Table 119: Incidence of Adverse Events At Least 2% Higher in Any Treatment Group by System Organ Class and Preferred Term and Causal Association to Study Drug: Studies 109MS301 and 109MS302

Incidence of adverse events at least 2% higher in any treatment group by system organ class and preferred term and causal association to study drug: Studies 109MS301 and 109MS302
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	Irrespective of causal association			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
Number of subjects with an event	720 (93)	733 (95)	712 (94)	304 (87)
感染症および寄生虫症	398 (52)	419 (54)	438 (58)	150 (43)
鼻咽頭炎	159 (21)	170 (22)	172 (23)	51 (15)
尿路感染	95 (12)	107 (14)	95 (13)	46 (13)
上気道感染	87 (11)	99 (13)	98 (13)	27 (8)
インフルエンザ	61 (8)	54 (7)	73 (10)	15 (4)
胃腸炎	28 (4)	42 (5)	34 (4)	5 (1)
気管支炎	32 (4)	35 (5)	48 (6)	16 (5)
副鼻腔炎	31 (4)	35 (5)	52 (7)	11 (3)
咽頭炎	31 (4)	31 (4)	27 (4)	14 (4)
鼻炎	26 (3)	26 (3)	23 (3)	8 (2)
口腔ヘルペス	26 (3)	23 (3)	13 (2)	6 (2)
ウイルス感染	15 (2)	18 (2)	13 (2)	5 (1)
気道感染	14 (2)	17 (2)	20 (3)	9 (3)
ウイルス性胃腸炎	16 (2)	15 (2)	20 (3)	6 (2)
膀胱炎	21 (3)	11 (1)	19 (3)	5 (1)

NOTE 1: Numbers in parentheses are percentages.
2: A subject was counted only once within each system organ class or preferred term.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-CAUS2-A.SAS DATE: 02DEC2015

Incidence of adverse events at least 2% higher in any treatment group by system organ class and preferred term and causal association to study drug: Studies 109MS301 and 109MS302
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	Causal association cannot be ruled out			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
Number of subjects with an event	348 (45)	535 (70)	538 (71)	153 (44)
感染症および寄生虫症	58 (8)	66 (9)	71 (9)	16 (5)
鼻咽頭炎	23 (3)	22 (3)	27 (4)	5 (1)
尿路感染	14 (2)	15 (2)	17 (2)	4 (1)
上気道感染	9 (1)	17 (2)	9 (1)	2 (<1)
インフルエンザ	4 (<1)	2 (<1)	10 (1)	1 (<1)
胃腸炎	5 (<1)	5 (<1)	8 (1)	1 (<1)
気管支炎	4 (<1)	5 (<1)	5 (<1)	0
副鼻腔炎	5 (<1)	2 (<1)	5 (<1)	0
咽頭炎	2 (<1)	3 (<1)	1 (<1)	2 (<1)
鼻炎	4 (<1)	4 (<1)	5 (<1)	2 (<1)
口腔ヘルペス	10 (1)	9 (1)	4 (<1)	0
ウイルス感染	0	1 (<1)	1 (<1)	0
気道感染	0	1 (<1)	2 (<1)	0
ウイルス性胃腸炎	1 (<1)	2 (<1)	2 (<1)	0
膀胱炎	1 (<1)	1 (<1)	3 (<1)	0

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	Irrespective of causal association			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
耳感染	12 (2)	5 (<1)	18 (2)	2 (<1)
血液およびリンパ系障害	17 (2)	30 (4)	37 (5)	4 (1)
リンパ球減少症	2 (<1)	18 (2)	17 (2)	0
貧血	15 (2)	13 (2)	21 (3)	4 (1)
代謝および栄養障害	13 (2)	17 (2)	14 (2)	4 (1)
食欲減退	13 (2)	17 (2)	14 (2)	4 (1)
精神障害	127 (16)	111 (14)	99 (13)	51 (15)
うつ病	68 (9)	53 (7)	48 (6)	30 (9)
不眠症	37 (5)	35 (5)	30 (4)	13 (4)
不安	27 (4)	31 (4)	26 (3)	7 (2)
抑うつ気分	17 (2)	12 (2)	7 (<1)	4 (1)
神経系障害	468 (61)	369 (48)	349 (46)	158 (45)
多発性硬化症再発	344 (45)	221 (29)	199 (26)	119 (34)
頭痛	129 (17)	133 (17)	126 (17)	46 (13)
錯感覚	69 (9)	56 (7)	59 (8)	15 (4)

NOTE 1: Numbers in parentheses are percentages.
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Incidence of adverse events at least 2% higher in any treatment group by system organ class and preferred term and causal association to study drug: Studies 109MS301 and 109MS302
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	Causal association cannot be ruled out			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
耳感染	1 (<1)	0	2 (<1)	0
血液およびリンパ系障害	3 (<1)	17 (2)	18 (2)	1 (<1)
リンパ球減少症	2 (<1)	16 (2)	15 (2)	0
貧血	1 (<1)	1 (<1)	4 (<1)	1 (<1)
代謝および栄養障害	4 (<1)	10 (1)	7 (<1)	4 (1)
食欲減退	4 (<1)	10 (1)	7 (<1)	4 (1)
精神障害	10 (1)	11 (1)	14 (2)	4 (1)
うつ病	5 (<1)	5 (<1)	4 (<1)	2 (<1)
不眠症	4 (<1)	3 (<1)	8 (1)	1 (<1)
不安	1 (<1)	6 (<1)	2 (<1)	1 (<1)
抑うつ気分	0	0	0	0
神経系障害	78 (10)	84 (11)	84 (11)	15 (4)
多発性硬化症再発	23 (3)	15 (2)	11 (1)	4 (1)
頭痛	41 (5)	47 (6)	41 (5)	7 (2)
錯感覚	5 (<1)	10 (1)	16 (2)	1 (<1)

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	Irrespective of causal association			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
浮動性めまい	38 (5)	33 (4)	30 (4)	9 (3)
感覚鈍麻	48 (6)	31 (4)	43 (6)	16 (5)
片頭痛	21 (3)	21 (3)	22 (3)	6 (2)
灼熱感	13 (2)	21 (3)	25 (3)	0
筋痙直	27 (4)	17 (2)	16 (2)	7 (2)
眼障害	35 (5)	25 (3)	30 (4)	11 (3)
霧視	22 (3)	13 (2)	18 (2)	6 (2)
眼痛	14 (2)	13 (2)	16 (2)	6 (2)
耳および迷路障害	37 (5)	22 (3)	42 (6)	15 (4)
回転性めまい	37 (5)	22 (3)	42 (6)	15 (4)
血管障害	66 (9)	312 (41)	264 (35)	22 (6)
潮紅	33 (4)	264 (34)	215 (28)	6 (2)
ほてり	16 (2)	49 (6)	49 (6)	5 (1)
高血圧	24 (3)	12 (2)	20 (3)	13 (4)

NOTE 1: Numbers in parentheses are percentages.
2: A subject was counted only once within each system organ class or preferred term.

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	Causal association cannot be ruled out			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
浮動性めまい	10 (1)	12 (2)	7 (<1)	4 (1)
感覚鈍麻	2 (<1)	1 (<1)	2 (<1)	2 (<1)
片頭痛	4 (<1)	5 (<1)	8 (1)	0
灼熱感	3 (<1)	11 (1)	10 (1)	0
筋痙直	2 (<1)	1 (<1)	0	0
眼障害	4 (<1)	1 (<1)	2 (<1)	1 (<1)
霧視	4 (<1)	1 (<1)	2 (<1)	0
眼痛	1 (<1)	0	1 (<1)	1 (<1)
耳および迷路障害	5 (<1)	8 (1)	8 (1)	1 (<1)
回転性めまい	5 (<1)	8 (1)	8 (1)	1 (<1)
血管障害	42 (5)	290 (38)	238 (31)	8 (2)
潮紅	29 (4)	252 (33)	208 (27)	6 (2)
ほてり	11 (1)	42 (5)	42 (6)	3 (<1)
高血圧	4 (<1)	4 (<1)	1 (<1)	0

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Incidence of adverse events at least 2% higher in any treatment group by system organ class and preferred term and causal association to study drug: Studies 109MS301 and 109MS302
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	Irrespective of causal association			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
呼吸器、胸郭および縦隔障害	62 (8)	67 (9)	71 (9)	23 (7)
咳嗽	36 (5)	38 (5)	37 (5)	9 (3)
口腔咽頭痛	33 (4)	37 (5)	42 (6)	15 (4)
胃腸障害	247 (32)	340 (44)	360 (47)	53 (15)
下痢	83 (11)	107 (14)	128 (17)	14 (4)
悪心	67 (9)	93 (12)	105 (14)	16 (5)
上腹部痛	45 (6)	76 (10)	85 (11)	4 (1)
腹痛	37 (5)	73 (9)	63 (8)	5 (1)
嘔吐	37 (5)	65 (8)	53 (7)	9 (3)
消化不良	20 (3)	35 (5)	40 (5)	6 (2)
便秘	33 (4)	23 (3)	29 (4)	9 (3)
胃炎	11 (1)	22 (3)	20 (3)	4 (1)
腹部不快感	11 (1)	19 (2)	14 (2)	1 (<1)
歯痛	19 (2)	18 (2)	26 (3)	4 (1)
胃腸障害	8 (1)	18 (2)	34 (4)	2 (<1)
口内乾燥	6 (<1)	16 (2)	10 (1)	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: A subject was counted only once within each system organ class or preferred term.

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	Causal association cannot be ruled out			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
呼吸器、胸郭および縦隔障害	3 (<1)	6 (<1)	7 (<1)	2 (<1)
咳嗽	2 (<1)	4 (<1)	5 (<1)	0
口腔咽頭痛	1 (<1)	2 (<1)	2 (<1)	2 (<1)
胃腸障害	123 (16)	230 (30)	253 (33)	13 (4)
下痢	38 (5)	64 (8)	82 (11)	1 (<1)
悪心	42 (5)	73 (9)	83 (11)	8 (2)
上腹部痛	30 (4)	62 (8)	69 (9)	2 (<1)
腹痛	22 (3)	48 (6)	42 (6)	2 (<1)
嘔吐	10 (1)	32 (4)	37 (5)	3 (<1)
消化不良	10 (1)	22 (3)	22 (3)	0
便秘	8 (1)	9 (1)	11 (1)	0
胃炎	3 (<1)	11 (1)	11 (1)	1 (<1)
腹部不快感	7 (<1)	12 (2)	8 (1)	0
歯痛	1 (<1)	1 (<1)	0	0
胃腸障害	6 (<1)	17 (2)	30 (4)	0
口内乾燥	0	9 (1)	5 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
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Incidence of adverse events at least 2% higher in any treatment group by system organ class and preferred term and causal association to study drug: Studies 109MS301 and 109MS302
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	Irrespective of causal association			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
胃食道逆流性疾患	14 (2)	15 (2)	18 (2)	2 (<1)
皮膚および皮下組織障害	85 (11)	159 (21)	164 (22)	28 (8)
そう痒症	30 (4)	62 (8)	58 (8)	7 (2)
発疹	26 (3)	58 (8)	55 (7)	9 (3)
紅斑	10 (1)	36 (5)	54 (7)	6 (2)
脱毛症	19 (2)	17 (2)	11 (1)	7 (2)
多汗症	10 (1)	17 (2)	26 (3)	5 (1)
筋骨格系および結合組織障害	237 (31)	223 (29)	224 (29)	72 (21)
背部痛	90 (12)	94 (12)	82 (11)	32 (9)
関節痛	65 (8)	66 (9)	64 (8)	17 (5)
四肢痛	58 (8)	58 (8)	55 (7)	21 (6)
筋痙縮	34 (4)	27 (4)	49 (6)	8 (2)
頚部痛	22 (3)	27 (4)	20 (3)	5 (1)
筋力低下	36 (5)	18 (2)	24 (3)	6 (2)
筋骨格痛	26 (3)	14 (2)	21 (3)	8 (2)

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Incidence of adverse events at least 2% higher in any treatment group by system organ class and preferred term and causal association to study drug: Studies 109MS301 and 109MS302
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	Causal association cannot be ruled out			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
胃食道逆流性疾患	6 (<1)	8 (1)	13 (2)	0
皮膚および皮下組織障害	43 (6)	129 (17)	122 (16)	14 (4)
そう痒症	18 (2)	52 (7)	46 (6)	3 (<1)
発疹	10 (1)	41 (5)	33 (4)	4 (1)
紅斑	4 (<1)	31 (4)	46 (6)	5 (1)
脱毛症	9 (1)	8 (1)	5 (<1)	1 (<1)
多汗症	6 (<1)	14 (2)	17 (2)	3 (<1)
筋骨格系および結合組織障害	20 (3)	19 (2)	28 (4)	5 (1)
背部痛	3 (<1)	2 (<1)	5 (<1)	2 (<1)
関節痛	5 (<1)	7 (<1)	7 (<1)	0
四肢痛	3 (<1)	4 (<1)	5 (<1)	0
筋痙縮	3 (<1)	5 (<1)	6 (<1)	1 (<1)
頚部痛	0	2 (<1)	3 (<1)	1 (<1)
筋力低下	3 (<1)	0	2 (<1)	1 (<1)
筋骨格痛	1 (<1)	0	0	0

NOTE 1: Numbers in parentheses are percentages.
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	Irrespective of causal association			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
筋肉痛	26 (3)	13 (2)	13 (2)	4 (1)
筋骨格硬直	11 (1)	7 (<1)	4 (<1)	9 (3)
腎および尿路障害	94 (12)	101 (13)	119 (16)	44 (13)
蛋白尿	59 (8)	67 (9)	85 (11)	30 (9)
ミクロアルブミン尿	24 (3)	35 (5)	36 (5)	15 (4)
血尿	34 (4)	33 (4)	41 (5)	10 (3)
一般・全身障害および投与部位の状態	149 (19)	136 (18)	153 (20)	102 (29)
疲労	87 (11)	94 (12)	96 (13)	30 (9)
発熱	40 (5)	27 (4)	44 (6)	17 (5)
無力症	20 (3)	24 (3)	17 (2)	15 (4)
末梢性浮腫	19 (2)	7 (<1)	16 (2)	4 (1)
注射部位腫脹	0	0	0	10 (3)
注射部位そう痒感	0	0	0	13 (4)
注射部位疼痛	0	0	0	29 (8)
注射部位紅斑	0	0	0	31 (9)

NOTE 1: Numbers in parentheses are percentages.
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Incidence of adverse events at least 2% higher in any treatment group by system organ class and preferred term and causal association to study drug: Studies 109MS301 and 109MS302
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	Causal association cannot be ruled out			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
筋肉痛	8 (1)	2 (<1)	5 (<1)	1 (<1)
筋骨格硬直	1 (<1)	1 (<1)	1 (<1)	1 (<1)
腎および尿路障害	43 (6)	50 (7)	48 (6)	9 (3)
蛋白尿	27 (4)	30 (4)	35 (5)	5 (1)
ミクロアルブミン尿	9 (1)	19 (2)	14 (2)	3 (<1)
血尿	12 (2)	11 (1)	12 (2)	2 (<1)
一般・全身障害および投与部位の状態	25 (3)	38 (5)	31 (4)	68 (19)
疲労	17 (2)	26 (3)	23 (3)	6 (2)
発熱	3 (<1)	2 (<1)	6 (<1)	6 (2)
無力症	3 (<1)	9 (1)	4 (<1)	5 (1)
末梢性浮腫	5 (<1)	3 (<1)	0	1 (<1)
注射部位腫脹	0	0	0	10 (3)
注射部位そう痒感	0	0	0	13 (4)
注射部位疼痛	0	0	0	27 (8)
注射部位紅斑	0	0	0	30 (9)

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	Irrespective of causal association			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
臨床検査	104 (13)	134 (17)	138 (18)	63 (18)
尿中アルブミン陽性	27 (4)	46 (6)	36 (5)	18 (5)
アラニン・アミノトランスフェラーゼ増加	38 (5)	45 (6)	49 (6)	20 (6)
アスパラギン酸アミノトランスフェラーゼ増加	18 (2)	33 (4)	29 (4)	14 (4)
尿中蛋白陽性	22 (3)	28 (4)	20 (3)	15 (4)
γ－グルタミルトランスフェラーゼ増加	19 (2)	20 (3)	12 (2)	8 (2)
尿中血陽性	7 (<1)	16 (2)	18 (2)	4 (1)
血中副甲状腺ホルモン増加	6 (<1)	15 (2)	17 (2)	2 (<1)
尿中白血球陽性	13 (2)	14 (2)	15 (2)	9 (3)
血中ブドウ糖増加	7 (<1)	10 (1)	18 (2)	7 (2)
傷害、中毒および処置合併症	54 (7)	44 (6)	53 (7)	17 (5)
転倒	22 (3)	22 (3)	22 (3)	14 (4)

NOTE 1: Numbers in parentheses are percentages.
2: A subject was counted only once within each system organ class or preferred term.

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Incidence of adverse events at least 2% higher in any treatment group by system organ class and preferred term and causal association to study drug: Studies 109MS301 and 109MS302
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	Causal association cannot be ruled out			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
臨床検査	53 (7)	58 (8)	72 (9)	19 (5)
尿中アルブミン陽性	12 (2)	17 (2)	19 (3)	5 (1)
アラニン・アミノトランスフェラーゼ増加	25 (3)	28 (4)	34 (4)	10 (3)
アスパラギン酸アミノトランスフェラーゼ増加	9 (1)	18 (2)	18 (2)	9 (3)
尿中蛋白陽性	12 (2)	9 (1)	12 (2)	2 (<1)
γ－グルタミルトランスフェラーゼ増加	7 (<1)	12 (2)	9 (1)	3 (<1)
尿中血陽性	2 (<1)	5 (<1)	7 (<1)	0
血中副甲状腺ホルモン増加	3 (<1)	4 (<1)	7 (<1)	0
尿中白血球陽性	0	2 (<1)	1 (<1)	0
血中ブドウ糖増加	2 (<1)	1 (<1)	2 (<1)	0
傷害、中毒および処置合併症	3 (<1)	0	0	0
転倒	1 (<1)	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: A subject was counted only once within each system organ class or preferred term.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-CAUS2-A.SAS DATE: 02DEC2015

Incidence of adverse events at least 2% higher in any treatment group by system organ class and preferred term and causal association to study drug: Studies 109MS301 and 109MS302
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	Irrespective of causal association			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
挫傷	19 (2)	21 (3)	25 (3)	5 (1)
関節捻挫	16 (2)	13 (2)	13 (2)	3 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: A subject was counted only once within each system organ class or preferred term.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-CAUS2-A.SAS DATE: 02DEC2015

Incidence of adverse events at least 2% higher in any treatment group by system organ class and preferred term and causal association to study drug: Studies 109MS301 and 109MS302
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	Causal association cannot be ruled out			
	Placebo (N=771)	BG00012 240 mg BID (N=769)	BG00012 240 mg TID (N=760)	GA (N=351)
挫傷	2 (<1)	0	0	0
関節捻挫	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: A subject was counted only once within each system organ class or preferred term.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-CAUS2-A.SAS DATE: 02DEC2015

Table 120: Incidence of Serious Adverse Events by Preferred Term: Studies 109MS301 and 109MS302

Incidence of serious adverse events by preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a serious event	165 (21)	135 (18)	119 (16)	254 (17)	60 (17)
多発性硬化症再発	111 (14)	78 (10)	62 (8)	140 (9)	36 (10)
胃腸炎	0	6 (<1)	3 (<1)	9 (<1)	0
蜂巣炎	0	2 (<1)	2 (<1)	4 (<1)	0
嘔吐	1 (<1)	2 (<1)	2 (<1)	4 (<1)	0
背部痛	0	2 (<1)	1 (<1)	3 (<1)	0
胃炎	0	0	3 (<1)	3 (<1)	0
頭痛	0	0	3 (<1)	3 (<1)	0
卵巣嚢胞	1 (<1)	1 (<1)	2 (<1)	3 (<1)	0
発熱	0	1 (<1)	2 (<1)	3 (<1)	0
交通事故	0	1 (<1)	2 (<1)	3 (<1)	1 (<1)
尿路感染	0	1 (<1)	2 (<1)	3 (<1)	0
ウイルス感染	0	2 (<1)	1 (<1)	3 (<1)	1 (<1)
腹痛	0	2 (<1)	0	2 (<1)	0
胆石症	0	1 (<1)	1 (<1)	2 (<1)	1 (<1)
うつ病	2 (<1)	1 (<1)	1 (<1)	2 (<1)	2 (<1)
大腿骨骨折	0	1 (<1)	1 (<1)	2 (<1)	1 (<1)
潮紅	0	1 (<1)	1 (<1)	2 (<1)	0
甲状腺腫	0	1 (<1)	1 (<1)	2 (<1)	0
Ｈ１Ｎ１インフルエンザ	1 (<1)	1 (<1)	1 (<1)	2 (<1)	0
過敏症	0	1 (<1)	1 (<1)	2 (<1)	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column.

SOURCE: BG12MS/JAPAN/ISS/T-AE-PT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
肉離れ	0	0	2 (<1)	2 (<1)	0
神経学的症状	0	1 (<1)	1 (<1)	2 (<1)	0
肺炎	2 (<1)	2 (<1)	0	2 (<1)	2 (<1)
副鼻腔炎	0	1 (<1)	1 (<1)	2 (<1)	0
子宮平滑筋腫	2 (<1)	1 (<1)	1 (<1)	2 (<1)	1 (<1)
静脈瘤	0	1 (<1)	1 (<1)	2 (<1)	0
手首関節骨折	0	0	2 (<1)	2 (<1)	0
腹部ヘルニア	0	1 (<1)	0	1 (<1)	0
下腹部痛	0	0	1 (<1)	1 (<1)	0
急性冠動脈症候群	0	0	1 (<1)	1 (<1)	0
腺筋症	0	0	1 (<1)	1 (<1)	0
抑うつ気分を伴う適応障害	0	1 (<1)	0	1 (<1)	0
アルコール中毒	0	0	1 (<1)	1 (<1)	0
アレルギー検査	0	0	1 (<1)	1 (<1)	0
意識変容状態	0	0	1 (<1)	1 (<1)	0
アナフィラキシー様反応	0	0	1 (<1)	1 (<1)	0
足関節部骨折	0	0	1 (<1)	1 (<1)	0
虫垂炎	0	1 (<1)	0	1 (<1)	1 (<1)
関節痛	0	1 (<1)	0	1 (<1)	0
無力症	1 (<1)	0	1 (<1)	1 (<1)	0
喘息	0	1 (<1)	0	1 (<1)	0
良性頭蓋内圧亢進	0	0	1 (<1)	1 (<1)	0
肺の良性新生物	0	1 (<1)	0	1 (<1)	0
尿中β２ミクログロブリン増加	0	0	1 (<1)	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column.

SOURCE: BG12MS/JAPAN/ISS/T-AE-PT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
胆管結石	0	0	1 (<1)	1 (<1)	0
双極１型障害	0	1 (<1)	0	1 (<1)	0
膀胱機能障害	0	1 (<1)	0	1 (<1)	0
膀胱穿孔	0	0	1 (<1)	1 (<1)	0
血中ブドウ糖増加	0	0	1 (<1)	1 (<1)	0
徐脈	0	0	1 (<1)	1 (<1)	0
乳癌	1 (<1)	0	1 (<1)	1 (<1)	0
乳房腫瘤摘除	0	1 (<1)	0	1 (<1)	0
滑液包炎	0	1 (<1)	0	1 (<1)	0
心不全	0	0	1 (<1)	1 (<1)	0
うっ血性心不全	0	0	1 (<1)	1 (<1)	0
子宮頚部癌	0	0	1 (<1)	1 (<1)	1 (<1)
結腸内視鏡検査	0	1 (<1)	0	1 (<1)	0
脳振盪	0	1 (<1)	0	1 (<1)	0
便秘	0	1 (<1)	0	1 (<1)	0
深部静脈血栓症	0	0	1 (<1)	1 (<1)	1 (<1)
脱水	0	0	1 (<1)	1 (<1)	0
憩室穿孔	0	1 (<1)	0	1 (<1)	0
ダグラス窩膿瘍	0	0	1 (<1)	1 (<1)	0
十二指腸炎	0	0	1 (<1)	1 (<1)	0
構語障害	0	0	1 (<1)	1 (<1)	0
間脳性内分泌障害	0	0	1 (<1)	1 (<1)	0
子宮内膜症	0	1 (<1)	0	1 (<1)	0
てんかん	1 (<1)	1 (<1)	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column.

SOURCE: BG12MS/JAPAN/ISS/T-AE-PT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
顔面骨骨折	0	1 (<1)	0	1 (<1)	0
転倒	0	1 (<1)	0	1 (<1)	0
女性不妊手術	0	1 (<1)	0	1 (<1)	0
足骨折	0	1 (<1)	0	1 (<1)	0
ウイルス性胃腸炎	0	0	1 (<1)	1 (<1)	0
胃腸障害	0	1 (<1)	0	1 (<1)	0
胃腸出血	1 (<1)	0	1 (<1)	1 (<1)	0
全般性不安障害	0	1 (<1)	0	1 (<1)	0
舌咽神経痛	0	1 (<1)	0	1 (<1)	0
大発作痙攣	2 (<1)	0	1 (<1)	1 (<1)	1 (<1)
胆汁うっ滞性肝炎	0	1 (<1)	0	1 (<1)	0
閉塞性ヘルニア	0	0	1 (<1)	1 (<1)	0
裂孔ヘルニア	0	1 (<1)	0	1 (<1)	0
陰嚢水瘤	0	0	1 (<1)	1 (<1)	0
低血糖症	0	0	1 (<1)	1 (<1)	0
子宮摘出	0	1 (<1)	0	1 (<1)	0
インフルエンザ	1 (<1)	0	1 (<1)	1 (<1)	0
椎間板手術	0	0	1 (<1)	1 (<1)	0
腸閉塞	0	0	1 (<1)	1 (<1)	0
検査	0	0	1 (<1)	1 (<1)	0
虚血性脳卒中	0	0	1 (<1)	1 (<1)	0
靭帯断裂	0	1 (<1)	0	1 (<1)	0
躁病	0	1 (<1)	0	1 (<1)	0
治療食	0	1 (<1)	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column.

SOURCE: BG12MS/JAPAN/ISS/T-AE-PT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
医学的観察	0	0	1 (<1)	1 (<1)	0
半月板障害	1 (<1)	1 (<1)	0	1 (<1)	0
月経過多	0	1 (<1)	0	1 (<1)	0
不正子宮出血	0	0	1 (<1)	1 (<1)	1 (<1)
片頭痛	2 (<1)	0	1 (<1)	1 (<1)	0
多発性硬化症	1 (<1)	0	1 (<1)	1 (<1)	0
自己愛性人格障害	0	1 (<1)	0	1 (<1)	0
悪心	1 (<1)	1 (<1)	0	1 (<1)	0
神経鞘腫	0	1 (<1)	0	1 (<1)	0
非心臓性胸痛	0	0	1 (<1)	1 (<1)	0
後頭神経痛	0	0	1 (<1)	1 (<1)	0
末梢性浮腫	0	0	1 (<1)	1 (<1)	1 (<1)
変形性関節症	1 (<1)	0	1 (<1)	1 (<1)	0
卵巣嚢胞破裂	0	1 (<1)	0	1 (<1)	0
過量投与	0	1 (<1)	0	1 (<1)	0
部分発作	0	1 (<1)	0	1 (<1)	1 (<1)
骨盤内炎症性疾患	1 (<1)	0	1 (<1)	1 (<1)	0
扁桃周囲膿瘍	0	0	1 (<1)	1 (<1)	0
胸水	0	1 (<1)	0	1 (<1)	0
誤嚥性肺炎	0	1 (<1)	0	1 (<1)	0
ウイルス感染後疲労症候群	0	1 (<1)	0	1 (<1)	0
術後発熱	0	1 (<1)	0	1 (<1)	0
処置による低血圧	0	1 (<1)	0	1 (<1)	0
そう痒症	0	0	1 (<1)	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column.

SOURCE: BG12MS/JAPAN/ISS/T-AE-PT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
急性腎盂腎炎	0	0	1 (<1)	1 (<1)	0
橈骨骨折	0	0	1 (<1)	1 (<1)	1 (<1)
腎仙痛	0	0	1 (<1)	1 (<1)	0
下肢静止不能症候群	1 (<1)	0	1 (<1)	1 (<1)	0
シェーグレン症候群	0	1 (<1)	0	1 (<1)	0
変形性脊椎症	0	0	1 (<1)	1 (<1)	0
スティーブンス・ジョンソン症候群	0	1 (<1)	0	1 (<1)	0
自殺念慮	1 (<1)	1 (<1)	0	1 (<1)	1 (<1)
自殺企図	0	0	1 (<1)	1 (<1)	1 (<1)
一過性全健忘	0	0	1 (<1)	1 (<1)	0
一過性脳虚血発作	0	1 (<1)	0	1 (<1)	0
移行上皮癌	0	1 (<1)	0	1 (<1)	0
横静脈洞血栓症	0	0	1 (<1)	1 (<1)	0
外傷性脳損傷	0	1 (<1)	0	1 (<1)	0
外傷性血腫	0	1 (<1)	0	1 (<1)	0
臍ヘルニア	0	0	1 (<1)	1 (<1)	0
尿管瘤	0	1 (<1)	0	1 (<1)	0
尿失禁	0	0	1 (<1)	1 (<1)	0
静脈ステント挿入	0	0	1 (<1)	1 (<1)	0
頭位性回転性めまい	0	0	1 (<1)	1 (<1)	0
第７脳神経麻痺	0	1 (<1)	0	1 (<1)	0
外陰部膿瘍	0	0	1 (<1)	1 (<1)	0
自然流産	2 (<1)	0	0	0	0
貧血	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column.

SOURCE: BG12MS/JAPAN/ISS/T-AE-PT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
肛門膿瘍	1 (<1)	0	0	0	0
アナフィラキシー反応	0	0	0	0	2 (<1)
不安	1 (<1)	0	0	0	0
失語症	0	0	0	0	1 (<1)
バルトリン嚢腫	1 (<1)	0	0	0	0
基底細胞癌	1 (<1)	0	0	0	1 (<1)
膀胱憩室	1 (<1)	0	0	0	0
ボレリア感染	1 (<1)	0	0	0	0
乳房新生物	1 (<1)	0	0	0	0
脳血管発作	1 (<1)	0	0	0	0
脳血管障害	0	0	0	0	1 (<1)
子宮頚部円錐切除	1 (<1)	0	0	0	0
大腸炎	1 (<1)	0	0	0	0
潰瘍性大腸炎	1 (<1)	0	0	0	0
自殺既遂	0	0	0	0	1 (<1)
痙攣	3 (<1)	0	0	0	0
アレルギー性皮膚炎	1 (<1)	0	0	0	0
糖尿病性ケトアシドーシス	1 (<1)	0	0	0	0
感染性下痢	1 (<1)	0	0	0	0
脳症	1 (<1)	0	0	0	0
細菌性心内膜炎	1 (<1)	0	0	0	0
子宮内膜癌	0	0	0	0	1 (<1)
眼外傷	1 (<1)	0	0	0	0
眼痛	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column.

SOURCE: BG12MS/JAPAN/ISS/T-AE-PT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
大腿骨頚部骨折	1 (<1)	0	0	0	0
線維腫	1 (<1)	0	0	0	0
妊娠浮腫	1 (<1)	0	0	0	0
血管腫	1 (<1)	0	0	0	0
手骨折	1 (<1)	0	0	0	0
肝酵素上昇	2 (<1)	0	0	0	0
ホームズ・アディー瞳孔	1 (<1)	0	0	0	0
インフルエンザ様疾患	1 (<1)	0	0	0	0
靭帯損傷	1 (<1)	0	0	0	0
意識消失	1 (<1)	0	0	0	1 (<1)
月経障害	1 (<1)	0	0	0	0
小球性貧血	1 (<1)	0	0	0	0
心筋炎	0	0	0	0	1 (<1)
鼻茸	1 (<1)	0	0	0	0
鼻咽頭炎	1 (<1)	0	0	0	0
腎下垂症	1 (<1)	0	0	0	0
急性膵炎	1 (<1)	0	0	0	0
骨盤腔内腫瘤	1 (<1)	0	0	0	0
骨盤痛	1 (<1)	0	0	0	0
末梢性虚血	1 (<1)	0	0	0	0
腹膜出血	1 (<1)	0	0	0	0
多発性関節炎	1 (<1)	0	0	0	0
膿胸	0	0	0	0	1 (<1)
ライター症候群	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column.

SOURCE: BG12MS/JAPAN/ISS/T-AE-PT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
敗血症	2 (<1)	0	0	0	0
社会問題	1 (<1)	0	0	0	0
不妊手術	0	0	0	0	1 (<1)
滑液嚢腫	1 (<1)	0	0	0	0
腱断裂	3 (<1)	0	0	0	0
治療薬毒性	1 (<1)	0	0	0	0
転移性甲状腺癌	0	0	0	0	1 (<1)
脛骨骨折	1 (<1)	0	0	0	0
気管炎	1 (<1)	0	0	0	0
消化器結核	1 (<1)	0	0	0	0
鼻甲介切除	1 (<1)	0	0	0	0
子宮出血	2 (<1)	0	0	0	1 (<1)
前庭性運動失調	0	0	0	0	1 (<1)
視力低下	1 (<1)	0	0	0	0
むち打ち損傷	0	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column.

SOURCE: BG12MS/JAPAN/ISS/T-AE-PT-SER-A.SAS DATE: 02DEC2015

Table 121: Listing of Adverse Events That Led to Discontinuation of Study Drug: Studies 109MS301 and 109MS302

Listing of adverse events that led to discontinuation of study drug:
Studies 109MS301 and 109MS302
Page 1 of 129
Treatment group: Placebo

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/001* M/2[redacted] WHITE	血中クレアチニン増加	541	552	12	UNLIKELY	MILD	No	DW	RESOLVED
109MS301/002* F/4[redacted] BLACK OR AFRICAN AMERICAN	多発性硬化症	254	337	84	UNRELATED	MODERATE	No	DW	RESOLVED
109MS301/003* F/5[redacted] WHITE	血尿	51	56	6	POSSIBLY	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

＊新薬承認情報提供時に置換えた

Listing of adverse events that led to discontinuation of study drug:
Studies 109MS301 and 109MS302
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Treatment group: Placebo

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/004* F/3[redacted] WHITE	アラニン･アミノトランスフェラーゼ増加	279	349	71	RELATED	SEVERE	No	DW	RESOLVED
	アスパラギン酸アミノトランスフェラーゼ増加	279	349	71	RELATED	SEVERE	No	DW	RESOLVED
	γ－グルタミルトランスフェラーゼ増加	279	349	71	RELATED	SEVERE	No	DW	RESOLVED
109MS301/005* F/5[redacted] WHITE	多発性硬化症	363	468	106	UNLIKELY	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 006* F/2[redacted] WHITE	多発性硬化症再発	152	224	73	UNRELATED	MODERATE	Yes	DW	RESOLVED
109MS301/ 007* F/2[redacted] ASIAN	多発性硬化症再発	175	178	4	UNRELATED	SEVERE	Yes	DW	RESOLVED
109MS301/ 008* F/4[redacted] ASIAN	多発性硬化症再発	271	521	251	POSSIBLY	SEVERE	Yes	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 009* F/3[redacted] ASIAN	肝酵素上昇	29	175	147	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 010* M/2[redacted] ASIAN	消化器結核	235	542	308	POSSIBLY	MODERATE	Yes	DW	RESOLVED
109MS301/ 011* M/2[redacted] WHITE	多発性硬化症再発	362			UNRELATED	MILD	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/012* M/2[redacted] WHITE	多発性硬化症再発	345	407	63	UNRELATED	MODERATE	No	DW	RESOLVED
109MS301/013* F/5[redacted] WHITE	筋痙直	2	9	8	POSSIBLY	SEVERE	No	DW	RESOLVED
	そう痒症	3	12	10	POSSIBLY	MODERATE	No	DW	RESOLVED
	帯状疱疹	5	8	4	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/014* F/3[redacted] WHITE	多発性硬化症再発	2	29	28	UNRELATED	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 015* F/4[redacted] WHITE	胃腸障害	607	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
109MS301/ 016* M/2[redacted] WHITE	多発性硬化症再発	117	209	93	UNRELATED	MILD	No	DW	RESOLVED
109MS301/ 017* M/2[redacted] WHITE	多発性硬化症再発	451	466	16	UNLIKELY	MILD	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 018* M/4[redacted] WHITE	肝酵素上昇	57	149	93	POSSIBLY	SEVERE	No	DW	RESOLVED
109MS301/ 019* F/2[redacted] WHITE	多発性硬化症再発	396	402	7	UNRELATED	MODERATE	No	DW	RESOLVED
109MS301/ 020* F/2[redacted] WHITE	多発性硬化症再発	315	320	6	UNRELATED	MILD	No	DW	RESOLVED
	多発性硬化症再発	320	344	25	UNRELATED	MILD	Yes	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 021* F/4[redacted] WHITE	多発性硬化症再発	124	131	8	UNRELATED	MILD	Yes	DW	RESOLVED
109MS301/ 022* F/4[redacted] WHITE	肝酵素上昇	1	29	29	UNRELATED	MILD	No	DW	RESOLVED
109MS301/ 023* F/3[redacted] WHITE	多発性硬化症再発	70	130	61	UNLIKELY	MILD	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 024* F/3[redacted] WHITE	感覚鈍麻	87	NR		UNLIKELY	MODERATE	No	DW	NOT RESOLVED
109MS301/ 025* F/3[redacted] WHITE	多発性硬化症再発	406	429	24	UNLIKELY	MODERATE	No	DW	RESOLVED
109MS301/ 026* F/4[redacted] WHITE	動悸	72	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
	腹部膨満	88	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 027* F/2[redacted] WHITE	多発性硬化症再発	459	NR		UNLIKELY	MODERATE	No	DW	NOT RESOLVED
109MS301/ 028* F/4[redacted] WHITE	下痢	123	171	49	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 029* F/1[redacted] WHITE	多発性硬化症再発	79	NR		UNRELATED	MODERATE	No	DW	NOT RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/030* F/2[redacted] WHITE	多発性硬化症再発	286	309	24	UNRELATED	MILD	No	DW	RESOLVED
109MS301/031* F/2[redacted] WHITE	胃腸障害	310	NR		RELATED	MODERATE	No	DW	NOT RESOLVED
109MS301/032* F/4[redacted] WHITE	多発性硬化症再発	266	309	44	UNRELATED	MILD	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/033* M/3[redacted] WHITE	多発性硬化症再発	368	464	97	UNRELATED	MODERATE	No	DW	RESOLVED
109MS301/034* M/3[redacted] WHITE	多発性硬化症再発	363	393	31	UNLIKELY	MILD	No	DW	RESOLVED
109MS301/035* F/4[redacted] WHITE	多発性硬化症再発	472	483	12	UNRELATED	MODERATE	Yes	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/036* F/2[redacted] WHITE	そう痒症	663	669	7	POSSIBLY	MODERATE	No	DW	RESOLVED
	乾皮症	663	669	7	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/037* F/3[redacted] WHITE	背部痛	113			POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/038* F/4[redacted] WHITE	多発性硬化症再発	352	422	71	UNRELATED	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/039* F/3[redacted] WHITE	潮紅	249	314	66	RELATED	MODERATE	No	DW	RESOLVED
109MS301/040* F/3[redacted]	上腹部痛	1	NR		POSSIBLY	SEVERE	No	DW	NOT RESOLVED
109MS301/041* F/4[redacted]	歯肉炎	46	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
109MS301/042* M/3[redacted]	多発性硬化症再発	273	327	55	UNRELATED	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 043* F/4[redacted]	末梢性虚血	403	410	8	POSSIBLY	SEVERE	Yes	DW	RESOLVED
109MS301/ 044* F/3[redacted]	多発性硬化症再発	159	171	13	UNRELATED	MODERATE	No	DW	RESOLVED
109MS301/ 045* F/4[redacted] WHITE	多発性硬化症再発	323	505	183	UNRELATED	MODERATE	No	DW	RESOLVED
109MS301/ 046* F/3[redacted] WHITE	多発性硬化症再発	416			UNRELATED	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 047* F/4[redacted] WHITE	多発性硬化症再発	133	365	233	UNLIKELY	MODERATE	No	DW	RESOLVED
109MS301/ 048* F/4[redacted] WHITE	多発性硬化症再発	227			UNRELATED	SEVERE	Yes	DW	RESOLVED
109MS301/ 049* F/5[redacted] WHITE	インフルエンザ様疾患	9	101	93	POSSIBLY	SEVERE	No	DW	RESOLVED
	細菌性咽頭炎	89	101	13	POSSIBLY	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 050* M/5[redacted] WHITE	多発性硬化症再発	413	NR		UNRELATED	SEVERE	No	DW	NOT RESOLVED
109MS301/ 051* F/3[redacted] WHITE	乳癌	561	NR		UNRELATED	SEVERE	Yes	DW	NOT RESOLVED
109MS301/ 052* F/4[redacted] WHITE	多発性硬化症再発	514	537	24	UNRELATED	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 053* F/3[redacted] WHITE	多発性硬化症再発	154	158	5	UNLIKELY	MODERATE	No	DW	RESOLVED
109MS301/ 054* M/2[redacted] WHITE	多発性硬化症再発	119	147	29	UNRELATED	MODERATE	No	DW	RESOLVED
109MS301/ 055* F/3[redacted] WHITE	頭痛	6	12	7	RELATED	SEVERE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 056* F/4[redacted] ASIAN	大発作痙攣	297	301	5	POSSIBLY	MODERATE	Yes	DW	RESOLVED
109MS302/ 057* M/5[redacted] ASIAN	発疹	5	66	62	RELATED	SEVERE	No	DW	RESOLVED
109MS302/ 058* M/2[redacted] ASIAN	多発性硬化症再発	368#	370	3	UNRELATED	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/059* F/3[redacted] ASIAN	多発性硬化症再発	322	441	120	UNRELATED	MODERATE	No	DW	RESOLVED
109MS302/060* M/3[redacted] ASIAN	多発性硬化症再発	633	673	41	UNRELATED	MILD	No	DW	RESOLVED
109MS302/061* M/4[redacted] WHITE	多発性硬化症再発	162	187	26	UNRELATED	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 062* F/2[redacted] WHITE	心電図ＰＲ延長	162	214	53	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/ 063* F/4[redacted] WHITE	多発性硬化症再発	256	262	7	UNRELATED	MODERATE	No	DW	RESOLVED
109MS302/ 064* F/3[redacted] BLACK OR AFRICAN AMERICAN	肝酵素上昇	226	261	36	POSSIBLY	SEVERE	Yes	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 065* F/4[redacted] WHITE	多発性硬化症再発	292	300	9	UNRELATED	MODERATE	No	DW	RESOLVED
109MS302/ 066* F/3[redacted] WHITE	性的興奮障害	1	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
109MS302/ 067* F/2[redacted] WHITE	肝酵素上昇	209	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

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Treatment group: Placebo

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 068* F/2[redacted] WHITE	トランスアミナーゼ上昇	1	81	81	UNLIKELY	SEVERE	No	DW	RESOLVED
109MS302/ 069* F/5[redacted] WHITE	消化不良	188	206	19	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 070* F/3[redacted] WHITE	アラニン･アミノトランスフェラーゼ増加	183	253	71	POSSIBLY	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/071* M/3[redacted] WHITE	アラニン･アミノトランスフェラーゼ増加	427	486	60	POSSIBLY	MODERATE	No	DW	RESOLVED
	アスパラギン酸アミノトランスフェラーゼ増加	427	486	60	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/072* M/4[redacted] WHITE	多発性硬化症再発	139	237	99	UNRELATED	MODERATE	No	DW	RESOLVED
109MS302/073* F/4[redacted] WHITE	多発性硬化症再発	110	151	42	UNLIKELY	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 074* F/5[redacted] WHITE	蛋白尿	59	250	192	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/ 075* F/4[redacted] WHITE	多発性硬化症再発	256	289	34	POSSIBLY	MILD	No	DW	RESOLVED
109MS302/ 076* F/5[redacted] WHITE	肝酵素上昇	564	NR		UNLIKELY	MILD	No	DW	NOT RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 077* F/4[redacted] WHITE	細菌性心内膜炎	57	117	61	POSSIBLY	SEVERE	Yes	DW	RESOLVED
109MS302/ 078* M/3[redacted] WHITE	アラニン･アミノトランスフェラーゼ増加	589	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
109MS302/ 079* M/2[redacted] WHITE	視力低下	341	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 080* F/3[redacted] WHITE	乳房新生物	352			UNLIKELY	MODERATE	Yes	DW	RESOLVED
109MS302/ 081* F/2[redacted] WHITE	多発性硬化症再発	339	341	3	UNRELATED	MODERATE	No	DW	RESOLVED
109MS302/ 082* M/3[redacted] WHITE	多発性硬化症再発	367	368	2	UNLIKELY	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/083* F/4[redacted] WHITE	多発性硬化症再発	277	280	4	UNLIKELY	MODERATE	No	DW	RESOLVED
109MS302/084* F/4[redacted] WHITE	食欲亢進	35	NR		UNLIKELY	MILD	No	DW	NOT RESOLVED
109MS302/085* M/3[redacted]	多発性硬化症再発	215	NR		UNRELATED	MODERATE	No	DW	NOT RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/086* M/4[redacted] WHITE	多発性硬化症再発	80	105	26	UNRELATED	MODERATE	No	DW	RESOLVED
109MS302/087* F/3[redacted] WHITE	多発性硬化症再発	62	NR		UNRELATED	MODERATE	No	DW	NOT RESOLVED
109MS302/088* F/3[redacted] WHITE	アラニン・アミノトランスフェラーゼ増加	57	121	65	RELATED	MODERATE	No	DW	RESOLVED
	アスパラギン酸アミノトランスフェラーゼ増加	57	121	65	RELATED	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/089* F/4[redacted] WHITE	脳血管発作	117	NR		UNLIKELY	SEVERE	Yes	DW	NOT RESOLVED
109MS302/090* F/4[redacted] WHITE	中毒性肝炎	476	533	58	RELATED	MODERATE	No	DW	RESOLVED
109MS302/091* F/3[redacted] HISPANIC	多発性硬化症再発	492	533	42	UNRELATED	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Listing of adverse events that led to discontinuation of study drug:
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/092* M/3[redacted] WHITE	多発性硬化症再発	181			UNRELATED	MODERATE	No	DW	RESOLVED
109MS302/093* F/3[redacted] WHITE	肝障害	338	683	346	UNRELATED	MODERATE	No	DW	RESOLVED
109MS302/094* F/3[redacted] WHITE	多発性硬化症再発	589	595	7	UNRELATED	SEVERE	Yes	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Listing of adverse events that led to discontinuation of study drug:
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Treatment group: BG00012 240 mg BID

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/095* F/4[redacted] FATHER E.INDIAN, MOTHER M-EAST - BLACK	そう痒症	2	24	23	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/096* M/4[redacted] WHITE	過敏症	1	1	1	RELATED	SEVERE	No	DW	RESOLVED

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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Listing of adverse events that led to discontinuation of study drug:
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Treatment group: BG00012 240 mg BID

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/097* F/3[redacted] WHITE	腹部不快感	10	22	13	RELATED	SEVERE	No	DW	RESOLVED
	消化不良	10	22	13	RELATED	SEVERE	No	DW	RESOLVED
109MS301/098* F/3[redacted] WHITE	嘔吐	84	94	11	RELATED	MODERATE	No	DW	RESOLVED
109MS301/099* F/4[redacted] WHITE	腹部不快感	31	41	11	POSSIBLY	MILD	No	DW	RESOLVED
	疲労	31	41	11	POSSIBLY	MODERATE	No	DW	RESOLVED
	悪心	31	41	11	POSSIBLY	MILD	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Listing of adverse events that led to discontinuation of study drug:
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Treatment group: BG00012 240 mg BID

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 099* F/4[redacted] WHITE	傾眠	31	41	11	POSSIBLY	MODERATE	No	DW	RESOLVED
	嘔吐	32	34	3	POSSIBLY	MILD	No	DW	RESOLVED
	下痢	33	41	9	POSSIBLY	MODERATE	No	DW	RESOLVED
	便失禁	37	37	1	UNLIKELY	MODERATE	No	DW	RESOLVED
109MS301/ 100* M/4[redacted] WHITE	蛋白尿	203	308	106	POSSIBLY	MILD	No	DW	RESOLVED
109MS301/ 101* F/3[redacted] WHITE	上腹部痛	3	48	46	RELATED	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 101* F/3[redacted] WHITE	悪心	3	48	46	RELATED	MODERATE	No	DW	RESOLVED
	嘔吐	3	48	46	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 103* F/2[redacted] WHITE	潮紅	1	9	9	RELATED	MILD	No	DW	RESOLVED
109MS301/ 104* F/4[redacted] WHITE	発疹	2	19	18	RELATED	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Listing of adverse events that led to discontinuation of study drug:
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 105* F/3[redacted] WHITE	過敏症	82	82	1	RELATED	MILD	No	DW	RESOLVED
109MS301/ 106* F/4[redacted] WHITE	下痢	119			RELATED	SEVERE	No	DW	RESOLVED
109MS301/ 107* F/5[redacted] WHITE	多汗症	229	231	3	POSSIBLY	SEVERE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 108* F/3[redacted] WHITE	悪心	8	40	33	POSSIBLY	MODERATE	No	DW	RESOLVED
	下痢	13	41	29	POSSIBLY	MILD	No	DW	RESOLVED
109MS301/ 109* F/3[redacted] BLACK OR AFRICAN AMERICAN	甲状腺腫	175	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
109MS301/ 110* F/5[redacted] WHITE	発疹	1	122	122	RELATED	MILD	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 111* M/3[redacted] WHITE	多発性硬化症再発	268	339	72	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 112* M/5[redacted] BLACK OR AFRICAN AMERICAN	尿中アルブミン陽性	1	85	85	UNRELATED	MILD	No	DW	RESOLVED
109MS301/ 113* F/5[redacted] WHITE	血尿	28	168	141	POSSIBLY	MILD	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 114* F/4[redacted] WHITE	下痢	16	21	6	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 115* F/3[redacted] WHITE	潮紅	35	154	120	POSSIBLY	MODERATE	No	DW	RESOLVED
	全身性皮疹	35	154	120	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 116* M/3[redacted] WHITE	上腹部痛	21	22	2	RELATED	SEVERE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 117* M/4[redacted] WHITE	胃炎	18			POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 118* F/3[redacted] HISPANIC OR LATINO	多発性硬化症再発	365	374	10	UNRELATED	MODERATE	No	DW	RESOLVED
109MS301/ 119* F/4[redacted] WHITE	過敏症	30	40	11	POSSIBLY	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 120* F/3[redacted] WHITE	潮紅	28	43	16	RELATED	MILD	No	DW	RESOLVED
	胃腸障害	28	43	16	RELATED	MILD	No	DW	RESOLVED
109MS301/ 121* F/3[redacted] ASIAN	腫脹	8	13	6	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 122* F/5[redacted] WHITE	潮紅	8	8	1	RELATED	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 123* F/4[redacted] WHITE	過敏症	1	1	1	RELATED	MODERATE	Yes	DW	RESOLVED
109MS301/ 124* F/4[redacted] WHITE	紅斑	5	84	753	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 125* F/4[redacted] WHITE	胃腸障害	11	13	3	POSSIBLY	SEVERE	No	DW	RESOLVED
	胃腸障害	13	54	42	POSSIBLY	SEVERE	Yes	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 126* F/2[redacted] WHITE	腹痛	398	420	23	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 127* M/4[redacted] WHITE	蛋白尿	225	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
109MS301/ 128* F/3[redacted] WHITE	アレルギー性皮膚炎	1	4	4	RELATED	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 129* F/4[redacted] WHITE	上腹部痛	32	86	55	RELATED	SEVERE	No	DW	RESOLVED
109MS301/ 130* F/3[redacted] WHITE	全身紅斑	2	11	10	RELATED	MODERATE	No	DW	RESOLVED
	全身性そう痒症	2	11	10	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 131* M/5[redacted] WHITE	全身紅斑	2	2	1	RELATED	MODERATE	No	DW	RESOLVED
	高血圧	2	2	1	RELATED	MODERATE	No	DW	RESOLVED
	粘膜乾燥	2	2	1	RELATED	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 131* M/5[redacted] WHITE	発熱	2	2	1	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 132* F/5[redacted] WHITE	腎新生物	633	644	12	POSSIBLY	MODERATE	No	DW	RESOLVED
	移行上皮癌	644	660	17	POSSIBLY	SEVERE	Yes	DW	RESOLVED
109MS301/ 133* F/5[redacted] WHITE	体重減少	1	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
	悪心	14	22	9	RELATED	SEVERE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 133* F/5[redacted] WHITE	嘔吐	14	22	9	RELATED	SEVERE	No	DW	RESOLVED
109MS301/ 134* F/3[redacted] WHITE	消化不良	61	75	15	RELATED	MILD	No	DW	RESOLVED
109MS301/ 135* F/5[redacted] WHITE	多発性硬化症再発	190	280	91	UNRELATED	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/136* F/5[redacted] WHITE	交通事故	5	5	1	UNRELATED	SEVERE	Yes	DW	RESOLVED
	外傷性脳損傷	5	99	95	UNRELATED	SEVERE	Yes	DW	RESOLVED
109MS301/137* F/4[redacted] WHITE	多発性硬化症再発	82	194	113	UNRELATED	MILD	No	DW	RESOLVED
109MS301/138* F/3[redacted] WHITE	消化不良	477	513	37	RELATED	SEVERE	No	DW	RESOLVED
	紅斑	477	513	37	RELATED	SEVERE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 139* M/3[redacted] WHITE	潮紅	7	21	15	RELATED	SEVERE	No	DW	RESOLVED
109MS301/ 140* F/2[redacted] WHITE	妊娠	664	NR		UNRELATED	MODERATE	No	DW	NOT RESOLVED
109MS301/ 141* F/4[redacted] WHITE	胆汁うっ滞性肝炎	446	457	12	POSSIBLY	SEVERE	Yes	DW	RESOLVED

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109MS301/ 142* M/4[redacted] WHITE	全身性皮疹	351	368	18	RELATED	SEVERE	No	DW	RESOLVED
109MS301/ 143* F/3[redacted] WHITE	上腹部痛	55	74	20	RELATED	SEVERE	No	DW	RESOLVED
109MS301/ 144* F/4[redacted] WHITE	下痢	1	14	14	RELATED	MODERATE	No	DW	RESOLVED
	嘔吐	26	26	1	RELATED	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 145* F/3[redacted] WHITE	胃腸炎	12	34	23	RELATED	SEVERE	No	DW	RESOLVED
109MS301/ 146* F/3[redacted] WHITE	潮紅	424	NR		RELATED	SEVERE	No	DW	NOT RESOLVED
109MS301/ 147* F/4[redacted] WHITE	潮紅	168	287	120	RELATED	MILD	No	DW	RESOLVED

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109MS301/ 148* M/3[redacted]	うつ病	256	NR		UNLIKELY	MODERATE	No	DW	NOT RESOLVED
109MS301/ 149* F/2[redacted]	発疹	1			RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 150* F/2[redacted]	異常行動	1	138	138	POSSIBLY	MILD	No	DW	RESOLVED
109MS301/ 151* M/2[redacted]	腹痛	44	56	13	POSSIBLY	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 152* F/4[redacted]	潮紅	156	188	33	RELATED	MODERATE	No	DW	RESOLVED
	頭痛	156	188	33	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 153* M/3[redacted] WHITE	てんかん	534	554	21	UNRELATED	SEVERE	Yes	DW	RESOLVED
	誤嚥性肺炎	535	554	20	UNRELATED	SEVERE	Yes	DW	RESOLVED
109MS301/ 154* F/2[redacted] WHITE	潮紅	1	1	1	RELATED	MODERATE	Yes	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/155* F/4[redacted] WHITE	腹痛	1	38	38	POSSIBLY	MODERATE	No	DW	RESOLVED
	悪心	1	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
	上腹部痛	15	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
109MS301/156* F/3[redacted] WHITE	アレルギー性皮膚炎	1	1	1	POSSIBLY	MODERATE	No	DW	RESOLVED
	アレルギー性そう痒症	1	1	1	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/157* M/3[redacted] WHITE	好中球増加症	23	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 158* F/5[redacted] WHITE	多発性硬化症再発	172	NR		UNRELATED	MODERATE	No	DW	NOT RESOLVED
109MS301/ 159* F/4[redacted] PERSIAN	肝機能検査異常	65	140	76	RELATED	SEVERE	No	DW	RESOLVED
109MS301/ 160* F/3[redacted] WHITE	便秘	14	48	35	RELATED	SEVERE	Yes	DW	RESOLVED

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109MS301/ 161* F/4[redacted] WHITE	潮紅	1	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
109MS302/ 162* F/4[redacted] WHITE	潮紅	290	509	220	POSSIBLY	SEVERE	No	DW	RESOLVED
109MS302/ 163* F/1[redacted] ASIAN	多発性硬化症再発	581	588	8	UNLIKELY	SEVERE	Yes	DW	RESOLVED
	部分発作	581	588	8	UNLIKELY	SEVERE	Yes	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 164* F/2[redacted] ASIAN	多発性硬化症	514	NR		UNLIKELY	MILD	No	DW	NOT RESOLVED
109MS302/ 165* F/5[redacted] WHITE	下痢	2	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
109MS302/ 166* F/4[redacted] WHITE	腹部圧痛	337	393	57	POSSIBLY	MILD	No	DW	RESOLVED

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109MS302/ 167* F/4[redacted] WHITE	灼熱感	1	17	17	RELATED	MODERATE	No	DW	RESOLVED
	潮紅	1	17	17	RELATED	MODERATE	No	DW	RESOLVED
	全身性そう痒症	1	17	17	RELATED	MODERATE	No	DW	RESOLVED
	咳嗽	4	20	17	UNRELATED	MILD	No	DW	RESOLVED
109MS302/ 168* F/3[redacted] WHITE	振戦	135	139	5	POSSIBLY	MODERATE	No	DW	RESOLVED
	蕁麻疹	135	139	5	POSSIBLY	MODERATE	No	DW	RESOLVED

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109MS302/ 169* F/4[redacted] WHITE	腹痛	41	105	65	RELATED	SEVERE	No	DW	RESOLVED
109MS302/ 170* F/4[redacted] WHITE	潮紅	8	24	17	RELATED	MODERATE	No	DW	RESOLVED
	そう痒症	8	24	17	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 171* F/5[redacted] WHITE	高熱	1	182		RELATED	MILD	No	DW	RESOLVED
	蕁麻疹	1	182		RELATED	MODERATE	No	DW	RESOLVED
	ざ瘡様皮膚炎	1	182	182	RELATED	MODERATE	No	DW	RESOLVED

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109MS302/ 171* F/5[redacted] WHITE	潮紅	1	213	213	RELATED	MODERATE	No	DW	RESOLVED
	発疹	45	194	150	RELATED	MODERATE	No	DW	RESOLVED
	そう痒症	74	75	2	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 172* F/3[redacted] WHITE	潮紅	8	28	21	POSSIBLY	MODERATE	No	DW	RESOLVED
	頭痛	8	28	21	POSSIBLY	MODERATE	No	DW	RESOLVED
	四肢痛	8	28	21	POSSIBLY	MODERATE	No	DW	RESOLVED
	背部痛	18	29	12	POSSIBLY	MODERATE	No	DW	RESOLVED
	胸部不快感	18	29	12	POSSIBLY	MODERATE	No	DW	RESOLVED

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109MS302/ 173* F/3[redacted] HISPANIC	潮紅	1	12	12	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 174* M/5[redacted] WHITE	浮動性めまい	70	83	14	UNLIKELY	MILD	No	DW	RESOLVED
109MS302/ 175* F/4[redacted] WHITE	多発性硬化症再発	161	281	121	UNLIKELY	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 176* M/2[redacted] WHITE	多発性硬化症再発	53			UNRELATED	MILD	No	DW	RESOLVED
109MS302/ 177* F/4[redacted] WHITE	紅斑	1	4	4	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 178* M/4[redacted] WHITE	多発性硬化症再発	516	525	10	UNLIKELY	MILD	No	DW	RESOLVED

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SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

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Listing of adverse events that led to discontinuation of study drug:
Studies 109MS301 and 109MS302
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Treatment group: BG00012 240 mg BID

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 179* F/3[redacted] WHITE	アラニン･アミノトランスフェラーゼ増加	1	NR		UNRELATED	MODERATE	No	DW	NOT RESOLVED
	アスパラギン酸アミノトランスフェラーゼ増加	1	NR		UNRELATED	MODERATE	No	DW	NOT RESOLVED
109MS302/ 180* F/3[redacted] WHITE	発疹	36	53	18	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/ 181* F/5[redacted] WHITE	肝酵素上昇	142	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED

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Listing of adverse events that led to discontinuation of study drug:
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Treatment group: BG00012 240 mg BID

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 182* F/5[redacted] WHITE	多発性硬化症	97	207	111	UNLIKELY	MODERATE	No	DW	RESOLVED
109MS302/ 183* F/4[redacted] WHITE	アラニン･アミノトランスフェラーゼ増加	277	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
	アスパラギン酸アミノトランスフェラーゼ増加	277	337	61	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/ 184* F/5[redacted] WHITE	潮紅	352	533		POSSIBLY	MILD	No	DW	RESOLVED

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Listing of adverse events that led to discontinuation of study drug:
Studies 109MS301 and 109MS302
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 185* F/3[redacted] WHITE	潮紅	394	476	83	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/ 186* F/3[redacted] WHITE	潮紅	29	70	42	RELATED	MILD	No	DW	RESOLVED
109MS302/ 187* M/3[redacted] WHITE	潮紅	9			POSSIBLY	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 188* F/4[redacted] WHITE	上腹部痛	595	660	66	RELATED	MODERATE	No	DW	RESOLVED
	下痢	611	660	50	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 189* F/4[redacted] WHITE	潮紅	230	309	80	RELATED	SEVERE	No	DW	RESOLVED
109MS302/ 190* M/2[redacted] WHITE	肝機能検査異常	57	NR		RELATED	MODERATE	No	DW	NOT RESOLVED

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Listing of adverse events that led to discontinuation of study drug:
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 191* M/3[redacted] WHITE	アラニン･アミノトランスフェラーゼ増加	29	NR		UNLIKELY	MODERATE	No	DW	NOT RESOLVED
	アスパラギン酸アミノトランスフェラーゼ増加	29	NR		UNLIKELY	MODERATE	No	DW	NOT RESOLVED
	γ－グルタミルトランスフェラーゼ増加	56	NR		UNLIKELY	MODERATE	No	DW	NOT RESOLVED
109MS302/ 192* F/3[redacted] WHITE	血中乳酸脱水素酵素増加	593	671	79	POSSIBLY	SEVERE	No	DW	RESOLVED

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Listing of adverse events that led to discontinuation of study drug:
Studies 109MS301 and 109MS302
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Treatment group: BG00012 240 mg BID

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109MS302/ 193* F/2[redacted] WHITE	双極１型障害	637	NR		UNRELATED	SEVERE	Yes	DW	NOT RESOLVED
109MS302/ 194* M/3[redacted]	多発性硬化症再発	375			UNRELATED	MODERATE	No	DW	RESOLVED
109MS302/ 195* M/3[redacted]	多発性硬化症再発	480	NR		UNRELATED	MODERATE	No	DW	NOT RESOLVED
109MS302/ 196* F/2[redacted] WHITE	頭痛	2	10	9	POSSIBLY	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 196* F/2[redacted] WHITE	悪心	10	10	1	POSSIBLY	MODERATE	No	DW	RESOLVED
	嘔吐	10	10	1	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/ 197* F/4[redacted] WHITE	腹痛	21	25	5	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 198* F/3[redacted] WHITE	頭痛	69	72	4	POSSIBLY	MODERATE	No	DW	RESOLVED
	嘔吐	69	72	4	RELATED	MODERATE	No	DW	RESOLVED

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109MS302/ 199* M/2[redacted] WHITE	頭痛	1	7	7	RELATED	SEVERE	No	DW	RESOLVED
109MS302/ 200* M/3[redacted] WHITE	潮紅	336	365	30	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 201* M/3[redacted] WHITE	下腹部痛	31	54	24	POSSIBLY	MILD	No	DW	RESOLVED
	ほてり	31	54	24	POSSIBLY	MODERATE	No	DW	RESOLVED
	そう痒症	31	54	24	POSSIBLY	MILD	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 201* M/3[redacted] WHITE	好酸球数増加	33	43	11	POSSIBLY	MILD	No	DW	RESOLVED
	好酸球百分率増加	33	43	11	POSSIBLY	MILD	No	DW	RESOLVED
109MS302/ 203* M/3[redacted] WHITE	嘔吐	31	34	4	RELATED	SEVERE	No	DW	RESOLVED
109MS302/ 204* F/3[redacted] WHITE	潮紅	561	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 205* F/3[redacted] WHITE	回転性めまい	97	118	22	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/ 206* F/5[redacted] WHITE	潮紅	331	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 207* F/3[redacted] WHITE	胃腸障害	35	52	18	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 208* F/5[redacted] WHITE	多発性硬化症再発	327	421	95	UNRELATED	MODERATE	No	DW	RESOLVED
109MS301/ 209* F/5[redacted] WHITE	下腹部痛	394	396	3	POSSIBLY	MODERATE	Yes	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/210* F/3[redacted] BLACK OR AFRICAN AMERICAN	交通事故	62	62	1	UNRELATED	SEVERE	Yes	DW	RESOLVED
109MS301/211* M/5[redacted] WHITE	腹痛	3	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
	平衡障害	3	NR		UNLIKELY	MILD	No	DW	NOT RESOLVED
	胸痛	3	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
	不快感	3	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
	疲労	3	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
	頭痛	3	NR		UNLIKELY	MILD	No	DW	NOT RESOLVED
	四肢痛	3	NR		UNLIKELY	MILD	No	DW	NOT RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 211* M/5[redacted] WHITE	霧視	3	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
109MS301/ 212* F/4[redacted] WHITE	腹痛	28	38	11	POSSIBLY	MODERATE	No	DW	RESOLVED
	背部痛	28	38	11	POSSIBLY	SEVERE	No	DW	RESOLVED
	下痢	28	38	11	POSSIBLY	MILD	No	DW	RESOLVED
	腹部膨満	29	38	10	POSSIBLY	SEVERE	No	DW	RESOLVED
	側腹部痛	30	38	9	POSSIBLY	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 213* F/5[redacted] WHITE	悪心	379	NR		UNLIKELY	MILD	No	DW	NOT RESOLVED
	嘔吐	379	NR		UNLIKELY	MILD	No	DW	NOT RESOLVED
109MS301/ 214* F/3[redacted] WHITE	そう痒性皮疹	29	32	4	POSSIBLY	MILD	No	DW	RESOLVED
	そう痒性皮疹	29	32	4	POSSIBLY	MILD	No	DW	RESOLVED
	そう痒性皮疹	31	32	2	POSSIBLY	MILD	No	DW	RESOLVED
	そう痒性皮疹	31	32	2	POSSIBLY	MILD	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 215* F/4[redacted] WHITE	眼帯状疱疹	88	NR		UNLIKELY	SEVERE	No	DW	NOT RESOLVED
109MS301/ 216* F/3[redacted] WHITE	全身性皮疹	11	14	4	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 217* F/4[redacted] WHITE	子宮頚部癌	556	595	40	UNLIKELY	MODERATE	Yes	DW	RESOLVED

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109MS301/ 218* F/4[redacted] WHITE	蕁麻疹	15	35	21	POSSIBLY	MODERATE	No	DW	RESOLVED
	上腹部痛	20	35	16	POSSIBLY	SEVERE	No	DW	RESOLVED
	憩室炎	22	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
109MS301/ 219* F/3[redacted] WHITE	腹部膨満	20	34	15	RELATED	MODERATE	No	DW	RESOLVED
	下痢	20	32	13	RELATED	MODERATE	No	DW	RESOLVED
	悪心	20	53	34	RELATED	MODERATE	No	DW	RESOLVED
	耳不快感	21	24	4	RELATED	MILD	No	DW	RESOLVED
	腹痛	23	34	12	RELATED	MODERATE	No	DW	RESOLVED

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109MS301/ 220* F/4[redacted] WHITE	潮紅	1	82	82	POSSIBLY	MILD	No	DW	RESOLVED
	腹部膨満	12	83	72	POSSIBLY	MILD	No	DW	RESOLVED
109MS301/ 221* F/4[redacted] BLACK OR AFRICAN AMERICAN	嘔吐	10	29	20	RELATED	MILD	No	DW	RESOLVED
109MS301/ 222* F/3[redacted] WHITE	うっ血性心不全	477	668	192	UNLIKELY	SEVERE	Yes	DW	RESOLVED

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109MS301/ 222* F/3[redacted] WHITE	心筋症	478	NR		UNLIKELY	MODERATE	No	DW	NOT RESOLVED
109MS301/ 223* F/4[redacted] WHITE	肝機能検査異常	362	408	47	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 224* F/3[redacted] WHITE	多発性硬化症再発	43			UNRELATED	MODERATE	No	DW	RESOLVED

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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Treatment group: BG00012 240 mg TID

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 225* F/4[redacted] WHITE	肝障害	29	65	37	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 226* M/4[redacted] WHITE	腹痛	12	53	42	RELATED	MODERATE	No	DW	RESOLVED
	下痢	12	53	42	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 227* F/5[redacted] WHITE	腹痛	11	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/228* F/4[redacted] WHITE	耳鳴	3	5	3	POSSIBLY	MILD	No	DW	RESOLVED
	下痢	5	5	1	RELATED	MILD	No	DW	RESOLVED
	悪心	5	5	1	RELATED	MODERATE	No	DW	RESOLVED
	膣出血	5	5	1	UNLIKELY	MILD	No	DW	RESOLVED
	回転性めまい	5	5	1	POSSIBLY	MODERATE	No	DW	RESOLVED
	嘔吐	5	5	1	RELATED	MODERATE	No	DW	RESOLVED
109MS301/229* F/4[redacted] WHITE	鼓腸	1	20	20	RELATED	MODERATE	No	DW	RESOLVED
	腹痛	11	20	10	RELATED	SEVERE	No	DW	RESOLVED
	悪心	11	15	5	RELATED	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/230* F/4[redacted] WHITE	上腹部痛	22	26	5	RELATED	SEVERE	No	DW	RESOLVED
	上腹部痛	22	26	5	RELATED	SEVERE	No	DW	RESOLVED
	悪心	22	26	5	RELATED	SEVERE	No	DW	RESOLVED
109MS301/231* F/2[redacted] PATIENT IS MIXED, BLACK ANDWHITE.	上腹部痛	67	68	2	RELATED	SEVERE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 232* F/4[redacted] HISPANIC	潮紅	152	152	1	POSSIBLY	SEVERE	Yes	DW	RESOLVED
	そう痒症	152	152	1	POSSIBLY	SEVERE	Yes	DW	RESOLVED
109MS301/ 233* F/3[redacted] WHITE	アナフィラキシー様反応	13	16	4	RELATED	SEVERE	Yes	DW	RESOLVED
109MS301/ 234* F/4[redacted] WHITE	潮紅	113	116	4	POSSIBLY	MODERATE	No	DW	RESOLVED

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109MS301/ 235* M/4[redacted] WHITE	虚血性脳卒中	139	140	2	UNLIKELY	SEVERE	Yes	DW	RESOLVED
109MS301/ 236* F/4[redacted] ASIAN	急性冠動脈症候群	174	192	19	UNLIKELY	SEVERE	Yes	DW	RESOLVED
109MS301/ 237* M/5[redacted] ASIAN	多発性硬化症再発	504	507	4	UNRELATED	MODERATE	Yes	DW	RESOLVED
	二次性進行型多発性硬化症	588	NR		UNRELATED	MODERATE	No	DW	NOT RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 237* M/5[redacted] ASIAN	二次性進行型多発性硬化症	588	NR		UNRELATED	MODERATE	No	DW	NOT RESOLVED
109MS301/ 238* F/3[redacted] ASIAN	多発性硬化症再発	334	335	2	UNRELATED	SEVERE	No	DW	RESOLVED
109MS301/ 239* F/4[redacted] ASIAN	腎機能障害	222	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED

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109MS301/ 240* F/2[redacted] WHITE	尿中蛋白陽性	21	80	60	RELATED	SEVERE	No	DW	RESOLVED
	腹部不快感	56			RELATED	MODERATE	No	DW	RESOLVED
	下痢	56			RELATED	MODERATE	No	DW	RESOLVED
	潮紅	56			RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 241* F/4[redacted] WHITE	下痢	15	18	4	RELATED	SEVERE	No	DW	RESOLVED
	嘔吐	15	18	4	RELATED	SEVERE	No	DW	RESOLVED
	灼熱感	21	21	1	RELATED	SEVERE	No	DW	RESOLVED
	発熱	21	21	1	RELATED	MODERATE	No	DW	RESOLVED

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109MS301/ 242* F/5[redacted] WHITE	多発性硬化症再発	343	376	34	UNRELATED	MODERATE	Yes	DW	RESOLVED
109MS301/ 243* F/2[redacted] WHITE	上腹部痛	13	21	9	RELATED	SEVERE	No	DW	RESOLVED
109MS301/ 244* F/4[redacted] WHITE	アラニン･アミノトランスフェラーゼ増加	335	372	38	POSSIBLY	MODERATE	No	DW	RESOLVED
	アスパラギン酸アミノトランスフェラーゼ増加	372	448	77	POSSIBLY	SEVERE	No	DW	RESOLVED

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109MS301/ 245* F/4[redacted] WHITE	過敏症	1	1	1	POSSIBLY	SEVERE	No	DW	RESOLVED
109MS301/ 246* F/5[redacted] WHITE	咳嗽	1	114	114	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 247* F/4[redacted] WHITE	乳癌	462	468	7	UNLIKELY	MODERATE	No	DW	RESOLVED
	乳癌	468	476	9	UNLIKELY	MODERATE	Yes	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 248* M/4[redacted] WHITE	腹痛	2	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
	蟻走感	2	4	3	POSSIBLY	MODERATE	No	DW	RESOLVED
	多汗症	2	4	3	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 249* M/5[redacted] WHITE	全身紅斑	155	155	1	RELATED	SEVERE	No	DW	RESOLVED
109MS301/ 250* M/4[redacted] WHITE	腎臓痛	2	6	5	POSSIBLY	MODERATE	No	DW	RESOLVED

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109MS301/ 251* M/3[redacted] WHITE	アレルギー性皮膚炎	257	273	17	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 252* F/5[redacted] WHITE	アラニン･アミノトランスフェラーゼ増加	29	47	19	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 253* F/5[redacted] WHITE	潮紅	1	4	4	RELATED	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 254* F/4[redacted] WHITE	多発性硬化症再発	209	225	17	UNRELATED	MILD	No	DW	RESOLVED
109MS301/ 255* M/2[redacted] WHITE	肝機能検査異常	309	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
109MS301/ 256* F/2[redacted] WHITE	多発性硬化症再発	476	483	8	UNRELATED	MILD	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS301/ 102* F/3[redacted] WHITE	過敏症	2	34	33	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 257* F/2[redacted] WHITE	アレルギー性皮膚炎	2	4	3	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 258* M/3[redacted] WHITE	多発性硬化症再発	155	168	14	UNLIKELY	MODERATE	No	DW	RESOLVED

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109MS301/ 259* F/4[redacted] WHITE	関節痛	259	349	91	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 800* F/4[redacted] HISPANIC	高血糖	3	NR		UNLIKELY	MODERATE	No	DW	NOT RESOLVED
109MS301/ 261* F/3[redacted]	アレルギー性皮膚炎	1	1	1	RELATED	MILD	No	DW	RESOLVED
109MS301/ 262* F/4[redacted]	紅斑	71	139		RELATED	MODERATE	No	DW	RESOLVED

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109MS301/ 262* F/4[redacted]	皮膚灼熱感	71	139		RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 263* F/3[redacted]	胃炎	8	18	11	POSSIBLY	MODERATE	No	DW	RESOLVED
	胃炎	18	NR		POSSIBLY	MODERATE	Yes	DW	NOT RESOLVED
109MS301/ 264* F/3[redacted]	潮紅	1	3	3	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 265* F/4[redacted] WHITE	下痢	9	29	21	RELATED	MODERATE	No	DW	RESOLVED

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109MS301/ 265* F/4[redacted] WHITE	悪心	9	29	21	RELATED	MODERATE	No	DW	RESOLVED
	上腹部痛	10	29	20	RELATED	MODERATE	No	DW	RESOLVED
109MS301/ 266* F/4[redacted] ARABIC	上腹部痛	2	23	22	POSSIBLY	MODERATE	No	DW	RESOLVED
	嘔吐	10	23	14	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/ 267* F/2[redacted] WHITE	潮紅	1	149	828	POSSIBLY	MILD	No	DW	RESOLVED

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109MS301/ 268* F/3[redacted] WHITE	体重増加	191	97		UNLIKELY	MODERATE	No	DW	RESOLVED
109MS301/ 269* F/4[redacted] WHITE	下痢	15	48	34	POSSIBLY	MILD	No	DW	RESOLVED
109MS301/ 270* F/4[redacted] WHITE	頭痛	13	14	2	POSSIBLY	SEVERE	No	DW	RESOLVED

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109MS301/271* F/3[redacted] WHITE	灼熱感	392	392	1	POSSIBLY	MODERATE	No	DW	RESOLVED
	過敏症	392	392	1	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS301/272* M/5[redacted] WHITE	過敏症	29	85	57	RELATED	MODERATE	Yes	DW	RESOLVED
109MS301/273* F/3[redacted] MIXED SOUTH AFRICAN	多発性硬化症再発	420	424	5	UNRELATED	SEVERE	No	DW	RESOLVED

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109MS301/ 273* F/3[redacted] MIXED SOUTH AFRICAN	多発性硬化症再発	424	588	165	UNRELATED	SEVERE	Yes	DW	RESOLVED
	嘔吐	424	588	165	UNRELATED	SEVERE	Yes	DW	RESOLVED
109MS301/ 274* M/ 3[redacted] WHITE	多発性硬化症	419	700	282	UNLIKELY	MILD	No	DW	RESOLVED
109MS301/ 275* F/4[redacted] WHITE	多発性硬化症再発	450	455	6	UNRELATED	MODERATE	Yes	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 276* M/5[redacted] WHITE	腹痛	23	25	3	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 277* F/4[redacted] WHITE	多発性硬化症再発	107	119	13	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/ 278* F/3[redacted] WHITE	下痢	11	22	12	RELATED	MILD	No	DW	RESOLVED
	悪心	11	22	12	RELATED	MILD	No	DW	RESOLVED
	嘔吐	11	22	12	RELATED	MILD	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
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Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 279* F/2[redacted] WHITE	潮紅	585	587	3	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/ 280* F/3[redacted] WHITE	多発性硬化症	171	NR		UNLIKELY	MODERATE	No	DW	NOT RESOLVED
109MS302/ 281* F/3[redacted] WHITE	蕁麻疹	54	64	11	POSSIBLY	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 282* F/3[redacted] WHITE	蛋白尿	29	716	688	POSSIBLY	MILD	No	DW	RESOLVED
	慢性腎不全	29	716	688	POSSIBLY	MILD	No	DW	RESOLVED
109MS302/ 283* F/3[redacted] WHITE	灼熱感	26	49	704	RELATED	MILD	No	DW	RESOLVED
	潮紅	26	49	704	RELATED	MILD	No	DW	RESOLVED
	全身性そう痒症	26	49	704	RELATED	MILD	No	DW	RESOLVED
109MS302/ 284* M/3[redacted] WHITE	潮紅	40	55	16	POSSIBLY	MILD	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 284* M/3[redacted] WHITE	気分変化	40	55	16	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/ 285* F/2[redacted] WHITE	ほてり	579	599	21	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 286* F/3[redacted] WHITE	悪心	11	32	22	RELATED	MODERATE	No	DW	RESOLVED
	嘔吐	11	32	22	RELATED	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 287* F/4[redacted] WHITE	多発性硬化症再発	359	504	146	UNLIKELY	MODERATE	No	DW	RESOLVED
109MS302/ 288* F/5[redacted] HISPANIC	帯状疱疹	300	308	9	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/ 289* F/4[redacted] WHITE	悪心	58	59	2	RELATED	MILD	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 290* F/4[redacted] WHITE	胸痛	7	7	1	POSSIBLY	MILD	No	DW	RESOLVED
109MS302/ 291* F/3[redacted] WHITE	脱毛症	26	39	14	POSSIBLY	SEVERE	No	DW	RESOLVED
	狭心症	26	NR		POSSIBLY	SEVERE	No	DW	NOT RESOLVED
109MS302/ 292* F/3[redacted] WHITE	上腹部痛	349	430	82	POSSIBLY	MODERATE	No	DW	RESOLVED

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109MS302/ 293* F/4[redacted] WHITE	上腹部痛	2	16	15	POSSIBLY	MODERATE	No	DW	RESOLVED
	下痢	2	16	15	POSSIBLY	MODERATE	No	DW	RESOLVED
	上腹部痛	18	61	44	POSSIBLY	MODERATE	No	DW	RESOLVED
	下痢	18	61	44	POSSIBLY	MODERATE	No	DW	RESOLVED
	上腹部痛	72	109	38	POSSIBLY	MODERATE	No	DW	RESOLVED
	下痢	72	109	38	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/ 294* F/4[redacted] WHITE	浮動性めまい	1	22	22	POSSIBLY	MILD	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 295* F/4[redacted] WHITE	消化管感染	5	NR		POSSIBLY	SEVERE	No	DW	NOT RESOLVED
	体重減少	5	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
109MS302/ 296* F/2[redacted] WHITE	下痢	142	363		RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 297* F/3[redacted] WHITE	悪心	8	27	20	RELATED	SEVERE	No	DW	RESOLVED

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109MS302/ 298* F/3[redacted] WHITE	潮紅	99	116	18	RELATED	SEVERE	No	DW	RESOLVED
109MS302/ 299* F/3[redacted] WHITE	腹部不快感	21	49	29	RELATED	MODERATE	No	DW	RESOLVED
	下痢	21	49	29	RELATED	MODERATE	No	DW	RESOLVED
	悪心	21	49	29	RELATED	MODERATE	No	DW	RESOLVED
	発疹	40	49	10	RELATED	MODERATE	No	DW	RESOLVED
	気道感染	49			POSSIBLY	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/300* F/2[redacted] WHITE	嘔吐	15	30	16	RELATED	MODERATE	No	DW	RESOLVED
109MS302/301* F/3[redacted] WHITE	上腹部痛	8	25	18	POSSIBLY	MODERATE	No	DW	RESOLVED
	下痢	8	25	18	POSSIBLY	MODERATE	No	DW	RESOLVED
	悪心	8	25	18	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/302* F/3[redacted] WHITE	腹痛	21	22	2	RELATED	MODERATE	No	DW	RESOLVED
	腹部硬直	21	22	2	RELATED	MODERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/303* F/3[redacted] WHITE	胃腸障害	2	22	21	RELATED	MODERATE	No	DW	RESOLVED
109MS302/304* F/5[redacted] WHITE	そう痒症	363	477	115	POSSIBLY	MILD	No	DW	RESOLVED
	潮紅	428	477	50	POSSIBLY	MODERATE	No	DW	RESOLVED
109MS302/305* F/2[redacted] WHITE	胃腸障害	28	34	7	RELATED	SEVERE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 306* M/5[redacted] WHITE	嘔吐	24	25	2	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 307* F/4[redacted] WHITE	白血球数減少	56	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
109MS302/ 308* M/4[redacted] WHITE	下痢	29	31	3	RELATED	SEVERE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 309* M/2[redacted] WHITE	腎結石症	340	NR		RELATED	MILD	No	DW	NOT RESOLVED
109MS302/ 310* F/3[redacted] WHITE	胃腸障害	18	57	40	POSSIBLY	SEVERE	No	DW	RESOLVED
109MS302/ 311* M/4[redacted] WHITE	尿路感染	59	66	8	UNRELATED	SEVERE	Yes	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 312* F/4[redacted]	血尿	262	43		POSSIBLY	MILD	No	DW	RESOLVED
109MS302/ 313* F/3[redacted]	悪寒	167	167	1	RELATED	MODERATE	No	DW	RESOLVED
	潮紅	167	167	1	RELATED	SEVERE	No	DW	RESOLVED
	ほてり	167	167	1	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 314* M/4[redacted] WHITE	背部痛	1	1	1	RELATED	MODERATE	No	DW	RESOLVED
	潮紅	1	1	1	RELATED	MILD	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 315* M/2[redacted] WHITE	過敏症	121	127	7	POSSIBLY	MOIERATE	No	DW	RESOLVED
109MS302/ 316* F/4[redacted] HISPANIC	多発性硬化症再発	40	43	4	UNRELATED	MOIERATE	No	DW	RESOLVED
	多発性硬化症再発	43	47	5	UNRELATED	MOIERATE	Yes	DW	RESOLVED
109MS302/ 317* F/4[redacted] WHITE	全身性皮疹	32	34	3	POSSIBLY	MOIERATE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 318* F/3[redacted] WHITE	上腹部痛	13	23	11	RELATED	MOIERATE	No	DW	RESOLVED
	下痢	13	23	11	RELATED	MOIERATE	No	DW	RESOLVED

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Treatment group: GA

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 319* F/4[redacted] WHITE	うつ病	2	27	26	UNLIKELY	MODERATE	No	DW	RESOLVED
109MS302/ 320* F/4[redacted] ASIAN	アナフィラキシー反応	127	128	2	POSSIBLY	MODERATE	Yes	DW	RESOLVED
109MS302/ 321* F/3[redacted] ASIAN	多発性硬化症	251	590	340	UNRELATED	SEVERE	No	DW	RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 322* F/2[redacted] ASIAN	アラニン･アミノトランスフェラーゼ増加	337	421	85	POSSIBLY	MILD	No	DW	RESOLVED
	アスパラギン酸アミノトランスフェラーゼ増加	337	437	101	POSSIBLY	MILD	No	DW	RESOLVED
109MS302/ 323* F/4[redacted] WHITE	注射部位結節	55	260	206	RELATED	MILD	No	DW	RESOLVED
109MS302/ 202* F/3[redacted] WHITE	多発性硬化症再発	193	NR		UNRELATED	MODERATE	No	DW	NOT RESOLVED

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/325* F/2[redacted] WHITE	注射部位紅斑	12	29	18	RELATED	MODERATE	No	DW	RESOLVED
	注射部位そう痒感	12	29	18	RELATED	MODERATE	No	DW	RESOLVED
	注射部位腫脹	12	12	1	RELATED	MODERATE	No	DW	RESOLVED
	注射部位熱感	12	29	18	RELATED	MODERATE	No	DW	RESOLVED
109MS302/326* F/4[redacted] WHITE	注射部位紅斑	1	75	75	RELATED	SEVERE	No	DW	RESOLVED
	注射部位腫瘤	1	75	75	RELATED	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

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Treatment group: GA

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 327* F/3[redacted] WHITE	注射部位紅斑	1	29	29	RELATED	MODERATE	No	DW	RESOLVED
	注射部位疼痛	1	29	29	RELATED	MODERATE	No	DW	RESOLVED
	注射部位そう痒感	1	29	29	RELATED	MODERATE	No	DW	RESOLVED
	注射部位腫脹	1	29	29	RELATED	MODERATE	No	DW	RESOLVED
	頻脈	1	29	29	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 328* F/3[redacted] HISPANIC	呼吸困難	514	525	12	RELATED	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Listing of adverse events that led to discontinuation of study drug:
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Treatment group: GA

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/329* M/3[redacted] WHITE	多発性硬化症再発	555	631	77	UNRELATED	MODERATE	No	DW	RESOLVED
109MS302/330* F/3[redacted] WHITE	悪心	2	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
	注射部位疼痛	9	NR		RELATED	MILD	No	DW	NOT RESOLVED
	齲歯	21	79	59	UNRELATED	MILD	No	DW	RESOLVED
109MS302/331* F/2[redacted] WHITE	肝酵素上昇	85	NR		UNRELATED	MILD	No	DW	NOT RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

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Listing of adverse events that led to discontinuation of study drug:
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Treatment group: GA

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/331* F/2[redacted] WHITE	アラニン･アミノトランスフェラーゼ異常	113	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
	アスパラギン酸アミノトランスフェラーゼ増加	113	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
	血中アルカリホスファターゼ異常	113	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
	γ－グルタミルトランスフェラーゼ増加	113	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED
109MS302/333* M/5[redacted] WHITE	多発性硬化症再発	353	369	17	UNRELATED	MILD	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 310* F/3[redacted] WHITE	過敏症	91	93	3	RELATED	SEVERE	Yes	DW	RESOLVED
109MS302/ 335* F/3[redacted] WHITE	末梢性浮腫	194	342	149	POSSIBLY	MODERATE	Yes	DW	RESOLVED
109MS302/ 336* F/4[redacted] WHITE	多発性硬化症再発	428	490	63	POSSIBLY	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 337* F/2[redacted] WHITE	注射部位疼痛	1	57	57	RELATED	MODERATE	No	DW	RESOLVED
	注射部位硬結	19	57	39	RELATED	MILD	No	DW	RESOLVED
	注射部位そう痒感	19	57	39	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 338* F/4[redacted] WHITE	注射部位反応	15	113	99	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 339* F/2[redacted] WHITE	多発性硬化症再発	420	NR		RELATED	MODERATE	No	DW	NOT RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

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Listing of adverse events that led to discontinuation of study drug:
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/340* F/2[redacted] WHITE	無力症	44	44	1	POSSIBLY	MODERATE	No	DW	RESOLVED
	浮動性めまい	44	44	1	POSSIBLY	MODERATE	No	DW	RESOLVED
	紅斑	44	44	1	POSSIBLY	MILD	No	DW	RESOLVED
	顔面腫脹	44	44	1	POSSIBLY	MILD	No	DW	RESOLVED
109MS302/341* F/3[redacted] WHITE	無力症	41	42	2	POSSIBLY	MILD	No	DW	RESOLVED
	胸痛	41	41	1	POSSIBLY	MODERATE	No	DW	RESOLVED
	呼吸困難	41	41	1	POSSIBLY	MODERATE	No	DW	RESOLVED
	紅斑	41	41	1	POSSIBLY	MODERATE	No	DW	RESOLVED
	筋力低下	41	NR		POSSIBLY	MILD	No	DW	NOT RESOLVED
	頻尿	41	NR		UNLIKELY	MILD	No	DW	NOT RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female
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Listing of adverse events that led to discontinuation of study drug:
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 341* F/3[redacted] WHITE	顔面腫脹	41	41	1	POSSIBLY	MODERATE	No	DW	RESOLVED
	振戦	41	41	1	POSSIBLY	MILD	No	DW	RESOLVED
109MS302/ 334* F/3[redacted] WHITE	上腹部痛	61	61	1	RELATED	MILD	No	DW	RESOLVED
	無力症	61	61	1	RELATED	MODERATE	No	DW	RESOLVED
	浮動性めまい	61	61	1	RELATED	MODERATE	No	DW	RESOLVED
	頭痛	61	61	1	RELATED	MODERATE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

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Listing of adverse events that led to discontinuation of study drug:
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ *343 F/4[redacted] WHITE	壊死	283	505	223	RELATED	MILD	No	DW	RESOLVED
109MS302/ 383* F/4[redacted] WHITE	非心臓性胸痛	460	460	1	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 384* F/3[redacted] WHITE	アラニン･アミノトランスフェラーゼ増加	250	NR		POSSIBLY	SEVERE	No	DW	NOT RESOLVED
	アスパラギン酸アミノトランスフェラーゼ増加	250	NR		POSSIBLY	SEVERE	No	DW	NOT RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

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Listing of adverse events that led to discontinuation of study drug:
Studies 109MS301 and 109MS302
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 335* F/4[redacted] WHITE	子宮内膜癌	182	244	63	UNLIKELY	MODERATE	Yes	DW	RESOLVED
	アナフィラキシー反応	216	219	4	RELATED	SEVERE	Yes	DW	RESOLVED
109MS302/ 385* F/3[redacted] WHITE	多発性硬化症再発	6	10	5	UNRELATED	MODERATE	No	DW	RESOLVED
109MS302/ 386* F/2[redacted]	トランスアミナーゼ上昇	222			POSSIBLY	MODERATE	No	DW	RESOLVED
	腹痛	693	238		POSSIBLY	MILD	No	DW	RESOLVED
	嘔吐	693	238		POSSIBLY	MILD	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

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Listing of adverse events that led to discontinuation of study drug:
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Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 387* F/4[redacted] WHITE	注射部位疼痛	1	34	34	RELATED	MODERATE	No	DW	RESOLVED
109MS302/ 350* M/2[redacted] WHITE	自殺既遂	529	529	1	UNLIKELY	SEVERE	Yes	DW	RESOLVED
109MS302/ 389* F/3[redacted] WHITE	ネフローゼ症候群	330	423	94	POSSIBLY	SEVERE	No	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

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Listing of adverse events that led to discontinuation of study drug:
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Treatment group: GA

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 390* F/5[redacted] HISPANIC	頭痛	15	NR		RELATED	MODERATE	No	DW	NOT RESOLVED
	悪心	15	NR		RELATED	MODERATE	No	DW	NOT RESOLVED
	皮膚硬結	15	NR		RELATED	MODERATE	No	DW	NOT RESOLVED
	頻脈	15	NR		RELATED	MODERATE	No	DW	NOT RESOLVED
	嘔吐	15	NR		RELATED	MODERATE	No	DW	NOT RESOLVED
109MS302/ 342* F/3[redacted] WHITE	心房細動	25	70	46	POSSIBLY	SEVERE	No	DW	RESOLVED
	心筋炎	25	70	46	POSSIBLY	SEVERE	Yes	DW	RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

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Listing of adverse events that led to discontinuation of study drug:
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Treatment group: GA

Subject Sex/Age Race	MedDRA Preferred Term	Study Day Onset (a)(b)	Study Day Res	Dur (days)	Relationship to Study Drug	Severity	Serious	Action Taken with Study Drug	Outcome
109MS302/ 391* M/3[redacted] WHITE	ミクロアルブミン尿	1	NR		POSSIBLY	MODERATE	No	DW	NOT RESOLVED

(a) #=On or after the subject switched to alternate MS medication
(b) ^=Adverse Event with onset prior to dosing
Abbreviations: Res=Resolution, NR=Not Recovered/Not Resolved, Dur=Duration, NONE=Dose Not Changed, DW=Drug Withdrawn, DI=Drug Interrupted, DR=Dose Reduced, M=Male, F=Female

SOURCE: BG12MS/JAPAN/ISS/L-AE-DISCON-A.SAS DATE: 02DEC2015

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Table 122: Incidence of Adverse Events That Led to Dose Reduction by System Organ Class and Preferred Term: Studies 109MS301 and 109MS302

Incidence of adverse events that led to dose reduction by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with an event	18 (2)	74 (10)	74 (10)	148 (10)	1 (<1)
感染症および寄生虫症	1 (<1)	3 (<1)	6 (<1)	9 (<1)	0
消化管感染	0	1 (<1)	4 (<1)	5 (<1)	0
胃腸炎	1 (<1)	2 (<1)	0	2 (<1)	0
ウイルス性胃腸炎	0	0	1 (<1)	1 (<1)	0
鼻咽頭炎	0	0	1 (<1)	1 (<1)	0
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	1 (<1)	0	0	0	0
乳房新生物	1 (<1)	0	0	0	0
免疫系障害	0	1 (<1)	2 (<1)	3 (<1)	0
過敏症	0	1 (<1)	2 (<1)	3 (<1)	0
精神障害	2 (<1)	0	0	0	0
不眠症	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose reduction, regardless of reason. Adverse events that may have initially led to dose reduction but then subsequently led study treatment discontinuation are therefore not included.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-REDUC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to dose reduction by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
神経過敏	1 (<1)	0	0	0	0
神経系障害	2 (<1)	6 (<1)	4 (<1)	10 (<1)	1 (<1)
頭痛	2 (<1)	1 (<1)	3 (<1)	4 (<1)	0
浮動性めまい	0	3 (<1)	0	3 (<1)	0
異常感覚	0	2 (<1)	0	2 (<1)	0
灼熱感	0	0	1 (<1)	1 (<1)	0
多発性硬化症再発	0	0	0	0	1 (<1)
心臓障害	1 (<1)	1 (<1)	0	1 (<1)	0
期外収縮	0	1 (<1)	0	1 (<1)	0
動悸	1 (<1)	0	0	0	0
血管障害	1 (<1)	23 (3)	20 (3)	43 (3)	0
潮紅	1 (<1)	21 (3)	18 (2)	39 (3)	0
ほてり	0	2 (<1)	1 (<1)	3 (<1)	0
充血	0	1 (<1)	1 (<1)	2 (<1)	0
呼吸器、胸郭および縦隔障害	0	1 (<1)	1 (<1)	2 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose reduction, regardless of reason. Adverse events that may have initially led to dose reduction but then subsequently led study treatment discontinuation are therefore not included.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-REDUC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to dose reduction by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
喘息	0	1 (<1)	0	1 (<1)	0
口腔咽頭痛	0	0	1 (<1)	1 (<1)	0
胃腸障害	13 (2)	49 (6)	51 (7)	100 (7)	0
悪心	1 (<1)	12 (2)	16 (2)	28 (2)	0
上腹部痛	1 (<1)	14 (2)	12 (2)	26 (2)	0
下痢	3 (<1)	11 (1)	15 (2)	26 (2)	0
胃腸障害	2 (<1)	7 (<1)	16 (2)	23 (2)	0
腹痛	5 (<1)	13 (2)	8 (1)	21 (1)	0
嘔吐	0	6 (<1)	11 (1)	17 (1)	0
消化不良	1 (<1)	2 (<1)	1 (<1)	3 (<1)	0
胃炎	0	1 (<1)	2 (<1)	3 (<1)	0
胃食道逆流性疾患	2 (<1)	1 (<1)	1 (<1)	2 (<1)	0
腹部不快感	1 (<1)	1 (<1)	0	1 (<1)	0
腹部膨満	0	0	1 (<1)	1 (<1)	0
食中毒	0	0	1 (<1)	1 (<1)	0
胃障害	0	1 (<1)	0	1 (<1)	0
歯痛	0	0	1 (<1)	1 (<1)	0
歯肉痛	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose reduction, regardless of reason. Adverse events that may have initially led to dose reduction but then subsequently led study treatment discontinuation are therefore not included.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-REDUC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to dose reduction by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
肝胆道系障害	0	1 (<1)	0	1 (<1)	0
高トランスアミナーゼ血症	0	1 (<1)	0	1 (<1)	0
皮膚および皮下組織障害	2 (<1)	9 (1)	10 (1)	19 (1)	0
紅斑	0	5 (<1)	1 (<1)	6 (<1)	0
そう痒症	1 (<1)	3 (<1)	3 (<1)	6 (<1)	0
発疹	1 (<1)	0	4 (<1)	4 (<1)	0
皮膚乾燥	0	1 (<1)	0	1 (<1)	0
多汗症	0	1 (<1)	0	1 (<1)	0
寝汗	0	0	1 (<1)	1 (<1)	0
全身性そう痒症	0	0	1 (<1)	1 (<1)	0
そう痒性皮疹	0	0	1 (<1)	1 (<1)	0
皮膚灼熱感	0	0	1 (<1)	1 (<1)	0
筋骨格系および結合組織障害	1 (<1)	2 (<1)	3 (<1)	5 (<1)	0
関節痛	0	2 (<1)	1 (<1)	3 (<1)	0
背部痛	0	0	1 (<1)	1 (<1)	0
骨痛	0	0	1 (<1)	1 (<1)	0
筋痙縮	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose reduction, regardless of reason. Adverse events that may have initially led to dose reduction but then subsequently led study treatment discontinuation are therefore not included.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-REDUC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to dose reduction by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
腎および尿路障害	1 (<1)	0	1 (<1)	1 (<1)	0
蛋白尿	0	0	1 (<1)	1 (<1)	0
腎臓痛	1 (<1)	0	0	0	0
生殖系および乳房障害	0	1 (<1)	1 (<1)	2 (<1)	0
射精障害	0	1 (<1)	0	1 (<1)	0
閉経後出血	0	0	1 (<1)	1 (<1)	0
一般・全身障害および投与部位の状態	0	2 (<1)	6 (<1)	8 (<1)	0
無力症	0	1 (<1)	1 (<1)	2 (<1)	0
疲労	0	1 (<1)	1 (<1)	2 (<1)	0
顔面痛	0	0	1 (<1)	1 (<1)	0
倦怠感	0	0	1 (<1)	1 (<1)	0
粘膜乾燥	0	0	1 (<1)	1 (<1)	0
発熱	0	0	1 (<1)	1 (<1)	0
臨床検査	1 (<1)	3 (<1)	1 (<1)	4 (<1)	0
アラニン・アミノトランスフェラーゼ増加	1 (<1)	1 (<1)	1 (<1)	2 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose reduction, regardless of reason. Adverse events that may have initially led to dose reduction but then subsequently led study treatment discontinuation are therefore not included.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-REDUC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to dose reduction by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
アスパラギン酸アミノトランスフェラーゼ増加	1 (<1)	2 (<1)	0	2 (<1)	0
リンパ球数減少	0	1 (<1)	0	1 (<1)	0
白血球数減少	0	1 (<1)	0	1 (<1)	0
γ－グルタミルトランスフェラーゼ増加	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose reduction, regardless of reason. Adverse events that may have initially led to dose reduction but then subsequently led study treatment discontinuation are therefore not included.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-REDUC-A.SAS DATE: 02DEC2015

Table 123: Incidence of Adverse Events That Led to Dose Interruption by System Organ Class and Preferred Term: Studies 109MS301 and 109MS302

Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with an event	70 (9)	100 (13)	105 (14)	205 (13)	26 (7)
感染症および寄生虫症	19 (2)	25 (3)	24 (3)	49 (3)	4 (1)
胃腸炎	6 (<1)	9 (1)	5 (<1)	14 (<1)	1 (<1)
ウイルス性胃腸炎	2 (<1)	4 (<1)	6 (<1)	10 (<1)	0
インフルエンザ	0	2 (<1)	3 (<1)	5 (<1)	0
消化管感染	1 (<1)	1 (<1)	2 (<1)	3 (<1)	0
ウイルス性消化管感染	1 (<1)	2 (<1)	1 (<1)	3 (<1)	0
帯状疱疹	1 (<1)	1 (<1)	1 (<1)	2 (<1)	0
細菌性副鼻腔炎	0	1 (<1)	1 (<1)	2 (<1)	0
歯膿瘍	0	0	2 (<1)	2 (<1)	0
尿路感染	2 (<1)	1 (<1)	1 (<1)	2 (<1)	0
蜂巣炎	0	1 (<1)	0	1 (<1)	0
Ｈ１Ｎ１インフルエンザ	0	0	1 (<1)	1 (<1)	0
ヘリコバクター感染	0	1 (<1)	0	1 (<1)	0
単純ヘルペス	0	0	1 (<1)	1 (<1)	0
鼻咽頭炎	1 (<1)	1 (<1)	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-INTERR-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
中耳炎	0	0	1 (<1)	1 (<1)	0
骨盤内炎症性疾患	1 (<1)	0	1 (<1)	1 (<1)	0
咽頭炎	0	0	1 (<1)	1 (<1)	0
肺炎	1 (<1)	1 (<1)	0	1 (<1)	2 (<1)
扁桃炎	0	0	1 (<1)	1 (<1)	0
気管支炎	1 (<1)	0	0	0	0
膿胸	0	0	0	0	1 (<1)
気道感染	1 (<1)	0	0	0	0
敗血症	1 (<1)	0	0	0	0
上気道感染	2 (<1)	0	0	0	0
ウイルス感染	0	0	0	0	1 (<1)
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	2 (<1)	2 (<1)	0	2 (<1)	1 (<1)
肺の良性新生物	0	1 (<1)	0	1 (<1)	0
脂肪腫	0	1 (<1)	0	1 (<1)	0
線維腫	1 (<1)	0	0	0	0
転移性甲状腺癌	0	0	0	0	1 (<1)
子宮平滑筋腫	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-INTERR-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
血液およびリンパ系障害	0	2 (<1)	1 (<1)	3 (<1)	0
白血球増加症	0	2 (<1)	0	2 (<1)	0
白血球減少症	0	0	1 (<1)	1 (<1)	0
免疫系障害	0	2 (<1)	1 (<1)	3 (<1)	0
過敏症	0	2 (<1)	0	2 (<1)	0
薬物過敏症	0	0	1 (<1)	1 (<1)	0
内分泌障害	0	0	2 (<1)	2 (<1)	0
間脳性内分泌障害	0	0	1 (<1)	1 (<1)	0
甲状腺腫	0	0	1 (<1)	1 (<1)	0
代謝および栄養障害	0	1 (<1)	2 (<1)	3 (<1)	0
脱水	0	1 (<1)	1 (<1)	2 (<1)	0
食欲減退	0	0	1 (<1)	1 (<1)	0
精神障害	2 (<1)	3 (<1)	0	3 (<1)	1 (<1)
うつ病	0	2 (<1)	0	2 (<1)	0
躁病	0	1 (<1)	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-INTERR-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
不安	1 (<1)	0	0	0	1 (<1)
歯ぎしり	1 (<1)	0	0	0	0
幻覚	1 (<1)	0	0	0	0
神経系障害	18 (2)	12 (2)	12 (2)	24 (2)	8 (2)
多発性硬化症再発	8 (1)	7 (<1)	3 (<1)	10 (<1)	3 (<1)
頭痛	4 (<1)	4 (<1)	3 (<1)	7 (<1)	1 (<1)
片頭痛	0	1 (<1)	3 (<1)	4 (<1)	0
浮動性めまい	2 (<1)	1 (<1)	1 (<1)	2 (<1)	0
味覚消失	0	0	1 (<1)	1 (<1)	0
平衡障害	0	1 (<1)	0	1 (<1)	0
構語障害	0	0	1 (<1)	1 (<1)	0
失語症	0	0	0	0	1 (<1)
灼熱感	1 (<1)	0	0	0	0
味覚異常	0	0	0	0	1 (<1)
顔面痙攣	1 (<1)	0	0	0	0
意識消失	0	0	0	0	1 (<1)
仮面状顔貌	0	0	0	0	1 (<1)
多発性硬化症	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

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Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
片頭痛発作重積	1 (<1)	0	0	0	0
失神	0	0	0	0	1 (<1)
三叉神経痛	1 (<1)	0	0	0	0
眼障害	2 (<1)	0	1 (<1)	1 (<1)	1 (<1)
結膜炎	0	0	1 (<1)	1 (<1)	0
眼瞼紅斑	1 (<1)	0	0	0	0
眼瞼そう痒症	1 (<1)	0	0	0	0
流涙増加	0	0	0	0	1 (<1)
視力低下	1 (<1)	0	0	0	0
耳および迷路障害	2 (<1)	1 (<1)	0	1 (<1)	0
回転性めまい	1 (<1)	1 (<1)	0	1 (<1)	0
頭位性回転性めまい	1 (<1)	0	0	0	0
心臓障害	1 (<1)	0	2 (<1)	2 (<1)	0
動悸	1 (<1)	0	1 (<1)	1 (<1)	0
頻脈	0	0	1 (<1)	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

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Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
血管障害	1 (<1)	4 (<1)	10 (1)	14 (<1)	0
潮紅	1 (<1)	4 (<1)	7 (<1)	11 (<1)	0
ほてり	0	0	2 (<1)	2 (<1)	0
高血圧クリーゼ	0	0	1 (<1)	1 (<1)	0
呼吸器、胸郭および縦隔障害	1 (<1)	0	1 (<1)	1 (<1)	1 (<1)
アレルギー性鼻炎	0	0	1 (<1)	1 (<1)	0
呼吸困難	0	0	0	0	1 (<1)
上気道の炎症	1 (<1)	0	0	0	0
胃腸障害	23 (3)	37 (5)	45 (6)	82 (5)	3 (<1)
下痢	4 (<1)	15 (2)	13 (2)	28 (2)	2 (<1)
悪心	7 (<1)	10 (1)	14 (2)	24 (2)	1 (<1)
嘔吐	7 (<1)	12 (2)	9 (1)	21 (1)	0
上腹部痛	1 (<1)	9 (1)	8 (1)	17 (1)	0
腹痛	4 (<1)	5 (<1)	11 (1)	16 (1)	0
消化不良	1 (<1)	2 (<1)	3 (<1)	5 (<1)	0
胃腸障害	0	1 (<1)	4 (<1)	5 (<1)	0
胃炎	1 (<1)	3 (<1)	1 (<1)	4 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

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Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
腹部不快感	0	1 (<1)	1 (<1)	2 (<1)	0
小腸炎	0	0	2 (<1)	2 (<1)	0
腹部膨満	0	0	1 (<1)	1 (<1)	0
腹部硬直	0	0	1 (<1)	1 (<1)	0
憩室穿孔	0	1 (<1)	0	1 (<1)	0
十二指腸潰瘍	0	1 (<1)	0	1 (<1)	0
十二指腸炎	0	0	1 (<1)	1 (<1)	0
おくび	0	0	1 (<1)	1 (<1)	0
便失禁	0	1 (<1)	0	1 (<1)	0
鼓腸	0	0	1 (<1)	1 (<1)	0
食中毒	0	0	1 (<1)	1 (<1)	1 (<1)
胃腸出血	1 (<1)	0	1 (<1)	1 (<1)	0
吐血	0	1 (<1)	0	1 (<1)	0
裂孔ヘルニア	0	1 (<1)	0	1 (<1)	0
腸閉塞	0	0	1 (<1)	1 (<1)	0
マロリー・ワイス症候群	0	1 (<1)	0	1 (<1)	0
大腸炎	1 (<1)	0	0	0	0
便秘	2 (<1)	0	0	0	0
胃障害	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

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Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
消化器痛	1 (<1)	0	0	0	0
腹膜出血	1 (<1)	0	0	0	0
臍ヘルニア	1 (<1)	0	0	0	0
肝胆道系障害	0	2 (<1)	3 (<1)	5 (<1)	0
肝障害	0	1 (<1)	2 (<1)	3 (<1)	0
胆石症	0	1 (<1)	1 (<1)	2 (<1)	0
胆管結石	0	0	1 (<1)	1 (<1)	0
皮膚および皮下組織障害	2 (<1)	7 (<1)	10 (1)	17 (1)	2 (<1)
発疹	0	1 (<1)	3 (<1)	4 (<1)	0
そう痒症	0	2 (<1)	1 (<1)	3 (<1)	0
多汗症	0	1 (<1)	1 (<1)	2 (<1)	0
脱毛症	1 (<1)	0	1 (<1)	1 (<1)	0
水疱	0	1 (<1)	0	1 (<1)	0
皮膚炎	0	1 (<1)	0	1 (<1)	0
アレルギー性皮膚炎	0	1 (<1)	0	1 (<1)	0
湿疹	0	0	1 (<1)	1 (<1)	0
全身紅斑	0	0	1 (<1)	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

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Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
全身性そう痒症	0	0	1 (<1)	1 (<1)	1 (<1)
皮膚反応	0	0	1 (<1)	1 (<1)	0
蕁麻疹	0	0	1 (<1)	1 (<1)	0
接触性皮膚炎	0	0	0	0	1 (<1)
斑状丘疹状皮疹	1 (<1)	0	0	0	0
筋骨格系および結合組織障害	5 (<1)	2 (<1)	4 (<1)	6 (<1)	2 (<1)
背部痛	1 (<1)	1 (<1)	3 (<1)	4 (<1)	1 (<1)
筋緊張	0	0	1 (<1)	1 (<1)	0
筋肉痛	0	1 (<1)	0	1 (<1)	0
関節痛	1 (<1)	0	0	0	0
骨痛	1 (<1)	0	0	0	0
側腹部痛	0	0	0	0	1 (<1)
筋拘縮	1 (<1)	0	0	0	0
筋痙縮	1 (<1)	0	0	0	0
変形性関節症	1 (<1)	0	0	0	0
腎および尿路障害	0	2 (<1)	3 (<1)	5 (<1)	0
蛋白尿	0	0	2 (<1)	2 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

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Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
ミクロアルブミン尿	0	0	1 (<1)	1 (<1)	0
尿管瘤	0	1 (<1)	0	1 (<1)	0
尿失禁	0	1 (<1)	0	1 (<1)	0
妊娠、産褥および周産期の状態	2 (<1)	0	0	0	0
自然流産	2 (<1)	0	0	0	0
生殖系および乳房障害	3 (<1)	1 (<1)	1 (<1)	2 (<1)	0
腺筋症	0	0	1 (<1)	1 (<1)	0
卵巣嚢胞	1 (<1)	0	1 (<1)	1 (<1)	0
卵巣嚢胞破裂	0	1 (<1)	0	1 (<1)	0
月経過多	1 (<1)	0	0	0	0
月経障害	1 (<1)	0	0	0	0
骨盤痛	1 (<1)	0	0	0	0
一般・全身障害および投与部位の状態	7 (<1)	3 (<1)	8 (1)	11 (<1)	4 (1)
胸痛	0	0	3 (<1)	3 (<1)	0
疲労	0	1 (<1)	2 (<1)	3 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

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Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
無力症	1 (<1)	1 (<1)	1 (<1)	2 (<1)	1 (<1)
胸部不快感	0	0	1 (<1)	1 (<1)	0
悪寒	1 (<1)	0	1 (<1)	1 (<1)	1 (<1)
脂肪壊死	0	1 (<1)	0	1 (<1)	0
閉塞性ヘルニア	0	0	1 (<1)	1 (<1)	0
疼痛	0	1 (<1)	0	1 (<1)	0
熱感	1 (<1)	0	0	0	1 (<1)
インフルエンザ様疾患	1 (<1)	0	0	0	0
注射部位紅斑	0	0	0	0	1 (<1)
注射部位硬結	0	0	0	0	1 (<1)
注射部位疼痛	0	0	0	0	1 (<1)
末梢性浮腫	1 (<1)	0	0	0	0
骨盤腔内腫瘤	1 (<1)	0	0	0	0
発熱	1 (<1)	0	0	0	0
臨床検査	6 (<1)	15 (2)	11 (1)	26 (2)	8 (2)
アラニン・アミノトランスフェラーゼ増加	2 (<1)	7 (<1)	3 (<1)	10 (<1)	5 (1)
アスパラギン酸アミノトランスフェラーゼ増加	1 (<1)	5 (<1)	4 (<1)	9 (<1)	3 (<1)
肝酵素上昇	1 (<1)	3 (<1)	3 (<1)	6 (<1)	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-INTERR-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
Page 12 of 13

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
血中クレアチニン増加	2 (<1)	0	2 (<1)	2 (<1)	0
肝機能検査異常	1 (<1)	1 (<1)	1 (<1)	2 (<1)	0
尿中アルブミン陽性	0	1 (<1)	0	1 (<1)	0
血中副甲状腺ホルモン異常	0	0	1 (<1)	1 (<1)	0
血中尿素増加	0	0	1 (<1)	1 (<1)	0
尿中血陽性	0	1 (<1)	0	1 (<1)	0
体温上昇	0	0	1 (<1)	1 (<1)	0
尿中蛋白陽性	0	1 (<1)	0	1 (<1)	0
腎機能検査異常	0	1 (<1)	0	1 (<1)	0
体重減少	0	1 (<1)	0	1 (<1)	0
白血球数減少	0	1 (<1)	0	1 (<1)	0
血中アルカリホスファターゼ増加	1 (<1)	0	0	0	0
血中乳酸脱水素酵素異常	0	0	0	0	1 (<1)
γ－グルタミルトランスフェラーゼ増加	1 (<1)	0	0	0	1 (<1)
傷害、中毒および処置合併症	1 (<1)	3 (<1)	2 (<1)	5 (<1)	0
処置による疼痛	0	2 (<1)	0	2 (<1)	0
大腿骨骨折	0	0	1 (<1)	1 (<1)	0
肉離れ	0	0	1 (<1)	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-INTERR-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to dose interruption by system organ class and preferred term:
Studies 109MS301 and 109MS302
Page 13 of 13

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
術後発熱	0	1 (<1)	0	1 (<1)	0
処置による低血圧	0	1 (<1)	0	1 (<1)	0
処置による悪心	0	1 (<1)	0	1 (<1)	0
処置による嘔吐	0	1 (<1)	0	1 (<1)	0
交通事故	0	0	1 (<1)	1 (<1)	0
靱帯損傷	1 (<1)	0	0	0	0
半月板障害	1 (<1)	0	0	0	0
外科および内科処置	0	2 (<1)	0	2 (<1)	1 (<1)
女性不妊手術	0	1 (<1)	0	1 (<1)	0
子宮摘出	0	1 (<1)	0	1 (<1)	0
不妊手術	0	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-INTERR-A.SAS DATE: 02DEC2015

Table 131: Summary of Independent Nephrologist Review of Subjects Who Qualified for and/or Had a Nephrologist Evaluation: Studies 109MS301 and 109MS302

Summary of independent nephrologist review of subjects who qualified for and/or had a nephrologist evaluation: Studies 109MS301 and 109MS302
Page 1 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in the safety population	771	769	760	1529	351
Number of subjects who qualified for and/or had a nephrologist evaluation (a)	127 (16)	155 (20)	150 (20)	305 (20)	73 (21)
Independent Nephrologist Review Findings (b):					
Renal dysfunction prior to dosing					
Yes	1 (<1)	2 (1)	1 (<1)	3 (<1)	0
No	119 (94)	147 (95)	139 (93)	286 (94)	70 (96)
Unable to determine	7 (6)	6 (4)	10 (7)	16 (5)	3 (4)

NOTE: Numbers in parentheses are percentages.
(a) Includes subjects who qualified for a nephrologist evaluation (based strictly on protocol-specified laboratory criteria with glycosuria considered without regard to normality of serum glucose) and/or had a nephrologist evaluation. The denominator for percentages is number of subjects in the safety population.
(b) The denominator for percentages is the number of subjects who qualified for and/or had a nephrologist evaluation.
(c) Only applicable when independent nephrologist review indicated 'Yes' for new or worse renal dysfunction post-dosing.

SOURCE: BG12MS/ISS/CSR/T-NEPH.SAS DATE: 05FEB2012

Summary of independent nephrologist review of subjects who qualified for and/or had a nephrologist evaluation: Studies 109MS301 and 109MS302
Page 2 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
New or worse renal dysfunction post-dosing					
Yes	1 (<1)	0	0	0	0
No	116 (91)	151 (97)	142 (95)	293 (96)	72 (99)
Unable to determine	10 (8)	4 (3)	8 (5)	12 (4)	1 (1)
Related to study treatment (c)					
Not applicable	126 (>99)	155 (100)	150 (100)	305 (100)	73 (100)
Unable to determine	1 (<1)	0	0	0	0

NOTE: Numbers in parentheses are percentages.
(a) Includes subjects who qualified for a nephrologist evaluation (based strictly on protocol-specified laboratory criteria with glycosuria considered without regard to normality of serum glucose) and/or had a nephrologist evaluation. The denominator for percentages is number of subjects in the safety population.
(b) The denominator for percentages is the number of subjects who qualified for and/or had a nephrologist evaluation.
(c) Only applicable when independent nephrologist review indicated 'Yes' for new or worse renal dysfunction post-dosing.

SOURCE: BG12MS/ISS/CSR/T-NEPH.SAS DATE: 05FEB2012

Table 136: Incidence of Adverse Events by Severity – Part I (Placebo-Controlled Period)

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 1 of 21
Treatment group: Placebo

	Severity				
	Mild	Moderate	Severe	Unknown	Total
Number of subjects in the safety population					113 (100)
Number of subjects with an event	50 (44)	35 (31)	2 (2)	0	87 (77)
感染症および寄生虫症	36 (32)	11 (10)	0	0	47 (42)
鼻咽頭炎	21 (19)	7 (6)	0	0	28 (25)
上気道感染	9 (8)	2 (2)	0	0	11 (10)
副鼻腔炎	1 (<1)	1 (<1)	0	0	2 (2)
扁桃炎	2 (2)	0	0	0	2 (2)
蜂巣炎	0	1 (<1)	0	0	1 (<1)
せつ	1 (<1)	0	0	0	1 (<1)
陰部ヘルペス	1 (<1)	0	0	0	1 (<1)
単純ヘルペス	1 (<1)	0	0	0	1 (<1)
帯状疱疹	0	1 (<1)	0	0	1 (<1)
インフルエンザ	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 2 of 21
Treatment group: Placebo

	Severity				
	Mild	Moderate	Severe	Unknown	Total
口腔ヘルペス	1 (<1)	0	0	0	1 (<1)
扁桃周囲膿瘍	1 (<1)	0	0	0	1 (<1)
咽頭炎	1 (<1)	0	0	0	1 (<1)
尿路感染	1 (<1)	0	0	0	1 (<1)
ウイルス感染	1 (<1)	0	0	0	1 (<1)
血液およびリンパ系障害	1 (<1)	0	0	0	1 (<1)
鉄欠乏性貧血	1 (<1)	0	0	0	1 (<1)
免疫系障害	2 (2)	0	0	0	2 (2)
造影剤アレルギー	1 (<1)	0	0	0	1 (<1)
薬物過敏症	1 (<1)	0	0	0	1 (<1)
代謝および栄養障害	2 (2)	0	0	0	2 (2)
糖尿病	1 (<1)	0	0	0	1 (<1)
耐糖能障害	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 3 of 21
Treatment group: Placebo

	Severity				
	Mild	Moderate	Severe	Unknown	Total
精神障害	5 (4)	2 (2)	0	0	7 (6)
不眠症	3 (3)	1 (<1)	0	0	4 (4)
適応障害	1 (<1)	0	0	0	1 (<1)
抑うつ気分	1 (<1)	0	0	0	1 (<1)
うつ病	0	1 (<1)	0	0	1 (<1)
精神障害	1 (<1)	0	0	0	1 (<1)
神経系障害	18 (16)	19 (17)	1<1)	0	38 (34)
多発性硬化症再発	16 (14)	18 (16)	1<1)	0	35 (31)
傾眠	5 (4)	0	0	0	5 (4)
頭痛	1 (<1)	1 (<1)	0	0	2 (2)
浮動性めまい	1 (<1)	0	0	0	1 (<1)
肋間神経痛	0	1 (<1)	0	0	1 (<1)
神経痛	1 (<1)	0	0	0	1 (<1)
眼障害	3 (3)	0	0	0	3 (3)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 4 of 21
Treatment group: Placebo

	Severity				
	Mild	Moderate	Severe	Unknown	Total
霰粒腫	1 (<1)	0	0	0	1 (<1)
結膜炎	1 (<1)	0	0	0	1 (<1)
眼乾燥	1 (<1)	0	0	0	1 (<1)
眼痛	1 (<1)	0	0	0	1 (<1)
暗点	1 (<1)	0	0	0	1 (<1)
耳および迷路障害	1 (<1)	1 (<1)	0	0	2 (2)
耳管機能障害	1 (<1)	0	0	0	1 (<1)
回転性めまい	0	1 (<1)	0	0	1 (<1)
血管障害	11 (10)	0	0	0	11 (10)
潮紅	9 (8)	0	0	0	9 (8)
高血圧	2 (2)	0	0	0	2 (2)
ほてり	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 5 of 21
Treatment group: Placebo

	Severity				
	Mild	Moderate	Severe	Unknown	Total
呼吸器、胸郭および縦隔障害	3 (3)	0	0	0	3 (3)
口腔咽頭痛	2 (2)	0	0	0	2 (2)
アレルギー性咳嗽	1 (<1)	0	0	0	1 (<1)
胃腸障害	19 (17)	6 (5)	1 (<1)	0	26 (23)
上腹部痛	5 (4)	1 (<1)	0	0	6 (5)
下痢	6 (5)	0	0	0	6 (5)
悪心	4 (4)	2 (2)	0	0	6 (5)
齲歯	2 (2)	1 (<1)	0	0	3 (3)
消化不良	3 (3)	0	0	0	3 (3)
口内炎	1 (<1)	2 (2)	0	0	3 (3)
心窩部不快感	2 (2)	0	0	0	2 (2)
腹部膨満	1 (<1)	0	0	0	1 (<1)
下腹部痛	0	1 (<1)	0	0	1 (<1)
肛門出血	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 6 of 21
Treatment group: Placebo

	Severity				
	Mild	Moderate	Severe	Unknown	Total
アフタ性口内炎	1 (<1)	0	0	0	1 (<1)
萎縮性舌炎	1 (<1)	0	0	0	1 (<1)
口腔内潰瘍形成	0	1 (<1)	0	0	1 (<1)
腹膜ヘルニア	0	0	1 (<1)	0	1 (<1)
肛門周囲痛	1 (<1)	0	0	0	1 (<1)
皮膚および皮下組織障害	9 (8)	4 (4)	0	0	13 (12)
蕁麻疹	0	3 (3)	0	0	3 (3)
脱毛症	1 (<1)	1 (<1)	0	0	2 (2)
皮膚乾燥	2 (2)	0	0	0	2 (2)
そう痒症	2 (2)	0	0	0	2 (2)
環状紅斑	1 (<1)	0	0	0	1 (<1)
過角化	1 (<1)	0	0	0	1 (<1)
手掌紅斑	1 (<1)	0	0	0	1 (<1)
乾癬	1 (<1)	0	0	0	1 (<1)
丘疹性皮疹	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 7 of 21
Treatment group: Placebo

	Severity				
	Mild	Moderate	Severe	Unknown	Total
筋骨格系および結合組織障害	11 (10)	3 (3)	0	0	14 (12)
関節痛	4 (4)	1 (<1)	0	0	5 (4)
背部痛	1 (<1)	2 (2)	0	0	3 (3)
凧径部痛	1 (<1)	0	0	0	1 (<1)
筋痙縮	1 (<1)	0	0	0	1 (<1)
筋骨格痛	1 (<1)	0	0	0	1 (<1)
筋骨格硬直	1 (<1)	0	0	0	1 (<1)
頚部痛	1 (<1)	0	0	0	1 (<1)
四肢痛	1 (<1)	0	0	0	1 (<1)
腎および尿路障害	7 (6)	1 (<1)	0	0	8 (7)
排尿困難	3 (3)	0	0	0	3 (3)
血尿	1 (<1)	0	0	0	1 (<1)
緊張性膀胱	1 (<1)	0	0	0	1 (<1)
尿意切迫	0	1 (<1)	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 8 of 21
Treatment group: Placebo

	Severity				
	Mild	Moderate	Severe	Unknown	Total
頻尿	1 (<1)	0	0	0	1 (<1)
尿失禁	1 (<1)	0	0	0	1 (<1)
生殖系および乳房障害	4 (4)	1 (<1)	0	0	5 (4)
不正子宮出血	2 (2)	0	0	0	2 (2)
乳房不快感	0	1 (<1)	0	0	1 (<1)
月経困難症	1 (<1)	0	0	0	1 (<1)
月経遅延	1 (<1)	0	0	0	1 (<1)
一般・全身障害および投与部位の状態	11 (10)	1 (<1)	0	0	12 (11)
発熱	5 (4)	0	0	0	5 (4)
疲労	1 (<1)	1 (<1)	0	0	2 (2)
医薬品副作用	1 (<1)	0	0	0	1 (<1)
無力症	1 (<1)	0	0	0	1 (<1)
胸痛	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 9 of 21
Treatment group: Placebo

	Severity				
	Mild	Moderate	Severe	Unknown	Total
注射部位紅斑	1 (<1)	0	0	0	1 (<1)
末梢性浮腫	1 (<1)	0	0	0	1 (<1)
臨床検査	7 (6)	0	0	0	7 (6)
アラニン・アミノトランスフェラーゼ増加	2 (2)	0	0	0	2 (2)
体重増加	2 (2)	0	0	0	2 (2)
アスパラギン酸アミノトランスフェラーゼ増加	1 (<1)	0	0	0	1 (<1)
γ－グルタミルトランスフェラーゼ増加	1 (<1)	0	0	0	1 (<1)
肝機能検査異常	1 (<1)	0	0	0	1 (<1)
好中球数減少	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 10 of 21
Treatment group: Placebo

	Severity				
	Mild	Moderate	Severe	Unknown	Total
傷害、中毒および処置合併症	3 (3)	0	0	0	3 (3)
節足動物咬傷	1 (<1)	0	0	0	1 (<1)
挫傷	1 (<1)	0	0	0	1 (<1)
転倒	1 (<1)	0	0	0	1 (<1)
処置後合併症	1 (<1)	0	0	0	1 (<1)
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	0	0	1 (<1)	0	1 (<1)
卵管癌	0	0	1 (<1)	0	1 (<1)
卵巣新生物	0	0	1 (<1)	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 11 of 21
Treatment group: BG00012 240 mg BID

	Severity				
	Mild	Moderate	Severe	Unknown	Total
Number of subjects in the safety popualation					111 (100)
Number of subjects with an event	58 (52)	32 (29)	6 (5)	0	96 (86)
感染症および寄生虫症	27 (24)	18 (16)	0	0	45 (41)
鼻咽頭炎	15 (14)	11 (10)	0	0	26 (23)
上気道感染	4 (4)	1 (<1)	0	0	5 (5)
胃腸炎	1 (<1)	3 (3)	0	0	4 (4)
咽頭炎	3 (3)	0	0	0	3 (3)
尿路感染	3 (3)	0	0	0	3 (3)
インフルエンザ	2 (2)	0	0	0	2 (2)
腎盂腎炎	1 (<1)	1 (<1)	0	0	2 (2)
気管支炎	1 (<1)	0	0	0	1 (<1)
慢性副鼻腔炎	1 (<1)	0	0	0	1 (<1)
膀胱炎	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 12 of 21
Treatment group: BG00012 240 mg BID

	Severity				
	Mild	Moderate	Severe	Unknown	Total
消化管感染	0	1 (<1)	0	0	1 (<1)
ヘルペスウイルス感染	0	1 (<1)	0	0	1 (<1)
感染	1 (<1)	0	0	0	1 (<1)
副鼻腔炎	0	1 (<1)	0	0	1 (<1)
癜風	1 (<1)	0	0	0	1 (<1)
扁桃炎	0	1 (<1)	0	0	1 (<1)
細菌性上気道感染	0	1 (<1)	0	0	1 (<1)
血液およびリンパ系障害	4 (4)	0	0	0	4 (4)
好酸球増加症	2 (2)	0	0	0	2 (2)
鉄欠乏性貧血	1 (<1)	0	0	0	1 (<1)
白血球減少症	1 (<1)	0	0	0	1 (<1)
リンパ球減少症	1 (<1)	0	0	0	1 (<1)
免疫系障害	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 13 of 21
Treatment group: BG00012 240 mg BID

	Severity				
	Mild	Moderate	Severe	Unknown	Total
季節性アレルギー	1 (<1)	0	0	0	1 (<1)
代謝および栄養障害	3 (3)	0	0	0	3 (3)
食欲減退	1 (<1)	0	0	0	1 (<1)
糖尿病	1 (<1)	0	0	0	1 (<1)
低血糖症	1 (<1)	0	0	0	1 (<1)
精神障害	7 (6)	1 (<1)	1 (<1)	0	9 (8)
不眠症	3 (3)	0	0	0	3 (3)
不安	1 (<1)	1 (<1)	0	0	2 (2)
不安障害	1 (<1)	0	0	0	1 (<1)
うつ病	1 (<1)	0	0	0	1 (<1)
気分動揺	1 (<1)	0	0	0	1 (<1)
パニック発作	0	0	1 (<1)	0	1 (<1)
神経系障害	19 (17)	9 (8)	3 (3)	0	31 (28)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 14 of 21
Treatment group: BG00012 240 mg BID

	Severity				
	Mild	Moderate	Severe	Unknown	Total
多発性硬化症再発	15 (14)	7 (6)	3 (3)	0	25 (23)
頭痛	3 (3)	1 (<1)	0	0	4 (4)
浮動性めまい	3 (3)	0	0	0	3 (3)
感覚鈍麻	3 (3)	0	0	0	3 (3)
錯感覚	2 (2)	0	0	0	2 (2)
灼熱感	1 (<1)	0	0	0	1 (<1)
糖尿病性自律神経ニューロパチー	1 (<1)	0	0	0	1 (<1)
神経痛	0	1 (<1)	0	0	1 (<1)
失神	0	1 (<1)	0	0	1 (<1)
眼障害	2 (2)	0	0	0	2 (2)
結膜充血	1 (<1)	0	0	0	1 (<1)
眼出血	1 (<1)	0	0	0	1 (<1)
眼痛	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 15 of 21
Treatment group: BG00012 240 mg BID

	Severity				
	Mild	Moderate	Severe	Unknown	Total
耳および迷路障害	3 (3)	0	0	0	3 (3)
回転性めまい	2 (2)	0	0	0	2 (2)
頭位性回転性めまい	1 (<1)	0	0	0	1 (<1)
心臓障害	1 (<1)	0	0	0	1 (<1)
洞性頻脈	1 (<1)	0	0	0	1 (<1)
血管障害	25 (23)	4 (4)	1 (<1)	0	30 (27)
潮紅	19 (17)	4 (4)	1 (<1)	0	24 (22)
ほてり	6 (5)	1 (<1)	0	0	7 (6)
呼吸器、胸郭および縦隔障害	3 (3)	1 (<1)	0	0	4 (4)
上気道の炎症	2 (2)	0	0	0	2 (2)
アレルギー性気管支炎	0	1 (<1)	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 16 of 21
Treatment group: BG00012 240 mg BID

	Severity				
	Mild	Moderate	Severe	Unknown	Total
喘息	1 (<1)	0	0	0	1 (<1)
胃腸障害	32 (29)	6 (5)	1 (<1)	0	39 (35)
下痢	8 (7)	2 (2)	1 (<1)	0	11 (10)
悪心	10 (9)	1 (<1)	0	0	11 (10)
腹痛	5 (5)	2 (2)	1 (<1)	0	8 (7)
上腹部痛	3 (3)	2 (2)	0	0	5 (5)
嘔吐	4 (4)	0	1 (<1)	0	5 (5)
便秘	3 (3)	0	0	0	3 (3)
消化不良	2 (2)	0	0	0	2 (2)
齲歯	1 (<1)	0	0	0	1 (<1)
心窩部不快感	1 (<1)	0	0	0	1 (<1)
胃炎	0	1 (<1)	0	0	1 (<1)
胃腸障害	1 (<1)	0	0	0	1 (<1)
胃食道逆流性疾患	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 17 of 21
Treatment group: BG00012 240 mg BID

	Severity				
	Mild	Moderate	Severe	Unknown	Total
歯痛	1 (<1)	0	0	0	1 (<1)
肝胆道系障害	2 (2)	0	0	0	2 (2)
肝障害	2 (2)	0	0	0	2 (2)
皮膚および皮下組織障害	19 (17)	0	0	0	19 (17)
そう痒症	8 (7)	0	0	0	8 (7)
紅斑	4 (4)	0	0	0	4 (4)
発疹	3 (3)	0	0	0	3 (3)
円形脱毛症	2 (2)	0	0	0	2 (2)
全身性そう痒症	2 (2)	0	0	0	2 (2)
蕁麻疹	2 (2)	0	0	0	2 (2)
湿疹	1 (<1)	0	0	0	1 (<1)
光線性皮膚症	1 (<1)	0	0	0	1 (<1)
全身性皮疹	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 18 of 21
Treatment group: BG00012 240 mg BID

	Severity				
	Mild	Moderate	Severe	Unknown	Total
	10 (9)	3 (3)	0	0	13 (12)
筋骨格系および結合組織障害					
背部痛	3 (3)	0	0	0	3 (3)
筋痙縮	2 (2)	0	0	0	2 (2)
頚部痛	1 (<1)	1 (<1)	0	0	2 (2)
四肢痛	1 (<1)	1 (<1)	0	0	2 (2)
関節痛	1 (<1)	0	0	0	1 (<1)
関節炎	1 (<1)	0	0	0	1 (<1)
骨痛	1 (<1)	0	0	0	1 (<1)
椎間板障害	0	1 (<1)	0	0	1 (<1)
顎関節症候群	1 (<1)	0	0	0	1 (<1)
腱石灰化	1 (<1)	0	0	0	1 (<1)
腎および尿路障害	5 (5)	0	0	0	5 (5)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 19 of 21
Treatment group: BG00012 240 mg BID

	Severity				
	Mild	Moderate	Severe	Unknown	Total
ミクロアルブミン尿	3 (3)	0	0	0	3 (3)
蛋白尿	3 (3)	0	0	0	3 (3)
頻尿	1 (<1)	0	0	0	1 (<1)
生殖系および乳房障害	3 (3)	1 (<1)	0	0	4 (4)
乳房嚢胞	1 (<1)	0	0	0	1 (<1)
月経困難症	1 (<1)	0	0	0	1 (<1)
月経障害	1 (<1)	0	0	0	1 (<1)
子宮頚部びらん	0	1 (<1)	0	0	1 (<1)
一般・全身障害および投与部位の状態	4 (4)	1 (<1)	0	0	5 (5)
末梢性浮腫	1 (<1)	1 (<1)	0	0	2 (2)
発熱	2 (2)	0	0	0	2 (2)
悪寒	1 (<1)	0	0	0	1 (<1)
疲労	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 20 of 21
Treatment group: BG00012 240 mg BID

	Severity				
	Mild	Moderate	Severe	Unknown	Total
臨床検査	13 (12)	0	0	0	13 (12)
アラニン・アミノトランスフェラーゼ増加	7 (6)	0	0	0	7 (6)
アスパラギン酸アミノトランスフェラーゼ増加	4 (4)	0	0	0	4 (4)
リンパ球数減少	2 (2)	0	0	0	2 (2)
血中尿酸増加	1 (<1)	0	0	0	1 (<1)
肝酵素上昇	1 (<1)	0	0	0	1 (<1)
好中球数減少	1 (<1)	0	0	0	1 (<1)
好中球数増加	1 (<1)	0	0	0	1 (<1)
血小板数増加	1 (<1)	0	0	0	1 (<1)
白血球数減少	1 (<1)	0	0	0	1 (<1)
白血球数増加	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Incidence of adverse events by severity
-Part I (placebo-controlled period)
Page 21 of 21
Treatment group: BG00012 240 mg BID

	Severity				
	Mild	Moderate	Severe	Unknown	Total
尿中白血球陽性	1 (<1)	0	0	0	1 (<1)
傷害、中毒および処置合併症	1 (<1)	2 (2)	1 (<1)	0	4 (4)
挫傷	1 (<1)	0	0	0	1 (<1)
転倒	1 (<1)	0	0	0	1 (<1)
上腕骨骨折	0	0	1 (<1)	0	1 (<1)
角膜損傷	0	1 (<1)	0	0	1 (<1)
交通事故	0	0	1 (<1)	0	1 (<1)
脛骨骨折	0	0	1 (<1)	0	1 (<1)
上肢骨折	0	1 (<1)	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based upon the numbers of subjects dosed.
2: Data after subjects switched to alternative MS medications are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/109MS305/PART1/T-AE-BYSEV.SAS DATE: 25SEP2015

Table 137: Incidence of Adverse Events by Severity: Studies 109MS301 and 109MS302

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
Page 1 of 203
Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
Number of subjects in safety population					771 (100)
Number of subjects with an event	184 (24)	418 (54)	118 (15)	0	720 (93)
感染症および寄生虫症	263 (34)	167 (22)	17 (2)	0	447 (58)
鼻咽頭炎	110 (14)	47 (6)	2 (<1)	0	159 (21)
尿路感染	60 (8)	33 (4)	2 (<1)	0	95 (12)
上気道感染	55 (7)	31 (4)	1 (<1)	0	87 (11)
インフルエンザ	39 (5)	21 (3)	1 (<1)	0	61 (8)
気管支炎	16 (2)	16 (2)	0	0	32 (4)
咽頭炎	20 (3)	11 (1)	0	0	31 (4)
副鼻腔炎	24 (3)	7 (<1)	0	0	31 (4)
胃腸炎	12 (2)	12 (2)	4 (<1)	0	28 (4)
口腔ヘルペス	23 (3)	3 (<1)	0	0	26 (3)
鼻炎	16 (2)	10 (1)	0	0	26 (3)
膀胱炎	15 (2)	5 (<1)	1 (<1)	0	21 (3)
ウイルス性胃腸炎	5 (<1)	9 (1)	2 (<1)	0	16 (2)
ウイルス感染	11 (1)	4 (<1)	0	0	15 (2)
気道感染	12 (2)	2 (<1)	0	0	14 (2)
耳感染	6 (<1)	6 (<1)	0	0	12 (2)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
Page 2 of 203
Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
ウイルス性上気道感染	8 (1)	4 (<1)	0	0	12 (2)
歯膿瘍	7 (<1)	4 (<1)	0	0	11 (1)
外陰腟真菌感染	9 (1)	2 (<1)	0	0	11 (1)
帯状疱疹	4 (<1)	5 (<1)	1 (<1)	0	10 (1)
レンサ球菌性咽頭炎	4 (<1)	6 (<1)	0	0	10 (1)
扁桃炎	6 (<1)	3 (<1)	0	0	9 (1)
消化管感染	7 (<1)	1 (<1)	0	0	8 (1)
下気道感染	5 (<1)	1 (<1)	0	0	6 (<1)
喉頭炎	4 (<1)	1 (<1)	0	0	5 (<1)
外陰部腟カンジダ症	3 (<1)	2 (<1)	0	0	5 (<1)
急性扁桃炎	3 (<1)	1 (<1)	0	0	4 (<1)
毛包炎	4 (<1)	0	0	0	4 (<1)
ウイルス性消化管感染	2 (<1)	2 (<1)	0	0	4 (<1)
麦粒腫	3 (<1)	1 (<1)	0	0	4 (<1)
ウイルス性気道感染	3 (<1)	1 (<1)	0	0	4 (<1)
足部白癬	4 (<1)	0	0	0	4 (<1)
歯感染	1 (<1)	2 (<1)	1 (<1)	0	4 (<1)
ボレリア感染	3 (<1)	0	0	0	3 (<1)
眼感染	3 (<1)	0	0	0	3 (<1)
陰部ヘルペス	1 (<1)	2 (<1)	0	0	3 (<1)
限局性感染	3 (<1)	0	0	0	3 (<1)
細菌性咽頭炎	1 (<1)	2 (<1)	0	0	3 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
Page 3 of 203
Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
肺炎	1 (<1)	2 (<1)	0	0	3 (<1)
細菌性尿路感染	2 (<1)	1 (<1)	0	0	3 (<1)
腟感染	3 (<1)	0	0	0	3 (<1)
蜂巣炎	1 (<1)	1 (<1)	0	0	2 (<1)
感染性結膜炎	1 (<1)	1 (<1)	0	0	2 (<1)
真菌感染	2 (<1)	0	0	0	2 (<1)
せつ	1 (<1)	1 (<1)	0	0	2 (<1)
細菌性性器感染	2 (<1)	0	0	0	2 (<1)
歯肉感染	2 (<1)	0	0	0	2 (<1)
Ｈ１Ｎ１インフルエンザ	0	1 (<1)	1 (<1)	0	2 (<1)
単純ヘルペス	2 (<1)	0	0	0	2 (<1)
迷路炎	1 (<1)	1 (<1)	0	0	2 (<1)
爪真菌症	2 (<1)	0	0	0	2 (<1)
口腔カンジダ症	0	2 (<1)	0	0	2 (<1)
歯周感染	1 (<1)	1 (<1)	0	0	2 (<1)
腎盂腎炎	1 (<1)	1 (<1)	0	0	2 (<1)
卵管卵巣炎	0	2 (<1)	0	0	2 (<1)
敗血症	0	1 (<1)	1 (<1)	0	2 (<1)
癜風	2 (<1)	0	0	0	2 (<1)
気管炎	1 (<1)	1 (<1)	0	0	2 (<1)
尿路性敗血症	0	2 (<1)	0	0	2 (<1)
細菌性膣炎	2 (<1)	0	0	0	2 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
Page 4 of 203
Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
創傷感染	2 (<1)	0	0	0	2 (<1)
膿瘍	0	1 (<1)	0	0	1 (<1)
顎膿瘍	0	1 (<1)	0	0	1 (<1)
四肢膿瘍	1 (<1)	0	0	0	1 (<1)
急性副鼻腔炎	0	1 (<1)	0	0	1 (<1)
肛門膿瘍	0	0	1 (<1)	0	1 (<1)
無症候性細菌尿	1 (<1)	0	0	0	1 (<1)
細菌感染	1 (<1)	0	0	0	1 (<1)
細菌尿	1 (<1)	0	0	0	1 (<1)
熱傷部感染	0	1 (<1)	0	0	1 (<1)
ウイルス性結膜炎	1 (<1)	0	0	0	1 (<1)
医療機器関連感染	1 (<1)	0	0	0	1 (<1)
感染性下痢	0	1 (<1)	0	0	1 (<1)
細菌性心内膜炎	0	0	1 (<1)	0	1 (<1)
熱性感染症	1 (<1)	0	0	0	1 (<1)
皮膚真菌感染	1 (<1)	0	0	0	1 (<1)
ノロウイルス性胃腸炎	0	1 (<1)	0	0	1 (<1)
真菌性消化管感染	1 (<1)	0	0	0	1 (<1)
泌尿生殖器感染	0	1 (<1)	0	0	1 (<1)
ヘルペスウイルス感染	1 (<1)	0	0	0	1 (<1)
咬傷感染	1 (<1)	0	0	0	1 (<1)
感染性嚢腫	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
感染性皮脂嚢腫	0	1 (<1)	0	0	1 (<1)
乳腺炎	1 (<1)	0	0	0	1 (<1)
ムンプス	0	1 (<1)	0	0	1 (<1)
口腔真菌感染	0	1 (<1)	0	0	1 (<1)
外耳炎	1 (<1)	0	0	0	1 (<1)
中耳炎	1 (<1)	0	0	0	1 (<1)
パラインフルエンザウイルス感染	1 (<1)	0	0	0	1 (<1)
爪囲炎	1 (<1)	0	0	0	1 (<1)
骨盤内炎症性疾患	0	0	1 (<1)	0	1 (<1)
咽頭扁桃炎	1 (<1)	0	0	0	1 (<1)
毛巣嚢胞	1 (<1)	0	0	0	1 (<1)
ウイルス感染後疲労症候群	0	1 (<1)	0	0	1 (<1)
術後膿瘍	0	1 (<1)	0	0	1 (<1)
術後創感染	1 (<1)	0	0	0	1 (<1)
歯髄炎	1 (<1)	0	0	0	1 (<1)
ライター症候群	0	1 (<1)	0	0	1 (<1)
猩紅熱	1 (<1)	0	0	0	1 (<1)
レンサ球菌感染	1 (<1)	0	0	0	1 (<1)
白癬感染	0	1 (<1)	0	0	1 (<1)
気管気管支炎	0	1 (<1)	0	0	1 (<1)
消化器結核	0	1 (<1)	0	0	1 (<1)
細菌性上気道感染	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
膣膿瘍	0	1 (<1)	0	0	1 (<1)
ウイルス性咽頭炎	1 (<1)	0	0	0	1 (<1)
外陰部膿瘍	0	1 (<1)	0	0	1 (<1)
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	10 (1)	4 (<1)	3 (<1)	0	17 (2)
メラノサイト性母斑	3 (<1)	0	0	0	3 (<1)
子宮平滑筋腫	0	1 (<1)	1 (<1)	0	2 (<1)
アクロコルドン	1 (<1)	0	0	0	1 (<1)
基底細胞癌	0	1 (<1)	0	0	1 (<1)
リンパ節の良性新生物	0	1 (<1)	0	0	1 (<1)
甲状腺の良性新生物	0	1 (<1)	0	0	1 (<1)
乳癌	0	0	1 (<1)	0	1 (<1)
乳房新生物	0	1 (<1)	0	0	1 (<1)
線維腫	0	0	1 (<1)	0	1 (<1)
血管腫	1 (<1)	0	0	0	1 (<1)
モートン神経腫	1 (<1)	0	0	0	1 (<1)
皮膚の新生物	1 (<1)	0	0	0	1 (<1)
口腔新生物	1 (<1)	0	0	0	1 (<1)
良性副甲状腺腫瘍	1 (<1)	0	0	0	1 (<1)
皮膚乳頭腫	1 (<1)	0	0	0	1 (<1)
甲状腺新生物	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
血液およびリンパ系障害	25 (3)	11 (1)	1 (<1)	0	37 (5)
貧血	10 (1)	4 (<1)	1 (<1)	0	15 (2)
リンパ節症	3 (<1)	3 (<1)	0	0	6 (<1)
好中球増加症	5 (<1)	0	0	0	5 (<1)
白血球増加症	2 (<1)	2 (<1)	0	0	4 (<1)
鉄欠乏性貧血	2 (<1)	1 (<1)	0	0	3 (<1)
リンパ球減少症	2 (<1)	0	0	0	2 (<1)
妊娠貧血	1 (<1)	0	0	0	1 (<1)
好酸球増加症	1 (<1)	0	0	0	1 (<1)
低色素性貧血	1 (<1)	0	0	0	1 (<1)
白血球減少症	1 (<1)	0	0	0	1 (<1)
リンパ節炎	1 (<1)	0	0	0	1 (<1)
小球性貧血	0	1 (<1)	0	0	1 (<1)
好中球減少症	1 (<1)	0	0	0	1 (<1)
血小板増加症	1 (<1)	0	0	0	1 (<1)
免疫系障害	14 (2)	2 (<1)	1 (<1)	0	17 (2)
季節性アレルギー	9 (1)	0	0	0	9 (1)
薬物過敏症	3 (<1)	0	0	0	3 (<1)
家塵アレルギー	1 (<1)	1 (<1)	0	0	2 (<1)
過敏症	1 (<1)	1 (<1)	0	0	2 (<1)
化学物質アレルギー	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
食物アレルギー	0	0	1 (<1)	0	1 (<1)
内分泌障害	6 (<1)	2 (<1)	0	0	8 (1)
甲状腺機能低下症	4 (<1)	0	0	0	4 (<1)
甲状腺機能亢進症	0	2 (<1)	0	0	2 (<1)
副腎腫瘤	1 (<1)	0	0	0	1 (<1)
副甲状腺機能亢進症	1 (<1)	0	0	0	1 (<1)
代謝および栄養障害	44 (6)	14 (2)	2 (<1)	0	60 (8)
食欲減退	12 (2)	2 (<1)	0	0	14 (2)
高血糖	5 (<1)	2 (<1)	0	0	7 (<1)
ビタミンD欠乏	3 (<1)	3 (<1)	1 (<1)	0	7 (<1)
高脂血症	4 (<1)	1 (<1)	0	0	5 (<1)
高コレステロール血症	4 (<1)	0	0	0	4 (<1)
高トリグリセリド血症	2 (<1)	2 (<1)	0	0	4 (<1)
糖尿病	2 (<1)	1 (<1)	0	0	3 (<1)
食欲亢進	3 (<1)	0	0	0	3 (<1)
糖尿病性ケトアシドーシス	1 (<1)	0	1 (<1)	0	2 (<1)
ビタミン欠乏症	1 (<1)	1 (<1)	0	0	2 (<1)
脱水	1 (<1)	0	0	0	1 (<1)
電解質失調	1 (<1)	0	0	0	1 (<1)
葉酸欠乏	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
妊娠糖尿病	1 (<1)	0	0	0	1 (<1)
痛風	0	1 (<1)	0	0	1 (<1)
高カルシウム血症	1 (<1)	0	0	0	1 (<1)
高カリウム血症	1 (<1)	0	0	0	1 (<1)
ビタミンD過剰症	1 (<1)	0	0	0	1 (<1)
低カリウム血症	1 (<1)	0	0	0	1 (<1)
低ナトリウム血症	0	1 (<1)	0	0	1 (<1)
鉄欠乏	1 (<1)	0	0	0	1 (<1)
肥満	1 (<1)	0	0	0	1 (<1)
多飲症	1 (<1)	0	0	0	1 (<1)
精神障害	98 (13)	64 (8)	1 (<1)	0	163 (21)
うつ病	38 (5)	30 (4)	0	0	68 (9)
不眠症	29 (4)	8 (1)	1 (<1)	0	38 (5)
不安	13 (2)	13 (2)	1 (<1)	0	27 (4)
抑うつ気分	10 (1)	7 (<1)	0	0	17 (2)
睡眠障害	9 (1)	3 (<1)	0	0	12 (2)
感情不安定	3 (<1)	2 (<1)	0	0	5 (<1)
気分動揺	1 (<1)	4 (<1)	0	0	5 (<1)
ストレス	1 (<1)	3 (<1)	0	0	4 (<1)
感情障害	3 (<1)	0	0	0	3 (<1)
抑うつ症状	3 (<1)	0	0	0	3 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
身体表現性障害	3 (<1)	0	0	0	3 (<1)
不安障害	2 (<1)	0	0	0	2 (<1)
神経過敏	1 (<1)	1 (<1)	0	0	2 (<1)
異常な夢	1 (<1)	0	0	0	1 (<1)
攻撃性	0	1 (<1)	0	0	1 (<1)
激越	1 (<1)	0	0	0	1 (<1)
怒り	1 (<1)	0	0	0	1 (<1)
気晴らし食い	1 (<1)	0	0	0	1 (<1)
精神緩慢	1 (<1)	0	0	0	1 (<1)
歯ぎしり	0	1 (<1)	0	0	1 (<1)
錯乱状態	0	1 (<1)	0	0	1 (<1)
性的興奮障害	1 (<1)	0	0	0	1 (<1)
不快気分	1 (<1)	0	0	0	1 (<1)
多幸気分	1 (<1)	0	0	0	1 (<1)
幻覚	0	1 (<1)	0	0	1 (<1)
リビドー減退	1 (<1)	0	0	0	1 (<1)
躁病	1 (<1)	0	0	0	1 (<1)
中期不眠症	1 (<1)	0	0	0	1 (<1)
悪夢	1 (<1)	0	0	0	1 (<1)
強迫性障害	1 (<1)	0	0	0	1 (<1)
パニック発作	0	1 (<1)	0	0	1 (<1)
自殺念慮	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
緊張	0	1 (<1)	0	0	1 (<1)
タバコ乱用	1 (<1)	0	0	0	1 (<1)
神経系障害	182 (24)	269 (35)	60 (8)	0	511 (66)
多発性硬化症再発	103 (13)	198 (26)	43 (6)	0	344 (45)
頭痛	75 (10)	48 (6)	7 (<1)	0	130 (17)
錯感覚	58 (8)	11 (1)	0	0	69 (9)
感覚鈍麻	37 (5)	10 (1)	1 (<1)	0	48 (6)
浮動性めまい	34 (4)	4 (<1)	0	0	38 (5)
筋痙直	17 (2)	9 (1)	1 (<1)	0	27 (4)
片頭痛	9 (1)	8 (1)	4 (<1)	0	21 (3)
多発性硬化症	8 (1)	6 (<1)	1 (<1)	0	15 (2)
灼熱感	10 (1)	3 (<1)	0	0	13 (2)
振戦	9 (1)	2 (<1)	0	0	11 (1)
感覚障害	10 (1)	0	0	0	10 (1)
平衡障害	5 (<1)	4 (<1)	0	0	9 (1)
レルミット徴候	5 (<1)	3 (<1)	0	0	8 (1)
坐骨神経痛	2 (<1)	6 (<1)	0	0	8 (1)
傾眠	7 (<1)	1 (<1)	0	0	8 (1)
三叉神経痛	1 (<1)	5 (<1)	2 (<1)	0	8 (1)
緊張性頭痛	3 (<1)	4 (<1)	0	0	7 (<1)
手根管症候群	3 (<1)	3 (<1)	0	0	6 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
記憶障害	5 (<1)	1 (<1)	0	0	6 (<1)
神経痛	4 (<1)	2 (<1)	0	0	6 (<1)
下肢静止不能症候群	5 (<1)	1 (<1)	0	0	6 (<1)
健忘	3 (<1)	2 (<1)	0	0	5 (<1)
異常感覚	5 (<1)	0	0	0	5 (<1)
片側頭痛	2 (<1)	3 (<1)	0	0	5 (<1)
知覚過敏	4 (<1)	1 (<1)	0	0	5 (<1)
反射亢進	3 (<1)	2 (<1)	0	0	5 (<1)
痙攣	1 (<1)	2 (<1)	1 (<1)	0	4 (<1)
失神寸前の状態	2 (<1)	2 (<1)	0	0	4 (<1)
失神	3 (<1)	1 (<1)	0	0	4 (<1)
ウートホフ現象	3 (<1)	1 (<1)	0	0	4 (<1)
過眠症	3 (<1)	0	0	0	3 (<1)
末梢性ニューロパチー	2 (<1)	1 (<1)	0	0	3 (<1)
副鼻腔炎に伴う頭痛	2 (<1)	1 (<1)	0	0	3 (<1)
運動失調	2 (<1)	0	0	0	2 (<1)
中枢神経系病変	0	2 (<1)	0	0	2 (<1)
頚腕症候群	1 (<1)	1 (<1)	0	0	2 (<1)
振動覚低下	2 (<1)	0	0	0	2 (<1)
てんかん	0	1 (<1)	1 (<1)	0	2 (<1)
顔面痙攣	1 (<1)	1 (<1)	0	0	2 (<1)
大発作痙攣	1 (<1)	1 (<1)	0	0	2 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
不全片麻痺	0	2 (<1)	0	0	2 (<1)
肋間神経痛	1 (<1)	1 (<1)	0	0	2 (<1)
意識消失	0	1 (<1)	1 (<1)	0	2 (<1)
前兆を伴う片頭痛	2 (<1)	0	0	0	2 (<1)
振動覚亢進	1 (<1)	1 (<1)	0	0	2 (<1)
異痛症	0	1 (<1)	0	0	1 (<1)
失語症	0	1 (<1)	0	0	1 (<1)
中枢痛症候群	0	1 (<1)	0	0	1 (<1)
小脳症候群	1 (<1)	0	0	0	1 (<1)
脳血管発作	0	0	1 (<1)	0	1 (<1)
頚髄神経根痛	0	1 (<1)	0	0	1 (<1)
不器用	1 (<1)	0	0	0	1 (<1)
複雑部分発作	0	1 (<1)	0	0	1 (<1)
協調運動異常	1 (<1)	0	0	0	1 (<1)
よだれ	0	1 (<1)	0	0	1 (<1)
構語障害	1 (<1)	0	0	0	1 (<1)
味覚異常	0	1 (<1)	0	0	1 (<1)
脳症	0	1 (<1)	0	0	1 (<1)
顔面不全麻痺	1 (<1)	0	0	0	1 (<1)
痙性歩行	1 (<1)	0	0	0	1 (<1)
ホルネル症候群	1 (<1)	0	0	0	1 (<1)
筋緊張亢進	0	1 (<1)	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
筋緊張低下	1 (<1)	0	0	0	1 (<1)
腰髄神経根障害	1 (<1)	0	0	0	1 (<1)
不全単麻痺	1 (<1)	0	0	0	1 (<1)
単麻痺	0	1 (<1)	0	0	1 (<1)
神経圧迫	1 (<1)	0	0	0	1 (<1)
眼振	0	1 (<1)	0	0	1 (<1)
後頭神経痛	0	1 (<1)	0	0	1 (<1)
嗅覚錯誤	1 (<1)	0	0	0	1 (<1)
錐体路症候群	1 (<1)	0	0	0	1 (<1)
片頭痛発作重積	0	0	1 (<1)	0	1 (<1)
温度覚鈍麻	1 (<1)	0	0	0	1 (<1)
第７脳神経麻痺	1 (<1)	0	0	0	1 (<1)
視野欠損	0	1 (<1)	0	0	1 (<1)
眼障害	70 (9)	22 (3)	3 (<1)	0	95 (12)
霧視	16 (2)	6 (<1)	0	0	22 (3)
眼痛	12 (2)	2 (<1)	0	0	14 (2)
複視	10 (1)	2 (<1)	0	0	12 (2)
視力低下	4 (<1)	6 (<1)	1 (<1)	0	11 (1)
眼瞼痙攣	7 (<1)	0	0	0	7 (<1)
結膜炎	4 (<1)	2 (<1)	0	0	6 (<1)
視力障害	4 (<1)	2 (<1)	0	0	6 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
眼乾燥	4 (<1)	0	0	0	4 (<1)
アレルギー性結膜炎	2 (<1)	0	0	0	2 (<1)
眼瞼紅斑	1 (<1)	1 (<1)	0	0	2 (<1)
眼そう痒症	2 (<1)	0	0	0	2 (<1)
遠視	2 (<1)	0	0	0	2 (<1)
流涙増加	2 (<1)	0	0	0	2 (<1)
羞明	2 (<1)	0	0	0	2 (<1)
眼の異常感	0	1 (<1)	0	0	1 (<1)
眼精疲労	1 (<1)	0	0	0	1 (<1)
眼瞼炎	1 (<1)	0	0	0	1 (<1)
一過性失明	0	0	1 (<1)	0	1 (<1)
白内障	1 (<1)	0	0	0	1 (<1)
嚢下白内障	0	1 (<1)	0	0	1 (<1)
霰粒腫	1 (<1)	0	0	0	1 (<1)
結膜出血	1 (<1)	0	0	0	1 (<1)
結膜刺激	1 (<1)	0	0	0	1 (<1)
眼の障害	1 (<1)	0	0	0	1 (<1)
眼刺激	1 (<1)	0	0	0	1 (<1)
眼瞼刺激	0	1 (<1)	0	0	1 (<1)
眼瞼そう痒症	1 (<1)	0	0	0	1 (<1)
緑内障	0	1 (<1)	0	0	1 (<1)
ホームズ・アディー瞳孔	0	0	1 (<1)	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
黄斑浮腫	0	1 (<1)	0	0	1 (<1)
近視	1 (<1)	0	0	0	1 (<1)
眼充血	1 (<1)	0	0	0	1 (<1)
翼状片	1 (<1)	0	0	0	1 (<1)
屈折障害	1 (<1)	0	0	0	1 (<1)
閃輝暗点	1 (<1)	0	0	0	1 (<1)
硝子体出血	0	1 (<1)	0	0	1 (<1)
耳および迷路障害	40 (5)	13 (2)	3 (<1)	0	56 (7)
回転性めまい	27 (4)	8 (1)	2 (<1)	0	37 (5)
耳鳴	3 (<1)	3 (<1)	0	0	6 (<1)
耳痛	4 (<1)	0	0	0	4 (<1)
頭位性回転性めまい	2 (<1)	2 (<1)	0	0	4 (<1)
聴力低下	3 (<1)	0	0	0	3 (<1)
難聴	1 (<1)	1 (<1)	0	0	2 (<1)
乗物酔い	2 (<1)	0	0	0	2 (<1)
耳垢栓塞	1 (<1)	0	0	0	1 (<1)
外耳道紅斑	1 (<1)	0	0	0	1 (<1)
耳閉	1 (<1)	0	0	0	1 (<1)
耳不快感	1 (<1)	0	0	0	1 (<1)
中耳の炎症	1 (<1)	0	0	0	1 (<1)
前庭障害	0	0	1 (<1)	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
心臓障害	29 (4)	8 (1)	0	0	37 (5)
動悸	8 (1)	2 (<1)	0	0	10 (1)
心室性期外収縮	2 (<1)	5 (<1)	0	0	7 (<1)
頻脈	6 (<1)	0	0	0	6 (<1)
伝導障害	3 (<1)	0	0	0	3 (<1)
洞性頻脈	2 (<1)	1 (<1)	0	0	3 (<1)
洞性徐脈	2 (<1)	0	0	0	2 (<1)
上室性期外収縮	2 (<1)	0	0	0	2 (<1)
上室性不整脈	1 (<1)	0	0	0	1 (<1)
第一度房室ブロック	1 (<1)	0	0	0	1 (<1)
徐脈	1 (<1)	0	0	0	1 (<1)
左脚ブロック	1 (<1)	0	0	0	1 (<1)
期外収縮	1 (<1)	0	0	0	1 (<1)
心筋虚血	1 (<1)	0	0	0	1 (<1)
上室性頻脈	1 (<1)	0	0	0	1 (<1)
発作性頻脈	1 (<1)	0	0	0	1 (<1)
血管障害	63 (8)	17 (2)	4 (<1)	0	84 (11)
潮紅	27 (4)	5 (<1)	1 (<1)	0	33 (4)
高血圧	17 (2)	7 (<1)	0	0	24 (3)
ほてり	15 (2)	1 (<1)	0	0	16 (2)
血腫	4 (<1)	1 (<1)	0	0	5 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
低血圧	3 (<1)	0	0	0	3 (<1)
末梢冷感	1 (<1)	1 (<1)	1 (<1)	0	3 (<1)
起立性低血圧	2 (<1)	0	0	0	2 (<1)
静脈炎	1 (<1)	0	1 (<1)	0	2 (<1)
レイノー現象	2 (<1)	0	0	0	2 (<1)
毛細血管脆弱	0	1 (<1)	0	0	1 (<1)
高血圧クリーゼ	0	1 (<1)	0	0	1 (<1)
蒼白	1 (<1)	0	0	0	1 (<1)
末梢性虚血	0	0	1 (<1)	0	1 (<1)
静脈狭窄	0	1 (<1)	0	0	1 (<1)
呼吸器、胸郭および縦隔障害	83 (11)	34 (4)	3 (<1)	0	120 (16)
咳嗽	28 (4)	8 (1)	0	0	36 (5)
口腔咽頭痛	22 (3)	9 (1)	2 (<1)	0	33 (4)
鼻閉	4 (<1)	3 (<1)	1 (<1)	0	8 (1)
鼻漏	8 (1)	0	0	0	8 (1)
呼吸困難	5 (<1)	2 (<1)	0	0	7 (<1)
鼻出血	6 (<1)	1 (<1)	0	0	7 (<1)
アレルギー性鼻炎	4 (<1)	3 (<1)	0	0	7 (<1)
気道うっ血	4 (<1)	1 (<1)	0	0	5 (<1)
発声障害	3 (<1)	0	0	0	3 (<1)
湿性咳嗽	2 (<1)	1 (<1)	0	0	3 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
低音性連続性ラ音	3 (<1)	0	0	0	3 (<1)
咽喉刺激感	3 (<1)	0	0	0	3 (<1)
上気道うっ血	2 (<1)	1 (<1)	0	0	3 (<1)
上気道咳症候群	2 (<1)	1 (<1)	0	0	3 (<1)
アレルギー性咽頭炎	2 (<1)	0	0	0	2 (<1)
喘息	1 (<1)	1 (<1)	0	0	2 (<1)
息詰まり	1 (<1)	1 (<1)	0	0	2 (<1)
咽喉乾燥	2 (<1)	0	0	0	2 (<1)
しゃっくり	1 (<1)	1 (<1)	0	0	2 (<1)
鼻乾燥	2 (<1)	0	0	0	2 (<1)
ラ音	1 (<1)	1 (<1)	0	0	2 (<1)
副鼻腔うっ血	1 (<1)	1 (<1)	0	0	2 (<1)
アレルギー性咳嗽	1 (<1)	0	0	0	1 (<1)
アレルギー性呼吸器疾患	1 (<1)	0	0	0	1 (<1)
アレルギー性呼吸器症状	1 (<1)	0	0	0	1 (<1)
アレルギー性副鼻腔炎	1 (<1)	0	0	0	1 (<1)
慢性気管支炎	1 (<1)	0	0	0	1 (<1)
労作性呼吸困難	1 (<1)	0	0	0	1 (<1)
喀血	0	1 (<1)	0	0	1 (<1)
過換気	1 (<1)	0	0	0	1 (<1)
上気道分泌増加	1 (<1)	0	0	0	1 (<1)
鼻部不快感	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
鼻茸	0	1 (<1)	0	0	1 (<1)
口腔咽頭水疱形成	1 (<1)	0	0	0	1 (<1)
口腔咽頭不快感	1 (<1)	0	0	0	1 (<1)
口腔咽頭プラーク	1 (<1)	0	0	0	1 (<1)
咽頭紅斑	1 (<1)	0	0	0	1 (<1)
咽頭の炎症	1 (<1)	0	0	0	1 (<1)
気道の炎症	1 (<1)	0	0	0	1 (<1)
副鼻腔障害	1 (<1)	0	0	0	1 (<1)
くしゃみ	1 (<1)	0	0	0	1 (<1)
扁桃障害	1 (<1)	0	0	0	1 (<1)
上気道の炎症	0	1 (<1)	0	0	1 (<1)
声帯の炎症	0	1 (<1)	0	0	1 (<1)
喘鳴	0	1 (<1)	0	0	1 (<1)
胃腸障害	198 (26)	77 (10)	14 (2)	0	289 (37)
下痢	60 (8)	22 (3)	1 (<1)	0	83 (11)
悪心	52 (7)	12 (2)	3 (<1)	0	67 (9)
上腹部痛	34 (4)	10 (1)	1 (<1)	0	45 (6)
腹痛	23 (3)	13 (2)	1 (<1)	0	37 (5)
嘔吐	27 (4)	9 (1)	1 (<1)	0	37 (5)
便秘	22 (3)	9 (1)	2 (<1)	0	33 (4)
消化不良	14 (2)	6 (<1)	0	0	20 (3)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
歯痛	15 (2)	2 (<1)	2 (<1)	0	19 (2)
胃食道逆流性疾患	8 (1)	6 (<1)	1 (<1)	0	15 (2)
鼓腸	9 (1)	4 (<1)	0	0	13 (2)
腹部不快感	10 (1)	1 (<1)	0	0	11 (1)
腹部膨満	9 (1)	2 (<1)	0	0	11 (1)
胃炎	7 (<1)	4 (<1)	0	0	11 (1)
胃腸障害	5 (<1)	3 (<1)	0	0	8 (1)
痔核	3 (<1)	4 (<1)	0	0	7 (<1)
口内乾燥	6 (<1)	0	0	0	6 (<1)
嚥下障害	4 (<1)	1 (<1)	1 (<1)	0	6 (<1)
口腔内潰瘍形成	2 (<1)	2 (<1)	0	0	4 (<1)
下腹部痛	1 (<1)	2 (<1)	0	0	3 (<1)
胃障害	0	3 (<1)	0	0	3 (<1)
消化器痛	1 (<1)	2 (<1)	0	0	3 (<1)
歯肉炎	3 (<1)	0	0	0	3 (<1)
歯周炎	3 (<1)	0	0	0	3 (<1)
口内炎	2 (<1)	1 (<1)	0	0	3 (<1)
腹部圧痛	2 (<1)	0	0	0	2 (<1)
大腸炎	0	2 (<1)	0	0	2 (<1)
結腸ポリープ	2 (<1)	0	0	0	2 (<1)
齲歯	2 (<1)	0	0	0	2 (<1)
心窩部不快感	1 (<1)	1 (<1)	0	0	2 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
便失禁	2 (<1)	0	0	0	2 (<1)
食中毒	2 (<1)	0	0	0	2 (<1)
血便排泄	2 (<1)	0	0	0	2 (<1)
裂孔ヘルニア	2 (<1)	0	0	0	2 (<1)
胃酸過多	2 (<1)	0	0	0	2 (<1)
過敏性腸症候群	2 (<1)	0	0	0	2 (<1)
口の錯感覚	2 (<1)	0	0	0	2 (<1)
肛門周囲痛	0	2 (<1)	0	0	2 (<1)
逆流性食道炎	2 (<1)	0	0	0	2 (<1)
腹部硬直	1 (<1)	0	0	0	1 (<1)
異常便	1 (<1)	0	0	0	1 (<1)
裂肛	0	1 (<1)	0	0	1 (<1)
アフタ性口内炎	1 (<1)	0	0	0	1 (<1)
便通不規則	1 (<1)	0	0	0	1 (<1)
呼気臭	1 (<1)	0	0	0	1 (<1)
口唇のひび割れ	1 (<1)	0	0	0	1 (<1)
潰瘍性大腸炎	0	1 (<1)	0	0	1 (<1)
十二指腸潰瘍	0	1 (<1)	0	0	1 (<1)
十二指腸胃逆流	1 (<1)	0	0	0	1 (<1)
腸炎	0	1 (<1)	0	0	1 (<1)
胃ポリープ	1 (<1)	0	0	0	1 (<1)
胃腸出血	0	1 (<1)	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
歯肉出血	1 (<1)	0	0	0	1 (<1)
歯肉痛	1 (<1)	0	0	0	1 (<1)
歯肉腫脹	1 (<1)	0	0	0	1 (<1)
舌痛	0	1 (<1)	0	0	1 (<1)
吐血	1 (<1)	0	0	0	1 (<1)
口の感覚鈍麻	1 (<1)	0	0	0	1 (<1)
口唇乾燥	1 (<1)	0	0	0	1 (<1)
膵炎	1 (<1)	0	0	0	1 (<1)
急性膵炎	0	0	1 (<1)	0	1 (<1)
腹膜出血	0	0	1 (<1)	0	1 (<1)
直腸出血	1 (<1)	0	0	0	1 (<1)
逆流性胃炎	1 (<1)	0	0	0	1 (<1)
脆弱歯	1 (<1)	0	0	0	1 (<1)
舌障害	1 (<1)	0	0	0	1 (<1)
舌乾燥	1 (<1)	0	0	0	1 (<1)
歯の発育障害	0	1 (<1)	0	0	1 (<1)
歯の障害	1 (<1)	0	0	0	1 (<1)
埋伏歯	1 (<1)	0	0	0	1 (<1)
歯の脱落	1 (<1)	0	0	0	1 (<1)
臍ヘルニア	0	1 (<1)	0	0	1 (<1)
肝胆道系障害	4 (<1)	6 (<1)	1 (<1)	0	11 (1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
胆石症	1 (<1)	1 (<1)	1 (<1)	0	3 (<1)
胆管結石	1 (<1)	1 (<1)	0	0	2 (<1)
高ビリルビン血症	1 (<1)	1 (<1)	0	0	2 (<1)
肝嚢胞	1 (<1)	0	0	0	1 (<1)
脂肪肝	1 (<1)	0	0	0	1 (<1)
肝炎	0	1 (<1)	0	0	1 (<1)
中毒性肝炎	0	1 (<1)	0	0	1 (<1)
肝障害	0	1 (<1)	0	0	1 (<1)
皮膚および皮下組織障害	116 (15)	34 (4)	7 (<1)	0	157 (20)
そう痒症	25 (3)	5 (<1)	0	0	30 (4)
発疹	20 (3)	5 (<1)	1 (<1)	0	26 (3)
脱毛症	15 (2)	3 (<1)	1 (<1)	0	19 (2)
ざ瘡	12 (2)	1 (<1)	0	0	13 (2)
紅斑	10 (1)	0	0	0	10 (1)
多汗症	9 (1)	1 (<1)	0	0	10 (1)
蕁麻疹	8 (1)	1 (<1)	0	0	9 (1)
寝汗	5 (<1)	2 (<1)	1 (<1)	0	8 (1)
顔面感覚鈍麻	5 (<1)	2 (<1)	0	0	7 (<1)
皮膚乾燥	6 (<1)	0	0	0	6 (<1)
アレルギー性皮膚炎	2 (<1)	2 (<1)	1 (<1)	0	5 (<1)
乾癬	4 (<1)	0	1 (<1)	0	5 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
皮膚炎	3 (<1)	1 (<1)	0	0	4 (<1)
斑状出血	2 (<1)	2 (<1)	0	0	4 (<1)
湿疹	2 (<1)	2 (<1)	0	0	4 (<1)
皮膚嚢腫	3 (<1)	0	0	0	3 (<1)
接触性皮膚炎	3 (<1)	0	0	0	3 (<1)
点状出血	2 (<1)	1 (<1)	0	0	3 (<1)
色素沈着障害	3 (<1)	0	0	0	3 (<1)
ばら色粃糠疹	3 (<1)	0	0	0	3 (<1)
全身性そう痒症	1 (<1)	2 (<1)	0	0	3 (<1)
酒さ	1 (<1)	2 (<1)	0	0	3 (<1)
皮膚病変	2 (<1)	1 (<1)	0	0	3 (<1)
冷汗	2 (<1)	0	0	0	2 (<1)
アレルギー性そう痒症	1 (<1)	1 (<1)	0	0	2 (<1)
そう痒性皮疹	2 (<1)	0	0	0	2 (<1)
皮膚色素過剰	1 (<1)	1 (<1)	0	0	2 (<1)
水疱	1 (<1)	0	0	0	1 (<1)
ざ瘡様皮膚炎	1 (<1)	0	0	0	1 (<1)
アトピー性皮膚炎	0	0	1 (<1)	0	1 (<1)
発汗障害	1 (<1)	0	0	0	1 (<1)
多形紅斑	0	0	1 (<1)	0	1 (<1)
剥脱性発疹	1 (<1)	0	0	0	1 (<1)
皮膚肉芽腫	0	1 (<1)	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
毛質異常	1 (<1)	0	0	0	1 (<1)
紅色汗疹	1 (<1)	0	0	0	1 (<1)
嵌入爪	1 (<1)	0	0	0	1 (<1)
黒子	1 (<1)	0	0	0	1 (<1)
爪床障害	1 (<1)	0	0	0	1 (<1)
爪床の炎症	1 (<1)	0	0	0	1 (<1)
爪変色	1 (<1)	0	0	0	1 (<1)
爪破損	1 (<1)	0	0	0	1 (<1)
光線性皮膚症	1 (<1)	0	0	0	1 (<1)
光線過敏性反応	1 (<1)	0	0	0	1 (<1)
前癌性皮膚病変	0	1 (<1)	0	0	1 (<1)
斑状皮疹	1 (<1)	0	0	0	1 (<1)
斑状丘疹状皮疹	0	1 (<1)	0	0	1 (<1)
猩紅熱様発疹	1 (<1)	0	0	0	1 (<1)
小水疱性皮疹	0	1 (<1)	0	0	1 (<1)
癥痕	1 (<1)	0	0	0	1 (<1)
皮膚変色	1 (<1)	0	0	0	1 (<1)
皮膚障害	1 (<1)	0	0	0	1 (<1)
皮膚剥脱	1 (<1)	0	0	0	1 (<1)
皮膚硬結	1 (<1)	0	0	0	1 (<1)
皮膚刺激	1 (<1)	0	0	0	1 (<1)
皮下結節	1 (<1)	0	0	0	1 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
顔面腫脹	1 (<1)	0	0	0	1 (<1)
毛細血管拡張症	0	1 (<1)	0	0	1 (<1)
裂毛	1 (<1)	0	0	0	1 (<1)
乾皮症	0	1 (<1)	0	0	1 (<1)
筋骨格系および結合組織障害	144 (19)	103 (13)	14 (2)	0	261 (34)
背部痛	55 (7)	31 (4)	4 (<1)	0	90 (12)
関節痛	47 (6)	15 (2)	3 (<1)	0	65 (8)
四肢痛	29 (4)	26 (3)	3 (<1)	0	58 (8)
筋力低下	29 (4)	7 (<1)	0	0	36 (5)
筋痙縮	20 (3)	14 (2)	0	0	34 (4)
筋骨格痛	16 (2)	10 (1)	0	0	26 (3)
筋肉痛	20 (3)	4 (<1)	2 (<1)	0	26 (3)
頚部痛	14 (2)	7 (<1)	1 (<1)	0	22 (3)
筋骨格硬直	6 (<1)	5 (<1)	0	0	11 (1)
腱炎	7 (<1)	2 (<1)	0	0	9 (1)
筋骨格系胸痛	4 (<1)	2 (<1)	0	0	6 (<1)
変形性関節症	1 (<1)	3 (<1)	1 (<1)	0	5 (<1)
骨痛	3 (<1)	0	1 (<1)	0	4 (<1)
筋攣縮	4 (<1)	0	0	0	4 (<1)
骨粗鬆症	2 (<1)	2 (<1)	0	0	4 (<1)
顎痛	3 (<1)	1 (<1)	0	0	4 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
関節周囲炎	2 (<1)	2 (<1)	0	0	4 (<1)
重感	3 (<1)	1 (<1)	0	0	4 (<1)
滑液包炎	3 (<1)	0	0	0	3 (<1)
関節腫脹	1 (<1)	2 (<1)	0	0	3 (<1)
筋骨格不快感	2 (<1)	1 (<1)	0	0	3 (<1)
尾骨痛	1 (<1)	1 (<1)	0	0	2 (<1)
線維筋痛	1 (<1)	1 (<1)	0	0	2 (<1)
椎間板突出	0	2 (<1)	0	0	2 (<1)
筋緊張	2 (<1)	0	0	0	2 (<1)
関節リウマチ	1 (<1)	1 (<1)	0	0	2 (<1)
肩回旋筋腱板症候群	1 (<1)	1 (<1)	0	0	2 (<1)
変形性脊椎症	1 (<1)	1 (<1)	0	0	2 (<1)
滑液嚢腫	1 (<1)	0	1 (<1)	0	2 (<1)
腱鞘炎	1 (<1)	1 (<1)	0	0	2 (<1)
関節炎	1 (<1)	0	0	0	1 (<1)
腋窩腫瘤	1 (<1)	0	0	0	1 (<1)
側腹部痛	1 (<1)	0	0	0	1 (<1)
鼡径部痛	1 (<1)	0	0	0	1 (<1)
四肢不快感	0	1 (<1)	0	0	1 (<1)
運動性低下	0	0	1 (<1)	0	1 (<1)
筋拘縮	0	0	1 (<1)	0	1 (<1)
筋肉疲労	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
筋硬化症	1 (<1)	0	0	0	1 (<1)
筋炎	0	1 (<1)	0	0	1 (<1)
結節性変形性関節症	0	1 (<1)	0	0	1 (<1)
骨壊死	0	1 (<1)	0	0	1 (<1)
骨減少症	1 (<1)	0	0	0	1 (<1)
回帰性リウマチ	0	1 (<1)	0	0	1 (<1)
足底筋膜炎	1 (<1)	0	0	0	1 (<1)
多発性関節炎	0	1 (<1)	0	0	1 (<1)
脊柱変形	1 (<1)	0	0	0	1 (<1)
滑膜炎	0	1 (<1)	0	0	1 (<1)
腱障害	1 (<1)	0	0	0	1 (<1)
腱痛	0	1 (<1)	0	0	1 (<1)
斜頚	1 (<1)	0	0	0	1 (<1)
腎および尿路障害	111 (14)	38 (5)	2 (<1)	0	151 (20)
蛋白尿	52 (7)	7 (<1)	0	0	59 (8)
血尿	24 (3)	10 (1)	0	0	34 (4)
ミクロアルブミン尿	21 (3)	3 (<1)	0	0	24 (3)
頻尿	11 (1)	1 (<1)	0	0	12 (2)
排尿困難	8 (1)	3 (<1)	0	0	11 (1)
尿意切迫	8 (1)	3 (<1)	0	0	11 (1)
糖尿	8 (1)	1 (<1)	0	0	9 (1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
腎結石症	3 (<1)	5 (<1)	0	0	8 (1)
尿失禁	4 (<1)	3 (<1)	0	0	7 (<1)
ケトン尿	6 (<1)	0	0	0	6 (<1)
排尿躊躇	4 (<1)	1 (<1)	0	0	5 (<1)
尿閉	2 (<1)	1 (<1)	1 (<1)	0	4 (<1)
非感染性膀胱炎	3 (<1)	0	0	0	3 (<1)
白血球尿	2 (<1)	0	0	0	2 (<1)
神経因性膀胱	1 (<1)	1 (<1)	0	0	2 (<1)
膀胱憩室	0	0	1 (<1)	0	1 (<1)
膀胱機能障害	0	1 (<1)	0	0	1 (<1)
膀胱痙縮	1 (<1)	0	0	0	1 (<1)
尿路結石	0	1 (<1)	0	0	1 (<1)
肋骨脊柱角圧痛	0	1 (<1)	0	0	1 (<1)
慢性糸球体腎炎	0	1 (<1)	0	0	1 (<1)
腎下垂症	1 (<1)	0	0	0	1 (<1)
夜間頻尿	1 (<1)	0	0	0	1 (<1)
腎仙痛	1 (<1)	0	0	0	1 (<1)
腎嚢胞	1 (<1)	0	0	0	1 (<1)
腎臓痛	0	1 (<1)	0	0	1 (<1)
腹圧性尿失禁	1 (<1)	0	0	0	1 (<1)
尿路の炎症	1 (<1)	0	0	0	1 (<1)
尿路痛	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
尿臭異常	1 (<1)	0	0	0	1 (<1)
妊娠、産褥および周産期の状態	0	2 (<1)	1 (<1)	0	3 (<1)
自然流産	0	1 (<1)	1 (<1)	0	2 (<1)
妊娠浮腫	0	1 (<1)	0	0	1 (<1)
生殖系および乳房障害	52 (7)	21 (3)	3 (<1)	0	76 (10)
月経困難症	5 (<1)	4 (<1)	0	0	9 (1)
不規則月経	7 (<1)	2 (<1)	0	0	9 (1)
無月経	6 (<1)	0	0	0	6 (<1)
月経過多	4 (<1)	1 (<1)	1 (<1)	0	6 (<1)
不正子宮出血	5 (<1)	1 (<1)	0	0	6 (<1)
卵巣嚢胞	2 (<1)	2 (<1)	1 (<1)	0	5 (<1)
勃起不全	2 (<1)	2 (<1)	0	0	4 (<1)
骨盤痛	1 (<1)	2 (<1)	1 (<1)	0	4 (<1)
線維嚢胞性乳腺疾患	3 (<1)	0	0	0	3 (<1)
月経遅延	3 (<1)	0	0	0	3 (<1)
精巣痛	3 (<1)	0	0	0	3 (<1)
腟出血	2 (<1)	1 (<1)	0	0	3 (<1)
バルトリン嚢腫	1 (<1)	1 (<1)	0	0	2 (<1)
月経障害	0	1 (<1)	1 (<1)	0	2 (<1)
頻発月経	1 (<1)	1 (<1)	0	0	2 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
閉経後出血	2 (<1)	0	0	0	2 (<1)
性機能不全	2 (<1)	0	0	0	2 (<1)
子宮出血	1 (<1)	1 (<1)	0	0	2 (<1)
良性前立腺肥大症	1 (<1)	0	0	0	1 (<1)
乳房嚢胞	1 (<1)	0	0	0	1 (<1)
乳房障害	0	1 (<1)	0	0	1 (<1)
乳房硬結	1 (<1)	0	0	0	1 (<1)
乳房腫瘤	0	1 (<1)	0	0	1 (<1)
乳房痛	1 (<1)	0	0	0	1 (<1)
子宮頚部上皮異形成	1 (<1)	0	0	0	1 (<1)
生殖器病変	1 (<1)	0	0	0	1 (<1)
機能性子宮出血	1 (<1)	0	0	0	1 (<1)
閉経期症状	0	1 (<1)	0	0	1 (<1)
希発月経	1 (<1)	0	0	0	1 (<1)
卵巣嚢胞破裂	0	1 (<1)	0	0	1 (<1)
子宮頚部びらん	0	1 (<1)	0	0	1 (<1)
子宮ポリープ	0	1 (<1)	0	0	1 (<1)
膣分泌物	1 (<1)	0	0	0	1 (<1)
外陰膣痛	0	1 (<1)	0	0	1 (<1)
先天性、家族性および遺伝性障害	1 (<1)	0	0	0	1 (<1)
ジルベール症候群	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
一般・全身障害および投与部位の状態	114 (15)	72 (9)	8 (1)	0	194 (25)
疲労	50 (6)	34 (4)	3 (<1)	0	87 (11)
発熱	32 (4)	8 (1)	0	0	40 (5)
無力症	13 (2)	7 (<1)	0	0	20 (3)
末梢性浮腫	10 (1)	8 (1)	1 (<1)	0	19 (2)
インフルエンザ様疾患	5 (<1)	5 (<1)	1 (<1)	0	11 (1)
疼痛	5 (<1)	6 (<1)	0	0	11 (1)
胸痛	4 (<1)	4 (<1)	2 (<1)	0	10 (1)
歩行障害	9 (1)	1 (<1)	0	0	10 (1)
悪寒	7 (<1)	0	0	0	7 (<1)
胸部不快感	5 (<1)	0	0	0	5 (<1)
易刺激性	4 (<1)	1 (<1)	0	0	5 (<1)
顔面痛	2 (<1)	1 (<1)	0	0	3 (<1)
熱感	1 (<1)	1 (<1)	0	0	2 (<1)
非心臓性胸痛	1 (<1)	1 (<1)	0	0	2 (<1)
嚢胞	1 (<1)	0	0	0	1 (<1)
医療機器関連眼合併症	1 (<1)	0	0	0	1 (<1)
異常感	0	1 (<1)	0	0	1 (<1)
冷感	1 (<1)	0	0	0	1 (<1)
体温変動感	1 (<1)	0	0	0	1 (<1)
全身症状	0	1 (<1)	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
ヘルニア痛	0	1 (<1)	0	0	1 (<1)
空腹	1 (<1)	0	0	0	1 (<1)
高熱	1 (<1)	0	0	0	1 (<1)
足のもつれ	1 (<1)	0	0	0	1 (<1)
倦怠感	1 (<1)	0	0	0	1 (<1)
浮腫	1 (<1)	0	0	0	1 (<1)
骨盤腔内腫瘤	0	0	1 (<1)	0	1 (<1)
口渇	1 (<1)	0	0	0	1 (<1)
ワクチン接種部位疼痛	1 (<1)	0	0	0	1 (<1)
臨床検査	142 (18)	51 (7)	7 (<1)	0	200 (26)
アラニン・アミノトランスフェラーゼ増加	21 (3)	15 (2)	2 (<1)	0	38 (5)
尿中アルブミン陽性	22 (3)	5 (<1)	0	0	27 (4)
尿中蛋白陽性	20 (3)	2 (<1)	0	0	22 (3)
γ－グルタミルトランスフェラーゼ増加	14 (2)	3 (<1)	2 (<1)	0	19 (2)
アスパラギン酸アミノトランスフェラーゼ増加	8 (1)	8 (1)	2 (<1)	0	18 (2)
尿中β２ミクログロブリン増加	11 (1)	3 (<1)	0	0	14 (2)
白血球数増加	11 (1)	3 (<1)	0	0	14 (2)
尿中白血球陽性	12 (2)	1 (<1)	0	0	13 (2)
好中球数増加	11 (1)	1 (<1)	0	0	12 (2)
体重増加	7 (<1)	4 (<1)	0	0	11 (1)
肝酵素上昇	5 (<1)	3 (<1)	2 (<1)	0	10 (1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
血中ビリルビン増加	7 (<1)	2 (<1)	0	0	9 (1)
血中アルカリホスファターゼ増加	6 (<1)	1 (<1)	0	0	7 (<1)
血中ブドウ糖増加	6 (<1)	0	1 (<1)	0	7 (<1)
尿中血陽性	7 (<1)	0	0	0	7 (<1)
心電図ＱＴ延長	7 (<1)	0	0	0	7 (<1)
血中副甲状腺ホルモン増加	6 (<1)	0	0	0	6 (<1)
尿中結晶陽性	6 (<1)	0	0	0	6 (<1)
尿中赤血球陽性	5 (<1)	1 (<1)	0	0	6 (<1)
血中クレアチニン増加	1 (<1)	3 (<1)	1 (<1)	0	5 (<1)
血中トリグリセリド増加	4 (<1)	1 (<1)	0	0	5 (<1)
ヘモグロビン減少	5 (<1)	0	0	0	5 (<1)
血中乳酸脱水素酵素増加	4 (<1)	0	0	0	4 (<1)
心電図異常	3 (<1)	1 (<1)	0	0	4 (<1)
ヘマトクリット減少	4 (<1)	0	0	0	4 (<1)
尿中ブドウ糖陽性	2 (<1)	1 (<1)	0	0	3 (<1)
血小板数増加	3 (<1)	0	0	0	3 (<1)
赤血球数減少	3 (<1)	0	0	0	3 (<1)
体重減少	3 (<1)	0	0	0	3 (<1)
細菌検査	2 (<1)	0	0	0	2 (<1)
細菌検査陽性	0	2 (<1)	0	0	2 (<1)
β２ミクログロブリン増加	2 (<1)	0	0	0	2 (<1)
血中カルシウム増加	2 (<1)	0	0	0	2 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
血中コレステロール増加	2 (<1)	0	0	0	2 (<1)
血中カリウム減少	1 (<1)	1 (<1)	0	0	2 (<1)
血中尿素増加	2 (<1)	0	0	0	2 (<1)
血中尿酸増加	2 (<1)	0	0	0	2 (<1)
心雑音	2 (<1)	0	0	0	2 (<1)
好酸球数増加	1 (<1)	1 (<1)	0	0	2 (<1)
心拍数増加	2 (<1)	0	0	0	2 (<1)
肝機能検査異常	1 (<1)	1 (<1)	0	0	2 (<1)
リンパ球数増加	2 (<1)	0	0	0	2 (<1)
好中球数減少	2 (<1)	0	0	0	2 (<1)
血小板数減少	2 (<1)	0	0	0	2 (<1)
ＱＲＳ軸異常	2 (<1)	0	0	0	2 (<1)
トランスアミナーゼ上昇	1 (<1)	0	1 (<1)	0	2 (<1)
尿中ケトン体陽性	2 (<1)	0	0	0	2 (<1)
ビタミンＢ１２減少	2 (<1)	0	0	0	2 (<1)
ビタミンＤ減少	2 (<1)	0	0	0	2 (<1)
ビタミンＤ増加	2 (<1)	0	0	0	2 (<1)
抗甲状腺抗体陽性	1 (<1)	0	0	0	1 (<1)
抗核抗体増加	1 (<1)	0	0	0	1 (<1)
動脈雑音	1 (<1)	0	0	0	1 (<1)
血中重炭酸塩減少	1 (<1)	0	0	0	1 (<1)
血中ビリルビン減少	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
血中カルシウム減少	1 (<1)	0	0	0	1 (<1)
血中クロール減少	0	1 (<1)	0	0	1 (<1)
血中クレアチン異常	1 (<1)	0	0	0	1 (<1)
血中ブドウ糖減少	0	1 (<1)	0	0	1 (<1)
血中鉄減少	1 (<1)	0	0	0	1 (<1)
血中マグネシウム減少	1 (<1)	0	0	0	1 (<1)
血中副甲状腺ホルモン減少	0	1 (<1)	0	0	1 (<1)
血中リン減少	1 (<1)	0	0	0	1 (<1)
血中リン増加	1 (<1)	0	0	0	1 (<1)
血圧低下	1 (<1)	0	0	0	1 (<1)
血圧上昇	1 (<1)	0	0	0	1 (<1)
収縮期血圧上昇	1 (<1)	0	0	0	1 (<1)
体温上昇	1 (<1)	0	0	0	1 (<1)
中枢神経系機能検査異常	1 (<1)	0	0	0	1 (<1)
心電図ＰＲ延長	0	1 (<1)	0	0	1 (<1)
心電図異常ＱＲＳ群	1 (<1)	0	0	0	1 (<1)
心電図ＱＲＳ群延長	1 (<1)	0	0	0	1 (<1)
心電図ＳＴ部分下降	1 (<1)	0	0	0	1 (<1)
心電図Ｔ波振幅減少	1 (<1)	0	0	0	1 (<1)
心電図Ｔ波逆転	1 (<1)	0	0	0	1 (<1)
好酸球数異常	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
全血球数異常	1 (<1)	0	0	0	1 (<1)
γ－グルタミルトランスフェラーゼ異常	0	1 (<1)	0	0	1 (<1)
血液学的検査異常	1 (<1)	0	0	0	1 (<1)
心音異常	1 (<1)	0	0	0	1 (<1)
高比重リポ蛋白増加	1 (<1)	0	0	0	1 (<1)
A型インフルエンザウイルス検査陽性	1 (<1)	0	0	0	1 (<1)
リンパ球数減少	1 (<1)	0	0	0	1 (<1)
リンパ球形態異常	1 (<1)	0	0	0	1 (<1)
リンパ球百分率減少	1 (<1)	0	0	0	1 (<1)
後骨髄球百分率増加	1 (<1)	0	0	0	1 (<1)
骨髄球数増加	1 (<1)	0	0	0	1 (<1)
骨髄球百分率増加	1 (<1)	0	0	0	1 (<1)
好中球百分率異常	1 (<1)	0	0	0	1 (<1)
好中球百分率増加	1 (<1)	0	0	0	1 (<1)
脳核磁気共鳴画像異常	0	1 (<1)	0	0	1 (<1)
赤血球数増加	1 (<1)	0	0	0	1 (<1)
子宮頚部スミア異常	0	1 (<1)	0	0	1 (<1)
膀胱超音波検査異常	1 (<1)	0	0	0	1 (<1)
尿細胞診異常	1 (<1)	0	0	0	1 (<1)
白血球数減少	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
傷害、中毒および処置合併症	79 (10)	56 (7)	5 (<1)	0	140 (18)
転倒	14 (2)	7 (<1)	1 (<1)	0	22 (3)
挫傷	13 (2)	6 (<1)	0	0	19 (2)
関節捻挫	10 (1)	6 (<1)	0	0	16 (2)
節足動物咬傷	7 (<1)	2 (<1)	0	0	9 (1)
熱傷	4 (<1)	4 (<1)	0	0	8 (1)
皮膚裂傷	4 (<1)	3 (<1)	0	0	7 (<1)
関節損傷	4 (<1)	2 (<1)	0	0	6 (<1)
骨格損傷	4 (<1)	2 (<1)	0	0	6 (<1)
四肢損傷	5 (<1)	0	0	0	5 (<1)
肉離れ	4 (<1)	0	1 (<1)	0	5 (<1)
交通事故	4 (<1)	0	1 (<1)	0	5 (<1)
擦過傷	4 (<1)	0	0	0	4 (<1)
足骨折	0	4 (<1)	0	0	4 (<1)
靭帯断裂	2 (<1)	1 (<1)	1 (<1)	0	4 (<1)
サンバーン	4 (<1)	0	0	0	4 (<1)
節足動物刺傷	1 (<1)	2 (<1)	0	0	3 (<1)
眼外傷	2 (<1)	1 (<1)	0	0	3 (<1)
頭部損傷	2 (<1)	1 (<1)	0	0	3 (<1)
半月板障害	1 (<1)	2 (<1)	0	0	3 (<1)
処置による疼痛	0	3 (<1)	0	0	3 (<1)
腱断裂	1 (<1)	2 (<1)	0	0	3 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
創傷	2 (<1)	1 (<1)	0	0	3 (<1)
動物咬傷	0	2 (<1)	0	0	2 (<1)
上顎炎	2 (<1)	0	0	0	2 (<1)
手骨折	0	2 (<1)	0	0	2 (<1)
筋損傷	1 (<1)	1 (<1)	0	0	2 (<1)
処置後合併症	2 (<1)	0	0	0	2 (<1)
外傷後疼痛	2 (<1)	0	0	0	2 (<1)
脛骨骨折	0	2 (<1)	0	0	2 (<1)
歯牙破折	2 (<1)	0	0	0	2 (<1)
有毒性刺傷	2 (<1)	0	0	0	2 (<1)
むち打ち損傷	2 (<1)	0	0	0	2 (<1)
手首関節骨折	1 (<1)	1 (<1)	0	0	2 (<1)
労働災害	0	1 (<1)	0	0	1 (<1)
第２度熱傷	1 (<1)	0	0	0	1 (<1)
眼部化学的損傷	1 (<1)	0	0	0	1 (<1)
凍瘡	1 (<1)	0	0	0	1 (<1)
脳振盪	1 (<1)	0	0	0	1 (<1)
角膜擦過傷	1 (<1)	0	0	0	1 (<1)
大腿骨頚部骨折	0	0	1 (<1)	0	1 (<1)
腓骨骨折	1 (<1)	0	0	0	1 (<1)
眼内異物	0	1 (<1)	0	0	1 (<1)
尾骨骨折	0	1 (<1)	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
瘢痕ヘルニア	1 (<1)	0	0	0	1 (<1)
関節脱臼	0	1 (<1)	0	0	1 (<1)
靭帯損傷	0	1 (<1)	0	0	1 (<1)
処置後出血	0	1 (<1)	0	0	1 (<1)
処置による悪心	1 (<1)	0	0	0	1 (<1)
橈骨骨折	0	1 (<1)	0	0	1 (<1)
反復性挫傷	0	1 (<1)	0	0	1 (<1)
網膜損傷	0	1 (<1)	0	0	1 (<1)
腱損傷	1 (<1)	0	0	0	1 (<1)
治療薬毒性	0	1 (<1)	0	0	1 (<1)
歯の完全脱臼	1 (<1)	0	0	0	1 (<1)
上肢骨折	1 (<1)	0	0	0	1 (<1)
ワクチン接種合併症	1 (<1)	0	0	0	1 (<1)
創傷出血	1 (<1)	0	0	0	1 (<1)
外科および内科処置	2 (<1)	5 (<1)	0	0	7 (<1)
抜歯	1 (<1)	2 (<1)	0	0	3 (<1)
子宮頚部円錐切除	0	1 (<1)	0	0	1 (<1)
嚢胞ドレナージ	0	1 (<1)	0	0	1 (<1)
色素性母斑切除	1 (<1)	0	0	0	1 (<1)
鼻甲介切除	0	1 (<1)	0	0	1 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Placebo

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
社会環境	1 (<1)	2 (<1)	0	0	3 (<1)
元タバコ使用者	0	1 (<1)	0	0	1 (<1)
社会問題	1 (<1)	0	0	0	1 (<1)
職場でのストレス	0	1 (<1)	0	0	1 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
Number of subjects in safety population					769 (100)
Number of subjects with an event	189 (25)	429 (56)	115 (15)	0	733 (95)
感染症および寄生虫症	234 (30)	214 (28)	15 (2)	0	463 (60)
鼻咽頭炎	133 (17)	36 (5)	1 (<1)	0	170 (22)
尿路感染	63 (8)	44 (6)	0	0	107 (14)
上気道感染	67 (9)	30 (4)	2 (<1)	0	99 (13)
インフルエンザ	31 (4)	20 (3)	3 (<1)	0	54 (7)
胃腸炎	22 (3)	14 (2)	6 (<1)	0	42 (5)
気管支炎	13 (2)	21 (3)	1 (<1)	0	35 (5)
副鼻腔炎	19 (2)	15 (2)	1 (<1)	0	35 (5)
咽頭炎	18 (2)	13 (2)	0	0	31 (4)
鼻炎	22 (3)	4 (<1)	0	0	26 (3)
口腔ヘルペス	17 (2)	6 (<1)	0	0	23 (3)
ウイルス感染	13 (2)	5 (<1)	0	0	18 (2)
気道感染	11 (1)	6 (<1)	0	0	17 (2)
ウイルス性胃腸炎	7 (<1)	7 (<1)	1 (<1)	0	15 (2)
ウイルス性上気道感染	11 (1)	2 (<1)	0	0	13 (2)
膀胱炎	8 (1)	3 (<1)	0	0	11 (1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
喉頭炎	6 (<1)	5 (<1)	0	0	11 (1)
中耳炎	5 (<1)	5 (<1)	0	0	10 (1)
膣感染	8 (1)	2 (<1)	0	0	10 (1)
扁桃炎	5 (<1)	4 (<1)	0	0	9 (1)
歯膿瘍	3 (<1)	6 (<1)	0	0	9 (1)
帯状疱疹	1 (<1)	7 (<1)	0	0	8 (1)
外陰膣真菌感染	6 (<1)	2 (<1)	0	0	8 (1)
感染性結膜炎	4 (<1)	3 (<1)	0	0	7 (<1)
爪真菌症	4 (<1)	3 (<1)	0	0	7 (<1)
ウイルス性消化管感染	1 (<1)	5 (<1)	0	0	6 (<1)
麦粒腫	5 (<1)	1 (<1)	0	0	6 (<1)
ウイルス性気道感染	6 (<1)	0	0	0	6 (<1)
気管炎	4 (<1)	1 (<1)	1 (<1)	0	6 (<1)
蜂巣炎	2 (<1)	3 (<1)	0	0	5 (<1)
耳感染	2 (<1)	3 (<1)	0	0	5 (<1)
せつ	1 (<1)	3 (<1)	1 (<1)	0	5 (<1)
消化管感染	3 (<1)	2 (<1)	0	0	5 (<1)
陰部ヘルペス	2 (<1)	2 (<1)	0	0	4 (<1)
咽頭扁桃炎	3 (<1)	1 (<1)	0	0	4 (<1)
肺炎	1 (<1)	2 (<1)	1 (<1)	0	4 (<1)
細菌性膣炎	4 (<1)	0	0	0	4 (<1)
外陰部膣カンジダ症	2 (<1)	2 (<1)	0	0	4 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
急性扁桃炎	1 (<1)	2 (<1)	0	0	3 (<1)
毛包炎	1 (<1)	2 (<1)	0	0	3 (<1)
外耳炎	1 (<1)	2 (<1)	0	0	3 (<1)
レンサ球菌性咽頭炎	2 (<1)	1 (<1)	0	0	3 (<1)
細菌性副鼻腔炎	0	3 (<1)	0	0	3 (<1)
歯感染	0	3 (<1)	0	0	3 (<1)
細菌感染	0	2 (<1)	0	0	2 (<1)
細菌尿	1 (<1)	1 (<1)	0	0	2 (<1)
眼感染	2 (<1)	0	0	0	2 (<1)
真菌感染	2 (<1)	0	0	0	2 (<1)
性器カンジダ症	0	2 (<1)	0	0	2 (<1)
Ｈ１Ｎ１インフルエンザ	1 (<1)	1 (<1)	0	0	2 (<1)
単純ヘルペス	2 (<1)	0	0	0	2 (<1)
切開部位感染	1 (<1)	1 (<1)	0	0	2 (<1)
咬傷感染	1 (<1)	1 (<1)	0	0	2 (<1)
シラミ寄生	1 (<1)	1 (<1)	0	0	2 (<1)
限局性感染	1 (<1)	1 (<1)	0	0	2 (<1)
下気道感染	0	2 (<1)	0	0	2 (<1)
爪囲炎	1 (<1)	1 (<1)	0	0	2 (<1)
皮下組織膿瘍	2 (<1)	0	0	0	2 (<1)
癜風	1 (<1)	1 (<1)	0	0	2 (<1)
細菌性上気道感染	1 (<1)	1 (<1)	0	0	2 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
外陰部炎	0	2 (<1)	0	0	2 (<1)
急性副鼻腔炎	1 (<1)	0	0	0	1 (<1)
虫垂炎	0	1 (<1)	0	0	1 (<1)
無症候性細菌尿	1 (<1)	0	0	0	1 (<1)
ボレリア感染	0	1 (<1)	0	0	1 (<1)
気管支肺炎	0	1 (<1)	0	0	1 (<1)
カンジダ症	1 (<1)	0	0	0	1 (<1)
子宮頚管炎	1 (<1)	0	0	0	1 (<1)
細菌性結膜炎	0	0	1 (<1)	0	1 (<1)
デング熱	0	1 (<1)	0	0	1 (<1)
遊走性紅斑	1 (<1)	0	0	0	1 (<1)
大腸菌性尿路感染	1 (<1)	0	0	0	1 (<1)
ノロウイルス性胃腸炎	0	1 (<1)	0	0	1 (<1)
ロタウイルス胃腸炎	0	1 (<1)	0	0	1 (<1)
細菌性性器感染	1 (<1)	0	0	0	1 (<1)
泌尿生殖器感染	1 (<1)	0	0	0	1 (<1)
ジアルジア症	1 (<1)	0	0	0	1 (<1)
ヘリコバクター性胃炎	0	1 (<1)	0	0	1 (<1)
ヘリコバクター感染	0	1 (<1)	0	0	1 (<1)
神経合併症を伴う帯状疱疹感染	1 (<1)	0	0	0	1 (<1)
感染性嚢腫	1 (<1)	0	0	0	1 (<1)
伝染性単核症	0	1 (<1)	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
迷路炎	1 (<1)	0	0	0	1 (<1)
乳腺炎	0	1 (<1)	0	0	1 (<1)
口腔カンジダ症	1 (<1)	0	0	0	1 (<1)
口腔真菌感染	1 (<1)	0	0	0	1 (<1)
歯周感染	1 (<1)	0	0	0	1 (<1)
ウイルス感染後疲労症候群	0	1 (<1)	0	0	1 (<1)
術後創感染	1 (<1)	0	0	0	1 (<1)
歯髄炎	0	1 (<1)	0	0	1 (<1)
腎盂腎炎	1 (<1)	0	0	0	1 (<1)
膿皮症	0	1 (<1)	0	0	1 (<1)
膿疱性皮疹	0	1 (<1)	0	0	1 (<1)
卵管卵巣炎	0	1 (<1)	0	0	1 (<1)
皮膚感染	1 (<1)	0	0	0	1 (<1)
軟部組織感染	1 (<1)	0	0	0	1 (<1)
気管気管支炎	0	1 (<1)	0	0	1 (<1)
真菌性尿路感染	1 (<1)	0	0	0	1 (<1)
ガードネレラ菌性膣炎	0	1 (<1)	0	0	1 (<1)
水痘	0	1 (<1)	0	0	1 (<1)
ウイルス性咽頭炎	1 (<1)	0	0	0	1 (<1)
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	14 (2)	3 (<1)	4 (<1)	0	21 (3)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
皮膚乳頭腫	4 (<1)	1 (<1)	0	0	5 (<1)
脂肪腫	2 (<1)	0	1 (<1)	0	3 (<1)
線維腫	2 (<1)	0	0	0	2 (<1)
メラノサイト性母斑	2 (<1)	0	0	0	2 (<1)
甲状腺新生物	1 (<1)	1 (<1)	0	0	2 (<1)
子宮平滑筋腫	1 (<1)	1 (<1)	0	0	2 (<1)
基底細胞癌	1 (<1)	0	0	0	1 (<1)
肺の良性新生物	0	0	1 (<1)	0	1 (<1)
乳腺線維腺腫	1 (<1)	0	0	0	1 (<1)
肺新生物	0	0	1 (<1)	0	1 (<1)
神経鞘腫	0	0	1 (<1)	0	1 (<1)
腎新生物	0	1 (<1)	0	0	1 (<1)
移行上皮癌	0	0	1 (<1)	0	1 (<1)
外陰腟ヒト乳頭腫ウイルス感染	1 (<1)	0	0	0	1 (<1)
血液およびリンパ系障害	37 (5)	14 (2)	0	0	51 (7)
リンパ球減少症	15 (2)	3 (<1)	0	0	18 (2)
貧血	10 (1)	3 (<1)	0	0	13 (2)
白血球増加症	7 (<1)	1 (<1)	0	0	8 (1)
白血球減少症	5 (<1)	2 (<1)	0	0	7 (<1)
リンパ節症	3 (<1)	1 (<1)	0	0	4 (<1)
好中球増加症	4 (<1)	0	0	0	4 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
好酸球増加症	2 (<1)	1 (<1)	0	0	3 (<1)
鉄欠乏性貧血	1 (<1)	2 (<1)	0	0	3 (<1)
血小板減少症	1 (<1)	1 (<1)	0	0	2 (<1)
好中球減少症	1 (<1)	0	0	0	1 (<1)
免疫系障害	9 (1)	13 (2)	1 (<1)	0	23 (3)
過敏症	4 (<1)	6 (<1)	1 (<1)	0	11 (1)
季節性アレルギー	4 (<1)	2 (<1)	0	0	6 (<1)
食物アレルギー	1 (<1)	4 (<1)	0	0	5 (<1)
薬物過敏症	0	2 (<1)	0	0	2 (<1)
造影剤アレルギー	0	1 (<1)	0	0	1 (<1)
内分泌障害	6 (<1)	1 (<1)	0	0	7 (<1)
甲状腺腫	2 (<1)	1 (<1)	0	0	3 (<1)
自己免疫性甲状腺炎	1 (<1)	0	0	0	1 (<1)
副甲状腺機能亢進症	1 (<1)	0	0	0	1 (<1)
続発性副甲状腺機能亢進症	1 (<1)	0	0	0	1 (<1)
甲状腺機能低下症	1 (<1)	0	0	0	1 (<1)
代謝および栄養障害	38 (5)	12 (2)	0	0	50 (7)
食欲減退	12 (2)	5 (<1)	0	0	17 (2)
高コレステロール血症	6 (<1)	1 (<1)	0	0	7 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
ビタミンD欠乏	5 (<1)	0	0	0	5 (<1)
脱水	1 (<1)	2 (<1)	0	0	3 (<1)
高血糖	3 (<1)	0	0	0	3 (<1)
高脂血症	1 (<1)	1 (<1)	0	0	2 (<1)
ビタミン欠乏症	2 (<1)	0	0	0	2 (<1)
食欲亢進	2 (<1)	0	0	0	2 (<1)
鉄欠乏	1 (<1)	1 (<1)	0	0	2 (<1)
２型糖尿病	1 (<1)	1 (<1)	0	0	2 (<1)
糖尿病	1 (<1)	0	0	0	1 (<1)
耐糖能障害	1 (<1)	0	0	0	1 (<1)
痛風	0	1 (<1)	0	0	1 (<1)
高トリグリセリド血症	1 (<1)	0	0	0	1 (<1)
高尿酸血症	1 (<1)	0	0	0	1 (<1)
低カリウム血症	1 (<1)	0	0	0	1 (<1)
１型糖尿病	1 (<1)	0	0	0	1 (<1)
精神障害	82 (11)	43 (6)	6 (<1)	0	131 (17)
うつ病	30 (4)	21 (3)	2 (<1)	0	53 (7)
不眠症	20 (3)	13 (2)	2 (<1)	0	35 (5)
不安	20 (3)	11 (1)	0	0	31 (4)
抑うつ気分	12 (2)	0	0	0	12 (2)
睡眠障害	6 (<1)	2 (<1)	0	0	8 (1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
感情障害	2 (<1)	1 (<1)	0	0	3 (<1)
リビドー減退	3 (<1)	0	0	0	3 (<1)
ストレス	2 (<1)	1 (<1)	0	0	3 (<1)
気分変化	2 (<1)	0	0	0	2 (<1)
気分動揺	1 (<1)	1 (<1)	0	0	2 (<1)
神経過敏	2 (<1)	0	0	0	2 (<1)
神経症	2 (<1)	0	0	0	2 (<1)
落ち着きのなさ	2 (<1)	0	0	0	2 (<1)
自殺念慮	1 (<1)	0	1 (<1)	0	2 (<1)
異常行動	1 (<1)	0	0	0	1 (<1)
抑うつ気分を伴う適応障害	0	0	1 (<1)	0	1 (<1)
不安障害	0	1 (<1)	0	0	1 (<1)
双極１型障害	0	0	1 (<1)	0	1 (<1)
燃え尽き症候群	0	1 (<1)	0	0	1 (<1)
抑うつ症状	0	1 (<1)	0	0	1 (<1)
多幸気分	1 (<1)	0	0	0	1 (<1)
全般性不安障害	0	1 (<1)	0	0	1 (<1)
幻聴	1 (<1)	0	0	0	1 (<1)
リビド消失	1 (<1)	0	0	0	1 (<1)
躁病	1 (<1)	0	0	0	1 (<1)
自己愛性人格障害	0	0	1 (<1)	0	1 (<1)
パニック障害	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
人格変化	1 (<1)	0	0	0	1 (<1)
人格障害	1 (<1)	0	0	0	1 (<1)
精神症状	0	1 (<1)	0	0	1 (<1)
身体表現性障害	1 (<1)	0	0	0	1 (<1)
神経系障害	168 (22)	207 (27)	39 (5)	0	414 (54)
多発性硬化症再発	64 (8)	135 (18)	22 (3)	0	221 (29)
頭痛	87 (11)	37 (5)	9 (1)	0	133 (17)
錯感覚	46 (6)	10 (1)	0	0	56 (7)
浮動性めまい	21 (3)	11 (1)	1 (<1)	0	33 (4)
感覚鈍麻	23 (3)	8 (1)	0	0	31 (4)
灼熱感	14 (2)	7 (<1)	0	0	21 (3)
片頭痛	14 (2)	6 (<1)	1 (<1)	0	21 (3)
筋痙直	10 (1)	6 (<1)	1 (<1)	0	17 (2)
異常感覚	10 (1)	2 (<1)	0	0	12 (2)
振戦	9 (1)	2 (<1)	0	0	11 (1)
平衡障害	9 (1)	1 (<1)	0	0	10 (1)
坐骨神経痛	4 (<1)	5 (<1)	0	0	9 (1)
感覚障害	8 (1)	0	1 (<1)	0	9 (1)
多発性硬化症	4 (<1)	4 (<1)	0	0	8 (1)
前兆を伴う片頭痛	5 (<1)	2 (<1)	0	0	7 (<1)
神経痛	4 (<1)	3 (<1)	0	0	7 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
傾眠	4 (<1)	2 (<1)	0	0	6 (<1)
緊張性頭痛	4 (<1)	0	1 (<1)	0	5 (<1)
三叉神経痛	3 (<1)	2 (<1)	0	0	5 (<1)
健忘	3 (<1)	1 (<1)	0	0	4 (<1)
味覚異常	3 (<1)	1 (<1)	0	0	4 (<1)
記憶障害	3 (<1)	1 (<1)	0	0	4 (<1)
ウートホフ現象	2 (<1)	2 (<1)	0	0	4 (<1)
手根管症候群	2 (<1)	0	1 (<1)	0	3 (<1)
注意力障害	3 (<1)	0	0	0	3 (<1)
構語障害	2 (<1)	0	1 (<1)	0	3 (<1)
知覚過敏	3 (<1)	0	0	0	3 (<1)
レルミット徴候	2 (<1)	1 (<1)	0	0	3 (<1)
不随意性筋収縮	2 (<1)	1 (<1)	0	0	3 (<1)
不器用	0	2 (<1)	0	0	2 (<1)
振動覚低下	2 (<1)	0	0	0	2 (<1)
てんかん	0	1 (<1)	1 (<1)	0	2 (<1)
反射亢進	2 (<1)	0	0	0	2 (<1)
過眠症	2 (<1)	0	0	0	2 (<1)
腰髄神経根障害	0	2 (<1)	0	0	2 (<1)
視神経炎	2 (<1)	0	0	0	2 (<1)
失神寸前の状態	1 (<1)	1 (<1)	0	0	2 (<1)
下肢静止不能症候群	1 (<1)	1 (<1)	0	0	2 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
副鼻腔炎に伴う頭痛	0	2 (<1)	0	0	2 (<1)
失神	0	0	2 (<1)	0	2 (<1)
味覚消失	0	1 (<1)	0	0	1 (<1)
失認症	1 (<1)	0	0	0	1 (<1)
運動失調	0	1 (<1)	0	0	1 (<1)
帯状感	1 (<1)	0	0	0	1 (<1)
頚原性頭痛	0	1 (<1)	0	0	1 (<1)
概日リズム睡眠障害	1 (<1)	0	0	0	1 (<1)
認知障害	0	1 (<1)	0	0	1 (<1)
痙攣	1 (<1)	0	0	0	1 (<1)
協調運動異常	1 (<1)	0	0	0	1 (<1)
体位性めまい	1 (<1)	0	0	0	1 (<1)
ジスキネジー	1 (<1)	0	0	0	1 (<1)
ジストニー	1 (<1)	0	0	0	1 (<1)
てんかんの前兆	1 (<1)	0	0	0	1 (<1)
顔面部神経痛	1 (<1)	0	0	0	1 (<1)
顔面不全麻痺	1 (<1)	0	0	0	1 (<1)
舌咽神経痛	0	0	1 (<1)	0	1 (<1)
頭部動揺	1 (<1)	0	0	0	1 (<1)
片側頭痛	1 (<1)	0	0	0	1 (<1)
肋間神経痛	1 (<1)	0	0	0	1 (<1)
感覚異常性大腿神経痛	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
運動機能障害	1 (<1)	0	0	0	1 (<1)
神経学的症状	1 (<1)	0	0	0	1 (<1)
眼振	1 (<1)	0	0	0	1 (<1)
部分発作	0	0	1 (<1)	0	1 (<1)
腓骨神経麻痺	0	1 (<1)	0	0	1 (<1)
睡眠の質低下	1 (<1)	0	0	0	1 (<1)
神経根痛	1 (<1)	0	0	0	1 (<1)
頚髄神経根炎	0	1 (<1)	0	0	1 (<1)
逆行性健忘	0	1 (<1)	0	0	1 (<1)
感覚消失	0	1 (<1)	0	0	1 (<1)
会話障害	1 (<1)	0	0	0	1 (<1)
舌の麻痺	1 (<1)	0	0	0	1 (<1)
一過性脳虚血発作	1 (<1)	0	0	0	1 (<1)
尺骨神経管症候群	1 (<1)	0	0	0	1 (<1)
第７脳神経麻痺	0	1 (<1)	0	0	1 (<1)
視野欠損	0	1 (<1)	0	0	1 (<1)
眼障害	53 (7)	19 (2)	0	0	72 (9)
眼痛	9 (1)	4 (<1)	0	0	13 (2)
霧視	12 (2)	1 (<1)	0	0	13 (2)
結膜炎	3 (<1)	5 (<1)	0	0	8 (1)
眼乾燥	5 (<1)	2 (<1)	0	0	7 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
視力障害	6 (<1)	1 (<1)	0	0	7 (<1)
複視	3 (<1)	2 (<1)	0	0	5 (<1)
眼瞼痙攣	3 (<1)	1 (<1)	0	0	4 (<1)
視力低下	3 (<1)	1 (<1)	0	0	4 (<1)
眼充血	3 (<1)	0	0	0	3 (<1)
眼の異常感	1 (<1)	1 (<1)	0	0	2 (<1)
眼瞼炎	1 (<1)	1 (<1)	0	0	2 (<1)
霰粒腫	2 (<1)	0	0	0	2 (<1)
アレルギー性結膜炎	2 (<1)	0	0	0	2 (<1)
光視症	2 (<1)	0	0	0	2 (<1)
屈折障害	2 (<1)	0	0	0	2 (<1)
硝子体浮遊物	1 (<1)	1 (<1)	0	0	2 (<1)
黒内障	1 (<1)	0	0	0	1 (<1)
失明	1 (<1)	0	0	0	1 (<1)
白内障	1 (<1)	0	0	0	1 (<1)
眼瞼湿疹	1 (<1)	0	0	0	1 (<1)
眼出血	1 (<1)	0	0	0	1 (<1)
眼瞼嚢胞	1 (<1)	0	0	0	1 (<1)
眼瞼下垂	0	1 (<1)	0	0	1 (<1)
遠視	1 (<1)	0	0	0	1 (<1)
流涙増加	1 (<1)	0	0	0	1 (<1)
眼球運動失調	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
眼筋麻痺	1 (<1)	0	0	0	1 (<1)
動揺視	0	1 (<1)	0	0	1 (<1)
全眼球炎	0	1 (<1)	0	0	1 (<1)
羞明	0	1 (<1)	0	0	1 (<1)
老視	1 (<1)	0	0	0	1 (<1)
強膜炎	1 (<1)	0	0	0	1 (<1)
乾燥症候群	1 (<1)	0	0	0	1 (<1)
ブドウ膜炎	0	1 (<1)	0	0	1 (<1)
耳および迷路障害	29 (4)	16 (2)	0	0	45 (6)
回転性めまい	15 (2)	7 (<1)	0	0	22 (3)
耳痛	3 (<1)	3 (<1)	0	0	6 (<1)
耳鳴	3 (<1)	3 (<1)	0	0	6 (<1)
乗物酔い	2 (<1)	0	0	0	2 (<1)
頭位性回転性めまい	0	2 (<1)	0	0	2 (<1)
耳垢栓塞	0	1 (<1)	0	0	1 (<1)
難聴	0	1 (<1)	0	0	1 (<1)
感音性難聴	1 (<1)	0	0	0	1 (<1)
耳不快感	1 (<1)	0	0	0	1 (<1)
耳出血	1 (<1)	0	0	0	1 (<1)
耳そう痒症	1 (<1)	0	0	0	1 (<1)
外耳痛	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
聴覚過敏	1 (<1)	0	0	0	1 (<1)
鼓膜充血	1 (<1)	0	0	0	1 (<1)
心臓障害	33 (4)	7 (<1)	0	0	40 (5)
動悸	8 (1)	1 (<1)	0	0	9 (1)
頻脈	5 (<1)	3 (<1)	0	0	8 (1)
第一度房室ブロック	2 (<1)	3 (<1)	0	0	5 (<1)
上室性期外収縮	5 (<1)	0	0	0	5 (<1)
狭心症	3 (<1)	0	0	0	3 (<1)
期外収縮	3 (<1)	0	0	0	3 (<1)
洞性徐脈	2 (<1)	0	0	0	2 (<1)
心室性期外収縮	2 (<1)	0	0	0	2 (<1)
ウォルフ・パーキンソン・ホワイト症候群	2 (<1)	0	0	0	2 (<1)
右脚ブロック	1 (<1)	0	0	0	1 (<1)
心臓瘤	1 (<1)	0	0	0	1 (<1)
心筋症	1 (<1)	0	0	0	1 (<1)
伝導障害	1 (<1)	0	0	0	1 (<1)
僧帽弁逸脱	1 (<1)	0	0	0	1 (<1)
血管障害	214 (28)	95 (12)	13 (2)	0	322 (42)
潮紅	174 (23)	80 (10)	11 (1)	0	265 (34)
ほてり	38 (5)	12 (2)	2 (<1)	0	52 (7)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
高血圧	9 (1)	3 (<1)	0	0	12 (2)
低血圧	5 (<1)	1 (<1)	0	0	6 (<1)
静脈瘤	3 (<1)	1 (<1)	0	0	4 (<1)
血腫	2 (<1)	0	0	0	2 (<1)
充血	1 (<1)	1 (<1)	0	0	2 (<1)
動脈障害	0	1 (<1)	0	0	1 (<1)
微小血管症	0	1 (<1)	0	0	1 (<1)
末梢冷感	1 (<1)	0	0	0	1 (<1)
末梢性虚血	0	1 (<1)	0	0	1 (<1)
レイノー現象	0	1 (<1)	0	0	1 (<1)
静脈痛	1 (<1)	0	0	0	1 (<1)
静脈不全	1 (<1)	0	0	0	1 (<1)
呼吸器、胸郭および縦隔障害	94 (12)	21 (3)	2 (<1)	0	117 (15)
咳嗽	32 (4)	6 (<1)	0	0	38 (5)
口腔咽頭痛	27 (4)	10 (1)	0	0	37 (5)
鼻漏	14 (2)	1 (<1)	0	0	15 (2)
鼻閉	8 (1)	1 (<1)	0	0	9 (1)
喘息	4 (<1)	2 (<1)	0	0	6 (<1)
呼吸困難	3 (<1)	3 (<1)	0	0	6 (<1)
鼻出血	4 (<1)	0	0	0	4 (<1)
アレルギー性鼻炎	2 (<1)	1 (<1)	0	0	3 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
咽喉刺激感	3 (<1)	0	0	0	3 (<1)
喘鳴	3 (<1)	0	0	0	3 (<1)
咽喉乾燥	2 (<1)	0	0	0	2 (<1)
湿性咳嗽	2 (<1)	0	0	0	2 (<1)
上気道咳症候群	2 (<1)	0	0	0	2 (<1)
アレルギー性咽頭炎	1 (<1)	0	0	0	1 (<1)
アレルギー性副鼻腔炎	0	1 (<1)	0	0	1 (<1)
息詰まり感	0	1 (<1)	0	0	1 (<1)
労作性呼吸困難	1 (<1)	0	0	0	1 (<1)
しゃっくり	1 (<1)	0	0	0	1 (<1)
鼻中隔弯曲	1 (<1)	0	0	0	1 (<1)
口腔咽頭不快感	1 (<1)	0	0	0	1 (<1)
口腔咽頭プラーク	1 (<1)	0	0	0	1 (<1)
咽頭嚢腫	1 (<1)	0	0	0	1 (<1)
咽頭紅斑	1 (<1)	0	0	0	1 (<1)
胸水	0	0	1 (<1)	0	1 (<1)
誤嚥性肺炎	0	0	1 (<1)	0	1 (<1)
呼吸抑制	1 (<1)	0	0	0	1 (<1)
気道うっ血	1 (<1)	0	0	0	1 (<1)
低音性連続性ラ音	1 (<1)	0	0	0	1 (<1)
副鼻腔うっ血	1 (<1)	0	0	0	1 (<1)
咽喉絞扼感	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
胃腸障害	193 (25)	145 (19)	28 (4)	0	366 (48)
下痢	69 (9)	35 (5)	3 (<1)	0	107 (14)
悪心	59 (8)	30 (4)	4 (<1)	0	93 (12)
上腹部痛	47 (6)	24 (3)	5 (<1)	0	76 (10)
腹痛	37 (5)	31 (4)	5 (<1)	0	73 (9)
嘔吐	33 (4)	26 (3)	6 (<1)	0	65 (8)
消化不良	23 (3)	10 (1)	2 (<1)	0	35 (5)
便秘	17 (2)	5 (<1)	1 (<1)	0	23 (3)
胃炎	14 (2)	8 (1)	0	0	22 (3)
腹部不快感	13 (2)	5 (<1)	1 (<1)	0	19 (2)
胃腸障害	9 (1)	5 (<1)	4 (<1)	0	18 (2)
歯痛	6 (<1)	12 (2)	0	0	18 (2)
口内乾燥	16 (2)	0	0	0	16 (2)
胃食道逆流性疾患	4 (<1)	9 (1)	2 (<1)	0	15 (2)
鼓腸	8 (1)	3 (<1)	0	0	11 (1)
痔核	5 (<1)	3 (<1)	0	0	8 (1)
嚥下障害	5 (<1)	0	0	0	5 (<1)
胃酸過多	5 (<1)	0	0	0	5 (<1)
腹部膨満	3 (<1)	1 (<1)	0	0	4 (<1)
齲歯	3 (<1)	1 (<1)	0	0	4 (<1)
食中毒	3 (<1)	1 (<1)	0	0	4 (<1)
裂孔ヘルニア	2 (<1)	2 (<1)	0	0	4 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
下腹部痛	1 (<1)	2 (<1)	0	0	3 (<1)
便失禁	0	3 (<1)	0	0	3 (<1)
流涎過多	3 (<1)	0	0	0	3 (<1)
腹部ヘルニア	0	1 (<1)	1 (<1)	0	2 (<1)
異常便	2 (<1)	0	0	0	2 (<1)
心窩部不快感	1 (<1)	1 (<1)	0	0	2 (<1)
おくび	2 (<1)	0	0	0	2 (<1)
歯肉出血	2 (<1)	0	0	0	2 (<1)
歯肉炎	1 (<1)	1 (<1)	0	0	2 (<1)
口の感覚鈍麻	2 (<1)	0	0	0	2 (<1)
食道炎	1 (<1)	1 (<1)	0	0	2 (<1)
口の錯感覚	2 (<1)	0	0	0	2 (<1)
歯周炎	1 (<1)	1 (<1)	0	0	2 (<1)
口内炎	1 (<1)	1 (<1)	0	0	2 (<1)
腹部硬直	1 (<1)	0	0	0	1 (<1)
腹部圧痛	1 (<1)	0	0	0	1 (<1)
唾液欠乏	1 (<1)	0	0	0	1 (<1)
口唇炎	1 (<1)	0	0	0	1 (<1)
大腸炎	1 (<1)	0	0	0	1 (<1)
結腸ポリープ	1 (<1)	0	0	0	1 (<1)
クローン病	1 (<1)	0	0	0	1 (<1)
便意切迫	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
憩室穿孔	0	0	1 (<1)	0	1 (<1)
十二指腸ポリープ	0	1 (<1)	0	0	1 (<1)
十二指腸潰瘍	0	1 (<1)	0	0	1 (<1)
小腸炎	1 (<1)	0	0	0	1 (<1)
排便回数増加	0	1 (<1)	0	0	1 (<1)
胃障害	0	0	1 (<1)	0	1 (<1)
出血性胃炎	0	1 (<1)	0	0	1 (<1)
消化器痛	1 (<1)	0	0	0	1 (<1)
歯肉腫脹	1 (<1)	0	0	0	1 (<1)
舌炎	0	1 (<1)	0	0	1 (<1)
舌痛	1 (<1)	0	0	0	1 (<1)
吐血	0	1 (<1)	0	0	1 (<1)
胃排出不全	1 (<1)	0	0	0	1 (<1)
腸管ポリープ	1 (<1)	0	0	0	1 (<1)
過敏性腸症候群	0	1 (<1)	0	0	1 (<1)
口唇水疱	0	1 (<1)	0	0	1 (<1)
弛緩歯	1 (<1)	0	0	0	1 (<1)
マロリー・ワイス症候群	0	0	1 (<1)	0	1 (<1)
口腔内潰瘍形成	1 (<1)	0	0	0	1 (<1)
嚥下痛	0	1 (<1)	0	0	1 (<1)
食道出血	1 (<1)	0	0	0	1 (<1)
口腔内痛	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
膵脂肪腫症	1 (<1)	0	0	0	1 (<1)
膵炎	0	1 (<1)	0	0	1 (<1)
歯周病	0	1 (<1)	0	0	1 (<1)
肛門周囲痛	0	1 (<1)	0	0	1 (<1)
直腸出血	1 (<1)	0	0	0	1 (<1)
逆流性食道炎	0	1 (<1)	0	0	1 (<1)
舌腫脹	1 (<1)	0	0	0	1 (<1)
地図状舌	1 (<1)	0	0	0	1 (<1)
歯の障害	0	1 (<1)	0	0	1 (<1)
歯の磨耗	0	1 (<1)	0	0	1 (<1)
歯の脱落	0	1 (<1)	0	0	1 (<1)
肝胆道系障害	6 (<1)	2 (<1)	2 (<1)	0	10 (1)
脂肪肝	2 (<1)	0	0	0	2 (<1)
肝障害	1 (<1)	1 (<1)	0	0	2 (<1)
胆道ジスキネジー	1 (<1)	0	0	0	1 (<1)
胆石症	0	0	1 (<1)	0	1 (<1)
肝細胞融解性肝炎	0	1 (<1)	0	0	1 (<1)
肝嚢胞	1 (<1)	0	0	0	1 (<1)
胆汁うっ滞性肝炎	0	0	1 (<1)	0	1 (<1)
高トランスアミナーゼ血症	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
皮膚および皮下組織障害	152 (20)	87 (11)	6 (<1)	0	245 (32)
そう痒症	45 (6)	17 (2)	0	0	62 (8)
発疹	38 (5)	19 (2)	1 (<1)	0	58 (8)
紅斑	26 (3)	9 (1)	1 (<1)	0	36 (5)
脱毛症	16 (2)	1 (<1)	0	0	17 (2)
多汗症	9 (1)	6 (<1)	2 (<1)	0	17 (2)
アレルギー性皮膚炎	7 (<1)	5 (<1)	1 (<1)	0	13 (2)
寝汗	8 (1)	5 (<1)	0	0	13 (2)
蕁麻疹	5 (<1)	6 (<1)	0	0	11 (1)
全身性そう痒症	8 (1)	2 (<1)	0	0	10 (1)
そう痒性皮疹	5 (<1)	3 (<1)	0	0	8 (1)
ざ瘡	7 (<1)	0	0	0	7 (<1)
皮膚乾燥	5 (<1)	2 (<1)	0	0	7 (<1)
湿疹	6 (<1)	1 (<1)	0	0	7 (<1)
酒さ	2 (<1)	4 (<1)	0	0	6 (<1)
皮膚灼熱感	4 (<1)	2 (<1)	0	0	6 (<1)
皮膚炎	3 (<1)	1 (<1)	0	0	4 (<1)
全身紅斑	1 (<1)	3 (<1)	0	0	4 (<1)
光線過敏性反応	4 (<1)	0	0	0	4 (<1)
全身性皮疹	2 (<1)	1 (<1)	1 (<1)	0	4 (<1)
水疱	2 (<1)	1 (<1)	0	0	3 (<1)
痒疹	2 (<1)	1 (<1)	0	0	3 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
皮膚色素過剰	3 (<1)	0	0	0	3 (<1)
皮膚病変	1 (<1)	2 (<1)	0	0	3 (<1)
ざ瘡様皮膚炎	1 (<1)	1 (<1)	0	0	2 (<1)
接触性皮膚炎	2 (<1)	0	0	0	2 (<1)
過角化	0	2 (<1)	0	0	2 (<1)
顔面感覚鈍麻	2 (<1)	0	0	0	2 (<1)
爪破損	1 (<1)	1 (<1)	0	0	2 (<1)
アレルギー性そう痒症	1 (<1)	1 (<1)	0	0	2 (<1)
紅斑性皮疹	2 (<1)	0	0	0	2 (<1)
皮膚剥脱	2 (<1)	0	0	0	2 (<1)
皮膚刺激	2 (<1)	0	0	0	2 (<1)
皮膚弛緩症	0	1 (<1)	0	0	1 (<1)
皮膚嚢腫	0	1 (<1)	0	0	1 (<1)
アトピー性皮膚炎	1 (<1)	0	0	0	1 (<1)
薬疹	1 (<1)	0	0	0	1 (<1)
斑状出血	1 (<1)	0	0	0	1 (<1)
剥脱性発疹	1 (<1)	0	0	0	1 (<1)
紅色汗疹	0	1 (<1)	0	0	1 (<1)
掌蹠角化症	0	1 (<1)	0	0	1 (<1)
特発性蕁麻疹	1 (<1)	0	0	0	1 (<1)
網状皮斑	0	1 (<1)	0	0	1 (<1)
睫毛眉毛脱落症	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
爪変色	1 (<1)	0	0	0	1 (<1)
色素沈着障害	1 (<1)	0	0	0	1 (<1)
乾癬	1 (<1)	0	0	0	1 (<1)
斑状皮疹	1 (<1)	0	0	0	1 (<1)
丘疹性皮疹	1 (<1)	0	0	0	1 (<1)
瘢痕	1 (<1)	0	0	0	1 (<1)
脂漏	1 (<1)	0	0	0	1 (<1)
皮膚色素減少	1 (<1)	0	0	0	1 (<1)
皮膚硬結	1 (<1)	0	0	0	1 (<1)
皮膚反応	1 (<1)	0	0	0	1 (<1)
皮膚のつっぱり感	1 (<1)	0	0	0	1 (<1)
皮膚熱感	1 (<1)	0	0	0	1 (<1)
スティーブンス・ジョンソン症候群	0	1 (<1)	0	0	1 (<1)
皮下結節	1 (<1)	0	0	0	1 (<1)
顔面腫脹	0	1 (<1)	0	0	1 (<1)
毛細血管拡張症	1 (<1)	0	0	0	1 (<1)
筋骨格系および結合組織障害	139 (18)	98 (13)	9 (1)	0	246 (32)
背部痛	54 (7)	38 (5)	2 (<1)	0	94 (12)
関節痛	44 (6)	21 (3)	1 (<1)	0	66 (9)
四肢痛	35 (5)	21 (3)	2 (<1)	0	58 (8)
筋痙縮	13 (2)	13 (2)	1 (<1)	0	27 (4)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
頚部痛	18 (2)	9 (1)	0	0	27 (4)
筋力低下	12 (2)	6 (<1)	0	0	18 (2)
筋骨格痛	8 (1)	5 (<1)	1 (<1)	0	14 (2)
筋肉痛	7 (<1)	4 (<1)	2 (<1)	0	13 (2)
筋骨格硬直	6 (<1)	1 (<1)	0	0	7 (<1)
重感	5 (<1)	2 (<1)	0	0	7 (<1)
滑液包炎	2 (<1)	2 (<1)	1 (<1)	0	5 (<1)
関節腫脹	4 (<1)	1 (<1)	0	0	5 (<1)
関節炎	2 (<1)	2 (<1)	0	0	4 (<1)
筋骨格系胸痛	3 (<1)	1 (<1)	0	0	4 (<1)
変形性関節症	1 (<1)	3 (<1)	0	0	4 (<1)
骨痛	2 (<1)	0	1 (<1)	0	3 (<1)
椎間板突出	1 (<1)	2 (<1)	0	0	3 (<1)
骨粗鬆症	1 (<1)	2 (<1)	0	0	3 (<1)
腱炎	1 (<1)	2 (<1)	0	0	3 (<1)
肩径部痛	0	2 (<1)	0	0	2 (<1)
椎間板障害	1 (<1)	1 (<1)	0	0	2 (<1)
関節硬直	2 (<1)	0	0	0	2 (<1)
筋緊張	2 (<1)	0	0	0	2 (<1)
筋攣縮	1 (<1)	0	1 (<1)	0	2 (<1)
骨壊死	2 (<1)	0	0	0	2 (<1)
骨減少症	2 (<1)	0	0	0	2 (<1)

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	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
シェーグレン症候群	0	2 (<1)	0	0	2 (<1)
変形性脊椎症	1 (<1)	1 (<1)	0	0	2 (<1)
滑液嚢腫	1 (<1)	1 (<1)	0	0	2 (<1)
腱鞘炎	2 (<1)	0	0	0	2 (<1)
関節障害	1 (<1)	0	0	0	1 (<1)
腋窩腫瘤	1 (<1)	0	0	0	1 (<1)
軟骨炎	1 (<1)	0	0	0	1 (<1)
腱付着部症	1 (<1)	0	0	0	1 (<1)
四肢拘縮	1 (<1)	0	0	0	1 (<1)
椎間板圧迫	0	1 (<1)	0	0	1 (<1)
中足骨痛	1 (<1)	0	0	0	1 (<1)
筋腫脹	0	1 (<1)	0	0	1 (<1)
筋骨格不快感	0	1 (<1)	0	0	1 (<1)
ミオキミア	1 (<1)	0	0	0	1 (<1)
筋硬化症	1 (<1)	0	0	0	1 (<1)
顎痛	1 (<1)	0	0	0	1 (<1)
膝蓋大腿部痛症候群	0	1 (<1)	0	0	1 (<1)
関節周囲炎	0	1 (<1)	0	0	1 (<1)
足根洞症候群	1 (<1)	0	0	0	1 (<1)
脊椎障害	1 (<1)	0	0	0	1 (<1)
脊椎分離	0	1 (<1)	0	0	1 (<1)
滑膜障害	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
腱障害	0	1 (<1)	0	0	1 (<1)
弾発指	1 (<1)	0	0	0	1 (<1)
腎および尿路障害	109 (14)	36 (5)	1 (<1)	0	146 (19)
蛋白尿	63 (8)	4 (<1)	0	0	67 (9)
ミクロアルブミン尿	27 (4)	8 (1)	0	0	35 (5)
血尿	32 (4)	1 (<1)	0	0	33 (4)
尿意切迫	4 (<1)	6 (<1)	0	0	10 (1)
尿失禁	5 (<1)	3 (<1)	0	0	8 (1)
排尿困難	6 (<1)	1 (<1)	0	0	7 (<1)
ケトン尿	6 (<1)	1 (<1)	0	0	7 (<1)
頻尿	4 (<1)	3 (<1)	0	0	7 (<1)
腎結石症	3 (<1)	1 (<1)	1 (<1)	0	5 (<1)
糖尿	3 (<1)	1 (<1)	0	0	4 (<1)
尿閉	3 (<1)	1 (<1)	0	0	4 (<1)
アルブミン尿	2 (<1)	0	0	0	2 (<1)
膀胱機能障害	0	2 (<1)	0	0	2 (<1)
グロブリン尿	2 (<1)	0	0	0	2 (<1)
神経因性膀胱	0	2 (<1)	0	0	2 (<1)
腎嚢胞	2 (<1)	0	0	0	2 (<1)
腎臓痛	2 (<1)	0	0	0	2 (<1)
切迫性尿失禁	1 (<1)	1 (<1)	0	0	2 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
膀胱刺激症状	1 (<1)	0	0	0	1 (<1)
膀胱痛	0	1 (<1)	0	0	1 (<1)
出血性膀胱炎	0	1 (<1)	0	0	1 (<1)
非感染性膀胱炎	0	1 (<1)	0	0	1 (<1)
緊張性膀胱	0	1 (<1)	0	0	1 (<1)
排尿異常	1 (<1)	0	0	0	1 (<1)
腎下垂症	1 (<1)	0	0	0	1 (<1)
起立性蛋白尿症	1 (<1)	0	0	0	1 (<1)
腎仙痛	0	1 (<1)	0	0	1 (<1)
腎障害	1 (<1)	0	0	0	1 (<1)
有痛性排尿困難	1 (<1)	0	0	0	1 (<1)
尿管瘤	0	1 (<1)	0	0	1 (<1)
排尿躊躇	1 (<1)	0	0	0	1 (<1)
尿路痛	1 (<1)	0	0	0	1 (<1)
尿臭異常	1 (<1)	0	0	0	1 (<1)
妊娠、産褥および周産期の状態	0	1 (<1)	0	0	1 (<1)
妊娠	0	1 (<1)	0	0	1 (<1)
生殖系および乳房障害	54 (7)	18 (2)	4 (<1)	0	76 (10)
月経困難症	9 (1)	3 (<1)	0	0	12 (2)
卵巣嚢胞	6 (<1)	3 (<1)	0	0	9 (1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
不正子宮出血	7 (<1)	1 (<1)	0	0	8 (1)
勃起不全	3 (<1)	2 (<1)	0	0	5 (<1)
月経過多	4 (<1)	0	1 (<1)	0	5 (<1)
不規則月経	5 (<1)	0	0	0	5 (<1)
腟出血	3 (<1)	1 (<1)	0	0	4 (<1)
無月経	2 (<1)	1 (<1)	0	0	3 (<1)
骨盤痛	2 (<1)	1 (<1)	0	0	3 (<1)
乳房嚢胞	0	2 (<1)	0	0	2 (<1)
乳房痛	2 (<1)	0	0	0	2 (<1)
子宮頚部上皮異形成	2 (<1)	0	0	0	2 (<1)
月経遅延	2 (<1)	0	0	0	2 (<1)
卵巣嚢胞破裂	1 (<1)	0	1 (<1)	0	2 (<1)
頻発月経	2 (<1)	0	0	0	2 (<1)
良性前立腺肥大症	1 (<1)	0	0	0	1 (<1)
乳房不快感	1 (<1)	0	0	0	1 (<1)
乳房障害	0	1 (<1)	0	0	1 (<1)
乳房出血	0	1 (<1)	0	0	1 (<1)
乳房腫瘤	1 (<1)	0	0	0	1 (<1)
子宮頚部の炎症	1 (<1)	0	0	0	1 (<1)
射精障害	0	1 (<1)	0	0	1 (<1)
子宮内膜増殖症	0	1 (<1)	0	0	1 (<1)
子宮内膜症	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
乳汁漏出症	1 (<1)	0	0	0	1 (<1)
閉経期症状	0	0	1 (<1)	0	1 (<1)
月経障害	1 (<1)	0	0	0	1 (<1)
乳頭障害	1 (<1)	0	0	0	1 (<1)
希発月経	1 (<1)	0	0	0	1 (<1)
多嚢胞性卵巣	0	1 (<1)	0	0	1 (<1)
早発閉経	1 (<1)	0	0	0	1 (<1)
前立腺炎	1 (<1)	0	0	0	1 (<1)
性機能不全	1 (<1)	0	0	0	1 (<1)
精巣痛	1 (<1)	0	0	0	1 (<1)
子宮出血	0	0	1 (<1)	0	1 (<1)
子宮の炎症	0	1 (<1)	0	0	1 (<1)
子宮ポリープ	1 (<1)	0	0	0	1 (<1)
子宮腟脱	0	1 (<1)	0	0	1 (<1)
外陰腟乾燥	0	1 (<1)	0	0	1 (<1)
外陰腟そう痒症	1 (<1)	0	0	0	1 (<1)
先天性、家族性および遺伝性障害	2 (<1)	0	0	0	2 (<1)
異形成母斑症候群	1 (<1)	0	0	0	1 (<1)
先天性心臓疾患	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
一般・全身障害および投与部位の状態	105 (14)	63 (8)	10 (1)	0	178 (23)
疲労	61 (8)	28 (4)	5 (<1)	0	94 (12)
発熱	19 (2)	7 (<1)	1 (<1)	0	27 (4)
無力症	10 (1)	12 (2)	2 (<1)	0	24 (3)
熱感	10 (1)	5 (<1)	0	0	15 (2)
疼痛	9 (1)	5 (<1)	1 (<1)	0	15 (2)
インフルエンザ様疾患	8 (1)	2 (<1)	0	0	10 (1)
胸痛	6 (<1)	3 (<1)	0	0	9 (1)
歩行障害	6 (<1)	2 (<1)	0	0	8 (1)
末梢性浮腫	3 (<1)	4 (<1)	0	0	7 (<1)
胸部不快感	1 (<1)	3 (<1)	0	0	4 (<1)
悪寒	3 (<1)	1 (<1)	0	0	4 (<1)
易刺激性	2 (<1)	1 (<1)	1 (<1)	0	4 (<1)
非心臓性胸痛	2 (<1)	1 (<1)	0	0	3 (<1)
顔面痛	2 (<1)	0	0	0	2 (<1)
高熱	2 (<1)	0	0	0	2 (<1)
倦怠感	2 (<1)	0	0	0	2 (<1)
浮腫	2 (<1)	0	0	0	2 (<1)
腫脹	1 (<1)	1 (<1)	0	0	2 (<1)
医療機器不具合	0	1 (<1)	0	0	1 (<1)
医療機器関連眼合併症	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
脂肪壊死	0	0	1 (<1)	0	1 (<1)
全身性浮腫	1 (<1)	0	0	0	1 (<1)
注入部位血腫	1 (<1)	0	0	0	1 (<1)
局所腫脹	1 (<1)	0	0	0	1 (<1)
足のもつれ	0	1 (<1)	0	0	1 (<1)
腫瘤	0	1 (<1)	0	0	1 (<1)
粘膜乾燥	0	1 (<1)	0	0	1 (<1)
軟部組織の炎症	0	1 (<1)	0	0	1 (<1)
温度変化不耐症	1 (<1)	0	0	0	1 (<1)
血管穿刺部位出血	0	1 (<1)	0	0	1 (<1)
血管穿刺部位疼痛	0	1 (<1)	0	0	1 (<1)
血管穿刺部位反応	0	1 (<1)	0	0	1 (<1)
臨床検査	131 (17)	74 (10)	7 (<1)	0	212 (28)
尿中アルブミン陽性	41 (5)	5 (<1)	0	0	46 (6)
アラニン・アミノトランスフェラーゼ増加	25 (3)	17 (2)	3 (<1)	0	45 (6)
アスパラギン酸アミノトランスフェラーゼ増加	18 (2)	12 (2)	3 (<1)	0	33 (4)
尿中蛋白陽性	24 (3)	4 (<1)	0	0	28 (4)
γ－グルタミルトランスフェラーゼ増加	13 (2)	7 (<1)	0	0	20 (3)
尿中血陽性	11 (1)	5 (<1)	0	0	16 (2)
血中副甲状腺ホルモン増加	13 (2)	2 (<1)	0	0	15 (2)
尿中白血球陽性	10 (1)	4 (<1)	0	0	14 (2)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
白血球数減少	7 (<1)	5 (<1)	1 (<1)	0	13 (2)
尿中β２ミクログロブリン増加	11 (1)	1 (<1)	0	0	12 (2)
体重減少	8 (1)	3 (<1)	0	0	11 (1)
血中ブドウ糖増加	7 (<1)	3 (<1)	0	0	10 (1)
リンパ球数減少	5 (<1)	4 (<1)	0	0	9 (1)
ヘモグロビン減少	7 (<1)	1 (<1)	0	0	8 (1)
尿中赤血球陽性	8 (1)	0	0	0	8 (1)
白血球数増加	6 (<1)	2 (<1)	0	0	8 (1)
肝酵素上昇	4 (<1)	3 (<1)	0	0	7 (<1)
好中球数増加	5 (<1)	2 (<1)	0	0	7 (<1)
尿中ケトン体陽性	6 (<1)	1 (<1)	0	0	7 (<1)
血中クレアチニン増加	4 (<1)	2 (<1)	0	0	6 (<1)
血中トリグリセリド増加	5 (<1)	1 (<1)	0	0	6 (<1)
ヘマトクリット減少	5 (<1)	1 (<1)	0	0	6 (<1)
好中球数減少	5 (<1)	1 (<1)	0	0	6 (<1)
血中乳酸脱水素酵素増加	2 (<1)	2 (<1)	1 (<1)	0	5 (<1)
ビタミンD減少	4 (<1)	1 (<1)	0	0	5 (<1)
体重増加	2 (<1)	3 (<1)	0	0	5 (<1)
β２ミクログロブリン増加	4 (<1)	0	0	0	4 (<1)
血中アルカリホスファターゼ増加	4 (<1)	0	0	0	4 (<1)
血中カリウム増加	3 (<1)	1 (<1)	0	0	4 (<1)
血小板数減少	3 (<1)	0	1 (<1)	0	4 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
赤血球数減少	4 (<1)	0	0	0	4 (<1)
尿中ブドウ糖陽性	2 (<1)	1 (<1)	0	0	3 (<1)
肝機能検査異常	0	2 (<1)	1 (<1)	0	3 (<1)
血中ビリルビン増加	1 (<1)	1 (<1)	0	0	2 (<1)
血中コレステロール増加	2 (<1)	0	0	0	2 (<1)
血中クレアチン増加	2 (<1)	0	0	0	2 (<1)
血圧上昇	1 (<1)	1 (<1)	0	0	2 (<1)
体温上昇	0	2 (<1)	0	0	2 (<1)
心電図ＳＴ部分下降	2 (<1)	0	0	0	2 (<1)
好酸球数増加	2 (<1)	0	0	0	2 (<1)
血液学的検査異常	1 (<1)	1 (<1)	0	0	2 (<1)
心拍数増加	0	2 (<1)	0	0	2 (<1)
リンパ球数増加	2 (<1)	0	0	0	2 (<1)
リンパ球形態異常	2 (<1)	0	0	0	2 (<1)
ビタミンＢ１２減少	2 (<1)	0	0	0	2 (<1)
アラニン・アミノトランスフェラーゼ異常	0	1 (<1)	0	0	1 (<1)
抗ＳＳＡ抗体陽性	0	1 (<1)	0	0	1 (<1)
アスパラギン酸アミノトランスフェラーゼ異常	0	1 (<1)	0	0	1 (<1)
血中アルカリホスファターゼ異常	0	1 (<1)	0	0	1 (<1)
血中重炭酸塩減少	1 (<1)	0	0	0	1 (<1)
血中重炭酸塩増加	1 (<1)	0	0	0	1 (<1)
血中カルシウム減少	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
血中クレアチニン異常	1 (<1)	0	0	0	1 (<1)
血中葉酸減少	1 (<1)	0	0	0	1 (<1)
血中鉄減少	1 (<1)	0	0	0	1 (<1)
血中ケトン体増加	1 (<1)	0	0	0	1 (<1)
血圧低下	0	1 (<1)	0	0	1 (<1)
血中ナトリウム増加	1 (<1)	0	0	0	1 (<1)
体温低下	1 (<1)	0	0	0	1 (<1)
呼吸音異常	1 (<1)	0	0	0	1 (<1)
心雑音	0	1 (<1)	0	0	1 (<1)
結腸内視鏡検査	1 (<1)	0	0	0	1 (<1)
尿中結晶陽性	1 (<1)	0	0	0	1 (<1)
心筋虚血の心電図所見	0	1 (<1)	0	0	1 (<1)
心電図ＱＴ延長	1 (<1)	0	0	0	1 (<1)
心電図Ｔ波逆転	1 (<1)	0	0	0	1 (<1)
好酸球百分率増加	1 (<1)	0	0	0	1 (<1)
大腸菌検査陽性	1 (<1)	0	0	0	1 (<1)
γ－グルタミルトランスフェラーゼ異常	0	1 (<1)	0	0	1 (<1)
γ－グルタミルトランスフェラーゼ減少	1 (<1)	0	0	0	1 (<1)
ヒト乳頭腫ウイルス検査陽性	1 (<1)	0	0	0	1 (<1)
ヒステロスコピー	1 (<1)	0	0	0	1 (<1)
眼圧上昇	0	1 (<1)	0	0	1 (<1)
低比重リポ蛋白増加	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
リンパ球百分率減少	1 (<1)	0	0	0	1 (<1)
神経学的検査異常	1 (<1)	0	0	0	1 (<1)
好中球百分率増加	1 (<1)	0	0	0	1 (<1)
脳核磁気共鳴画像異常	1 (<1)	0	0	0	1 (<1)
血小板数	1 (<1)	0	0	0	1 (<1)
血小板数増加	1 (<1)	0	0	0	1 (<1)
ロンベルグ徴候陽性	1 (<1)	0	0	0	1 (<1)
赤血球数増加	1 (<1)	0	0	0	1 (<1)
腎機能検査異常	0	1 (<1)	0	0	1 (<1)
残尿量増加	1 (<1)	0	0	0	1 (<1)
つぎ足歩行検査異常	1 (<1)	0	0	0	1 (<1)
傷害、中毒および処置合併症	52 (7)	46 (6)	5 (<1)	0	103 (13)
転倒	13 (2)	9 (1)	0	0	22 (3)
挫傷	17 (2)	4 (<1)	0	0	21 (3)
関節捻挫	7 (<1)	6 (<1)	0	0	13 (2)
足骨折	2 (<1)	5 (<1)	0	0	7 (<1)
四肢損傷	3 (<1)	2 (<1)	0	0	5 (<1)
肉離れ	2 (<1)	3 (<1)	0	0	5 (<1)
皮膚裂傷	3 (<1)	2 (<1)	0	0	5 (<1)
節足動物咬傷	2 (<1)	2 (<1)	0	0	4 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
半月板障害	1 (<1)	3 (<1)	0	0	4 (<1)
処置による疼痛	3 (<1)	1 (<1)	0	0	4 (<1)
むち打ち損傷	3 (<1)	1 (<1)	0	0	4 (<1)
関節脱臼	1 (<1)	2 (<1)	0	0	3 (<1)
交通事故	1 (<1)	1 (<1)	1 (<1)	0	3 (<1)
歯牙破折	1 (<1)	2 (<1)	0	0	3 (<1)
外傷性血腫	1 (<1)	2 (<1)	0	0	3 (<1)
動物咬傷	2 (<1)	0	0	0	2 (<1)
足関節部骨折	0	1 (<1)	1 (<1)	0	2 (<1)
節足動物刺傷	2 (<1)	0	0	0	2 (<1)
脳振盪	1 (<1)	1 (<1)	0	0	2 (<1)
擦過傷	1 (<1)	1 (<1)	0	0	2 (<1)
筋断裂	1 (<1)	1 (<1)	0	0	2 (<1)
術後発熱	0	2 (<1)	0	0	2 (<1)
骨格損傷	0	2 (<1)	0	0	2 (<1)
脊椎圧迫骨折	0	2 (<1)	0	0	2 (<1)
サンバーン	2 (<1)	0	0	0	2 (<1)
熱傷	1 (<1)	1 (<1)	0	0	2 (<1)
創傷	0	2 (<1)	0	0	2 (<1)
偶発的過量投与	1 (<1)	0	0	0	1 (<1)
凍瘡	1 (<1)	0	0	0	1 (<1)
鎖骨骨折	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
上顎炎	1 (<1)	0	0	0	1 (<1)
眼外傷	1 (<1)	0	0	0	1 (<1)
眼瞼損傷	1 (<1)	0	0	0	1 (<1)
顔面損傷	1 (<1)	0	0	0	1 (<1)
顔面骨骨折	0	1 (<1)	0	0	1 (<1)
大腿骨骨折	0	0	1 (<1)	0	1 (<1)
手骨折	0	1 (<1)	0	0	1 (<1)
頭部損傷	0	1 (<1)	0	0	1 (<1)
切開部位痛	0	1 (<1)	0	0	1 (<1)
瘢痕ヘルニア	0	0	1 (<1)	0	1 (<1)
関節損傷	1 (<1)	0	0	0	1 (<1)
靭帯断裂	0	1 (<1)	0	0	1 (<1)
頚部損傷	0	1 (<1)	0	0	1 (<1)
過量投与	0	0	1 (<1)	0	1 (<1)
処置後出血	1 (<1)	0	0	0	1 (<1)
処置による低血圧	0	1 (<1)	0	0	1 (<1)
処置による悪心	0	1 (<1)	0	0	1 (<1)
処置による嘔吐	0	1 (<1)	0	0	1 (<1)
橈骨骨折	0	1 (<1)	0	0	1 (<1)
反復性挫傷	1 (<1)	0	0	0	1 (<1)
網膜損傷	0	1 (<1)	0	0	1 (<1)
軟部組織損傷	1 (<1)	0	0	0	1 (<1)

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2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg BID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
舌損傷	1 (<1)	0	0	0	1 (<1)
外傷性脳損傷	0	0	1 (<1)	0	1 (<1)
外科および内科処置	5 (<1)	3 (<1)	1 (<1)	0	9 (1)
抜歯	3 (<1)	1 (<1)	0	0	4 (<1)
乳房腫瘤摘除	0	1 (<1)	0	0	1 (<1)
女性不妊手術	0	0	1 (<1)	0	1 (<1)
ヘルニア修復	1 (<1)	0	0	0	1 (<1)
子宮摘出	0	1 (<1)	0	0	1 (<1)
治療食	1 (<1)	0	0	0	1 (<1)
社会環境	1 (<1)	0	0	0	1 (<1)
閉経	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
Number of subjects in safety population					760 (100)
Number of subjects with an event	158 (21)	443 (58)	111 (15)	0	712 (94)
感染症および寄生虫症	223 (29)	233 (31)	16 (2)	0	472 (62)
鼻咽頭炎	111 (15)	60 (8)	1 (<1)	0	172 (23)
上気道感染	63 (8)	35 (5)	0	0	98 (13)
尿路感染	54 (7)	38 (5)	3 (<1)	0	95 (13)
インフルエンザ	47 (6)	24 (3)	2 (<1)	0	73 (10)
副鼻腔炎	32 (4)	20 (3)	0	0	52 (7)
気管支炎	23 (3)	25 (3)	0	0	48 (6)
胃腸炎	21 (3)	13 (2)	0	0	34 (4)
咽頭炎	20 (3)	7 (<1)	0	0	27 (4)
鼻炎	19 (3)	3 (<1)	1 (<1)	0	23 (3)
ウイルス性胃腸炎	11 (1)	7 (<1)	2 (<1)	0	20 (3)
気道感染	12 (2)	8 (1)	0	0	20 (3)
膀胱炎	9 (1)	10 (1)	0	0	19 (3)
耳感染	9 (1)	9 (1)	0	0	18 (2)
口腔ヘルペス	11 (1)	2 (<1)	0	0	13 (2)
ウイルス感染	9 (1)	4 (<1)	0	0	13 (2)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
帯状疱疹	5 (<1)	7 (<1)	0	0	12 (2)
喉頭炎	4 (<1)	8 (1)	0	0	12 (2)
外陰腟真菌感染	10 (1)	2 (<1)	0	0	12 (2)
消化管感染	7 (<1)	3 (<1)	1 (<1)	0	11 (1)
中耳炎	3 (<1)	5 (<1)	1 (<1)	0	9 (1)
扁桃炎	5 (<1)	4 (<1)	0	0	9 (1)
ウイルス性上気道感染	7 (<1)	2 (<1)	0	0	9 (1)
感染性結膜炎	5 (<1)	3 (<1)	0	0	8 (1)
下気道感染	4 (<1)	3 (<1)	0	0	7 (<1)
歯膿瘍	2 (<1)	4 (<1)	1 (<1)	0	7 (<1)
腟感染	6 (<1)	1 (<1)	0	0	7 (<1)
歯感染	3 (<1)	2 (<1)	1 (<1)	0	6 (<1)
麦粒腫	4 (<1)	1 (<1)	0	0	5 (<1)
レンサ球菌性咽頭炎	1 (<1)	4 (<1)	0	0	5 (<1)
ウイルス性消化管感染	3 (<1)	1 (<1)	0	0	4 (<1)
口腔カンジダ症	4 (<1)	0	0	0	4 (<1)
肺炎	0	4 (<1)	0	0	4 (<1)
外陰部腟カンジダ症	2 (<1)	2 (<1)	0	0	4 (<1)
細菌尿	3 (<1)	0	0	0	3 (<1)
蜂巣炎	0	2 (<1)	1 (<1)	0	3 (<1)
Ｈ１Ｎ１インフルエンザ	0	3 (<1)	0	0	3 (<1)
急性副鼻腔炎	1 (<1)	1 (<1)	0	0	2 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
細菌性結膜炎	1 (<1)	1 (<1)	0	0	2 (<1)
遊走性紅斑	1 (<1)	1 (<1)	0	0	2 (<1)
せつ	2 (<1)	0	0	0	2 (<1)
ヘリコバクター性胃炎	2 (<1)	0	0	0	2 (<1)
単純ヘルペス	1 (<1)	1 (<1)	0	0	2 (<1)
骨盤内炎症性疾患	2 (<1)	0	0	0	2 (<1)
歯周感染	1 (<1)	1 (<1)	0	0	2 (<1)
咽頭扁桃炎	1 (<1)	1 (<1)	0	0	2 (<1)
ウイルス性気道感染	1 (<1)	1 (<1)	0	0	2 (<1)
陰嚢膿瘍	0	2 (<1)	0	0	2 (<1)
ブドウ球菌感染	1 (<1)	1 (<1)	0	0	2 (<1)
皮下組織膿瘍	0	2 (<1)	0	0	2 (<1)
癜風	1 (<1)	1 (<1)	0	0	2 (<1)
気管炎	0	2 (<1)	0	0	2 (<1)
腸チフス熱	2 (<1)	0	0	0	2 (<1)
腹壁膿瘍	0	1 (<1)	0	0	1 (<1)
ダニ症	1 (<1)	0	0	0	1 (<1)
急性扁桃炎	1 (<1)	0	0	0	1 (<1)
無症候性細菌尿	1 (<1)	0	0	0	1 (<1)
乳房膿瘍	0	1 (<1)	0	0	1 (<1)
乳房蜂巣炎	0	1 (<1)	0	0	1 (<1)
ウイルス性気管支炎	1 (<1)	0	0	0	1 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
ウイルス性結膜炎	1 (<1)	0	0	0	1 (<1)
感染性皮膚炎	1 (<1)	0	0	0	1 (<1)
憩室炎	0	1 (<1)	0	0	1 (<1)
ダグラス窩膿瘍	0	0	1 (<1)	0	1 (<1)
感染性湿疹	1 (<1)	0	0	0	1 (<1)
エプスタイン・バーウイルス感染	1 (<1)	0	0	0	1 (<1)
熱性感染症	0	1 (<1)	0	0	1 (<1)
毛包炎	0	1 (<1)	0	0	1 (<1)
歯肉感染	1 (<1)	0	0	0	1 (<1)
ヘリコバクター感染	0	1 (<1)	0	0	1 (<1)
眼帯状疱疹	0	0	1 (<1)	0	1 (<1)
膿痂疹	1 (<1)	0	0	0	1 (<1)
咬傷感染	1 (<1)	0	0	0	1 (<1)
感染性皮脂嚢腫	0	1 (<1)	0	0	1 (<1)
感染	1 (<1)	0	0	0	1 (<1)
伝染性単核症	1 (<1)	0	0	0	1 (<1)
カンジダ性間擦疹	0	1 (<1)	0	0	1 (<1)
シラミ寄生	1 (<1)	0	0	0	1 (<1)
ライム病	0	1 (<1)	0	0	1 (<1)
マイコプラズマ感染	0	1 (<1)	0	0	1 (<1)
爪感染	0	1 (<1)	0	0	1 (<1)
口腔真菌感染	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
精巣炎	1 (<1)	0	0	0	1 (<1)
外耳炎	1 (<1)	0	0	0	1 (<1)
急性中耳炎	1 (<1)	0	0	0	1 (<1)
扁桃周囲膿瘍	0	0	1 (<1)	0	1 (<1)
術後創感染	1 (<1)	0	0	0	1 (<1)
歯髄炎	1 (<1)	0	0	0	1 (<1)
急性腎盂腎炎	0	1 (<1)	0	0	1 (<1)
細菌性副鼻腔炎	1 (<1)	0	0	0	1 (<1)
皮膚細菌感染	1 (<1)	0	0	0	1 (<1)
足部白癬	1 (<1)	0	0	0	1 (<1)
気管気管支炎	0	1 (<1)	0	0	1 (<1)
細菌性尿路感染	0	1 (<1)	0	0	1 (<1)
泌尿生殖器真菌感染	1 (<1)	0	0	0	1 (<1)
ウイルス性鼻炎	1 (<1)	0	0	0	1 (<1)
外陰部膿瘍	0	1 (<1)	0	0	1 (<1)
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	15 (2)	9 (1)	0	0	24 (3)
脂肪腫	3 (<1)	1 (<1)	0	0	4 (<1)
メラノサイト性母斑	3 (<1)	1 (<1)	0	0	4 (<1)
皮膚乳頭腫	2 (<1)	2 (<1)	0	0	4 (<1)
子宮平滑筋腫	4 (<1)	0	0	0	4 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
乳癌	0	1 (<1)	0	0	1 (<1)
子宮頚部癌	0	1 (<1)	0	0	1 (<1)
乳腺線維腺腫	1 (<1)	0	0	0	1 (<1)
線維腫	1 (<1)	0	0	0	1 (<1)
泌尿生殖器新生物	0	1 (<1)	0	0	1 (<1)
血管腫	1 (<1)	0	0	0	1 (<1)
肝臓血管腫	0	1 (<1)	0	0	1 (<1)
肺新生物	1 (<1)	0	0	0	1 (<1)
乳頭腫	1 (<1)	0	0	0	1 (<1)
脂漏性角化症	0	1 (<1)	0	0	1 (<1)
血液およびリンパ系障害	47 (6)	9 (1)	0	0	56 (7)
貧血	18 (2)	3 (<1)	0	0	21 (3)
リンパ球減少症	16 (2)	1 (<1)	0	0	17 (2)
白血球減少症	10 (1)	1 (<1)	0	0	11 (1)
リンパ節症	6 (<1)	0	0	0	6 (<1)
好中球増加症	5 (<1)	1 (<1)	0	0	6 (<1)
好酸球増加症	4 (<1)	1 (<1)	0	0	5 (<1)
好中球減少症	2 (<1)	1 (<1)	0	0	3 (<1)
鉄欠乏性貧血	2 (<1)	0	0	0	2 (<1)
白血球増加症	1 (<1)	0	0	0	1 (<1)
正色素性正球性貧血	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
脾腫	1 (<1)	0	0	0	1 (<1)
免疫系障害	7 (<1)	13 (2)	2 (<1)	0	22 (3)
過敏症	0	8 (1)	1 (<1)	0	9 (1)
季節性アレルギー	5 (<1)	2 (<1)	0	0	7 (<1)
薬物過敏症	1 (<1)	2 (<1)	0	0	3 (<1)
食物アレルギー	1 (<1)	1 (<1)	0	0	2 (<1)
アナフィラキシー様反応	0	0	1 (<1)	0	1 (<1)
造影剤アレルギー	0	1 (<1)	0	0	1 (<1)
家塵アレルギー	0	1 (<1)	0	0	1 (<1)
免疫不全症	1 (<1)	0	0	0	1 (<1)
続発性免疫不全症	1 (<1)	0	0	0	1 (<1)
内分泌障害	8 (1)	1 (<1)	1 (<1)	0	10 (1)
甲状腺機能低下症	2 (<1)	1 (<1)	0	0	3 (<1)
間脳性内分泌障害	0	0	1 (<1)	0	1 (<1)
甲状腺腫	1 (<1)	0	0	0	1 (<1)
副甲状腺機能亢進症	1 (<1)	0	0	0	1 (<1)
原発性副甲状腺機能亢進症	1 (<1)	0	0	0	1 (<1)
甲状腺機能亢進症	1 (<1)	0	0	0	1 (<1)
エストロゲン欠乏症	1 (<1)	0	0	0	1 (<1)
甲状腺腫瘤	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
代謝および栄養障害	35 (5)	14 (2)	2 (<1)	0	51 (7)
食欲減退	12 (2)	2 (<1)	0	0	14 (2)
ビタミンＤ欠乏	4 (<1)	4 (<1)	0	0	8 (1)
高コレステロール血症	4 (<1)	3 (<1)	0	0	7 (<1)
高血糖	4 (<1)	1 (<1)	0	0	5 (<1)
脱水	0	2 (<1)	1 (<1)	0	3 (<1)
脂質異常症	3 (<1)	0	0	0	3 (<1)
耐糖能障害	3 (<1)	0	0	0	3 (<1)
高脂血症	3 (<1)	0	0	0	3 (<1)
ビタミンＢ１２欠乏	3 (<1)	0	0	0	3 (<1)
糖尿病	1 (<1)	1 (<1)	0	0	2 (<1)
異常体重減少	0	1 (<1)	0	0	1 (<1)
糖尿病性ケトアシドーシス	1 (<1)	0	0	0	1 (<1)
高ナトリウム血症	1 (<1)	0	0	0	1 (<1)
高トリグリセリド血症	1 (<1)	0	0	0	1 (<1)
低血糖症	0	0	1 (<1)	0	1 (<1)
低カリウム血症	1 (<1)	0	0	0	1 (<1)
過小食	1 (<1)	0	0	0	1 (<1)
低リン酸血症	1 (<1)	0	0	0	1 (<1)
鉄欠乏	0	1 (<1)	0	0	1 (<1)
ケトーシス	0	1 (<1)	0	0	1 (<1)
亜鉛欠乏	1 (<1)	0	0	0	1 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
精神障害	75 (10)	51 (7)	5 (<1)	0	131 (17)
うつ病	24 (3)	21 (3)	3 (<1)	0	48 (6)
不眠症	22 (3)	7 (<1)	1 (<1)	0	30 (4)
不安	16 (2)	10 (1)	0	0	26 (3)
抑うつ気分	4 (<1)	3 (<1)	0	0	7 (<1)
睡眠障害	3 (<1)	4 (<1)	0	0	7 (<1)
気分動揺	3 (<1)	2 (<1)	0	0	5 (<1)
パニック発作	4 (<1)	1 (<1)	0	0	5 (<1)
感情障害	3 (<1)	0	0	0	3 (<1)
初期不眠症	2 (<1)	1 (<1)	0	0	3 (<1)
気分変化	2 (<1)	1 (<1)	0	0	3 (<1)
ストレス	2 (<1)	1 (<1)	0	0	3 (<1)
感情不安定	1 (<1)	1 (<1)	0	0	2 (<1)
抑うつ症状	1 (<1)	1 (<1)	0	0	2 (<1)
大うつ病	0	2 (<1)	0	0	2 (<1)
異常な夢	1 (<1)	0	0	0	1 (<1)
歯ぎしり	1 (<1)	0	0	0	1 (<1)
転換性障害	1 (<1)	0	0	0	1 (<1)
性的興奮障害	1 (<1)	0	0	0	1 (<1)
情動障害	1 (<1)	0	0	0	1 (<1)
リビドー減退	1 (<1)	0	0	0	1 (<1)
神経過敏	0	1 (<1)	0	0	1 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
神経症	1 (<1)	0	0	0	1 (<1)
精神病性障害	0	1 (<1)	0	0	1 (<1)
睡眠発作	1 (<1)	0	0	0	1 (<1)
身体表現性障害	1 (<1)	0	0	0	1 (<1)
自殺念慮	1 (<1)	0	0	0	1 (<1)
自殺企図	0	0	1 (<1)	0	1 (<1)
神経系障害	168 (22)	189 (25)	32 (4)	0	389 (51)
多発性硬化症再発	61 (8)	126 (17)	12 (2)	0	199 (26)
頭痛	73 (10)	46 (6)	7 (<1)	0	126 (17)
錯感覚	45 (6)	13 (2)	1 (<1)	0	59 (8)
感覚鈍麻	32 (4)	10 (1)	1 (<1)	0	43 (6)
浮動性めまい	21 (3)	9 (1)	1 (<1)	0	31 (4)
灼熱感	16 (2)	8 (1)	1 (<1)	0	25 (3)
片頭痛	8 (1)	11 (1)	3 (<1)	0	22 (3)
筋痙直	9 (1)	7 (<1)	0	0	16 (2)
平衡障害	9 (1)	2 (<1)	0	0	11 (1)
レルミット徴候	6 (<1)	3 (<1)	0	0	9 (1)
感覚障害	8 (1)	0	1 (<1)	0	9 (1)
多発性硬化症	3 (<1)	5 (<1)	0	0	8 (1)
傾眠	6 (<1)	2 (<1)	0	0	8 (1)
緊張性頭痛	6 (<1)	2 (<1)	0	0	8 (1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
坐骨神経痛	4 (<1)	2 (<1)	1 (<1)	0	7 (<1)
失神	7 (<1)	0	0	0	7 (<1)
構語障害	4 (<1)	0	2 (<1)	0	6 (<1)
認知障害	3 (<1)	2 (<1)	0	0	5 (<1)
味覚異常	5 (<1)	0	0	0	5 (<1)
神経圧迫	5 (<1)	0	0	0	5 (<1)
振戦	5 (<1)	0	0	0	5 (<1)
運動失調	4 (<1)	0	0	0	4 (<1)
異常感覚	3 (<1)	1 (<1)	0	0	4 (<1)
神経痛	3 (<1)	1 (<1)	0	0	4 (<1)
下肢静止不能症候群	2 (<1)	2 (<1)	0	0	4 (<1)
副鼻腔炎に伴う頭痛	3 (<1)	1 (<1)	0	0	4 (<1)
ウートホフ現象	3 (<1)	1 (<1)	0	0	4 (<1)
健忘	3 (<1)	0	0	0	3 (<1)
帯状感	1 (<1)	1 (<1)	1 (<1)	0	3 (<1)
注意力障害	1 (<1)	2 (<1)	0	0	3 (<1)
失神寸前の状態	2 (<1)	1 (<1)	0	0	3 (<1)
三叉神経痛	1 (<1)	1 (<1)	1 (<1)	0	3 (<1)
頚髄神経根痛	0	2 (<1)	0	0	2 (<1)
大発作痙攣	0	1 (<1)	1 (<1)	0	2 (<1)
不全片麻痺	2 (<1)	0	0	0	2 (<1)
知覚過敏	1 (<1)	1 (<1)	0	0	2 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
過眠症	1 (<1)	0	1 (<1)	0	2 (<1)
意識消失	0	1 (<1)	1 (<1)	0	2 (<1)
眼振	2 (<1)	0	0	0	2 (<1)
後頭神経痛	1 (<1)	0	1 (<1)	0	2 (<1)
味覚消失	0	0	1 (<1)	0	1 (<1)
意識変容状態	0	1 (<1)	0	0	1 (<1)
自律神経失調	1 (<1)	0	0	0	1 (<1)
良性頭蓋内圧亢進	0	1 (<1)	0	0	1 (<1)
手根管症候群	1 (<1)	0	0	0	1 (<1)
小脳症候群	1 (<1)	0	0	0	1 (<1)
頚原性頭痛	1 (<1)	0	0	0	1 (<1)
痙攣	1 (<1)	0	0	0	1 (<1)
協調運動異常	1 (<1)	0	0	0	1 (<1)
泣き	0	1 (<1)	0	0	1 (<1)
よだれ	1 (<1)	0	0	0	1 (<1)
てんかん	0	1 (<1)	0	0	1 (<1)
顔面神経障害	1 (<1)	0	0	0	1 (<1)
顔面不全麻痺	0	1 (<1)	0	0	1 (<1)
蟻走感	0	1 (<1)	0	0	1 (<1)
頭部動揺	1 (<1)	0	0	0	1 (<1)
反射亢進	1 (<1)	0	0	0	1 (<1)
思考散乱	0	0	1 (<1)	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
肋間神経痛	1 (<1)	0	0	0	1 (<1)
脳圧低下	0	1 (<1)	0	0	1 (<1)
虚血性脳卒中	0	0	1 (<1)	0	1 (<1)
嗜眠	1 (<1)	0	0	0	1 (<1)
記憶障害	1 (<1)	0	0	0	1 (<1)
感覚異常性大腿神経痛	1 (<1)	0	0	0	1 (<1)
前兆を伴う片頭痛	0	0	1 (<1)	0	1 (<1)
運動機能障害	1 (<1)	0	0	0	1 (<1)
不随意性筋収縮	1 (<1)	0	0	0	1 (<1)
神経学的症状	0	1 (<1)	0	0	1 (<1)
末梢性ニューロパチー	0	1 (<1)	0	0	1 (<1)
視神経炎	1 (<1)	0	0	0	1 (<1)
二次性進行型多発性硬化症	0	1 (<1)	0	0	1 (<1)
鎮静	1 (<1)	0	0	0	1 (<1)
一過性全健忘	0	1 (<1)	0	0	1 (<1)
一過性脳虚血発作	1 (<1)	0	0	0	1 (<1)
横静脈洞血栓症	0	0	1 (<1)	0	1 (<1)
血管性頭痛	0	1 (<1)	0	0	1 (<1)
眼障害	56 (7)	23 (3)	1 (<1)	0	80 (11)
霧視	13 (2)	5 (<1)	0	0	18 (2)
眼痛	10 (1)	5 (<1)	1 (<1)	0	16 (2)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
複視	5 (<1)	3 (<1)	0	0	8 (1)
結膜炎	6 (<1)	1 (<1)	0	0	7 (<1)
眼瞼痙攣	6 (<1)	0	0	0	6 (<1)
視力障害	5 (<1)	1 (<1)	0	0	6 (<1)
視力低下	2 (<1)	2 (<1)	0	0	4 (<1)
アレルギー性結膜炎	2 (<1)	1 (<1)	0	0	3 (<1)
眼瞼炎	2 (<1)	0	0	0	2 (<1)
失明	2 (<1)	0	0	0	2 (<1)
白内障	2 (<1)	0	0	0	2 (<1)
眼乾燥	2 (<1)	0	0	0	2 (<1)
眼刺激	2 (<1)	0	0	0	2 (<1)
眼瞼下垂	1 (<1)	1 (<1)	0	0	2 (<1)
緑内障	0	2 (<1)	0	0	2 (<1)
流涙増加	2 (<1)	0	0	0	2 (<1)
眼充血	2 (<1)	0	0	0	2 (<1)
ブドウ膜炎	1 (<1)	1 (<1)	0	0	2 (<1)
眼の異常感	0	1 (<1)	0	0	1 (<1)
眼精疲労	1 (<1)	0	0	0	1 (<1)
両眼球運動障害	1 (<1)	0	0	0	1 (<1)
アレルギー性眼瞼炎	0	1 (<1)	0	0	1 (<1)
霰粒腫	1 (<1)	0	0	0	1 (<1)
眼出血	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
眼運動障害	0	0	1 (<1)	0	1 (<1)
眼そう痒症	1 (<1)	0	0	0	1 (<1)
眼部腫脹	0	1 (<1)	0	0	1 (<1)
眼瞼障害	0	1 (<1)	0	0	1 (<1)
眼瞼浮腫	1 (<1)	0	0	0	1 (<1)
角膜炎	1 (<1)	0	0	0	1 (<1)
瞼板腺炎	1 (<1)	0	0	0	1 (<1)
夜盲	1 (<1)	0	0	0	1 (<1)
開放隅角緑内障	0	1 (<1)	0	0	1 (<1)
眼筋麻痺	1 (<1)	0	0	0	1 (<1)
視神経萎縮	0	1 (<1)	0	0	1 (<1)
羞明	1 (<1)	0	0	0	1 (<1)
光視症	1 (<1)	0	0	0	1 (<1)
硝子体浮遊物	1 (<1)	0	0	0	1 (<1)
耳および迷路障害	47 (6)	16 (2)	2 (<1)	0	65 (9)
回転性めまい	29 (4)	13 (2)	0	0	42 (6)
耳痛	7 (<1)	1 (<1)	0	0	8 (1)
耳鳴	4 (<1)	3 (<1)	0	0	7 (<1)
頭位性回転性めまい	2 (<1)	0	2 (<1)	0	4 (<1)
耳閉	3 (<1)	0	0	0	3 (<1)
聴力低下	1 (<1)	2 (<1)	0	0	3 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
耳不快感	2 (<1)	0	0	0	2 (<1)
耳管障害	1 (<1)	0	0	0	1 (<1)
耳管機能障害	1 (<1)	0	0	0	1 (<1)
外耳障害	1 (<1)	0	0	0	1 (<1)
聴覚過敏	1 (<1)	0	0	0	1 (<1)
乗物酔い	0	1 (<1)	0	0	1 (<1)
心臓障害	32 (4)	12 (2)	3 (<1)	0	47 (6)
頻脈	5 (<1)	3 (<1)	0	0	8 (1)
心室性期外収縮	6 (<1)	1 (<1)	0	0	7 (<1)
動悸	3 (<1)	3 (<1)	0	0	6 (<1)
徐脈	4 (<1)	1 (<1)	0	0	5 (<1)
洞性頻脈	3 (<1)	1 (<1)	0	0	4 (<1)
上室性期外収縮	3 (<1)	1 (<1)	0	0	4 (<1)
第一度房室ブロック	3 (<1)	0	0	0	3 (<1)
洞性徐脈	3 (<1)	0	0	0	3 (<1)
狭心症	0	1 (<1)	1 (<1)	0	2 (<1)
左脚ブロック	2 (<1)	0	0	0	2 (<1)
急性冠動脈症候群	0	0	1 (<1)	0	1 (<1)
心房細動	1 (<1)	0	0	0	1 (<1)
右脚ブロック	1 (<1)	0	0	0	1 (<1)
心臓瘤	0	1 (<1)	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
心不全	0	1 (<1)	0	0	1 (<1)
うっ血性心不全	0	0	1 (<1)	0	1 (<1)
心筋症	0	1 (<1)	0	0	1 (<1)
期外収縮	0	1 (<1)	0	0	1 (<1)
僧帽弁逸脱	1 (<1)	0	0	0	1 (<1)
結節性調律	1 (<1)	0	0	0	1 (<1)
頻脈性不整脈	1 (<1)	0	0	0	1 (<1)
血管障害	181 (24)	84 (11)	12 (2)	0	277 (36)
潮紅	144 (19)	62 (8)	9 (1)	0	215 (28)
ほてり	36 (5)	10 (1)	3 (<1)	0	49 (6)
高血圧	13 (2)	7 (<1)	0	0	20 (3)
充血	6 (<1)	1 (<1)	0	0	7 (<1)
血腫	1 (<1)	1 (<1)	0	0	2 (<1)
起立性低血圧	1 (<1)	1 (<1)	0	0	2 (<1)
静脈炎	1 (<1)	1 (<1)	0	0	2 (<1)
血管障害	1 (<1)	0	0	0	1 (<1)
動脈硬化症	1 (<1)	0	0	0	1 (<1)
深部静脈血栓症	0	0	1 (<1)	0	1 (<1)
高血圧クリーゼ	1 (<1)	0	0	0	1 (<1)
低血圧	1 (<1)	0	0	0	1 (<1)
レイノー現象	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
静脈瘤	1 (<1)	0	0	0	1 (<1)
静脈不全	0	1 (<1)	0	0	1 (<1)
呼吸器、胸郭および縦隔障害	84 (11)	38 (5)	3 (<1)	0	125 (16)
口腔咽頭痛	32 (4)	10 (1)	0	0	42 (6)
咳嗽	24 (3)	12 (2)	1 (<1)	0	37 (5)
鼻漏	10 (1)	1 (<1)	0	0	11 (1)
副鼻腔うっ血	7 (<1)	1 (<1)	0	0	8 (1)
アレルギー性鼻炎	3 (<1)	3 (<1)	0	0	6 (<1)
呼吸困難	3 (<1)	2 (<1)	0	0	5 (<1)
鼻出血	4 (<1)	0	0	0	4 (<1)
鼻閉	2 (<1)	2 (<1)	0	0	4 (<1)
上気道うっ血	3 (<1)	1 (<1)	0	0	4 (<1)
上気道咳症候群	4 (<1)	0	0	0	4 (<1)
息詰まり	1 (<1)	1 (<1)	1 (<1)	0	3 (<1)
喘息	1 (<1)	1 (<1)	0	0	2 (<1)
発声障害	0	2 (<1)	0	0	2 (<1)
口腔咽頭不快感	2 (<1)	0	0	0	2 (<1)
湿性咳嗽	2 (<1)	0	0	0	2 (<1)
気道うっ血	2 (<1)	0	0	0	2 (<1)
アレルギー性気管支炎	1 (<1)	0	0	0	1 (<1)
アレルギー性咽頭炎	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
しゃっくり	1 (<1)	0	0	0	1 (<1)
過換気	0	0	1 (<1)	0	1 (<1)
鼻乾燥	0	1 (<1)	0	0	1 (<1)
鼻浮腫	1 (<1)	0	0	0	1 (<1)
口腔咽頭腫脹	1 (<1)	0	0	0	1 (<1)
呼吸時疼痛	0	1 (<1)	0	0	1 (<1)
副鼻腔嚢胞	1 (<1)	0	0	0	1 (<1)
副鼻腔分泌過多	1 (<1)	0	0	0	1 (<1)
咽頭紅斑	1 (<1)	0	0	0	1 (<1)
咽頭腫瘤	0	1 (<1)	0	0	1 (<1)
胸膜炎	0	1 (<1)	0	0	1 (<1)
気胸	1 (<1)	0	0	0	1 (<1)
ラ音	1 (<1)	0	0	0	1 (<1)
呼吸障害	0	1 (<1)	0	0	1 (<1)
気道の炎症	0	1 (<1)	0	0	1 (<1)
副鼻腔障害	0	1 (<1)	0	0	1 (<1)
睡眠時無呼吸症候群	1 (<1)	0	0	0	1 (<1)
咽喉絞扼感	0	1 (<1)	0	0	1 (<1)
声帯の炎症	1 (<1)	0	0	0	1 (<1)
声帯ポリープ	1 (<1)	0	0	0	1 (<1)
喘鳴	0	1 (<1)	0	0	1 (<1)

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2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
胃腸障害	186 (24)	181 (24)	31 (4)	0	398 (52)
下痢	68 (9)	51 (7)	9 (1)	0	128 (17)
悪心	58 (8)	44 (6)	3 (<1)	0	105 (14)
上腹部痛	39 (5)	39 (5)	7 (<1)	0	85 (11)
腹痛	28 (4)	30 (4)	5 (<1)	0	63 (8)
嘔吐	22 (3)	28 (4)	3 (<1)	0	53 (7)
消化不良	23 (3)	16 (2)	1 (<1)	0	40 (5)
胃腸障害	16 (2)	15 (2)	3 (<1)	0	34 (4)
便秘	20 (3)	8 (1)	1 (<1)	0	29 (4)
歯痛	18 (2)	8 (1)	0	0	26 (3)
胃炎	9 (1)	9 (1)	2 (<1)	0	20 (3)
胃食道逆流性疾患	9 (1)	9 (1)	0	0	18 (2)
腹部不快感	9 (1)	5 (<1)	0	0	14 (2)
腹部膨満	12 (2)	1 (<1)	1 (<1)	0	14 (2)
口内乾燥	9 (1)	1 (<1)	0	0	10 (1)
歯周炎	5 (<1)	5 (<1)	0	0	10 (1)
鼓腸	6 (<1)	3 (<1)	0	0	9 (1)
痔核	4 (<1)	4 (<1)	0	0	8 (1)
下腹部痛	5 (<1)	2 (<1)	0	0	7 (<1)
齲歯	2 (<1)	3 (<1)	0	0	5 (<1)
嚥下障害	4 (<1)	1 (<1)	0	0	5 (<1)
食中毒	1 (<1)	4 (<1)	0	0	5 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
便失禁	2 (<1)	2 (<1)	0	0	4 (<1)
便意切迫	1 (<1)	2 (<1)	0	0	3 (<1)
小腸炎	2 (<1)	1 (<1)	0	0	3 (<1)
心窩部不快感	2 (<1)	1 (<1)	0	0	3 (<1)
おくび	3 (<1)	0	0	0	3 (<1)
歯肉炎	3 (<1)	0	0	0	3 (<1)
逆流性食道炎	2 (<1)	1 (<1)	0	0	3 (<1)
埋伏歯	0	3 (<1)	0	0	3 (<1)
腹部硬直	0	2 (<1)	0	0	2 (<1)
腹部圧痛	2 (<1)	0	0	0	2 (<1)
大腸炎	1 (<1)	1 (<1)	0	0	2 (<1)
腸憩室	2 (<1)	0	0	0	2 (<1)
十二指腸潰瘍	0	2 (<1)	0	0	2 (<1)
排便回数増加	2 (<1)	0	0	0	2 (<1)
胃障害	2 (<1)	0	0	0	2 (<1)
歯肉痛	2 (<1)	0	0	0	2 (<1)
口の感覚鈍麻	2 (<1)	0	0	0	2 (<1)
アフタ性口内炎	1 (<1)	0	0	0	1 (<1)
便通不規則	1 (<1)	0	0	0	1 (<1)
口腔灼熱感症候群	1 (<1)	0	0	0	1 (<1)
便習慣変化	1 (<1)	0	0	0	1 (<1)
結腸ポリープ	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
十二指腸炎	0	0	1 (<1)	0	1 (<1)
腸炎	1 (<1)	0	0	0	1 (<1)
変色便	1 (<1)	0	0	0	1 (<1)
胃潰瘍	0	0	1 (<1)	0	1 (<1)
胃十二指腸炎	1 (<1)	0	0	0	1 (<1)
胃腸出血	0	1 (<1)	0	0	1 (<1)
歯肉嚢胞	1 (<1)	0	0	0	1 (<1)
歯肉障害	1 (<1)	0	0	0	1 (<1)
舌痛	1 (<1)	0	0	0	1 (<1)
吐血	1 (<1)	0	0	0	1 (<1)
血便排泄	1 (<1)	0	0	0	1 (<1)
裂孔ヘルニア	1 (<1)	0	0	0	1 (<1)
炎症性腸疾患	0	1 (<1)	0	0	1 (<1)
腸閉塞	0	0	1 (<1)	0	1 (<1)
過敏性腸症候群	0	1 (<1)	0	0	1 (<1)
腰ヘルニア	0	1 (<1)	0	0	1 (<1)
口腔内潰瘍形成	1 (<1)	0	0	0	1 (<1)
神経因性腸	1 (<1)	0	0	0	1 (<1)
嚥下痛	1 (<1)	0	0	0	1 (<1)
食道痙攣	0	1 (<1)	0	0	1 (<1)
食道潰瘍	0	1 (<1)	0	0	1 (<1)
口腔内痛	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
膵臓障害	1 (<1)	0	0	0	1 (<1)
膵機能不全	0	1 (<1)	0	0	1 (<1)
消化性潰瘍	1 (<1)	0	0	0	1 (<1)
逆流性胃炎	1 (<1)	0	0	0	1 (<1)
唾液管閉塞	0	1 (<1)	0	0	1 (<1)
口内炎	1 (<1)	0	0	0	1 (<1)
舌苔	0	1 (<1)	0	0	1 (<1)
舌障害	1 (<1)	0	0	0	1 (<1)
臍ヘルニア	0	1 (<1)	0	0	1 (<1)
肝胆道系障害	8 (1)	6 (<1)	1 (<1)	0	15 (2)
肝障害	4 (<1)	2 (<1)	0	0	6 (<1)
胆石症	2 (<1)	0	0	0	2 (<1)
肝細胞融解性肝炎	0	2 (<1)	0	0	2 (<1)
胆管結石	0	0	1 (<1)	0	1 (<1)
胆道ジスキネジー	0	1 (<1)	0	0	1 (<1)
胆嚢浮腫	1 (<1)	0	0	0	1 (<1)
肝嚢胞	1 (<1)	0	0	0	1 (<1)
肝炎	0	1 (<1)	0	0	1 (<1)
高ビリルビン血症	1 (<1)	0	0	0	1 (<1)
皮膚および皮下組織障害	155 (20)	85 (11)	7 (<1)	0	247 (33)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
そう痒症	47 (6)	9 (1)	2 (<1)	0	58 (8)
発疹	40 (5)	14 (2)	1 (<1)	0	55 (7)
紅斑	38 (5)	15 (2)	1 (<1)	0	54 (7)
多汗症	17 (2)	8 (1)	1 (<1)	0	26 (3)
寝汗	10 (1)	4 (<1)	0	0	14 (2)
蕁麻疹	6 (<1)	7 (<1)	0	0	13 (2)
脱毛症	6 (<1)	4 (<1)	1 (<1)	0	11 (1)
全身性そう痒症	4 (<1)	5 (<1)	0	0	9 (1)
斑状皮疹	7 (<1)	2 (<1)	0	0	9 (1)
ざ瘡	5 (<1)	3 (<1)	0	0	8 (1)
アレルギー性皮膚炎	5 (<1)	3 (<1)	0	0	8 (1)
皮膚乾燥	7 (<1)	0	0	0	7 (<1)
皮膚灼熱感	5 (<1)	2 (<1)	0	0	7 (<1)
皮膚炎	4 (<1)	2 (<1)	0	0	6 (<1)
湿疹	4 (<1)	1 (<1)	0	0	5 (<1)
そう痒性皮疹	4 (<1)	1 (<1)	0	0	5 (<1)
全身紅斑	1 (<1)	2 (<1)	1 (<1)	0	4 (<1)
顔面感覚鈍麻	3 (<1)	1 (<1)	0	0	4 (<1)
光線過敏性反応	4 (<1)	0	0	0	4 (<1)
紅斑性皮疹	4 (<1)	0	0	0	4 (<1)
全身性皮疹	1 (<1)	3 (<1)	0	0	4 (<1)
乾癬	3 (<1)	0	0	0	3 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
丘疹性皮疹	0	3 (<1)	0	0	3 (<1)
皮膚のつっぱり感	3 (<1)	0	0	0	3 (<1)
薬疹	0	2 (<1)	0	0	2 (<1)
斑状出血	2 (<1)	0	0	0	2 (<1)
過角化	1 (<1)	1 (<1)	0	0	2 (<1)
皮膚疼痛	2 (<1)	0	0	0	2 (<1)
皮膚刺激	2 (<1)	0	0	0	2 (<1)
皮膚反応	2 (<1)	0	0	0	2 (<1)
顔面腫脹	1 (<1)	1 (<1)	0	0	2 (<1)
日光性角化症	0	1 (<1)	0	0	1 (<1)
冷汗	1 (<1)	0	0	0	1 (<1)
皮膚嚢腫	0	1 (<1)	0	0	1 (<1)
接触性皮膚炎	0	1 (<1)	0	0	1 (<1)
紅色症	1 (<1)	0	0	0	1 (<1)
内出血発生の増加傾向	1 (<1)	0	0	0	1 (<1)
嵌入爪	1 (<1)	0	0	0	1 (<1)
毛孔性角化症	0	1 (<1)	0	0	1 (<1)
網状皮斑	1 (<1)	0	0	0	1 (<1)
爪の障害	1 (<1)	0	0	0	1 (<1)
痒疹	0	1 (<1)	0	0	1 (<1)
アレルギー性そう痒症	1 (<1)	0	0	0	1 (<1)
脂腺障害	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
皮膚色素脱失	1 (<1)	0	0	0	1 (<1)
皮膚変色	0	1 (<1)	0	0	1 (<1)
皮膚剥脱	0	1 (<1)	0	0	1 (<1)
皮膚色素過剰	1 (<1)	0	0	0	1 (<1)
皮膚硬結	1 (<1)	0	0	0	1 (<1)
皮膚潰瘍	0	1 (<1)	0	0	1 (<1)
皮膚熱感	1 (<1)	0	0	0	1 (<1)
一過性棘融解性皮膚症	0	1 (<1)	0	0	1 (<1)
乾皮症	1 (<1)	0	0	0	1 (<1)
筋骨格系および結合組織障害	140 (18)	95 (13)	11 (1)	0	246 (32)
背部痛	46 (6)	32 (4)	4 (<1)	0	82 (11)
関節痛	35 (5)	25 (3)	4 (<1)	0	64 (8)
四肢痛	33 (4)	21 (3)	1 (<1)	0	55 (7)
筋痙縮	37 (5)	12 (2)	1 (<1)	0	50 (7)
筋力低下	15 (2)	9 (1)	0	0	24 (3)
筋骨格痛	16 (2)	5 (<1)	0	0	21 (3)
頚部痛	10 (1)	10 (1)	0	0	20 (3)
筋肉痛	10 (1)	3 (<1)	0	0	13 (2)
関節炎	5 (<1)	1 (<1)	0	0	6 (<1)
滑液包炎	1 (<1)	5 (<1)	0	0	6 (<1)
関節硬直	4 (<1)	1 (<1)	0	0	5 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
筋骨格系胸痛	4 (<1)	1 (<1)	0	0	5 (<1)
骨痛	3 (<1)	1 (<1)	0	0	4 (<1)
側腹部痛	1 (<1)	3 (<1)	0	0	4 (<1)
関節腫脹	3 (<1)	1 (<1)	0	0	4 (<1)
筋骨格硬直	3 (<1)	1 (<1)	0	0	4 (<1)
変形性関節症	3 (<1)	1 (<1)	0	0	4 (<1)
尾骨痛	2 (<1)	1 (<1)	0	0	3 (<1)
筋緊張	3 (<1)	0	0	0	3 (<1)
関節周囲炎	1 (<1)	1 (<1)	1 (<1)	0	3 (<1)
腱炎	2 (<1)	1 (<1)	0	0	3 (<1)
関節障害	2 (<1)	0	0	0	2 (<1)
椎間板突出	0	2 (<1)	0	0	2 (<1)
関節滲出液	1 (<1)	1 (<1)	0	0	2 (<1)
筋拘縮	1 (<1)	1 (<1)	0	0	2 (<1)
筋骨格不快感	1 (<1)	1 (<1)	0	0	2 (<1)
四肢の結節	0	2 (<1)	0	0	2 (<1)
骨減少症	1 (<1)	1 (<1)	0	0	2 (<1)
肩回旋筋腱板症候群	0	1 (<1)	1 (<1)	0	2 (<1)
重感	2 (<1)	0	0	0	2 (<1)
変形性脊椎症	2 (<1)	0	0	0	2 (<1)
滑液嚢腫	1 (<1)	1 (<1)	0	0	2 (<1)
腱鞘炎	2 (<1)	0	0	0	2 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
外骨腫	0	1 (<1)	0	0	1 (<1)
成長痛	0	1 (<1)	0	0	1 (<1)
椎間板変性症	1 (<1)	0	0	0	1 (<1)
椎間板障害	0	1 (<1)	0	0	1 (<1)
四肢不快感	1 (<1)	0	0	0	1 (<1)
下肢腫瘤	1 (<1)	0	0	0	1 (<1)
筋肉内出血	1 (<1)	0	0	0	1 (<1)
ミオキミア	1 (<1)	0	0	0	1 (<1)
筋炎	1 (<1)	0	0	0	1 (<1)
骨端症	0	1 (<1)	0	0	1 (<1)
骨壊死	0	1 (<1)	0	0	1 (<1)
骨粗鬆症	0	1 (<1)	0	0	1 (<1)
膝蓋大腿部痛症候群	0	1 (<1)	0	0	1 (<1)
乾癬性関節症	0	1 (<1)	0	0	1 (<1)
斜頚	0	1 (<1)	0	0	1 (<1)
弾発指	0	0	1 (<1)	0	1 (<1)
腎および尿路障害	137 (18)	37 (5)	2 (<1)	0	176 (23)
蛋白尿	76 (10)	9 (1)	0	0	85 (11)
血尿	36 (5)	5 (<1)	0	0	41 (5)
ミクロアルブミン尿	27 (4)	8 (1)	1 (<1)	0	36 (5)
ケトン尿	12 (2)	3 (<1)	0	0	15 (2)

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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
排尿困難	12 (2)	1 (<1)	0	0	13 (2)
尿意切迫	7 (<1)	2 (<1)	0	0	9 (1)
腎結石症	6 (<1)	2 (<1)	0	0	8 (1)
頻尿	5 (<1)	1 (<1)	0	0	6 (<1)
排尿躊躇	5 (<1)	0	0	0	5 (<1)
尿失禁	1 (<1)	4 (<1)	0	0	5 (<1)
切迫性尿失禁	3 (<1)	1 (<1)	0	0	4 (<1)
尿閉	2 (<1)	2 (<1)	0	0	4 (<1)
糖尿	3 (<1)	0	0	0	3 (<1)
白血球尿	2 (<1)	1 (<1)	0	0	3 (<1)
尿臭異常	2 (<1)	1 (<1)	0	0	3 (<1)
アルブミン尿	1 (<1)	1 (<1)	0	0	2 (<1)
腎仙痛	0	2 (<1)	0	0	2 (<1)
腎臓痛	0	2 (<1)	0	0	2 (<1)
膀胱機能障害	1 (<1)	0	0	0	1 (<1)
膀胱刺激症状	0	1 (<1)	0	0	1 (<1)
膀胱穿孔	0	0	1 (<1)	0	1 (<1)
着色尿	1 (<1)	0	0	0	1 (<1)
非感染性膀胱炎	1 (<1)	0	0	0	1 (<1)
緊張性膀胱	1 (<1)	0	0	0	1 (<1)
失禁	1 (<1)	0	0	0	1 (<1)
神経因性膀胱	1 (<1)	0	0	0	1 (<1)

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2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
起立性蛋白尿症	1 (<1)	0	0	0	1 (<1)
慢性腎不全	1 (<1)	0	0	0	1 (<1)
腎機能障害	0	1 (<1)	0	0	1 (<1)
腎尿細管性アシドーシス	1 (<1)	0	0	0	1 (<1)
生殖系および乳房障害	53 (7)	19 (3)	4 (<1)	0	76 (10)
月経困難症	7 (<1)	2 (<1)	2 (<1)	0	11 (1)
不規則月経	10 (1)	0	0	0	10 (1)
不正子宮出血	6 (<1)	1 (<1)	0	0	7 (<1)
乳房痛	5 (<1)	1 (<1)	0	0	6 (<1)
月経過多	4 (<1)	2 (<1)	0	0	6 (<1)
無月経	3 (<1)	2 (<1)	0	0	5 (<1)
勃起不全	1 (<1)	3 (<1)	1 (<1)	0	5 (<1)
卵巣嚢胞	2 (<1)	2 (<1)	0	0	4 (<1)
月経障害	3 (<1)	0	0	0	3 (<1)
骨盤痛	1 (<1)	2 (<1)	0	0	3 (<1)
頻発月経	3 (<1)	0	0	0	3 (<1)
子宮出血	2 (<1)	1 (<1)	0	0	3 (<1)
腟出血	2 (<1)	1 (<1)	0	0	3 (<1)
萎縮性外陰腟炎	2 (<1)	0	0	0	2 (<1)
乳房圧痛	2 (<1)	0	0	0	2 (<1)
性機能不全	2 (<1)	0	0	0	2 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
腺筋症	0	1 (<1)	0	0	1 (<1)
バルトリン腺炎	0	1 (<1)	0	0	1 (<1)
乳房嚢胞	0	1 (<1)	0	0	1 (<1)
乳房分泌	1 (<1)	0	0	0	1 (<1)
乳房腫瘤	1 (<1)	0	0	0	1 (<1)
性交困難	1 (<1)	0	0	0	1 (<1)
線維嚢胞性乳腺疾患	0	0	1 (<1)	0	1 (<1)
閉経期症状	1 (<1)	0	0	0	1 (<1)
月経遅延	1 (<1)	0	0	0	1 (<1)
多嚢胞性卵巣	1 (<1)	0	0	0	1 (<1)
閉経後出血	1 (<1)	0	0	0	1 (<1)
前立腺炎	1 (<1)	0	0	0	1 (<1)
前立腺腫大	1 (<1)	0	0	0	1 (<1)
精巣障害	1 (<1)	0	0	0	1 (<1)
腟分泌物	1 (<1)	0	0	0	1 (<1)
外陰腟乾燥	1 (<1)	0	0	0	1 (<1)
外陰腟そう痒症	1 (<1)	0	0	0	1 (<1)
先天性、家族性および遺伝性障害	3 (<1)	1 (<1)	0	0	4 (<1)
角膜ジストロフィー	1 (<1)	0	0	0	1 (<1)
異形成母斑症候群	1 (<1)	0	0	0	1 (<1)
陰嚢水瘤	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
ラウン・ギャノン・レバイン症候群	1 (<1)	0	0	0	1 (<1)
一般・全身障害および投与部位の状態	121 (16)	85 (11)	10 (1)	0	216 (28)
疲労	50 (7)	42 (6)	5 (<1)	1 (<1)	98 (13)
発熱	30 (4)	12 (2)	2 (<1)	0	44 (6)
無力症	11 (1)	5 (<1)	1 (<1)	0	17 (2)
末梢性浮腫	11 (1)	5 (<1)	0	0	16 (2)
インフルエンザ様疾患	11 (1)	4 (<1)	0	0	15 (2)
疼痛	9 (1)	6 (<1)	0	0	15 (2)
胸痛	9 (1)	4 (<1)	1 (<1)	0	14 (2)
熱感	10 (1)	2 (<1)	0	0	12 (2)
歩行障害	8 (1)	2 (<1)	1 (<1)	0	11 (1)
非心臓性胸痛	3 (<1)	4 (<1)	0	0	7 (<1)
倦怠感	4 (<1)	1 (<1)	0	0	5 (<1)
胸部不快感	2 (<1)	2 (<1)	0	0	4 (<1)
悪寒	2 (<1)	2 (<1)	0	0	4 (<1)
嚢胞	2 (<1)	2 (<1)	0	0	4 (<1)
顔面痛	2 (<1)	2 (<1)	0	0	4 (<1)
易刺激性	3 (<1)	0	0	0	3 (<1)
圧痛	3 (<1)	0	0	0	3 (<1)
冷感	2 (<1)	0	0	0	2 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
炎症	1 (<1)	1 (<1)	0	0	2 (<1)
医療機器による疼痛	2 (<1)	0	0	0	2 (<1)
腋窩痛	1 (<1)	0	0	0	1 (<1)
不快感	1 (<1)	0	0	0	1 (<1)
異常感	1 (<1)	0	0	0	1 (<1)
びくびく感	1 (<1)	0	0	0	1 (<1)
重力性浮腫	1 (<1)	0	0	0	1 (<1)
閉塞性ヘルニア	0	1 (<1)	0	0	1 (<1)
高熱	1 (<1)	0	0	0	1 (<1)
注射部位血腫	1 (<1)	0	0	0	1 (<1)
注射部位硬結	1 (<1)	0	0	0	1 (<1)
粘膜乾燥	0	1 (<1)	0	0	1 (<1)
粘膜の炎症	1 (<1)	0	0	0	1 (<1)
浮腫	1 (<1)	0	0	0	1 (<1)
不活発	1 (<1)	0	0	0	1 (<1)
腫脹	1 (<1)	0	0	0	1 (<1)
口渇	1 (<1)	0	0	0	1 (<1)
血管穿刺部位血腫	1 (<1)	0	0	0	1 (<1)
臨床検査	148 (19)	63 (8)	5 (<1)	0	216 (28)
アラニン・アミノトランスフェラーゼ増加	34 (4)	14 (2)	1 (<1)	0	49 (6)
尿中アルブミン陽性	30 (4)	6 (<1)	0	0	36 (5)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
アスパラギン酸アミノトランスフェラーゼ増加	19 (3)	9 (1)	1 (<1)	0	29 (4)
尿中蛋白陽性	16 (2)	3 (<1)	1 (<1)	0	20 (3)
血中ブドウ糖増加	17 (2)	1 (<1)	0	0	18 (2)
尿中血陽性	17 (2)	1 (<1)	0	0	18 (2)
血中副甲状腺ホルモン増加	14 (2)	3 (<1)	0	0	17 (2)
尿中β２ミクログロブリン増加	11 (1)	4 (<1)	0	0	15 (2)
尿中白血球陽性	14 (2)	0	1 (<1)	0	15 (2)
γ－グルタミルトランスフェラーゼ増加	8 (1)	4 (<1)	0	0	12 (2)
白血球数減少	8 (1)	4 (<1)	0	0	12 (2)
体重増加	10 (1)	1 (<1)	0	0	11 (1)
尿中ケトン体陽性	8 (1)	2 (<1)	0	0	10 (1)
体重減少	7 (<1)	3 (<1)	0	0	10 (1)
リンパ球数減少	8 (1)	0	0	0	8 (1)
β２ミクログロブリン増加	5 (<1)	2 (<1)	0	0	7 (<1)
肝酵素上昇	2 (<1)	5 (<1)	0	0	7 (<1)
ヘモグロビン減少	5 (<1)	0	1 (<1)	0	6 (<1)
好中球数増加	5 (<1)	1 (<1)	0	0	6 (<1)
白血球数増加	4 (<1)	2 (<1)	0	0	6 (<1)
血中クレアチニン増加	1 (<1)	4 (<1)	0	0	5 (<1)
心電図ＱＴ延長	5 (<1)	0	0	0	5 (<1)
尿中赤血球陽性	4 (<1)	1 (<1)	0	0	5 (<1)
血中コレステロール増加	4 (<1)	0	0	0	4 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
血中尿素増加	3 (<1)	1 (<1)	0	0	4 (<1)
ビタミンD増加	4 (<1)	0	0	0	4 (<1)
血中ビリルビン増加	2 (<1)	1 (<1)	0	0	3 (<1)
血中カリウム増加	1 (<1)	2 (<1)	0	0	3 (<1)
血中トリグリセリド増加	3 (<1)	0	0	0	3 (<1)
体温上昇	2 (<1)	1 (<1)	0	0	3 (<1)
心電図異常	3 (<1)	0	0	0	3 (<1)
尿中ブドウ糖陽性	2 (<1)	1 (<1)	0	0	3 (<1)
ヘマトクリット減少	2 (<1)	0	1 (<1)	0	3 (<1)
高比重リポ蛋白増加	3 (<1)	0	0	0	3 (<1)
肝機能検査異常	0	2 (<1)	1 (<1)	0	3 (<1)
低比重リポ蛋白増加	3 (<1)	0	0	0	3 (<1)
細菌検査陽性	2 (<1)	0	0	0	2 (<1)
血中アルカリホスファターゼ増加	2 (<1)	0	0	0	2 (<1)
血中クロール増加	2 (<1)	0	0	0	2 (<1)
血圧上昇	2 (<1)	0	0	0	2 (<1)
血中ナトリウム増加	2 (<1)	0	0	0	2 (<1)
血中尿酸増加	2 (<1)	0	0	0	2 (<1)
好酸球数増加	2 (<1)	0	0	0	2 (<1)
血液学的検査異常	1 (<1)	1 (<1)	0	0	2 (<1)
リンパ球形態異常	2 (<1)	0	0	0	2 (<1)
赤血球数減少	1 (<1)	1 (<1)	0	0	2 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
ビタミンD減少	2 (<1)	0	0	0	2 (<1)
アラニン・アミノトランスフェラーゼ異常	0	1 (<1)	0	0	1 (<1)
アレルギー検査	1 (<1)	0	0	0	1 (<1)
抗痙攣剤濃度減少	0	1 (<1)	0	0	1 (<1)
血中カルシウム増加	1 (<1)	0	0	0	1 (<1)
血中クレアチン増加	1 (<1)	0	0	0	1 (<1)
血中葉酸減少	1 (<1)	0	0	0	1 (<1)
血中ブドウ糖減少	0	1 (<1)	0	0	1 (<1)
血中免疫グロブリンM増加	1 (<1)	0	0	0	1 (<1)
血中ケトン体増加	0	1 (<1)	0	0	1 (<1)
血中副甲状腺ホルモン異常	0	1 (<1)	0	0	1 (<1)
血中カリウム減少	1 (<1)	0	0	0	1 (<1)
拡張期血圧上昇	1 (<1)	0	0	0	1 (<1)
血中ナトリウム減少	1 (<1)	0	0	0	1 (<1)
血中甲状腺刺激ホルモン増加	1 (<1)	0	0	0	1 (<1)
尿中結晶陽性	1 (<1)	0	0	0	1 (<1)
白血球百分率数異常	0	1 (<1)	0	0	1 (<1)
心電図ＳＴ部分下降	1 (<1)	0	0	0	1 (<1)
心電図Ｔ波振幅減少	1 (<1)	0	0	0	1 (<1)
好酸球数異常	1 (<1)	0	0	0	1 (<1)
エプスタイン・バーウイルス抗体陽性	1 (<1)	0	0	0	1 (<1)
γ－グルタミルトランスフェラーゼ異常	0	1 (<1)	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
胃内ｐＨ上昇	0	1 (<1)	0	0	1 (<1)
心拍数減少	1 (<1)	0	0	0	1 (<1)
検査	0	1 (<1)	0	0	1 (<1)
リンパ節触知	1 (<1)	0	0	0	1 (<1)
リンパ球数増加	1 (<1)	0	0	0	1 (<1)
医学的観察	1 (<1)	0	0	0	1 (<1)
単球数減少	1 (<1)	0	0	0	1 (<1)
単球数増加	1 (<1)	0	0	0	1 (<1)
好中球数減少	1 (<1)	0	0	0	1 (<1)
血小板数増加	0	1 (<1)	0	0	1 (<1)
赤血球数増加	1 (<1)	0	0	0	1 (<1)
呼吸数増加	1 (<1)	0	0	0	1 (<1)
血清フェリチン減少	0	1 (<1)	0	0	1 (<1)
子宮頚部スミア異常	0	1 (<1)	0	0	1 (<1)
尿円柱	1 (<1)	0	0	0	1 (<1)
傷害、中毒および処置合併症	58 (8)	52 (7)	9 (1)	0	119 (16)
挫傷	18 (2)	7 (<1)	0	0	25 (3)
転倒	14 (2)	8 (1)	0	0	22 (3)
関節捻挫	7 (<1)	5 (<1)	1 (<1)	0	13 (2)
肉離れ	5 (<1)	1 (<1)	2 (<1)	0	8 (1)
節足動物咬傷	2 (<1)	5 (<1)	0	0	7 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
擦過傷	6 (<1)	0	0	0	6 (<1)
足骨折	1 (<1)	5 (<1)	0	0	6 (<1)
四肢損傷	4 (<1)	2 (<1)	0	0	6 (<1)
処置による疼痛	2 (<1)	4 (<1)	0	0	6 (<1)
交通事故	1 (<1)	2 (<1)	2 (<1)	0	5 (<1)
靭帯断裂	0	3 (<1)	1 (<1)	0	4 (<1)
熱傷	2 (<1)	2 (<1)	0	0	4 (<1)
足関節部骨折	0	2 (<1)	1 (<1)	0	3 (<1)
半月板障害	0	3 (<1)	0	0	3 (<1)
皮膚裂傷	1 (<1)	2 (<1)	0	0	3 (<1)
サンバーン	2 (<1)	1 (<1)	0	0	3 (<1)
節足動物刺傷	1 (<1)	1 (<1)	0	0	2 (<1)
上顆炎	2 (<1)	0	0	0	2 (<1)
損傷	1 (<1)	1 (<1)	0	0	2 (<1)
関節損傷	1 (<1)	1 (<1)	0	0	2 (<1)
橈骨骨折	1 (<1)	1 (<1)	0	0	2 (<1)
骨格損傷	0	2 (<1)	0	0	2 (<1)
歯牙破折	2 (<1)	0	0	0	2 (<1)
手首関節骨折	0	0	2 (<1)	0	2 (<1)
アルコール中毒	0	1 (<1)	0	0	1 (<1)
鎖骨骨折	1 (<1)	0	0	0	1 (<1)
造影剤反応	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
眼外傷	0	1 (<1)	0	0	1 (<1)
顔面損傷	1 (<1)	0	0	0	1 (<1)
大腿骨骨折	0	0	1 (<1)	0	1 (<1)
尾骨骨折	0	1 (<1)	0	0	1 (<1)
腸脛靱帯症候群	0	1 (<1)	0	0	1 (<1)
閉塞性瘢痕ヘルニア	0	1 (<1)	0	0	1 (<1)
靱帯損傷	1 (<1)	0	0	0	1 (<1)
靱帯捻挫	0	1 (<1)	0	0	1 (<1)
下肢骨折	0	1 (<1)	0	0	1 (<1)
頚部損傷	1 (<1)	0	0	0	1 (<1)
神経損傷	1 (<1)	0	0	0	1 (<1)
処置後浮腫	0	1 (<1)	0	0	1 (<1)
放射線皮膚損傷	1 (<1)	0	0	0	1 (<1)
肋骨骨折	0	1 (<1)	0	0	1 (<1)
引っかき傷	1 (<1)	0	0	0	1 (<1)
滑膜断裂	1 (<1)	0	0	0	1 (<1)
外傷性骨折	0	1 (<1)	0	0	1 (<1)
外傷性血腫	1 (<1)	0	0	0	1 (<1)
上肢骨折	0	1 (<1)	0	0	1 (<1)
ワクチン接種合併症	1 (<1)	0	0	0	1 (<1)
創傷	1 (<1)	0	0	0	1 (<1)
創し開	0	1 (<1)	0	0	1 (<1)

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2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: BG00012 240 mg TID

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
外科および内科処置	1 (<1)	3 (<1)	0	0	4 (<1)
デンタルケア	1 (<1)	0	0	0	1 (<1)
子宮摘出	0	1 (<1)	0	0	1 (<1)
椎間板手術	0	1 (<1)	0	0	1 (<1)
静脈ステント挿入	0	1 (<1)	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
Number of subjects in safety population					1529 (100)
Number of subjects with an event	347 (23)	872 (57)	226 (15)	0	1445 (95)
感染症および寄生虫症	457 (30)	447 (29)	31 (2)	0	935 (61)
鼻咽頭炎	244 (16)	96 (6)	2 (<1)	0	342 (22)
尿路感染	117 (8)	82 (5)	3 (<1)	0	202 (13)
上気道感染	130 (9)	65 (4)	2 (<1)	0	197 (13)
インフルエンザ	78 (5)	44 (3)	5 (<1)	0	127 (8)
副鼻腔炎	51 (3)	35 (2)	1 (<1)	0	87 (6)
気管支炎	36 (2)	46 (3)	1 (<1)	0	83 (5)
胃腸炎	43 (3)	27 (2)	6 (<1)	0	76 (5)
咽頭炎	38 (2)	20 (1)	0	0	58 (4)
鼻炎	41 (3)	7 (<1)	1 (<1)	0	49 (3)
気道感染	23 (2)	14 (<1)	0	0	37 (2)
口腔ヘルペス	28 (2)	8 (<1)	0	0	36 (2)
ウイルス性胃腸炎	18 (1)	14 (<1)	3 (<1)	0	35 (2)
ウイルス感染	22 (1)	9 (<1)	0	0	31 (2)
膀胱炎	17 (1)	13 (<1)	0	0	30 (2)
耳感染	11 (<1)	12 (<1)	0	0	23 (2)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
喉頭炎	10 (<1)	13 (<1)	0	0	23 (2)
ウイルス性上気道感染	18 (1)	4 (<1)	0	0	22 (1)
帯状疱疹	6 (<1)	14 (<1)	0	0	20 (1)
外陰腟真菌感染	16 (1)	4 (<1)	0	0	20 (1)
中耳炎	8 (<1)	10 (<1)	1 (<1)	0	19 (1)
扁桃炎	10 (<1)	8 (<1)	0	0	18 (1)
腟感染	14 (<1)	3 (<1)	0	0	17 (1)
消化管感染	10 (<1)	5 (<1)	1 (<1)	0	16 (1)
歯膿瘍	5 (<1)	10 (<1)	1 (<1)	0	16 (1)
感染性結膜炎	9 (<1)	6 (<1)	0	0	15 (<1)
麦粒腫	9 (<1)	2 (<1)	0	0	11 (<1)
ウイルス性消化管感染	4 (<1)	6 (<1)	0	0	10 (<1)
下気道感染	4 (<1)	5 (<1)	0	0	9 (<1)
歯感染	3 (<1)	5 (<1)	1 (<1)	0	9 (<1)
蜂巣炎	2 (<1)	5 (<1)	1 (<1)	0	8 (<1)
レンサ球菌性咽頭炎	3 (<1)	5 (<1)	0	0	8 (<1)
肺炎	1 (<1)	6 (<1)	1 (<1)	0	8 (<1)
ウイルス性気道感染	7 (<1)	1 (<1)	0	0	8 (<1)
気管炎	4 (<1)	3 (<1)	1 (<1)	0	8 (<1)
外陰部腟カンジダ症	4 (<1)	4 (<1)	0	0	8 (<1)
せつ	3 (<1)	3 (<1)	1 (<1)	0	7 (<1)
爪真菌症	4 (<1)	3 (<1)	0	0	7 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
咽頭扁桃炎	4 (<1)	2 (<1)	0	0	6 (<1)
細菌尿	4 (<1)	1 (<1)	0	0	5 (<1)
Ｈ１Ｎ１インフルエンザ	1 (<1)	4 (<1)	0	0	5 (<1)
口腔カンジダ症	5 (<1)	0	0	0	5 (<1)
急性扁桃炎	2 (<1)	2 (<1)	0	0	4 (<1)
毛包炎	1 (<1)	3 (<1)	0	0	4 (<1)
陰部ヘルペス	2 (<1)	2 (<1)	0	0	4 (<1)
単純ヘルペス	3 (<1)	1 (<1)	0	0	4 (<1)
外耳炎	2 (<1)	2 (<1)	0	0	4 (<1)
細菌性副鼻腔炎	1 (<1)	3 (<1)	0	0	4 (<1)
皮下組織膿瘍	2 (<1)	2 (<1)	0	0	4 (<1)
癜風	2 (<1)	2 (<1)	0	0	4 (<1)
細菌性膣炎	4 (<1)	0	0	0	4 (<1)
急性副鼻腔炎	2 (<1)	1 (<1)	0	0	3 (<1)
細菌性結膜炎	1 (<1)	1 (<1)	1 (<1)	0	3 (<1)
遊走性紅斑	2 (<1)	1 (<1)	0	0	3 (<1)
ヘリコバクター性胃炎	2 (<1)	1 (<1)	0	0	3 (<1)
咬傷感染	2 (<1)	1 (<1)	0	0	3 (<1)
シラミ寄生	2 (<1)	1 (<1)	0	0	3 (<1)
歯周感染	2 (<1)	1 (<1)	0	0	3 (<1)
無症候性細菌尿	2 (<1)	0	0	0	2 (<1)
細菌感染	0	2 (<1)	0	0	2 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
眼感染	2 (<1)	0	0	0	2 (<1)
真菌感染	2 (<1)	0	0	0	2 (<1)
性器カンジダ症	0	2 (<1)	0	0	2 (<1)
ヘリコバクター感染	0	2 (<1)	0	0	2 (<1)
切開部位感染	1 (<1)	1 (<1)	0	0	2 (<1)
伝染性単核症	1 (<1)	1 (<1)	0	0	2 (<1)
限局性感染	1 (<1)	1 (<1)	0	0	2 (<1)
口腔真菌感染	2 (<1)	0	0	0	2 (<1)
爪囲炎	1 (<1)	1 (<1)	0	0	2 (<1)
骨盤内炎症性疾患	2 (<1)	0	0	0	2 (<1)
術後創感染	2 (<1)	0	0	0	2 (<1)
歯髄炎	1 (<1)	1 (<1)	0	0	2 (<1)
陰嚢膿瘍	0	2 (<1)	0	0	2 (<1)
ブドウ球菌感染	1 (<1)	1 (<1)	0	0	2 (<1)
気管気管支炎	0	2 (<1)	0	0	2 (<1)
腸チフス熱	2 (<1)	0	0	0	2 (<1)
細菌性上気道感染	1 (<1)	1 (<1)	0	0	2 (<1)
外陰部炎	0	2 (<1)	0	0	2 (<1)
腹壁膿瘍	0	1 (<1)	0	0	1 (<1)
ダニ症	1 (<1)	0	0	0	1 (<1)
虫垂炎	0	1 (<1)	0	0	1 (<1)
ボレリア感染	0	1 (<1)	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
乳房膿瘍	0	1 (<1)	0	0	1 (<1)
乳房蜂巣炎	0	1 (<1)	0	0	1 (<1)
ウイルス性気管支炎	1 (<1)	0	0	0	1 (<1)
気管支肺炎	0	1 (<1)	0	0	1 (<1)
カンジダ症	1 (<1)	0	0	0	1 (<1)
子宮頚管炎	1 (<1)	0	0	0	1 (<1)
ウイルス性結膜炎	1 (<1)	0	0	0	1 (<1)
デング熱	0	1 (<1)	0	0	1 (<1)
感染性皮膚炎	1 (<1)	0	0	0	1 (<1)
憩室炎	0	1 (<1)	0	0	1 (<1)
ダグラス窩膿瘍	0	0	1 (<1)	0	1 (<1)
感染性湿疹	1 (<1)	0	0	0	1 (<1)
エプスタイン・バーウイルス感染	1 (<1)	0	0	0	1 (<1)
大腸菌性尿路感染	1 (<1)	0	0	0	1 (<1)
熱性感染症	0	1 (<1)	0	0	1 (<1)
ノロウイルス性胃腸炎	0	1 (<1)	0	0	1 (<1)
ロタウイルス胃腸炎	0	1 (<1)	0	0	1 (<1)
細菌性性器感染	1 (<1)	0	0	0	1 (<1)
泌尿生殖器感染	1 (<1)	0	0	0	1 (<1)
ジアルジア症	1 (<1)	0	0	0	1 (<1)
歯肉感染	1 (<1)	0	0	0	1 (<1)
神経合併症を伴う帯状疱疹感染	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
眼帯状疱疹	0	0	1 (<1)	0	1 (<1)
膿痂疹	1 (<1)	0	0	0	1 (<1)
感染性嚢腫	1 (<1)	0	0	0	1 (<1)
感染性皮脂嚢腫	0	1 (<1)	0	0	1 (<1)
感染	1 (<1)	0	0	0	1 (<1)
カンジダ性間擦疹	0	1 (<1)	0	0	1 (<1)
迷路炎	1 (<1)	0	0	0	1 (<1)
ライム病	0	1 (<1)	0	0	1 (<1)
乳腺炎	0	1 (<1)	0	0	1 (<1)
マイコプラズマ感染	0	1 (<1)	0	0	1 (<1)
爪感染	0	1 (<1)	0	0	1 (<1)
精巣炎	1 (<1)	0	0	0	1 (<1)
急性中耳炎	1 (<1)	0	0	0	1 (<1)
扁桃周囲膿瘍	0	0	1 (<1)	0	1 (<1)
ウイルス感染後疲労症候群	0	1 (<1)	0	0	1 (<1)
腎盂腎炎	1 (<1)	0	0	0	1 (<1)
急性腎盂腎炎	0	1 (<1)	0	0	1 (<1)
膿皮症	0	1 (<1)	0	0	1 (<1)
膿疱性皮疹	0	1 (<1)	0	0	1 (<1)
卵管卵巣炎	0	1 (<1)	0	0	1 (<1)
皮膚細菌感染	1 (<1)	0	0	0	1 (<1)
皮膚感染	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
軟部組織感染	1 (<1)	0	0	0	1 (<1)
足部白癬	1 (<1)	0	0	0	1 (<1)
細菌性尿路感染	0	1 (<1)	0	0	1 (<1)
真菌性尿路感染	1 (<1)	0	0	0	1 (<1)
泌尿生殖器真菌感染	1 (<1)	0	0	0	1 (<1)
ガードネレラ菌性膣炎	0	1 (<1)	0	0	1 (<1)
水痘	0	1 (<1)	0	0	1 (<1)
ウイルス性咽頭炎	1 (<1)	0	0	0	1 (<1)
ウイルス性鼻炎	1 (<1)	0	0	0	1 (<1)
外陰部膿瘍	0	1 (<1)	0	0	1 (<1)
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	29 (2)	12 (<1)	4 (<1)	0	45 (3)
皮膚乳頭腫	6 (<1)	3 (<1)	0	0	9 (<1)
脂肪腫	5 (<1)	1 (<1)	1 (<1)	0	7 (<1)
メラノサイト性母斑	5 (<1)	1 (<1)	0	0	6 (<1)
子宮平滑筋腫	5 (<1)	1 (<1)	0	0	6 (<1)
線維腫	3 (<1)	0	0	0	3 (<1)
乳腺線維腺腫	2 (<1)	0	0	0	2 (<1)
肺新生物	1 (<1)	0	1 (<1)	0	2 (<1)
甲状腺新生物	1 (<1)	1 (<1)	0	0	2 (<1)
基底細胞癌	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
肺の良性新生物	0	0	1 (<1)	0	1 (<1)
乳癌	0	1 (<1)	0	0	1 (<1)
子宮頚部癌	0	1 (<1)	0	0	1 (<1)
泌尿生殖器新生物	0	1 (<1)	0	0	1 (<1)
血管腫	1 (<1)	0	0	0	1 (<1)
肝臓血管腫	0	1 (<1)	0	0	1 (<1)
神経鞘腫	0	0	1 (<1)	0	1 (<1)
乳頭腫	1 (<1)	0	0	0	1 (<1)
腎新生物	0	1 (<1)	0	0	1 (<1)
脂漏性角化症	0	1 (<1)	0	0	1 (<1)
移行上皮癌	0	0	1 (<1)	0	1 (<1)
外陰腟ヒト乳頭腫ウイルス感染	1 (<1)	0	0	0	1 (<1)
血液およびリンパ系障害	84 (5)	23 (2)	0	0	107 (7)
リンパ球減少症	31 (2)	4 (<1)	0	0	35 (2)
貧血	28 (2)	6 (<1)	0	0	34 (2)
白血球減少症	15 (<1)	3 (<1)	0	0	18 (1)
リンパ節症	9 (<1)	1 (<1)	0	0	10 (<1)
好中球増加症	9 (<1)	1 (<1)	0	0	10 (<1)
白血球増加症	8 (<1)	1 (<1)	0	0	9 (<1)
好酸球増加症	6 (<1)	2 (<1)	0	0	8 (<1)
鉄欠乏性貧血	3 (<1)	2 (<1)	0	0	5 (<1)

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2: Data after subjects switched to alternative MS treatment are excluded.
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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
好中球減少症	3 (<1)	1 (<1)	0	0	4 (<1)
血小板減少症	1 (<1)	1 (<1)	0	0	2 (<1)
正色素性正球性貧血	0	1 (<1)	0	0	1 (<1)
脾腫	1 (<1)	0	0	0	1 (<1)
免疫系障害	16 (1)	26 (2)	3 (<1)	0	45 (3)
過敏症	4 (<1)	14 (<1)	2 (<1)	0	20 (1)
季節性アレルギー	9 (<1)	4 (<1)	0	0	13 (<1)
食物アレルギー	2 (<1)	5 (<1)	0	0	7 (<1)
薬物過敏症	1 (<1)	4 (<1)	0	0	5 (<1)
造影剤アレルギー	0	2 (<1)	0	0	2 (<1)
アナフィラキシー様反応	0	0	1 (<1)	0	1 (<1)
家塵アレルギー	0	1 (<1)	0	0	1 (<1)
免疫不全症	1 (<1)	0	0	0	1 (<1)
続発性免疫不全症	1 (<1)	0	0	0	1 (<1)
内分泌障害	14 (<1)	2 (<1)	1 (<1)	0	17 (1)
甲状腺腫	3 (<1)	1 (<1)	0	0	4 (<1)
甲状腺機能低下症	3 (<1)	1 (<1)	0	0	4 (<1)
副甲状腺機能亢進症	2 (<1)	0	0	0	2 (<1)
自己免疫性甲状腺炎	1 (<1)	0	0	0	1 (<1)
間脳性内分泌障害	0	0	1 (<1)	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
原発性副甲状腺機能亢進症	1 (<1)	0	0	0	1 (<1)
続発性副甲状腺機能亢進症	1 (<1)	0	0	0	1 (<1)
甲状腺機能亢進症	1 (<1)	0	0	0	1 (<1)
エストロゲン欠乏症	1 (<1)	0	0	0	1 (<1)
甲状腺腫瘤	1 (<1)	0	0	0	1 (<1)
代謝および栄養障害	73 (5)	26 (2)	2 (<1)	0	101 (7)
食欲減退	24 (2)	7 (<1)	0	0	31 (2)
高コレステロール血症	10 (<1)	4 (<1)	0	0	14 (<1)
ビタミンＤ欠乏	9 (<1)	4 (<1)	0	0	13 (<1)
高血糖	7 (<1)	1 (<1)	0	0	8 (<1)
脱水	1 (<1)	4 (<1)	1 (<1)	0	6 (<1)
高脂血症	4 (<1)	1 (<1)	0	0	5 (<1)
耐糖能障害	4 (<1)	0	0	0	4 (<1)
糖尿病	2 (<1)	1 (<1)	0	0	3 (<1)
脂質異常症	3 (<1)	0	0	0	3 (<1)
鉄欠乏	1 (<1)	2 (<1)	0	0	3 (<1)
ビタミンＢ１２欠乏	3 (<1)	0	0	0	3 (<1)
高トリグリセリド血症	2 (<1)	0	0	0	2 (<1)
低カリウム血症	2 (<1)	0	0	0	2 (<1)
ビタミン欠乏症	2 (<1)	0	0	0	2 (<1)
食欲亢進	2 (<1)	0	0	0	2 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
２型糖尿病	1 (<1)	1 (<1)	0	0	2 (<1)
異常体重減少	0	1 (<1)	0	0	1 (<1)
糖尿病性ケトアシドーシス	1 (<1)	0	0	0	1 (<1)
痛風	0	1 (<1)	0	0	1 (<1)
高ナトリウム血症	1 (<1)	0	0	0	1 (<1)
高尿酸血症	1 (<1)	0	0	0	1 (<1)
低血糖症	0	0	1 (<1)	0	1 (<1)
過小食	1 (<1)	0	0	0	1 (<1)
低リン酸血症	1 (<1)	0	0	0	1 (<1)
ケトーシス	0	1 (<1)	0	0	1 (<1)
１型糖尿病	1 (<1)	0	0	0	1 (<1)
亜鉛欠乏	1 (<1)	0	0	0	1 (<1)
精神障害	157 (10)	94 (6)	11 (<1)	0	262 (17)
うつ病	54 (4)	42 (3)	5 (<1)	0	101 (7)
不眠症	42 (3)	20 (1)	3 (<1)	0	65 (4)
不安	36 (2)	21 (1)	0	0	57 (4)
抑うつ気分	16 (1)	3 (<1)	0	0	19 (1)
睡眠障害	9 (<1)	6 (<1)	0	0	15 (<1)
気分動揺	4 (<1)	3 (<1)	0	0	7 (<1)
感情障害	5 (<1)	1 (<1)	0	0	6 (<1)
ストレス	4 (<1)	2 (<1)	0	0	6 (<1)

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2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
気分変化	4 (<1)	1 (<1)	0	0	5 (<1)
パニック発作	4 (<1)	1 (<1)	0	0	5 (<1)
リビドー減退	4 (<1)	0	0	0	4 (<1)
抑うつ症状	1 (<1)	2 (<1)	0	0	3 (<1)
初期不眠症	2 (<1)	1 (<1)	0	0	3 (<1)
神経過敏	2 (<1)	1 (<1)	0	0	3 (<1)
神経症	3 (<1)	0	0	0	3 (<1)
自殺念慮	2 (<1)	0	1 (<1)	0	3 (<1)
感情不安定	1 (<1)	1 (<1)	0	0	2 (<1)
大うつ病	0	2 (<1)	0	0	2 (<1)
落ち着きのなさ	2 (<1)	0	0	0	2 (<1)
身体表現性障害	2 (<1)	0	0	0	2 (<1)
異常行動	1 (<1)	0	0	0	1 (<1)
異常な夢	1 (<1)	0	0	0	1 (<1)
抑うつ気分を伴う適応障害	0	0	1 (<1)	0	1 (<1)
不安障害	0	1 (<1)	0	0	1 (<1)
双極１型障害	0	0	1 (<1)	0	1 (<1)
歯ぎしり	1 (<1)	0	0	0	1 (<1)
燃え尽き症候群	0	1 (<1)	0	0	1 (<1)
転換性障害	1 (<1)	0	0	0	1 (<1)
性的興奮障害	1 (<1)	0	0	0	1 (<1)
情動障害	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
多幸気分	1 (<1)	0	0	0	1 (<1)
全般性不安障害	0	1 (<1)	0	0	1 (<1)
幻聴	1 (<1)	0	0	0	1 (<1)
リビド消失	1 (<1)	0	0	0	1 (<1)
躁病	1 (<1)	0	0	0	1 (<1)
自己愛性人格障害	0	0	1 (<1)	0	1 (<1)
パニック障害	1 (<1)	0	0	0	1 (<1)
人格変化	1 (<1)	0	0	0	1 (<1)
人格障害	1 (<1)	0	0	0	1 (<1)
精神症状	0	1 (<1)	0	0	1 (<1)
精神病性障害	0	1 (<1)	0	0	1 (<1)
睡眠発作	1 (<1)	0	0	0	1 (<1)
自殺企図	0	0	1 (<1)	0	1 (<1)
神経系障害	336 (22)	396 (26)	71 (5)	0	803 (53)
多発性硬化症再発	125 (8)	261 (17)	34 (2)	0	420 (27)
頭痛	160 (10)	83 (5)	16 (1)	0	259 (17)
錯感覚	91 (6)	23 (2)	1 (<1)	0	115 (8)
感覚鈍麻	55 (4)	18 (1)	1 (<1)	0	74 (5)
浮動性めまい	42 (3)	20 (1)	2 (<1)	0	64 (4)
灼熱感	30 (2)	15 (<1)	1 (<1)	0	46 (3)
片頭痛	22 (1)	17 (1)	4 (<1)	0	43 (3)

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2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
筋痙直	19 (1)	13 (<1)	1 (<1)	0	33 (2)
平衡障害	18 (1)	3 (<1)	0	0	21 (1)
感覚障害	16 (1)	0	2 (<1)	0	18 (1)
異常感覚	13 (<1)	3 (<1)	0	0	16 (1)
多発性硬化症	7 (<1)	9 (<1)	0	0	16 (1)
坐骨神経痛	8 (<1)	7 (<1)	1 (<1)	0	16 (1)
振戦	14 (<1)	2 (<1)	0	0	16 (1)
傾眠	10 (<1)	4 (<1)	0	0	14 (<1)
緊張性頭痛	10 (<1)	2 (<1)	1 (<1)	0	13 (<1)
レルミット徴候	8 (<1)	4 (<1)	0	0	12 (<1)
神経痛	7 (<1)	4 (<1)	0	0	11 (<1)
構語障害	6 (<1)	0	3 (<1)	0	9 (<1)
味覚異常	8 (<1)	1 (<1)	0	0	9 (<1)
失神	7 (<1)	0	2 (<1)	0	9 (<1)
前兆を伴う片頭痛	5 (<1)	2 (<1)	1 (<1)	0	8 (<1)
三叉神経痛	4 (<1)	3 (<1)	1 (<1)	0	8 (<1)
ウートホフ現象	5 (<1)	3 (<1)	0	0	8 (<1)
健忘	6 (<1)	1 (<1)	0	0	7 (<1)
認知障害	3 (<1)	3 (<1)	0	0	6 (<1)
注意力障害	4 (<1)	2 (<1)	0	0	6 (<1)
下肢静止不能症候群	3 (<1)	3 (<1)	0	0	6 (<1)
副鼻腔炎に伴う頭痛	3 (<1)	3 (<1)	0	0	6 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
運動失調	4 (<1)	1 (<1)	0	0	5 (<1)
知覚過敏	4 (<1)	1 (<1)	0	0	5 (<1)
記憶障害	4 (<1)	1 (<1)	0	0	5 (<1)
神経圧迫	5 (<1)	0	0	0	5 (<1)
失神寸前の状態	3 (<1)	2 (<1)	0	0	5 (<1)
帯状感	2 (<1)	1 (<1)	1 (<1)	0	4 (<1)
手根管症候群	3 (<1)	0	1 (<1)	0	4 (<1)
過眠症	3 (<1)	0	1 (<1)	0	4 (<1)
不随意性筋収縮	3 (<1)	1 (<1)	0	0	4 (<1)
てんかん	0	2 (<1)	1 (<1)	0	3 (<1)
反射亢進	3 (<1)	0	0	0	3 (<1)
眼振	3 (<1)	0	0	0	3 (<1)
視神経炎	3 (<1)	0	0	0	3 (<1)
味覚消失	0	1 (<1)	1 (<1)	0	2 (<1)
頚髄神経根痛	0	2 (<1)	0	0	2 (<1)
頚原性頭痛	1 (<1)	1 (<1)	0	0	2 (<1)
不器用	0	2 (<1)	0	0	2 (<1)
痙攣	2 (<1)	0	0	0	2 (<1)
協調運動異常	2 (<1)	0	0	0	2 (<1)
振動覚低下	2 (<1)	0	0	0	2 (<1)
顔面不全麻痺	1 (<1)	1 (<1)	0	0	2 (<1)
大発作痙攣	0	1 (<1)	1 (<1)	0	2 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
頭部動揺	2 (<1)	0	0	0	2 (<1)
不全片麻痺	2 (<1)	0	0	0	2 (<1)
肋間神経痛	2 (<1)	0	0	0	2 (<1)
意識消失	0	1 (<1)	1 (<1)	0	2 (<1)
腰髄神経根障害	0	2 (<1)	0	0	2 (<1)
感覚異常性大腿神経痛	2 (<1)	0	0	0	2 (<1)
運動機能障害	2 (<1)	0	0	0	2 (<1)
神経学的症状	1 (<1)	1 (<1)	0	0	2 (<1)
後頭神経痛	1 (<1)	0	1 (<1)	0	2 (<1)
一過性脳虚血発作	2 (<1)	0	0	0	2 (<1)
失認症	1 (<1)	0	0	0	1 (<1)
意識変容状態	0	1 (<1)	0	0	1 (<1)
自律神経失調	1 (<1)	0	0	0	1 (<1)
良性頭蓋内圧亢進	0	1 (<1)	0	0	1 (<1)
小脳症候群	1 (<1)	0	0	0	1 (<1)
概日リズム睡眠障害	1 (<1)	0	0	0	1 (<1)
泣き	0	1 (<1)	0	0	1 (<1)
体位性めまい	1 (<1)	0	0	0	1 (<1)
よだれ	1 (<1)	0	0	0	1 (<1)
ジスキネジー	1 (<1)	0	0	0	1 (<1)
ジストニー	1 (<1)	0	0	0	1 (<1)
てんかんの前兆	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
顔面神経障害	1 (<1)	0	0	0	1 (<1)
顔面部神経痛	1 (<1)	0	0	0	1 (<1)
蟻走感	0	1 (<1)	0	0	1 (<1)
舌咽神経痛	0	0	1 (<1)	0	1 (<1)
片側頭痛	1 (<1)	0	0	0	1 (<1)
思考散乱	0	0	1 (<1)	0	1 (<1)
脳圧低下	0	1 (<1)	0	0	1 (<1)
虚血性脳卒中	0	0	1 (<1)	0	1 (<1)
嗜眠	1 (<1)	0	0	0	1 (<1)
末梢性ニューロパチー	0	1 (<1)	0	0	1 (<1)
部分発作	0	0	1 (<1)	0	1 (<1)
腓骨神経麻痺	0	1 (<1)	0	0	1 (<1)
睡眠の質低下	1 (<1)	0	0	0	1 (<1)
神経根痛	1 (<1)	0	0	0	1 (<1)
頚髄神経根炎	0	1 (<1)	0	0	1 (<1)
逆行性健忘	0	1 (<1)	0	0	1 (<1)
二次性進行型多発性硬化症	0	1 (<1)	0	0	1 (<1)
鎮静	1 (<1)	0	0	0	1 (<1)
感覚消失	0	1 (<1)	0	0	1 (<1)
会話障害	1 (<1)	0	0	0	1 (<1)
舌の麻痺	1 (<1)	0	0	0	1 (<1)
一過性全健忘	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
横静脈洞血栓症	0	0	1 (<1)	0	1 (<1)
尺骨神経管症候群	1 (<1)	0	0	0	1 (<1)
血管性頭痛	0	1 (<1)	0	0	1 (<1)
第７脳神経麻痺	0	1 (<1)	0	0	1 (<1)
視野欠損	0	1 (<1)	0	0	1 (<1)
眼障害	109 (7)	42 (3)	1 (<1)	0	152 (10)
霧視	25 (2)	6 (<1)	0	0	31 (2)
眼痛	19 (1)	9 (<1)	1 (<1)	0	29 (2)
結膜炎	9 (<1)	6 (<1)	0	0	15 (<1)
複視	8 (<1)	5 (<1)	0	0	13 (<1)
視力障害	11 (<1)	2 (<1)	0	0	13 (<1)
眼瞼痙攣	9 (<1)	1 (<1)	0	0	10 (<1)
眼乾燥	7 (<1)	2 (<1)	0	0	9 (<1)
視力低下	5 (<1)	3 (<1)	0	0	8 (<1)
アレルギー性結膜炎	4 (<1)	1 (<1)	0	0	5 (<1)
眼充血	5 (<1)	0	0	0	5 (<1)
眼瞼炎	3 (<1)	1 (<1)	0	0	4 (<1)
眼の異常感	1 (<1)	2 (<1)	0	0	3 (<1)
失明	3 (<1)	0	0	0	3 (<1)
白内障	3 (<1)	0	0	0	3 (<1)
霰粒腫	3 (<1)	0	0	0	3 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
眼瞼下垂	1 (<1)	2 (<1)	0	0	3 (<1)
流涙増加	3 (<1)	0	0	0	3 (<1)
光視症	3 (<1)	0	0	0	3 (<1)
ブドウ膜炎	1 (<1)	2 (<1)	0	0	3 (<1)
硝子体浮遊物	2 (<1)	1 (<1)	0	0	3 (<1)
眼出血	2 (<1)	0	0	0	2 (<1)
眼刺激	2 (<1)	0	0	0	2 (<1)
緑内障	0	2 (<1)	0	0	2 (<1)
眼筋麻痺	2 (<1)	0	0	0	2 (<1)
羞明	1 (<1)	1 (<1)	0	0	2 (<1)
屈折障害	2 (<1)	0	0	0	2 (<1)
黒内障	1 (<1)	0	0	0	1 (<1)
眼精疲労	1 (<1)	0	0	0	1 (<1)
両眼球運動障害	1 (<1)	0	0	0	1 (<1)
アレルギー性眼瞼炎	0	1 (<1)	0	0	1 (<1)
眼瞼湿疹	1 (<1)	0	0	0	1 (<1)
眼運動障害	0	0	1 (<1)	0	1 (<1)
眼そう痒症	1 (<1)	0	0	0	1 (<1)
眼部腫脹	0	1 (<1)	0	0	1 (<1)
眼瞼嚢胞	1 (<1)	0	0	0	1 (<1)
眼瞼障害	0	1 (<1)	0	0	1 (<1)
眼瞼浮腫	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
遠視	1 (<1)	0	0	0	1 (<1)
角膜炎	1 (<1)	0	0	0	1 (<1)
瞼板腺炎	1 (<1)	0	0	0	1 (<1)
夜盲	1 (<1)	0	0	0	1 (<1)
眼球運動失調	1 (<1)	0	0	0	1 (<1)
開放隅角緑内障	0	1 (<1)	0	0	1 (<1)
視神経萎縮	0	1 (<1)	0	0	1 (<1)
動揺視	0	1 (<1)	0	0	1 (<1)
全眼球炎	0	1 (<1)	0	0	1 (<1)
老視	1 (<1)	0	0	0	1 (<1)
強膜炎	1 (<1)	0	0	0	1 (<1)
乾燥症候群	1 (<1)	0	0	0	1 (<1)
耳および迷路障害	76 (5)	32 (2)	2 (<1)	0	110 (7)
回転性めまい	44 (3)	20 (1)	0	0	64 (4)
耳痛	10 (<1)	4 (<1)	0	0	14 (<1)
耳鳴	7 (<1)	6 (<1)	0	0	13 (<1)
頭位性回転性めまい	2 (<1)	2 (<1)	2 (<1)	0	6 (<1)
耳閉	3 (<1)	0	0	0	3 (<1)
耳不快感	3 (<1)	0	0	0	3 (<1)
聴力低下	1 (<1)	2 (<1)	0	0	3 (<1)
乗物酔い	2 (<1)	1 (<1)	0	0	3 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
聴覚過敏	2 (<1)	0	0	0	2 (<1)
耳垢栓塞	0	1 (<1)	0	0	1 (<1)
難聴	0	1 (<1)	0	0	1 (<1)
感音性難聴	1 (<1)	0	0	0	1 (<1)
耳出血	1 (<1)	0	0	0	1 (<1)
耳そう痒症	1 (<1)	0	0	0	1 (<1)
耳管障害	1 (<1)	0	0	0	1 (<1)
耳管機能障害	1 (<1)	0	0	0	1 (<1)
外耳障害	1 (<1)	0	0	0	1 (<1)
外耳痛	1 (<1)	0	0	0	1 (<1)
鼓膜充血	1 (<1)	0	0	0	1 (<1)
心臓障害	65 (4)	19 (1)	3 (<1)	0	87 (6)
頻脈	10 (<1)	6 (<1)	0	0	16 (1)
動悸	11 (<1)	4 (<1)	0	0	15 (<1)
上室性期外収縮	8 (<1)	1 (<1)	0	0	9 (<1)
心室性期外収縮	8 (<1)	1 (<1)	0	0	9 (<1)
第一度房室ブロック	5 (<1)	3 (<1)	0	0	8 (<1)
狭心症	3 (<1)	1 (<1)	1 (<1)	0	5 (<1)
徐脈	4 (<1)	1 (<1)	0	0	5 (<1)
洞性徐脈	5 (<1)	0	0	0	5 (<1)
期外収縮	3 (<1)	1 (<1)	0	0	4 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
洞性頻脈	3 (<1)	1 (<1)	0	0	4 (<1)
左脚ブロック	2 (<1)	0	0	0	2 (<1)
右脚ブロック	2 (<1)	0	0	0	2 (<1)
心臓瘤	1 (<1)	1 (<1)	0	0	2 (<1)
心筋症	1 (<1)	1 (<1)	0	0	2 (<1)
僧帽弁逸脱	2 (<1)	0	0	0	2 (<1)
ウォルフ・パーキンソン・ホワイト症候群	2 (<1)	0	0	0	2 (<1)
急性冠動脈症候群	0	0	1 (<1)	0	1 (<1)
心房細動	1 (<1)	0	0	0	1 (<1)
心不全	0	1 (<1)	0	0	1 (<1)
うっ血性心不全	0	0	1 (<1)	0	1 (<1)
伝導障害	1 (<1)	0	0	0	1 (<1)
結節性調律	1 (<1)	0	0	0	1 (<1)
頻脈性不整脈	1 (<1)	0	0	0	1 (<1)
血管障害	395 (26)	179 (12)	25 (2)	0	599 (39)
潮紅	318 (21)	142 (9)	20 (1)	0	480 (31)
ほてり	74 (5)	22 (1)	5 (<1)	0	101 (7)
高血圧	22 (1)	10 (<1)	0	0	32 (2)
充血	7 (<1)	2 (<1)	0	0	9 (<1)
低血圧	6 (<1)	1 (<1)	0	0	7 (<1)
静脈瘤	4 (<1)	1 (<1)	0	0	5 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
血腫	3 (<1)	1 (<1)	0	0	4 (<1)
起立性低血圧	1 (<1)	1 (<1)	0	0	2 (<1)
静脈炎	1 (<1)	1 (<1)	0	0	2 (<1)
レイノー現象	0	2 (<1)	0	0	2 (<1)
静脈不全	1 (<1)	1 (<1)	0	0	2 (<1)
血管障害	1 (<1)	0	0	0	1 (<1)
動脈障害	0	1 (<1)	0	0	1 (<1)
動脈硬化症	1 (<1)	0	0	0	1 (<1)
深部静脈血栓症	0	0	1 (<1)	0	1 (<1)
高血圧クリーゼ	1 (<1)	0	0	0	1 (<1)
微小血管症	0	1 (<1)	0	0	1 (<1)
末梢冷感	1 (<1)	0	0	0	1 (<1)
末梢性虚血	0	1 (<1)	0	0	1 (<1)
静脈痛	1 (<1)	0	0	0	1 (<1)
呼吸器、胸郭および縦隔障害	178 (12)	59 (4)	5 (<1)	0	242 (16)
口腔咽頭痛	59 (4)	20 (1)	0	0	79 (5)
咳嗽	56 (4)	18 (1)	1 (<1)	0	75 (5)
鼻漏	24 (2)	2 (<1)	0	0	26 (2)
鼻閉	10 (<1)	3 (<1)	0	0	13 (<1)
呼吸困難	6 (<1)	5 (<1)	0	0	11 (<1)
アレルギー性鼻炎	5 (<1)	4 (<1)	0	0	9 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
副鼻腔うっ血	8 (<1)	1 (<1)	0	0	9 (<1)
喘息	5 (<1)	3 (<1)	0	0	8 (<1)
鼻出血	8 (<1)	0	0	0	8 (<1)
上気道咳症候群	6 (<1)	0	0	0	6 (<1)
湿性咳嗽	4 (<1)	0	0	0	4 (<1)
上気道うっ血	3 (<1)	1 (<1)	0	0	4 (<1)
喘鳴	3 (<1)	1 (<1)	0	0	4 (<1)
息詰まり	1 (<1)	1 (<1)	1 (<1)	0	3 (<1)
口腔咽頭不快感	3 (<1)	0	0	0	3 (<1)
気道うっ血	3 (<1)	0	0	0	3 (<1)
咽喉刺激感	3 (<1)	0	0	0	3 (<1)
アレルギー性咽頭炎	2 (<1)	0	0	0	2 (<1)
咽喉乾燥	2 (<1)	0	0	0	2 (<1)
発声障害	0	2 (<1)	0	0	2 (<1)
しゃっくり	2 (<1)	0	0	0	2 (<1)
咽頭紅斑	2 (<1)	0	0	0	2 (<1)
咽喉絞扼感	1 (<1)	1 (<1)	0	0	2 (<1)
アレルギー性気管支炎	1 (<1)	0	0	0	1 (<1)
アレルギー性副鼻腔炎	0	1 (<1)	0	0	1 (<1)
息詰まり感	0	1 (<1)	0	0	1 (<1)
労作性呼吸困難	1 (<1)	0	0	0	1 (<1)
過換気	0	0	1 (<1)	0	1 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
鼻乾燥	0	1 (<1)	0	0	1 (<1)
鼻浮腫	1 (<1)	0	0	0	1 (<1)
鼻中隔弯曲	1 (<1)	0	0	0	1 (<1)
口腔咽頭プラーク	1 (<1)	0	0	0	1 (<1)
口腔咽頭腫脹	1 (<1)	0	0	0	1 (<1)
呼吸時疼痛	0	1 (<1)	0	0	1 (<1)
副鼻腔嚢胞	1 (<1)	0	0	0	1 (<1)
副鼻腔分泌過多	1 (<1)	0	0	0	1 (<1)
咽頭嚢腫	1 (<1)	0	0	0	1 (<1)
咽頭腫瘤	0	1 (<1)	0	0	1 (<1)
胸水	0	0	1 (<1)	0	1 (<1)
胸膜炎	0	1 (<1)	0	0	1 (<1)
誤嚥性肺炎	0	0	1 (<1)	0	1 (<1)
気胸	1 (<1)	0	0	0	1 (<1)
ラ音	1 (<1)	0	0	0	1 (<1)
呼吸抑制	1 (<1)	0	0	0	1 (<1)
呼吸障害	0	1 (<1)	0	0	1 (<1)
気道の炎症	0	1 (<1)	0	0	1 (<1)
低音性連続性ラ音	1 (<1)	0	0	0	1 (<1)
副鼻腔障害	0	1 (<1)	0	0	1 (<1)
睡眠時無呼吸症候群	1 (<1)	0	0	0	1 (<1)
声帯の炎症	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
声帯ポリープ	1 (<1)	0	0	0	1 (<1)
胃腸障害	379 (25)	326 (21)	59 (4)	0	764 (50)
下痢	137 (9)	86 (6)	12 (<1)	0	235 (15)
悪心	117 (8)	74 (5)	7 (<1)	0	198 (13)
上腹部痛	86 (6)	63 (4)	12 (<1)	0	161 (11)
腹痛	65 (4)	61 (4)	10 (<1)	0	136 (9)
嘔吐	55 (4)	54 (4)	9 (<1)	0	118 (8)
消化不良	46 (3)	26 (2)	3 (<1)	0	75 (5)
便秘	37 (2)	13 (<1)	2 (<1)	0	52 (3)
胃腸障害	25 (2)	20 (1)	7 (<1)	0	52 (3)
歯痛	24 (2)	20 (1)	0	0	44 (3)
胃炎	23 (2)	17 (1)	2 (<1)	0	42 (3)
腹部不快感	22 (1)	10 (<1)	1 (<1)	0	33 (2)
胃食道逆流性疾患	13 (<1)	18 (1)	2 (<1)	0	33 (2)
口内乾燥	25 (2)	1 (<1)	0	0	26 (2)
鼓腸	14 (<1)	6 (<1)	0	0	20 (1)
腹部膨満	15 (<1)	2 (<1)	1 (<1)	0	18 (1)
痔核	9 (<1)	7 (<1)	0	0	16 (1)
歯周炎	6 (<1)	6 (<1)	0	0	12 (<1)
下腹部痛	6 (<1)	4 (<1)	0	0	10 (<1)
嚥下障害	9 (<1)	1 (<1)	0	0	10 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
齲歯	5 (<1)	4 (<1)	0	0	9 (<1)
食中毒	4 (<1)	5 (<1)	0	0	9 (<1)
便失禁	2 (<1)	5 (<1)	0	0	7 (<1)
心窩部不快感	3 (<1)	2 (<1)	0	0	5 (<1)
おくび	5 (<1)	0	0	0	5 (<1)
歯肉炎	4 (<1)	1 (<1)	0	0	5 (<1)
裂孔ヘルニア	3 (<1)	2 (<1)	0	0	5 (<1)
胃酸過多	5 (<1)	0	0	0	5 (<1)
便意切迫	2 (<1)	2 (<1)	0	0	4 (<1)
小腸炎	3 (<1)	1 (<1)	0	0	4 (<1)
口の感覚鈍麻	4 (<1)	0	0	0	4 (<1)
逆流性食道炎	2 (<1)	2 (<1)	0	0	4 (<1)
腹部硬直	1 (<1)	2 (<1)	0	0	3 (<1)
腹部圧痛	3 (<1)	0	0	0	3 (<1)
大腸炎	2 (<1)	1 (<1)	0	0	3 (<1)
十二指腸潰瘍	0	3 (<1)	0	0	3 (<1)
排便回数増加	2 (<1)	1 (<1)	0	0	3 (<1)
胃障害	2 (<1)	0	1 (<1)	0	3 (<1)
流涎過多	3 (<1)	0	0	0	3 (<1)
口内炎	2 (<1)	1 (<1)	0	0	3 (<1)
埋伏歯	0	3 (<1)	0	0	3 (<1)
腹部ヘルニア	0	1 (<1)	1 (<1)	0	2 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
異常便	2 (<1)	0	0	0	2 (<1)
結腸ポリープ	1 (<1)	1 (<1)	0	0	2 (<1)
腸憩室	2 (<1)	0	0	0	2 (<1)
歯肉出血	2 (<1)	0	0	0	2 (<1)
歯肉痛	2 (<1)	0	0	0	2 (<1)
舌痛	2 (<1)	0	0	0	2 (<1)
吐血	1 (<1)	1 (<1)	0	0	2 (<1)
過敏性腸症候群	0	2 (<1)	0	0	2 (<1)
口腔内潰瘍形成	2 (<1)	0	0	0	2 (<1)
嚥下痛	1 (<1)	1 (<1)	0	0	2 (<1)
食道炎	1 (<1)	1 (<1)	0	0	2 (<1)
口腔内痛	2 (<1)	0	0	0	2 (<1)
口の錯感覚	2 (<1)	0	0	0	2 (<1)
アフタ性口内炎	1 (<1)	0	0	0	1 (<1)
唾液欠乏	1 (<1)	0	0	0	1 (<1)
便通不規則	1 (<1)	0	0	0	1 (<1)
口腔灼熱感症候群	1 (<1)	0	0	0	1 (<1)
便習慣変化	1 (<1)	0	0	0	1 (<1)
口唇炎	1 (<1)	0	0	0	1 (<1)
クローン病	1 (<1)	0	0	0	1 (<1)
憩室穿孔	0	0	1 (<1)	0	1 (<1)
十二指腸ポリープ	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
十二指腸炎	0	0	1 (<1)	0	1 (<1)
腸炎	1 (<1)	0	0	0	1 (<1)
変色便	1 (<1)	0	0	0	1 (<1)
胃潰瘍	0	0	1 (<1)	0	1 (<1)
出血性胃炎	0	1 (<1)	0	0	1 (<1)
胃十二指腸炎	1 (<1)	0	0	0	1 (<1)
胃腸出血	0	1 (<1)	0	0	1 (<1)
消化器痛	1 (<1)	0	0	0	1 (<1)
歯肉嚢胞	1 (<1)	0	0	0	1 (<1)
歯肉障害	1 (<1)	0	0	0	1 (<1)
歯肉腫脹	1 (<1)	0	0	0	1 (<1)
舌炎	0	1 (<1)	0	0	1 (<1)
血便排泄	1 (<1)	0	0	0	1 (<1)
胃排出不全	1 (<1)	0	0	0	1 (<1)
炎症性腸疾患	0	1 (<1)	0	0	1 (<1)
腸閉塞	0	0	1 (<1)	0	1 (<1)
腸管ポリープ	1 (<1)	0	0	0	1 (<1)
口唇水疱	0	1 (<1)	0	0	1 (<1)
弛緩歯	1 (<1)	0	0	0	1 (<1)
腰ヘルニア	0	1 (<1)	0	0	1 (<1)
マロリー・ワイス症候群	0	0	1 (<1)	0	1 (<1)
神経因性腸	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
食道出血	1 (<1)	0	0	0	1 (<1)
食道痙攣	0	1 (<1)	0	0	1 (<1)
食道潰瘍	0	1 (<1)	0	0	1 (<1)
膵脂肪腫症	1 (<1)	0	0	0	1 (<1)
膵臓障害	1 (<1)	0	0	0	1 (<1)
膵機能不全	0	1 (<1)	0	0	1 (<1)
膵炎	0	1 (<1)	0	0	1 (<1)
消化性潰瘍	1 (<1)	0	0	0	1 (<1)
歯周病	0	1 (<1)	0	0	1 (<1)
肛門周囲痛	0	1 (<1)	0	0	1 (<1)
直腸出血	1 (<1)	0	0	0	1 (<1)
逆流性胃炎	1 (<1)	0	0	0	1 (<1)
唾液管閉塞	0	1 (<1)	0	0	1 (<1)
舌腫脹	1 (<1)	0	0	0	1 (<1)
舌苔	0	1 (<1)	0	0	1 (<1)
舌障害	1 (<1)	0	0	0	1 (<1)
地図状舌	1 (<1)	0	0	0	1 (<1)
歯の障害	0	1 (<1)	0	0	1 (<1)
歯の磨耗	0	1 (<1)	0	0	1 (<1)
歯の脱落	0	1 (<1)	0	0	1 (<1)
臍ヘルニア	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
肝胆道系障害	14 (<1)	8 (<1)	3 (<1)	0	25 (2)
肝障害	5 (<1)	3 (<1)	0	0	8 (<1)
胆石症	2 (<1)	0	1 (<1)	0	3 (<1)
肝細胞融解性肝炎	0	3 (<1)	0	0	3 (<1)
胆道ジスキネジー	1 (<1)	1 (<1)	0	0	2 (<1)
肝嚢胞	2 (<1)	0	0	0	2 (<1)
脂肪肝	2 (<1)	0	0	0	2 (<1)
胆管結石	0	0	1 (<1)	0	1 (<1)
胆嚢浮腫	1 (<1)	0	0	0	1 (<1)
肝炎	0	1 (<1)	0	0	1 (<1)
胆汁うっ滞性肝炎	0	0	1 (<1)	0	1 (<1)
高ビリルビン血症	1 (<1)	0	0	0	1 (<1)
高トランスアミナーゼ血症	1 (<1)	0	0	0	1 (<1)
皮膚および皮下組織障害	307 (20)	172 (11)	13 (<1)	0	492 (32)
そう痒症	92 (6)	26 (2)	2 (<1)	0	120 (8)
発疹	78 (5)	33 (2)	2 (<1)	0	113 (7)
紅斑	64 (4)	24 (2)	2 (<1)	0	90 (6)
多汗症	26 (2)	14 (<1)	3 (<1)	0	43 (3)
脱毛症	22 (1)	5 (<1)	1 (<1)	0	28 (2)
寝汗	18 (1)	9 (<1)	0	0	27 (2)
蕁麻疹	11 (<1)	13 (<1)	0	0	24 (2)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
アレルギー性皮膚炎	12 (<1)	8 (<1)	1 (<1)	0	21 (1)
全身性そう痒症	12 (<1)	7 (<1)	0	0	19 (1)
ざ瘡	12 (<1)	3 (<1)	0	0	15 (<1)
皮膚乾燥	12 (<1)	2 (<1)	0	0	14 (<1)
そう痒性皮疹	9 (<1)	4 (<1)	0	0	13 (<1)
皮膚灼熱感	9 (<1)	4 (<1)	0	0	13 (<1)
湿疹	10 (<1)	2 (<1)	0	0	12 (<1)
皮膚炎	7 (<1)	3 (<1)	0	0	10 (<1)
斑状皮疹	8 (<1)	2 (<1)	0	0	10 (<1)
全身紅斑	2 (<1)	5 (<1)	1 (<1)	0	8 (<1)
光線過敏性反応	8 (<1)	0	0	0	8 (<1)
全身性皮疹	3 (<1)	4 (<1)	1 (<1)	0	8 (<1)
顔面感覚鈍麻	5 (<1)	1 (<1)	0	0	6 (<1)
紅斑性皮疹	6 (<1)	0	0	0	6 (<1)
酒さ	2 (<1)	4 (<1)	0	0	6 (<1)
過角化	1 (<1)	3 (<1)	0	0	4 (<1)
痒疹	2 (<1)	2 (<1)	0	0	4 (<1)
乾癬	4 (<1)	0	0	0	4 (<1)
丘疹性皮疹	1 (<1)	3 (<1)	0	0	4 (<1)
皮膚色素過剰	4 (<1)	0	0	0	4 (<1)
皮膚刺激	4 (<1)	0	0	0	4 (<1)
皮膚のつっぱり感	4 (<1)	0	0	0	4 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
水疱	2 (<1)	1 (<1)	0	0	3 (<1)
接触性皮膚炎	2 (<1)	1 (<1)	0	0	3 (<1)
薬疹	1 (<1)	2 (<1)	0	0	3 (<1)
斑状出血	3 (<1)	0	0	0	3 (<1)
アレルギー性そう痒症	2 (<1)	1 (<1)	0	0	3 (<1)
皮膚剥脱	2 (<1)	1 (<1)	0	0	3 (<1)
皮膚病変	1 (<1)	2 (<1)	0	0	3 (<1)
皮膚反応	3 (<1)	0	0	0	3 (<1)
顔面腫脹	1 (<1)	2 (<1)	0	0	3 (<1)
皮膚嚢腫	0	2 (<1)	0	0	2 (<1)
ざ瘡様皮膚炎	1 (<1)	1 (<1)	0	0	2 (<1)
網状皮斑	1 (<1)	1 (<1)	0	0	2 (<1)
爪破損	1 (<1)	1 (<1)	0	0	2 (<1)
皮膚疼痛	2 (<1)	0	0	0	2 (<1)
皮膚硬結	2 (<1)	0	0	0	2 (<1)
皮膚熱感	2 (<1)	0	0	0	2 (<1)
日光性角化症	0	1 (<1)	0	0	1 (<1)
冷汗	1 (<1)	0	0	0	1 (<1)
皮膚弛緩症	0	1 (<1)	0	0	1 (<1)
アトピー性皮膚炎	1 (<1)	0	0	0	1 (<1)
紅色症	1 (<1)	0	0	0	1 (<1)
剥脱性発疹	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
紅色汗疹	0	1 (<1)	0	0	1 (<1)
掌蹠角化症	0	1 (<1)	0	0	1 (<1)
特発性蕁麻疹	1 (<1)	0	0	0	1 (<1)
内出血発生の増加傾向	1 (<1)	0	0	0	1 (<1)
嵌入爪	1 (<1)	0	0	0	1 (<1)
毛孔性角化症	0	1 (<1)	0	0	1 (<1)
睫毛眉毛脱落症	1 (<1)	0	0	0	1 (<1)
爪変色	1 (<1)	0	0	0	1 (<1)
爪の障害	1 (<1)	0	0	0	1 (<1)
色素沈着障害	1 (<1)	0	0	0	1 (<1)
瘢痕	1 (<1)	0	0	0	1 (<1)
脂腺障害	1 (<1)	0	0	0	1 (<1)
脂漏	1 (<1)	0	0	0	1 (<1)
皮膚色素脱失	1 (<1)	0	0	0	1 (<1)
皮膚変色	0	1 (<1)	0	0	1 (<1)
皮膚色素減少	1 (<1)	0	0	0	1 (<1)
皮膚潰瘍	0	1 (<1)	0	0	1 (<1)
スティーブンス・ジョンソン症候群	0	1 (<1)	0	0	1 (<1)
皮下結節	1 (<1)	0	0	0	1 (<1)
毛細血管拡張症	1 (<1)	0	0	0	1 (<1)
一過性棘融解性皮膚症	0	1 (<1)	0	0	1 (<1)
乾皮症	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
筋骨格系および結合組織障害	279 (18)	193 (13)	20 (1)	0	492 (32)
背部痛	100 (7)	70 (5)	6 (<1)	0	176 (12)
関節痛	79 (5)	46 (3)	5 (<1)	0	130 (9)
四肢痛	68 (4)	42 (3)	3 (<1)	0	113 (7)
筋痙縮	50 (3)	25 (2)	2 (<1)	0	77 (5)
頚部痛	28 (2)	19 (1)	0	0	47 (3)
筋力低下	27 (2)	15 (<1)	0	0	42 (3)
筋骨格痛	24 (2)	10 (<1)	1 (<1)	0	35 (2)
筋肉痛	17 (1)	7 (<1)	2 (<1)	0	26 (2)
滑液包炎	3 (<1)	7 (<1)	1 (<1)	0	11 (<1)
筋骨格硬直	9 (<1)	2 (<1)	0	0	11 (<1)
関節炎	7 (<1)	3 (<1)	0	0	10 (<1)
関節腫脹	7 (<1)	2 (<1)	0	0	9 (<1)
筋骨格系胸痛	7 (<1)	2 (<1)	0	0	9 (<1)
重感	7 (<1)	2 (<1)	0	0	9 (<1)
変形性関節症	4 (<1)	4 (<1)	0	0	8 (<1)
骨痛	5 (<1)	1 (<1)	1 (<1)	0	7 (<1)
関節硬直	6 (<1)	1 (<1)	0	0	7 (<1)
腱炎	3 (<1)	3 (<1)	0	0	6 (<1)
椎間板突出	1 (<1)	4 (<1)	0	0	5 (<1)
筋緊張	5 (<1)	0	0	0	5 (<1)
側腹部痛	1 (<1)	3 (<1)	0	0	4 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
骨減少症	3 (<1)	1 (<1)	0	0	4 (<1)
骨粗鬆症	1 (<1)	3 (<1)	0	0	4 (<1)
関節周囲炎	1 (<1)	2 (<1)	1 (<1)	0	4 (<1)
変形性脊椎症	3 (<1)	1 (<1)	0	0	4 (<1)
滑液嚢腫	2 (<1)	2 (<1)	0	0	4 (<1)
腱鞘炎	4 (<1)	0	0	0	4 (<1)
関節障害	3 (<1)	0	0	0	3 (<1)
尾骨痛	2 (<1)	1 (<1)	0	0	3 (<1)
椎間板障害	1 (<1)	2 (<1)	0	0	3 (<1)
筋骨格不快感	1 (<1)	2 (<1)	0	0	3 (<1)
骨壊死	2 (<1)	1 (<1)	0	0	3 (<1)
単径部痛	0	2 (<1)	0	0	2 (<1)
関節滲出液	1 (<1)	1 (<1)	0	0	2 (<1)
筋拘縮	1 (<1)	1 (<1)	0	0	2 (<1)
筋攣縮	1 (<1)	0	1 (<1)	0	2 (<1)
ミオキミア	2 (<1)	0	0	0	2 (<1)
四肢の結節	0	2 (<1)	0	0	2 (<1)
膝蓋大腿部痛症候群	0	2 (<1)	0	0	2 (<1)
肩回旋筋腱板症候群	0	1 (<1)	1 (<1)	0	2 (<1)
シェーグレン症候群	0	2 (<1)	0	0	2 (<1)
弾発指	1 (<1)	0	1 (<1)	0	2 (<1)
腋窩腫瘤	1 (<1)	0	0	0	1 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
軟骨炎	1 (<1)	0	0	0	1 (<1)
腱付着部症	1 (<1)	0	0	0	1 (<1)
外骨腫	0	1 (<1)	0	0	1 (<1)
四肢拘縮	1 (<1)	0	0	0	1 (<1)
成長痛	0	1 (<1)	0	0	1 (<1)
椎間板圧迫	0	1 (<1)	0	0	1 (<1)
椎間板変性症	1 (<1)	0	0	0	1 (<1)
四肢不快感	1 (<1)	0	0	0	1 (<1)
下肢腫瘤	1 (<1)	0	0	0	1 (<1)
中足骨痛	1 (<1)	0	0	0	1 (<1)
筋肉内出血	1 (<1)	0	0	0	1 (<1)
筋腫脹	0	1 (<1)	0	0	1 (<1)
筋硬化症	1 (<1)	0	0	0	1 (<1)
筋炎	1 (<1)	0	0	0	1 (<1)
骨端症	0	1 (<1)	0	0	1 (<1)
顎痛	1 (<1)	0	0	0	1 (<1)
乾癬性関節症	0	1 (<1)	0	0	1 (<1)
足根洞症候群	1 (<1)	0	0	0	1 (<1)
脊椎障害	1 (<1)	0	0	0	1 (<1)
脊椎分離	0	1 (<1)	0	0	1 (<1)
滑膜障害	0	1 (<1)	0	0	1 (<1)
腱障害	0	1 (<1)	0	0	1 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
斜頚	0	1 (<1)	0	0	1 (<1)
腎および尿路障害	246 (16)	73 (5)	3 (<1)	0	322 (21)
蛋白尿	139 (9)	13 (<1)	0	0	152 (10)
血尿	68 (4)	6 (<1)	0	0	74 (5)
ミクロアルブミン尿	54 (4)	16 (1)	1 (<1)	0	71 (5)
ケトン尿	18 (1)	4 (<1)	0	0	22 (1)
排尿困難	18 (1)	2 (<1)	0	0	20 (1)
尿意切迫	11 (<1)	8 (<1)	0	0	19 (1)
腎結石症	9 (<1)	3 (<1)	1 (<1)	0	13 (<1)
頻尿	9 (<1)	4 (<1)	0	0	13 (<1)
尿失禁	6 (<1)	7 (<1)	0	0	13 (<1)
尿閉	5 (<1)	3 (<1)	0	0	8 (<1)
糖尿	6 (<1)	1 (<1)	0	0	7 (<1)
切迫性尿失禁	4 (<1)	2 (<1)	0	0	6 (<1)
排尿躊躇	6 (<1)	0	0	0	6 (<1)
アルブミン尿	3 (<1)	1 (<1)	0	0	4 (<1)
腎臓痛	2 (<1)	2 (<1)	0	0	4 (<1)
尿臭異常	3 (<1)	1 (<1)	0	0	4 (<1)
膀胱機能障害	1 (<1)	2 (<1)	0	0	3 (<1)
白血球尿	2 (<1)	1 (<1)	0	0	3 (<1)
神経因性膀胱	1 (<1)	2 (<1)	0	0	3 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
腎仙痛	0	3 (<1)	0	0	3 (<1)
膀胱刺激症状	1 (<1)	1 (<1)	0	0	2 (<1)
非感染性膀胱炎	1 (<1)	1 (<1)	0	0	2 (<1)
グロブリン尿	2 (<1)	0	0	0	2 (<1)
緊張性膀胱	1 (<1)	1 (<1)	0	0	2 (<1)
起立性蛋白尿症	2 (<1)	0	0	0	2 (<1)
腎嚢胞	2 (<1)	0	0	0	2 (<1)
膀胱痛	0	1 (<1)	0	0	1 (<1)
膀胱穿孔	0	0	1 (<1)	0	1 (<1)
着色尿	1 (<1)	0	0	0	1 (<1)
出血性膀胱炎	0	1 (<1)	0	0	1 (<1)
失禁	1 (<1)	0	0	0	1 (<1)
排尿異常	1 (<1)	0	0	0	1 (<1)
腎下垂症	1 (<1)	0	0	0	1 (<1)
腎障害	1 (<1)	0	0	0	1 (<1)
慢性腎不全	1 (<1)	0	0	0	1 (<1)
腎機能障害	0	1 (<1)	0	0	1 (<1)
腎尿細管性アシドーシス	1 (<1)	0	0	0	1 (<1)
有痛性排尿困難	1 (<1)	0	0	0	1 (<1)
尿管瘤	0	1 (<1)	0	0	1 (<1)
尿路痛	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
妊娠、産褥および周産期の状態	0	1 (<1)	0	0	1 (<1)
妊娠	0	1 (<1)	0	0	1 (<1)
生殖系および乳房障害	107 (7)	37 (2)	8 (<1)	0	152 (10)
月経困難症	16 (1)	5 (<1)	2 (<1)	0	23 (2)
不規則月経	15 (<1)	0	0	0	15 (<1)
不正子宮出血	13 (<1)	2 (<1)	0	0	15 (<1)
卵巣嚢胞	8 (<1)	5 (<1)	0	0	13 (<1)
月経過多	8 (<1)	2 (<1)	1 (<1)	0	11 (<1)
勃起不全	4 (<1)	5 (<1)	1 (<1)	0	10 (<1)
無月経	5 (<1)	3 (<1)	0	0	8 (<1)
乳房痛	7 (<1)	1 (<1)	0	0	8 (<1)
腟出血	5 (<1)	2 (<1)	0	0	7 (<1)
骨盤痛	3 (<1)	3 (<1)	0	0	6 (<1)
頻発月経	5 (<1)	0	0	0	5 (<1)
月経障害	4 (<1)	0	0	0	4 (<1)
子宮出血	2 (<1)	1 (<1)	1 (<1)	0	4 (<1)
乳房嚢胞	0	3 (<1)	0	0	3 (<1)
月経遅延	3 (<1)	0	0	0	3 (<1)
性機能不全	3 (<1)	0	0	0	3 (<1)
萎縮性外陰腟炎	2 (<1)	0	0	0	2 (<1)
乳房腫瘤	2 (<1)	0	0	0	2 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
乳房圧痛	2 (<1)	0	0	0	2 (<1)
子宮頚部上皮異形成	2 (<1)	0	0	0	2 (<1)
閉経期症状	1 (<1)	0	1 (<1)	0	2 (<1)
卵巣嚢胞破裂	1 (<1)	0	1 (<1)	0	2 (<1)
多嚢胞性卵巣	1 (<1)	1 (<1)	0	0	2 (<1)
前立腺炎	2 (<1)	0	0	0	2 (<1)
外陰腟乾燥	1 (<1)	1 (<1)	0	0	2 (<1)
外陰腟そう痒症	2 (<1)	0	0	0	2 (<1)
腺筋症	0	1 (<1)	0	0	1 (<1)
バルトリン腺炎	0	1 (<1)	0	0	1 (<1)
良性前立腺肥大症	1 (<1)	0	0	0	1 (<1)
乳房分泌	1 (<1)	0	0	0	1 (<1)
乳房不快感	1 (<1)	0	0	0	1 (<1)
乳房障害	0	1 (<1)	0	0	1 (<1)
乳房出血	0	1 (<1)	0	0	1 (<1)
子宮頚部の炎症	1 (<1)	0	0	0	1 (<1)
性交困難	1 (<1)	0	0	0	1 (<1)
射精障害	0	1 (<1)	0	0	1 (<1)
子宮内膜増殖症	0	1 (<1)	0	0	1 (<1)
子宮内膜症	1 (<1)	0	0	0	1 (<1)
線維嚢胞性乳腺疾患	0	0	1 (<1)	0	1 (<1)
乳汁漏出症	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
乳頭障害	1 (<1)	0	0	0	1 (<1)
希発月経	1 (<1)	0	0	0	1 (<1)
閉経後出血	1 (<1)	0	0	0	1 (<1)
早発閉経	1 (<1)	0	0	0	1 (<1)
前立腺腫大	1 (<1)	0	0	0	1 (<1)
精巣障害	1 (<1)	0	0	0	1 (<1)
精巣痛	1 (<1)	0	0	0	1 (<1)
子宮の炎症	0	1 (<1)	0	0	1 (<1)
子宮ポリープ	1 (<1)	0	0	0	1 (<1)
子宮腟脱	0	1 (<1)	0	0	1 (<1)
腟分泌物	1 (<1)	0	0	0	1 (<1)
先天性、家族性および遺伝性障害	5 (<1)	1 (<1)	0	0	6 (<1)
異形成母斑症候群	2 (<1)	0	0	0	2 (<1)
角膜ジストロフィー	1 (<1)	0	0	0	1 (<1)
先天性心臓疾患	1 (<1)	0	0	0	1 (<1)
陰嚢水瘤	0	1 (<1)	0	0	1 (<1)
ラウン・ギャノン・レバイン症候群	1 (<1)	0	0	0	1 (<1)
一般・全身障害および投与部位の状態	226 (15)	148 (10)	20 (1)	0	394 (26)
疲労	111 (7)	70 (5)	10 (<1)	1 (<1)	192 (13)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
発熱	49 (3)	19 (1)	3 (<1)	0	71 (5)
無力症	21 (1)	17 (1)	3 (<1)	0	41 (3)
疼痛	18 (1)	11 (<1)	1 (<1)	0	30 (2)
熱感	20 (1)	7 (<1)	0	0	27 (2)
インフルエンザ様疾患	19 (1)	6 (<1)	0	0	25 (2)
胸痛	15 (<1)	7 (<1)	1 (<1)	0	23 (2)
末梢性浮腫	14 (<1)	9 (<1)	0	0	23 (2)
歩行障害	14 (<1)	4 (<1)	1 (<1)	0	19 (1)
非心臓性胸痛	5 (<1)	5 (<1)	0	0	10 (<1)
胸部不快感	3 (<1)	5 (<1)	0	0	8 (<1)
悪寒	5 (<1)	3 (<1)	0	0	8 (<1)
易刺激性	5 (<1)	1 (<1)	1 (<1)	0	7 (<1)
倦怠感	6 (<1)	1 (<1)	0	0	7 (<1)
顔面痛	4 (<1)	2 (<1)	0	0	6 (<1)
嚢胞	2 (<1)	2 (<1)	0	0	4 (<1)
高熱	3 (<1)	0	0	0	3 (<1)
浮腫	3 (<1)	0	0	0	3 (<1)
腫脹	2 (<1)	1 (<1)	0	0	3 (<1)
圧痛	3 (<1)	0	0	0	3 (<1)
冷感	2 (<1)	0	0	0	2 (<1)
炎症	1 (<1)	1 (<1)	0	0	2 (<1)
医療機器による疼痛	2 (<1)	0	0	0	2 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
粘膜乾燥	0	2 (<1)	0	0	2 (<1)
腋窩痛	1 (<1)	0	0	0	1 (<1)
医療機器不具合	0	1 (<1)	0	0	1 (<1)
不快感	1 (<1)	0	0	0	1 (<1)
医療機器関連眼合併症	0	1 (<1)	0	0	1 (<1)
脂肪壊死	0	0	1 (<1)	0	1 (<1)
異常感	1 (<1)	0	0	0	1 (<1)
びくびく感	1 (<1)	0	0	0	1 (<1)
全身性浮腫	1 (<1)	0	0	0	1 (<1)
重力性浮腫	1 (<1)	0	0	0	1 (<1)
閉塞性ヘルニア	0	1 (<1)	0	0	1 (<1)
注入部位血腫	1 (<1)	0	0	0	1 (<1)
注射部位血腫	1 (<1)	0	0	0	1 (<1)
注射部位硬結	1 (<1)	0	0	0	1 (<1)
局所腫脹	1 (<1)	0	0	0	1 (<1)
足のもつれ	0	1 (<1)	0	0	1 (<1)
腫瘤	0	1 (<1)	0	0	1 (<1)
粘膜の炎症	1 (<1)	0	0	0	1 (<1)
不活発	1 (<1)	0	0	0	1 (<1)
軟部組織の炎症	0	1 (<1)	0	0	1 (<1)
温度変化不耐症	1 (<1)	0	0	0	1 (<1)
口渇	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
血管穿刺部位血腫	1 (<1)	0	0	0	1 (<1)
血管穿刺部位出血	0	1 (<1)	0	0	1 (<1)
血管穿刺部位疼痛	0	1 (<1)	0	0	1 (<1)
血管穿刺部位反応	0	1 (<1)	0	0	1 (<1)
臨床検査	279 (18)	137 (9)	12 (<1)	0	428 (28)
アラニン・アミノトランスフェラーゼ増加	59 (4)	31 (2)	4 (<1)	0	94 (6)
尿中アルブミン陽性	71 (5)	11 (<1)	0	0	82 (5)
アスパラギン酸アミノトランスフェラーゼ増加	37 (2)	21 (1)	4 (<1)	0	62 (4)
尿中蛋白陽性	40 (3)	7 (<1)	1 (<1)	0	48 (3)
尿中血陽性	28 (2)	6 (<1)	0	0	34 (2)
血中副甲状腺ホルモン増加	27 (2)	5 (<1)	0	0	32 (2)
γ－グルタミルトランスフェラーゼ増加	21 (1)	11 (<1)	0	0	32 (2)
尿中白血球陽性	24 (2)	4 (<1)	1 (<1)	0	29 (2)
血中ブドウ糖増加	24 (2)	4 (<1)	0	0	28 (2)
尿中β２ミクログロブリン増加	22 (1)	5 (<1)	0	0	27 (2)
白血球数減少	15 (<1)	9 (<1)	1 (<1)	0	25 (2)
体重減少	15 (<1)	6 (<1)	0	0	21 (1)
リンパ球数減少	13 (<1)	4 (<1)	0	0	17 (1)
尿中ケトン体陽性	14 (<1)	3 (<1)	0	0	17 (1)
体重増加	12 (<1)	4 (<1)	0	0	16 (1)
ヘモグロビン減少	12 (<1)	1 (<1)	1 (<1)	0	14 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
肝酵素上昇	6 (<1)	8 (<1)	0	0	14 (<1)
白血球数増加	10 (<1)	4 (<1)	0	0	14 (<1)
好中球数増加	10 (<1)	3 (<1)	0	0	13 (<1)
尿中赤血球陽性	12 (<1)	1 (<1)	0	0	13 (<1)
β２ミクログロブリン増加	9 (<1)	2 (<1)	0	0	11 (<1)
血中クレアチニン増加	5 (<1)	6 (<1)	0	0	11 (<1)
血中トリグリセリド増加	8 (<1)	1 (<1)	0	0	9 (<1)
ヘマトクリット減少	7 (<1)	1 (<1)	1 (<1)	0	9 (<1)
血中カリウム増加	4 (<1)	3 (<1)	0	0	7 (<1)
好中球数減少	6 (<1)	1 (<1)	0	0	7 (<1)
ビタミンＤ減少	6 (<1)	1 (<1)	0	0	7 (<1)
血中アルカリホスファターゼ増加	6 (<1)	0	0	0	6 (<1)
血中コレステロール増加	6 (<1)	0	0	0	6 (<1)
心電図ＱＴ延長	6 (<1)	0	0	0	6 (<1)
尿中ブドウ糖陽性	4 (<1)	2 (<1)	0	0	6 (<1)
肝機能検査異常	0	4 (<1)	2 (<1)	0	6 (<1)
赤血球数減少	5 (<1)	1 (<1)	0	0	6 (<1)
血中ビリルビン増加	3 (<1)	2 (<1)	0	0	5 (<1)
血中乳酸脱水素酵素増加	2 (<1)	2 (<1)	1 (<1)	0	5 (<1)
体温上昇	2 (<1)	3 (<1)	0	0	5 (<1)
血圧上昇	3 (<1)	1 (<1)	0	0	4 (<1)
血中尿素増加	3 (<1)	1 (<1)	0	0	4 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
好酸球数増加	4 (<1)	0	0	0	4 (<1)
血液学的検査異常	2 (<1)	2 (<1)	0	0	4 (<1)
低比重リポ蛋白増加	4 (<1)	0	0	0	4 (<1)
リンパ球形態異常	4 (<1)	0	0	0	4 (<1)
血小板数減少	3 (<1)	0	1 (<1)	0	4 (<1)
ビタミンＤ増加	4 (<1)	0	0	0	4 (<1)
血中クレアチン増加	3 (<1)	0	0	0	3 (<1)
血中ナトリウム増加	3 (<1)	0	0	0	3 (<1)
心電図異常	3 (<1)	0	0	0	3 (<1)
心電図ＳＴ部分下降	3 (<1)	0	0	0	3 (<1)
高比重リポ蛋白増加	3 (<1)	0	0	0	3 (<1)
リンパ球数増加	3 (<1)	0	0	0	3 (<1)
アラニン・アミノトランスフェラーゼ異常	0	2 (<1)	0	0	2 (<1)
細菌検査陽性	2 (<1)	0	0	0	2 (<1)
血中クロール増加	2 (<1)	0	0	0	2 (<1)
血中葉酸減少	2 (<1)	0	0	0	2 (<1)
血中ケトン体増加	1 (<1)	1 (<1)	0	0	2 (<1)
血中尿酸増加	2 (<1)	0	0	0	2 (<1)
尿中結晶陽性	2 (<1)	0	0	0	2 (<1)
γ－グルタミルトランスフェラーゼ異常	0	2 (<1)	0	0	2 (<1)
心拍数増加	0	2 (<1)	0	0	2 (<1)
血小板数増加	1 (<1)	1 (<1)	0	0	2 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
赤血球数増加	2 (<1)	0	0	0	2 (<1)
ビタミンＢ１２減少	2 (<1)	0	0	0	2 (<1)
アレルギー検査	1 (<1)	0	0	0	1 (<1)
抗ＳＳＡ抗体陽性	0	1 (<1)	0	0	1 (<1)
抗痙攣剤濃度減少	0	1 (<1)	0	0	1 (<1)
アスパラギン酸アミノトランスフェラーゼ異常	0	1 (<1)	0	0	1 (<1)
血中アルカリホスファターゼ異常	0	1 (<1)	0	0	1 (<1)
血中重炭酸塩減少	1 (<1)	0	0	0	1 (<1)
血中重炭酸塩増加	1 (<1)	0	0	0	1 (<1)
血中カルシウム減少	1 (<1)	0	0	0	1 (<1)
血中カルシウム増加	1 (<1)	0	0	0	1 (<1)
血中クレアチニン異常	1 (<1)	0	0	0	1 (<1)
血中ブドウ糖減少	0	1 (<1)	0	0	1 (<1)
血中免疫グロブリンM増加	1 (<1)	0	0	0	1 (<1)
血中鉄減少	1 (<1)	0	0	0	1 (<1)
血中副甲状腺ホルモン異常	0	1 (<1)	0	0	1 (<1)
血中カリウム減少	1 (<1)	0	0	0	1 (<1)
血圧低下	0	1 (<1)	0	0	1 (<1)
拡張期血圧上昇	1 (<1)	0	0	0	1 (<1)
血中ナトリウム減少	1 (<1)	0	0	0	1 (<1)
血中甲状腺刺激ホルモン増加	1 (<1)	0	0	0	1 (<1)
体温低下	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
呼吸音異常	1 (<1)	0	0	0	1 (<1)
心雑音	0	1 (<1)	0	0	1 (<1)
結腸内視鏡検査	1 (<1)	0	0	0	1 (<1)
白血球百分率数異常	0	1 (<1)	0	0	1 (<1)
心筋虚血の心電図所見	0	1 (<1)	0	0	1 (<1)
心電図Ｔ波振幅減少	1 (<1)	0	0	0	1 (<1)
心電図Ｔ波逆転	1 (<1)	0	0	0	1 (<1)
好酸球数異常	1 (<1)	0	0	0	1 (<1)
好酸球百分率増加	1 (<1)	0	0	0	1 (<1)
エプスタイン・バーウイルス抗体陽性	1 (<1)	0	0	0	1 (<1)
大腸菌検査陽性	1 (<1)	0	0	0	1 (<1)
γ－グルタミルトランスフェラーゼ減少	1 (<1)	0	0	0	1 (<1)
胃内ｐＨ上昇	0	1 (<1)	0	0	1 (<1)
心拍数減少	1 (<1)	0	0	0	1 (<1)
ヒト乳頭腫ウイルス検査陽性	1 (<1)	0	0	0	1 (<1)
ヒステロスコピー	1 (<1)	0	0	0	1 (<1)
眼圧上昇	0	1 (<1)	0	0	1 (<1)
検査	0	1 (<1)	0	0	1 (<1)
リンパ節触知	1 (<1)	0	0	0	1 (<1)
リンパ球百分率減少	1 (<1)	0	0	0	1 (<1)
医学的観察	1 (<1)	0	0	0	1 (<1)
単球数減少	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
単球数増加	1 (<1)	0	0	0	1 (<1)
神経学的検査異常	1 (<1)	0	0	0	1 (<1)
好中球百分率増加	1 (<1)	0	0	0	1 (<1)
脳核磁気共鳴画像異常	1 (<1)	0	0	0	1 (<1)
血小板数	1 (<1)	0	0	0	1 (<1)
ロンベルグ徴候陽性	1 (<1)	0	0	0	1 (<1)
腎機能検査異常	0	1 (<1)	0	0	1 (<1)
残尿量増加	1 (<1)	0	0	0	1 (<1)
呼吸数増加	1 (<1)	0	0	0	1 (<1)
血清フェリチン減少	0	1 (<1)	0	0	1 (<1)
子宮頚部スミア異常	0	1 (<1)	0	0	1 (<1)
つぎ足歩行検査異常	1 (<1)	0	0	0	1 (<1)
尿円柱	1 (<1)	0	0	0	1 (<1)
傷害、中毒および処置合併症	110 (7)	98 (6)	14 (<1)	0	222 (15)
挫傷	35 (2)	11 (<1)	0	0	46 (3)
転倒	27 (2)	17 (1)	0	0	44 (3)
関節捻挫	14 (<1)	11 (<1)	1 (<1)	0	26 (2)
足骨折	3 (<1)	10 (<1)	0	0	13 (<1)
肉離れ	7 (<1)	4 (<1)	2 (<1)	0	13 (<1)
節足動物咬傷	4 (<1)	7 (<1)	0	0	11 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
四肢損傷	7 (<1)	4 (<1)	0	0	11 (<1)
処置による疼痛	5 (<1)	5 (<1)	0	0	10 (<1)
擦過傷	7 (<1)	1 (<1)	0	0	8 (<1)
交通事故	2 (<1)	3 (<1)	3 (<1)	0	8 (<1)
皮膚裂傷	4 (<1)	4 (<1)	0	0	8 (<1)
半月板障害	1 (<1)	6 (<1)	0	0	7 (<1)
熱傷	3 (<1)	3 (<1)	0	0	6 (<1)
足関節部骨折	0	3 (<1)	2 (<1)	0	5 (<1)
靭帯断裂	0	4 (<1)	1 (<1)	0	5 (<1)
サンバーン	4 (<1)	1 (<1)	0	0	5 (<1)
歯牙破折	3 (<1)	2 (<1)	0	0	5 (<1)
節足動物刺傷	3 (<1)	1 (<1)	0	0	4 (<1)
骨格損傷	0	4 (<1)	0	0	4 (<1)
外傷性血腫	2 (<1)	2 (<1)	0	0	4 (<1)
むち打ち損傷	3 (<1)	1 (<1)	0	0	4 (<1)
上顎炎	3 (<1)	0	0	0	3 (<1)
関節脱臼	1 (<1)	2 (<1)	0	0	3 (<1)
関節損傷	2 (<1)	1 (<1)	0	0	3 (<1)
橈骨骨折	1 (<1)	2 (<1)	0	0	3 (<1)
創傷	1 (<1)	2 (<1)	0	0	3 (<1)
動物咬傷	2 (<1)	0	0	0	2 (<1)
鎖骨骨折	1 (<1)	1 (<1)	0	0	2 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
脳振盪	1 (<1)	1 (<1)	0	0	2 (<1)
眼外傷	1 (<1)	1 (<1)	0	0	2 (<1)
顔面損傷	2 (<1)	0	0	0	2 (<1)
大腿骨骨折	0	0	2 (<1)	0	2 (<1)
損傷	1 (<1)	1 (<1)	0	0	2 (<1)
筋断裂	1 (<1)	1 (<1)	0	0	2 (<1)
頚部損傷	1 (<1)	1 (<1)	0	0	2 (<1)
術後発熱	0	2 (<1)	0	0	2 (<1)
脊椎圧迫骨折	0	2 (<1)	0	0	2 (<1)
手首関節骨折	0	0	2 (<1)	0	2 (<1)
偶発的過量投与	1 (<1)	0	0	0	1 (<1)
アルコール中毒	0	1 (<1)	0	0	1 (<1)
凍瘡	1 (<1)	0	0	0	1 (<1)
造影剤反応	1 (<1)	0	0	0	1 (<1)
眼瞼損傷	1 (<1)	0	0	0	1 (<1)
顔面骨骨折	0	1 (<1)	0	0	1 (<1)
尾骨骨折	0	1 (<1)	0	0	1 (<1)
手骨折	0	1 (<1)	0	0	1 (<1)
頭部損傷	0	1 (<1)	0	0	1 (<1)
腸脛靭帯症候群	0	1 (<1)	0	0	1 (<1)
切開部位痛	0	1 (<1)	0	0	1 (<1)
瘢痕ヘルニア	0	0	1 (<1)	0	1 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
閉塞性瘢痕ヘルニア	0	1 (<1)	0	0	1 (<1)
靭帯損傷	1 (<1)	0	0	0	1 (<1)
靭帯捻挫	0	1 (<1)	0	0	1 (<1)
下肢骨折	0	1 (<1)	0	0	1 (<1)
神経損傷	1 (<1)	0	0	0	1 (<1)
過量投与	0	0	1 (<1)	0	1 (<1)
処置後出血	1 (<1)	0	0	0	1 (<1)
処置後浮腫	0	1 (<1)	0	0	1 (<1)
処置による低血圧	0	1 (<1)	0	0	1 (<1)
処置による悪心	0	1 (<1)	0	0	1 (<1)
処置による嘔吐	0	1 (<1)	0	0	1 (<1)
放射線皮膚損傷	1 (<1)	0	0	0	1 (<1)
反復性挫傷	1 (<1)	0	0	0	1 (<1)
網膜損傷	0	1 (<1)	0	0	1 (<1)
肋骨骨折	0	1 (<1)	0	0	1 (<1)
引っかき傷	1 (<1)	0	0	0	1 (<1)
軟部組織損傷	1 (<1)	0	0	0	1 (<1)
滑膜断裂	1 (<1)	0	0	0	1 (<1)
舌損傷	1 (<1)	0	0	0	1 (<1)
外傷性脳損傷	0	0	1 (<1)	0	1 (<1)
外傷性骨折	0	1 (<1)	0	0	1 (<1)
上肢骨折	0	1 (<1)	0	0	1 (<1)

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2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: Total BG00012

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
ワクチン接種合併症	1 (<1)	0	0	0	1 (<1)
創し開	0	1 (<1)	0	0	1 (<1)
外科および内科処置	6 (<1)	6 (<1)	1 (<1)	0	13 (<1)
抜歯	3 (<1)	1 (<1)	0	0	4 (<1)
子宮摘出	0	2 (<1)	0	0	2 (<1)
乳房腫瘤摘除	0	1 (<1)	0	0	1 (<1)
デンタルケア	1 (<1)	0	0	0	1 (<1)
女性不妊手術	0	0	1 (<1)	0	1 (<1)
ヘルニア修復	1 (<1)	0	0	0	1 (<1)
椎間板手術	0	1 (<1)	0	0	1 (<1)
治療食	1 (<1)	0	0	0	1 (<1)
静脈ステント挿入	0	1 (<1)	0	0	1 (<1)
社会環境	1 (<1)	0	0	0	1 (<1)
閉経	1 (<1)	0	0	0	1 (<1)

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2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
Number of subjects in safety population					351 (100)
Number of subjects with an event	94 (27)	165 (47)	45 (13)	0	304 (87)
感染症および寄生虫症	90 (26)	81 (23)	4 (1)	0	175 (50)
鼻咽頭炎	36 (10)	15 (4)	0	0	51 (15)
尿路感染	29 (8)	17 (5)	0	0	46 (13)
上気道感染	14 (4)	13 (4)	0	0	27 (8)
気管支炎	6 (2)	9 (3)	1 (<1)	0	16 (5)
インフルエンザ	9 (3)	5 (1)	1 (<1)	0	15 (4)
咽頭炎	10 (3)	3 (<1)	1 (<1)	0	14 (4)
副鼻腔炎	3 (<1)	8 (2)	0	0	11 (3)
気道感染	7 (2)	2 (<1)	0	0	9 (3)
鼻炎	8 (2)	0	0	0	8 (2)
ウイルス性上気道感染	6 (2)	1 (<1)	0	0	7 (2)
ウイルス性胃腸炎	2 (<1)	4 (1)	0	0	6 (2)
口腔ヘルペス	4 (1)	2 (<1)	0	0	6 (2)
肺炎	3 (<1)	3 (<1)	0	0	6 (2)
歯感染	4 (1)	2 (<1)	0	0	6 (2)
膀胱炎	3 (<1)	2 (<1)	0	0	5 (1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
胃腸炎	2 (<1)	3 (<1)	0	0	5 (1)
膣感染	4 (1)	1 (<1)	0	0	5 (1)
ウイルス感染	3 (<1)	2 (<1)	0	0	5 (1)
外陰膣真菌感染	4 (1)	1 (<1)	0	0	5 (1)
歯膿瘍	3 (<1)	1 (<1)	0	0	4 (1)
急性扁桃炎	1 (<1)	1 (<1)	0	0	2 (<1)
耳感染	1 (<1)	1 (<1)	0	0	2 (<1)
消化管感染	2 (<1)	0	0	0	2 (<1)
Ｈ１Ｎ１インフルエンザ	1 (<1)	1 (<1)	0	0	2 (<1)
帯状疱疹	1 (<1)	1 (<1)	0	0	2 (<1)
扁桃炎	1 (<1)	1 (<1)	0	0	2 (<1)
気管炎	1 (<1)	1 (<1)	0	0	2 (<1)
細菌性膣炎	2 (<1)	0	0	0	2 (<1)
急性副鼻腔炎	1 (<1)	0	0	0	1 (<1)
虫垂炎	0	1 (<1)	0	0	1 (<1)
細菌尿	1 (<1)	0	0	0	1 (<1)
ウイルス性気管支炎	1 (<1)	0	0	0	1 (<1)
カンジダ症	1 (<1)	0	0	0	1 (<1)
蜂巣炎	1 (<1)	0	0	0	1 (<1)
子宮頚管炎	0	1 (<1)	0	0	1 (<1)
慢性副鼻腔炎	0	1 (<1)	0	0	1 (<1)
デング熱	1 (<1)	0	0	0	1 (<1)

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2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
毛包炎	0	1 (<1)	0	0	1 (<1)
真菌感染	1 (<1)	0	0	0	1 (<1)
皮膚真菌感染	1 (<1)	0	0	0	1 (<1)
ウイルス性消化管感染	1 (<1)	0	0	0	1 (<1)
陰部ヘルペス	1 (<1)	0	0	0	1 (<1)
細菌性性器感染	1 (<1)	0	0	0	1 (<1)
歯肉感染	0	1 (<1)	0	0	1 (<1)
ヘリコバクター性胃炎	0	1 (<1)	0	0	1 (<1)
単純ヘルペス	1 (<1)	0	0	0	1 (<1)
ヘルペスウイルス感染	0	1 (<1)	0	0	1 (<1)
感染	0	1 (<1)	0	0	1 (<1)
寄生虫感染	1 (<1)	0	0	0	1 (<1)
迷路炎	1 (<1)	0	0	0	1 (<1)
喉頭炎	1 (<1)	0	0	0	1 (<1)
下気道感染	1 (<1)	0	0	0	1 (<1)
ライム病	0	1 (<1)	0	0	1 (<1)
乳様突起炎	0	1 (<1)	0	0	1 (<1)
外耳炎	1 (<1)	0	0	0	1 (<1)
中耳炎	1 (<1)	0	0	0	1 (<1)
子宮傍組織炎	1 (<1)	0	0	0	1 (<1)
耳下腺炎	0	1 (<1)	0	0	1 (<1)
歯周感染	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
細菌性咽頭炎	0	1 (<1)	0	0	1 (<1)
レンサ球菌性咽頭炎	0	1 (<1)	0	0	1 (<1)
咽頭扁桃炎	0	1 (<1)	0	0	1 (<1)
腎盂腎炎	0	0	1 (<1)	0	1 (<1)
膿胸	0	1 (<1)	0	0	1 (<1)
膿疱性皮疹	0	1 (<1)	0	0	1 (<1)
気管気管支炎	0	1 (<1)	0	0	1 (<1)
水痘	1 (<1)	0	0	0	1 (<1)
外陰部腟カンジダ症	1 (<1)	0	0	0	1 (<1)
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	3 (<1)	5 (1)	1 (<1)	0	9 (3)
メラノサイト性母斑	2 (<1)	0	0	0	2 (<1)
子宮平滑筋腫	0	2 (<1)	0	0	2 (<1)
基底細胞癌	0	0	1 (<1)	0	1 (<1)
子宮頚部癌	0	1 (<1)	0	0	1 (<1)
子宮内膜癌	0	1 (<1)	0	0	1 (<1)
線維性組織球腫	1 (<1)	0	0	0	1 (<1)
脂肪腫	1 (<1)	0	0	0	1 (<1)
転移性甲状腺癌	0	1 (<1)	0	0	1 (<1)
血液およびリンパ系障害	11 (3)	0	0	0	11 (3)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
貧血	4 (1)	0	0	0	4 (1)
リンパ節症	4 (1)	0	0	0	4 (1)
低色素性貧血	1 (<1)	0	0	0	1 (<1)
好中球増加症	1 (<1)	0	0	0	1 (<1)
血小板減少症	1 (<1)	0	0	0	1 (<1)
免疫系障害	2 (<1)	4 (1)	2 (<1)	0	8 (2)
季節性アレルギー	2 (<1)	1 (<1)	0	0	3 (<1)
アナフィラキシー反応	0	1 (<1)	1 (<1)	0	2 (<1)
薬物過敏症	1 (<1)	1 (<1)	0	0	2 (<1)
食物アレルギー	0	1 (<1)	0	0	1 (<1)
過敏症	0	0	1 (<1)	0	1 (<1)
内分泌障害	3 (<1)	0	0	0	3 (<1)
甲状腺機能低下症	2 (<1)	0	0	0	2 (<1)
甲状腺腫	1 (<1)	0	0	0	1 (<1)
代謝および栄養障害	12 (3)	8 (2)	0	0	20 (6)
食欲減退	1 (<1)	3 (<1)	0	0	4 (1)
高トリグリセリド血症	2 (<1)	2 (<1)	0	0	4 (1)
高尿酸血症	3 (<1)	0	0	0	3 (<1)
ビタミンD欠乏	1 (<1)	2 (<1)	0	0	3 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
糖尿病	2 (<1)	0	0	0	2 (<1)
高コレステロール血症	1 (<1)	1 (<1)	0	0	2 (<1)
耐糖能障害	0	1 (<1)	0	0	1 (<1)
高血糖	1 (<1)	0	0	0	1 (<1)
高カリウム血症	1 (<1)	0	0	0	1 (<1)
高脂血症	0	1 (<1)	0	0	1 (<1)
肥満	1 (<1)	0	0	0	1 (<1)
精神障害	35 (10)	20 (6)	5 (1)	0	60 (17)
うつ病	18 (5)	10 (3)	2 (<1)	0	30 (9)
不眠症	10 (3)	3 (<1)	0	0	13 (4)
不安	5 (1)	1 (<1)	1 (<1)	0	7 (2)
抑うつ気分	1 (<1)	3 (<1)	0	0	4 (1)
ストレス	4 (1)	0	0	0	4 (1)
感情不安定	1 (<1)	1 (<1)	0	0	2 (<1)
睡眠障害	1 (<1)	1 (<1)	0	0	2 (<1)
自殺念慮	0	1 (<1)	1 (<1)	0	2 (<1)
適応障害	0	1 (<1)	0	0	1 (<1)
感情障害	0	1 (<1)	0	0	1 (<1)
閉所恐怖症	0	1 (<1)	0	0	1 (<1)
自殺既遂	0	0	1 (<1)	0	1 (<1)
故意の自傷行為	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
精神障害	0	1 (<1)	0	0	1 (<1)
気分動揺	1 (<1)	0	0	0	1 (<1)
神経過敏	1 (<1)	0	0	0	1 (<1)
身体表現性障害	1 (<1)	0	0	0	1 (<1)
自殺企図	0	0	1 (<1)	0	1 (<1)
神経系障害	61 (17)	99 (28)	18 (5)	0	178 (51)
多発性硬化症再発	29 (8)	78 (22)	12 (3)	0	119 (34)
頭痛	29 (8)	17 (5)	0	0	46 (13)
感覚鈍麻	12 (3)	4 (1)	0	0	16 (5)
錯感覚	10 (3)	5 (1)	0	0	15 (4)
浮動性めまい	4 (1)	5 (1)	0	0	9 (3)
多発性硬化症	3 (<1)	3 (<1)	1 (<1)	0	7 (2)
筋痙直	4 (1)	3 (<1)	0	0	7 (2)
片頭痛	2 (<1)	2 (<1)	2 (<1)	0	6 (2)
記憶障害	3 (<1)	2 (<1)	0	0	5 (1)
下肢静止不能症候群	1 (<1)	3 (<1)	0	0	4 (1)
振戦	2 (<1)	2 (<1)	0	0	4 (1)
失語症	1 (<1)	1 (<1)	0	0	2 (<1)
平衡障害	0	2 (<1)	0	0	2 (<1)
手根管症候群	1 (<1)	0	1 (<1)	0	2 (<1)
頚髄神経根痛	1 (<1)	1 (<1)	0	0	2 (<1)

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3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
注意力障害	1 (<1)	1 (<1)	0	0	2 (<1)
味覚異常	2 (<1)	0	0	0	2 (<1)
顔面痙攣	1 (<1)	1 (<1)	0	0	2 (<1)
失神寸前の状態	1 (<1)	0	1 (<1)	0	2 (<1)
坐骨神経痛	2 (<1)	0	0	0	2 (<1)
副鼻腔炎に伴う頭痛	2 (<1)	0	0	0	2 (<1)
傾眠	2 (<1)	0	0	0	2 (<1)
失神	2 (<1)	0	0	0	2 (<1)
緊張性頭痛	0	2 (<1)	0	0	2 (<1)
三叉神経痛	1 (<1)	1 (<1)	0	0	2 (<1)
脳血管障害	1 (<1)	0	0	0	1 (<1)
不器用	0	1 (<1)	0	0	1 (<1)
認知障害	1 (<1)	0	0	0	1 (<1)
ジストニー	0	1 (<1)	0	0	1 (<1)
てんかん	0	1 (<1)	0	0	1 (<1)
顔面不全麻痺	0	1 (<1)	0	0	1 (<1)
蟻走感	1 (<1)	0	0	0	1 (<1)
大発作痙攣	0	0	1 (<1)	0	1 (<1)
頭部動揺	0	1 (<1)	0	0	1 (<1)
片側頭痛	1 (<1)	0	0	0	1 (<1)
不全片麻痺	1 (<1)	0	0	0	1 (<1)
知覚過敏	1 (<1)	0	0	0	1 (<1)

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2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
反射亢進	1 (<1)	0	0	0	1 (<1)
レルミット徴候	1 (<1)	0	0	0	1 (<1)
意識消失	1 (<1)	0	0	0	1 (<1)
仮面状顔貌	0	1 (<1)	0	0	1 (<1)
前兆を伴う片頭痛	1 (<1)	0	0	0	1 (<1)
不全単麻痺	1 (<1)	0	0	0	1 (<1)
不随意性筋収縮	1 (<1)	0	0	0	1 (<1)
神経痛	0	1 (<1)	0	0	1 (<1)
末梢性ニューロパチー	0	1 (<1)	0	0	1 (<1)
後頭神経痛	0	1 (<1)	0	0	1 (<1)
起立不耐性	1 (<1)	0	0	0	1 (<1)
部分発作	1 (<1)	0	0	0	1 (<1)
周期性四肢運動障害	0	1 (<1)	0	0	1 (<1)
腓骨神経麻痺	0	1 (<1)	0	0	1 (<1)
睡眠の質低下	1 (<1)	0	0	0	1 (<1)
感覚障害	0	1 (<1)	0	0	1 (<1)
感覚消失	1 (<1)	0	0	0	1 (<1)
足根管症候群	0	1 (<1)	0	0	1 (<1)
ウートホフ現象	1 (<1)	0	0	0	1 (<1)
振動覚亢進	1 (<1)	0	0	0	1 (<1)
第６脳神経麻痺	0	1 (<1)	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
眼障害	19 (5)	9 (3)	1 (<1)	0	29 (8)
眼痛	3 (<1)	3 (<1)	0	0	6 (2)
霧視	5 (1)	1 (<1)	0	0	6 (2)
複視	4 (1)	0	0	0	4 (1)
視力低下	3 (<1)	1 (<1)	0	0	4 (1)
結膜炎	2 (<1)	1 (<1)	0	0	3 (<1)
ブドウ膜炎	0	2 (<1)	0	0	2 (<1)
一過性失明	0	0	1 (<1)	0	1 (<1)
片側失明	1 (<1)	0	0	0	1 (<1)
結膜出血	1 (<1)	0	0	0	1 (<1)
アレルギー性結膜炎	1 (<1)	0	0	0	1 (<1)
眼乾燥	0	1 (<1)	0	0	1 (<1)
眼のアレルギー	1 (<1)	0	0	0	1 (<1)
眼部腫脹	1 (<1)	0	0	0	1 (<1)
虹彩毛様体炎	1 (<1)	0	0	0	1 (<1)
流涙増加	1 (<1)	0	0	0	1 (<1)
近視	1 (<1)	0	0	0	1 (<1)
眼充血	1 (<1)	0	0	0	1 (<1)
視力障害	1 (<1)	0	0	0	1 (<1)
耳および迷路障害	14 (4)	9 (3)	1 (<1)	0	24 (7)
回転性めまい	9 (3)	6 (2)	0	0	15 (4)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
耳不快感	2 (<1)	0	0	0	2 (<1)
耳鳴	1 (<1)	1 (<1)	0	0	2 (<1)
耳垢栓塞	0	1 (<1)	0	0	1 (<1)
耳痛	0	0	1 (<1)	0	1 (<1)
耳管機能障害	0	1 (<1)	0	0	1 (<1)
聴力低下	1 (<1)	0	0	0	1 (<1)
頭位性回転性めまい	1 (<1)	0	0	0	1 (<1)
前庭性運動失調	1 (<1)	0	0	0	1 (<1)
心臓障害	14 (4)	4 (1)	1 (<1)	0	19 (5)
頻脈	3 (<1)	3 (<1)	0	0	6 (2)
動悸	2 (<1)	1 (<1)	0	0	3 (<1)
第一度房室ブロック	2 (<1)	0	0	0	2 (<1)
徐脈	2 (<1)	0	0	0	2 (<1)
心房細動	0	0	1 (<1)	0	1 (<1)
左脚ブロック	1 (<1)	0	0	0	1 (<1)
右脚ブロック	1 (<1)	0	0	0	1 (<1)
伝導障害	1 (<1)	0	0	0	1 (<1)
心筋炎	0	0	1 (<1)	0	1 (<1)
上室性期外収縮	1 (<1)	0	0	0	1 (<1)
発作性頻脈	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
血管障害	16 (5)	9 (3)	0	0	25 (7)
高血圧	7 (2)	6 (2)	0	0	13 (4)
潮紅	6 (2)	0	0	0	6 (2)
ほてり	5 (1)	0	0	0	5 (1)
血腫	0	2 (<1)	0	0	2 (<1)
深部静脈血栓症	0	1 (<1)	0	0	1 (<1)
腹腔内血腫	1 (<1)	0	0	0	1 (<1)
呼吸器、胸郭および縦隔障害	28 (8)	13 (4)	0	0	41 (12)
口腔咽頭痛	12 (3)	3 (<1)	0	0	15 (4)
咳嗽	8 (2)	1 (<1)	0	0	9 (3)
呼吸困難	3 (<1)	4 (1)	0	0	7 (2)
喘息	1 (<1)	1 (<1)	0	0	2 (<1)
鼻出血	2 (<1)	0	0	0	2 (<1)
アレルギー性鼻炎	1 (<1)	1 (<1)	0	0	2 (<1)
睡眠時無呼吸症候群	0	2 (<1)	0	0	2 (<1)
上気道うっ血	2 (<1)	0	0	0	2 (<1)
息詰まり	1 (<1)	0	0	0	1 (<1)
発声障害	1 (<1)	0	0	0	1 (<1)
低換気	0	1 (<1)	0	0	1 (<1)
鼻閉	1 (<1)	0	0	0	1 (<1)
鼻中隔穿孔	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
口腔咽頭不快感	1 (<1)	0	0	0	1 (<1)
気道うっ血	1 (<1)	0	0	0	1 (<1)
季節性鼻炎	1 (<1)	0	0	0	1 (<1)
鼻漏	0	1 (<1)	0	0	1 (<1)
くしゃみ	1 (<1)	0	0	0	1 (<1)
胃腸障害	48 (14)	17 (5)	0	0	65 (19)
悪心	10 (3)	6 (2)	0	0	16 (5)
下痢	11 (3)	3 (<1)	0	0	14 (4)
便秘	8 (2)	1 (<1)	0	0	9 (3)
嘔吐	5 (1)	4 (1)	0	0	9 (3)
消化不良	5 (1)	1 (<1)	0	0	6 (2)
腹痛	4 (1)	1 (<1)	0	0	5 (1)
上腹部痛	3 (<1)	1 (<1)	0	0	4 (1)
胃炎	3 (<1)	1 (<1)	0	0	4 (1)
歯痛	1 (<1)	3 (<1)	0	0	4 (1)
齲歯	3 (<1)	0	0	0	3 (<1)
便意切迫	1 (<1)	1 (<1)	0	0	2 (<1)
嚥下障害	1 (<1)	1 (<1)	0	0	2 (<1)
鼓腸	2 (<1)	0	0	0	2 (<1)
胃腸障害	2 (<1)	0	0	0	2 (<1)
胃食道逆流性疾患	1 (<1)	1 (<1)	0	0	2 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
腹部不快感	1 (<1)	0	0	0	1 (<1)
腹部圧痛	1 (<1)	0	0	0	1 (<1)
根尖肉芽腫	1 (<1)	0	0	0	1 (<1)
大腸炎	1 (<1)	0	0	0	1 (<1)
結腸ポリープ	0	1 (<1)	0	0	1 (<1)
腸憩室	1 (<1)	0	0	0	1 (<1)
口内乾燥	1 (<1)	0	0	0	1 (<1)
変色便	1 (<1)	0	0	0	1 (<1)
食中毒	0	1 (<1)	0	0	1 (<1)
出血性胃炎	0	1 (<1)	0	0	1 (<1)
消化器痛	0	1 (<1)	0	0	1 (<1)
歯肉出血	1 (<1)	0	0	0	1 (<1)
歯肉紅斑	1 (<1)	0	0	0	1 (<1)
歯肉炎	1 (<1)	0	0	0	1 (<1)
痔出血	0	1 (<1)	0	0	1 (<1)
痔核	1 (<1)	0	0	0	1 (<1)
直腸攣縮	0	1 (<1)	0	0	1 (<1)
逆流性食道炎	0	1 (<1)	0	0	1 (<1)
口内炎	1 (<1)	0	0	0	1 (<1)
埋伏歯	1 (<1)	0	0	0	1 (<1)
肝胆道系障害	4 (1)	2 (<1)	0	0	6 (2)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
胆石症	2 (<1)	1 (<1)	0	0	3 (<1)
肝障害	1 (<1)	1 (<1)	0	0	2 (<1)
胆道ジスキネジー	1 (<1)	0	0	0	1 (<1)
皮膚および皮下組織障害	47 (13)	12 (3)	1 (<1)	0	60 (17)
発疹	6 (2)	2 (<1)	1 (<1)	0	9 (3)
脱毛症	7 (2)	0	0	0	7 (2)
そう痒症	7 (2)	0	0	0	7 (2)
紅斑	4 (1)	2 (<1)	0	0	6 (2)
多汗症	4 (1)	1 (<1)	0	0	5 (1)
ざ瘡	4 (1)	0	0	0	4 (1)
顔面腫脹	3 (<1)	1 (<1)	0	0	4 (1)
接触性皮膚炎	3 (<1)	0	0	0	3 (<1)
全身性そう痒症	3 (<1)	0	0	0	3 (<1)
湿疹	2 (<1)	0	0	0	2 (<1)
寝汗	2 (<1)	0	0	0	2 (<1)
皮膚色素過剰	2 (<1)	0	0	0	2 (<1)
皮膚硬結	1 (<1)	1 (<1)	0	0	2 (<1)
皮膚反応	2 (<1)	0	0	0	2 (<1)
蕁麻疹	1 (<1)	1 (<1)	0	0	2 (<1)
血管浮腫	0	1 (<1)	0	0	1 (<1)
頭部粃糠疹	1 (<1)	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
皮膚嚢腫	1 (<1)	0	0	0	1 (<1)
皮膚炎	1 (<1)	0	0	0	1 (<1)
アレルギー性皮膚炎	1 (<1)	0	0	0	1 (<1)
皮膚乾燥	1 (<1)	0	0	0	1 (<1)
斑状出血	1 (<1)	0	0	0	1 (<1)
皮下出血	1 (<1)	0	0	0	1 (<1)
顔面感覚鈍麻	1 (<1)	0	0	0	1 (<1)
内出血発生の増加傾向	1 (<1)	0	0	0	1 (<1)
嵌入爪	0	1 (<1)	0	0	1 (<1)
脂肪組織萎縮症	1 (<1)	0	0	0	1 (<1)
後天性リポジストロフィー	1 (<1)	0	0	0	1 (<1)
網状皮斑	1 (<1)	0	0	0	1 (<1)
神経皮膚炎	0	1 (<1)	0	0	1 (<1)
光線過敏性反応	0	1 (<1)	0	0	1 (<1)
乾癬	0	1 (<1)	0	0	1 (<1)
瘢痕	1 (<1)	0	0	0	1 (<1)
脂漏性皮膚炎	1 (<1)	0	0	0	1 (<1)
皮膚刺激	1 (<1)	0	0	0	1 (<1)
皮膚小結節	1 (<1)	0	0	0	1 (<1)
皮下結節	1 (<1)	0	0	0	1 (<1)
筋骨格系および結合組織障害	39 (11)	36 (10)	7 (2)	0	82 (23)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
背部痛	20 (6)	11 (3)	1 (<1)	0	32 (9)
四肢痛	10 (3)	10 (3)	1 (<1)	0	21 (6)
関節痛	13 (4)	3 (<1)	1 (<1)	0	17 (5)
筋骨格硬直	4 (1)	5 (1)	0	0	9 (3)
筋痙縮	4 (1)	3 (<1)	1 (<1)	0	8 (2)
筋骨格痛	3 (<1)	5 (1)	0	0	8 (2)
筋力低下	3 (<1)	3 (<1)	0	0	6 (2)
頚部痛	2 (<1)	3 (<1)	0	0	5 (1)
筋肉痛	2 (<1)	1 (<1)	1 (<1)	0	4 (1)
関節炎	0	2 (<1)	0	0	2 (<1)
外骨腫	0	2 (<1)	0	0	2 (<1)
側腹部痛	0	1 (<1)	1 (<1)	0	2 (<1)
関節腫脹	0	2 (<1)	0	0	2 (<1)
重感	0	2 (<1)	0	0	2 (<1)
成長痛	0	1 (<1)	0	0	1 (<1)
関節硬直	1 (<1)	0	0	0	1 (<1)
運動性低下	0	1 (<1)	0	0	1 (<1)
筋拘縮	1 (<1)	0	0	0	1 (<1)
筋固縮	1 (<1)	0	0	0	1 (<1)
筋攣縮	0	1 (<1)	0	0	1 (<1)
筋骨格系胸痛	0	1 (<1)	0	0	1 (<1)
骨壊死	0	0	1 (<1)	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
骨減少症	1 (<1)	0	0	0	1 (<1)
顎痛	0	1 (<1)	0	0	1 (<1)
腎および尿路障害	44 (13)	11 (3)	3 (<1)	0	58 (17)
蛋白尿	29 (8)	1 (<1)	0	0	30 (9)
ミクロアルブミン尿	11 (3)	3 (<1)	1 (<1)	0	15 (4)
血尿	9 (3)	1 (<1)	0	0	10 (3)
尿意切迫	2 (<1)	3 (<1)	0	0	5 (1)
頻尿	1 (<1)	2 (<1)	0	0	3 (<1)
尿失禁	2 (<1)	1 (<1)	0	0	3 (<1)
アルブミン尿	2 (<1)	0	0	0	2 (<1)
糖尿	2 (<1)	0	0	0	2 (<1)
排尿困難	0	1 (<1)	0	0	1 (<1)
高血圧性腎症	1 (<1)	0	0	0	1 (<1)
失禁	1 (<1)	0	0	0	1 (<1)
ケトン尿	1 (<1)	0	0	0	1 (<1)
白血球尿	1 (<1)	0	0	0	1 (<1)
腎結石症	0	0	1 (<1)	0	1 (<1)
ネフローゼ症候群	0	0	1 (<1)	0	1 (<1)
夜間頻尿	0	1 (<1)	0	0	1 (<1)
膿尿	1 (<1)	0	0	0	1 (<1)
切迫性尿失禁	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
排尿躊躇	1 (<1)	0	0	0	1 (<1)
尿閉	0	1 (<1)	0	0	1 (<1)
尿路痛	1 (<1)	0	0	0	1 (<1)
生殖系および乳房障害	19 (5)	7 (2)	0	0	26 (7)
不規則月経	3 (<1)	2 (<1)	0	0	5 (1)
不正子宮出血	4 (1)	1 (<1)	0	0	5 (1)
無月経	2 (<1)	1 (<1)	0	0	3 (<1)
月経困難症	2 (<1)	1 (<1)	0	0	3 (<1)
月経過多	2 (<1)	1 (<1)	0	0	3 (<1)
卵巣嚢胞	3 (<1)	0	0	0	3 (<1)
乳房嚢胞	1 (<1)	0	0	0	1 (<1)
乳房障害	1 (<1)	0	0	0	1 (<1)
乳房腫大	1 (<1)	0	0	0	1 (<1)
子宮頚管ポリープ	1 (<1)	0	0	0	1 (<1)
機能性子宮出血	0	1 (<1)	0	0	1 (<1)
月経障害	0	1 (<1)	0	0	1 (<1)
月経遅延	1 (<1)	0	0	0	1 (<1)
頻発月経	1 (<1)	0	0	0	1 (<1)
前立腺腫大	1 (<1)	0	0	0	1 (<1)
子宮出血	1 (<1)	0	0	0	1 (<1)

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Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
先天性、家族性および遺伝性障害	1 (<1)	0	0	0	1 (<1)
過誤腫	1 (<1)	0	0	0	1 (<1)
一般・全身障害および投与部位の状態	82 (23)	47 (13)	4 (1)	0	133 (38)
注射部位紅斑	26 (7)	4 (1)	1 (<1)	0	31 (9)
疲労	13 (4)	16 (5)	1 (<1)	0	30 (9)
注射部位疼痛	24 (7)	5 (1)	0	0	29 (8)
発熱	13 (4)	3 (<1)	1 (<1)	0	17 (5)
無力症	7 (2)	8 (2)	0	0	15 (4)
注射部位そう痒感	9 (3)	4 (1)	0	0	13 (4)
注射部位腫脹	8 (2)	2 (<1)	0	0	10 (3)
注射部位硬結	6 (2)	1 (<1)	0	0	7 (2)
注射部位腫瘤	3 (<1)	4 (1)	0	0	7 (2)
歩行障害	3 (<1)	3 (<1)	0	0	6 (2)
注射部位血腫	5 (1)	0	0	0	5 (1)
注射部位反応	4 (1)	1 (<1)	0	0	5 (1)
疼痛	5 (1)	0	0	0	5 (1)
悪寒	2 (<1)	2 (<1)	0	0	4 (1)
熱感	2 (<1)	2 (<1)	0	0	4 (1)
注射直後反応	1 (<1)	3 (<1)	0	0	4 (1)
末梢性浮腫	2 (<1)	2 (<1)	0	0	4 (1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
胸痛	2 (<1)	1 (<1)	0	0	3 (<1)
インフルエンザ様疾患	2 (<1)	1 (<1)	0	0	3 (<1)
注射部位肥厚	3 (<1)	0	0	0	3 (<1)
注射部位浮腫	3 (<1)	0	0	0	3 (<1)
注射部位発疹	1 (<1)	2 (<1)	0	0	3 (<1)
注射部位蕁麻疹	2 (<1)	1 (<1)	0	0	3 (<1)
注射部位熱感	1 (<1)	2 (<1)	0	0	3 (<1)
非心臓性胸痛	2 (<1)	0	1 (<1)	0	3 (<1)
顔面痛	1 (<1)	1 (<1)	0	0	2 (<1)
注射部位出血	2 (<1)	0	0	0	2 (<1)
易刺激性	1 (<1)	1 (<1)	0	0	2 (<1)
倦怠感	1 (<1)	1 (<1)	0	0	2 (<1)
適用部位浮腫	1 (<1)	0	0	0	1 (<1)
胸部不快感	1 (<1)	0	0	0	1 (<1)
嚢胞破裂	0	1 (<1)	0	0	1 (<1)
異常感	1 (<1)	0	0	0	1 (<1)
注射部位変色	1 (<1)	0	0	0	1 (<1)
注射部位乾燥	1 (<1)	0	0	0	1 (<1)
注射部位知覚不全	1 (<1)	0	0	0	1 (<1)
注射部位血管外漏出	1 (<1)	0	0	0	1 (<1)
注射部位過敏反応	1 (<1)	0	0	0	1 (<1)
注射部位炎症	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
注射部位結節	1 (<1)	0	0	0	1 (<1)
注射部位瘢痕	1 (<1)	0	0	0	1 (<1)
微石症	1 (<1)	0	0	0	1 (<1)
壊死	1 (<1)	0	0	0	1 (<1)
浮腫	0	1 (<1)	0	0	1 (<1)
臨床検査	75 (21)	27 (8)	4 (1)	0	106 (30)
アラニン・アミノトランスフェラーゼ増加	11 (3)	8 (2)	1 (<1)	0	20 (6)
尿中アルブミン陽性	15 (4)	3 (<1)	0	0	18 (5)
尿中蛋白陽性	13 (4)	2 (<1)	0	0	15 (4)
アスパラギン酸アミノトランスフェラーゼ増加	7 (2)	6 (2)	1 (<1)	0	14 (4)
尿中白血球陽性	7 (2)	1 (<1)	1 (<1)	0	9 (3)
γ－グルタミルトランスフェラーゼ増加	5 (1)	3 (<1)	0	0	8 (2)
血中ブドウ糖増加	7 (2)	0	0	0	7 (2)
肝酵素上昇	4 (1)	2 (<1)	1 (<1)	0	7 (2)
血中クレアチニン増加	6 (2)	0	0	0	6 (2)
血中トリグリセリド増加	5 (1)	0	1 (<1)	0	6 (2)
尿中β２ミクログロブリン増加	4 (1)	1 (<1)	0	0	5 (1)
心電図ＱＴ延長	4 (1)	1 (<1)	0	0	5 (1)
白血球数増加	5 (1)	0	0	0	5 (1)
尿中血陽性	2 (<1)	2 (<1)	0	0	4 (1)
体重増加	2 (<1)	2 (<1)	0	0	4 (1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
尿中ブドウ糖陽性	3 (<1)	0	0	0	3 (<1)
血小板数減少	2 (<1)	1 (<1)	0	0	3 (<1)
体重減少	2 (<1)	1 (<1)	0	0	3 (<1)
アラニン・アミノトランスフェラーゼ異常	1 (<1)	1 (<1)	0	0	2 (<1)
細菌検査陽性	2 (<1)	0	0	0	2 (<1)
血中副甲状腺ホルモン増加	2 (<1)	0	0	0	2 (<1)
血中ナトリウム増加	2 (<1)	0	0	0	2 (<1)
心電図ＳＴ部分下降	2 (<1)	0	0	0	2 (<1)
心電図Ｔ波逆転	2 (<1)	0	0	0	2 (<1)
握力低下	2 (<1)	0	0	0	2 (<1)
好中球数増加	2 (<1)	0	0	0	2 (<1)
尿中赤血球陽性	2 (<1)	0	0	0	2 (<1)
尿中ケトン体陽性	1 (<1)	1 (<1)	0	0	2 (<1)
アスパラギン酸アミノトランスフェラーゼ異常	0	1 (<1)	0	0	1 (<1)
血中アルカリホスファターゼ異常	0	1 (<1)	0	0	1 (<1)
血中アルカリホスファターゼ増加	1 (<1)	0	0	0	1 (<1)
血中ビリルビン異常	1 (<1)	0	0	0	1 (<1)
血中ビリルビン増加	1 (<1)	0	0	0	1 (<1)
血中カルシウム減少	1 (<1)	0	0	0	1 (<1)
血中カルシウム増加	1 (<1)	0	0	0	1 (<1)
血中コレステロール増加	1 (<1)	0	0	0	1 (<1)
血中ブドウ糖減少	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
血中ケトン体増加	1 (<1)	0	0	0	1 (<1)
血中乳酸脱水素酵素異常	1 (<1)	0	0	0	1 (<1)
血中カリウム増加	1 (<1)	0	0	0	1 (<1)
血圧上昇	1 (<1)	0	0	0	1 (<1)
血中尿素増加	1 (<1)	0	0	0	1 (<1)
血中尿酸増加	1 (<1)	0	0	0	1 (<1)
体温上昇	1 (<1)	0	0	0	1 (<1)
心電図Ｔ波振幅減少	1 (<1)	0	0	0	1 (<1)
心電図２相性Ｔ波	1 (<1)	0	0	0	1 (<1)
ヘマトクリット減少	0	1 (<1)	0	0	1 (<1)
ヘモグロビン減少	0	1 (<1)	0	0	1 (<1)
低比重リポ蛋白増加	1 (<1)	0	0	0	1 (<1)
リンパ球数異常	0	1 (<1)	0	0	1 (<1)
リンパ球数減少	1 (<1)	0	0	0	1 (<1)
単球数減少	1 (<1)	0	0	0	1 (<1)
好中球数異常	0	1 (<1)	0	0	1 (<1)
好中球数減少	1 (<1)	0	0	0	1 (<1)
便潜血陽性	1 (<1)	0	0	0	1 (<1)
血小板数増加	1 (<1)	0	0	0	1 (<1)
トランスアミナーゼ上昇	0	1 (<1)	0	0	1 (<1)
前庭機能検査異常	1 (<1)	0	0	0	1 (<1)
ビタミンＤ減少	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
白血球数異常	0	1 (<1)	0	0	1 (<1)
白血球数減少	1 (<1)	0	0	0	1 (<1)
傷害、中毒および処置合併症	13 (4)	22 (6)	6 (2)	0	41 (12)
転倒	6 (2)	7 (2)	1 (<1)	0	14 (4)
挫傷	5 (1)	0	0	0	5 (1)
手骨折	1 (<1)	2 (<1)	1 (<1)	0	4 (1)
関節捻挫	2 (<1)	0	1 (<1)	0	3 (<1)
四肢損傷	0	3 (<1)	0	0	3 (<1)
交通事故	0	2 (<1)	1 (<1)	0	3 (<1)
むち打ち損傷	0	3 (<1)	0	0	3 (<1)
節足動物咬傷	2 (<1)	0	0	0	2 (<1)
脳振盪	1 (<1)	1 (<1)	0	0	2 (<1)
擦過傷	2 (<1)	0	0	0	2 (<1)
足骨折	0	0	2 (<1)	0	2 (<1)
外傷後疼痛	0	2 (<1)	0	0	2 (<1)
処置による疼痛	2 (<1)	0	0	0	2 (<1)
橈骨骨折	0	1 (<1)	1 (<1)	0	2 (<1)
動物咬傷	1 (<1)	0	0	0	1 (<1)
動物による引っかき傷	1 (<1)	0	0	0	1 (<1)
足関節部骨折	0	1 (<1)	0	0	1 (<1)
気圧性中耳炎	0	1 (<1)	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
上顎炎	0	1 (<1)	0	0	1 (<1)
眼外傷	1 (<1)	0	0	0	1 (<1)
顔面損傷	0	1 (<1)	0	0	1 (<1)
大腿骨骨折	0	1 (<1)	0	0	1 (<1)
前腕骨折	0	1 (<1)	0	0	1 (<1)
頭部損傷	1 (<1)	0	0	0	1 (<1)
損傷	0	1 (<1)	0	0	1 (<1)
口唇損傷	1 (<1)	0	0	0	1 (<1)
半月板障害	1 (<1)	0	0	0	1 (<1)
肉離れ	1 (<1)	0	0	0	1 (<1)
頚部損傷	1 (<1)	0	0	0	1 (<1)
処置後合併症	0	1 (<1)	0	0	1 (<1)
術後創合併症	0	1 (<1)	0	0	1 (<1)
骨格損傷	1 (<1)	0	0	0	1 (<1)
皮膚裂傷	0	1 (<1)	0	0	1 (<1)
ストレス骨折	1 (<1)	0	0	0	1 (<1)
サンバーン	1 (<1)	0	0	0	1 (<1)
腱断裂	0	1 (<1)	0	0	1 (<1)
熱傷	0	1 (<1)	0	0	1 (<1)
外傷性血腫	0	1 (<1)	0	0	1 (<1)
上肢骨折	0	1 (<1)	0	0	1 (<1)
第７神経損傷	0	1 (<1)	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Incidence of adverse events by severity: Studies 109MS301 and 109MS302
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Treatment Group: GA

	Relationship to study drug				
	Mild	Moderate	Severe	Unknown	Total
外科および内科処置	1 (<1)	2 (<1)	1 (<1)	0	4 (1)
抜歯	1 (<1)	0	1 (<1)	0	2 (<1)
入院	0	1 (<1)	0	0	1 (<1)
不妊手術	0	1 (<1)	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages based on the number of subjects in safety population.
2: Data after subjects switched to alternative MS treatment are excluded.
3: In the total column, a subject was counted only once within each system organ class/preferred term. Within each system organ class/preferred term, a subject was counted only once under the greatest severity.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-BYSEV-A.SAS DATE: 02DEC2015

Table 139: Incidence of Gastrointestinal Tolerability Adverse Events by System Organ Class and Preferred Term: 24 Weeks of Studies 109MS301 and 109MS302

Incidence of gastrointestinal tolerability adverse events by system organ class and preferred term:
24 weeks of studies 109MS301 and 109MS302
Page 1 of 3

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a gastrointestinal tolerability event (a)	174 (23)	253 (33)	271 (36)	524 (34)	27 (8)
感染症および寄生虫症	0	0	1 (<1)	1 (<1)	0
憩室炎	0	0	1 (<1)	1 (<1)	0
胃腸障害	169 (22)	252 (33)	266 (35)	518 (34)	23 (7)
下痢	49 (6)	78 (10)	102 (13)	180 (12)	4 (1)
悪心	51 (7)	75 (10)	86 (11)	161 (11)	10 (3)
上腹部痛	29 (4)	58 (8)	61 (8)	119 (8)	2 (<1)
腹痛	26 (3)	55 (7)	44 (6)	99 (6)	2 (<1)
嘔吐	16 (2)	44 (6)	36 (5)	80 (5)	2 (<1)
消化不良	15 (2)	22 (3)	30 (4)	52 (3)	3 (<1)
便秘	18 (2)	15 (2)	19 (3)	34 (2)	3 (<1)
胃炎	5 (<1)	11 (1)	11 (1)	22 (1)	0
胃食道逆流性疾患	9 (1)	12 (2)	10 (1)	22 (1)	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Gastrointestinal tolerability events were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Queries 'Gastrointestinal nonspecific inflammations', 'Gastrointestinal nonspecific symptoms and therapeutic procedures', or 'Gastrointestinal nonspecific dysfunction' (under the Level 1 SMQ 'Gastrointestinal nonspecific inflammation and dysfunctional conditions').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-GI-A-24W.SAS DATE: 02DEC2015

Incidence of gastrointestinal tolerability adverse events by system organ class and preferred term:
24 weeks of studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
腹部不快感	6 (<1)	9 (1)	11 (1)	20 (1)	0
鼓腸	6 (<1)	7 (<1)	8 (1)	15 (<1)	2 (<1)
腹部膨満	7 (<1)	3 (<1)	10 (1)	13 (<1)	0
下腹部痛	2 (<1)	2 (<1)	3 (<1)	5 (<1)	0
おくび	0	2 (<1)	3 (<1)	5 (<1)	0
便意切迫	0	1 (<1)	3 (<1)	4 (<1)	0
嚥下障害	2 (<1)	1 (<1)	2 (<1)	3 (<1)	0
心窩部不快感	0	1 (<1)	2 (<1)	3 (<1)	0
腹部圧痛	0	0	2 (<1)	2 (<1)	1 (<1)
異常便	1 (<1)	2 (<1)	0	2 (<1)	0
排便回数増加	0	0	2 (<1)	2 (<1)	0
食道炎	0	2 (<1)	0	2 (<1)	0
便習慣変化	0	0	1 (<1)	1 (<1)	0
十二指腸炎	0	0	1 (<1)	1 (<1)	0
胃十二指腸炎	0	0	1 (<1)	1 (<1)	0
胃排出不全	0	1 (<1)	0	1 (<1)	0
膵機能不全	0	0	1 (<1)	1 (<1)	0
呼気臭	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Gastrointestinal tolerability events were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Queries 'Gastrointestinal nonspecific inflammations', 'Gastrointestinal nonspecific symptoms and therapeutic procedures', or 'Gastrointestinal nonspecific dysfunction' (under the Level 1 SMQ 'Gastrointestinal nonspecific inflammation and dysfunctional conditions').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-GI-A-24W.SAS DATE: 02DEC2015

Incidence of gastrointestinal tolerability adverse events by system organ class and preferred term:
24 weeks of studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
逆流性食道炎	1 (<1)	0	0	0	0
一般・全身障害および投与部位の状態	8 (1)	5 (<1)	9 (1)	14 (<1)	4 (1)
胸痛	7 (<1)	4 (<1)	6 (<1)	10 (<1)	2 (<1)
非心臓性胸痛	1 (<1)	1 (<1)	4 (<1)	5 (<1)	2 (<1)
臨床検査	0	0	1 (<1)	1 (<1)	0
胃内ｐＨ上昇	0	0	1 (<1)	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Gastrointestinal tolerability events were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Queries 'Gastrointestinal nonspecific inflammations', 'Gastrointestinal nonspecific symptoms and therapeutic procedures', or 'Gastrointestinal nonspecific dysfunction' (under the Level 1 SMQ 'Gastrointestinal nonspecific inflammation and dysfunctional conditions').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-GI-A-24W.SAS DATE: 02DEC2015

Table 140: Incidence of Gastrointestinal Tolerability Adverse Events by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period)

Incidence of gastrointestinal tolerability adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Number of subjects with a gastrointestinal tolerability event (a)	18 (16)	37 (33)
胃腸障害	17 (15)	37 (33)
下痢	6 (5)	11 (10)
悪心	6 (5)	11 (10)
腹痛	0	8 (7)
上腹部痛	6 (5)	5 (5)
嘔吐	0	5 (5)
便秘	0	3 (3)
消化不良	3 (3)	2 (2)
心窩部不快感	2 (2)	1 (<1)
胃炎	0	1 (<1)
胃食道逆流性疾患	0	1 (<1)
腹部膨満	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each interval for each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

(a) Gastrointestinal tolerability events were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Queries ‘Gastrointestinal nonspecific inflammations’, ‘Gastrointestinal nonspecific symptoms and therapeutic procedures’, or ‘Gastrointestinal nonspecific dysfunction’ (under the Level 1 SMQ ‘Gastrointestinal nonspecific inflammation and dysfunctional conditions’).

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-GI.SAS DATE: 25SEP2015

Incidence of gastrointestinal tolerability adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
下腹部痛	1 (<1)	0
一般・全身障害および投与部位の状態	1 (<1)	0
胸痛	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each interval for each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

(a) Gastrointestinal tolerability events were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Queries 'Gastrointestinal nonspecific inflammations', 'Gastrointestinal nonspecific symptoms and therapeutic procedures', or 'Gastrointestinal nonspecific dysfunction' (under the Level 1 SMQ 'Gastrointestinal nonspecific inflammation and dysfunctional conditions').

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-GI.SAS DATE: 25SEP2015

Table 141: Incidence of Gastrointestinal Tolerability Adverse Events by System Organ Class and Preferred Term: Studies 109MS301 and 109MS302

Incidence of gastrointestinal tolerability adverse events by system organ class and preferred term:
Studies 109MS301 and 109MS302
Page 1 of 3

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a gastrointestinal tolerability event (a)	257 (33)	329 (43)	350 (46)	679 (44)	57 (16)
感染症および寄生虫症	0	0	1 (<1)	1 (<1)	0
憩室炎	0	0	1 (<1)	1 (<1)	0
胃腸障害	250 (32)	326 (42)	343 (45)	669 (44)	53 (15)
下痢	83 (11)	107 (14)	128 (17)	235 (15)	14 (4)
悪心	67 (9)	93 (12)	105 (14)	198 (13)	16 (5)
上腹部痛	45 (6)	76 (10)	85 (11)	161 (11)	4 (1)
腹痛	37 (5)	73 (9)	63 (8)	136 (9)	5 (1)
嘔吐	37 (5)	65 (8)	53 (7)	118 (8)	9 (3)
消化不良	20 (3)	35 (5)	40 (5)	75 (5)	6 (2)
便秘	33 (4)	23 (3)	29 (4)	52 (3)	9 (3)
胃炎	11 (1)	22 (3)	20 (3)	42 (3)	4 (1)
腹部不快感	11 (1)	19 (2)	14 (2)	33 (2)	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Gastrointestinal tolerability events were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Queries 'Gastrointestinal nonspecific inflammations', 'Gastrointestinal nonspecific symptoms and therapeutic procedures', or 'Gastrointestinal nonspecific dysfunction' (under the Level 1 SMQ 'Gastrointestinal nonspecific inflammation and dysfunctional conditions').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-GI-A.SAS DATE: 02DEC2015

Incidence of gastrointestinal tolerability adverse events by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
胃食道逆流性疾患	15 (2)	15 (2)	18 (2)	33 (2)	2 (<1)
鼓腸	13 (2)	11 (1)	9 (1)	20 (1)	2 (<1)
腹部膨満	11 (1)	4 (<1)	14 (2)	18 (1)	0
下腹部痛	3 (<1)	3 (<1)	7 (<1)	10 (<1)	0
嚥下障害	6 (<1)	5 (<1)	5 (<1)	10 (<1)	2 (<1)
心窩部不快感	2 (<1)	2 (<1)	3 (<1)	5 (<1)	0
おくび	0	2 (<1)	3 (<1)	5 (<1)	0
便意切迫	0	1 (<1)	3 (<1)	4 (<1)	2 (<1)
逆流性食道炎	2 (<1)	1 (<1)	3 (<1)	4 (<1)	1 (<1)
腹部圧痛	2 (<1)	1 (<1)	2 (<1)	3 (<1)	1 (<1)
排便回数増加	0	1 (<1)	2 (<1)	3 (<1)	0
異常便	1 (<1)	2 (<1)	0	2 (<1)	0
腸憩室	0	0	2 (<1)	2 (<1)	1 (<1)
食道炎	0	2 (<1)	0	2 (<1)	0
便通不規則	1 (<1)	0	1 (<1)	1 (<1)	0
便習慣変化	0	0	1 (<1)	1 (<1)	0
十二指腸炎	0	0	1 (<1)	1 (<1)	0
胃十二指腸炎	0	0	1 (<1)	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Gastrointestinal tolerability events were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Queries 'Gastrointestinal nonspecific inflammations', 'Gastrointestinal nonspecific symptoms and therapeutic procedures', or 'Gastrointestinal nonspecific dysfunction' (under the Level 1 SMQ 'Gastrointestinal nonspecific inflammation and dysfunctional conditions').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-GI-A.SAS DATE: 02DEC2015

Incidence of gastrointestinal tolerability adverse events by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
消化器痛	3 (<1)	1 (<1)	0	1 (<1)	1 (<1)
胃排出不全	0	1 (<1)	0	1 (<1)	0
膵機能不全	0	0	1 (<1)	1 (<1)	0
逆流性胃炎	1 (<1)	0	1 (<1)	1 (<1)	0
呼気臭	1 (<1)	0	0	0	0
十二指腸胃逆流	1 (<1)	0	0	0	0
一般・全身障害および投与部位の状態	12 (2)	12 (2)	20 (3)	32 (2)	6 (2)
胸痛	10 (1)	9 (1)	14 (2)	23 (2)	3 (<1)
非心臓性胸痛	2 (<1)	3 (<1)	7 (<1)	10 (<1)	3 (<1)
臨床検査	0	0	1 (<1)	1 (<1)	0
胃内ｐＨ上昇	0	0	1 (<1)	1 (<1)	0
傷害、中毒および処置合併症	1 (<1)	1 (<1)	0	1 (<1)	0
処置による悪心	1 (<1)	1 (<1)	0	1 (<1)	0
処置による嘔吐	0	1 (<1)	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Gastrointestinal tolerability events were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Queries 'Gastrointestinal nonspecific inflammations', 'Gastrointestinal nonspecific symptoms and therapeutic procedures', or 'Gastrointestinal nonspecific dysfunction' (under the Level 1 SMQ 'Gastrointestinal nonspecific inflammation and dysfunctional conditions').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-GI-A.SAS DATE: 02DEC2015

Table 146: Incidence of Adverse Events by Preferred Term and 1-Month Interval With an Incidence of ≥2% in Any Treatment Group and the Entire Study Period – Part I (Placebo-Controlled Period) [PMDA Specific Requirements]

Incidence of adverse events by preferred term and 1-month interval with an incidence of >=2% in any treatment group and the entire study period - Part I (Placebo-controlled period) (PMDA specific requirements)

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	Placebo					
	0-1 months	>1-2 months	>2-3 months	>3-4 months	>4-5 months	>5-6 months
Number of subjects followed in the interval	113 (100)	113 (100)	113 (100)	112 (100)	110 (100)	110 (100)
Number of subjects with an event	43 (38)	41 (36)	32 (28)	31 (28)	33 (30)	23(21)
鼻咽頭炎	7 (6)	3 (3)	5 (4)	8 (7)	12 (11)	8 (7)
多発性硬化症再発	7 (6)	11 (10)	9 (8)	8 (7)	7 (6)	4 (4)
潮紅	7 (6)	1 (<1)	1 (<1)	0	1 (<1)	1 (<1)
下痢	3 (3)	1 (<1)	0	0	2 (2)	0 (<1)
悪心	4 (4)	0	0	1 (<1)	0	1 (<1)
そう痒症	2 (2)	1 (<1)	1 (<1)	1 (<1)	1 (<1)	1 (<1)
アラニン・アミノトランスフェラーゼ増加	0	0	1 (<1)	0	0	1 (<1)
ほてり	1 (<1)	0	0	0	0	0
上腹部痛	4 (4)	0	0	1 (<1)	1 (<1)	1
上気道感染	5 (4)	2 (2)	2 (2)	1 (<1)	3 (3)	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each interval for each preferred term.
4: Preferred terms are presented by decreasing order of the BG00012 overall incidence (not shown).

SOURCE: BG12MS/109MS305/PART1/T-AE-PT1-PDMA2.SAS DATE: 05OCT2015

Incidence of adverse events by preferred term and 1-month interval with an incidence of >=2% in any treatment group and the entire study period - Part I (Placebo-controlled period) (PMDA specific requirements)
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	Placebo					
	0-1 months	>1-2 months	>2-3 months	>3-4 months	>4-5 months	>5-6 months
アスパラギン酸アミノトランスフェラーゼ増加	0	0	1 (<1)	0	0	0
頭痛	0	0	1 (<1)	0	1 (<1)	0
背部痛	0	2 (2)	1 (<1)	0	0	0
浮動性めまい	0	0	0	1 (<1)	0	0
不眠症	0	1 (<1)	1 (<1)	0	1 (<1)	1 (<1)
咽頭炎	0	0	0	0	1 (<1)	0
尿路感染	1 (<1)	0	0	0	0	0
消化不良	2 (2)	0	0	0	1 (<1)	0
発熱	1 (<1)	3 (3)	2 (2)	0	0	0
蕁麻疹	1 (<1)	1 (<1)	0	0	1 (<1)	0
関節痛	2 (2)	1 (<1)	1 (<1)	1 (<1)	0	1 (<1)
齲歯	0	1 (<1)	0	2 (2)	0	0
排尿困難	0	1 (<1)	1 (<1)	1 (<1)	0	0
傾眠	1 (<1)	2 (2)	2 (2)	0	0	0
口内炎	0	1 (<1)	1 (<1)	1 (<1)	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each interval for each preferred term.
4: Preferred terms are presented by decreasing order of the BG00012 overall incidence (not shown).

SOURCE: BG12MS/109MS305/PART1/T-AE-PT1-PDMA2.SAS DATE: 05OCT2015

Incidence of adverse events by preferred term and 1-month interval with an incidence of >=2% in any treatment group and the entire study period - Part I (Placebo-controlled period) (PMDA specific requirements)
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	BG00012 240 mg BID					
	0-1 months	>1-2 months	>2-3 months	>3-4 months	>4-5 months	>5-6 months
Number of subjects followed in the interval	111 (100)	111 (100)	110 (100)	110 (100)	108 (100)	107 (100)
Number of subjects with an event	63 (57)	36 (32)	28 (25)	25 (23)	24 (22)	23 (21)
鼻咽頭炎	5 (5)	4 (4)	7 (6)	2 (2)	6 (6)	4 (4)
多発性硬化症再発	9 (8)	10 (9)	3 (3)	3 (3)	3 (3)	5 (5)
潮紅	16 (14)	2 (2)	2 (2)	0	4 (4)	1 (<1)
下痢	10 (9)	0	0	1 (<1)	0	0
悪心	8 (7)	0	2 (2)	0	0	0
腹痛	6 (5)	1 (<1)	2 (2)	0	0	0
そう痒症	5 (5)	1 (<1)	0	1 (<1)	1 (<1)	0
アラニン・アミノトランスフェラーゼ増加	4 (4)	3 (3)	0	0	1 (<1)	0
ほてり	6 (5)	0	1 (<1)	0	0	0
上腹部痛	4 (4)	0	1 (<1)	0	0	0
上気道感染	0	1 (<1)	0	3 (3)	1 (<1)	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each interval for each preferred term.
4: Preferred terms are presented by decreasing order of the BG00012 overall incidence (not shown).

SOURCE: BG12MS/109MS305/PART1/T-AE-PT1-PDMA2.SAS DATE: 05OCT2015

Incidence of adverse events by preferred term and 1-month interval with an incidence of >=2% in any treatment group and the entire study period - Part I (Placebo-controlled period) (PMDA specific requirements)
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	BG00012 240 mg BID					
	0-1 months	>1-2 months	>2-3 months	>3-4 months	>4-5 months	>5-6 months
嘔吐	5 (5)	0	0	0	0	0
アスパラギン酸アミノトランスフェラーゼ増加	3 (3)	1 (<1)	0	1 (<1)	0	0
紅斑	2 (2)	1 (<1)	1 (<1)	1 (<1)	0	0
胃腸炎	1 (<1)	0	1 (<1)	0	1 (<1)	1 (<1)
頭痛	1 (<1)	1 (<1)	2 (2)	0	0	1 (<1)
背部痛	0	0	0	0	1 (<1)	2 (2)
便秘	1 (<1)	0	0	1 (<1)	0	1 (<1)
浮動性めまい	2 (2)	1 (<1)	0	0	0	0
感覚鈍麻	0	2 (2)	0	0	0	1 (<1)
不眠症	0	2 (2)	0	1 (<1)	0	1 (<1)
ミクロアルブミン尿	1 (<1)	0	0	1 (<1)	0	1 (<1)
咽頭炎	2 (2)	0	1 (<1)	0	0	0
蛋白尿	1 (<1)	0	1 (<1)	1 (<1)	0	0
発疹	3 (3)	0	0	0	0	0
尿路感染	1 (<1)	2 (2)	0	0	0	0
消化不良	1 (<1)	0	0	1 (<1)	0	0
発熱	1 (<1)	0	0	0	0	1 (<1)
蕁麻疹	1 (<1)	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each interval for each preferred term.
4: Preferred terms are presented by decreasing order of the BG00012 overall incidence (not shown).

SOURCE: BG12MS/109MS305/PART1/T-AE-PT1-PDMA2.SAS DATE: 05OCT2015

Incidence of adverse events by preferred term and 1-month interval with an incidence of >=2% in any treatment group and the entire study period - Part I (Placebo-controlled period) (PMDA specific requirements)
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	BG00012 240 mg BID					
	0-1 months	>1-2 months	>2-3 months	>3-4 months	>4-5 months	>5-6 months
関節痛	0	0	0	0	1 (<1)	0
齲歯	0	0	0	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each interval for each preferred term.
4: Preferred terms are presented by decreasing order of the BG00012 overall incidence (not shown).

SOURCE: BG12MS/109MS305/PART1/T-AE-PT1-PDMA2.SAS DATE: 05OCT2015

Table 147: Accounting of Subjects – Part I (Placebo-Controlled Period) - Overall

Accounting of subjects - Part I (placebo-controlled period)
- Overall
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	Placebo	BG00012 240 mg BID	Total
Number of subjects randomized	113	112	225
Number of subjects dosed in Part I	113 (100)	111 (100)	224 (100)
Number of subjects who completed study drug in Part I	107 (95)	105 (95)	212 (95)
Number of subjects who discontinued study drug in Part I	6 (5)	6 (5)	12 (5)
Adverse event	3 (3)	1 (<1)	4 (2)
Lost to follow-up	0	0	0
Consent withdrawn	3 (3)	1 (<1)	4 (2)
Investigator decision	0	0	0
Subject non-compliance	0	0	0
Death	0	0	0
Other	0	4 (4)	4 (2)
Unknown	0	0	0

NOTE: Numbers in parentheses are percentages.

SOURCE: BG12MS/109MS305/PART1/T-ACCTSUBJ.SAS DATE: 25SEP2015

Accounting of subjects - Part I (placebo-controlled period)
- Overall
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	Placebo	BG00012 240 mg BID	Total
Number of subjects who completed study in Part I	108 (96)	105 (95)	213 (95)
Number of subjects who withdrew from study in Part I	5 (4)	6 (5)	11 (5)
Adverse event	2 (2)	1 (<1)	3 (1)
Lost to follow-up	0	0	0
Consent withdrawn	3 (3)	1 (<1)	4 (2)
Investigator decision	0	0	0
Subject non-compliance	0	0	0
Death	0	0	0
Other	0	4 (4)	4 (2)
Unknown	0	0	0

NOTE: Numbers in parentheses are percentages.

SOURCE: BG12MS/109MS305/PART1/T-ACCTSUBJ.SAS DATE: 25SEP2015

Table 149: Incidence of Adverse Events That Led to Discontinuation of Study Drug by System Organ Class and Preferred Term: Studies 109MS301 and 109MS302

Incidence of adverse events that led to discontinuation of study drug by system organ class and preferred term: Studies 109MS301 and 109MS302
Page 1 of 10

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with an event	93 (12)	109 (14)	109 (14)	218 (14)	35 (10)
感染症および寄生虫症	4 (<1)	1 (<1)	6 (<1)	7 (<1)	0
憩室炎	0	0	1 (<1)	1 (<1)	0
胃腸炎	0	1 (<1)	0	1 (<1)	0
消化管感染	0	0	1 (<1)	1 (<1)	0
帯状疱疹	1 (<1)	0	1 (<1)	1 (<1)	0
眼帯状疱疹	0	0	1 (<1)	1 (<1)	0
気道感染	0	0	1 (<1)	1 (<1)	0
尿路感染	0	0	1 (<1)	1 (<1)	0
細菌性心内膜炎	1 (<1)	0	0	0	0
細菌性咽頭炎	1 (<1)	0	0	0	0
消化器結核	1 (<1)	0	0	0	0
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	2 (<1)	1 (<1)	2 (<1)	3 (<1)	1 (<1)
乳癌	1 (<1)	0	1 (<1)	1 (<1)	0
子宮頚部癌	0	0	1 (<1)	1 (<1)	0
腎新生物	0	1 (<1)	0	1 (<1)	0
移行上皮癌	0	1 (<1)	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-DISC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to discontinuation of study drug by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
乳房新生物	1 (<1)	0	0	0	0
子宮内膜癌	0	0	0	0	1 (<1)
血液およびリンパ系障害	0	1 (<1)	0	1 (<1)	0
好中球増加症	0	1 (<1)	0	1 (<1)	0
免疫系障害	0	4 (<1)	6 (<1)	10 (<1)	3 (<1)
過敏症	0	4 (<1)	5 (<1)	9 (<1)	1 (<1)
アナフィラキシー様反応	0	0	1 (<1)	1 (<1)	0
アナフィラキシー反応	0	0	0	0	2 (<1)
内分泌障害	0	1 (<1)	0	1 (<1)	0
甲状腺腫	0	1 (<1)	0	1 (<1)	0
代謝および栄養障害	1 (<1)	0	1 (<1)	1 (<1)	0
高血糖	0	0	1 (<1)	1 (<1)	0
食欲亢進	1 (<1)	0	0	0	0
精神障害	1 (<1)	3 (<1)	1 (<1)	4 (<1)	2 (<1)
異常行動	0	1 (<1)	0	1 (<1)	0
双極１型障害	0	1 (<1)	0	1 (<1)	0
うつ病	0	1 (<1)	0	1 (<1)	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-DISC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to discontinuation of study drug by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
気分変化	0	0	1 (<1)	1 (<1)	0
自殺既遂	0	0	0	0	1 (<1)
性的興奮障害	1 (<1)	0	0	0	0
神経系障害	55 (7)	23 (3)	22 (3)	45 (3)	11 (3)
多発性硬化症再発	48 (6)	11 (1)	13 (2)	24 (2)	6 (2)
頭痛	1 (<1)	5 (<1)	2 (<1)	7 (<1)	2 (<1)
多発性硬化症	2 (<1)	2 (<1)	2 (<1)	4 (<1)	1 (<1)
灼熱感	0	1 (<1)	2 (<1)	3 (<1)	0
浮動性めまい	0	1 (<1)	1 (<1)	2 (<1)	2 (<1)
平衡障害	0	0	1 (<1)	1 (<1)	0
てんかん	0	1 (<1)	0	1 (<1)	0
蟻走感	0	0	1 (<1)	1 (<1)	0
虚血性脳卒中	0	0	1 (<1)	1 (<1)	0
部分発作	0	1 (<1)	0	1 (<1)	0
二次性進行型多発性硬化症	0	0	1 (<1)	1 (<1)	0
傾眠	0	1 (<1)	0	1 (<1)	0
振戦	0	1 (<1)	0	1 (<1)	1 (<1)
脳血管発作	1 (<1)	0	0	0	0
大発作痙攣	1 (<1)	0	0	0	0
感覚鈍麻	1 (<1)	0	0	0	0
筋痙直	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-DISC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to discontinuation of study drug by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
眼障害	1 (<1)	0	1 (<1)	1 (<1)	0
霧視	0	0	1 (<1)	1 (<1)	0
視力低下	1 (<1)	0	0	0	0
耳および迷路障害	0	1 (<1)	2 (<1)	3 (<1)	0
回転性めまい	0	1 (<1)	1 (<1)	2 (<1)	0
耳不快感	0	0	1 (<1)	1 (<1)	0
耳鳴	0	0	1 (<1)	1 (<1)	0
心臓障害	1 (<1)	0	3 (<1)	3 (<1)	3 (<1)
急性冠動脈症候群	0	0	1 (<1)	1 (<1)	0
狭心症	0	0	1 (<1)	1 (<1)	0
うっ血性心不全	0	0	1 (<1)	1 (<1)	0
心筋症	0	0	1 (<1)	1 (<1)	0
心房細動	0	0	0	0	1 (<1)
心筋炎	0	0	0	0	1 (<1)
動悸	1 (<1)	0	0	0	0
頻脈	0	0	0	0	2 (<1)
血管障害	2 (<1)	26 (3)	13 (2)	39 (3)	0
潮紅	1 (<1)	24 (3)	12 (2)	36 (2)	0
ほてり	0	1 (<1)	2 (<1)	3 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-DISC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to discontinuation of study drug by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
高血圧	0	1 (<1)	0	1 (<1)	0
末梢性虚血	1 (<1)	0	0	0	0
呼吸器、胸郭および縦隔障害	0	2 (<1)	1 (<1)	3 (<1)	2 (<1)
咳嗽	0	1 (<1)	1 (<1)	2 (<1)	0
誤嚥性肺炎	0	1 (<1)	0	1 (<1)	0
呼吸困難	0	0	0	0	2 (<1)
胃腸障害	7 (<1)	30 (4)	42 (6)	72 (5)	3 (<1)
下痢	1 (<1)	7 (<1)	15 (2)	22 (1)	0
悪心	0	6 (<1)	12 (2)	18 (1)	2 (<1)
嘔吐	0	8 (1)	10 (1)	18 (1)	1 (<1)
上腹部痛	1 (<1)	6 (<1)	10 (1)	16 (1)	1 (<1)
腹痛	0	5 (<1)	9 (1)	14 (<1)	0
胃腸障害	2 (<1)	2 (<1)	4 (<1)	6 (<1)	0
腹部不快感	0	2 (<1)	2 (<1)	4 (<1)	0
腹部膨満	1 (<1)	0	3 (<1)	3 (<1)	0
消化不良	1 (<1)	3 (<1)	0	3 (<1)	0
下腹部痛	0	1 (<1)	1 (<1)	2 (<1)	0
胃炎	0	1 (<1)	1 (<1)	2 (<1)	0
腹部硬直	0	0	1 (<1)	1 (<1)	0
腹部圧痛	0	1 (<1)	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-DISC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to discontinuation of study drug by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
便秘	0	1 (<1)	0	1 (<1)	0
便失禁	0	1 (<1)	0	1 (<1)	0
鼓腸	0	0	1 (<1)	1 (<1)	0
齲歯	0	0	0	0	1 (<1)
歯肉炎	1 (<1)	0	0	0	0
肝胆道系障害	2 (<1)	1 (<1)	1 (<1)	2 (<1)	0
胆汁うっ滞性肝炎	0	1 (<1)	0	1 (<1)	0
肝障害	1 (<1)	0	1 (<1)	1 (<1)	0
中毒性肝炎	1 (<1)	0	0	0	0
皮膚および皮下組織障害	3 (<1)	19 (2)	15 (2)	34 (2)	3 (<1)
そう痒症	2 (<1)	4 (<1)	2 (<1)	6 (<1)	0
発疹	1 (<1)	5 (<1)	1 (<1)	6 (<1)	0
アレルギー性皮膚炎	0	2 (<1)	3 (<1)	5 (<1)	0
全身性皮疹	0	2 (<1)	2 (<1)	4 (<1)	0
蕁麻疹	0	2 (<1)	2 (<1)	4 (<1)	0
紅斑	0	2 (<1)	1 (<1)	3 (<1)	2 (<1)
全身紅斑	0	2 (<1)	1 (<1)	3 (<1)	0
多汗症	0	1 (<1)	1 (<1)	2 (<1)	0
全身性そう痒症	0	2 (<1)	0	2 (<1)	0
脱毛症	0	0	1 (<1)	1 (<1)	0

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-DISC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to discontinuation of study drug by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
ざ瘡様皮膚炎	0	1 (<1)	0	1 (<1)	0
アレルギー性そう痒症	0	1 (<1)	0	1 (<1)	0
そう痒性皮疹	0	0	1 (<1)	1 (<1)	0
皮膚灼熱感	0	0	1 (<1)	1 (<1)	0
皮膚硬結	0	0	0	0	1 (<1)
顔面腫脹	0	0	0	0	2 (<1)
乾皮症	1 (<1)	0	0	0	0
筋骨格系および結合組織障害	1 (<1)	1 (<1)	4 (<1)	5 (<1)	1 (<1)
背部痛	1 (<1)	1 (<1)	2 (<1)	3 (<1)	0
四肢痛	0	1 (<1)	1 (<1)	2 (<1)	0
関節痛	0	0	1 (<1)	1 (<1)	0
側腹部痛	0	0	1 (<1)	1 (<1)	0
筋力低下	0	0	0	0	1 (<1)
腎および尿路障害	2 (<1)	3 (<1)	4 (<1)	7 (<1)	3 (<1)
蛋白尿	1 (<1)	2 (<1)	1 (<1)	3 (<1)	0
血尿	1 (<1)	1 (<1)	0	1 (<1)	0
腎結石症	0	0	1 (<1)	1 (<1)	0
慢性腎不全	0	0	1 (<1)	1 (<1)	0
腎機能障害	0	0	1 (<1)	1 (<1)	0
腎臓痛	0	0	1 (<1)	1 (<1)	0

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-DISC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to discontinuation of study drug by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
ミクロアルブミン尿	0	0	0	0	1 (<1)
ネフローゼ症候群	0	0	0	0	1 (<1)
頻尿	0	0	0	0	1 (<1)
妊娠、産褥および周産期の状態	0	1 (<1)	0	1 (<1)	0
妊娠	0	1 (<1)	0	1 (<1)	0
生殖系および乳房障害	0	0	1 (<1)	1 (<1)	0
腟出血	0	0	1 (<1)	1 (<1)	0
一般・全身障害および投与部位の状態	1 (<1)	5 (<1)	4 (<1)	9 (<1)	14 (4)
胸痛	0	0	2 (<1)	2 (<1)	1 (<1)
疲労	0	1 (<1)	1 (<1)	2 (<1)	0
発熱	0	1 (<1)	1 (<1)	2 (<1)	0
胸部不快感	0	1 (<1)	0	1 (<1)	0
悪寒	0	0	1 (<1)	1 (<1)	0
不快感	0	0	1 (<1)	1 (<1)	0
高熱	0	1 (<1)	0	1 (<1)	0
粘膜乾燥	0	1 (<1)	0	1 (<1)	0
腫脹	0	1 (<1)	0	1 (<1)	0
無力症	0	0	0	0	3 (<1)

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Incidence of adverse events that led to discontinuation of study drug by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
インフルエンザ様疾患	1 (<1)	0	0	0	0
注射部位紅斑	0	0	0	0	3 (<1)
注射部位硬結	0	0	0	0	1 (<1)
注射部位腫瘤	0	0	0	0	1 (<1)
注射部位結節	0	0	0	0	1 (<1)
注射部位疼痛	0	0	0	0	4 (1)
注射部位そう痒感	0	0	0	0	3 (<1)
注射部位反応	0	0	0	0	1 (<1)
注射部位腫脹	0	0	0	0	2 (<1)
注射部位熱感	0	0	0	0	1 (<1)
壊死	0	0	0	0	1 (<1)
非心臓性胸痛	0	0	0	0	1 (<1)
末梢性浮腫	0	0	0	0	1 (<1)
臨床検査	14 (2)	10 (1)	7 (<1)	17 (1)	4 (1)
アラニン・アミノトランスフェラーゼ増加	5 (<1)	3 (<1)	2 (<1)	5 (<1)	2 (<1)
アスパラギン酸アミノトランスフェラーゼ増加	3 (<1)	3 (<1)	1 (<1)	4 (<1)	3 (<1)
肝機能検査異常	0	2 (<1)	2 (<1)	4 (<1)	0
体重減少	0	1 (<1)	1 (<1)	2 (<1)	0
尿中アルブミン陽性	0	1 (<1)	0	1 (<1)	0
血中乳酸脱水素酵素増加	0	1 (<1)	0	1 (<1)	0
好酸球数増加	0	1 (<1)	0	1 (<1)	0

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4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-DISC-A.SAS DATE: 02DEC2015

Incidence of adverse events that led to discontinuation of study drug by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
好酸球百分率増加	0	1 (<1)	0	1 (<1)	0
γ－グルタミルトランスフェラーゼ増加	1 (<1)	1 (<1)	0	1 (<1)	1 (<1)
肝酵素上昇	6 (<1)	1 (<1)	0	1 (<1)	1 (<1)
尿中蛋白陽性	0	0	1 (<1)	1 (<1)	0
白血球数減少	0	0	1 (<1)	1 (<1)	0
アラニン・アミノトランスフェラーゼ異常	0	0	0	0	1 (<1)
血中アルカリホスファターゼ異常	0	0	0	0	1 (<1)
血中クレアチニン増加	1 (<1)	0	0	0	0
心電図ＰＲ延長	1 (<1)	0	0	0	0
トランスアミナーゼ上昇	1 (<1)	0	0	0	1 (<1)
傷害、中毒および処置合併症	0	1 (<1)	1 (<1)	2 (<1)	0
交通事故	0	1 (<1)	1 (<1)	2 (<1)	0
外傷性脳損傷	0	1 (<1)	0	1 (<1)	0

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-DISC-A.SAS DATE: 02DEC2015

Table 155: Incidence of Serious Adverse Events by System Organ Class and Preferred Term: Studies 109MS301 and 109MS302

Incidence of serious adverse events by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a serious event	165 (21)	135 (18)	119 (16)	254 (17)	60 (17)
感染症および寄生虫症	12 (2)	17 (2)	15 (2)	32 (2)	4 (1)
胃腸炎	0	6 (<1)	3 (<1)	9 (<1)	0
蜂巣炎	0	2 (<1)	2 (<1)	4 (<1)	0
尿路感染	0	1 (<1)	2 (<1)	3 (<1)	0
ウイルス感染	0	2 (<1)	1 (<1)	3 (<1)	1 (<1)
Ｈ１Ｎ１インフルエンザ	1 (<1)	1 (<1)	1 (<1)	2 (<1)	0
肺炎	2 (<1)	2 (<1)	0	2 (<1)	2 (<1)
副鼻腔炎	0	1 (<1)	1 (<1)	2 (<1)	0
虫垂炎	0	1 (<1)	0	1 (<1)	1 (<1)
ダグラス窩膿瘍	0	0	1 (<1)	1 (<1)	0
ウイルス性胃腸炎	0	0	1 (<1)	1 (<1)	0
インフルエンザ	1 (<1)	0	1 (<1)	1 (<1)	0
骨盤内炎症性疾患	1 (<1)	0	1 (<1)	1 (<1)	0
扁桃周囲膿瘍	0	0	1 (<1)	1 (<1)	0
ウイルス感染後疲労症候群	0	1 (<1)	0	1 (<1)	0
急性腎盂腎炎	0	0	1 (<1)	1 (<1)	0
外陰部膿瘍	0	0	1 (<1)	1 (<1)	0
肛門膿瘍	1 (<1)	0	0	0	0
ボレリア感染	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
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3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
感染性下痢	1 (<1)	0	0	0	0
細菌性心内膜炎	1 (<1)	0	0	0	0
鼻咽頭炎	1 (<1)	0	0	0	0
膿胸	0	0	0	0	1 (<1)
ライター症候群	1 (<1)	0	0	0	0
敗血症	2 (<1)	0	0	0	0
気管炎	1 (<1)	0	0	0	0
消化器結核	1 (<1)	0	0	0	0
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	6 (<1)	4 (<1)	3 (<1)	7 (<1)	5 (1)
子宮平滑筋腫	2 (<1)	1 (<1)	1 (<1)	2 (<1)	1 (<1)
肺の良性新生物	0	1 (<1)	0	1 (<1)	0
乳癌	1 (<1)	0	1 (<1)	1 (<1)	0
子宮頚部癌	0	0	1 (<1)	1 (<1)	1 (<1)
神経鞘腫	0	1 (<1)	0	1 (<1)	0
移行上皮癌	0	1 (<1)	0	1 (<1)	0
基底細胞癌	1 (<1)	0	0	0	1 (<1)
乳房新生物	1 (<1)	0	0	0	0
子宮内膜癌	0	0	0	0	1 (<1)
線維腫	1 (<1)	0	0	0	0
血管腫	1 (<1)	0	0	0	0
転移性甲状腺癌	0	0	0	0	1 (<1)

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
血液およびリンパ系障害	2 (<1)	0	0	0	0
貧血	1 (<1)	0	0	0	0
小球性貧血	1 (<1)	0	0	0	0
免疫系障害	0	1 (<1)	2 (<1)	3 (<1)	3 (<1)
過敏症	0	1 (<1)	1 (<1)	2 (<1)	1 (<1)
アナフィラキシー様反応	0	0	1 (<1)	1 (<1)	0
アナフィラキシー反応	0	0	0	0	2 (<1)
内分泌障害	0	1 (<1)	2 (<1)	3 (<1)	0
甲状腺腫	0	1 (<1)	1 (<1)	2 (<1)	0
間脳性内分泌障害	0	0	1 (<1)	1 (<1)	0
代謝および栄養障害	1 (<1)	0	2 (<1)	2 (<1)	0
脱水	0	0	1 (<1)	1 (<1)	0
低血糖症	0	0	1 (<1)	1 (<1)	0
糖尿病性ケトアシドーシス	1 (<1)	0	0	0	0
精神障害	4 (<1)	5 (<1)	2 (<1)	7 (<1)	4 (1)
うつ病	2 (<1)	1 (<1)	1 (<1)	2 (<1)	2 (<1)
抑うつ気分を伴う適応障害	0	1 (<1)	0	1 (<1)	0
双極１型障害	0	1 (<1)	0	1 (<1)	0
全般性不安障害	0	1 (<1)	0	1 (<1)	0

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SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
躁病	0	1 (<1)	0	1 (<1)	0
自己愛性人格障害	0	1 (<1)	0	1 (<1)	0
自殺念慮	1 (<1)	1 (<1)	0	1 (<1)	1 (<1)
自殺企図	0	0	1 (<1)	1 (<1)	1 (<1)
不安	1 (<1)	0	0	0	0
自殺既遂	0	0	0	0	1 (<1)
神経系障害	118 (15)	81 (11)	69 (9)	150 (10)	40 (11)
多発性硬化症再発	111 (14)	78 (10)	62 (8)	140 (9)	36 (10)
頭痛	0	0	3 (<1)	3 (<1)	0
神経学的症状	0	1 (<1)	1 (<1)	2 (<1)	0
意識変容状態	0	0	1 (<1)	1 (<1)	0
良性頭蓋内圧亢進	0	0	1 (<1)	1 (<1)	0
構語障害	0	0	1 (<1)	1 (<1)	0
てんかん	1 (<1)	1 (<1)	0	1 (<1)	0
舌咽神経痛	0	1 (<1)	0	1 (<1)	0
大発作痙攣	2 (<1)	0	1 (<1)	1 (<1)	1 (<1)
虚血性脳卒中	0	0	1 (<1)	1 (<1)	0
片頭痛	2 (<1)	0	1 (<1)	1 (<1)	0
多発性硬化症	1 (<1)	0	1 (<1)	1 (<1)	0
後頭神経痛	0	0	1 (<1)	1 (<1)	0
部分発作	0	1 (<1)	0	1 (<1)	1 (<1)
下肢静止不能症候群	1 (<1)	0	1 (<1)	1 (<1)	0

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Incidence of serious adverse events by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
一過性全健忘	0	0	1 (<1)	1 (<1)	0
一過性脳虚血発作	0	1 (<1)	0	1 (<1)	0
横静脈洞血栓症	0	0	1 (<1)	1 (<1)	0
第７脳神経麻痺	0	1 (<1)	0	1 (<1)	0
失語症	0	0	0	0	1 (<1)
脳血管発作	1 (<1)	0	0	0	0
脳血管障害	0	0	0	0	1 (<1)
痙攣	3 (<1)	0	0	0	0
脳症	1 (<1)	0	0	0	0
意識消失	1 (<1)	0	0	0	1 (<1)
眼障害	3 (<1)	0	0	0	0
眼痛	1 (<1)	0	0	0	0
ホームズ・アディー瞳孔	1 (<1)	0	0	0	0
視力低下	1 (<1)	0	0	0	0
耳および迷路障害	0	0	1 (<1)	1 (<1)	1 (<1)
頭位性回転性めまい	0	0	1 (<1)	1 (<1)	0
前庭性運動失調	0	0	0	0	1 (<1)
心臓障害	0	0	4 (<1)	4 (<1)	1 (<1)
急性冠動脈症候群	0	0	1 (<1)	1 (<1)	0
徐脈	0	0	1 (<1)	1 (<1)	0

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Incidence of serious adverse events by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
心不全	0	0	1 (<1)	1 (<1)	0
うっ血性心不全	0	0	1 (<1)	1 (<1)	0
心筋炎	0	0	0	0	1 (<1)
血管障害	1 (<1)	2 (<1)	3 (<1)	5 (<1)	1 (<1)
潮紅	0	1 (<1)	1 (<1)	2 (<1)	0
静脈瘤	0	1 (<1)	1 (<1)	2 (<1)	0
深部静脈血栓症	0	0	1 (<1)	1 (<1)	1 (<1)
末梢性虚血	1 (<1)	0	0	0	0
呼吸器、胸郭および縦隔障害	1 (<1)	3 (<1)	0	3 (<1)	0
喘息	0	1 (<1)	0	1 (<1)	0
胸水	0	1 (<1)	0	1 (<1)	0
誤嚥性肺炎	0	1 (<1)	0	1 (<1)	0
鼻茸	1 (<1)	0	0	0	0
胃腸障害	5 (<1)	8 (1)	10 (1)	18 (1)	0
嘔吐	1 (<1)	2 (<1)	2 (<1)	4 (<1)	0
胃炎	0	0	3 (<1)	3 (<1)	0
腹痛	0	2 (<1)	0	2 (<1)	0
腹部ヘルニア	0	1 (<1)	0	1 (<1)	0
下腹部痛	0	0	1 (<1)	1 (<1)	0
便秘	0	1 (<1)	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
憩室穿孔	0	1 (<1)	0	1 (<1)	0
十二指腸炎	0	0	1 (<1)	1 (<1)	0
胃腸障害	0	1 (<1)	0	1 (<1)	0
胃腸出血	1 (<1)	0	1 (<1)	1 (<1)	0
裂孔ヘルニア	0	1 (<1)	0	1 (<1)	0
腸閉塞	0	0	1 (<1)	1 (<1)	0
悪心	1 (<1)	1 (<1)	0	1 (<1)	0
臍ヘルニア	0	0	1 (<1)	1 (<1)	0
大腸炎	1 (<1)	0	0	0	0
潰瘍性大腸炎	1 (<1)	0	0	0	0
急性膵炎	1 (<1)	0	0	0	0
腹膜出血	1 (<1)	0	0	0	0
肝胆道系障害	0	2 (<1)	1 (<1)	3 (<1)	1 (<1)
胆石症	0	1 (<1)	1 (<1)	2 (<1)	1 (<1)
胆管結石	0	0	1 (<1)	1 (<1)	0
胆汁うっ滞性肝炎	0	1 (<1)	0	1 (<1)	0
皮膚および皮下組織障害	1 (<1)	1 (<1)	1 (<1)	2 (<1)	0
そう痒症	0	0	1 (<1)	1 (<1)	0
スティーブンス・ジョンソン症候群	0	1 (<1)	0	1 (<1)	0
アレルギー性皮膚炎	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
筋骨格系および結合組織障害	3 (<1)	5 (<1)	3 (<1)	8 (<1)	0
背部痛	0	2 (<1)	1 (<1)	3 (<1)	0
関節痛	0	1 (<1)	0	1 (<1)	0
滑液包炎	0	1 (<1)	0	1 (<1)	0
変形性関節症	1 (<1)	0	1 (<1)	1 (<1)	0
シェーグレン症候群	0	1 (<1)	0	1 (<1)	0
変形性脊椎症	0	0	1 (<1)	1 (<1)	0
多発性関節炎	1 (<1)	0	0	0	0
滑液嚢腫	1 (<1)	0	0	0	0
腎および尿路障害	2 (<1)	2 (<1)	3 (<1)	5 (<1)	0
膀胱機能障害	0	1 (<1)	0	1 (<1)	0
膀胱穿孔	0	0	1 (<1)	1 (<1)	0
腎仙痛	0	0	1 (<1)	1 (<1)	0
尿管瘤	0	1 (<1)	0	1 (<1)	0
尿失禁	0	0	1 (<1)	1 (<1)	0
膀胱憩室	1 (<1)	0	0	0	0
腎下垂症	1 (<1)	0	0	0	0
妊娠、産褥および周産期の状態	3 (<1)	0	0	0	0
自然流産	2 (<1)	0	0	0	0
妊娠浮腫	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
生殖系および乳房障害	6 (<1)	4 (<1)	3 (<1)	7 (<1)	2 (<1)
卵巣嚢胞	1 (<1)	1 (<1)	2 (<1)	3 (<1)	0
腺筋症	0	0	1 (<1)	1 (<1)	0
子宮内膜症	0	1 (<1)	0	1 (<1)	0
月経過多	0	1 (<1)	0	1 (<1)	0
不正子宮出血	0	0	1 (<1)	1 (<1)	1 (<1)
卵巣嚢胞破裂	0	1 (<1)	0	1 (<1)	0
バルトリン嚢腫	1 (<1)	0	0	0	0
月経障害	1 (<1)	0	0	0	0
骨盤痛	1 (<1)	0	0	0	0
子宮出血	2 (<1)	0	0	0	1 (<1)
先天性、家族性および遺伝性障害	0	0	1 (<1)	1 (<1)	0
陰嚢水瘤	0	0	1 (<1)	1 (<1)	0
一般・全身障害および投与部位の状態	3 (<1)	1 (<1)	6 (<1)	7 (<1)	1 (<1)
発熱	0	1 (<1)	2 (<1)	3 (<1)	0
無力症	1 (<1)	0	1 (<1)	1 (<1)	0
閉塞性ヘルニア	0	0	1 (<1)	1 (<1)	0
非心臓性胸痛	0	0	1 (<1)	1 (<1)	0
末梢性浮腫	0	0	1 (<1)	1 (<1)	1 (<1)
インフルエンザ様疾患	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
骨盤腔内腫瘤	1 (<1)	0	0	0	0
臨床検査	2 (<1)	1 (<1)	5 (<1)	6 (<1)	0
アレルギー検査	0	0	1 (<1)	1 (<1)	0
尿中β２ミクログロブリン増加	0	0	1 (<1)	1 (<1)	0
血中ブドウ糖増加	0	0	1 (<1)	1 (<1)	0
結腸内視鏡検査	0	1 (<1)	0	1 (<1)	0
検査	0	0	1 (<1)	1 (<1)	0
医学的観察	0	0	1 (<1)	1 (<1)	0
肝酵素上昇	2 (<1)	0	0	0	0
傷害、中毒および処置合併症	9 (1)	10 (1)	9 (1)	19 (1)	3 (<1)
交通事故	0	1 (<1)	2 (<1)	3 (<1)	1 (<1)
大腿骨骨折	0	1 (<1)	1 (<1)	2 (<1)	1 (<1)
肉離れ	0	0	2 (<1)	2 (<1)	0
手首関節骨折	0	0	2 (<1)	2 (<1)	0
アルコール中毒	0	0	1 (<1)	1 (<1)	0
足関節部骨折	0	0	1 (<1)	1 (<1)	0
脳振盪	0	1 (<1)	0	1 (<1)	0
顔面骨骨折	0	1 (<1)	0	1 (<1)	0
転倒	0	1 (<1)	0	1 (<1)	0
足骨折	0	1 (<1)	0	1 (<1)	0
靭帯断裂	0	1 (<1)	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
半月板障害	1 (<1)	1 (<1)	0	1 (<1)	0
過量投与	0	1 (<1)	0	1 (<1)	0
術後発熱	0	1 (<1)	0	1 (<1)	0
処置による低血圧	0	1 (<1)	0	1 (<1)	0
橈骨骨折	0	0	1 (<1)	1 (<1)	1 (<1)
外傷性脳損傷	0	1 (<1)	0	1 (<1)	0
外傷性血腫	0	1 (<1)	0	1 (<1)	0
眼外傷	1 (<1)	0	0	0	0
大腿骨頚部骨折	1 (<1)	0	0	0	0
手骨折	1 (<1)	0	0	0	0
靭帯損傷	1 (<1)	0	0	0	0
腱断裂	3 (<1)	0	0	0	0
治療薬毒性	1 (<1)	0	0	0	0
脛骨骨折	1 (<1)	0	0	0	0
むち打ち損傷	0	0	0	0	1 (<1)
外科および内科処置	2 (<1)	4 (<1)	2 (<1)	6 (<1)	1 (<1)
乳房腫瘤摘除	0	1 (<1)	0	1 (<1)	0
女性不妊手術	0	1 (<1)	0	1 (<1)	0
子宮摘出	0	1 (<1)	0	1 (<1)	0
椎間板手術	0	0	1 (<1)	1 (<1)	0
治療食	0	1 (<1)	0	1 (<1)	0
静脈ステント挿入	0	0	1 (<1)	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-SER-A.SAS DATE: 02DEC2015

Incidence of serious adverse events by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
子宮頚部円錐切除	1 (<1)	0	0	0	0
不妊手術	0	0	0	0	1 (<1)
鼻甲介切除	1 (<1)	0	0	0	0
社会環境	1 (<1)	0	0	0	0
社会問題	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-SER-A.SAS DATE: 02DEC2015

Table 156: Incidence of Serious Infections by High Level Term - by Minimum Post-Baseline Lymphocyte Categories: Studies 109MS301 and 109MS302

Incidence of serious infections by high level term - by minimum post-baseline lymphocyte categories:
Studies 109MS301 and 109MS302
Page 1 of 10
Part 1 of 5: Placebo

	Minimum post-baseline lymphocyte category (x 10^9/L)					
	<0.5	>=0.5 to <0.8	>=0.8	>=0.91 (LLN)	Unknown	Total
Number of subjects in safety population	4 (100)	17 (100)	744 (100)	730 (100)	6 (100)	771 (100)
Number of subjects with a serious infection	0	1 (6)	11 (1)	11 (2)	0	12 (2)
腹部および消化管感染	0	0	2 (<1)	2 (<1)	0	2 (<1)
ウイルス感染ＮＥＣ	0	0	0	0	0	0
細菌感染ＮＥＣ	0	0	1 (<1)	1 (<1)	0	1 (<1)
尿路感染	0	0	0	0	0	0
インフルエンザウイルス感染	0	0	2 (<1)	2 (<1)	0	2 (<1)
上気道感染	0	0	2 (<1)	2 (<1)	0	2 (<1)
女性生殖器系感染	0	0	1 (<1)	1 (<1)	0	1 (<1)
下気道および肺感染	0	1 (6)	1 (<1)	1 (<1)	0	2 (<1)
ボレリア感染	0	0	1 (<1)	1 (<1)	0	1 (<1)
感染後の炎症性障害	0	0	1 (<1)	1 (<1)	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each high level term.
4: High level terms are presented by decreasing order of incidence in Total BG00012 column.
Abbreviations: LLN = lower limit of normal.

SOURCE: BG12MS/JAPAN/ISS/T-AE-HLT-LYM-SERINF-A.SAS DATE: 02DEC2015

Incidence of serious infections by high level term - by minimum post-baseline lymphocyte categories:
Studies 109MS301 and 109MS302
Page 2 of 10
Part 1 of 5: Placebo

	Minimum post-baseline lymphocyte category (x 10^9/L)					
	<0.5	>=0.5 to <0.8	>=0.8	>=0.91 (LLN)	Unknown	Total
敗血症、菌血症、ウイルス血症および真菌血症ＮＥＣ	0	0	2 (<1)	2 (<1)	0	2 (<1)
結核感染	0	0	1 (<1)	1 (<1)	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each high level term.
4: High level terms are presented by decreasing order of incidence in Total BG00012 column.
Abbreviations: LLN = lower limit of normal.

SOURCE: BG12MS/JAPAN/ISS/T-AE-HLT-LYM-SERINF-A.SAS DATE: 02DEC2015

Incidence of serious infections by high level term - by minimum post-baseline lymphocyte categories:
Studies 109MS301 and 109MS302
Page 3 of 10
Part 2 of 5: BG00012 240 mg BID

	Minimum post-baseline lymphocyte category (x 10^9/L)					
	<0.5	>=0.5 to <0.8	>=0.8	>=0.91 (LLN)	Unknown	Total
Number of subjects in safety population	43 (100)	166 (100)	548 (100)	472 (100)	12 (100)	769 (100)
Number of subjects with a serious infection	0	2 (1)	15 (3)	11 (2)	0	17 (2)
腹部および消化管感染	0	1 (<1)	6 (1)	4 (<1)	0	7 (<1)
ウイルス感染ＮＥＣ	0	0	3 (<1)	2 (<1)	0	3 (<1)
細菌感染ＮＥＣ	0	0	2 (<1)	2 (<1)	0	2 (<1)
尿路感染	0	1 (<1)	0	0	0	1 (<1)
インフルエンザウイルス感染	0	0	1 (<1)	1 (<1)	0	1 (<1)
上気道感染	0	0	1 (<1)	0	0	1 (<1)
女性生殖器系感染	0	0	0	0	0	0
下気道および肺感染	0	0	2 (<1)	2 (<1)	0	2 (<1)
ボレリア感染	0	0	0	0	0	0
感染後の炎症性障害	0	0	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each high level term.
4: High level terms are presented by decreasing order of incidence in Total BG00012 column.
Abbreviations: LLN = lower limit of normal.

SOURCE: BG12MS/JAPAN/ISS/T-AE-HLT-LYM-SERINF-A.SAS DATE: 02DEC2015

Incidence of serious infections by high level term - by minimum post-baseline lymphocyte categories:
Studies 109MS301 and 109MS302
Page 4 of 10
Part 2 of 5: BG00012 240 mg BID

	Minimum post-baseline lymphocyte category (x 10^9/L)					
	<0.5	>=0.5 to <0.8	>=0.8	>=0.91 (LLN)	Unknown	Total
敗血症、菌血症、ウイルス血症および真菌血症ＮＥＣ	0	0	0	0	0	0
結核感染	0	0	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each high level term.
4: High level terms are presented by decreasing order of incidence in Total BG00012 column.
Abbreviations: LLN = lower limit of normal.

SOURCE: BG12MS/JAPAN/ISS/T-AE-HLT-LYM-SERINF-A.SAS DATE: 02DEC2015

Incidence of serious infections by high level term - by minimum post-baseline lymphocyte categories:
Studies 109MS301 and 109MS302
Page 5 of 10
Part 3 of 5: BG00012 240 mg TID

	Minimum post-baseline lymphocyte category (x 10^9/L)					
	<0.5	>=0.5 to <0.8	>=0.8	>=0.91 (LLN)	Unknown	Total
Number of subjects in safety population	24 (100)	136 (100)	584 (100)	527 (100)	16 (100)	760 (100)
Number of subjects with a serious infection	0	4 (3)	11 (2)	10 (2)	0	15 (2)
腹部および消化管感染	0	1 (<1)	3 (<1)	3 (<1)	0	4 (<1)
ウイルス感染ＮＥＣ	0	1 (<1)	1 (<1)	1 (<1)	0	2 (<1)
細菌感染ＮＥＣ	0	1 (<1)	1 (<1)	1 (<1)	0	2 (<1)
尿路感染	0	0	3 (<1)	3 (<1)	0	3 (<1)
インフルエンザウイルス感染	0	0	2 (<1)	1 (<1)	0	2 (<1)
上気道感染	0	2 (1)	0	0	0	2 (<1)
女性生殖器系感染	0	0	2 (<1)	2 (<1)	0	2 (<1)
下気道および肺感染	0	0	0	0	0	0
ボレリア感染	0	0	0	0	0	0
感染後の炎症性障害	0	0	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each high level term.
4: High level terms are presented by decreasing order of incidence in Total BG00012 column.
Abbreviations: LLN = lower limit of normal.

SOURCE: BG12MS/JAPAN/ISS/T-AE-HLT-LYM-SERINF-A.SAS DATE: 02DEC2015

Incidence of serious infections by high level term - by minimum post-baseline lymphocyte categories:
Studies 109MS301 and 109MS302
Page 6 of 10
Part 3 of 5: BG00012 240 mg TID

	Minimum post-baseline lymphocyte category (x 10^9/L)					
	<0.5	>=0.5 to <0.8	>=0.8	>=0.91 (LLN)	Unknown	Total
敗血症、菌血症、ウイルス血症および真菌血症ＮＥＣ	0	0	0	0	0	0
結核感染	0	0	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each high level term.
4: High level terms are presented by decreasing order of incidence in Total BG00012 column.
Abbreviations: LLN = lower limit of normal.

SOURCE: BG12MS/JAPAN/ISS/T-AE-HLT-LYM-SERINF-A.SAS DATE: 02DEC2015

Incidence of serious infections by high level term - by minimum post-baseline lymphocyte categories:
Studies 109MS301 and 109MS302
Page 7 of 10
Part 4 of 5: Total BG00012

	Minimum post-baseline lymphocyte category (x 10^9/L)					
	<0.5	>=0.5 to <0.8	>=0.8	>=0.91 (LLN)	Unknown	Total
Number of subjects in safety population	67 (100)	302 (100)	1132 (100)	999 (100)	28 (100)	1529 (100)
Number of subjects with a serious infection	0	6 (2)	26 (2)	21 (2)	0	32 (2)
腹部および消化管感染	0	2 (<1)	9 (<1)	7 (<1)	0	11 (<1)
ウイルス感染ＮＥＣ	0	1 (<1)	4 (<1)	3 (<1)	0	5 (<1)
細菌感染ＮＥＣ	0	1 (<1)	3 (<1)	3 (<1)	0	4 (<1)
尿路感染	0	1 (<1)	3 (<1)	3 (<1)	0	4 (<1)
インフルエンザウイルス感染	0	0	3 (<1)	2 (<1)	0	3 (<1)
上気道感染	0	2 (<1)	1 (<1)	0	0	3 (<1)
女性生殖器系感染	0	0	2 (<1)	2 (<1)	0	2 (<1)
下気道および肺感染	0	0	2 (<1)	2 (<1)	0	2 (<1)
ボレリア感染	0	0	0	0	0	0
感染後の炎症性障害	0	0	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each high level term.
4: High level terms are presented by decreasing order of incidence in Total BG00012 column.
Abbreviations: LLN = lower limit of normal.

SOURCE: BG12MS/JAPAN/ISS/T-AE-HLT-LYM-SERINF-A.SAS DATE: 02DEC2015

Incidence of serious infections by high level term - by minimum post-baseline lymphocyte categories:
Studies 109MS301 and 109MS302
Page 8 of 10
Part 4 of 5: Total BG00012

	Minimum post-baseline lymphocyte category (x 10^9/L)					
	<0.5	>=0.5 to <0.8	>=0.8	>=0.91 (LLN)	Unknown	Total
敗血症、菌血症、ウイルス血症および真菌血症ＮＥＣ	0	0	0	0	0	0
結核感染	0	0	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each high level term.
4: High level terms are presented by decreasing order of incidence in Total BG00012 column.
Abbreviations: LLN = lower limit of normal.

SOURCE: BG12MS/JAPAN/ISS/T-AE-HLT-LYM-SERINF-A.SAS DATE: 02DEC2015

Incidence of serious infections by high level term - by minimum post-baseline lymphocyte categories:
Studies 109MS301 and 109MS302
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	Minimum post-baseline lymphocyte category (x 10^9/L)					
	<0.5	>=0.5 to <0.8	>=0.8	>=0.91 (LLN)	Unknown	Total
Number of subjects in safety population	1 (100)	12 (100)	334 (100)	326 (100)	4 (100)	351 (100)
Number of subjects with a serious infection	0	0	4 (1)	4 (1)	0	4 (1)
腹部および消化管感染	0	0	1 (<1)	1 (<1)	0	1 (<1)
ウイルス感染ＮＥＣ	0	0	1 (<1)	1 (<1)	0	1 (<1)
細菌感染ＮＥＣ	0	0	0	0	0	0
尿路感染	0	0	0	0	0	0
インフルエンザウイルス感染	0	0	0	0	0	0
上気道感染	0	0	0	0	0	0
女性生殖器系感染	0	0	0	0	0	0
下気道および肺感染	0	0	2 (<1)	2 (<1)	0	2 (<1)
ボレリア感染	0	0	0	0	0	0
感染後の炎症性障害	0	0	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each high level term.
4: High level terms are presented by decreasing order of incidence in Total BG00012 column.
Abbreviations: LLN = lower limit of normal.

SOURCE: BG12MS/JAPAN/ISS/T-AE-HLT-LYM-SERINF-A.SAS DATE: 02DEC2015

Incidence of serious infections by high level term - by minimum post-baseline lymphocyte categories:
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	Minimum post-baseline lymphocyte category (x 10^9/L)					
	<0.5	>=0.5 to <0.8	>=0.8	>=0.91 (LLN)	Unknown	Total
敗血症、菌血症、ウイルス血症および真菌血症ＮＥＣ	0	0	0	0	0	0
結核感染	0	0	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each high level term.
4: High level terms are presented by decreasing order of incidence in Total BG00012 column.
Abbreviations: LLN = lower limit of normal.

SOURCE: BG12MS/JAPAN/ISS/T-AE-HLT-LYM-SERINF-A.SAS DATE: 02DEC2015

Table 158: Summary of Lymphocytes (× 10^9/L) for Subjects With Lymphocyte Data After the Date of Last Dose - Actual Values: Treatment Completers in Studies 109MS301 and 109MS302

Summary of lymphocytes (x 10^9/L) for subjects with lymphocyte data after the date of last dose - actual values: Treatment completers in Studies 109MS301 and 109MS302

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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects evaluable (a)	63 (8)	66 (9)	67 (9)	133 (9)	40 (11)
Baseline					
n	63	66	67	133	40
Mean	1.891	1.961	2.038	2.000	1.881
SD	0.5692	0.8207	0.5876	0.7112	0.5552
Median	1.830	1.840	1.950	1.890	1.945
Min, Max	0.99, 3.87	1.03, 7.07	0.74, 3.71	0.74, 7.07	0.93, 2.79

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

(a) Number of subjects who completed treatment and had lymphocyte data (baseline value, at least one post-baseline value during the treatment period, and at least one follow-up value between 15 and 42 days after the date of last dose).

SOURCE: BG12MS/ISS/CSR/T-LB-LYM-POST-P3-A.SAS DATE: 20JAN2012

Summary of lymphocytes (x 10^9/L) for subjects with lymphocyte data after the date of last dose - actual values: Treatment completers in Studies 109MS301 and 109MS302

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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Treatment period					
Last value					
n	63	66	67	133	40
Mean	1.997	1.217	1.397	1.308	1.981
SD	0.6602	0.5329	0.4616	0.5045	0.7028
Median	1.880	1.095	1.380	1.270	1.850
Min, Max	0.91, 4.23	0.39, 3.08	0.43, 2.53	0.39, 3.08	0.80, 3.77
Follow-up relative to last dose					
4 weeks post-dose					
n	63	66	67	133	40
Mean	2.037	1.333	1.539	1.437	1.962
SD	0.6091	0.4771	0.4870	0.4913	0.6705
Median	1.940	1.235	1.480	1.420	1.890
Min, Max	0.97, 4.11	0.46, 2.89	0.56, 3.02	0.46, 3.02	0.55, 3.31

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

(a) Number of subjects who completed treatment and had lymphocyte data (baseline value, at least one post-baseline value during the treatment period, and at least one follow-up value between 15 and 42 days after the date of last dose).

SOURCE: BG12MS/ISS/CSR/T-LB-LYM-POST-P3-A.SAS DATE: 20JAN2012

Table 159: Number and Percent of Patients who had ALC <0.8 and ≥0.5 × 10^9/L and Confirmed at Least 6 Months Later (Excluding Patients who had < 0.5 × 10^9/L for at Least 6 Months): Controlled and Uncontrolled MS studies (Pool B)

Number and percent of patients who had ALC <0.8 and >=0.5x10^9/L and confirmed at least 6 months later (excluding patients who had < 0.5 x10^9/L for at least 6 months): Controlled and uncontrolled MS studies (Pool B)

	BG00012 Lower Doses	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012
Number of subjects in safety population	128	1136	1249	2513
Number of subjects with any post-baseline lymphocyte count data	128 (100)	1119 (100)	1223 (100)	2470 (100)
Subjects who had ALC <0.8 and >=0.5x10^9/L onset confirmed atleast 6 months later (excluding patients who had < 0.5 x10^9/L for at least 6 months)	8 (6)	122 (11)	94 (8)	224 (9)

NOTE 1: Numbers in parentheses are percentages.
2: Data from Studies 109MS301 and 109MS302 after subjects switched to alternative MS medications are excluded.
3: One month is equal to 4 weeks.
ALC = Absolute lymphocyte count.

SOURCE: BG12MS/ISS/INTERIM5/T-LB-LYM-LT0PT8EXCL5-B.SAS DATE: 06NOV2015

Table 160: Summary of Lymphocytes (× 10^9/L) for Subjects With Lymphocyte Data After the Date of Last Dose - Change From Baseline Values: Treatment Completers in Studies 109MS301 and 109MS302

Summary of lymphocytes (x 10^9/L) for subjects with lymphocyte data after the date of last dose - change from baseline values: Treatment completers in Studies 109MS301 and 109MS302

Page 1 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects evaluable (a)	63 (8)	66 (9)	67 (9)	133 (9)	40 (11)
Treatment period					
Last value					
n	63	66	67	133	40
Mean	0.106	-0.744	-0.641	-0.692	0.100
SD	0.4832	0.8313	0.4941	0.6819	0.4762
Median	0.080	-0.690	-0.630	-0.690	0.045
Min, Max	-1.35, 1.65	-5.09, 1.73	-1.63, 0.74	-5.09, 1.73	-0.79, 1.62

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

(a) Number of subjects who completed treatment and had lymphocyte data (baseline value, at least one post-baseline value during the treatment period, and at least one follow-up value between 15 and 42 days after the date of last dose).

SOURCE: BG12MS/ISS/CSR/T-LB-LYM-POST-CHG-P3-A.SAS DATE: 20JAN2012

Summary of lymphocytes (x 10^9/L) for subjects with lymphocyte data after the date of last dose - change from baseline values: Treatment completers in Studies 109MS301 and 109MS302

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Follow-up relative to last dose					
4 weeks post-dose					
n	63	66	67	133	40
Mean	0.146	-0.628	-0.499	-0.563	0.082
SD	0.3939	0.6883	0.4295	0.5742	0.5370
Median	0.140	-0.515	-0.490	-0.510	0.050
Min, Max	-0.92, 1.53	-4.18, 0.39	-1.50, 0.41	-4.18, 0.41	-0.84, 1.88

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

(a) Number of subjects who completed treatment and had lymphocyte data (baseline value, at least one post-baseline value during the treatment period, and at least one follow-up value between 15 and 42 days after the date of last dose).

SOURCE: BG12MS/ISS/CSR/T-LB-LYM-POST-CHG-P3-A.SAS DATE: 20JAN2012

Table 161: Summary of Lymphocytes (× 10^9/L) for Subjects With Lymphocyte Data After the Date of Last Dose - Percentage Change From Baseline Values: Treatment Completers in Studies 109MS301 and 109MS302

Summary of lymphocytes (x 10^9/L) for subjects with lymphocyte data after the date of last dose - percentage change from baseline values: Treatment completers in Studies 109MS301 and 109MS302

Page 1 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects evaluable (a)	63 (8)	66 (9)	67 (9)	133 (9)	40 (11)
Treatment period					
Last value					
n	63	66	67	133	40
Mean	7.25	-33.61	-29.05	-31.32	6.56
SD	23.798	33.069	25.373	29.422	25.336
Median	4.53	-38.86	-33.20	-35.29	2.70
Min, Max	-36.3, 68.3	-79.5, 128.1	-78.7, 100.0	-79.5, 128.1	-34.6, 81.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

(a) Number of subjects who completed treatment and had lymphocyte data (baseline value, at least one post-baseline value during the treatment period, and at least one follow-up value between 15 and 42 days after the date of last dose).

SOURCE: BG12MS/ISS/CSR/T-LB-LYM-POST-PCTCHG-P3-A.SAS DATE: 20JAN2012

Summary of lymphocytes (x 10^9/L) for subjects with lymphocyte data after the date of last dose - percentage change from baseline values: Treatment completers in Studies 109MS301 and 109MS302

Page 2 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Follow-up relative to last dose					
4 weeks post-dose					
n	63	66	67	133	40
Mean	10.05	-28.34	-22.83	-25.57	7.20
SD	22.421	24.030	19.256	21.849	36.727
Median	7.69	-31.27	-24.55	-28.11	4.04
Min, Max	-48.7, 77.7	-76.2, 23.9	-72.3, 28.4	-76.2, 28.4	-40.9, 180.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

(a) Number of subjects who completed treatment and had lymphocyte data (baseline value, at least one post-baseline value during the treatment period, and at least one follow-up value between 15 and 42 days after the date of last dose).

SOURCE: BG12MS/ISS/CSR/T-LB-LYM-POST-PCTCHG-P3-A.SAS DATE: 20JAN2012

Table 172: Incidence of Adverse Events That Led to Discontinuation of Study Drug by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period)

Incidence of adverse events that led to discontinuation of study drug by system organ class and preferred term
- Part I (placebo-controlled period)

	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Number of subjects with an event leading to discontinuation of study drug	2 (2)	1 (<1)
神経系障害	1 (<1)	0
多発性硬化症再発	1 (<1)	0
肝胆道系障害	0	1 (<1)
肝障害	0	1 (<1)
臨床検査	1 (<1)	0
肝機能検査異常	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-DISCON.SAS DATE: 25SEP2015

Table 173: Incidence of Adverse Events That Led to Dose Reduction by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period)

Incidence of adverse events that led to dose reduction by system organ class and preferred term
-Part I (placebo-controlled period)

	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Number of subjects with an event that led to dose reduction	3 (3)	7 (6)
血管障害	0	2 (2)
潮紅	0	2 (2)
胃腸障害	3 (3)	5 (5)
腹痛	0	2 (2)
悪心	1 (<1)	2 (2)
下痢	0	1 (<1)
腹部膨満	1 (<1)	0
上腹部痛	2 (2)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by descending incidence in the BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose reduction, regardless of reason. Adverse events that may have initially led to dose reduction but then subsequently led to study treatment discontinuation are therefore not included.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPTDOSE-RED.SAS DATE: 25SEP2015

Table 174: Incidence of Adverse Events That Led to Dose Interruption by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period)

Incidence of adverse events that led to dose interruption by system organ class and preferred term
–Part I (placebo-controlled period)
Page 1 of 2

	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Number of subjects with an event that led to dose interruption	5 (4)	5 (5)
感染症および寄生虫症	1 (<1)	2 (2)
胃腸炎	0	2 (2)
インフルエンザ	0	1 (<1)
鼻咽頭炎	1 (<1)	0
眼障害	1 (<1)	0
結膜炎	1 (<1)	0
耳および迷路障害	1 (<1)	0
回転性めまい	1 (<1)	0
胃腸障害	1 (<1)	3 (3)
嘔吐	0	2 (2)
腹痛	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by descending incidence in the BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPTDOSE-INT.SAS DATE: 25SEP2015

Incidence of adverse events that led to dose interruption by system organ class and preferred term
–Part I (placebo-controlled period)
Page 2 of 2

	Placebo	BG00012 240 mg BID
下痢	0	1 (<1)
胃食道逆流性疾患	0	1 (<1)
悪心	1 (<1)	1 (<1)
上腹部痛	1 (<1)	0
肝胆道系障害	0	1 (<1)
肝障害	0	1 (<1)
一般・全身障害および投与部位の状態	1 (<1)	0
医薬品副作用	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by descending incidence in the BG00012 column within each system organ class.
5: This table presents all adverse events indicated as leading to dose interruption, regardless of reason. Adverse events that may have initially led to dose interruption but then subsequently led to dose reduction and/or study treatment discontinuation are therefore not included.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPTDOSE-INT.SAS DATE: 25SEP2015

Table 176: Incidence of Flushing and Other Related Symptoms by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period)

Incidence of flushing and other related symptoms by system organ class and preferred term
- Part I (placebo-controlled period)

	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Number of subjects with an event	10 (9)	33 (30)
Number of subjects with flushing (a)	10 (9)	30 (27)
Number of subjects with an other related symptom (b)	0	5 (5)
神経系障害	0	1 (<1)
灼熱感	0	1 (<1)
血管障害	10 (9)	30 (27)
潮紅	9 (8)	24 (22)
ほてり	1 (<1)	7 (6)
皮膚および皮下組織障害	0	4 (4)
紅斑	0	4 (4)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by descending incidence in the BG00012 column within each system organ class.
(a) Flushing consists of the preferred terms of Flushing and Hot Flush.
(b) Other related symptoms consist of the preferred terms of Erythema, Generalised Erythema, Burning Sensation, Skin Burning, Feeling Hot, and Hyperaemia.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-FLUSH.SAS DATE: 25SEP2015

Table 177: Incidence of Serious Adverse Events by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period) – Subjects From Japan

Incidence of serious adverse events by system organ class and preferred term
- Part I (placebo-controlled period)-Subjects from Japan
Page 1 of 2

	Placebo	BG00012 240 mg BID
Number of subjects from Japan in the safety population	58 (100)	56 (100)
Number of subjects from Japan with an event	11 (19)	10 (18)
感染症および寄生虫症	0	1 (2)
腎盂腎炎	0	1 (2)
精神障害	0	1 (2)
不安	0	1 (2)
神経系障害	11 (19)	7 (13)
多発性硬化症再発	11 (19)	7 (13)
傷害、中毒および処置合併症	0	1 (2)
上腕骨骨折	0	1 (2)
交通事故	0	1 (2)
脛骨骨折	0	1 (2)
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	1 (2)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-SERIOUS.SAS DATE: 25SEP2015

Incidence of serious adverse events by system organ class and preferred term
- Part I (placebo-controlled period)-Subjects from Japan
Page 2 of 2

	Placebo	BG00012 240 mg BID
卵管癌	1 (2)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-SERIOUS.SAS DATE: 25SEP2015

Table 178: Incidence of Adverse Events That Led to Discontinuation of Study Drug by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period) - Subjects from Japan

Incidence of adverse events that led to discontinuation of study drug
by system organ class and preferred term
- Part I (placebo-controlled period)-Subjects from Japan

	Placebo	BG00012 240 mg BID
Number of subjects from Japan in the safety population	58 (100)	56 (100)
Number of subjects from Japan with an event leading to discontinuation of study drug	2 (3)	1 (2)
神経系障害	1 (2)	0
多発性硬化症再発	1 (2)	0
肝胆道系障害	0	1 (2)
肝障害	0	1 (2)
臨床検査	1 (2)	0
肝機能検査異常	1 (2)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-DISCON.SAS DATE: 25SEP2015

Table 179: Incidence of Flushing and Other Related Symptoms by System Organ Class and Preferred Term: 24 Weeks of Studies 109MS301 and 109MS302

Incidence of flushing and other related symptoms by system organ class and preferred term:
24 weeks of studies 109MS301 and 109MS302
Page 1 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with an event	43 (6)	300 (39)	278 (37)	578 (38)	14 (4)
Number of subjects with flushing (a)	37 (5)	267 (35)	232 (31)	499 (33)	8 (2)
Number of subjects with an other related symptom (b)	9 (1)	51 (7)	72 (9)	123 (8)	6 (2)
神経系障害	5 (<1)	14 (2)	14 (2)	28 (2)	0
灼熱感	5 (<1)	14 (2)	14 (2)	28 (2)	0
血管障害	37 (5)	269 (35)	237 (31)	506 (33)	8 (2)
潮紅	27 (4)	231 (30)	199 (26)	430 (28)	3 (<1)
ほてり	10 (1)	39 (5)	41 (5)	80 (5)	5 (1)
充血	0	2 (<1)	6 (<1)	8 (<1)	0
皮膚および皮下組織障害	3 (<1)	29 (4)	47 (6)	76 (5)	4 (1)
紅斑	3 (<1)	24 (3)	40 (5)	64 (4)	4 (1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
(a) Flushing consists of the preferred terms of Flushing and Hot Flush.
(b) Other related symptoms consist of the preferred terms of Erythema, Generalised Erythema, Burning Sensation, Skin Burning, Feeling Hot, and Hyperaemia.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-FLUSH-A-24W.SAS DATE: 02DEC2015

Incidence of flushing and other related symptoms by system organ class and preferred term:
24 weeks of studies 109MS301 and 109MS302
Page 2 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
皮膚灼熱感	0	4 (<1)	6 (<1)	10 (<1)	0
全身紅斑	0	2 (<1)	3 (<1)	5 (<1)	0
一般・全身障害および投与部位の状態	2 (<1)	11 (1)	9 (1)	20 (1)	3 (<1)
熱感	2 (<1)	11 (1)	9 (1)	20 (1)	3 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
(a) Flushing consists of the preferred terms of Flushing and Hot Flush.
(b) Other related symptoms consist of the preferred terms of Erythema, Generalised Erythema, Burning Sensation, Skin Burning, Feeling Hot, and Hyperaemia.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-FLUSH-A-24W.SAS DATE: 02DEC2015

Table 180: Incidence of Flushing and Other Related Symptoms by System Organ Class and Preferred Term: Studies 109MS301 and 109MS302

Incidence of flushing and other related symptoms by system organ class and preferred term:
Studies 109MS301 and 109MS302
Page 1 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with an event	65 (8)	347 (45)	308 (41)	655 (43)	18 (5)
Number of subjects with flushing (a)	47 (6)	307 (40)	250 (33)	557 (36)	10 (3)
Number of subjects with an other related symptom (b)	23 (3)	73 (9)	95 (13)	168 (11)	9 (3)
神経系障害	13 (2)	21 (3)	25 (3)	46 (3)	0
灼熱感	13 (2)	21 (3)	25 (3)	46 (3)	0
血管障害	47 (6)	309 (40)	256 (34)	565 (37)	10 (3)
潮紅	33 (4)	265 (34)	215 (28)	480 (31)	6 (2)
ほてり	16 (2)	52 (7)	49 (6)	101 (7)	5 (1)
充血	0	2 (<1)	7 (<1)	9 (<1)	0
	10 (1)	43 (6)	62 (8)	105 (7)	6 (2)
皮膚および皮下組織障害					
紅斑	10 (1)	36 (5)	54 (7)	90 (6)	6 (2)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
(a) Flushing consists of the preferred terms of Flushing and Hot Flush.
(b) Other related symptoms consist of the preferred terms of Erythema, Generalised Erythema, Burning Sensation, Skin Burning, Feeling Hot, and Hyperaemia.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-FLUSH-A.SAS DATE: 02DEC2015

Incidence of flushing and other related symptoms by system organ class and preferred term:
Studies 109MS301 and 109MS302
Page 2 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
皮膚灼熱感	0	6 (<1)	7 (<1)	13 (<1)	0
全身紅斑	0	4 (<1)	4 (<1)	8 (<1)	0
一般・全身障害および投与部位の状態	2 (<1)	15 (2)	12 (2)	27 (2)	4 (1)
熱感	2 (<1)	15 (2)	12 (2)	27 (2)	4 (1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
(a) Flushing consists of the preferred terms of Flushing and Hot Flush.
(b) Other related symptoms consist of the preferred terms of Erythema, Generalised Erythema, Burning Sensation, Skin Burning, Feeling Hot, and Hyperaemia.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-FLUSH-A.SAS DATE: 02DEC2015

Table 181: Incidence of Potential Opportunistic Infections by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period)

Incidence of potential opportunistic infections by system organ class and preferred term
- Part I (placebo-controlled period)

	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Number of subjects with a potential opportunistic infection event	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-OPPIN.SAS DATE: 25SEP2015

Table 182: Incidence of Potential Opportunistic Infections by System Organ Class and Preferred Term: Studies 109MS301 and 109MS302

Incidence of potential opportunistic infections by system organ class and preferred term:
Studies 109MS301 and 109MS302

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a potential opportunistic infection event	2 (<1)	1 (<1)	0	1 (<1)	0
感染症および寄生虫症	2 (<1)	1 (<1)	0	1 (<1)	0
神経合併症を伴う帯状疱疹感染	0	1 (<1)	0	1 (<1)	0
真菌性消化管感染	1 (<1)	0	0	0	0
消化器結核	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-OPPIN-A.SAS DATE: 02DEC2015

Table 183: Incidence of Potential Opportunistic Infections by System Organ Class and Preferred Term by Combined Treatment Group in Previous and Current Studies

Incidence of potential opportunistic infections by system organ class and preferred term by combined treatment group in previous and current studies

	BG00012 240 mg BID Previously Treated With:			BG00012 240 mg TID Previously Treated With:		
	BG00012 240 mg BID	Placebo	GA	BG00012 240 mg TID	Placebo	GA
Number of subjects in safety population	501 (100)	249 (100)	118 (100)	501 (100)	248 (100)	119 (100)
Number of subjects with a potential opportunistic infection event	2 (<1)	0	1 (<1)	0	1 (<1)	1 (<1)
感染症および寄生虫症	2 (<1)	0	1 (<1)	0	1 (<1)	1 (<1)
食道カンジダ症	2 (<1)	0	0	0	0	0
トキソプラズマ性眼感染	0	0	0	0	0	1 (<1)
進行性多巣性白質脳症	0	0	0	0	1 (<1)	0
結核	0	0	1 (<1)	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: A subject was counted only once within each system organ class/preferred term.
3: Preferred terms are presented by decreasing total incidence within each system organ class.

SOURCE: BG12MS/109MS303/INTERIM6/T-AE-SOCPT-OPPINF-PREV-STD-TRT.SAS DATE: 08JUL2015

Table 185: Incidence of Cardiovascular Disorders by System Organ Class and Preferred Term: 24 Weeks of Studies 109MS301 and 109MS302

Incidence of cardiovascular disorders by system organ class and preferred term:
24 weeks of studies 109MS301 and 109MS302
Page 1 of 3

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a cardiovascular disorder event (a)	45 (6)	30 (4)	33 (4)	63 (4)	18 (5)
神経系障害	2 (<1)	2 (<1)	2 (<1)	4 (<1)	1 (<1)
失神	2 (<1)	1 (<1)	2 (<1)	3 (<1)	1 (<1)
体位性めまい	0	1 (<1)	0	1 (<1)	0
心臓障害	21 (3)	14 (2)	17 (2)	31 (2)	10 (3)
動悸	10 (1)	7 (<1)	4 (<1)	11 (<1)	1 (<1)
頻脈	2 (<1)	3 (<1)	4 (<1)	7 (<1)	4 (1)
第一度房室ブロック	0	1 (<1)	1 (<1)	2 (<1)	1 (<1)
徐脈	1 (<1)	0	2 (<1)	2 (<1)	1 (<1)
期外収縮	1 (<1)	1 (<1)	1 (<1)	2 (<1)	0
洞性徐脈	0	1 (<1)	1 (<1)	2 (<1)	0
洞性頻脈	2 (<1)	0	2 (<1)	2 (<1)	0
上室性期外収縮	1 (<1)	2 (<1)	0	2 (<1)	0
心室性期外収縮	2 (<1)	1 (<1)	1 (<1)	2 (<1)	0
狭心症	0	0	1 (<1)	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
(a) Cardiovascular disorders include cardiac CMQ (Custom MedDRA Query), and Cardiac and vascular investigations HLGT (excluding enzyme tests).

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-CVD-A-24W.SAS DATE: 02DEC2015

Incidence of cardiovascular disorders by system organ class and preferred term:
24 weeks of studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
心房細動	0	0	1 (<1)	1 (<1)	1 (<1)
心不全	0	0	1 (<1)	1 (<1)	0
右脚ブロック	0	0	0	0	1 (<1)
伝導障害	0	0	0	0	1 (<1)
心筋虚血	1 (<1)	0	0	0	0
心筋炎	0	0	0	0	1 (<1)
上室性頻脈	1 (<1)	0	0	0	0
発作性頻脈	1 (<1)	0	0	0	0
呼吸器、胸郭および縦隔障害	5 (<1)	5 (<1)	3 (<1)	8 (<1)	4 (1)
呼吸困難	5 (<1)	4 (<1)	3 (<1)	7 (<1)	4 (1)
労作性呼吸困難	0	1 (<1)	0	1 (<1)	0
一般・全身障害および投与部位の状態	11 (1)	3 (<1)	9 (1)	12 (<1)	2 (<1)
末梢性浮腫	11 (1)	3 (<1)	9 (1)	12 (<1)	2 (<1)
臨床検査	8 (1)	6 (<1)	2 (<1)	8 (<1)	2 (<1)
血圧上昇	0	1 (<1)	1 (<1)	2 (<1)	0
心拍数増加	1 (<1)	2 (<1)	0	2 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
(a) Cardiovascular disorders include cardiac CMQ (Custom MedDRA Query), and Cardiac and vascular investigations HLGT (excluding enzyme tests).

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-CVD-A-24W.SAS DATE: 02DEC2015

Incidence of cardiovascular disorders by system organ class and preferred term:
24 weeks of studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
血圧低下	0	1 (<1)	0	1 (<1)	0
心雑音	0	1 (<1)	0	1 (<1)	0
心電図ＱＴ延長	0	1 (<1)	0	1 (<1)	2 (<1)
心拍数減少	0	0	1 (<1)	1 (<1)	0
動脈雑音	1 (<1)	0	0	0	0
心電図異常	2 (<1)	0	0	0	0
心電図ＰＲ延長	1 (<1)	0	0	0	0
心電図Ｔ波振幅減少	0	0	0	0	1 (<1)
心音異常	1 (<1)	0	0	0	0
ＱＲＳ軸異常	2 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
(a) Cardiovascular disorders include cardiac CMQ (Custom MedDRA Query), and Cardiac and vascular investigations HLGT (excluding enzyme tests).

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-CVD-A-24W.SAS DATE: 02DEC2015

Table 186: Incidence of Cardiovascular Disorders by System Organ Class and Preferred Term: Studies 109MS301 and 109MS302

Incidence of cardiovascular disorders by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a cardiovascular disorder event (a)	82 (11)	63 (8)	83 (11)	146 (10)	37 (11)
神経系障害	4 (<1)	3 (<1)	7 (<1)	10 (<1)	3 (<1)
失神	4 (<1)	2 (<1)	7 (<1)	9 (<1)	2 (<1)
体位性めまい	0	1 (<1)	0	1 (<1)	0
起立不耐性	0	0	0	0	1 (<1)
心臓障害	37 (5)	40 (5)	47 (6)	87 (6)	19 (5)
頻脈	6 (<1)	8 (1)	8 (1)	16 (1)	6 (2)
動悸	10 (1)	9 (1)	6 (<1)	15 (<1)	3 (<1)
上室性期外収縮	2 (<1)	5 (<1)	4 (<1)	9 (<1)	1 (<1)
心室性期外収縮	7 (<1)	2 (<1)	7 (<1)	9 (<1)	0
第一度房室ブロック	1 (<1)	5 (<1)	3 (<1)	8 (<1)	2 (<1)
狭心症	0	3 (<1)	2 (<1)	5 (<1)	0
徐脈	1 (<1)	0	5 (<1)	5 (<1)	2 (<1)
洞性徐脈	2 (<1)	2 (<1)	3 (<1)	5 (<1)	0
期外収縮	1 (<1)	3 (<1)	1 (<1)	4 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
(a) Cardiovascular disorders include cardiac CMQ (Custom MedDRA Query), and Cardiac and vascular investigations HLGT (excluding enzyme tests).

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-CVD-A.SAS DATE: 02DEC2015

Incidence of cardiovascular disorders by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
洞性頻脈	3 (<1)	0	4 (<1)	4 (<1)	0
左脚ブロック	1 (<1)	0	2 (<1)	2 (<1)	1 (<1)
右脚ブロック	0	1 (<1)	1 (<1)	2 (<1)	1 (<1)
心臓瘤	0	1 (<1)	1 (<1)	2 (<1)	0
心筋症	0	1 (<1)	1 (<1)	2 (<1)	0
僧帽弁逸脱	0	1 (<1)	1 (<1)	2 (<1)	0
ウォルフ・パーキンソン・ホワイト症候群	0	2 (<1)	0	2 (<1)	0
急性冠動脈症候群	0	0	1 (<1)	1 (<1)	0
心房細動	0	0	1 (<1)	1 (<1)	1 (<1)
心不全	0	0	1 (<1)	1 (<1)	0
うっ血性心不全	0	0	1 (<1)	1 (<1)	0
伝導障害	3 (<1)	1 (<1)	0	1 (<1)	1 (<1)
結節性調律	0	0	1 (<1)	1 (<1)	0
頻脈性不整脈	0	0	1 (<1)	1 (<1)	0
上室性不整脈	1 (<1)	0	0	0	0
心筋虚血	1 (<1)	0	0	0	0
心筋炎	0	0	0	0	1 (<1)
上室性頻脈	1 (<1)	0	0	0	0
発作性頻脈	1 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
(a) Cardiovascular disorders include cardiac CMQ (Custom MedDRA Query), and Cardiac and vascular investigations HLGT (excluding enzyme tests).

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-CVD-A.SAS DATE: 02DEC2015

Incidence of cardiovascular disorders by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
呼吸器、胸郭および縦隔障害	8 (1)	7 (<1)	5 (<1)	12 (<1)	7 (2)
呼吸困難	7 (<1)	6 (<1)	5 (<1)	11 (<1)	7 (2)
労作性呼吸困難	1 (<1)	1 (<1)	0	1 (<1)	0
一般・全身障害および投与部位の状態	19 (2)	7 (<1)	16 (2)	23 (2)	4 (1)
末梢性浮腫	19 (2)	7 (<1)	16 (2)	23 (2)	4 (1)
臨床検査	25 (3)	7 (<1)	13 (2)	20 (1)	7 (2)
心電図ＱＴ延長	7 (<1)	1 (<1)	5 (<1)	6 (<1)	5 (1)
血圧上昇	1 (<1)	2 (<1)	2 (<1)	4 (<1)	1 (<1)
心電図異常	4 (<1)	0	3 (<1)	3 (<1)	0
心拍数増加	2 (<1)	2 (<1)	0	2 (<1)	0
血圧低下	1 (<1)	1 (<1)	0	1 (<1)	0
拡張期血圧上昇	0	0	1 (<1)	1 (<1)	0
心雑音	2 (<1)	1 (<1)	0	1 (<1)	0
心電図Ｔ波振幅減少	1 (<1)	0	1 (<1)	1 (<1)	1 (<1)
心拍数減少	0	0	1 (<1)	1 (<1)	0
動脈雑音	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
(a) Cardiovascular disorders include cardiac CMQ (Custom MedDRA Query), and Cardiac and vascular investigations HLGT (excluding enzyme tests).

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-CVD-A.SAS DATE: 02DEC2015

Incidence of cardiovascular disorders by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
収縮期血圧上昇	1 (<1)	0	0	0	0
心電図ＰＲ延長	1 (<1)	0	0	0	0
心電図異常ＱＲＳ群	1 (<1)	0	0	0	0
心電図ＱＲＳ群延長	1 (<1)	0	0	0	0
心電図２相性Ｔ波	0	0	0	0	1 (<1)
心音異常	1 (<1)	0	0	0	0
ＱＲＳ軸異常	2 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
(a) Cardiovascular disorders include cardiac CMQ (Custom MedDRA Query), and Cardiac and vascular investigations HLGT (excluding enzyme tests).

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-CVD-A.SAS DATE: 02DEC2015

Table 188: Incidence of Cardiovascular Disorders by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period)

Incidence of cardiovascular disorders by system organ class and preferred term - Part I (placebo-controlled period)

	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Number of subjects with a cardiovascular disorder event (a)	1 (<1)	4 (4)
神経系障害	0	1 (<1)
失神	0	1 (<1)
心臓障害	0	1 (<1)
洞性頻脈	0	1 (<1)
一般・全身障害および投与部位の状態	1 (<1)	2 (2)
末梢性浮腫	1 (<1)	2 (2)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each interval for each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.
(a) Cardiovascular disorders include cardiac CMQ (Custom MedDRA Query), and Cardiac and vascular investigations HLGT (excluding enzyme tests).

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Table 191: Incidence of Adverse Events by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period)

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Number of subjects with an event	87 (77)	96 (86)
感染症および寄生虫症	47 (42)	45 (41)
鼻咽頭炎	28 (25)	26 (23)
上気道感染	11 (10)	5 (5)
胃腸炎	0	4 (4)
咽頭炎	1 (<1)	3 (3)
尿路感染	1 (<1)	3 (3)
インフルエンザ	1 (<1)	2 (2)
腎盂腎炎	0	2 (2)
気管支炎	0	1 (<1)
慢性副鼻腔炎	0	1 (<1)
膀胱炎	0	1 (<1)
消化管感染	0	1 (<1)
ヘルペスウイルス感染	0	1 (<1)
感染	0	1 (<1)
副鼻腔炎	2 (2)	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
癜風	0	1 (<1)
扁桃炎	2 (2)	1 (<1)
細菌性上気道感染	0	1 (<1)
蜂巣炎	1 (<1)	0
せつ	1 (<1)	0
陰部ヘルペス	1 (<1)	0
単純ヘルペス	1 (<1)	0
帯状疱疹	1 (<1)	0
口腔ヘルペス	1 (<1)	0
扁桃周囲膿瘍	1 (<1)	0
ウイルス感染	1 (<1)	0
血液およびリンパ系障害	1 (<1)	4 (4)
好酸球増加症	0	2 (2)
鉄欠乏性貧血	1 (<1)	1 (<1)
白血球減少症	0	1 (<1)
リンパ球減少症	0	1 (<1)
免疫系障害	2 (2)	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
季節性アレルギー	0	1 (<1)
造影剤アレルギー	1 (<1)	0
薬物過敏症	1 (<1)	0
代謝および栄養障害	2 (2)	3 (3)
食欲減退	0	1 (<1)
糖尿病	1 (<1)	1 (<1)
低血糖症	0	1 (<1)
耐糖能障害	1 (<1)	0
精神障害	7 (6)	9 (8)
不眠症	4 (4)	3 (3)
不安	0	2 (2)
不安障害	0	1 (<1)
うつ病	1 (<1)	1 (<1)
気分動揺	0	1 (<1)
パニック発作	0	1 (<1)
適応障害	1 (<1)	0
抑うつ気分	1 (<1)	0
精神障害	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
神経系障害	38 (34)	31 (28)
多発性硬化症再発	35 (31)	25 (23)
頭痛	2 (2)	4 (4)
浮動性めまい	1 (<1)	3 (3)
感覚鈍麻	0	3 (3)
錯感覚	0	2 (2)
灼熱感	0	1 (<1)
糖尿病性自律神経ニューロパチー	0	1 (<1)
神経痛	1 (<1)	1 (<1)
失神	0	1 (<1)
肋間神経痛	1 (<1)	0
傾眠	5 (4)	0
眼障害	3 (3)	2 (2)
結膜充血	0	1 (<1)
眼出血	0	1 (<1)
眼痛	1 (<1)	1 (<1)
霰粒腫	1 (<1)	0
結膜炎	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
眼乾燥	1 (<1)	0
暗点	1 (<1)	0
耳および迷路障害	2 (2)	3 (3)
回転性めまい	1 (<1)	2 (2)
頭位性回転性めまい	0	1 (<1)
耳管機能障害	1 (<1)	0
心臓障害	0	1 (<1)
洞性頻脈	0	1 (<1)
血管障害	11 (10)	30 (27)
潮紅	9 (8)	24 (22)
ほてり	1 (<1)	7 (6)
高血圧	2 (2)	0
呼吸器、胸郭および縦隔障害	3 (3)	4 (4)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
上気道の炎症	0	2 (2)
アレルギー性気管支炎	0	1 (<1)
喘息	0	1 (<1)
アレルギー性咳嗽	1 (<1)	0
口腔咽頭痛	2 (2)	0
胃腸障害	26 (23)	39 (35)
下痢	6 (5)	11 (10)
悪心	6 (5)	11 (10)
腹痛	0	8 (7)
上腹部痛	6 (5)	5 (5)
嘔吐	0	5 (5)
便秘	0	3 (3)
消化不良	3 (3)	2 (2)
齲歯	3 (3)	1 (<1)
心窩部不快感	2 (2)	1 (<1)
胃炎	0	1 (<1)
胃腸障害	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
胃食道逆流性疾患	0	1 (<1)
歯痛	0	1 (<1)
腹部膨満	1 (<1)	0
下腹部痛	1 (<1)	0
肛門出血	1 (<1)	0
アフタ性口内炎	1 (<1)	0
萎縮性舌炎	1 (<1)	0
口腔内潰瘍形成	1 (<1)	0
腹膜ヘルニア	1 (<1)	0
肛門周囲痛	1 (<1)	0
口内炎	3 (3)	0
肝胆道系障害	0	2 (2)
肝障害	0	2 (2)
皮膚および皮下組織障害	13 (12)	19 (17)
そう痒症	2 (2)	8 (7)
紅斑	0	4 (4)
発疹	0	3 (3)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
円形脱毛症	0	2 (2)
全身性そう痒症	0	2 (2)
蕁麻疹	3 (3)	2 (2)
湿疹	0	1 (<1)
光線性皮膚症	0	1 (<1)
全身性皮疹	0	1 (<1)
脱毛症	2 (2)	0
皮膚乾燥	2 (2)	0
環状紅斑	1 (<1)	0
過角化	1 (<1)	0
手掌紅斑	1 (<1)	0
乾癬	1 (<1)	0
丘疹性皮疹	1 (<1)	0
筋骨格系および結合組織障害	14 (12)	13 (12)
背部痛	3 (3)	3 (3)
筋痙縮	1 (<1)	2 (2)
頚部痛	1 (<1)	2 (2)
四肢痛	1 (<1)	2 (2)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
関節痛	5 (4)	1 (<1)
関節炎	0	1 (<1)
骨痛	0	1 (<1)
椎間板障害	0	1 (<1)
顎関節症候群	0	1 (<1)
腱石灰化	0	1 (<1)
胤径部痛	1 (<1)	0
筋骨格痛	1 (<1)	0
筋骨格硬直	1 (<1)	0
腎および尿路障害	8 (7)	5 (5)
ミクロアルブミン尿	0	3 (3)
蛋白尿	0	3 (3)
頻尿	1 (<1)	1 (<1)
排尿困難	3 (3)	0
血尿	1 (<1)	0
緊張性膀胱	1 (<1)	0
尿意切迫	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
尿失禁	1 (<1)	0
生殖系および乳房障害	5 (4)	4 (4)
乳房嚢胞	0	1 (<1)
月経困難症	1 (<1)	1 (<1)
月経障害	0	1 (<1)
子宮頚部びらん	0	1 (<1)
乳房不快感	1 (<1)	0
月経遅延	1 (<1)	0
不正子宮出血	2 (2)	0
一般・全身障害および投与部位の状態	12 (11)	5 (5)
末梢性浮腫	1 (<1)	2 (2)
発熱	5 (4)	2 (2)
悪寒	0	1 (<1)
疲労	2 (2)	1 (<1)
医薬品副作用	1 (<1)	0
無力症	1 (<1)	0
胸痛	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
注射部位紅斑	1 (<1)	0
臨床検査	7 (6)	13 (12)
アラニン・アミノトランスフェラーゼ増加	2 (2)	7 (6)
アスパラギン酸アミノトランスフェラーゼ増加	1 (<1)	4 (4)
リンパ球数減少	0	2 (2)
血中尿酸増加	0	1 (<1)
肝酵素上昇	0	1 (<1)
好中球数減少	1 (<1)	1 (<1)
好中球数増加	0	1 (<1)
血小板数増加	0	1 (<1)
白血球数減少	0	1 (<1)
白血球数増加	0	1 (<1)
尿中白血球陽性	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
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	Placebo	BG00012 240 mg BID
ｙ－グルタミルトランスフェラーゼ増加	1 (<1)	0
肝機能検査異常	1 (<1)	0
体重増加	2 (2)	0
傷害、中毒および処置合併症	3 (3)	4 (4)
挫傷	1 (<1)	1 (<1)
転倒	1 (<1)	1 (<1)
上腕骨骨折	0	1 (<1)
角膜損傷	0	1 (<1)
交通事故	0	1 (<1)
脛骨骨折	0	1 (<1)
上肢骨折	0	1 (<1)
節足動物咬傷	1 (<1)	0
処置後合併症	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Incidence of adverse events by system organ class and preferred term
-Part I (placebo-controlled period)
Page 13 of 13

	Placebo	BG00012 240 mg BID
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	1(<1)	0
卵管癌	1(<1)	0
卵巣新生物	1(<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-CARD.SAS DATE: 11NOV2015

Table 194: Summary of Maximum Post-Baseline Values - Liver Enzymes (ALT, AST, GGT and Bilirubin): 24 Weeks of Studies 109MS301 and 109MS302

Summary of maximum post-baseline values - liver enzymes (ALT, AST, GGT and Bilirubin):
24 weeks of studies 109MS301 and 109MS302
Page 1 of 3

Parameters/Criterion	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
ALT					
Total n	766 (100)	756 (100)	743 (100)	1499 (100)	346 (100)
<=1 xULN	619 (81)	465 (62)	416 (56)	881 (59)	270 (78)
>1 xULN	147 (19)	291 (38)	327 (44)	618 (41)	76 (22)
>=3 xULN	12 (2)	29 (4)	27 (4)	56 (4)	9 (3)
>5 xULN	6 (<1)	8 (1)	9 (1)	17 (1)	4 (1)
>10 xULN	2 (<1)	1 (<1)	1 (<1)	2 (<1)	1 (<1)
>20 xULN	1 (<1)	0	0	0	0
AST					
Total n	766 (100)	756 (100)	743 (100)	1499 (100)	346 (100)
<=1 xULN	696 (91)	607 (80)	568 (76)	1175 (78)	308 (89)
>1 xULN	70 (9)	149 (20)	175 (24)	324 (22)	38 (11)
>=3 xULN	3 (<1)	7 (<1)	10 (1)	17 (1)	5 (1)
>5 xULN	2 (<1)	2 (<1)	1 (<1)	3 (<1)	2 (<1)
>10 xULN	2 (<1)	0	1 (<1)	1 (<1)	0
>20 xULN	0	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: ULN = upper limit of normal.
3: Total n is the number of subjects in the safety population with at least one post-baseline value. This is the denominator for percentages in parentheses.

SOURCE: BG12MS/JAPAN/ISS/T-LB-MAXSUM-LIV-A-24W.SAS DATE: 16OCT2015

Summary of maximum post-baseline values - liver enzymes (ALT, AST, GGT and Bilirubin):
24 weeks of studies 109MS301 and 109MS302
Page 2 of 3

Parameters/Criterion	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
GGT					
Total n	766 (100)	756 (100)	744 (100)	1500 (100)	346 (100)
<=1 xULN	698 (91)	685 (90)	655 (88)	1340 (89)	310 (89)
>1 xULN	68 (9)	71 (9)	89 (12)	160 (11)	36 (10)
>=3 xULN	7 (<1)	6 (<1)	8 (1)	14 (<1)	4 (1)
>5 xULN	0	0	4 (<1)	4 (<1)	0
>10 xULN	0	0	0	0	0
>20 xULN	0	0	0	0	0
Total Bilirubin					
Total n	766 (100)	757 (100)	743 (100)	1500 (100)	347 (100)
<=1 xULN	726 (95)	725 (96)	699 (94)	1424 (95)	328 (95)
>1 xULN	40 (5)	32 (4)	44 (6)	76 (5)	19 (5)
>1.5 xULN	9 (1)	7 (<1)	11 (1)	18 (1)	5 (1)
>2 xULN	6 (<1)	3 (<1)	2 (<1)	5 (<1)	2 (<1)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: ULN = upper limit of normal.
3: Total n is the number of subjects in the safety population with at least one post-baseline value. This is the denominator for percentages in parentheses.

SOURCE: BG12MS/JAPAN/ISS/T-LB-MAXSUM-LIV-A-24W.SAS DATE: 16OCT2015

Summary of maximum post-baseline values - liver enzymes (ALT, AST, GGT and Bilirubin):
24 weeks of studies 109MS301 and 109MS302
Page 3 of 3

Parameters/Criterion	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
ALT/AST >=3 xULN by concurrently elevated total bilirubin defined as					
Total n	766 (100)	756 (100)	743 (100)	1499 (100)	346 (100)
>1.5 xULN	0	0	0	0	0
>2 xULN	0	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: ULN = upper limit of normal.
3: Total n is the number of subjects in the safety population with at least one post-baseline value. This is the denominator for percentages in parentheses.

SOURCE: BG12MS/JAPAN/ISS/T-LB-MAXSUM-LIV-A-24W.SAS DATE: 16OCT2015

Table 195: Summary of Maximum Postbaseline Values – Liver Enzymes (ALT, AST, GGT, and Bilirubin): Studies 109MS301 and 109MS302

Summary of maximum post-baseline values - liver enzymes (ALT, AST, GGT and Bilirubin):
Studies 109MS301 and 109MS302
Page 1 of 3

Parameters/Criterion	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
ALT					
Total n	766 (100)	756 (100)	743 (100)	1499 (100)	346 (100)
<=1 xULN	488 (64)	391 (52)	347 (47)	738 (49)	217 (63)
>1 xULN	278 (36)	365 (48)	396 (53)	761 (51)	129 (37)
>=3 xULN	37 (5)	46 (6)	44 (6)	90 (6)	24 (7)
>5 xULN	20 (3)	13 (2)	14 (2)	27 (2)	10 (3)
>10 xULN	9 (1)	3 (<1)	3 (<1)	6 (<1)	4 (1)
>20 xULN	2 (<1)	1 (<1)	0	1 (<1)	1 (<1)
AST					
Total n	766 (100)	756 (100)	743 (100)	1499 (100)	346 (100)
<=1 xULN	597 (78)	556 (73)	510 (69)	1066 (71)	260 (75)
>1 xULN	169 (22)	200 (26)	233 (31)	433 (29)	86 (25)
>=3 xULN	15 (2)	15 (2)	15 (2)	30 (2)	14 (4)
>5 xULN	10 (1)	4 (<1)	2 (<1)	6 (<1)	6 (2)
>10 xULN	5 (<1)	2 (<1)	1 (<1)	3 (<1)	1 (<1)
>20 xULN	1 (<1)	1 (<1)	0	1 (<1)	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: ULN = upper limit of normal.
3: Total n is the number of subjects in the safety population with at least one post-baseline value. This is the denominator for percentages in parentheses.

SOURCE: BG12MS/JAPAN/ISS/T-LB-MAXSUM-LIV-A.SAS DATE: 08OCT2015

Summary of maximum post-baseline values - liver enzymes (ALT, AST, GGT and Bilirubin):
Studies 109MS301 and 109MS302
Page 2 of 3

Parameters/Criterion	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
GGT					
Total n	766 (100)	756 (100)	744 (100)	1500 (100)	346 (100)
<=1 xULN	645 (84)	635 (84)	609 (82)	1244 (83)	290 (84)
>1 xULN	121 (16)	121 (16)	135 (18)	256 (17)	56 (16)
>=3 xULN	20 (3)	12 (2)	11 (1)	23 (2)	9 (3)
>5 xULN	5 (<1)	2 (<1)	5 (<1)	7 (<1)	1 (<1)
>10 xULN	0	0	0	0	0
>20 xULN	0	0	0	0	0
Total Bilirubin					
Total n	766 (100)	757 (100)	743 (100)	1500 (100)	347 (100)
<=1 xULN	706 (92)	705 (93)	675 (91)	1380 (92)	319 (92)
>1 xULN	60 (8)	52 (7)	68 (9)	120 (8)	28 (8)
>1.5 xULN	16 (2)	13 (2)	22 (3)	35 (2)	9 (3)
>2 xULN	8 (1)	4 (<1)	4 (<1)	8 (<1)	4 (1)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: ULN = upper limit of normal.
3: Total n is the number of subjects in the safety population with at least one post-baseline value. This is the denominator for percentages in parentheses.

SOURCE: BG12MS/JAPAN/ISS/T-LB-MAXSUM-LIV-A.SAS DATE: 08OCT2015

Summary of maximum post-baseline values - liver enzymes (ALT, AST, GGT and Bilirubin):
Studies 109MS301 and 109MS302
Page 3 of 3

Parameters/Criterion	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
ALT/AST >=3 xULN by concurrently elevated total bilirubin defined as					
Total n	766 (100)	756 (100)	743 (100)	1499 (100)	346 (100)
>1.5 xULN	0	1 (<1)	0	1 (<1)	0
>2 xULN	0	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: ULN = upper limit of normal.
3: Total n is the number of subjects in the safety population with at least one post-baseline value. This is the denominator for percentages in parentheses.

SOURCE: BG12MS/JAPAN/ISS/T-LB-MAXSUM-LIV-A.SAS DATE: 08OCT2015

Table 196: Summary of Shifts From Baseline to Maximum Post-Baseline – Total Bilirubin: Studies 109MS301 and 109MS302

Summary of shifts from baseline to maximum post-baseline - total bilirubin: Studies 109MS301 and 109MS302
Page 1 of 3

	Maximum post-baseline value				
Baseline	<=1 xULN	>1-1.5 xULN	>1.5-2 xULN	>2 xULN	Unknown
Placebo					
<=1xULN	704 (91)	40 (5)	4 (<1)	2 (<1)	4 (<1)
>1-1.5xULN	0	4 (<1)	4 (<1)	6 (<1)	0
>1.5-2xULN	1 (<1)	0	0	0	0
>2 xULN	0	0	0	0	0
Unknown	1 (<1)	0	0	0	1 (<1)
BG00012 240 mg BID					
<=1xULN	703 (91)	35 (5)	4 (<1)	1 (<1)	12 (2)
>1-1.5xULN	0	3 (<1)	5 (<1)	2 (<1)	0
>1.5-2xULN	0	1 (<1)	0	1 (<1)	0
>2 xULN	0	0	0	0	0
Unknown	2 (<1)	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: ULN = upper limit of normal.
4: Numbers in parentheses are percentages based upon the numbers of subjects in safety population.

SOURCE: BG12MS/JAPAN/ISS/T-LB-SHFT-TBIL-A.SAS DATE: 07OCT2015

Summary of shifts from baseline to maximum post-baseline - total bilirubin: Studies 109MS301 and 109MS302
Page 2 of 3

Baseline	Maximum post-baseline value				
	<=1 xULN	>1-1.5 xULN	>1.5-2 xULN	>2 xULN	Unknown
BG00012 240 mg TID					
<=1xULN	673 (89)	35 (5)	9 (1)	1 (<1)	16 (2)
>1-1.5xULN	1 (<1)	11 (1)	8 (1)	1 (<1)	0
>1.5-2xULN	0	0	1 (<1)	2 (<1)	0
>2 xULN	0	0	0	0	1 (<1)
Unknown	1 (<1)	0	0	0	0
Total BG00012					
<=1xULN	1376 (90)	70 (5)	13 (<1)	2 (<1)	28 (2)
>1-1.5xULN	1 (<1)	14 (<1)	13 (<1)	3 (<1)	0
>1.5-2xULN	0	1 (<1)	1 (<1)	3 (<1)	0
>2 xULN	0	0	0	0	1 (<1)
Unknown	3 (<1)	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: ULN = upper limit of normal.
4: Numbers in parentheses are percentages based upon the numbers of subjects in safety population.

SOURCE: BG12MS/JAPAN/ISS/T-LB-SHFT-TBIL-A.SAS DATE: 07OCT2015

Summary of shifts from baseline to maximum post-baseline - total bilirubin: Studies 109MS301 and 109MS302
Page 3 of 3

Baseline	Maximum post-baseline value				
	<=1 xULN	>1-1.5 xULN	>1.5-2 xULN	>2 xULN	Unknown
GA					
<=1xULN	319 (91)	15 (4)	1 (<1)	1 (<1)	4 (1)
>1-1.5xULN	0	4 (1)	3 (<1)	1 (<1)	0
>1.5-2xULN	0	0	1 (<1)	1 (<1)	0
>2 xULN	0	0	0	1 (<1)	0
Unknown	0	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: ULN = upper limit of normal.
4: Numbers in parentheses are percentages based upon the numbers of subjects in safety population.

SOURCE: BG12MS/JAPAN/ISS/T-LB-SHFT-TBIL-A.SAS DATE: 07OCT2015

Table 197: Summary of Shifts From Baseline to Maximum Post-Baseline – Total Bilirubin: 24 Weeks of Studies 109MS301 and 109MS302

Summary of shifts from baseline to maximum post-baseline - total bilirubin: 24 weeks of studies 109MS301 and 109MS302
Page 1 of 3

	Maximum post-baseline value				
Baseline	<=1 xULN	>1-1.5 xULN	>1.5-2 xULN	>2 xULN	Unknown
Placebo					
<=1xULN	723 (94)	24 (3)	1 (<1)	1 (<1)	4 (<1)
>1-1.5xULN	0	7 (<1)	2 (<1)	5 (<1)	0
>1.5-2xULN	1 (<1)	0	0	0	0
>2 xULN	0	0	0	0	0
Unknown	2 (<1)	0	0	0	1 (<1)
BG00012 240 mg BID					
<=1xULN	722 (94)	18 (2)	3 (<1)	0	12 (2)
>1-1.5xULN	1 (<1)	6 (<1)	1 (<1)	2 (<1)	0
>1.5-2xULN	0	1 (<1)	0	1 (<1)	0
>2 xULN	0	0	0	0	0
Unknown	2 (<1)	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: ULN = upper limit of normal.
4: Numbers in parentheses are percentages based upon the numbers of subjects in safety population.

SOURCE: BG12MS/JAPAN/ISS/T-LB-SHFT-TBIL-A-24W.SAS DATE: 16OCT2015

Summary of shifts from baseline to maximum post-baseline - total bilirubin: 24 weeks of studies 109MS301 and 109MS302
Page 2 of 3

Baseline	Maximum post-baseline value				
	<=1 xULN	>1-1.5 xULN	>1.5-2 xULN	>2 xULN	Unknown
BG00012 240 mg TID					
<=1xULN	692 (91)	21 (3)	5 (<1)	0	16 (2)
>1-1.5xULN	6 (<1)	12 (2)	3 (<1)	0	0
>1.5-2xULN	0	0	1 (<1)	2 (<1)	0
>2 xULN	0	0	0	0	1 (<1)
Unknown	1 (<1)	0	0	0	0
Total BG00012					
<=1xULN	1414 (92)	39 (3)	8 (<1)	0	28 (2)
>1-1.5xULN	7 (<1)	18 (1)	4 (<1)	2 (<1)	0
>1.5-2xULN	0	1 (<1)	1 (<1)	3 (<1)	0
>2 xULN	0	0	0	0	1 (<1)
Unknown	3 (<1)	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: ULN = upper limit of normal.
4: Numbers in parentheses are percentages based upon the numbers of subjects in safety population.

SOURCE: BG12MS/JAPAN/ISS/T-LB-SHFT-TBIL-A-24W.SAS DATE: 16OCT2015

Summary of shifts from baseline to maximum post-baseline - total bilirubin: 24 weeks of studies 109MS301 and 109MS302
Page 3 of 3

	Maximum post-baseline value				
Baseline	<=1 xULN	>1-1.5 xULN	>1.5-2 xULN	>2 xULN	Unknown
GA					
<=1xULN	327 (93)	9 (3)	0	0	4 (1)
>1-1.5xULN	1 (<1)	4 (1)	2 (<1)	1 (<1)	0
>1.5-2xULN	0	1 (<1)	0	1 (<1)	0
>2 xULN	0	0	1 (<1)	0	0
Unknown	0	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: ULN = upper limit of normal.
4: Numbers in parentheses are percentages based upon the numbers of subjects in safety population.

SOURCE: BG12MS/JAPAN/ISS/T-LB-SHFT-TBIL-A-24W.SAS DATE: 16OCT2015

Table 199: Incidence of Potential Hepatic Disorders by System Organ Class and Preferred Term: 24 Weeks of Studies 109MS301 and 109MS302

Incidence of potential hepatic disorders by system organ class and preferred term:
24 weeks of studies 109MS301 and 109MS302
Page 1 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a potential hepatic disorder (a)	23 (3)	49 (6)	51 (7)	100 (7)	16 (5)
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	0	0	1 (<1)	1 (<1)	0
肝臓血管腫	0	0	1 (<1)	1 (<1)	0
肝胆道系障害	0	4 (<1)	10 (1)	14 (<1)	0
肝障害	0	2 (<1)	5 (<1)	7 (<1)	0
肝細胞融解性肝炎	0	0	2 (<1)	2 (<1)	0
肝嚢胞	0	1 (<1)	1 (<1)	2 (<1)	0
肝炎	0	0	1 (<1)	1 (<1)	0
高ビリルビン血症	0	0	1 (<1)	1 (<1)	0
高トランスアミナーゼ血症	0	1 (<1)	0	1 (<1)	0
臨床検査	23 (3)	45 (6)	40 (5)	85 (6)	16 (5)
アラニン・アミノトランスフェラーゼ増加	9 (1)	32 (4)	30 (4)	62 (4)	10 (3)
アスパラギン酸アミノトランスフェラーゼ増加	5 (<1)	21 (3)	19 (3)	40 (3)	6 (2)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Potential hepatic disorders were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Query (SMQ) 'Drug related hepatic disorders - comprehensive search' (under the Level 1 SMQ 'Hepatic disorders').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-HEPAT-A-24W.SAS DATE: 02DEC2015

Incidence of potential hepatic disorders by system organ class and preferred term:
24 weeks of studies 109MS301 and 109MS302
Page 2 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
γ－グルタミルトランスフェラーゼ増加	5 (<1)	7 (<1)	7 (<1)	14 (<1)	4 (1)
肝酵素上昇	4 (<1)	7 (<1)	5 (<1)	12 (<1)	3 (<1)
血中ビリルビン増加	5 (<1)	1 (<1)	1 (<1)	2 (<1)	0
肝機能検査異常	0	2 (<1)	0	2 (<1)	0
血中アルカリホスファターゼ増加	1 (<1)	1 (<1)	0	1 (<1)	0
アラニン・アミノトランスフェラーゼ異常	0	0	0	0	2 (<1)
アスパラギン酸アミノトランスフェラーゼ異常	0	0	0	0	1 (<1)
血中アルカリホスファターゼ異常	0	0	0	0	1 (<1)
血中ビリルビン異常	0	0	0	0	1 (<1)
トランスアミナーゼ上昇	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Potential hepatic disorders were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Query (SMQ) 'Drug related hepatic disorders - comprehensive search' (under the Level 1 SMQ 'Hepatic disorders').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-HEPAT-A-24W.SAS DATE: 02DEC2015

Table 200 Incidence of Potential Hepatic Disorders by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period)

Incidence of potential hepatic disorders by system organ class and preferred term
– Part I (placebo-controlled period)

	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Number of subjects with a potential hepatic disorder event (a)	4 (4)	10 (9)
肝胆道系障害	0	2 (2)
肝障害	0	2 (2)
臨床検査	4 (4)	8 (7)
アラニン・アミノトランスフェラーゼ増加	2 (2)	7 (6)
アスパラギン酸アミノトランスフェラーゼ増加	1 (<1)	4 (4)
肝酵素上昇	0	1 (<1)
γ－グルタミルトランスフェラーゼ増加	1 (<1)	0
肝機能検査異常	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each interval for each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

(a) Potential hepatic disorders were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Query (SMQ) 'Drug related hepatic disorders - comprehensive search' (under the Level 1 SMQ 'Hepatic disorders').

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-HEP.SAS DATE: 25SEP2015

Table 201: Incidence of Potential Hepatic Disorders by System Organ Class and Preferred Term: Studies 109MS301 and 109MS302

Incidence of potential hepatic disorders by system organ class and preferred term: Studies 109MS301 and 109MS302
Page 1 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a potential hepatic disorder (a)	75 (10)	73 (9)	75 (10)	148 (10)	37 (11)
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	0	0	1 (<1)	1 (<1)	0
肝臓血管腫	0	0	1 (<1)	1 (<1)	0
肝胆道系障害	7 (<1)	8 (1)	11 (1)	19 (1)	2 (<1)
肝障害	1 (<1)	2 (<1)	6 (<1)	8 (<1)	2 (<1)
肝細胞融解性肝炎	0	1 (<1)	2 (<1)	3 (<1)	0
肝嚢胞	1 (<1)	1 (<1)	1 (<1)	2 (<1)	0
脂肪肝	1 (<1)	2 (<1)	0	2 (<1)	0
肝炎	1 (<1)	0	1 (<1)	1 (<1)	0
胆汁うっ滞性肝炎	0	1 (<1)	0	1 (<1)	0
高ビリルビン血症	2 (<1)	0	1 (<1)	1 (<1)	0
高トランスアミナーゼ血症	0	1 (<1)	0	1 (<1)	0
中毒性肝炎	1 (<1)	0	0	0	0
臨床検査	69 (9)	68 (9)	66 (9)	134 (9)	35 (10)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Potential hepatic disorders were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Query (SMQ) 'Drug related hepatic disorders - comprehensive search' (under the Level 1 SMQ 'Hepatic disorders').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-HEPAT-A.SAS DATE: 02DEC2015

Incidence of potential hepatic disorders by system organ class and preferred term: Studies 109MS301 and 109MS302
Page 2 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
アラニン・アミノトランスフェラーゼ増加	38 (5)	45 (6)	49 (6)	94 (6)	20 (6)
アスパラギン酸アミノトランスフェラーゼ増加	18 (2)	33 (4)	29 (4)	62 (4)	14 (4)
γ－グルタミルトランスフェラーゼ増加	19 (2)	20 (3)	12 (2)	32 (2)	8 (2)
肝酵素上昇	10 (1)	7 (<1)	7 (<1)	14 (<1)	7 (2)
血中アルカリホスファターゼ増加	7 (<1)	4 (<1)	2 (<1)	6 (<1)	1 (<1)
肝機能検査異常	2 (<1)	3 (<1)	3 (<1)	6 (<1)	0
血中ビリルビン増加	9 (1)	2 (<1)	3 (<1)	5 (<1)	1 (<1)
アラニン・アミノトランスフェラーゼ異常	0	1 (<1)	1 (<1)	2 (<1)	2 (<1)
γ－グルタミルトランスフェラーゼ異常	1 (<1)	1 (<1)	1 (<1)	2 (<1)	0
アスパラギン酸アミノトランスフェラーゼ異常	0	1 (<1)	0	1 (<1)	1 (<1)
血中アルカリホスファターゼ異常	0	1 (<1)	0	1 (<1)	1 (<1)
血中ビリルビン異常	0	0	0	0	1 (<1)
トランスアミナーゼ上昇	2 (<1)	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Potential hepatic disorders were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Query (SMQ) 'Drug related hepatic disorders - comprehensive search' (under the Level 1 SMQ 'Hepatic disorders').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-HEPAT-A.SAS DATE: 02DEC2015

Table 202: Summary of Shifts From Baseline to Maximum Post-Baseline - ALT and AST: Studies 109MS301 and 109MS302

Summary of shifts from baseline to maximum post-baseline - ALT and AST: Studies 109MS301 and 109MS302
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	Maximum post-baseline value						
Baseline	<=1 xULN	>1-<3 xULN	>=3-5 xULN	>5-10 xULN	>10-20 xULN	>20 xULN	Unknown
ALT (SGPT)							
Placebo							
<=1 xULN	481 (62)	201 (26)	14 (2)	9 (1)	6 (<1)	2 (<1)	4 (<1)
>1 - <3 xULN	6 (<1)	40 (5)	2 (<1)	1 (<1)	1 (<1)	0	0
>=3 - 5 xULN	0	0	1 (<1)	1 (<1)	0	0	0
>5 - 10 xULN	0	0	0	0	0	0	0
>10 - 20 xULN	0	0	0	0	0	0	0
>20 xULN	0	0	0	0	0	0	0
Unknown	1 (<1)	0	0	0	0	0	1 (<1)
BG00012 240 mg BID							
<=1 xULN	387 (50)	285 (37)	25 (3)	8 (1)	1 (<1)	1 (<1)	12 (2)
>1 - <3 xULN	3 (<1)	33 (4)	7 (<1)	1 (<1)	0	0	1 (<1)
>=3 - 5 xULN	0	0	1 (<1)	0	0	0	0
>5 - 10 xULN	0	0	0	1 (<1)	1 (<1)	0	0
>10 - 20 xULN	0	0	0	0	0	0	0
>20 xULN	0	0	0	0	0	0	0
Unknown	1 (<1)	1 (<1)	0	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: ULN = upper limit of normal.
4: Numbers in parentheses are percentages based upon the numbers of subjects in safety population.

SOURCE: BG12MS/JAPAN/ISS/T-LB-SHFT-ALTAST-A.SAS DATE: 07OCT2015

Summary of shifts from baseline to maximum post-baseline - ALT and AST: Studies 109MS301 and 109MS302
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Baseline	Maximum post-baseline value						
	<=1 xULN	>1-<3 xULN	>=3-5 xULN	>5-10 xULN	>10-20 xULN	>20 xULN	Unknown
BG00012 240 mg TID							
<=1 xULN	339 (45)	311 (41)	20 (3)	8 (1)	2 (<1)	0	14 (2)
>1 - <3 xULN	8 (1)	39 (5)	10 (1)	3 (<1)	0	0	3 (<1)
>=3 - 5 xULN	0	2 (<1)	0	0	0	0	0
>5 - 10 xULN	0	0	0	0	0	0	0
>10 - 20 xULN	0	0	0	0	0	0	0
>20 xULN	0	0	0	0	0	0	0
Unknown	0	0	0	0	1 (<1)	0	0
Total BG00012							
<=1 xULN	726 (47)	596 (39)	45 (3)	16 (1)	3 (<1)	1 (<1)	26 (2)
>1 - <3 xULN	11 (<1)	72 (5)	17 (1)	4 (<1)	0	0	4 (<1)
>=3 - 5 xULN	0	2 (<1)	1 (<1)	0	0	0	0
>5 - 10 xULN	0	0	0	1 (<1)	1 (<1)	0	0
>10 - 20 xULN	0	0	0	0	0	0	0
>20 xULN	0	0	0	0	0	0	0
Unknown	1 (<1)	1 (<1)	0	0	1 (<1)	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: ULN = upper limit of normal.
4: Numbers in parentheses are percentages based upon the numbers of subjects in safety population.

SOURCE: BG12MS/JAPAN/ISS/T-LB-SHFT-ALTAST-A.SAS DATE: 07OCT2015

Summary of shifts from baseline to maximum post-baseline - ALT and AST: Studies 109MS301 and 109MS302
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Baseline	Maximum post-baseline value						
	<=1 xULN	>1-<3 xULN	>=3-5 xULN	>5-10 xULN	>10-20 xULN	>20 xULN	Unknown
GA							
<=1 xULN	214 (61)	79 (23)	9 (3)	4 (1)	2 (<1)	1 (<1)	5 (1)
>1 - <3 xULN	3 (<1)	26 (7)	5 (1)	1 (<1)	1 (<1)	0	0
>=3 - 5 xULN	0	0	0	0	0	0	0
>5 - 10 xULN	0	0	0	1 (<1)	0	0	0
>10 - 20 xULN	0	0	0	0	0	0	0
>20 xULN	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: ULN = upper limit of normal.
4: Numbers in parentheses are percentages based upon the numbers of subjects in safety population.

SOURCE: BG12MS/JAPAN/ISS/T-LB-SHFT-ALTAST-A.SAS DATE: 07OCT2015

Summary of shifts from baseline to maximum post-baseline - ALT and AST: Studies 109MS301 and 109MS302
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Baseline	Maximum post-baseline value						
	<=1 xULN	>1-<3 xULN	>=3-5 xULN	>5-10 xULN	>10-20 xULN	>20 xULN	Unknown
AST (SGOT)							
Placebo							
<=1 xULN	587 (76)	141 (18)	4 (<1)	5 (<1)	4 (<1)	1 (<1)	4 (<1)
>1 - <3 xULN	8 (1)	13 (2)	1 (<1)	0	0	0	0
>=3 - 5 xULN	0	0	0	0	0	0	0
>5 - 10 xULN	0	0	0	0	0	0	0
>10 - 20 xULN	0	0	0	0	0	0	0
>20 xULN	0	0	0	0	0	0	0
Unknown	2 (<1)	0	0	0	0	0	1 (<1)
BG00012 240 mg BID							
<=1 xULN	548 (71)	172 (22)	11 (1)	1 (<1)	1 (<1)	1 (<1)	13 (2)
>1 - <3 xULN	7 (<1)	12 (2)	0	1 (<1)	0	0	0
>=3 - 5 xULN	0	0	0	0	0	0	0
>5 - 10 xULN	0	0	0	0	0	0	0
>10 - 20 xULN	0	0	0	0	0	0	0
>20 xULN	0	0	0	0	0	0	0
Unknown	1 (<1)	1 (<1)	0	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: ULN = upper limit of normal.
4: Numbers in parentheses are percentages based upon the numbers of subjects in safety population.

SOURCE: BG12MS/JAPAN/ISS/T-LB-SHFT-ALTAST-A.SAS DATE: 07OCT2015

Summary of shifts from baseline to maximum post-baseline - ALT and AST: Studies 109MS301 and 109MS302
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Baseline	Maximum post-baseline value						
	<=1 xULN	>1-<3 xULN	>=3-5 xULN	>5-10 xULN	>10-20 xULN	>20 xULN	Unknown
BG00012 240 mg TID							
<=1 xULN	503 (66)	205 (27)	10 (1)	1 (<1)	1 (<1)	0	16 (2)
>1 - <3 xULN	7 (<1)	12 (2)	2 (<1)	0	0	0	1 (<1)
>=3 - 5 xULN	0	1 (<1)	0	0	0	0	0
>5 - 10 xULN	0	0	0	0	0	0	0
>10 - 20 xULN	0	0	0	0	0	0	0
>20 xULN	0	0	0	0	0	0	0
Unknown	0	0	1 (<1)	0	0	0	0
Total BG00012							
<=1 xULN	1051 (69)	377 (25)	21 (1)	2 (<1)	2 (<1)	1 (<1)	29 (2)
>1 - <3 xULN	14 (<1)	24 (2)	2 (<1)	1 (<1)	0	0	1 (<1)
>=3 - 5 xULN	0	1 (<1)	0	0	0	0	0
>5 - 10 xULN	0	0	0	0	0	0	0
>10 - 20 xULN	0	0	0	0	0	0	0
>20 xULN	0	0	0	0	0	0	0
Unknown	1 (<1)	1 (<1)	1 (<1)	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: ULN = upper limit of normal.
4: Numbers in parentheses are percentages based upon the numbers of subjects in safety population.

SOURCE: BG12MS/JAPAN/ISS/T-LB-SHFT-ALTAST-A.SAS DATE: 07OCT2015

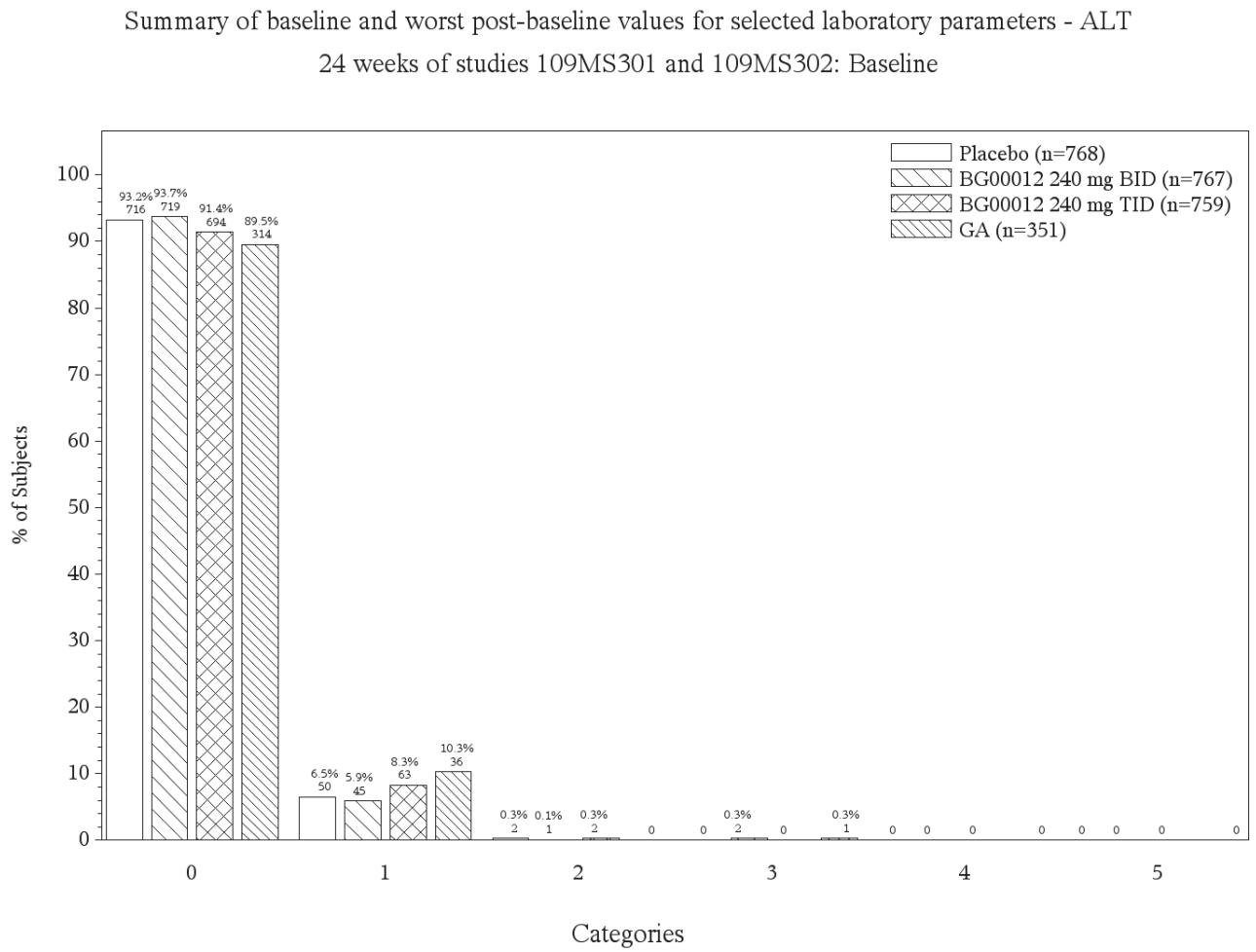
Summary of shifts from baseline to maximum post-baseline - ALT and AST: Studies 109MS301 and 109MS302
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	Maximum post-baseline value						
Baseline	<=1 xULN	>1-<3 xULN	>=3-5 xULN	>5-10 xULN	>10-20 xULN	>20 xULN	Unknown
GA							
<=1 xULN	256 (73)	62 (18)	5 (1)	4 (1)	1 (<1)	0	5 (1)
>1 - <3 xULN	4 (1)	10 (3)	3 (<1)	1 (<1)	0	0	0
>=3 - 5 xULN	0	0	0	0	0	0	0
>5 - 10 xULN	0	0	0	0	0	0	0
>10 - 20 xULN	0	0	0	0	0	0	0
>20 xULN	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: ULN = upper limit of normal.
4: Numbers in parentheses are percentages based upon the numbers of subjects in safety population.

SOURCE: BG12MS/JAPAN/ISS/T-LB-SHFT-ALTAST-A.SAS DATE: 07OCT2015

Figure 13: Summary of Baseline and Worst Post-Baseline Values for Selected Laboratory Parameters – ALT – 24 Weeks of Studies 109MS301 and 109MS302

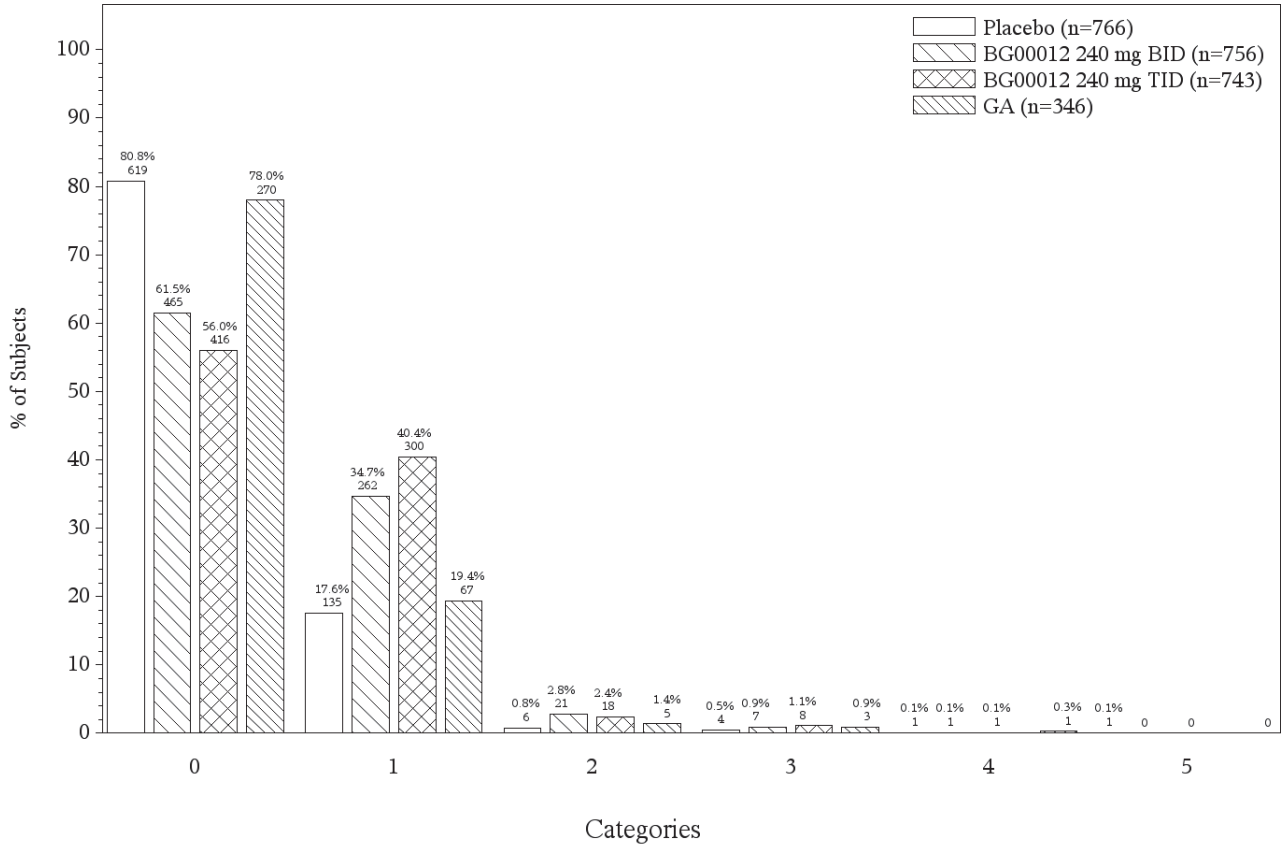


NOTE 1: Besides percentage, the number of subjects is also provided on the top of each bar.
2: Categories are in U/L units: 0 : <=1 xULN, 1 : >1 - <3 xULN, 2 : >=3 - 5 xULN, 3 : >5 - 10 xULN, 4 : >10 - 20 xULN, 5: >20 xULN.

SOURCE: BG12MS/JAPAN/F-LB-SUM-ALT-A-24W.SAS DATE: 22OCT2015

Summary of baseline and worst post-baseline values for selected laboratory parameters - ALT

24 weeks of studies 109MS301 and 109MS302: Worst post-baseline



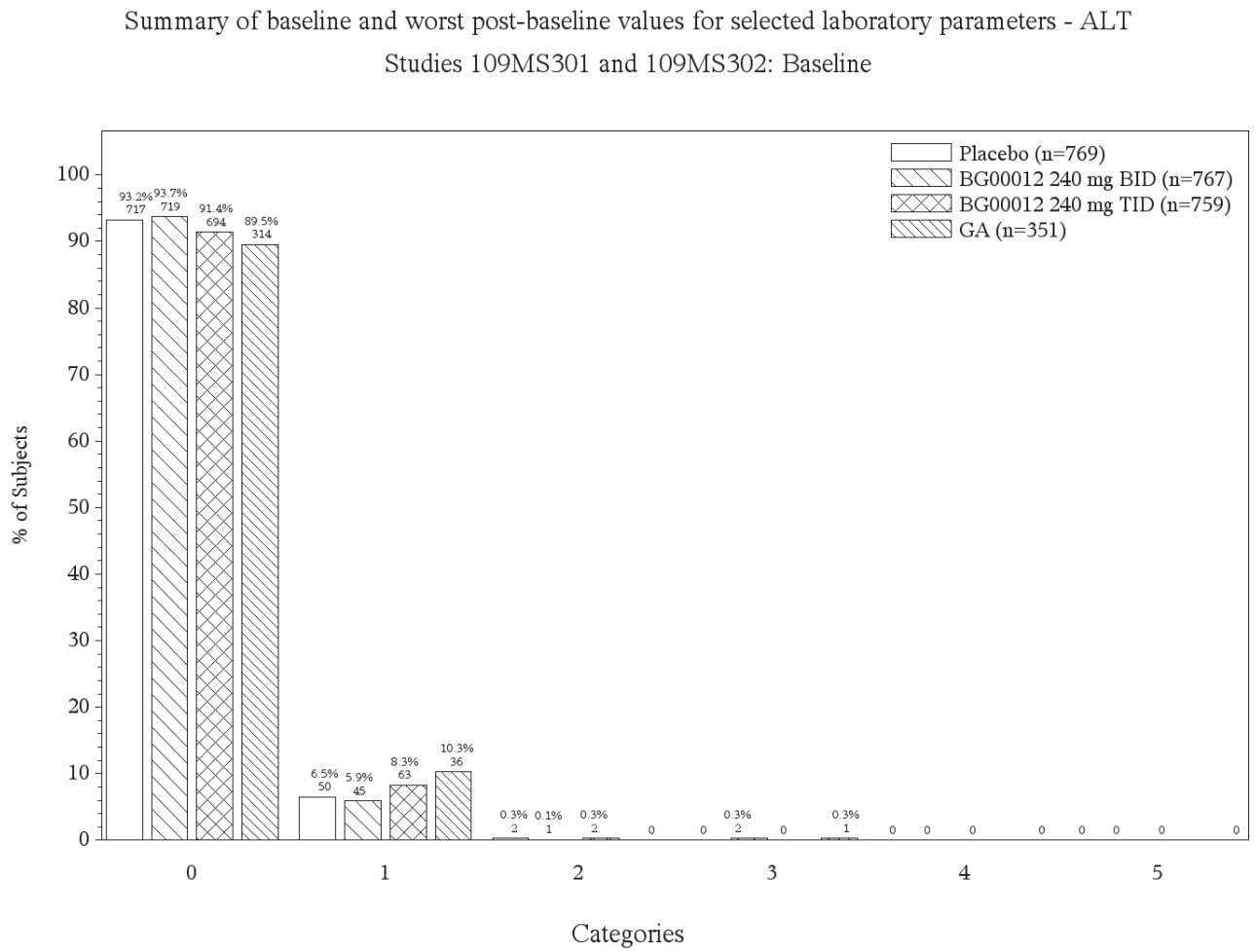
NOTE 1: Besides percentage, the number of subjects is also provided on the top of each bar.

2: Categories are in U/L units: 0 : <=1 xULN, 1 : >1 - <3 xULN, 2 : >=3 - 5 xULN, 3 : >5 - 10 xULN, 4 : >10 - 20 xULN, 5: >20 xULN.

SOURCE: BG12MS/JAPAN/F-LB-SUM-ALT-A-24W.SAS

DATE: 22OCT2015

Figure 14: Summary of Baseline and Worst Post-Baseline Values for Selected Laboratory Parameters – ALT – Studies 109MS301 and 109MS302

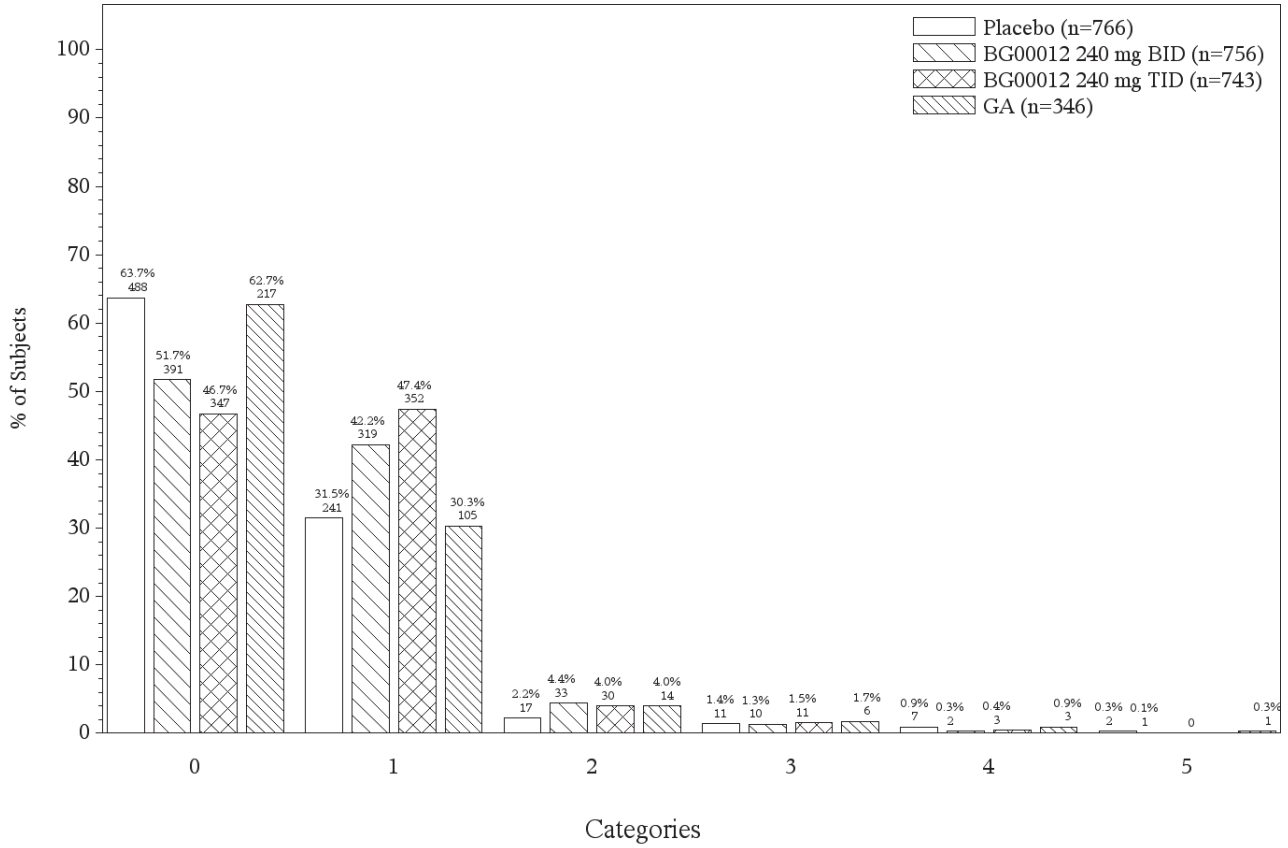


NOTE 1: Besides percentage, the number of subjects is also provided on the top of each bar.
2: Categories are in U/L units: 0 : <=1 xULN, 1 : >1 - <3 xULN, 2 : >=3 - 5 xULN, 3 : >5 - 10 xULN, 4 : >10 - 20 xULN, 5: >20 xULN.

SOURCE: BG12MS/JAPAN/F-LB-SUM-ALT-A.SAS DATE: 22OCT2015

Summary of baseline and worst post-baseline values for selected laboratory parameters - ALT

Studies 109MS301 and 109MS302: Worst post-baseline

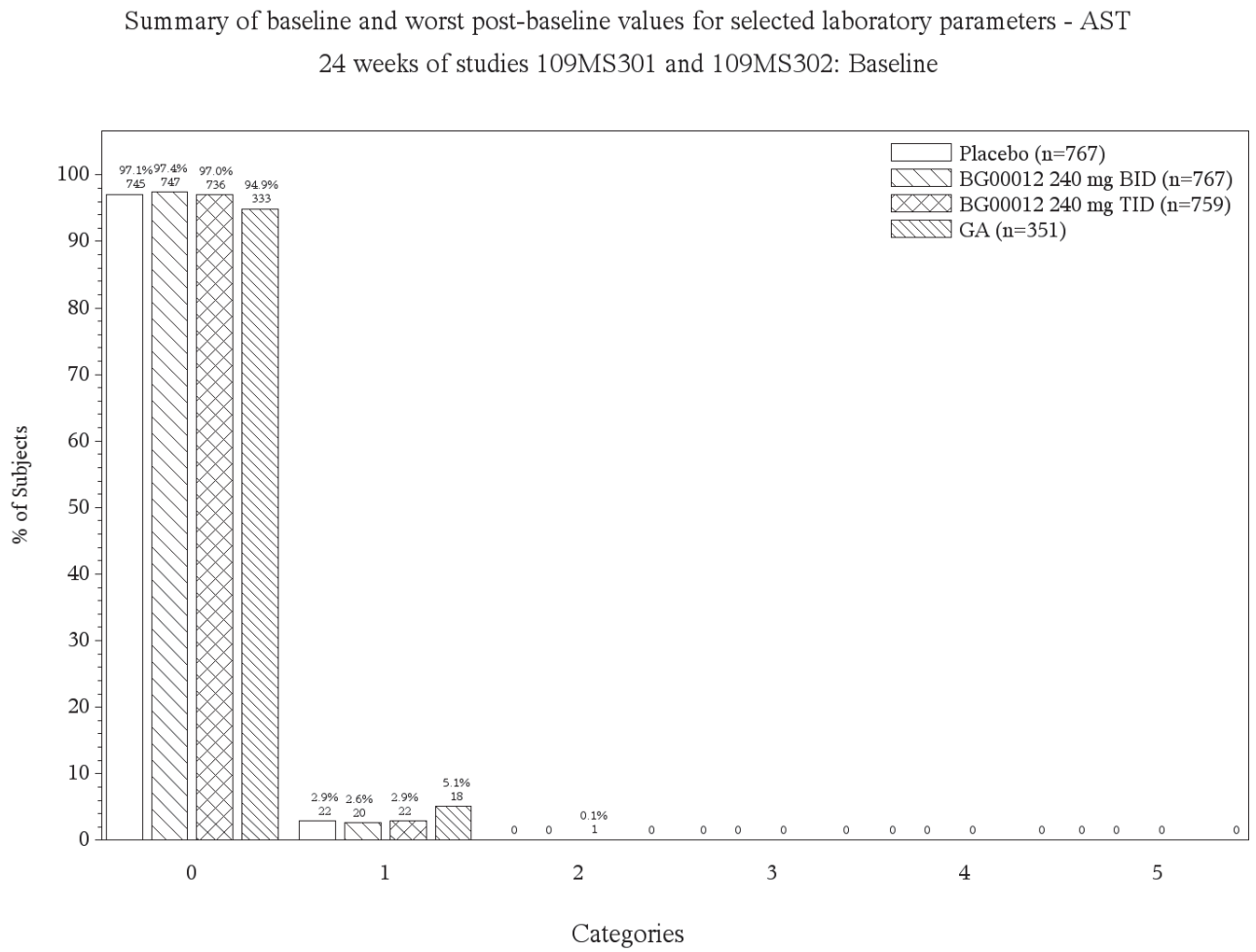


NOTE 1: Besides percentage, the number of subjects is also provided on the top of each bar.
2: Categories are in U/L units: 0 : <=1 xULN, 1 : >1 - <3 xULN, 2 : >=3 - 5 xULN, 3 : >5 - 10 xULN, 4 : >10 - 20 xULN, 5: >20 xULN.

SOURCE: BG12MS/JAPAN/F-LB-SUM-ALT-A.SAS

DATE: 22OCT2015

Figure 15: Summary of Baseline and Worst Post-Baseline Values for Selected Laboratory Parameters – AST – 24 Weeks of Studies 109MS301 and 109MS302

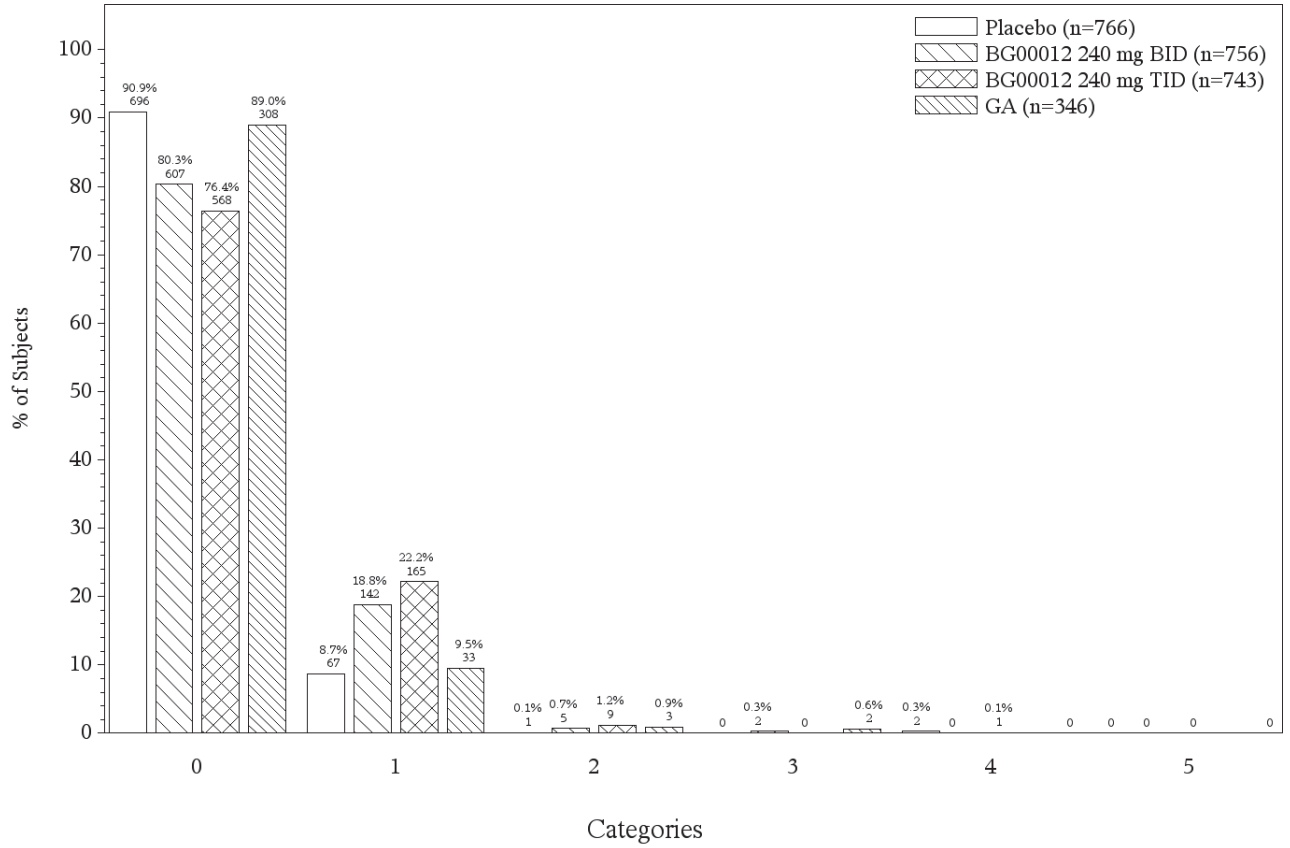


NOTE 1: Besides percentage, the number of subjects is also provided on the top of each bar.
2: Categories are in U/L units: 0 : <=1 xULN, 1 : >1 - <3 xULN, 2 : >=3 - 5 xULN, 3 : >5 - 10 xULN, 4 : >10 - 20 xULN, 5: >20 xULN.

SOURCE: BG12MS/JAPAN/F-LB-SUM-AST-A-24W.SAS DATE: 22OCT2015

Summary of baseline and worst post-baseline values for selected laboratory parameters - AST

24 weeks of studies 109MS301 and 109MS302: Worst post-baseline

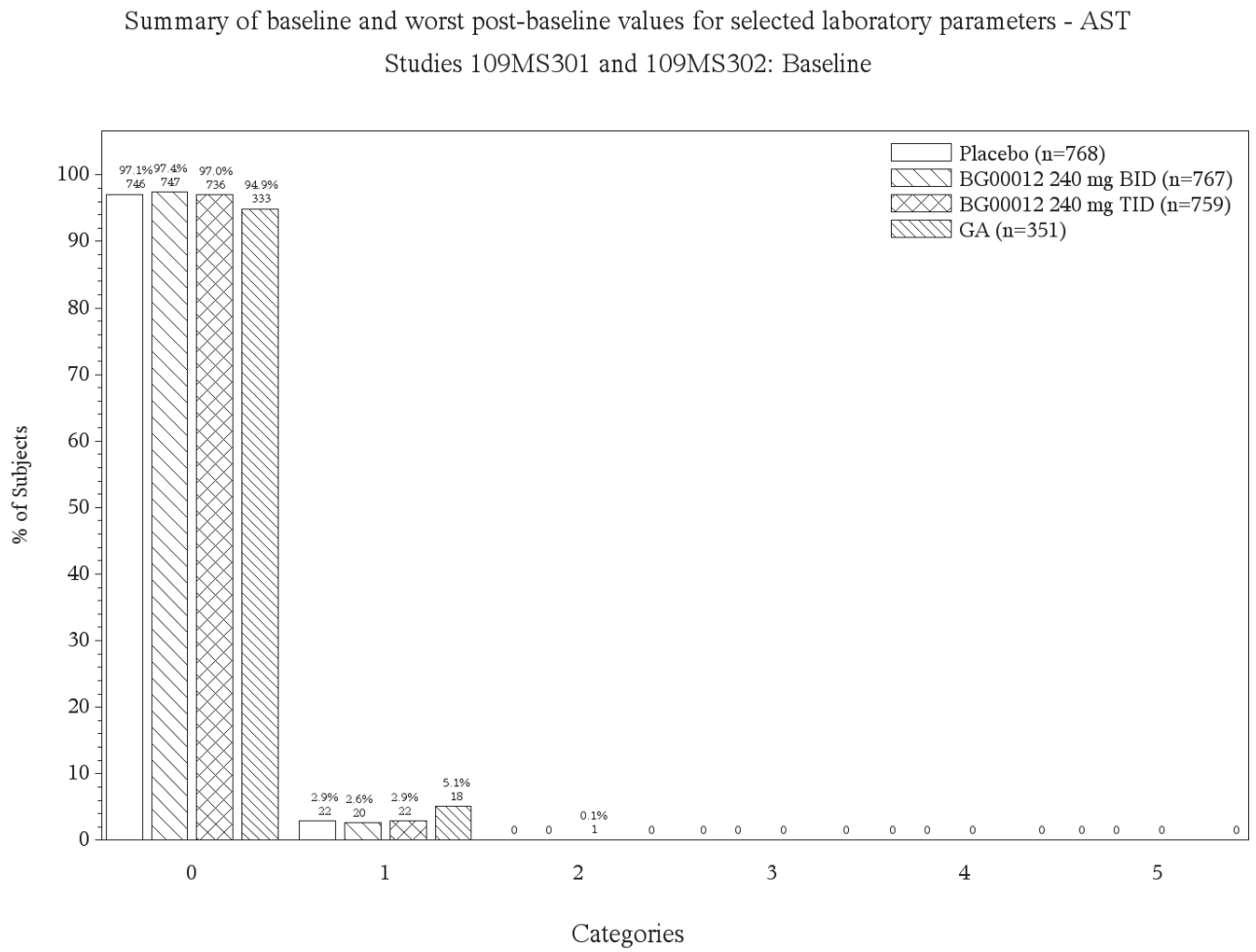


NOTE 1: Besides percentage, the number of subjects is also provided on the top of each bar.
2: Categories are in U/L units: 0 : <=1 xULN, 1 : >1 - <3 xULN, 2 : >=3 - 5 xULN, 3 : >5 - 10 xULN, 4 : >10 - 20 xULN, 5: >20 xULN.

SOURCE: BG12MS/JAPAN/F-LB-SUM-AST-A-24W.SAS

DATE: 22OCT2015

Figure 16: Summary of Baseline and Worst Post-Baseline Values for Selected Laboratory Parameters – AST – Studies 109MS301 and 109MS302

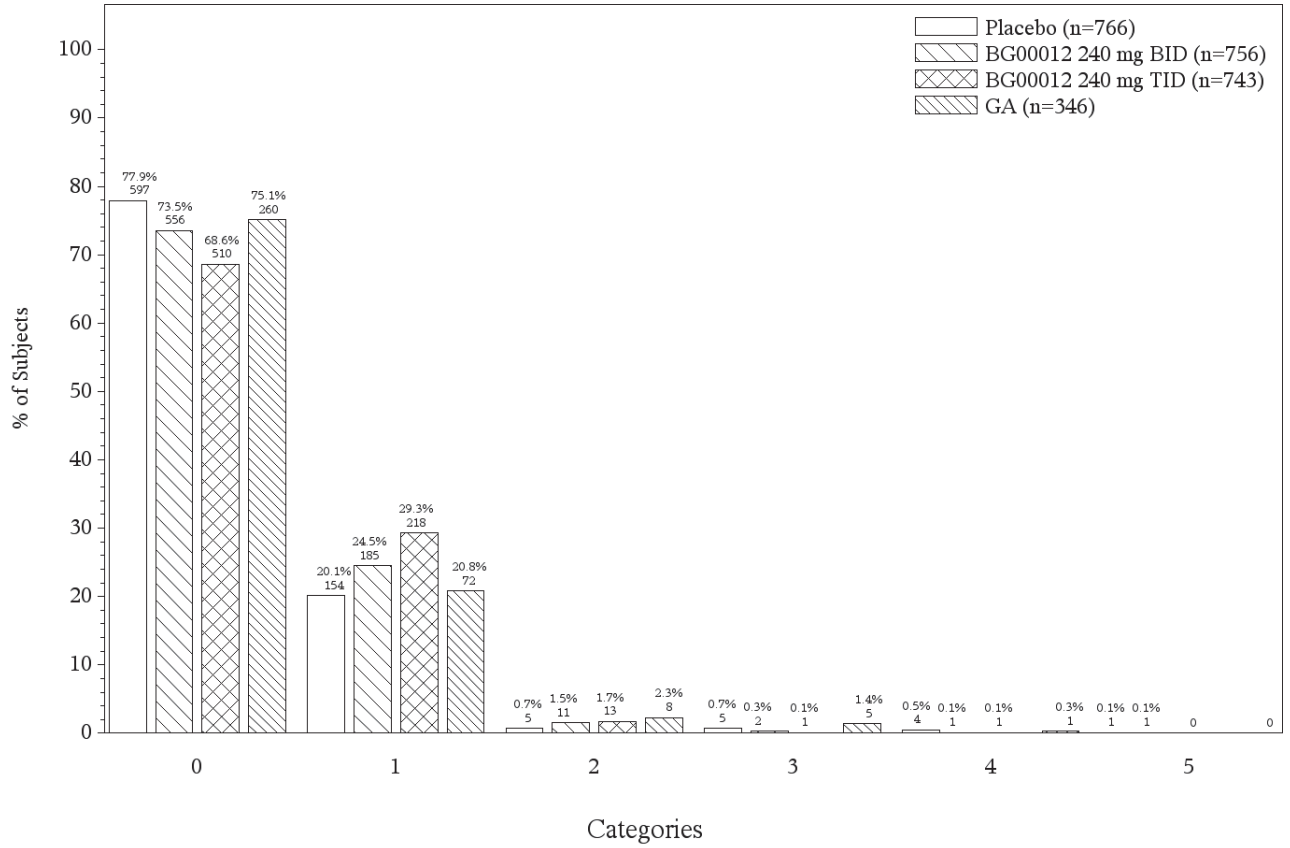


NOTE 1: Besides percentage, the number of subjects is also provided on the top of each bar.
2: Categories are in U/L units: 0 : <=1 xULN, 1 : >1 - <3 xULN, 2 : >=3 - 5 xULN, 3 : >5 - 10 xULN, 4 : >10 - 20 xULN, 5: >20 xULN.

SOURCE: BG12MS/JAPAN/F-LB-SUM-AST-A.SAS DATE: 22OCT2015

Summary of baseline and worst post-baseline values for selected laboratory parameters - AST

Studies 109MS301 and 109MS302: Worst post-baseline



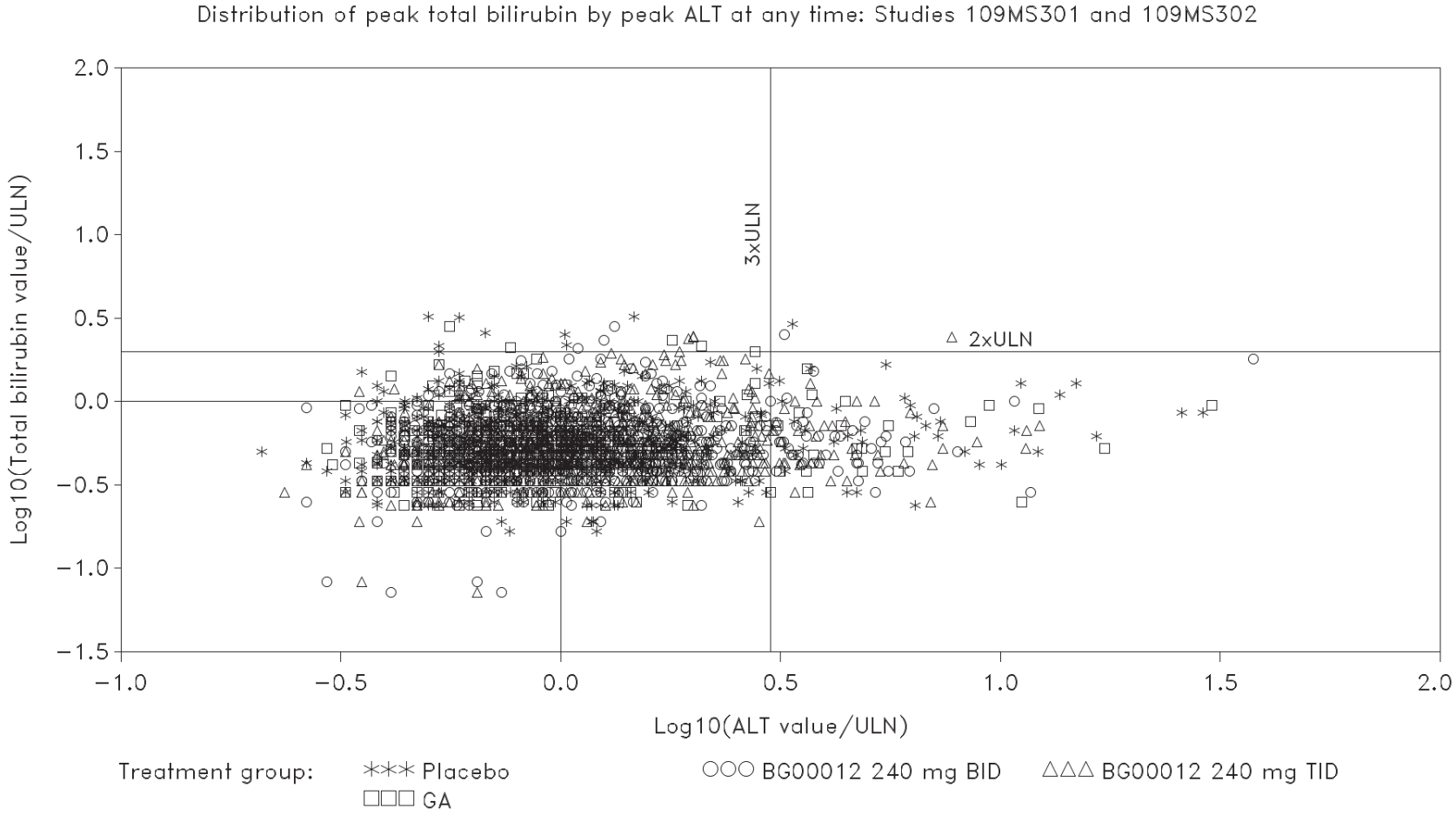
NOTE 1: Besides percentage, the number of subjects is also provided on the top of each bar.

2: Categories are in U/L units: 0 : <=1 xULN, 1 : >1 - <3 xULN, 2 : >=3 - 5 xULN, 3 : >5 - 10 xULN, 4 : >10 - 20 xULN, 5: >20 xULN.

SOURCE: BG12MS/JAPAN/F-LB-SUM-AST-A.SAS

DATE: 22OCT2015

Figure 17: Distribution of Peak Total Bilirubin by Peak ALT at Any Time: Studies 109MS301 and 109MS302

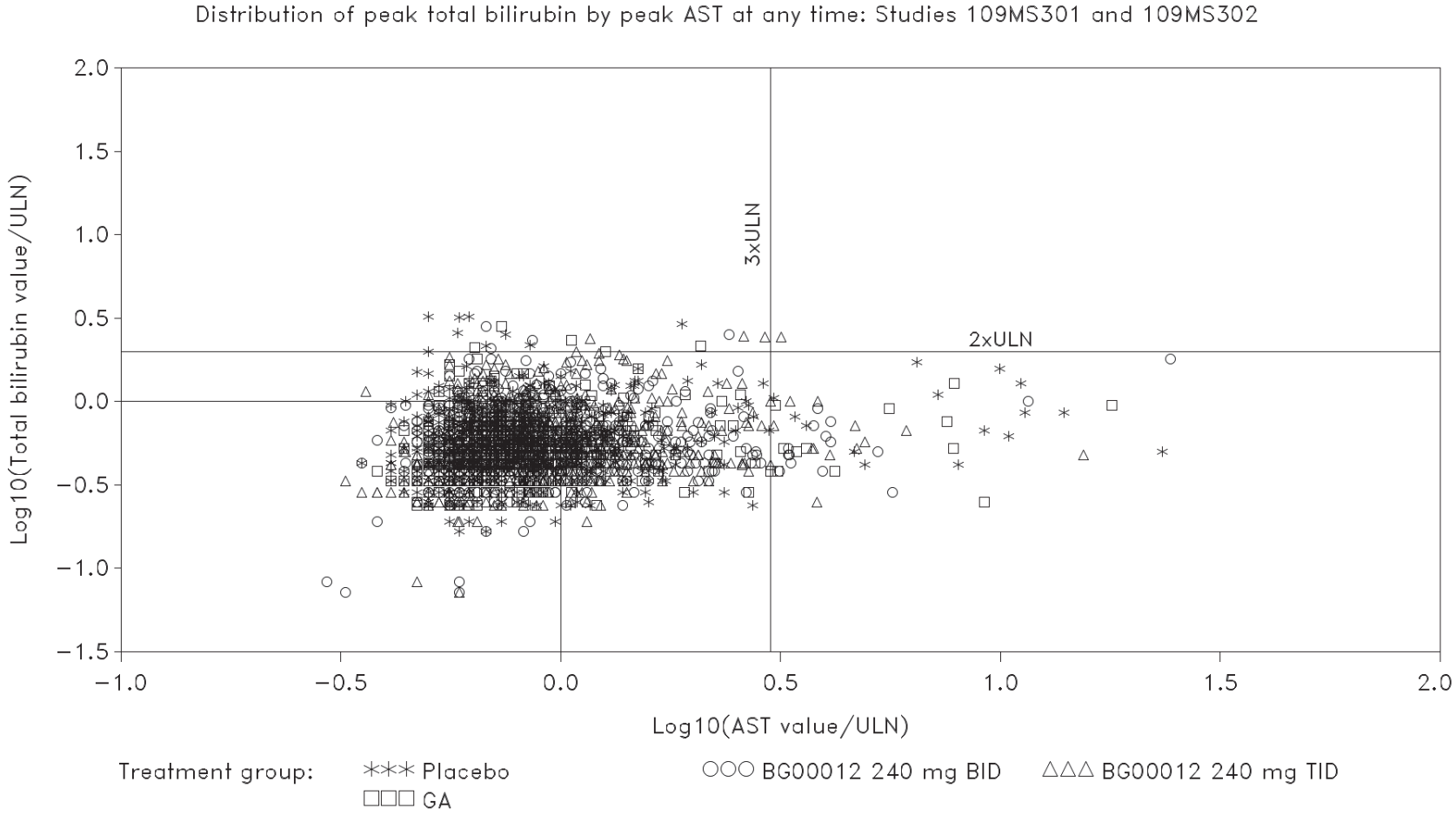


Note 1: For each subject, maximum post−baseline ALT value (relative to ULN) and maximum post−baseline total bilirubin value (relative to ULN) are plotted, regardless of when they occur (i.e., values may or may not be concurrent). Values are plotted as log10(value/ULN).
2: Data after subjects switched to alternative MS medications are excluded.

SOURCE: bg12ms/japan/iss/f−lb−tbil−palt−a.sas

DATE: 09OCT2015

Figure 18: Distribution of Peak Total Bilirubin by Peak AST at Any Time: Studies 109MS301 and 109MS302

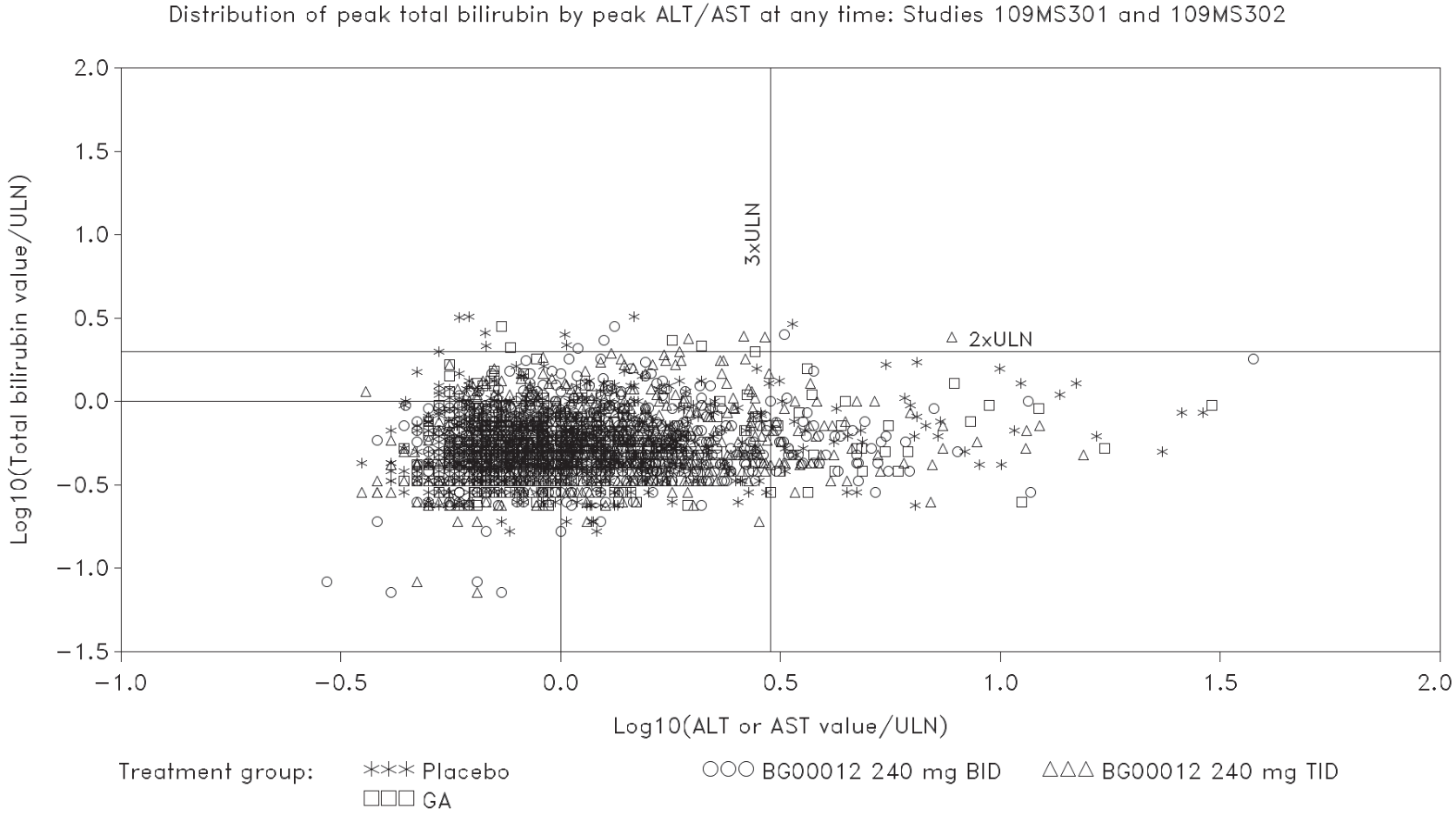


Note 1: For each subject, maximum post−baseline AST value (relative to ULN) and maximum post−baseline total bilirubin value (relative to ULN) are plotted, regardless of when they occur (i.e., values may or may not be concurrent). Values are plotted as log10(value/ULN).
2: Data after subjects switched to alternative MS medications are excluded.

SOURCE: bg12ms/japan/iss/f−lb−tbil−past−a.sas

DATE: 09OCT2015

Figure 19: Distribution of Peak Total Bilirubin by Peak ALT/AST at Any Time: Studies 109MS301 and 109MS302



Note 1: For each subject, maximum post−baseline ALT/AST value (relative to ULN) and maximum post−baseline total bilirubin value (relative to ULN) are plotted, regardless of when they occur (i.e., values may or may not be concurrent). Values are plotted as log10(value/ULN).
2: Data after subjects switched to alternative MS medications are excluded.

SOURCE: bg12ms/japan/iss/f−lb−tbil−pat−a.sas

DATE: 20OCT2015

Table 203: Summary of Blood Chemistry Laboratory Parameters: Actual Values by Visit Part I (Placebo-Controlled Period)

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 1 of 57
Lab test: ALT/SGPT (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	17.5	22.9
SD	8.85	42.85
Median	15.0	16.0
Min, Max	7, 50	7, 458
Week 4		
n	113	109
Mean	17.6	33.1
SD	8.57	50.92
Median	15.0	21.0
Min, Max	6, 49	9, 515
Week 8		
n	112	108
Mean	18.4	25.2
SD	12.85	16.38
Median	15.0	19.5
Min, Max	7, 121	6, 92

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 2 of 57
Lab test: ALT/SGPT (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	17.0	25.1
SD	7.61	17.49
Median	15.0	19.0
Min, Max	8, 53	7, 108
Week 16		
n	111	106
Mean	18.3	22.4
SD	10.77	13.19
Median	15.0	18.0
Min, Max	8, 68	6, 75
Week 20		
n	110	106
Mean	18.8	22.3
SD	16.35	17.45
Median	16.0	17.3
Min, Max	6, 166	7, 128

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 3 of 57
Lab test: ALT/SGPT (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	108	105
Mean	20.3	21.4
SD	25.02	13.51
Median	15.5	17.0
Min, Max	7, 238	6, 73

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 4 of 57
Lab test: AST/SGOT (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	18.7	21.9
SD	5.51	30.00
Median	18.0	18.0
Min, Max	9, 40	11, 331
Week 4		
n	112	107
Mean	18.9	26.3
SD	6.15	27.73
Median	17.0	20.3
Min, Max	10, 44	12, 289
Week 8		
n	111	108
Mean	19.1	21.3
SD	5.57	7.08
Median	18.0	20.0
Min, Max	11, 41	12, 44

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 5 of 57
Lab test: AST/SGOT (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	106
Mean	18.6	21.8
SD	4.37	9.16
Median	18.0	19.0
Min, Max	12, 36	11, 69
Week 16		
n	111	106
Mean	18.8	20.5
SD	4.74	6.85
Median	18.0	20.0
Min, Max	12, 33	11, 49
Week 20		
n	107	106
Mean	19.0	19.9
SD	7.44	7.68
Median	18.0	18.0
Min, Max	11, 78	11, 58

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 6 of 57
Lab test: AST/SGOT (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	107	104
Mean	19.7	19.3
SD	11.61	6.12
Median	18.0	18.0
Min, Max	8, 111	11, 42

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 7 of 57
Lab test: Alkaline Phosphatase (ALP) (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	59.2	60.1
SD	15.50	16.43
Median	59.0	56.0
Min, Max	28, 127	32, 128
Week 4		
n	113	109
Mean	58.9	58.2
SD	14.32	15.23
Median	59.0	56.0
Min, Max	28, 114	28, 115
Week 8		
n	112	108
Mean	60.6	58.4
SD	15.52	14.79
Median	59.0	55.0
Min, Max	33, 114	29, 103

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 8 of 57
Lab test: Alkaline Phosphatase (ALP) (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	60.4	57.4
SD	15.26	15.42
Median	59.0	53.0
Min, Max	33, 117	30, 120
Week 16		
n	111	106
Mean	60.7	59.2
SD	14.73	15.68
Median	60.0	55.0
Min, Max	27, 109	29, 112
Week 20		
n	110	106
Mean	61.6	59.7
SD	14.89	15.46
Median	61.0	56.0
Min, Max	31, 117	31, 114

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 9 of 57
Lab test: Alkaline Phosphatase (ALP) (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	108	105
Mean	61.9	59.9
SD	16.44	15.56
Median	60.5	58.0
Min, Max	29, 121	30, 118

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 10 of 57
Lab test: Total Bilirubin (umol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	8.69	7.82
SD	5.677	4.056
Median	7.00	7.00
Min, Max	1.5, 39.0	1.5, 31.0
Week 4		
n	113	109
Mean	8.71	6.87
SD	4.926	3.520
Median	8.00	6.00
Min, Max	1.5, 26.0	1.5, 26.0
Week 8		
n	112	108
Mean	8.30	7.32
SD	4.672	3.652
Median	7.00	7.00
Min, Max	1.5, 24.0	1.5, 22.0

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 11 of 57
Lab test: Total Bilirubin (umol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	8.74	7.23
SD	5.520	3.515
Median	7.00	7.00
Min, Max	1.5, 32.0	1.5, 23.0
Week 16		
n	111	106
Mean	8.76	7.64
SD	6.076	3.970
Median	7.00	7.00
Min, Max	1.5, 50.0	1.5, 23.0
Week 20		
n	110	106
Mean	8.54	7.12
SD	4.731	3.304
Median	7.00	7.00
Min, Max	1.5, 25.0	1.5, 16.0

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 12 of 57
Lab test: Total Bilirubin (umol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	109	105
Mean	8.29	7.18
SD	4.845	3.612
Median	7.00	7.00
Min, Max	1.5, 35.0	1.5, 18.0

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 13 of 57
Lab test: GGT (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	18.3	19.8
SD	14.57	14.97
Median	13.0	16.0
Min, Max	5, 81	2, 82
Week 4		
n	113	109
Mean	19.1	23.7
SD	17.17	18.42
Median	13.0	17.0
Min, Max	5, 100	5, 104
Week 8		
n	112	108
Mean	19.8	23.4
SD	19.93	17.82
Median	13.0	17.0
Min, Max	6, 160	4, 102

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 14 of 57
Lab test: GGT (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	17.0	22.2
SD	12.55	18.59
Median	12.5	16.0
Min, Max	5, 72	2, 131
Week 16		
n	111	106
Mean	18.3	22.4
SD	15.88	17.64
Median	14.0	17.0
Min, Max	4, 116	4, 115
Week 20		
n	110	106
Mean	18.1	24.2
SD	13.89	32.76
Median	13.0	16.0
Min, Max	5, 74	4, 308

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 15 of 57
Lab test: GGT (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	108	105
Mean	17.9	23.0
SD	14.51	23.73
Median	13.0	16.0
Min, Max	5, 76	5, 182

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 16 of 57
Lab test: LDH (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	155.1	157.4
SD	26.57	35.37
Median	152.0	154.0
Min, Max	110, 251	102, 410
Week 4		
n	111	100
Mean	154.2	151.5
SD	29.18	29.36
Median	151.0	147.5
Min, Max	104, 295	91, 298
Week 8		
n	111	107
Mean	154.9	148.5
SD	30.86	23.52
Median	149.0	145.0
Min, Max	105, 313	95, 211

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 17 of 57
Lab test: LDH (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	107	104
Mean	154.1	146.2
SD	34.37	29.25
Median	153.0	140.5
Min, Max	102, 420	91, 247
Week 16		
n	107	103
Mean	156.7	145.4
SD	36.30	22.96
Median	151.0	145.0
Min, Max	106, 415	91, 208
Week 20		
n	105	101
Mean	156.0	145.4
SD	40.09	25.57
Median	151.0	145.0
Min, Max	105, 479	88, 228

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 18 of 57
Lab test: LDH (U/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	104	102
Mean	151.9	143.1
SD	25.37	21.45
Median	150.0	141.0
Min, Max	101, 241	102, 210

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 19 of 57
Lab test: BUN/urea (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	4.30	4.08
SD	1.068	0.996
Median	4.10	4.10
Min, Max	2.4, 9.4	1.7, 7.6
Week 4		
n	113	109
Mean	4.18	4.04
SD	0.974	1.106
Median	4.10	3.95
Min, Max	1.9, 6.7	2.1, 7.6
Week 8		
n	112	108
Mean	4.45	4.04
SD	1.257	1.117
Median	4.10	4.00
Min, Max	2.2, 10.4	1.9, 7.7

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 20 of 57
Lab test: BUN/urea (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	4.20	4.24
SD	0.981	1.187
Median	4.00	4.10
Min, Max	2.4, 7.5	2.0, 9.4
Week 16		
n	111	106
Mean	4.27	4.15
SD	1.172	1.100
Median	4.10	4.10
Min, Max	1.6, 8.2	2.1, 7.7
Week 20		
n	110	106
Mean	4.25	4.32
SD	1.038	1.133
Median	4.15	4.20
Min, Max	2.2, 8.2	1.7, 8.5

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: BUN/urea (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	109	105
Mean	4.24	4.43
SD	1.201	1.095
Median	4.00	4.40
Min, Max	1.8, 8.5	1.6, 7.4

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Creatinine (umol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	64.9	66.1
SD	14.00	13.41
Median	63.0	65.0
Min, Max	41, 108	39, 104
Week 4		
n	113	109
Mean	65.0	60.2
SD	13.85	12.61
Median	63.0	59.0
Min, Max	41, 116	34, 96
Week 8		
n	112	108
Mean	65.0	59.6
SD	12.81	12.80
Median	63.0	55.5
Min, Max	39, 101	38, 96

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 23 of 57
Lab test: Creatinine (umol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	64.9	58.7
SD	13.39	12.51
Median	61.0	55.5
Min, Max	44, 103	31, 101
Week 16		
n	111	106
Mean	65.2	58.9
SD	13.30	12.31
Median	63.0	56.0
Min, Max	45, 102	34, 109
Week 20		
n	110	106
Mean	64.6	59.8
SD	12.96	12.52
Median	61.0	57.2
Min, Max	43, 104	34, 110

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Creatinine (umol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	109	105
Mean	65.0	58.5
SD	13.40	12.32
Median	63.0	57.0
Min, Max	40, 102	33, 100

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Sodium (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	139.1	139.4
SD	1.81	1.93
Median	139.0	139.0
Min, Max	135, 144	134, 146
Week 4		
n	113	109
Mean	138.9	139.4
SD	1.95	1.66
Median	139.0	139.0
Min, Max	134, 144	136, 144
Week 8		
n	112	108
Mean	138.8	139.3
SD	1.94	1.62
Median	139.0	139.0
Min, Max	134, 145	136, 144

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 26 of 57
Lab test: Sodium (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	138.7	139.0
SD	1.80	1.92
Median	139.0	139.0
Min, Max	134, 146	134, 146
Week 16		
n	111	106
Mean	138.9	139.0
SD	1.74	1.73
Median	139.0	139.0
Min, Max	135, 143	134, 144
Week 20		
n	110	106
Mean	139.0	139.3
SD	1.90	1.89
Median	139.0	139.0
Min, Max	134, 145	134, 146

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 27 of 57
Lab test: Sodium (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	109	105
Mean	138.8	139.2
SD	1.94	2.27
Median	139.0	139.0
Min, Max	134, 145	127, 145

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Potassium (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	4.04	4.11
SD	0.272	0.336
Median	4.00	4.10
Min, Max	3.4, 5.3	3.3, 5.0
Week 4		
n	113	109
Mean	4.07	4.12
SD	0.309	0.324
Median	4.00	4.10
Min, Max	3.4, 5.8	3.4, 5.1
Week 8		
n	112	108
Mean	4.06	4.04
SD	0.325	0.309
Median	4.00	4.00
Min, Max	3.3, 5.3	3.2, 4.8

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 29 of 57
Lab test: Potassium (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	4.09	4.11
SD	0.333	0.315
Median	4.00	4.10
Min, Max	3.5, 5.8	3.1, 5.0
Week 16		
n	111	106
Mean	4.02	4.10
SD	0.296	0.318
Median	4.00	4.05
Min, Max	3.2, 5.1	3.3, 5.1
Week 20		
n	108	106
Mean	4.07	4.09
SD	0.306	0.317
Median	4.05	4.10
Min, Max	3.4, 4.9	3.3, 5.1

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 30 of 57
Lab test: Potassium (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	108	105
Mean	4.09	4.12
SD	0.341	0.316
Median	4.10	4.10
Min, Max	3.4, 5.6	3.5, 4.9

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Chloride (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	102.0	101.9
SD	2.00	1.86
Median	102.0	102.0
Min, Max	98, 108	97, 107
Week 4		
n	113	109
Mean	102.1	101.6
SD	1.99	1.77
Median	102.0	102.0
Min, Max	97, 107	95, 106
Week 8		
n	112	108
Mean	102.0	101.5
SD	2.03	1.82
Median	102.0	102.0
Min, Max	97, 106	97, 105

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 32 of 57
Lab test: Chloride (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	101.9	101.2
SD	1.96	1.99
Median	102.0	101.0
Min, Max	97, 107	95, 107
Week 16		
n	111	106
Mean	102.0	101.4
SD	1.88	1.79
Median	102.0	101.3
Min, Max	98, 107	97, 106
Week 20		
n	110	106
Mean	102.1	101.5
SD	2.15	1.66
Median	102.0	102.0
Min, Max	95, 107	97, 105

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 33 of 57
Lab test: Chloride (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	109	105
Mean	102.2	101.6
SD	2.15	2.23
Median	102.0	102.0
Min, Max	97, 110	88, 107

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Bicarbonate (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	23.67	23.87
SD	2.303	2.126
Median	23.60	23.90
Min, Max	15.5, 29.7	18.0, 29.8
Week 4		
n	113	109
Mean	23.70	24.07
SD	2.303	2.121
Median	24.00	24.10
Min, Max	18.1, 29.4	18.2, 28.7
Week 8		
n	112	108
Mean	23.73	24.39
SD	2.217	2.202
Median	23.85	24.30
Min, Max	19.1, 29.5	19.0, 29.7

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 35 of 57
Lab test: Bicarbonate (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	23.73	24.20
SD	2.001	2.192
Median	23.70	24.15
Min, Max	18.8, 28.8	19.4, 28.4
Week 16		
n	111	106
Mean	23.51	24.19
SD	2.204	2.270
Median	23.50	24.20
Min, Max	19.3, 29.2	18.4, 29.9
Week 20		
n	110	106
Mean	23.85	24.33
SD	2.114	2.257
Median	23.70	24.60
Min, Max	18.3, 28.4	19.3, 28.4

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 36 of 57
Lab test: Bicarbonate (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	109	105
Mean	23.86	24.64
SD	2.008	2.068
Median	23.80	24.90
Min, Max	19.4, 29.9	17.7, 29.0

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Calcium (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	2.347	2.351
SD	0.1039	0.1101
Median	2.350	2.360
Min, Max	2.09, 2.60	2.08, 2.59
Week 4		
n	113	109
Mean	2.346	2.351
SD	0.0957	0.1057
Median	2.340	2.345
Min, Max	2.12, 2.65	2.05, 2.65
Week 8		
n	112	108
Mean	2.337	2.347
SD	0.0880	0.1177
Median	2.340	2.350
Min, Max	2.07, 2.56	1.80, 2.59

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Calcium (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	2.340	2.358
SD	0.1018	0.1018
Median	2.340	2.360
Min, Max	1.91, 2.60	2.09, 2.60
Week 16		
n	111	106
Mean	2.334	2.366
SD	0.0979	0.1027
Median	2.340	2.360
Min, Max	1.95, 2.56	2.04, 2.67
Week 20		
n	110	106
Mean	2.346	2.365
SD	0.0864	0.1080
Median	2.330	2.370
Min, Max	2.14, 2.53	2.08, 2.65

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 39 of 57
Lab test: Calcium (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	109	105
Mean	2.355	2.348
SD	0.0936	0.1110
Median	2.350	2.350
Min, Max	2.14, 2.65	1.89, 2.63

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Magnesium (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	0.856	0.861
SD	0.0552	0.0627
Median	0.860	0.860
Min, Max	0.74, 1.01	0.70, 1.03
Week 4		
n	113	109
Mean	0.857	0.845
SD	0.0567	0.0602
Median	0.850	0.840
Min, Max	0.74, 1.03	0.69, 1.03
Week 8		
n	112	108
Mean	0.855	0.843
SD	0.0497	0.0626
Median	0.853	0.830
Min, Max	0.73, 1.00	0.74, 1.06

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 41 of 57
Lab test: Magnesium (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	0.858	0.844
SD	0.0556	0.0602
Median	0.850	0.840
Min, Max	0.73, 1.01	0.72, 1.01
Week 16		
n	111	106
Mean	0.859	0.848
SD	0.0503	0.0620
Median	0.860	0.848
Min, Max	0.74, 0.97	0.69, 1.05
Week 20		
n	110	106
Mean	0.861	0.844
SD	0.0601	0.0628
Median	0.860	0.840
Min, Max	0.71, 1.10	0.66, 0.97

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Magnesium (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	109	105
Mean	0.858	0.849
SD	0.0605	0.0547
Median	0.860	0.850
Min, Max	0.72, 1.05	0.71, 0.96

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Phosphorus (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	1.165	1.154
SD	0.1566	0.1606
Median	1.160	1.150
Min, Max	0.74, 1.51	0.79, 1.53
Week 4		
n	113	109
Mean	1.149	1.123
SD	0.1647	0.1691
Median	1.140	1.140
Min, Max	0.72, 1.53	0.74, 1.53
Week 8		
n	112	108
Mean	1.149	1.113
SD	0.1589	0.1536
Median	1.145	1.115
Min, Max	0.83, 1.56	0.74, 1.53

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Phosphorus (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	1.172	1.128
SD	0.1766	0.1651
Median	1.170	1.110
Min, Max	0.76, 2.15	0.66, 1.49
Week 16		
n	111	106
Mean	1.122	1.135
SD	0.1515	0.1890
Median	1.110	1.120
Min, Max	0.78, 1.51	0.75, 2.07
Week 20		
n	110	106
Mean	1.142	1.129
SD	0.1694	0.1712
Median	1.138	1.100
Min, Max	0.72, 1.74	0.81, 1.60

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Phosphorus (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	108	105
Mean	1.121	1.117
SD	0.1524	0.1588
Median	1.140	1.140
Min, Max	0.66, 1.48	0.68, 1.58

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 46 of 57
Lab test: Glucose (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	5.21	5.14
SD	0.789	0.789
Median	5.10	5.00
Min, Max	3.8, 9.1	3.4, 8.3
Week 4		
n	113	109
Mean	5.25	5.22
SD	0.854	0.884
Median	5.10	5.00
Min, Max	3.9, 8.8	3.5, 8.3
Week 8		
n	112	108
Mean	5.25	5.22
SD	0.860	0.773
Median	5.00	5.20
Min, Max	3.9, 9.9	3.8, 8.4

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 47 of 57
Lab test: Glucose (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	5.10	5.16
SD	0.617	0.852
Median	5.00	5.10
Min, Max	3.6, 7.0	3.5, 10.6
Week 16		
n	111	106
Mean	5.22	5.18
SD	0.949	0.932
Median	5.10	5.00
Min, Max	3.3, 11.1	3.6, 10.6
Week 20		
n	110	106
Mean	5.21	5.22
SD	0.770	0.722
Median	5.00	5.20
Min, Max	3.4, 7.8	3.2, 7.3

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Glucose (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	109	105
Mean	5.09	5.14
SD	0.826	0.846
Median	5.00	5.00
Min, Max	2.6, 8.5	2.6, 10.3

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 49 of 57
Lab test: Cholesterol (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	4.960	5.144
SD	0.9081	0.8224
Median	4.930	5.120
Min, Max	2.83, 7.75	3.08, 7.01
Week 4		
n	113	109
Mean	4.949	5.132
SD	0.8999	0.8249
Median	4.850	5.130
Min, Max	3.01, 8.16	3.26, 7.56
Week 8		
n	112	108
Mean	4.951	5.172
SD	0.8564	0.8354
Median	4.955	5.170
Min, Max	3.07, 7.20	3.18, 7.70

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 50 of 57
Lab test: Cholesterol (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	5.055	5.178
SD	0.8464	0.7775
Median	5.110	5.190
Min, Max	2.98, 7.49	3.49, 7.21
Week 16		
n	111	106
Mean	5.032	5.288
SD	0.8353	0.8921
Median	5.090	5.210
Min, Max	3.07, 7.06	3.63, 7.92
Week 20		
n	110	106
Mean	5.013	5.249
SD	0.8572	0.8934
Median	5.015	5.135
Min, Max	3.35, 6.99	3.32, 8.67

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Cholesterol (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	109	105
Mean	4.939	5.205
SD	0.8355	0.8386
Median	4.960	5.130
Min, Max	2.78, 7.82	3.52, 8.26

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Triglycerides (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	1.181	1.298
SD	0.6089	0.7225
Median	0.980	1.100
Min, Max	0.40, 3.66	0.38, 4.42
Week 4		
n	113	109
Mean	1.241	1.209
SD	0.7526	0.6675
Median	1.020	1.040
Min, Max	0.42, 5.07	0.36, 3.57
Week 8		
n	112	108
Mean	1.216	1.193
SD	0.6795	0.6633
Median	1.015	1.005
Min, Max	0.42, 4.55	0.31, 3.99

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Triglycerides (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	1.192	1.155
SD	0.6524	0.6693
Median	1.000	0.960
Min, Max	0.48, 4.92	0.37, 5.80
Week 16		
n	111	106
Mean	1.253	1.252
SD	0.6786	0.7829
Median	1.020	0.980
Min, Max	0.39, 4.37	0.45, 5.46
Week 20		
n	110	106
Mean	1.252	1.163
SD	0.7255	0.7273
Median	1.095	0.935
Min, Max	0.47, 4.32	0.33, 5.07

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Triglycerides (mmol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	109	105
Mean	1.250	1.122
SD	0.7559	0.6221
Median	0.960	0.940
Min, Max	0.32, 4.93	0.34, 3.40

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Uric Acid (umol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	271.64	288.51
SD	80.975	89.161
Median	265.00	270.00
Min, Max	29.5, 533.0	29.5, 575.0
Week 4		
n	113	109
Mean	271.09	277.31
SD	82.407	91.052
Median	253.00	258.00
Min, Max	29.5, 614.0	29.5, 496.0
Week 8		
n	112	108
Mean	270.26	279.42
SD	78.889	91.977
Median	253.50	259.00
Min, Max	29.5, 610.0	29.5, 495.0

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
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Lab test: Uric Acid (umol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	109	107
Mean	268.16	274.02
SD	76.302	90.738
Median	254.00	260.00
Min, Max	29.5, 580.0	29.5, 566.0
Week 16		
n	111	106
Mean	265.10	277.76
SD	78.755	85.744
Median	248.00	259.00
Min, Max	29.5, 469.0	29.5, 507.0
Week 20		
n	110	106
Mean	260.75	284.76
SD	77.551	93.464
Median	258.50	269.50
Min, Max	29.5, 530.0	29.5, 503.0

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Summary of blood chemistry laboratory parameters: actual values by visit
Part I (placebo-controlled period)
Page 57 of 57
Lab test: Uric Acid (umol/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	109	105
Mean	264.67	278.57
SD	75.929	90.980
Median	254.00	260.00
Min, Max	29.5, 526.0	29.5, 543.0

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-BC.SAS DATE: 25SEP2015

Table 206: Incidence of Renal Disorders by System Organ Class and Preferred Term: 24 Weeks of Studies 109MS301 and 109MS302

Incidence of renal disorders by system organ class and preferred term:
24 Weeks of Studies 109MS301 and 109MS302
Page 1 of 3

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a renal disorder	94 (12)	101 (13)	118 (16)	219 (14)	42 (12)
腎および尿路障害	69 (9)	73 (9)	95 (13)	168 (11)	24 (7)
蛋白尿	31 (4)	31 (4)	43 (6)	74 (5)	11 (3)
血尿	17 (2)	15 (2)	23 (3)	38 (2)	4 (1)
ミクロアルブミン尿	10 (1)	14 (2)	14 (2)	28 (2)	5 (1)
ケトン尿	4 (<1)	3 (<1)	10 (1)	13 (<1)	0
排尿困難	3 (<1)	2 (<1)	6 (<1)	8 (<1)	1 (<1)
尿意切迫	4 (<1)	4 (<1)	4 (<1)	8 (<1)	3 (<1)
尿失禁	1 (<1)	4 (<1)	2 (<1)	6 (<1)	0
頻尿	5 (<1)	2 (<1)	3 (<1)	5 (<1)	3 (<1)
腎結石症	1 (<1)	2 (<1)	2 (<1)	4 (<1)	1 (<1)
膀胱機能障害	1 (<1)	2 (<1)	1 (<1)	3 (<1)	0
糖尿	4 (<1)	1 (<1)	2 (<1)	3 (<1)	0
白血球尿	1 (<1)	0	3 (<1)	3 (<1)	1 (<1)
腎臓痛	1 (<1)	1 (<1)	2 (<1)	3 (<1)	0
切迫性尿失禁	0	0	3 (<1)	3 (<1)	1 (<1)
非感染性膀胱炎	1 (<1)	1 (<1)	1 (<1)	2 (<1)	0
排尿躊躇	1 (<1)	0	2 (<1)	2 (<1)	0
尿臭異常	0	1 (<1)	1 (<1)	2 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-RENAL-A-24W.SAS DATE: 02DEC2015

Incidence of renal disorders by system organ class and preferred term:
24 Weeks of Studies 109MS301 and 109MS302
Page 2 of 3

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
出血性膀胱炎	0	1 (<1)	0	1 (<1)	0
緊張性膀胱	0	1 (<1)	0	1 (<1)	0
失禁	0	0	1 (<1)	1 (<1)	0
排尿異常	0	1 (<1)	0	1 (<1)	0
神経因性膀胱	0	0	1 (<1)	1 (<1)	0
起立性蛋白尿症	0	1 (<1)	0	1 (<1)	0
腎仙痛	0	0	1 (<1)	1 (<1)	0
慢性腎不全	0	0	1 (<1)	1 (<1)	0
有痛性排尿困難	0	1 (<1)	0	1 (<1)	0
尿閉	2 (<1)	1 (<1)	0	1 (<1)	1 (<1)
アルブミン尿	0	0	0	0	1 (<1)
膀胱憩室	1 (<1)	0	0	0	0
夜間頻尿	1 (<1)	0	0	0	0
臨床検査	31 (4)	42 (5)	34 (4)	76 (5)	23 (7)
尿中アルブミン陽性	11 (1)	20 (3)	15 (2)	35 (2)	5 (1)
尿中蛋白陽性	6 (<1)	14 (2)	10 (1)	24 (2)	10 (3)
尿中血陽性	1 (<1)	7 (<1)	6 (<1)	13 (<1)	4 (1)
尿中赤血球陽性	2 (<1)	5 (<1)	4 (<1)	9 (<1)	1 (<1)
尿中白血球陽性	6 (<1)	4 (<1)	5 (<1)	9 (<1)	7 (2)
血中クレアチニン増加	1 (<1)	2 (<1)	2 (<1)	4 (<1)	3 (<1)
血中クレアチン増加	0	1 (<1)	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-RENAL-A-24W.SAS DATE: 02DEC2015

Incidence of renal disorders by system organ class and preferred term:
24 Weeks of Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
血中クレアチニン異常	0	1 (<1)	0	1 (<1)	0
血中尿素増加	1 (<1)	0	1 (<1)	1 (<1)	1 (<1)
尿中結晶陽性	3 (<1)	0	1 (<1)	1 (<1)	0
尿中ブドウ糖陽性	2 (<1)	1 (<1)	0	1 (<1)	0
腎機能検査異常	0	1 (<1)	0	1 (<1)	0
残尿量増加	0	1 (<1)	0	1 (<1)	0
尿円柱	0	0	1 (<1)	1 (<1)	0
尿細胞診異常	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-RENAL-A-24W.SAS DATE: 02DEC2015

Table 207: Incidence of Renal Disorders by System Organ Class and Preferred Term: Studies 109MS301 and 109MS302

Incidence of renal disorders by system organ class and preferred term:
Studies 109MS301 and 109MS302
Page 1 of 4

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a renal disorder	193 (25)	192 (25)	215 (28)	407 (27)	82 (23)
腎および尿路障害	151 (20)	146 (19)	176 (23)	322 (21)	58 (17)
蛋白尿	59 (8)	67 (9)	85 (11)	152 (10)	30 (9)
血尿	34 (4)	33 (4)	41 (5)	74 (5)	10 (3)
ミクロアルブミン尿	24 (3)	35 (5)	36 (5)	71 (5)	15 (4)
ケトン尿	6 (<1)	7 (<1)	15 (2)	22 (1)	1 (<1)
排尿困難	11 (1)	7 (<1)	13 (2)	20 (1)	1 (<1)
尿意切迫	11 (1)	10 (1)	9 (1)	19 (1)	5 (1)
腎結石症	8 (1)	5 (<1)	8 (1)	13 (<1)	1 (<1)
頻尿	12 (2)	7 (<1)	6 (<1)	13 (<1)	3 (<1)
尿失禁	7 (<1)	8 (1)	5 (<1)	13 (<1)	3 (<1)
尿閉	4 (<1)	4 (<1)	4 (<1)	8 (<1)	1 (<1)
糖尿	9 (1)	4 (<1)	3 (<1)	7 (<1)	2 (<1)
切迫性尿失禁	0	2 (<1)	4 (<1)	6 (<1)	1 (<1)
排尿躊躇	5 (<1)	1 (<1)	5 (<1)	6 (<1)	1 (<1)
アルブミン尿	0	2 (<1)	2 (<1)	4 (<1)	2 (<1)
腎臓痛	1 (<1)	2 (<1)	2 (<1)	4 (<1)	0
尿臭異常	1 (<1)	1 (<1)	3 (<1)	4 (<1)	0
膀胱機能障害	1 (<1)	2 (<1)	1 (<1)	3 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-RENAL-A.SAS DATE: 02DEC2015

Incidence of renal disorders by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
白血球尿	2 (<1)	0	3 (<1)	3 (<1)	1 (<1)
神経因性膀胱	2 (<1)	2 (<1)	1 (<1)	3 (<1)	0
腎仙痛	1 (<1)	1 (<1)	2 (<1)	3 (<1)	0
膀胱刺激症状	0	1 (<1)	1 (<1)	2 (<1)	0
非感染性膀胱炎	3 (<1)	1 (<1)	1 (<1)	2 (<1)	0
グロブリン尿	0	2 (<1)	0	2 (<1)	0
緊張性膀胱	0	1 (<1)	1 (<1)	2 (<1)	0
起立性蛋白尿症	0	1 (<1)	1 (<1)	2 (<1)	0
腎嚢胞	1 (<1)	2 (<1)	0	2 (<1)	0
膀胱痛	0	1 (<1)	0	1 (<1)	0
膀胱穿孔	0	0	1 (<1)	1 (<1)	0
着色尿	0	0	1 (<1)	1 (<1)	0
出血性膀胱炎	0	1 (<1)	0	1 (<1)	0
失禁	0	0	1 (<1)	1 (<1)	1 (<1)
排尿異常	0	1 (<1)	0	1 (<1)	0
腎下垂症	1 (<1)	1 (<1)	0	1 (<1)	0
腎障害	0	1 (<1)	0	1 (<1)	0
慢性腎不全	0	0	1 (<1)	1 (<1)	0
腎機能障害	0	0	1 (<1)	1 (<1)	0
腎尿細管性アシドーシス	0	0	1 (<1)	1 (<1)	0
有痛性排尿困難	0	1 (<1)	0	1 (<1)	0
尿管瘤	0	1 (<1)	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-RENAL-A.SAS DATE: 02DEC2015

Incidence of renal disorders by system organ class and preferred term:
Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
尿路痛	1 (<1)	1 (<1)	0	1 (<1)	1 (<1)
膀胱憩室	1 (<1)	0	0	0	0
膀胱痙縮	1 (<1)	0	0	0	0
尿路結石	1 (<1)	0	0	0	0
肋骨脊柱角圧痛	1 (<1)	0	0	0	0
慢性糸球体腎炎	1 (<1)	0	0	0	0
高血圧性腎症	0	0	0	0	1 (<1)
ネフローゼ症候群	0	0	0	0	1 (<1)
夜間頻尿	1 (<1)	0	0	0	1 (<1)
膿尿	0	0	0	0	1 (<1)
腹圧性尿失禁	1 (<1)	0	0	0	0
尿路の炎症	1 (<1)	0	0	0	0
臨床検査	66 (9)	89 (12)	76 (10)	165 (11)	41 (12)
尿中アルブミン陽性	27 (4)	46 (6)	36 (5)	82 (5)	18 (5)
尿中蛋白陽性	22 (3)	28 (4)	20 (3)	48 (3)	15 (4)
尿中血陽性	7 (<1)	16 (2)	18 (2)	34 (2)	4 (1)
尿中白血球陽性	13 (2)	14 (2)	15 (2)	29 (2)	9 (3)
尿中赤血球陽性	6 (<1)	8 (1)	5 (<1)	13 (<1)	2 (<1)
血中クレアチニン増加	5 (<1)	6 (<1)	5 (<1)	11 (<1)	6 (2)
尿中ブドウ糖陽性	3 (<1)	3 (<1)	3 (<1)	6 (<1)	3 (<1)
血中尿素増加	2 (<1)	0	4 (<1)	4 (<1)	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-RENAL-A.SAS DATE: 02DEC2015

Incidence of renal disorders by system organ class and preferred term:
Studies 109MS301 and 109MS302
Page 4 of 4

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
血中クレアチン増加	0	2 (<1)	1 (<1)	3 (<1)	0
尿中結晶陽性	6 (<1)	1 (<1)	1 (<1)	2 (<1)	0
血中クレアチニン異常	0	1 (<1)	0	1 (<1)	0
腎機能検査異常	0	1 (<1)	0	1 (<1)	0
残尿量増加	0	1 (<1)	0	1 (<1)	0
尿円柱	0	0	1 (<1)	1 (<1)	0
血中クレアチン異常	1 (<1)	0	0	0	0
膀胱超音波検査異常	1 (<1)	0	0	0	0
尿細胞診異常	1 (<1)	0	0	0	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-RENAL-A.SAS DATE: 02DEC2015

Table 209: Incidence of Renal Disorders by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period)

Incidence of renal disorders by system organ class and preferred term
– Part I (placebo-controlled period)

	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Number of subjects with a renal disorder event	8 (7)	6 (5)
腎および尿路障害	8 (7)	5 (5)
ミクロアルブミン尿	0	3 (3)
蛋白尿	0	3 (3)
頻尿	1 (<1)	1 (<1)
排尿困難	3 (3)	0
血尿	1 (<1)	0
緊張性膀胱	1 (<1)	0
尿意切迫	1 (<1)	0
尿失禁	1 (<1)	0
臨床検査	0	1 (<1)
尿中白血球陽性	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-RENAL.SAS DATE: 25SEP2015

Table 211: Incidence of Potential Malignancies by System Organ Class and Preferred Term: 24 Weeks of Studies 109MS301 and 109MS302

Incidence of potential malignancies by system organ class and preferred term:
24 weeks of studies 109MS301 and 109MS302

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a potential malignancy (a)	0	2 (<1)	1 (<1)	3 (<1)	1 (<1)
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	0	1 (<1)	1 (<1)	2 (<1)	1 (<1)
肺新生物	0	1 (<1)	1 (<1)	2 (<1)	0
転移性甲状腺癌	0	0	0	0	1 (<1)
先天性、家族性および遺伝性障害	0	1 (<1)	0	1 (<1)	0
異形成母斑症候群	0	1 (<1)	0	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Potential malignancies were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Query (SMQ) 'Malignant or unspecified tumours' (under the Level 1 SMQ 'Malignancies').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-PMALIG-A-24W.SAS DATE: 02DEC2015

Table 212: Incidence of Potential Malignancies by System Organ Class and Preferred Term: Studies 109MS301 and 109MS302

Incidence of potential malignancies by system organ class and preferred term: Studies 109MS301 and 109MS302

Page 1 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a potential malignancy (a)	6 (<1)	6 (<1)	5 (<1)	11 (<1)	4 (1)
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	6 (<1)	5 (<1)	4 (<1)	9 (<1)	4 (1)
肺新生物	0	1 (<1)	1 (<1)	2 (<1)	0
甲状腺新生物	1 (<1)	2 (<1)	0	2 (<1)	0
基底細胞癌	1 (<1)	1 (<1)	0	1 (<1)	1 (<1)
乳癌	1 (<1)	0	1 (<1)	1 (<1)	0
子宮頚部癌	0	0	1 (<1)	1 (<1)	1 (<1)
泌尿生殖器新生物	0	0	1 (<1)	1 (<1)	0
神経鞘腫	0	1 (<1)	0	1 (<1)	0
腎新生物	0	1 (<1)	0	1 (<1)	0
移行上皮癌	0	1 (<1)	0	1 (<1)	0
乳房新生物	1 (<1)	0	0	0	0
子宮内膜癌	0	0	0	0	1 (<1)
皮膚の新生物	1 (<1)	0	0	0	0
口腔新生物	1 (<1)	0	0	0	0
転移性甲状腺癌	0	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Potential malignancies were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Query (SMQ) 'Malignant or unspecified tumours' (under the Level 1 SMQ 'Malignancies').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-PMALIG-A.SAS DATE: 02DEC2015

Incidence of potential malignancies by system organ class and preferred term: Studies 109MS301 and 109MS302
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
先天性、家族性および遺伝性障害	0	1 (<1)	1 (<1)	2 (<1)	0
異形成母斑症候群	0	1 (<1)	1 (<1)	2 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.
(a) Potential malignancies were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Query (SMQ) 'Malignant or unspecified tumours' (under the Level 1 SMQ 'Malignancies').

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-PMALIG-A.SAS DATE: 02DEC2015

Table 213: Incidence Rate of Overall Potential Malignancies: Study 109MS303

Incidence rate of overall potential malignancies: Study 109MS303

	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012
Number of subjects in safety population	868	868	1736
Total subject-years of follow-up (a)	3056.29	2953.60	6009.89
Number (%) of subjects with a potential malignancy (b)	21 (2)	18 (2)	39 (2)
Incidence rate per 100,000 subject-years (95% CI) (c)	687.11 (425.33,1050.32)	609.43 (361.18,963.16)	648.93 (461.45,887.11)

NOTE: (a) Total subject-years of follow-up excludes follow-up time for a subject after the onset of the first event.
(b) Potential malignancies were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Query (SMQ) 'Malignant or unspecified tumours' (under the Level 1 SMQ 'Malignancies').
(c) Incidence rate per 100,000 subject-years is calculated as (number of subjects with an event) / (total subject-years of follow-up) x 100,000. Exact confidence intervals are calculated based on the Poisson distribution.

SOURCE: BG12MS/JAPAN/ISS/T-AE-RATE-PMALIG-303.SAS DATE: 04DEC2015

Table 215: Incidence of Potential Malignancies by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period)

Incidence of potential malignancies by system organ class and preferred term
– Part I (placebo-controlled period)

	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Number of subjects with a potential malignancy (a)	1 (<1)	0
良性、悪性および詳細不明の新生物（嚢胞およびポリープを含む）	1 (<1)	0
卵管癌	1 (<1)	0
卵巣新生物	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each interval for each system organ class/preferred term. 4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

(a) Potential malignancies were defined as those preferred terms in the Level 2 subordinate Standardised MedDRA Query (SMQ) 'Malignant or unspecified tumours' (under the Level 1 SMQ 'Malignancies').

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-MALIG.SAS DATE: 25SEP2015

Table 217: Incidence rate of renal cancer: Studies 109MS301, 109MS302, and 109MS303

Incidence rate of renal cancer: Studies 109MS301, 109MS302 and 109MS303
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	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012
Number of subjects in safety population	1136	1127	2263
Overall renal cancer:			
Total subject-years of follow-up (a)	4272.11	4147.41	8419.52
Number (%) of subjects with an event (c)	4 (<1)	0	4 (<1)
Incidence rate per 100,000 subject-years (95% CI) (b)	93.63 (25.51,239.73)	0 (.,88.94)	47.51 (12.94,121.64)

NOTE: Data from Studies 109MS301 and 109MS302 after subjects switched to alternative MS treatment are excluded.
(a) Total subject-years of follow-up excludes follow-up time for a subject after the onset of the first event.
(b) Incidence rate per 100,000 subject-years is calculated as (number of subjects with an event) / (total subject-years of follow-up) x 100,000. Exact confidence intervals are calculated based on the Poisson distribution.
(c) One report of renal neoplasm was further specified as a renal cell carcinoma on histology records obtained during the reporting process.

SOURCE: BG12MS/JAPAN/ISS/T-AE-RATE-RENALC-B.SAS DATE: 04JAN2016

Incidence rate of renal cancer: Studies 109MS301, 109MS302 and 109MS303
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	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012
Renal cell carcinoma (c):			
Total subject-years of follow-up (a)	4272.27	4147.41	8419.67
Number (%) of subjects with an event (c)	3 (<1)	0	3 (<1)
Incidence rate per 100,000 subject-years (95% CI) (b)	70.22 (14.48,205.21)	0 (.,88.94)	35.63 (7.35,104.13)

NOTE: Data from Studies 109MS301 and 109MS302 after subjects switched to alternative MS treatment are excluded.
(a) Total subject-years of follow-up excludes follow-up time for a subject after the onset of the first event.
(b) Incidence rate per 100,000 subject-years is calculated as (number of subjects with an event) / (total subject-years of follow-up) x 100,000. Exact confidence intervals are calculated based on the Poisson distribution.
(c) One report of renal neoplasm was further specified as a renal cell carcinoma on histology records obtained during the reporting process.

SOURCE: BG12MS/JAPAN/ISS/T-AE-RATE-RENALC-B.SAS DATE: 04JAN2016

Incidence rate of renal cancer: Studies 109MS301, 109MS302 and 109MS303
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	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012
Transitional cell cancer of renal pelvis:			
Total subject-years of follow-up (a)	4276.12	4147.41	8423.53
Number (%) of subjects with an event (c)	1 (<1)	0	1 (<1)
Incidence rate per 100,000 subject-years (95% CI) (b)	23.39 (0.59,130.30)	0 (.,88.94)	11.87 (0.30,66.14)

NOTE: Data from Studies 109MS301 and 109MS302 after subjects switched to alternative MS treatment are excluded.
(a) Total subject-years of follow-up excludes follow-up time for a subject after the onset of the first event.
(b) Incidence rate per 100,000 subject-years is calculated as (number of subjects with an event) / (total subject-years of follow-up) x 100,000. Exact confidence intervals are calculated based on the Poisson distribution.
(c) One report of renal neoplasm was further specified as a renal cell carcinoma on histology records obtained during the reporting process.

SOURCE: BG12MS/JAPAN/ISS/T-AE-RATE-RENALC-B.SAS DATE: 04JAN2016

Incidence rate of renal cancer: Studies 109MS301, 109MS302 and 109MS303
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	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012
Other renal cancer:			
Total subject-years of follow-up (a)	4276.27	4147.41	8423.68
Number (%) of subjects with an event (c)	0	0	0
Incidence rate per 100,000 subject-years (95% CI) (b)	0 (.,86.26)	0 (.,88.94)	0 (.,43.79)

NOTE: Data from Studies 109MS301 and 109MS302 after subjects switched to alternative MS treatment are excluded.
(a) Total subject-years of follow-up excludes follow-up time for a subject after the onset of the first event.
(b) Incidence rate per 100,000 subject-years is calculated as (number of subjects with an event) / (total subject-years of follow-up) x 100,000. Exact confidence intervals are calculated based on the Poisson distribution.
(c) One report of renal neoplasm was further specified as a renal cell carcinoma on histology records obtained during the reporting process.

SOURCE: BG12MS/JAPAN/ISS/T-AE-RATE-RENALC-B.SAS DATE: 04JAN2016

Table 220: Incidence of Adverse Events Associated With Depression and Suicide by System Organ Class and Preferred Term – Part I (Placebo-Controlled Period)

Incidence of adverse events associated with depression and suicide by system organ class and preferred term - Part I (placebo-controlled period)

	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Number of subjects with a depression and suicide event (a)	2 (2)	1 (<1)
精神障害	2 (2)	1 (<1)
うつ病	1 (<1)	1 (<1)
抑うつ気分	1 (<1)	0

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS medications are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing incidence in the BG00012 column within each system organ class.

(a) Adverse events associated with suicide and depression were defined as narrow search preferred terms from the Level 1 Standardised MedDRA Query (SMQ) 'Depression and suicide/self-injury'.

SOURCE: BG12MS/109MS305/PART1/T-AE-SOCPT-SUIC.SAS DATE: 16NOV2015

Table 221: Incidence of Adverse Events Associated With Depression and Suicide by System Organ Class and Preferred Term: 24 Weeks of Studies 109MS301 and 109MS302

Incidence of adverse events associated with depression and suicide by system organ class and preferred term: 24 Weeks of Studies 109MS301 and 109MS302

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a depression and suicide event (a)	42 (5)	29 (4)	25 (3)	54 (4)	16 (5)
精神障害	42 (5)	29 (4)	25 (3)	54 (4)	16 (5)
うつ病	33 (4)	23 (3)	19 (3)	42 (3)	13 (4)
抑うつ気分	7 (<1)	5 (<1)	4 (<1)	9 (<1)	2 (<1)
抑うつ症状	1 (<1)	1 (<1)	1 (<1)	2 (<1)	0
大うつ病	0	0	1 (<1)	1 (<1)	0
自殺念慮	1 (<1)	1 (<1)	0	1 (<1)	2 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Adverse events associated with suicide and depression were defined as narrow search preferred terms from the Level 1 Standardised MedDRA Query (SMQ) 'Depression and suicide/self-injury '.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-SUIC-A-24W.SAS DATE: 02DEC2015

Table 222: Incidence of Adverse Events Associated With Depression and Suicide by System Organ Class and Preferred Term: Studies 109MS301 and 109MS302

Incidence of adverse events associated with depression and suicide by system organ class and preferred term: Studies 109MS301 and 109MS302

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771 (100)	769 (100)	760 (100)	1529 (100)	351 (100)
Number of subjects with a depression and suicide event (a)	88 (11)	65 (8)	61 (8)	126 (8)	35 (10)
精神障害	88 (11)	65 (8)	61 (8)	126 (8)	35 (10)
うつ病	68 (9)	53 (7)	48 (6)	101 (7)	30 (9)
抑うつ気分	17 (2)	12 (2)	7 (<1)	19 (1)	4 (1)
抑うつ症状	3 (<1)	1 (<1)	2 (<1)	3 (<1)	0
自殺念慮	1 (<1)	2 (<1)	1 (<1)	3 (<1)	2 (<1)
大うつ病	0	0	2 (<1)	2 (<1)	0
抑うつ気分を伴う適応障害	0	1 (<1)	0	1 (<1)	0
自殺企図	0	0	1 (<1)	1 (<1)	1 (<1)
自殺既遂	0	0	0	0	1 (<1)
不快気分	1 (<1)	0	0	0	0
故意の自傷行為	0	0	0	0	1 (<1)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

(a) Adverse events associated with suicide and depression were defined as narrow search preferred terms from the Level 1 Standardised MedDRA Query (SMQ) 'Depression and suicide/self-injury'.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-SUIC-A.SAS DATE: 02DEC2015

Table 224: Incidence of Adverse Events at Least 2% Higher for BG00012 240 BID Group Relative to Placebo by System Organ Class and Preferred Term: Studies 109MS301, 109MS302, and 109MS305 Part I

Incidence of adverse events at least 2% higher for BG00012 240 BID group relative to placebo by system organ class and preferred term: Studies 109MS301, 109MS302, and 109MS305 Part 1
Page 1 of 2

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	884 (100)	880 (100)	760 (100)	1640 (100)	351 (100)
Number of subjects with an event	807 (91)	829 (94)	712 (94)	1541 (94)	304 (87)
感染症および寄生虫症	4 94 (56)	508 (58)	472 (62)	980 (60)	175 (50)
胃腸炎	28 (3)	46 (5)	34 (4)	80 (5)	5 (1)
血管障害	95 (11)	352 (40)	277 (36)	629 (38)	25 (7)
潮紅	42 (5)	289 (33)	215 (28)	504 (31)	6 (2)
ほてり	17 (2)	59 (7)	49 (6)	108 (7)	5 (1)
胃腸障害	315 (36)	405 (46)	398 (52)	803 (49)	65 (19)
下痢	89 (10)	118 (13)	128 (17)	246 (15)	14 (4)
悪心	73 (8)	104 (12)	105 (14)	209 (13)	16 (5)
上腹部痛	51 (6)	81 (9)	85 (11)	166 (10)	4 (1)
腹痛	37 (4)	81 (9)	63 (8)	144 (9)	5 (1)
嘔吐	37 (4)	70 (8)	53 (7)	123 (8)	9 (3)
皮膚および皮下組織障害	170 (19)	264 (30)	247 (33)	511 (31)	60 (17)
そう痒症	32 (4)	70 (8)	58 (8)	128 (8)	7 (2)
発疹	26 (3)	61 (7)	55 (7)	116 (7)	9 (3)
紅斑	10 (1)	40 (5)	54 (7)	94 (6)	6 (2)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-GEPL2PT-BID-A305.SAS DATE: 02DEC2015

Incidence of adverse events at least 2% higher for BG00012 240 BID group relative to placebo by system organ class and preferred term: Studies 109MS301, 109MS302, and 109MS305 Part 1
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	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
臨床検査	207 (23)	225 (26)	216 (28)	441 (27)	106 (30)
尿中アルブミン陽性	27 (3)	46 (5)	36 (5)	82 (5)	18 (5)
アスパラギン酸アミノトランスフェラーゼ増加	19 (2)	37 (4)	29 (4)	66 (4)	14 (4)

NOTE 1: Numbers in parentheses are percentages.
2: Data after subjects switched to alternative MS treatment are excluded.
3: A subject was counted only once within each system organ class/preferred term.
4: Preferred terms are presented by decreasing order of incidence in Total BG00012 column within each system organ class.

SOURCE: BG12MS/JAPAN/ISS/T-AE-SOCPT-GEPL2PT-BID-A305.SAS DATE: 02DEC2015

Table 225: Summary of Hematology Laboratory Parameters - Actual Values by Visit: Studies 109MS301 and 109MS302 Lab Test

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: WBC (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	770	767	758	1525	350
Mean	6.909	6.926	6.959	6.942	6.898
SD	1.8912	1.9741	2.0786	2.0261	2.1206
Median	6.715	6.650	6.660	6.660	6.635
Min, Max	3.27, 15.61	2.79, 17.19	2.51, 18.73	2.51, 18.73	2.20, 18.01
Week 4					
n	745	732	721	1453	333
Mean	7.011	7.229	7.136	7.183	7.067
SD	2.0855	2.4382	2.3961	2.4170	1.9865
Median	6.730	6.760	6.620	6.690	6.830
Min, Max	2.91, 18.54	2.39, 23.05	2.80, 19.83	2.39, 23.05	2.52, 18.23

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: WBC (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	728	694	671	1365	329
Mean	7.022	6.612	6.631	6.621	7.242
SD	2.0931	1.9787	2.0643	2.0205	2.1034
Median	6.730	6.320	6.320	6.320	7.000
Min, Max	3.35, 19.67	2.90, 18.79	2.83, 14.98	2.83, 18.79	3.03, 15.66
Week 12					
n	728	699	669	1368	325
Mean	7.044	6.508	6.424	6.467	7.021
SD	2.1110	2.1621	1.9684	2.0693	2.0099
Median	6.710	6.100	6.170	6.120	6.670
Min, Max	2.73, 28.30	2.56, 16.91	2.57, 22.87	2.56, 22.87	2.84, 16.61
Week 24					
n	699	665	648	1313	316
Mean	6.962	6.169	6.313	6.240	7.139
SD	1.8385	1.9698	2.0169	1.9938	2.0621
Median	6.780	5.840	5.955	5.880	6.890
Min, Max	1.98, 13.89	2.58, 15.48	2.10, 19.55	2.10, 19.55	2.58, 15.42

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: WBC (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 36					
n	655	636	617	1253	307
Mean	6.998	6.121	6.125	6.123	6.964
SD	2.0274	1.9465	1.9541	1.9495	2.1091
Median	6.770	5.740	5.840	5.790	6.840
Min, Max	2.63, 19.18	2.01, 16.12	2.11, 16.54	2.01, 16.54	2.49, 18.95
Week 48					
n	608	611	606	1217	299
Mean	6.890	5.963	6.043	6.003	6.776
SD	1.8633	2.0776	2.0483	2.0626	2.0824
Median	6.620	5.580	5.755	5.640	6.500
Min, Max	2.88, 18.87	2.18, 23.12	2.15, 22.55	2.15, 23.12	2.26, 16.46
Week 60					
n	565	596	586	1182	287
Mean	7.029	6.008	6.103	6.056	6.814
SD	2.0200	1.9906	2.0445	2.0172	1.8461
Median	6.860	5.685	5.805	5.740	6.530
Min, Max	3.15, 18.69	1.88, 15.53	2.21, 19.69	1.88, 19.69	3.38, 15.88

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: WBC (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 72					
n	526	575	569	1144	280
Mean	6.965	5.951	6.219	6.084	6.941
SD	2.0125	2.1037	2.1240	2.1172	2.1582
Median	6.680	5.560	5.790	5.640	6.620
Min, Max	3.16, 18.94	1.61, 21.12	1.92, 15.96	1.61, 21.12	2.45, 17.17
Week 84					
n	521	564	556	1120	264
Mean	7.040	5.983	6.148	6.065	7.138
SD	2.0401	1.9786	2.3140	2.1522	2.1071
Median	6.730	5.555	5.820	5.660	6.800
Min, Max	2.76, 17.44	1.90, 15.03	2.33, 32.18	1.90, 32.18	2.09, 15.83
Week 96					
n	479	527	505	1032	252
Mean	7.011	5.883	6.078	5.978	7.068
SD	2.1101	2.0566	2.0607	2.0599	2.2334
Median	6.710	5.490	5.750	5.605	6.700
Min, Max	2.45, 18.34	1.71, 16.54	1.89, 17.08	1.71, 17.08	2.81, 16.55

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Lymphocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	770	767	758	1525	350
Mean	2.002	1.970	1.997	1.983	1.944
SD	0.6162	0.6201	0.6448	0.6324	0.5822
Median	1.930	1.890	1.895	1.890	1.885
Min, Max	0.62, 6.70	0.47, 7.07	0.67, 8.17	0.47, 8.17	0.51, 4.61
Week 4					
n	744	731	721	1452	333
Mean	2.044	1.916	1.902	1.909	1.922
SD	0.6387	0.6036	0.5615	0.5829	0.5512
Median	1.960	1.820	1.820	1.820	1.880
Min, Max	0.74, 5.47	0.46, 4.91	0.60, 4.70	0.46, 4.91	0.40, 3.75

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Lymphocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	728	694	671	1365	329
Mean	2.044	1.763	1.807	1.784	1.967
SD	0.6180	0.6203	0.6320	0.6262	0.5940
Median	1.980	1.695	1.760	1.720	1.860
Min, Max	0.39, 4.78	0.31, 6.50	0.48, 7.68	0.31, 7.68	0.74, 5.01
Week 12					
n	728	699	669	1368	325
Mean	2.055	1.664	1.699	1.681	1.898
SD	0.6305	0.6240	0.5957	0.6104	0.5644
Median	1.955	1.580	1.650	1.620	1.800
Min, Max	0.49, 5.67	0.32, 4.37	0.36, 5.16	0.32, 5.16	0.57, 3.99
Week 24					
n	699	665	648	1313	316
Mean	2.058	1.480	1.581	1.530	1.922
SD	0.6165	0.6277	0.6217	0.6266	0.5783
Median	1.970	1.380	1.510	1.440	1.840
Min, Max	0.66, 5.76	0.43, 4.46	0.36, 4.30	0.36, 4.46	0.79, 3.88

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Lymphocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 36					
n	655	636	617	1253	307
Mean	2.069	1.416	1.493	1.454	1.939
SD	0.6490	0.6140	0.6166	0.6162	0.5475
Median	1.950	1.290	1.400	1.340	1.870
Min, Max	0.76, 5.13	0.36, 4.15	0.37, 6.01	0.36, 6.01	0.73, 4.13
Week 48					
n	607	611	606	1217	299
Mean	2.014	1.342	1.436	1.389	1.869
SD	0.6322	0.5931	0.5497	0.5735	0.5803
Median	1.900	1.240	1.370	1.300	1.790
Min, Max	0.58, 6.21	0.31, 3.83	0.31, 3.23	0.31, 3.83	0.70, 4.68
Week 60					
n	565	596	586	1182	287
Mean	2.073	1.369	1.451	1.410	1.954
SD	0.6032	0.6179	0.5935	0.6070	0.5598
Median	2.000	1.250	1.350	1.300	1.890
Min, Max	0.29, 4.85	0.31, 4.92	0.29, 3.94	0.29, 4.92	0.53, 3.56

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Lymphocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 72					
n	526	574	568	1142	280
Mean	2.042	1.321	1.423	1.372	1.939
SD	0.6059	0.5930	0.5726	0.5849	0.6513
Median	1.985	1.205	1.330	1.270	1.875
Min, Max	0.63, 4.46	0.14, 4.53	0.32, 4.39	0.14, 4.53	0.83, 5.98
Week 84					
n	519	564	555	1119	264
Mean	2.064	1.365	1.426	1.395	2.009
SD	0.6317	0.6272	0.5696	0.5998	0.6447
Median	1.965	1.230	1.370	1.290	1.885
Min, Max	0.87, 5.21	0.27, 3.93	0.30, 4.23	0.27, 4.23	0.59, 4.67
Week 96					
n	479	527	505	1032	252
Mean	2.011	1.307	1.398	1.352	1.974
SD	0.6494	0.5952	0.5615	0.5804	0.6616
Median	1.930	1.210	1.340	1.260	1.855
Min, Max	0.80, 6.03	0.25, 3.81	0.31, 3.55	0.25, 3.81	0.77, 4.15

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Neutrophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	770	767	758	1525	350
Mean	4.359	4.413	4.420	4.416	4.425
SD	1.5409	1.5942	1.6993	1.6468	1.7717
Median	4.135	4.190	4.080	4.130	4.160
Min, Max	1.35, 12.96	1.50, 12.96	0.92, 14.07	0.92, 14.07	1.17, 13.89
Week 4					
n	744	731	721	1452	333
Mean	4.396	4.548	4.519	4.534	4.553
SD	1.7052	1.9339	1.9885	1.9606	1.6661
Median	4.160	4.150	4.030	4.105	4.240
Min, Max	0.69, 16.93	0.69, 21.90	1.44, 18.70	0.69, 21.90	1.34, 13.95

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Neutrophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	728	694	671	1365	329
Mean	4.413	4.273	4.244	4.259	4.622
SD	1.8059	1.5969	1.7009	1.6483	1.6873
Median	4.090	3.950	3.920	3.940	4.350
Min, Max	1.42, 19.08	1.54, 14.99	1.25, 11.75	1.25, 14.99	1.38, 13.17
Week 12					
n	728	699	669	1368	325
Mean	4.428	4.292	4.182	4.239	4.500
SD	1.7831	1.7953	1.6631	1.7322	1.6324
Median	4.105	3.840	3.890	3.860	4.290
Min, Max	1.11, 23.41	1.21, 14.87	1.23, 20.48	1.21, 20.48	1.81, 11.63
Week 24					
n	699	665	648	1313	316
Mean	4.365	4.179	4.214	4.196	4.619
SD	1.5136	1.6032	1.6896	1.6459	1.7069
Median	4.110	3.870	3.850	3.860	4.365
Min, Max	1.55, 11.34	1.39, 12.19	1.30, 15.19	1.30, 15.19	0.81, 10.46

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Neutrophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 36					
n	655	636	617	1253	307
Mean	4.368	4.197	4.121	4.160	4.453
SD	1.6334	1.5715	1.5896	1.5802	1.7161
Median	4.090	3.915	3.810	3.870	4.240
Min, Max	0.78, 15.44	1.00, 13.45	1.11, 11.22	1.00, 13.45	1.32, 14.40
Week 48					
n	607	611	606	1217	299
Mean	4.328	4.132	4.114	4.123	4.346
SD	1.5051	1.7395	1.7548	1.7464	1.7554
Median	4.120	3.800	3.805	3.800	4.080
Min, Max	1.19, 15.06	0.75, 20.87	0.97, 19.96	0.75, 20.87	1.06, 13.83
Week 60					
n	565	596	586	1182	287
Mean	4.394	4.142	4.151	4.146	4.291
SD	1.6695	1.6506	1.7372	1.6934	1.4898
Median	4.150	3.800	3.780	3.790	3.960
Min, Max	1.33, 15.33	1.11, 12.45	1.13, 15.16	1.11, 15.16	1.73, 11.45

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Neutrophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 72					
n	526	574	568	1142	280
Mean	4.372	4.118	4.285	4.201	4.411
SD	1.6884	1.7264	1.8191	1.7743	1.7271
Median	4.120	3.765	3.830	3.800	4.125
Min, Max	0.97, 15.03	1.09, 19.96	1.34, 13.69	1.09, 19.96	1.33, 12.11
Week 84					
n	519	564	555	1119	264
Mean	4.400	4.105	4.219	4.162	4.538
SD	1.6064	1.5890	2.0346	1.8237	1.6583
Median	4.130	3.785	3.820	3.810	4.260
Min, Max	1.46, 12.72	1.18, 13.30	1.41, 29.93	1.18, 29.93	0.90, 11.55
Week 96					
n	479	527	505	1032	252
Mean	4.452	4.072	4.169	4.120	4.519
SD	1.7468	1.6748	1.7173	1.6956	1.8124
Median	4.180	3.760	3.820	3.795	4.155
Min, Max	1.43, 14.64	0.97, 14.13	0.98, 13.83	0.97, 14.13	1.22, 14.02

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Monocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	770	767	758	1525	350
Mean	0.353	0.354	0.351	0.352	0.353
SD	0.1305	0.1409	0.1368	0.1389	0.1359
Median	0.330	0.330	0.330	0.330	0.340
Min, Max	0.10, 1.10	0.10, 1.15	0.09, 1.24	0.09, 1.24	0.04, 1.09
Week 4					
n	744	731	721	1452	333
Mean	0.369	0.378	0.381	0.379	0.357
SD	0.1349	0.1326	0.1407	0.1366	0.1297
Median	0.350	0.360	0.360	0.360	0.340
Min, Max	0.11, 1.08	0.05, 0.97	0.13, 1.12	0.05, 1.12	0.08, 0.91

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Monocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	728	694	671	1365	329
Mean	0.373	0.375	0.382	0.379	0.370
SD	0.1489	0.1403	0.1380	0.1391	0.1430
Median	0.340	0.350	0.360	0.350	0.340
Min, Max	0.09, 1.40	0.06, 1.26	0.10, 1.09	0.06, 1.26	0.14, 1.41
Week 12					
n	728	699	669	1368	325
Mean	0.366	0.364	0.361	0.363	0.364
SD	0.1441	0.1383	0.1258	0.1323	0.1391
Median	0.340	0.350	0.340	0.350	0.340
Min, Max	0.11, 1.58	0.10, 1.21	0.06, 1.12	0.06, 1.21	0.13, 0.92
Week 24					
n	699	665	648	1313	316
Mean	0.359	0.349	0.356	0.353	0.367
SD	0.1325	0.1339	0.1282	0.1311	0.1453
Median	0.340	0.330	0.330	0.330	0.340
Min, Max	0.05, 1.11	0.09, 1.33	0.07, 1.11	0.07, 1.33	0.14, 1.18

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Monocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 36					
n	655	636	617	1253	307
Mean	0.369	0.349	0.354	0.352	0.357
SD	0.1482	0.1343	0.1320	0.1331	0.1289
Median	0.340	0.330	0.330	0.330	0.340
Min, Max	0.05, 1.32	0.09, 1.33	0.12, 1.13	0.09, 1.33	0.11, 0.96
Week 48					
n	607	611	606	1217	299
Mean	0.352	0.334	0.340	0.337	0.348
SD	0.1325	0.1200	0.1223	0.1212	0.1332
Median	0.330	0.310	0.325	0.320	0.330
Min, Max	0.09, 1.13	0.03, 0.82	0.08, 0.97	0.03, 0.97	0.11, 0.97
Week 60					
n	565	596	586	1182	287
Mean	0.372	0.338	0.345	0.342	0.362
SD	0.1353	0.1241	0.1236	0.1239	0.1305
Median	0.350	0.320	0.320	0.320	0.330
Min, Max	0.11, 1.15	0.05, 1.08	0.11, 1.07	0.05, 1.08	0.10, 0.99

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Monocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 72					
n	526	574	568	1142	280
Mean	0.357	0.343	0.357	0.350	0.370
SD	0.1272	0.1317	0.1324	0.1322	0.1483
Median	0.340	0.320	0.330	0.330	0.340
Min, Max	0.10, 1.04	0.10, 1.34	0.10, 0.96	0.10, 1.34	0.05, 1.14
Week 84					
n	519	564	555	1119	264
Mean	0.372	0.344	0.355	0.349	0.368
SD	0.1424	0.1265	0.1280	0.1273	0.1262
Median	0.350	0.330	0.330	0.330	0.350
Min, Max	0.07, 1.07	0.11, 1.48	0.07, 1.08	0.07, 1.48	0.16, 1.02
Week 96					
n	479	527	505	1032	252
Mean	0.353	0.337	0.349	0.343	0.359
SD	0.1371	0.1360	0.1280	0.1322	0.1407
Median	0.330	0.310	0.330	0.320	0.335
Min, Max	0.08, 1.26	0.05, 1.31	0.10, 1.00	0.05, 1.31	0.13, 1.44

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Eosinophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	770	767	758	1525	350
Mean	0.140	0.134	0.134	0.134	0.120
SD	0.1153	0.1126	0.0980	0.1055	0.0885
Median	0.110	0.110	0.110	0.110	0.095
Min, Max	0.00, 0.82	0.00, 1.62	0.00, 0.64	0.00, 1.62	0.00, 0.59
Week 4					
n	744	731	721	1452	333
Mean	0.138	0.322	0.273	0.298	0.179
SD	0.1203	0.6128	0.4874	0.5544	0.1283
Median	0.110	0.140	0.150	0.140	0.150
Min, Max	0.00, 1.25	0.00, 6.18	0.00, 5.18	0.00, 6.18	0.00, 0.82

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Eosinophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	728	694	671	1365	329
Mean	0.142	0.152	0.145	0.149	0.229
SD	0.1267	0.1455	0.1351	0.1405	0.1782
Median	0.100	0.110	0.110	0.110	0.180
Min, Max	0.00, 1.53	0.00, 2.01	0.00, 2.15	0.00, 2.15	0.00, 1.49
Week 12					
n	728	699	669	1368	325
Mean	0.141	0.137	0.133	0.135	0.201
SD	0.1125	0.1295	0.0992	0.1157	0.1680
Median	0.110	0.110	0.110	0.110	0.160
Min, Max	0.00, 1.03	0.00, 1.92	0.00, 1.08	0.00, 1.92	0.00, 1.76
Week 24					
n	699	665	648	1313	316
Mean	0.135	0.118	0.116	0.117	0.178
SD	0.1203	0.1178	0.0837	0.1024	0.1516
Median	0.100	0.090	0.100	0.090	0.140
Min, Max	0.00, 1.78	0.00, 2.04	0.00, 1.02	0.00, 2.04	0.00, 1.65

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Eosinophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 36					
n	655	636	617	1253	307
Mean	0.137	0.116	0.113	0.114	0.167
SD	0.1028	0.1532	0.0727	0.1204	0.1263
Median	0.110	0.090	0.100	0.090	0.140
Min, Max	0.00, 0.79	0.00, 3.42	0.00, 0.53	0.00, 3.42	0.00, 0.97
Week 48					
n	607	611	606	1217	299
Mean	0.140	0.114	0.111	0.112	0.158
SD	0.1019	0.0913	0.0757	0.0839	0.1164
Median	0.110	0.090	0.090	0.090	0.130
Min, Max	0.00, 0.72	0.00, 1.20	0.00, 0.73	0.00, 1.20	0.00, 0.82
Week 60					
n	565	596	586	1182	287
Mean	0.138	0.117	0.113	0.115	0.159
SD	0.1025	0.0951	0.0776	0.0868	0.1121
Median	0.110	0.090	0.090	0.090	0.130
Min, Max	0.00, 0.62	0.00, 1.22	0.00, 0.68	0.00, 1.22	0.01, 1.12

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Eosinophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 72					
n	526	574	568	1142	280
Mean	0.141	0.120	0.114	0.117	0.173
SD	0.1213	0.1179	0.0740	0.0985	0.1243
Median	0.115	0.090	0.100	0.090	0.140
Min, Max	0.00, 1.86	0.00, 2.01	0.00, 0.70	0.00, 2.01	0.00, 0.88
Week 84					
n	519	564	555	1119	264
Mean	0.136	0.131	0.109	0.120	0.169
SD	0.0934	0.1599	0.0708	0.1244	0.1079
Median	0.110	0.100	0.090	0.100	0.150
Min, Max	0.00, 0.64	0.00, 2.35	0.00, 0.56	0.00, 2.35	0.00, 0.78
Week 96					
n	479	527	505	1032	252
Mean	0.141	0.122	0.117	0.120	0.162
SD	0.1112	0.1196	0.0844	0.1039	0.1073
Median	0.110	0.100	0.090	0.100	0.140
Min, Max	0.00, 1.10	0.00, 1.89	0.00, 0.77	0.00, 1.89	0.00, 0.74

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Basophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	770	767	758	1525	350
Mean	0.055	0.056	0.054	0.055	0.056
SD	0.0321	0.0363	0.0349	0.0356	0.0394
Median	0.050	0.050	0.050	0.050	0.050
Min, Max	0.00, 0.25	0.00, 0.25	0.00, 0.29	0.00, 0.29	0.00, 0.48
Week 4					
n	744	731	721	1452	333
Mean	0.053	0.054	0.058	0.056	0.056
SD	0.0311	0.0317	0.0375	0.0348	0.0356
Median	0.050	0.050	0.050	0.050	0.050
Min, Max	0.00, 0.26	0.00, 0.22	0.00, 0.39	0.00, 0.39	0.00, 0.29

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Basophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	728	694	671	1365	329
Mean	0.051	0.049	0.050	0.050	0.052
SD	0.0311	0.0322	0.0314	0.0318	0.0296
Median	0.050	0.040	0.040	0.040	0.050
Min, Max	0.00, 0.23	0.00, 0.40	0.00, 0.31	0.00, 0.40	0.00, 0.18
Week 12					
n	728	699	669	1368	325
Mean	0.052	0.050	0.049	0.049	0.055
SD	0.0299	0.0335	0.0324	0.0330	0.0368
Median	0.050	0.040	0.040	0.040	0.050
Min, Max	0.00, 0.26	0.00, 0.42	0.00, 0.43	0.00, 0.43	0.00, 0.25
Week 24					
n	699	665	648	1313	316
Mean	0.052	0.042	0.045	0.044	0.050
SD	0.0305	0.0277	0.0268	0.0273	0.0289
Median	0.050	0.040	0.040	0.040	0.040
Min, Max	0.00, 0.22	0.00, 0.21	0.00, 0.24	0.00, 0.24	0.00, 0.22

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Basophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 36					
n	655	636	617	1253	307
Mean	0.052	0.042	0.043	0.042	0.047
SD	0.0360	0.0295	0.0295	0.0295	0.0315
Median	0.040	0.040	0.040	0.040	0.040
Min, Max	0.00, 0.32	0.00, 0.25	0.00, 0.25	0.00, 0.25	0.00, 0.24
Week 48					
n	607	611	606	1217	299
Mean	0.052	0.041	0.041	0.041	0.053
SD	0.0342	0.0292	0.0293	0.0292	0.0357
Median	0.040	0.040	0.040	0.040	0.050
Min, Max	0.00, 0.25	0.00, 0.25	0.00, 0.27	0.00, 0.27	0.00, 0.21
Week 60					
n	565	596	586	1182	287
Mean	0.051	0.040	0.041	0.041	0.047
SD	0.0343	0.0263	0.0296	0.0280	0.0271
Median	0.040	0.030	0.030	0.030	0.040
Min, Max	0.00, 0.36	0.00, 0.21	0.00, 0.22	0.00, 0.22	0.00, 0.19

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Basophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 72					
n	526	574	568	1142	280
Mean	0.050	0.040	0.043	0.041	0.048
SD	0.0333	0.0264	0.0296	0.0280	0.0311
Median	0.040	0.030	0.040	0.040	0.040
Min, Max	0.00, 0.28	0.00, 0.19	0.00, 0.21	0.00, 0.21	0.00, 0.22
Week 84					
n	519	564	555	1119	264
Mean	0.051	0.041	0.042	0.041	0.053
SD	0.0315	0.0255	0.0294	0.0275	0.0317
Median	0.040	0.040	0.040	0.040	0.040
Min, Max	0.00, 0.26	0.00, 0.17	0.00, 0.37	0.00, 0.37	0.00, 0.23
Week 96					
n	479	527	505	1032	252
Mean	0.053	0.043	0.045	0.044	0.052
SD	0.0376	0.0313	0.0310	0.0311	0.0321
Median	0.040	0.040	0.040	0.040	0.050
Min, Max	0.00, 0.26	0.00, 0.26	0.00, 0.24	0.00, 0.26	0.00, 0.26

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: RBC (x10^12/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	770	767	758	1525	350
Mean	4.69	4.71	4.69	4.70	4.72
SD	0.419	0.435	0.431	0.433	0.478
Median	4.60	4.70	4.65	4.70	4.70
Min, Max	3.0, 6.0	3.4, 6.8	3.6, 6.6	3.4, 6.8	3.4, 7.3
Week 4					
n	745	732	721	1453	333
Mean	4.68	4.63	4.59	4.61	4.66
SD	0.422	0.445	0.416	0.431	0.470
Median	4.70	4.60	4.60	4.60	4.60
Min, Max	3.5, 6.0	3.6, 6.8	3.6, 5.9	3.6, 6.8	3.4, 7.2

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: RBC (x10^12/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	728	694	671	1365	329
Mean	4.70	4.65	4.60	4.63	4.66
SD	0.431	0.459	0.426	0.444	0.463
Median	4.70	4.60	4.60	4.60	4.60
Min, Max	3.5, 6.1	3.6, 7.0	3.4, 5.9	3.4, 7.0	3.6, 7.1
Week 12					
n	728	699	669	1368	325
Mean	4.71	4.69	4.64	4.66	4.69
SD	0.434	0.450	0.428	0.440	0.491
Median	4.70	4.60	4.60	4.60	4.60
Min, Max	3.3, 6.1	3.6, 6.9	3.5, 5.8	3.5, 6.9	3.5, 7.4
Week 24					
n	699	665	648	1313	316
Mean	4.68	4.66	4.61	4.63	4.72
SD	0.435	0.446	0.431	0.439	0.462
Median	4.60	4.60	4.60	4.60	4.70
Min, Max	1.8, 6.4	3.2, 6.6	3.1, 6.7	3.1, 6.7	3.7, 6.9

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: RBC (x10^12/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 36					
n	655	636	617	1253	307
Mean	4.70	4.65	4.60	4.63	4.70
SD	0.420	0.455	0.431	0.444	0.451
Median	4.70	4.60	4.50	4.60	4.70
Min, Max	3.4, 6.1	3.1, 6.5	3.4, 6.1	3.1, 6.5	3.7, 7.0
Week 48					
n	608	611	606	1217	299
Mean	4.72	4.67	4.62	4.64	4.70
SD	0.436	0.456	0.427	0.442	0.493
Median	4.70	4.60	4.60	4.60	4.70
Min, Max	3.6, 6.7	3.3, 6.5	3.1, 6.1	3.1, 6.5	3.5, 7.6
Week 60					
n	565	596	586	1182	287
Mean	4.71	4.63	4.62	4.62	4.70
SD	0.431	0.449	0.430	0.440	0.494
Median	4.70	4.60	4.60	4.60	4.70
Min, Max	3.4, 6.0	3.5, 6.7	3.5, 6.2	3.5, 6.7	3.7, 7.9

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: RBC (x10^12/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 72					
n	526	575	569	1144	280
Mean	4.71	4.64	4.61	4.63	4.70
SD	0.436	0.441	0.408	0.425	0.470
Median	4.70	4.60	4.60	4.60	4.70
Min, Max	3.6, 7.0	3.5, 6.7	3.6, 6.4	3.5, 6.7	3.7, 7.2
Week 84					
n	521	564	556	1120	264
Mean	4.73	4.65	4.60	4.62	4.70
SD	0.468	0.443	0.419	0.431	0.469
Median	4.70	4.60	4.55	4.60	4.60
Min, Max	2.4, 7.0	3.5, 6.2	3.6, 6.2	3.5, 6.2	3.7, 6.9
Week 96					
n	479	527	505	1032	252
Mean	4.70	4.66	4.62	4.64	4.70
SD	0.458	0.459	0.421	0.441	0.499
Median	4.70	4.60	4.60	4.60	4.70
Min, Max	3.4, 6.0	3.2, 6.7	3.7, 6.3	3.2, 6.7	3.6, 7.5

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Hemoglobin (g/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	770	767	758	1525	350
Mean	138.1	138.8	138.8	138.8	139.4
SD	14.06	14.63	14.34	14.48	14.36
Median	138.0	138.0	139.0	138.0	139.0
Min, Max	89, 183	77, 184	80, 181	77, 184	101, 183
Week 4					
n	745	732	721	1453	333
Mean	137.5	136.2	135.7	135.9	137.4
SD	14.43	14.74	14.28	14.51	13.92
Median	137.0	135.0	136.0	135.0	137.0
Min, Max	88, 185	80, 177	85, 181	80, 181	96, 176

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Hemoglobin (g/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	728	694	671	1365	329
Mean	137.9	136.8	135.9	136.4	137.0
SD	14.69	15.07	14.96	15.02	13.97
Median	138.0	137.0	135.0	136.0	137.0
Min, Max	89, 181	81, 173	84, 176	81, 176	96, 174
Week 12					
n	728	699	669	1368	325
Mean	138.0	137.4	136.9	137.1	137.3
SD	14.32	15.20	15.16	15.18	14.33
Median	137.8	138.0	137.0	137.0	137.0
Min, Max	91, 182	84, 177	85, 180	84, 180	96, 178
Week 24					
n	699	665	648	1313	316
Mean	137.1	136.6	136.1	136.4	137.9
SD	15.01	14.69	15.00	14.84	14.22
Median	137.0	136.0	136.0	136.0	139.0
Min, Max	58, 186	86, 174	78, 180	78, 180	90, 176

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Hemoglobin (g/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 36					
n	655	634	617	1251	307
Mean	137.6	136.8	136.1	136.4	137.4
SD	14.31	15.08	14.91	15.00	14.52
Median	138.0	137.0	136.0	136.0	137.0
Min, Max	88, 172	85, 178	76, 178	76, 178	91, 173
Week 48					
n	608	610	606	1216	298
Mean	138.3	137.3	137.3	137.3	137.0
SD	14.60	15.08	14.70	14.89	14.90
Median	138.0	137.0	137.0	137.0	138.0
Min, Max	82, 182	70, 184	76, 179	70, 184	81, 178
Week 60					
n	565	594	584	1178	285
Mean	138.0	136.4	137.0	136.7	137.9
SD	14.69	15.32	14.93	15.12	14.41
Median	138.0	136.0	137.0	137.0	139.0
Min, Max	83, 177	83, 177	92, 177	83, 177	95, 174

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Hemoglobin (g/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 72					
n	526	574	569	1143	280
Mean	138.0	136.8	136.7	136.7	137.7
SD	14.47	14.81	14.65	14.73	14.46
Median	138.0	137.0	137.0	137.0	138.0
Min, Max	73, 201	77, 176	89, 174	77, 176	96, 172
Week 84					
n	521	564	556	1120	264
Mean	138.2	136.9	136.5	136.7	137.4
SD	15.51	14.75	14.54	14.64	14.55
Median	138.0	137.0	137.0	137.0	137.0
Min, Max	57, 208	87, 185	82, 177	82, 185	88, 177
Week 96					
n	479	527	505	1032	252
Mean	138.2	137.2	137.5	137.4	138.1
SD	14.71	15.23	14.92	15.07	14.99
Median	138.0	137.0	138.0	137.0	138.0
Min, Max	74, 182	80, 178	77, 179	77, 179	80, 179

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Hematocrit (%)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	767	765	757	1522	349
Mean	40.9	41.0	41.1	41.1	41.5
SD	3.90	3.94	3.95	3.94	4.07
Median	41.0	41.0	41.0	41.0	41.0
Min, Max	29, 56	25, 55	29, 56	25, 56	31, 54
Week 4					
n	738	720	716	1436	329
Mean	41.1	40.6	40.5	40.5	41.1
SD	4.09	4.04	3.87	3.96	4.03
Median	41.0	40.0	40.0	40.0	41.0
Min, Max	29, 56	26, 52	30, 57	26, 57	31, 53

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Hematocrit (%)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	723	691	669	1360	328
Mean	41.0	40.8	40.4	40.6	40.7
SD	4.08	4.17	3.97	4.08	3.89
Median	41.0	41.0	40.0	40.0	40.8
Min, Max	30, 57	29, 54	30, 56	29, 56	31, 54
Week 12					
n	720	690	664	1354	323
Mean	40.9	40.8	40.5	40.6	40.8
SD	4.08	4.15	4.05	4.10	4.12
Median	41.0	41.0	40.0	41.0	41.0
Min, Max	28, 58	28, 54	28, 55	28, 55	30, 53
Week 24					
n	693	661	645	1306	312
Mean	40.8	40.5	40.2	40.3	40.8
SD	4.27	4.05	4.10	4.08	3.97
Median	41.0	40.0	40.0	40.0	40.0
Min, Max	16, 56	27, 52	25, 55	25, 55	31, 52

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Hematocrit (%)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 36					
n	648	633	613	1246	306
Mean	41.0	40.5	40.2	40.3	40.7
SD	3.99	4.25	4.09	4.17	3.99
Median	41.0	40.0	40.0	40.0	41.0
Min, Max	29, 55	28, 55	27, 54	27, 55	30, 51
Week 48					
n	601	608	604	1212	297
Mean	41.2	40.7	40.5	40.6	41.4
SD	4.17	4.18	4.13	4.15	4.30
Median	41.0	40.0	40.0	40.0	41.0
Min, Max	28, 57	27, 58	24, 54	24, 58	27, 55
Week 60					
n	559	585	581	1166	280
Mean	41.3	40.6	40.7	40.6	41.6
SD	4.15	4.30	4.16	4.23	4.05
Median	41.0	40.0	41.0	40.0	41.0
Min, Max	29, 55	28, 56	30, 56	28, 56	31, 56

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Hematocrit (%)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 72					
n	519	567	564	1131	276
Mean	41.5	40.9	40.8	40.8	41.3
SD	4.10	4.21	4.04	4.13	4.09
Median	41.0	41.0	41.0	41.0	41.0
Min, Max	29, 62	26, 55	30, 57	26, 57	32, 51
Week 84					
n	518	560	553	1113	263
Mean	41.7	41.0	40.7	40.8	41.3
SD	4.46	4.12	4.10	4.11	4.04
Median	42.0	41.0	41.0	41.0	41.0
Min, Max	20, 60	28, 55	29, 53	28, 55	29, 54
Week 96					
n	475	520	500	1020	252
Mean	41.7	41.1	41.1	41.1	41.6
SD	4.12	4.26	4.05	4.16	4.15
Median	41.0	41.0	41.0	41.0	41.0
Min, Max	27, 55	27, 55	27, 53	27, 55	27, 55

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Platelets (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	769	765	757	1522	350
Mean	279.0	276.6	280.5	278.5	272.3
SD	69.27	67.93	68.24	68.09	64.61
Median	273.0	270.0	274.0	271.5	266.5
Min, Max	17, 582	109, 625	127, 575	109, 625	93, 535
Week 4					
n	741	720	717	1437	329
Mean	277.8	281.9	288.8	285.3	270.9
SD	68.17	68.42	72.28	70.43	63.38
Median	271.0	276.0	279.0	277.0	263.0
Min, Max	120, 615	127, 617	133, 592	127, 617	101, 530

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Platelets (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	723	690	669	1359	325
Mean	279.1	272.9	278.7	275.8	272.3
SD	67.30	67.49	72.43	70.00	66.77
Median	274.0	268.0	267.0	267.0	269.0
Min, Max	127, 524	114, 571	144, 877	114, 877	129, 536
Week 12					
n	725	694	665	1359	322
Mean	280.9	269.2	275.2	272.1	274.5
SD	67.96	66.11	67.32	66.75	63.32
Median	276.0	259.5	265.0	262.0	273.0
Min, Max	90, 556	93, 570	127, 561	93, 570	113, 540
Week 24					
n	695	658	647	1305	315
Mean	280.2	266.9	274.4	270.6	275.5
SD	69.46	63.30	69.74	66.66	65.39
Median	271.0	257.5	264.0	261.0	270.0
Min, Max	33, 597	111, 570	95, 779	95, 779	130, 522

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Platelets (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 36					
n	655	631	614	1245	303
Mean	282.9	266.9	271.3	269.1	277.9
SD	73.56	63.52	63.81	63.67	64.16
Median	277.0	259.0	265.5	261.0	273.0
Min, Max	99, 762	124, 574	123, 472	123, 574	86, 505
Week 48					
n	604	608	604	1212	295
Mean	280.3	265.7	271.7	268.7	277.3
SD	70.37	62.67	66.26	64.53	79.16
Median	270.0	260.0	262.0	261.0	268.0
Min, Max	133, 601	77, 553	126, 540	77, 553	104, 1059
Week 60					
n	562	592	581	1173	286
Mean	281.4	267.2	272.0	269.6	271.8
SD	69.48	63.28	66.53	64.93	65.00
Median	275.5	263.0	265.0	264.0	265.5
Min, Max	126, 626	94, 623	106, 529	94, 623	90, 527

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Summary of hematology laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Platelets (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 72					
n	524	572	566	1138	279
Mean	275.9	264.2	268.9	266.6	271.5
SD	66.48	66.59	66.77	66.69	69.52
Median	272.0	256.5	258.0	257.0	263.0
Min, Max	112, 523	46, 534	120, 590	46, 590	116, 716
Week 84					
n	516	563	554	1117	261
Mean	276.4	266.0	269.7	267.8	273.6
SD	68.26	63.71	63.98	63.84	63.36
Median	270.5	260.0	261.0	260.0	266.0
Min, Max	113, 546	63, 549	127, 515	63, 549	123, 465
Week 96					
n	479	525	503	1028	249
Mean	275.4	263.5	266.0	264.7	271.0
SD	69.25	67.60	65.50	66.56	63.12
Median	270.0	258.0	260.0	259.0	265.0
Min, Max	80, 625	45, 665	112, 525	45, 665	98, 513

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-A.SAS DATE: 03DEC2015

Table 226: Summary of Shifts From Baseline - Hematology Laboratory Parameters: Studies 109MS301 and 109MS302

Summary of shifts from baseline - Hematology laboratory parameters: Studies 109MS301 and 109MS302
Page 1 of 2

Laboratory Parameters	Placebo		BG00012 240 mg BID		BG00012 240 mg TID	
	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)
WBC	54/751(7)	171/743(23)	156/738(21)	143/722(20)	139/730(19)	141/709(20)
Lymphocytes	32/758(4)	22/764(3)	278/746(37)	12/755(2)	213/738(29)	7/739(<1)
Neutrophils	50/747(7)	196/736(27)	83/741(11)	194/719(27)	80/730(11)	199/704(28)
Monocytes	19/763(2)	25/763(3)	22/753(3)	16/753(2)	19/743(3)	17/739(2)
Eosinophils		23/757(3)		94/752(13)		72/740(10)
Basophils		31/762(4)		21/751(3)		14/739(2)
RBC	99/722(14)	8/763(1)	147/718(20)	7/754(<1)	154/700(22)	5/742(<1)
Hemoglobin	69/722(10)	13/761(2)	94/718(13)	3/755(<1)	99/714(14)	2/743(<1)
Hematocrit	71/752(9)	33/760(4)	80/737(11)	17/751(2)	91/728(13)	11/739(1)
Platelets	18/757(2)	91/729(12)	23/750(3)	67/720(9)	17/741(2)	85/710(12)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: Entries are number low (or high)/number at risk. Number at risk for shift to low (or high) is the number of subjects whose baseline value was not low (or high) and who had at least one post- baseline value. Numbers in parentheses are percentages based on number at risk.
(a) Shift to low includes normal to low, high to low, and unknown to low.
(b) Shift to high includes normal to high, low to high, and unknown to high.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-SHFT-A.SAS DATE: 28SEP2015

Summary of shifts from baseline - Hematology laboratory parameters: Studies 109MS301 and 109MS302
Page 2 of 2

Laboratory Parameters	Total BG00012		GA	
	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)
WBC	295/1468(20)	284/1431(20)	24/334 (7)	75/333 (23)
Lymphocytes	491/1484(33)	19/1494(1)	16/342 (5)	5/346 (1)
Neutrophils	163/1471(11)	393/1423(28)	21/338 (6)	90/327 (28)
Monocytes	41/1496(3)	33/1492(2)	9/343 (3)	12/345 (3)
Eosinophils		166/1492(11)		32/346 (9)
Basophils		35/1490(2)		10/344 (3)
RBC	301/1418(21)	12/1496(<1)	49/326 (15)	2/344 (<1)
Hemoglobin	193/1432(13)	5/1498(<1)	39/328 (12)	2/346 (<1)
Hematocrit	171/1465(12)	28/1490(2)	38/342 (11)	7/346 (2)
Platelets	40/1491(3)	152/1430(11)	7/341 (2)	37/332 (11)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: Entries are number low (or high)/number at risk. Number at risk for shift to low (or high) is the number of subjects whose baseline value was not low (or high) and who had at least one post- baseline value. Numbers in parentheses are percentages based on number at risk.
(a) Shift to low includes normal to low, high to low, and unknown to low.
(b) Shift to high includes normal to high, low to high, and unknown to high.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-SHFT-A.SAS DATE: 28SEP2015

Table 227: Potentially Clinically Significant Hematology Laboratory Abnormalities: Studies 109MS301 and 109MS302

Potentially clinically significant hematology laboratory abnormalities: Studies 109MS301 and 109MS302
Page 1 of 2

Laboratory Parameters	Criterion	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
WBC (total)(x10^9/L)	Total n	765	757	744	1501	347
	<3.0	9 (1)	54 (7)	40 (5)	94 (6)	7 (2)
	>=16	30 (4)	15 (2)	19 (3)	34 (2)	10 (3)
Lymphocytes (x10^9/L)	Total n	765	757	744	1501	347
	<0.8	21 (3)	209 (28)	160 (22)	369 (25)	13 (4)
	<0.5	4 (<1)	43 (6)	24 (3)	67 (4)	1 (<1)
	>12	0	0	0	0	0
Neutrophils (x10^9/L)	Total n	765	757	744	1501	347
	<=1	4 (<1)	6 (<1)	3 (<1)	9 (<1)	3 (<1)
	<1.5	13 (2)	20 (3)	20 (3)	40 (3)	8 (2)
	>=12	41 (5)	26 (3)	27 (4)	53 (4)	10 (3)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Total n is the number of subjects in the safety population with at least one post-baseline value. Numbers in parentheses are percentages using Total n as the denominator.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-OUTLIER-A.SAS DATE: 01OCT2015

Potentially clinically significant hematology laboratory abnormalities: Studies 109MS301 and 109MS302
Page 2 of 2

Laboratory Parameters	Criterion	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
RBC (x10^12/L)	Total n	765	757	744	1501	347
	<=3.3	3 (<1)	3 (<1)	3 (<1)	6 (<1)	0
	>=6.8	2 (<1)	2 (<1)	0	2 (<1)	1 (<1)
Hemoglobin (g/L)	Total n	765	757	744	1501	347
	<=100	32 (4)	36 (5)	30 (4)	66 (4)	12 (3)
Platelet count (x10^9/L)	Total n	765	754	744	1498	345
	<=100	4 (<1)	6 (<1)	1 (<1)	7 (<1)	3 (<1)
	>=600	7 (<1)	2 (<1)	2 (<1)	4 (<1)	2 (<1)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Total n is the number of subjects in the safety population with at least one post-baseline value.
Numbers in parentheses are percentages using Total n as the denominator.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-OUTLIER-A.SAS DATE: 01OCT2015

Table 229: Summary of Hematology Laboratory Parameters: Actual Values by Visit – Part I (Placebo-Controlled Period)

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 1 of 30
Lab test: WBC (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	6.016	6.136
SD	1.6757	2.4136
Median	5.750	5.930
Min, Max	3.21, 15.60	3.17, 25.30
Week 4		
n	112	109
Mean	6.059	6.386
SD	1.6441	2.0049
Median	5.880	6.110
Min, Max	3.46, 11.42	3.17, 13.32
Week 8		
n	111	107
Mean	6.203	5.907
SD	1.7165	2.0692
Median	5.880	5.640
Min, Max	2.69, 12.25	2.56, 14.59

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 2 of 30
Lab test: WBC (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	110	106
Mean	6.115	5.876
SD	1.5632	2.7735
Median	5.995	5.605
Min, Max	2.82, 12.30	2.32, 26.55
Week 16		
n	110	107
Mean	6.279	5.570
SD	1.8677	1.5903
Median	5.745	5.270
Min, Max	3.08, 13.36	2.86, 11.06
Week 20		
n	108	106
Mean	6.204	5.711
SD	1.8507	1.8944
Median	6.005	5.480
Min, Max	3.36, 15.13	2.66, 14.27

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 3 of 30
Lab test: WBC (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	107	104
Mean	5.937	5.678
SD	1.5953	1.7612
Median	5.700	5.505
Min, Max	3.06, 11.17	2.33, 12.56

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 4 of 30
Lab test: Lymphocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	1.776	1.720
SD	0.4762	0.5301
Median	1.750	1.660
Min, Max	0.81, 3.08	0.80, 2.90
Week 4		
n	112	109
Mean	1.765	1.694
SD	0.4508	0.5594
Median	1.680	1.580
Min, Max	0.81, 3.11	0.76, 3.68
Week 8		
n	111	107
Mean	1.842	1.564
SD	0.5502	0.4756
Median	1.740	1.540
Min, Max	0.94, 4.21	0.68, 3.20

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 5 of 30
Lab test: Lymphocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	110	106
Mean	1.769	1.485
SD	0.4656	0.4822
Median	1.700	1.410
Min, Max	0.88, 3.15	0.58, 3.72
Week 16		
n	110	107
Mean	1.772	1.471
SD	0.5143	0.4895
Median	1.680	1.420
Min, Max	0.73, 3.45	0.53, 2.86
Week 20		
n	108	106
Mean	1.797	1.415
SD	0.4836	0.4502
Median	1.740	1.400
Min, Max	0.48, 2.89	0.58, 2.54

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 6 of 30
Lab test: Lymphocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	107	104
Mean	1.782	1.403
SD	0.4801	0.5240
Median	1.690	1.340
Min, Max	0.89, 2.97	0.43, 3.20

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 7 of 30
Lab test: Neutrophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	3.715	3.883
SD	1.3671	2.2178
Median	3.450	3.700
Min, Max	1.40, 11.58	1.61, 23.23
Week 4		
n	112	109
Mean	3.780	3.989
SD	1.3801	1.4347
Median	3.480	3.740
Min, Max	1.34, 8.30	1.60, 8.18
Week 8		
n	111	107
Mean	3.840	3.797
SD	1.3816	1.7929
Median	3.610	3.550
Min, Max	1.18, 9.58	1.21, 11.96

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 8 of 30
Lab test: Neutrophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	110	106
Mean	3.820	3.838
SD	1.2869	2.1670
Median	3.755	3.635
Min, Max	1.49, 9.29	1.04, 18.85
Week 16		
n	110	107
Mean	3.979	3.572
SD	1.5853	1.3438
Median	3.655	3.300
Min, Max	1.26, 10.23	1.41, 9.26
Week 20		
n	108	106
Mean	3.883	3.784
SD	1.7519	1.6406
Median	3.530	3.435
Min, Max	1.51, 14.47	1.31, 10.97

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 9 of 30
Lab test: Neutrophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	107	104
Mean	3.636	3.781
SD	1.2746	1.4708
Median	3.430	3.570
Min, Max	1.37, 7.66	1.41, 9.36

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 10 of 30
Lab test: Monocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	0.338	0.328
SD	0.1171	0.1347
Median	0.320	0.310
Min, Max	0.09, 0.78	0.10, 0.90
Week 4		
n	112	109
Mean	0.327	0.349
SD	0.1147	0.1187
Median	0.320	0.330
Min, Max	0.11, 0.69	0.16, 0.77
Week 8		
n	111	107
Mean	0.334	0.343
SD	0.1161	0.1308
Median	0.320	0.330
Min, Max	0.11, 0.75	0.09, 0.73

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 11 of 30
Lab test: Monocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	110	106
Mean	0.339	0.343
SD	0.1170	0.1392
Median	0.305	0.318
Min, Max	0.15, 0.77	0.12, 1.06
Week 16		
n	110	107
Mean	0.335	0.341
SD	0.1150	0.1135
Median	0.325	0.330
Min, Max	0.09, 0.74	0.10, 0.67
Week 20		
n	108	106
Mean	0.338	0.337
SD	0.1178	0.1327
Median	0.323	0.313
Min, Max	0.10, 0.87	0.13, 0.72

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 12 of 30
Lab test: Monocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	107	104
Mean	0.332	0.327
SD	0.1114	0.1195
Median	0.320	0.310
Min, Max	0.13, 0.63	0.09, 0.66

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 13 of 30
Lab test: Eosinophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	0.140	0.160
SD	0.0924	0.1278
Median	0.110	0.120
Min, Max	0.03, 0.46	0.02, 0.80
Week 4		
n	112	109
Mean	0.142	0.306
SD	0.0972	0.5497
Median	0.110	0.160
Min, Max	0.02, 0.48	0.00, 3.94
Week 8		
n	111	107
Mean	0.139	0.159
SD	0.1043	0.1246
Median	0.100	0.130
Min, Max	0.02, 0.51	0.01, 0.76

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 14 of 30
Lab test: Eosinophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	110	106
Mean	0.144	0.141
SD	0.1054	0.1146
Median	0.110	0.105
Min, Max	0.02, 0.58	0.00, 0.82
Week 16		
n	110	107
Mean	0.149	0.144
SD	0.1121	0.1096
Median	0.110	0.110
Min, Max	0.03, 0.52	0.04, 0.88
Week 20		
n	108	106
Mean	0.143	0.131
SD	0.1086	0.0867
Median	0.100	0.115
Min, Max	0.02, 0.68	0.02, 0.60

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 15 of 30
Lab test: Eosinophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	107	104
Mean	0.141	0.128
SD	0.0986	0.0788
Median	0.110	0.110
Min, Max	0.02, 0.53	0.02, 0.55

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 16 of 30
Lab test: Basophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	0.047	0.046
SD	0.0230	0.0208
Median	0.040	0.040
Min, Max	0.00, 0.12	0.00, 0.10
Week 4		
n	112	109
Mean	0.045	0.048
SD	0.0221	0.0243
Median	0.040	0.050
Min, Max	0.01, 0.12	0.00, 0.13
Week 8		
n	111	107
Mean	0.047	0.043
SD	0.0230	0.0227
Median	0.040	0.040
Min, Max	0.01, 0.11	0.00, 0.12

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 17 of 30
Lab test: Basophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	110	106
Mean	0.045	0.043
SD	0.0219	0.0243
Median	0.040	0.040
Min, Max	0.00, 0.11	0.00, 0.12
Week 16		
n	110	107
Mean	0.046	0.042
SD	0.0226	0.0274
Median	0.040	0.040
Min, Max	0.00, 0.12	0.00, 0.22
Week 20		
n	108	106
Mean	0.043	0.043
SD	0.0242	0.0251
Median	0.040	0.040
Min, Max	0.00, 0.12	0.00, 0.14

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 18 of 30
Lab test: Basophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	107	104
Mean	0.048	0.040
SD	0.0311	0.0247
Median	0.040	0.040
Min, Max	0.01, 0.27	0.00, 0.14

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 19 of 30
Lab test: RBC (TI/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	4.44	4.52
SD	0.425	0.417
Median	4.40	4.50
Min, Max	3.5, 5.6	3.7, 5.7
Week 4		
n	112	109
Mean	4.43	4.46
SD	0.457	0.447
Median	4.33	4.40
Min, Max	3.6, 5.6	3.5, 5.9
Week 8		
n	111	107
Mean	4.44	4.48
SD	0.429	0.452
Median	4.40	4.50
Min, Max	3.5, 5.6	3.6, 5.7

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 20 of 30
Lab test: RBC (TI/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	110	106
Mean	4.46	4.49
SD	0.430	0.455
Median	4.40	4.43
Min, Max	3.5, 5.5	3.5, 6.0
Week 16		
n	110	107
Mean	4.48	4.53
SD	0.420	0.442
Median	4.40	4.50
Min, Max	3.5, 5.7	3.7, 6.2
Week 20		
n	108	106
Mean	4.45	4.50
SD	0.418	0.455
Median	4.40	4.50
Min, Max	3.4, 5.4	3.4, 5.9

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 21 of 30
Lab test: RBC (TI/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	107	104
Mean	4.46	4.49
SD	0.449	0.445
Median	4.40	4.40
Min, Max	3.2, 5.5	3.6, 5.8

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 22 of 30
Lab test: Hemoglobin (g/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	133.0	135.3
SD	15.63	13.81
Median	133.0	135.0
Min, Max	73, 165	105, 169
Week 4		
n	112	109
Mean	132.9	133.8
SD	15.48	15.35
Median	131.0	134.0
Min, Max	92, 174	95, 166
Week 8		
n	111	107
Mean	133.2	134.2
SD	15.31	15.46
Median	132.0	134.0
Min, Max	93, 172	99, 164

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 23 of 30
Lab test: Hemoglobin (g/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	110	106
Mean	134.1	134.8
SD	15.27	15.76
Median	136.0	133.0
Min, Max	93, 168	100, 173
Week 16		
n	110	107
Mean	134.9	135.3
SD	15.54	15.13
Median	134.0	135.0
Min, Max	88, 173	105, 176
Week 20		
n	108	106
Mean	134.0	134.8
SD	15.89	15.53
Median	134.5	132.5
Min, Max	91, 171	100, 169

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 24 of 30
Lab test: Hemoglobin (g/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	107	104
Mean	134.0	134.9
SD	17.02	15.05
Median	133.0	133.0
Min, Max	83, 172	103, 167

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 25 of 30
Lab test: Hematocrit (%)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	113	111
Mean	40.2	40.9
SD	3.89	3.55
Median	40.0	41.0
Min, Max	26, 49	33, 49
Week 4		
n	112	109
Mean	39.9	40.4
SD	4.00	4.06
Median	40.0	40.0
Min, Max	31, 50	32, 50
Week 8		
n	111	107
Mean	39.9	40.5
SD	3.88	3.97
Median	40.0	41.0
Min, Max	31, 50	32, 49

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 26 of 30
Lab test: Hematocrit (%)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	110	106
Mean	40.2	40.3
SD	4.02	3.87
Median	40.0	40.0
Min, Max	30, 51	32, 50
Week 16		
n	109	107
Mean	40.2	40.4
SD	3.74	3.83
Median	40.0	40.0
Min, Max	29, 49	34, 52
Week 20		
n	108	106
Mean	40.2	40.4
SD	3.81	4.04
Median	40.0	40.5
Min, Max	30, 50	33, 50

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 27 of 30
Lab test: Hematocrit (%)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	107	104
Mean	40.2	40.4
SD	4.26	3.87
Median	40.0	40.0
Min, Max	27, 49	32, 52

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 28 of 30
Lab test: Platelets (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Baseline		
n	112	111
Mean	246.8	242.5
SD	53.33	60.69
Median	243.0	238.0
Min, Max	143, 464	116, 473
Week 4		
n	112	109
Mean	249.2	255.0
SD	58.04	65.83
Median	246.5	246.0
Min, Max	76, 383	116, 503
Week 8		
n	111	107
Mean	251.4	243.3
SD	54.56	59.16
Median	249.0	230.0
Min, Max	135, 436	119, 424

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 29 of 30
Lab test: Platelets (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 12		
n	110	106
Mean	251.7	242.8
SD	55.69	64.02
Median	248.0	230.0
Min, Max	142, 441	121, 545
Week 16		
n	109	107
Mean	250.9	244.1
SD	57.25	68.79
Median	243.0	232.0
Min, Max	125, 423	122, 476
Week 20		
n	108	106
Mean	247.8	242.3
SD	53.11	61.41
Median	251.5	233.5
Min, Max	114, 380	116, 421

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: actual values by visit
-Part I (placebo-controlled period)
Page 30 of 30
Lab test: Platelets (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 24		
n	107	104
Mean	252.4	243.1
SD	54.24	58.84
Median	251.0	244.0
Min, Max	147, 408	122, 422

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-SUM-HEM.SAS DATE: 25SEP2015

Table 230: Summary of Hematology Laboratory Parameters - Change From Baseline by Visit: Studies 109MS301 and 109MS302

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 1 of 40
Lab test: WBC (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	745	730	719	1449	332
Mean	0.12	0.31	0.19	0.25	0.18
SD	1.769	2.121	2.202	2.162	1.693
Median	0.00	0.13	0.05	0.08	0.23
Min, Max	-9.8, 12.5	-8.0, 13.8	-12.5, 12.4	-12.5, 13.8	-6.9, 5.1
Week 8					
n	727	693	669	1362	328
Mean	0.12	-0.29	-0.31	-0.30	0.38
SD	1.826	1.757	2.071	1.917	1.886
Median	0.10	-0.26	-0.26	-0.26	0.34
Min, Max	-8.5, 11.4	-9.4, 8.3	-12.9, 8.3	-12.9, 8.3	-8.1, 10.3

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 2 of 40
Lab test: WBC (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	0.12	-0.37	-0.50	-0.43	0.14
SD	1.957	1.922	2.078	2.000	1.930
Median	0.05	-0.45	-0.42	-0.44	0.17
Min, Max	-10.4, 17.6	-7.5, 9.2	-12.6, 15.6	-12.6, 15.6	-8.3, 8.8
Week 24					
n	698	664	646	1310	315
Mean	0.09	-0.74	-0.59	-0.67	0.25
SD	1.804	1.880	2.113	1.999	1.846
Median	0.15	-0.88	-0.54	-0.67	0.32
Min, Max	-10.1, 8.9	-9.6, 8.8	-12.0, 11.1	-12.0, 11.1	-9.7, 6.1
Week 36					
n	654	634	615	1249	306
Mean	0.14	-0.76	-0.78	-0.77	0.13
SD	1.842	1.869	1.956	1.911	1.858
Median	0.14	-0.80	-0.75	-0.79	0.29
Min, Max	-10.5, 12.2	-7.6, 7.1	-11.0, 7.4	-11.0, 7.4	-7.4, 9.7

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 3 of 40
Lab test: WBC (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	608	609	604	1213	298
Mean	0.01	-0.94	-0.87	-0.90	-0.04
SD	1.810	1.945	2.020	1.982	1.688
Median	0.02	-0.96	-0.79	-0.88	-0.05
Min, Max	-9.6, 11.9	-9.6, 11.8	-11.3, 13.9	-11.3, 13.9	-8.2, 8.5
Week 60					
n	565	594	584	1178	286
Mean	0.16	-0.87	-0.84	-0.85	-0.02
SD	1.851	1.910	1.984	1.946	1.805
Median	0.10	-0.81	-0.77	-0.80	0.06
Min, Max	-8.8, 8.4	-8.7, 9.7	-10.7, 12.1	-10.7, 12.1	-7.8, 5.6
Week 72					
n	526	573	568	1141	279
Mean	0.13	-0.92	-0.74	-0.83	0.08
SD	1.788	2.055	2.094	2.076	1.933
Median	0.13	-0.90	-0.80	-0.85	0.10
Min, Max	-7.0, 8.5	-9.5, 14.6	-9.5, 7.7	-9.5, 14.6	-7.5, 9.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 4 of 40
Lab test: WBC (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	521	562	554	1116	263
Mean	0.20	-0.88	-0.76	-0.82	0.25
SD	1.880	1.961	2.109	2.036	1.805
Median	0.12	-0.86	-0.74	-0.80	0.30
Min, Max	-7.9, 8.6	-9.5, 9.1	-9.6, 13.5	-9.6, 13.5	-5.5, 7.9
Week 96					
n	479	526	503	1029	251
Mean	0.18	-0.97	-0.88	-0.93	0.24
SD	1.789	1.942	2.134	2.038	1.861
Median	0.10	-0.98	-0.89	-0.91	0.32
Min, Max	-7.0, 9.6	-9.4, 7.8	-11.2, 12.2	-11.2, 12.2	-7.8, 11.1

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 5 of 40
Lab test: Lymphocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	744	729	719	1448	332
Mean	0.04	-0.05	-0.10	-0.07	-0.01
SD	0.449	0.474	0.528	0.502	0.445
Median	0.05	-0.03	-0.08	-0.06	-0.02
Min, Max	-1.8, 2.1	-2.2, 2.2	-6.2, 1.3	-6.2, 2.2	-1.6, 1.3
Week 8					
n	727	693	669	1362	328
Mean	0.04	-0.19	-0.18	-0.19	0.04
SD	0.473	0.533	0.565	0.549	0.456
Median	0.05	-0.19	-0.16	-0.18	0.03
Min, Max	-2.5, 2.5	-3.2, 3.8	-6.1, 4.5	-6.1, 4.5	-1.9, 1.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 6 of 40
Lab test: Lymphocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	0.04	-0.30	-0.29	-0.29	-0.04
SD	0.486	0.557	0.580	0.568	0.433
Median	0.05	-0.27	-0.25	-0.26	-0.05
Min, Max	-2.2, 4.1	-3.9, 2.5	-6.6, 1.1	-6.6, 2.5	-1.8, 1.9
Week 24					
n	698	664	646	1310	315
Mean	0.06	-0.49	-0.39	-0.44	0.00
SD	0.486	0.617	0.635	0.627	0.455
Median	0.07	-0.48	-0.36	-0.42	-0.01
Min, Max	-2.7, 1.9	-5.0, 2.2	-6.7, 1.8	-6.7, 2.2	-1.7, 1.4
Week 36					
n	654	634	615	1249	306
Mean	0.08	-0.54	-0.48	-0.51	0.01
SD	0.461	0.627	0.638	0.633	0.455
Median	0.08	-0.54	-0.46	-0.50	0.01
Min, Max	-1.7, 1.4	-5.1, 2.1	-6.0, 2.1	-6.0, 2.1	-2.1, 1.7

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 7 of 40
Lab test: Lymphocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	607	609	604	1213	298
Mean	0.02	-0.63	-0.54	-0.58	-0.06
SD	0.496	0.608	0.613	0.612	0.433
Median	0.02	-0.62	-0.53	-0.58	-0.06
Min, Max	-2.4, 3.0	-5.0, 1.7	-5.3, 1.0	-5.3, 1.7	-1.8, 1.7
Week 60					
n	565	594	584	1178	286
Mean	0.08	-0.60	-0.53	-0.57	0.02
SD	0.467	0.624	0.652	0.639	0.450
Median	0.07	-0.58	-0.51	-0.54	0.01
Min, Max	-2.3, 2.2	-5.4, 1.8	-6.3, 1.7	-6.3, 1.8	-1.8, 1.3
Week 72					
n	526	572	567	1139	279
Mean	0.05	-0.65	-0.56	-0.60	0.00
SD	0.484	0.629	0.630	0.631	0.512
Median	0.05	-0.64	-0.55	-0.59	-0.01
Min, Max	-2.8, 1.3	-5.1, 1.5	-5.1, 3.2	-5.1, 3.2	-1.5, 3.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 8 of 40
Lab test: Lymphocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	519	562	553	1115	263
Mean	0.07	-0.59	-0.56	-0.58	0.07
SD	0.499	0.611	0.664	0.638	0.528
Median	0.07	-0.60	-0.57	-0.59	0.06
Min, Max	-1.6, 3.5	-2.9, 1.7	-6.6, 2.6	-6.6, 2.6	-1.7, 2.8
Week 96					
n	479	526	503	1029	251
Mean	0.02	-0.66	-0.58	-0.62	0.04
SD	0.526	0.620	0.625	0.624	0.492
Median	0.02	-0.64	-0.56	-0.60	0.05
Min, Max	-2.4, 2.0	-5.1, 1.3	-6.6, 1.2	-6.6, 1.3	-1.5, 1.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 9 of 40
Lab test: Neutrophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	744	729	719	1448	332
Mean	0.05	0.13	0.11	0.12	0.13
SD	1.606	1.768	1.898	1.833	1.535
Median	-0.04	0.01	-0.03	-0.01	0.13
Min, Max	-9.1, 13.6	-6.1, 16.1	-9.9, 13.4	-9.9, 16.1	-7.8, 5.1
Week 8					
n	727	693	669	1362	328
Mean	0.06	-0.13	-0.17	-0.15	0.21
SD	1.741	1.537	1.820	1.682	1.721
Median	0.06	-0.12	-0.18	-0.16	0.22
Min, Max	-8.0, 14.1	-6.5, 8.1	-10.3, 8.8	-10.3, 8.8	-8.1, 9.7

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 10 of 40
Lab test: Neutrophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	0.06	-0.08	-0.21	-0.15	0.08
SD	1.790	1.679	1.807	1.743	1.752
Median	0.03	-0.20	-0.19	-0.20	0.12
Min, Max	-10.9, 16.8	-6.5, 8.9	-10.0, 15.5	-10.0, 15.5	-8.5, 6.8
Week 24					
n	698	664	646	1310	315
Mean	0.03	-0.22	-0.18	-0.20	0.19
SD	1.618	1.641	1.833	1.738	1.749
Median	0.03	-0.28	-0.21	-0.23	0.28
Min, Max	-10.0, 8.6	-7.0, 8.3	-9.9, 10.6	-9.9, 10.6	-10.0, 6.3
Week 36					
n	654	634	615	1249	306
Mean	0.05	-0.19	-0.28	-0.23	0.08
SD	1.663	1.607	1.671	1.639	1.598
Median	0.00	-0.21	-0.24	-0.22	0.21
Min, Max	-10.3, 11.1	-7.2, 8.0	-9.0, 7.9	-9.0, 8.0	-7.4, 8.4

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 11 of 40
Lab test: Neutrophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	607	609	604	1213	298
Mean	-0.01	-0.25	-0.28	-0.27	-0.01
SD	1.596	1.721	1.778	1.749	1.543
Median	0.03	-0.27	-0.27	-0.27	-0.02
Min, Max	-9.5, 10.8	-8.0, 13.2	-8.9, 14.2	-8.9, 14.2	-7.9, 6.9
Week 60					
n	565	594	584	1178	286
Mean	0.07	-0.22	-0.28	-0.25	-0.09
SD	1.648	1.682	1.728	1.705	1.619
Median	0.00	-0.26	-0.22	-0.24	0.06
Min, Max	-9.5, 7.5	-6.7, 10.0	-9.1, 10.5	-9.1, 10.5	-7.9, 5.1
Week 72					
n	526	572	567	1139	279
Mean	0.07	-0.24	-0.15	-0.19	0.02
SD	1.635	1.789	1.837	1.813	1.690
Median	0.05	-0.23	-0.19	-0.21	0.07
Min, Max	-7.2, 8.7	-7.9, 16.1	-8.8, 7.5	-8.8, 16.1	-7.4, 8.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 12 of 40
Lab test: Neutrophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	519	562	553	1115	263
Mean	0.10	-0.26	-0.17	-0.21	0.11
SD	1.616	1.682	1.879	1.782	1.527
Median	0.07	-0.26	-0.21	-0.22	0.15
Min, Max	-7.7, 7.6	-8.3, 9.5	-8.8, 16.0	-8.8, 16.0	-5.4, 4.8
Week 96					
n	479	526	503	1029	251
Mean	0.15	-0.27	-0.27	-0.27	0.15
SD	1.577	1.666	1.861	1.763	1.703
Median	0.07	-0.34	-0.27	-0.31	0.12
Min, Max	-6.6, 8.3	-8.2, 8.0	-9.8, 11.2	-9.8, 11.2	-7.4, 11.4

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Monocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	744	729	719	1448	332
Mean	0.02	0.02	0.03	0.03	0.00
SD	0.120	0.128	0.142	0.135	0.126
Median	0.01	0.03	0.03	0.03	0.01
Min, Max	-0.7, 0.7	-0.7, 0.5	-0.9, 0.9	-0.9, 0.9	-0.5, 0.6
Week 8					
n	727	693	669	1362	328
Mean	0.02	0.02	0.03	0.03	0.02
SD	0.129	0.128	0.135	0.131	0.131
Median	0.02	0.02	0.03	0.03	0.01
Min, Max	-0.7, 1.0	-0.6, 0.5	-0.9, 0.7	-0.9, 0.7	-0.6, 0.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Monocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	0.01	0.01	0.01	0.01	0.01
SD	0.138	0.125	0.135	0.130	0.145
Median	0.01	0.01	0.01	0.01	0.01
Min, Max	-0.8, 1.1	-0.5, 0.7	-0.8, 0.5	-0.8, 0.7	-0.6, 0.7
Week 24					
n	698	664	646	1310	315
Mean	0.01	0.00	0.01	0.00	0.01
SD	0.134	0.128	0.134	0.131	0.145
Median	0.01	0.00	0.01	0.00	0.02
Min, Max	-0.8, 0.5	-0.7, 0.6	-0.8, 0.5	-0.8, 0.6	-0.7, 0.6
Week 36					
n	654	634	615	1249	306
Mean	0.02	0.00	0.01	0.00	0.00
SD	0.143	0.127	0.135	0.131	0.127
Median	0.02	0.00	0.00	0.00	0.01
Min, Max	-0.9, 1.1	-0.7, 0.8	-0.9, 0.7	-0.9, 0.8	-0.6, 0.4

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Monocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	607	609	604	1213	298
Mean	0.00	-0.02	-0.01	-0.01	0.00
SD	0.131	0.115	0.130	0.122	0.128
Median	0.00	-0.01	0.00	-0.01	0.00
Min, Max	-0.7, 0.9	-0.6, 0.4	-0.9, 0.5	-0.9, 0.5	-0.5, 0.4
Week 60					
n	565	594	584	1178	286
Mean	0.02	-0.01	0.00	-0.01	0.01
SD	0.125	0.118	0.132	0.125	0.121
Median	0.02	-0.01	0.00	0.00	0.01
Min, Max	-0.7, 0.9	-0.6, 0.6	-0.9, 0.5	-0.9, 0.6	-0.5, 0.6
Week 72					
n	526	572	567	1139	279
Mean	0.01	0.00	0.01	0.00	0.02
SD	0.125	0.132	0.141	0.137	0.149
Median	0.01	-0.01	0.01	0.00	0.01
Min, Max	-0.9, 0.5	-0.6, 0.9	-0.8, 0.5	-0.8, 0.9	-0.4, 0.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 16 of 40
Lab test: Monocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	519	562	553	1115	263
Mean	0.02	0.00	0.01	0.00	0.02
SD	0.142	0.127	0.136	0.132	0.127
Median	0.02	0.00	0.01	0.01	0.02
Min, Max	-0.6, 0.6	-0.6, 0.7	-0.8, 0.7	-0.8, 0.7	-0.3, 0.6
Week 96					
n	479	526	503	1029	251
Mean	0.01	-0.01	0.00	0.00	0.01
SD	0.136	0.133	0.139	0.136	0.117
Median	0.00	-0.01	0.00	0.00	0.01
Min, Max	-0.6, 0.9	-0.7, 1.0	-0.8, 0.4	-0.8, 1.0	-0.4, 0.4

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Eosinophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	744	729	719	1448	332
Mean	0.00	0.19	0.14	0.16	0.06
SD	0.094	0.605	0.478	0.546	0.106
Median	0.00	0.03	0.02	0.02	0.04
Min, Max	-0.6, 0.6	-0.4, 6.1	-0.5, 4.9	-0.5, 6.1	-0.2, 0.6
Week 8					
n	727	693	669	1362	328
Mean	0.00	0.02	0.01	0.02	0.11
SD	0.090	0.127	0.132	0.129	0.167
Median	0.00	0.01	0.00	0.01	0.07
Min, Max	-0.5, 0.8	-0.5, 1.9	-0.5, 2.0	-0.5, 2.0	-0.3, 1.3

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Eosinophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	0.00	0.00	0.00	0.00	0.08
SD	0.103	0.117	0.091	0.105	0.162
Median	0.00	0.00	0.00	0.00	0.05
Min, Max	-0.6, 0.8	-0.5, 1.8	-0.4, 0.6	-0.5, 1.8	-0.3, 1.6
Week 24					
n	698	664	646	1310	315
Mean	0.00	-0.02	-0.01	-0.02	0.06
SD	0.105	0.103	0.085	0.094	0.142
Median	0.00	-0.01	-0.01	-0.01	0.04
Min, Max	-0.5, 1.0	-0.6, 1.0	-0.4, 0.5	-0.6, 1.0	-0.4, 1.5
Week 36					
n	654	634	615	1249	306
Mean	0.00	-0.02	-0.02	-0.02	0.05
SD	0.105	0.118	0.088	0.104	0.121
Median	0.00	-0.01	-0.01	-0.01	0.03
Min, Max	-0.6, 0.5	-0.5, 1.8	-0.4, 0.4	-0.5, 1.8	-0.4, 0.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Eosinophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	607	609	604	1213	298
Mean	0.00	-0.02	-0.02	-0.02	0.04
SD	0.096	0.087	0.085	0.086	0.105
Median	0.00	-0.01	-0.01	-0.01	0.03
Min, Max	-0.6, 0.4	-0.6, 0.4	-0.5, 0.4	-0.6, 0.4	-0.3, 0.7
Week 60					
n	565	594	584	1178	286
Mean	0.00	-0.02	-0.02	-0.02	0.04
SD	0.104	0.096	0.083	0.090	0.107
Median	0.00	-0.01	-0.01	-0.01	0.03
Min, Max	-0.6, 0.6	-0.7, 0.7	-0.5, 0.4	-0.7, 0.7	-0.4, 0.8
Week 72					
n	526	572	567	1139	279
Mean	0.00	-0.02	-0.02	-0.02	0.05
SD	0.126	0.104	0.088	0.096	0.120
Median	0.01	-0.01	-0.01	-0.01	0.03
Min, Max	-0.6, 1.6	-0.6, 0.5	-0.5, 0.3	-0.6, 0.5	-0.4, 0.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Eosinophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	519	562	553	1115	263
Mean	0.00	-0.01	-0.02	-0.01	0.05
SD	0.112	0.143	0.087	0.119	0.111
Median	0.00	-0.01	-0.01	-0.01	0.04
Min, Max	-0.6, 0.6	-0.6, 1.5	-0.5, 0.3	-0.6, 1.5	-0.4, 0.5
Week 96					
n	479	526	503	1029	251
Mean	0.00	-0.01	-0.01	-0.01	0.04
SD	0.108	0.102	0.094	0.098	0.096
Median	0.00	-0.01	-0.01	-0.01	0.03
Min, Max	-0.6, 0.5	-0.6, 0.7	-0.5, 0.7	-0.6, 0.7	-0.3, 0.5

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Basophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	744	729	719	1448	332
Mean	0.00	0.00	0.00	0.00	0.00
SD	0.036	0.039	0.039	0.039	0.041
Median	0.00	0.00	0.00	0.00	0.00
Min, Max	-0.2, 0.2	-0.2, 0.1	-0.2, 0.2	-0.2, 0.2	-0.3, 0.2
Week 8					
n	727	693	669	1362	328
Mean	0.00	-0.01	0.00	0.00	0.00
SD	0.034	0.037	0.037	0.037	0.038
Median	0.00	0.00	0.00	0.00	0.00
Min, Max	-0.2, 0.1	-0.2, 0.2	-0.2, 0.3	-0.2, 0.3	-0.3, 0.1

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Basophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	0.00	-0.01	-0.01	-0.01	0.00
SD	0.038	0.042	0.040	0.041	0.043
Median	0.00	-0.01	0.00	0.00	0.00
Min, Max	-0.2, 0.3	-0.2, 0.2	-0.2, 0.4	-0.2, 0.4	-0.3, 0.1
Week 24					
n	698	664	646	1310	315
Mean	0.00	-0.01	-0.01	-0.01	-0.01
SD	0.038	0.039	0.037	0.038	0.037
Median	0.00	-0.01	-0.01	-0.01	0.00
Min, Max	-0.2, 0.2	-0.2, 0.2	-0.2, 0.2	-0.2, 0.2	-0.3, 0.2
Week 36					
n	654	634	615	1249	306
Mean	0.00	-0.01	-0.01	-0.01	-0.01
SD	0.041	0.041	0.038	0.039	0.044
Median	0.00	-0.01	-0.01	-0.01	-0.01
Min, Max	-0.2, 0.3	-0.2, 0.2	-0.2, 0.2	-0.2, 0.2	-0.4, 0.2

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Basophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	607	609	604	1213	298
Mean	0.00	-0.02	-0.01	-0.01	0.00
SD	0.042	0.039	0.040	0.040	0.047
Median	0.00	-0.01	-0.01	-0.01	0.00
Min, Max	-0.2, 0.2	-0.2, 0.2	-0.2, 0.2	-0.2, 0.2	-0.4, 0.2
Week 60					
n	565	594	584	1178	286
Mean	0.00	-0.02	-0.01	-0.01	-0.01
SD	0.038	0.039	0.039	0.039	0.044
Median	0.00	-0.01	-0.01	-0.01	-0.01
Min, Max	-0.2, 0.3	-0.2, 0.2	-0.2, 0.2	-0.2, 0.2	-0.4, 0.1
Week 72					
n	526	572	567	1139	279
Mean	0.00	-0.02	-0.01	-0.01	-0.01
SD	0.039	0.039	0.040	0.040	0.046
Median	0.00	-0.01	-0.01	-0.01	0.00
Min, Max	-0.2, 0.2	-0.2, 0.2	-0.3, 0.2	-0.3, 0.2	-0.4, 0.1

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Basophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	519	562	553	1115	263
Mean	0.00	-0.02	-0.01	-0.01	0.00
SD	0.035	0.038	0.039	0.039	0.046
Median	0.00	-0.01	-0.01	-0.01	0.00
Min, Max	-0.2, 0.2	-0.2, 0.1	-0.2, 0.3	-0.2, 0.3	-0.4, 0.2
Week 96					
n	479	526	503	1029	251
Mean	0.00	-0.01	-0.01	-0.01	0.00
SD	0.043	0.039	0.039	0.039	0.044
Median	0.00	-0.01	-0.01	-0.01	0.00
Min, Max	-0.2, 0.2	-0.2, 0.2	-0.2, 0.2	-0.2, 0.2	-0.4, 0.2

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: RBC (x10^12/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	745	730	719	1449	332
Mean	-0.01	-0.09	-0.10	-0.09	-0.06
SD	0.224	0.230	0.224	0.227	0.234
Median	0.00	-0.10	-0.10	-0.10	0.00
Min, Max	-1.1, 0.7	-0.9, 0.7	-0.7, 0.6	-0.9, 0.7	-1.2, 0.6
Week 8					
n	727	693	669	1362	328
Mean	0.01	-0.06	-0.08	-0.07	-0.04
SD	0.245	0.244	0.246	0.245	0.258
Median	0.00	-0.10	-0.10	-0.10	0.00
Min, Max	-1.3, 0.8	-0.9, 0.9	-0.8, 0.7	-0.9, 0.9	-0.8, 0.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: RBC (x10^12/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	0.01	-0.03	-0.05	-0.04	-0.01
SD	0.254	0.251	0.251	0.251	0.278
Median	0.00	0.00	0.00	0.00	0.00
Min, Max	-1.3, 1.3	-0.8, 0.9	-0.9, 0.9	-0.9, 0.9	-0.7, 1.3
Week 24					
n	698	664	646	1310	315
Mean	-0.01	-0.06	-0.09	-0.07	0.01
SD	0.288	0.265	0.269	0.267	0.282
Median	0.00	-0.10	-0.10	-0.10	0.00
Min, Max	-2.8, 1.1	-1.6, 0.8	-1.5, 0.7	-1.6, 0.8	-0.8, 1.2
Week 36					
n	654	634	615	1249	306
Mean	0.00	-0.06	-0.09	-0.08	-0.01
SD	0.266	0.269	0.272	0.271	0.270
Median	0.00	-0.10	-0.10	-0.10	0.00
Min, Max	-1.3, 1.3	-1.7, 0.8	-0.9, 1.3	-1.7, 1.3	-0.7, 1.3

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: RBC (x10^12/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	608	609	604	1213	298
Mean	0.01	-0.04	-0.08	-0.06	-0.01
SD	0.282	0.253	0.270	0.263	0.267
Median	0.00	0.00	-0.10	-0.10	0.00
Min, Max	-0.8, 2.3	-0.9, 1.0	-1.2, 0.9	-1.2, 1.0	-0.7, 1.3
Week 60					
n	565	594	584	1178	286
Mean	0.00	-0.08	-0.08	-0.08	-0.01
SD	0.253	0.265	0.261	0.263	0.276
Median	0.00	-0.10	-0.10	-0.10	0.00
Min, Max	-0.7, 1.1	-0.8, 1.5	-0.8, 0.8	-0.8, 1.5	-0.9, 1.3
Week 72					
n	526	573	568	1141	279
Mean	0.02	-0.06	-0.09	-0.08	-0.02
SD	0.296	0.256	0.264	0.260	0.279
Median	0.00	-0.10	-0.10	-0.10	0.00
Min, Max	-0.9, 3.0	-0.9, 0.7	-1.0, 1.0	-1.0, 1.0	-0.8, 1.4

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: RBC (x10^12/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	521	562	554	1116	263
Mean	0.02	-0.06	-0.10	-0.08	-0.02
SD	0.307	0.293	0.271	0.283	0.303
Median	0.00	-0.10	-0.10	-0.10	0.00
Min, Max	-2.4, 2.6	-1.3, 2.0	-0.9, 0.8	-1.3, 2.0	-0.7, 1.8
Week 96					
n	479	526	503	1029	251
Mean	0.01	-0.04	-0.09	-0.07	-0.03
SD	0.289	0.296	0.258	0.279	0.288
Median	0.00	-0.10	-0.10	-0.10	0.00
Min, Max	-1.0, 1.0	-1.1, 2.1	-1.0, 0.8	-1.1, 2.1	-0.8, 1.2

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 29 of 40
Lab test: Hemoglobin (g/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	745	730	719	1449	332
Mean	-0.48	-2.65	-3.06	-2.85	-1.95
SD	6.473	6.599	6.588	6.594	6.916
Median	-1.00	-3.00	-3.00	-3.00	-1.00
Min, Max	-38.0, 22.0	-26.0, 19.0	-24.0, 28.0	-26.0, 28.0	-35.0, 18.0
Week 8					
n	727	693	669	1362	328
Mean	-0.17	-2.31	-2.64	-2.47	-1.90
SD	7.084	7.175	7.010	7.094	7.365
Median	-1.00	-2.00	-3.00	-3.00	-2.00
Min, Max	-38.0, 28.0	-41.0, 35.0	-28.0, 29.0	-41.0, 35.0	-30.0, 24.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 30 of 40
Lab test: Hemoglobin (g/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	-0.33	-1.64	-1.83	-1.73	-1.78
SD	7.474	7.351	7.244	7.297	7.963
Median	0.00	-2.00	-2.00	-2.00	-2.00
Min, Max	-37.0, 32.0	-26.0, 44.0	-27.0, 27.0	-27.0, 44.0	-23.0, 38.0
Week 24					
n	698	664	646	1310	315
Mean	-0.90	-2.56	-2.96	-2.76	-1.24
SD	8.848	8.026	8.199	8.111	8.141
Median	-1.00	-3.00	-3.00	-3.00	-2.00
Min, Max	-81.0, 64.0	-27.0, 41.0	-47.0, 28.0	-47.0, 41.0	-24.0, 21.0
Week 36					
n	654	632	615	1247	306
Mean	-0.54	-2.27	-2.81	-2.53	-1.83
SD	8.531	8.542	8.355	8.451	8.196
Median	-1.00	-2.00	-3.00	-3.00	-2.00
Min, Max	-37.0, 42.0	-34.0, 45.0	-53.0, 32.0	-53.0, 45.0	-26.0, 35.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 31 of 40
Lab test: Hemoglobin (g/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	608	608	604	1212	297
Mean	-0.06	-1.53	-2.11	-1.82	-2.52
SD	9.077	8.539	8.991	8.768	8.533
Median	-1.00	-1.00	-2.00	-1.00	-3.00
Min, Max	-30.0, 66.0	-38.0, 38.0	-43.0, 46.0	-43.0, 46.0	-34.0, 45.0
Week 60					
n	565	592	582	1174	284
Mean	-0.48	-2.43	-2.06	-2.25	-1.65
SD	8.391	8.629	8.941	8.784	8.549
Median	0.00	-2.00	-2.00	-2.00	-1.00
Min, Max	-33.0, 39.0	-34.0, 33.0	-35.0, 54.0	-35.0, 54.0	-28.0, 44.0
Week 72					
n	526	572	568	1140	279
Mean	-0.39	-1.94	-2.49	-2.21	-1.93
SD	9.173	9.086	9.026	9.056	9.182
Median	0.00	-1.00	-2.00	-2.00	-2.00
Min, Max	-25.0, 91.0	-42.0, 43.0	-36.0, 50.0	-42.0, 50.0	-26.0, 45.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 32 of 40
Lab test: Hemoglobin (g/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	521	562	554	1116	263
Mean	-0.05	-1.74	-2.83	-2.28	-2.11
SD	9.798	9.008	9.457	9.246	9.221
Median	0.00	-2.00	-3.00	-2.00	-2.00
Min, Max	-76.0, 76.0	-36.0, 36.0	-37.0, 54.0	-37.0, 54.0	-33.0, 36.0
Week 96					
n	479	526	503	1029	251
Mean	0.02	-1.27	-2.12	-1.68	-1.71
SD	9.408	9.588	8.837	9.234	8.932
Median	0.00	-1.00	-2.00	-2.00	-2.00
Min, Max	-59.0, 37.0	-41.0, 45.0	-54.0, 47.0	-54.0, 47.0	-24.0, 39.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
Page 33 of 40
Lab test: Hematocrit (%)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	735	717	714	1431	327
Mean	0.16	-0.43	-0.54	-0.48	-0.35
SD	2.449	2.304	2.413	2.359	2.397
Median	0.00	-1.00	-1.00	-1.00	0.00
Min, Max	-10.0, 9.0	-10.0, 7.0	-8.0, 8.0	-10.0, 8.0	-10.0, 7.0
Week 8					
n	719	688	666	1354	326
Mean	0.16	-0.29	-0.56	-0.43	-0.61
SD	2.662	2.497	2.607	2.554	2.634
Median	0.00	0.00	-1.00	0.00	-1.00
Min, Max	-9.0, 11.0	-10.0, 9.0	-8.0, 8.0	-10.0, 9.0	-8.0, 8.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Hematocrit (%)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	716	686	661	1347	321
Mean	-0.05	-0.35	-0.60	-0.47	-0.60
SD	2.806	2.617	2.712	2.666	2.774
Median	0.00	0.00	-1.00	0.00	-1.00
Min, Max	-13.0, 10.0	-8.0, 11.0	-9.0, 8.0	-9.0, 11.0	-7.0, 11.0
Week 24					
n	689	658	642	1300	310
Mean	-0.09	-0.64	-0.93	-0.78	-0.62
SD	3.175	2.904	2.968	2.938	2.933
Median	0.00	-1.00	-1.00	-1.00	-1.00
Min, Max	-24.0, 18.0	-11.0, 12.0	-15.0, 9.0	-15.0, 12.0	-8.0, 7.0
Week 36					
n	645	630	610	1240	304
Mean	0.08	-0.58	-0.86	-0.72	-0.60
SD	3.050	2.939	2.939	2.941	2.922
Median	0.00	0.00	-1.00	-1.00	0.00
Min, Max	-11.0, 12.0	-11.0, 13.0	-14.0, 7.0	-14.0, 13.0	-7.0, 7.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Hematocrit (%)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	598	604	601	1205	295
Mean	0.25	-0.35	-0.63	-0.49	-0.03
SD	3.098	2.810	2.892	2.854	3.018
Median	0.00	0.00	0.00	0.00	0.00
Min, Max	-10.0, 18.0	-9.0, 10.0	-12.0, 10.0	-12.0, 10.0	-8.0, 10.0
Week 60					
n	557	582	578	1160	278
Mean	0.31	-0.50	-0.48	-0.49	0.09
SD	2.802	2.819	2.970	2.894	2.704
Median	0.00	0.00	0.00	0.00	0.00
Min, Max	-9.0, 10.0	-9.0, 12.0	-10.0, 11.0	-10.0, 12.0	-9.0, 12.0
Week 72					
n	517	564	562	1126	274
Mean	0.62	-0.13	-0.33	-0.23	-0.13
SD	3.307	3.052	2.992	3.023	3.115
Median	1.00	0.00	0.00	0.00	0.00
Min, Max	-9.0, 28.0	-11.0, 11.0	-10.0, 8.0	-11.0, 11.0	-10.0, 14.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Hematocrit (%)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	515	557	551	1108	261
Mean	0.78	-0.06	-0.42	-0.24	-0.10
SD	3.418	3.227	3.189	3.211	3.375
Median	1.00	0.00	0.00	0.00	0.00
Min, Max	-20.0, 19.0	-11.0, 9.0	-9.0, 11.0	-11.0, 11.0	-11.0, 11.0
Week 96					
n	473	518	497	1015	250
Mean	0.72	0.14	-0.20	-0.03	0.12
SD	3.321	3.387	2.809	3.120	3.258
Median	1.00	0.00	0.00	0.00	0.00
Min, Max	-13.0, 11.0	-12.0, 16.0	-10.0, 10.0	-12.0, 16.0	-9.0, 11.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Platelets (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	740	718	714	1432	328
Mean	-0.23	6.07	8.68	7.37	0.76
SD	38.617	40.013	44.554	42.343	37.747
Median	-1.00	6.00	7.00	6.00	0.50
Min, Max	-170.0, 219.0	-174.0, 181.0	-175.0, 255.0	-175.0, 255.0	-190.0, 123.0
Week 8					
n	721	689	666	1355	324
Mean	1.88	-2.35	-0.78	-1.58	-0.85
SD	41.026	39.779	42.458	41.110	38.937
Median	3.00	-4.00	-2.00	-3.00	1.00
Min, Max	-154.0, 300.0	-157.0, 170.0	-135.0, 414.0	-157.0, 414.0	-193.0, 94.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Platelets (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	723	692	662	1354	321
Mean	3.40	-5.74	-4.48	-5.13	2.17
SD	43.765	39.343	39.639	39.478	42.043
Median	3.00	-6.00	-4.50	-5.00	2.00
Min, Max	-274.0, 322.0	-189.0, 149.0	-150.0, 143.0	-189.0, 149.0	-219.0, 99.0
Week 24					
n	693	657	644	1301	314
Mean	2.46	-7.69	-4.46	-6.09	4.62
SD	46.514	46.698	47.028	46.871	44.042
Median	2.00	-10.00	-5.00	-7.00	5.50
Min, Max	-195.0, 332.0	-182.0, 227.0	-185.0, 332.0	-185.0, 332.0	-216.0, 149.0
Week 36					
n	654	629	611	1240	302
Mean	6.19	-8.19	-7.54	-7.87	5.38
SD	46.779	43.744	43.235	43.477	40.517
Median	3.00	-10.00	-7.00	-8.00	5.00
Min, Max	-141.0, 330.0	-150.0, 166.0	-168.0, 184.0	-168.0, 184.0	-184.0, 124.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Platelets (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	603	606	601	1207	294
Mean	4.04	-9.81	-6.38	-8.10	4.88
SD	43.215	42.893	44.355	43.643	60.131
Median	4.00	-7.00	-7.00	-7.00	5.00
Min, Max	-205.0, 266.0	-282.0, 194.0	-151.0, 174.0	-282.0, 194.0	-193.0, 675.0
Week 60					
n	561	590	578	1168	285
Mean	5.03	-8.86	-6.93	-7.91	-0.64
SD	47.732	43.448	44.261	43.844	39.519
Median	6.00	-8.00	-7.00	-7.00	3.00
Min, Max	-176.0, 354.0	-156.0, 155.0	-178.0, 184.0	-178.0, 184.0	-204.0, 102.0
Week 72					
n	523	570	564	1134	278
Mean	-0.46	-12.69	-10.50	-11.60	-0.21
SD	42.149	46.652	45.629	46.139	54.735
Median	-1.00	-12.50	-9.50	-11.00	-1.00
Min, Max	-164.0, 137.0	-191.0, 162.0	-163.0, 183.0	-191.0, 183.0	-230.0, 491.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Summary of hematology laboratory parameters - change from baseline by visit : Studies 109MS301 and 109MS302
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Lab test: Platelets (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	515	561	551	1112	260
Mean	0.10	-10.74	-10.83	-10.79	1.83
SD	44.147	46.848	47.778	47.290	42.072
Median	0.00	-12.00	-8.00	-10.00	2.00
Min, Max	-167.0, 169.0	-171.0, 205.0	-177.0, 212.0	-177.0, 212.0	-167.0, 168.0
Week 96					
n	478	524	500	1024	248
Mean	-1.62	-14.94	-13.50	-14.24	-1.42
SD	46.541	48.021	46.069	47.060	44.095
Median	-3.00	-12.00	-14.00	-13.00	0.00
Min, Max	-197.0, 189.0	-290.0, 186.0	-178.0, 187.0	-290.0, 187.0	-214.0, 166.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-CHG-A.SAS DATE: 08OCT2015

Table 231: Summary of Hematology Laboratory Parameters - Percentage Change From Baseline by Visit: Studies 109MS301 and 109MS302

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
Page 1 of 40
Lab test: WBC (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	745	730	719	1449	332
Mean	3.95	6.90	5.56	6.23	5.97
SD	26.288	30.857	30.448	30.652	24.154
Median	0.00	1.77	0.84	1.35	3.23
Min, Max	-63.9, 229.5	-69.9, 194.8	-66.8, 172.8	-69.9, 194.8	-54.2, 101.4
Week 8					
n	727	693	669	1362	328
Mean	4.23	-1.33	-1.15	-1.24	9.15
SD	26.522	25.357	27.794	26.572	28.553
Median	1.64	-3.92	-4.00	-3.97	4.80
Min, Max	-55.5, 200.4	-64.2, 170.3	-68.7, 152.1	-68.7, 170.3	-57.9, 203.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
Page 2 of 40
Lab test: WBC (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	4.57	-3.06	-3.76	-3.40	5.90
SD	27.355	27.806	28.289	28.035	26.823
Median	0.79	-7.28	-6.12	-6.84	2.81
Min, Max	-69.7, 216.1	-56.6, 139.0	-67.5, 212.9	-67.5, 212.9	-59.3, 113.2
Week 24					
n	698	664	646	1310	315
Mean	4.62	-8.02	-5.30	-6.68	7.66
SD	26.602	26.557	27.371	26.985	28.278
Median	2.35	-12.73	-8.63	-10.33	4.46
Min, Max	-67.4, 199.5	-65.9, 161.7	-67.5, 140.4	-67.5, 161.7	-69.0, 194.0
Week 36					
n	654	634	615	1249	306
Mean	4.83	-8.41	-8.65	-8.53	5.25
SD	26.117	26.176	25.595	25.882	27.419
Median	2.13	-11.85	-11.87	-11.87	4.23
Min, Max	-70.2, 174.0	-65.6, 104.3	-67.1, 124.4	-67.1, 124.4	-52.7, 191.3

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
Page 3 of 40
Lab test: WBC (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	608	609	604	1213	298
Mean	3.22	-11.47	-10.06	-10.77	2.16
SD	25.619	25.874	25.744	25.808	23.724
Median	0.22	-14.39	-13.07	-13.85	-0.84
Min, Max	-64.1, 169.6	-66.4, 103.9	-77.1, 160.1	-77.1, 160.1	-58.2, 142.1
Week 60					
n	565	594	584	1178	286
Mean	5.45	-10.19	-9.52	-9.86	3.82
SD	27.639	26.960	25.616	26.293	25.296
Median	1.52	-12.61	-12.32	-12.44	0.95
Min, Max	-59.3, 166.9	-68.0, 228.5	-68.4, 159.4	-68.4, 228.5	-57.3, 101.7
Week 72					
n	526	573	568	1141	279
Mean	4.43	-10.93	-7.60	-9.27	4.56
SD	25.305	28.243	30.091	29.212	28.651
Median	1.65	-14.46	-13.07	-13.76	1.34
Min, Max	-50.6, 104.7	-70.9, 222.4	-68.6, 216.8	-70.9, 222.4	-56.3, 191.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: WBC (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	521	562	554	1116	263
Mean	5.57	-10.25	-8.62	-9.44	7.24
SD	27.022	27.129	27.347	27.237	27.006
Median	2.13	-13.46	-12.50	-12.95	4.88
Min, Max	-55.4, 148.5	-65.8, 160.5	-68.7, 169.9	-68.7, 169.9	-51.8, 171.5
Week 96					
n	479	526	503	1029	251
Mean	5.11	-12.16	-9.67	-10.94	6.65
SD	27.311	25.699	29.090	27.424	28.267
Median	1.57	-15.27	-14.35	-14.68	4.90
Min, Max	-54.0, 232.5	-69.5, 108.1	-67.3, 247.2	-69.5, 247.2	-56.0, 228.9

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Lymphocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	744	729	719	1448	332
Mean	4.73	0.63	-1.99	-0.67	2.52
SD	23.970	28.002	23.574	25.922	26.563
Median	2.52	-1.89	-4.46	-3.60	-1.48
Min, Max	-70.9, 161.7	-81.1, 284.2	-76.3, 114.9	-81.1, 284.2	-73.2, 194.1
Week 8					
n	727	693	669	1362	328
Mean	4.80	-6.94	-6.57	-6.76	4.71
SD	25.026	28.915	26.059	27.540	24.025
Median	2.18	-9.59	-8.16	-8.96	1.64
Min, Max	-86.6, 188.5	-79.1, 235.1	-74.5, 202.7	-79.1, 235.1	-47.5, 128.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Lymphocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	5.07	-12.84	-11.73	-12.30	0.68
SD	25.948	28.786	26.578	27.723	22.083
Median	2.59	-14.72	-13.75	-14.15	-2.35
Min, Max	-53.1, 270.6	-70.9, 215.7	-80.8, 124.3	-80.8, 215.7	-62.7, 89.1
Week 24					
n	698	664	646	1310	315
Mean	6.39	-22.29	-17.54	-19.95	2.54
SD	25.801	30.645	28.140	29.521	22.855
Median	4.10	-25.82	-19.94	-22.41	-0.45
Min, Max	-69.4, 144.5	-79.8, 263.2	-82.3, 104.1	-82.3, 263.2	-54.9, 78.7
Week 36					
n	654	634	615	1249	306
Mean	6.60	-25.29	-22.05	-23.70	3.69
SD	25.014	29.065	28.706	28.923	24.789
Median	4.29	-30.11	-25.48	-27.56	0.58
Min, Max	-60.8, 125.9	-78.7, 125.6	-78.9, 150.0	-78.9, 150.0	-51.3, 119.6

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Lymphocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	607	609	604	1213	298
Mean	3.84	-30.18	-24.79	-27.50	-0.86
SD	25.688	26.626	27.442	27.158	22.627
Median	1.24	-34.59	-28.18	-31.15	-3.14
Min, Max	-61.1, 185.3	-83.1, 81.9	-82.3, 128.4	-83.1, 128.4	-53.9, 87.4
Week 60					
n	565	594	584	1178	286
Mean	7.17	-28.94	-24.12	-26.55	4.32
SD	24.490	27.718	29.296	28.601	25.345
Median	3.80	-31.92	-28.08	-30.00	1.02
Min, Max	-84.4, 170.9	-83.9, 107.7	-80.7, 140.5	-83.9, 140.5	-75.7, 120.7
Week 72					
n	526	572	567	1139	279
Mean	5.59	-30.94	-25.74	-28.35	2.67
SD	24.942	27.345	29.474	28.531	27.938
Median	2.85	-35.18	-28.67	-32.53	-0.41
Min, Max	-54.6, 100.9	-90.1, 75.8	-81.7, 268.9	-90.1, 268.9	-61.5, 159.5

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Lymphocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	519	562	553	1115	263
Mean	6.65	-28.68	-25.54	-27.13	7.10
SD	26.836	28.808	29.014	28.940	30.721
Median	4.00	-32.68	-30.20	-31.56	3.00
Min, Max	-42.5, 222.0	-82.3, 128.1	-83.8, 153.3	-83.8, 153.3	-45.9, 237.1
Week 96					
n	479	526	503	1029	251
Mean	4.22	-31.89	-27.35	-29.67	4.81
SD	26.929	27.049	27.005	27.110	26.735
Median	1.12	-34.53	-30.30	-32.09	2.63
Min, Max	-63.5, 158.1	-85.5, 74.2	-86.1, 152.7	-86.1, 152.7	-59.1, 117.9

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Neutrophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	744	729	719	1448	332
Mean	5.49	7.31	7.73	7.51	8.74
SD	38.093	39.052	42.339	40.704	33.004
Median	-1.13	0.23	-0.44	-0.34	2.82
Min, Max	-77.9, 402.4	-88.1, 275.6	-71.2, 260.3	-88.1, 275.6	-73.9, 186.5
Week 8					
n	727	693	669	1362	328
Mean	6.33	2.48	2.60	2.54	11.70
SD	41.496	37.632	41.074	39.346	40.414
Median	1.46	-2.99	-4.20	-3.51	5.96
Min, Max	-69.2, 329.5	-70.2, 441.5	-74.0, 291.7	-74.0, 441.5	-66.7, 284.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Neutrophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	6.81	2.81	1.50	2.17	8.85
SD	40.473	40.452	41.058	40.740	37.670
Median	0.55	-5.41	-5.65	-5.48	3.90
Min, Max	-84.3, 378.0	-65.6, 307.5	-71.8, 312.9	-71.8, 312.9	-70.3, 185.6
Week 24					
n	698	664	646	1310	315
Mean	6.80	0.62	2.39	1.49	12.35
SD	38.179	38.441	40.044	39.235	47.558
Median	0.82	-6.36	-5.32	-5.87	7.62
Min, Max	-76.9, 313.9	-66.7, 240.0	-76.4, 317.7	-76.4, 317.7	-85.3, 537.6
Week 36					
n	654	634	615	1249	306
Mean	6.88	1.50	-0.71	0.41	7.70
SD	38.983	38.540	36.444	37.524	36.928
Median	0.00	-5.17	-5.94	-5.47	5.61
Min, Max	-79.2, 303.0	-82.0, 294.1	-68.8, 239.1	-82.0, 294.1	-68.5, 244.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Neutrophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	607	609	604	1213	298
Mean	5.89	-0.92	-1.26	-1.09	4.50
SD	37.073	37.591	36.771	37.170	32.829
Median	0.66	-6.43	-6.91	-6.67	-0.47
Min, Max	-73.4, 249.4	-85.7, 177.5	-86.9, 243.5	-86.9, 243.5	-68.4, 176.8
Week 60					
n	565	594	584	1178	286
Mean	7.54	0.37	-1.02	-0.31	5.75
SD	39.957	40.431	36.560	38.551	36.129
Median	0.00	-6.13	-6.12	-6.13	1.72
Min, Max	-73.0, 301.9	-78.4, 416.6	-79.0, 226.7	-79.0, 416.6	-73.0, 158.5
Week 72					
n	526	572	567	1139	279
Mean	6.62	-0.18	2.92	1.36	6.47
SD	37.559	40.541	43.171	41.881	38.702
Median	1.25	-6.54	-4.65	-5.67	1.81
Min, Max	-76.8, 213.8	-71.2, 413.1	-72.9, 311.1	-72.9, 413.1	-72.2, 284.9

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Neutrophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	519	562	553	1115	263
Mean	7.53	-0.32	1.33	0.49	8.91
SD	37.316	39.024	39.498	39.251	35.976
Median	2.10	-6.50	-6.03	-6.31	4.42
Min, Max	-65.8, 201.9	-68.8, 260.7	-76.3, 307.6	-76.3, 307.6	-67.1, 161.0
Week 96					
n	479	526	503	1029	251
Mean	8.78	-1.67	0.58	-0.57	9.64
SD	42.251	36.847	44.559	40.795	44.037
Median	2.05	-9.10	-7.33	-8.04	3.69
Min, Max	-68.1, 350.4	-69.5, 187.7	-74.1, 416.0	-74.1, 416.0	-64.9, 433.1

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Monocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	744	729	719	1448	332
Mean	10.47	13.40	16.40	14.89	8.84
SD	36.170	37.426	45.010	41.379	50.261
Median	4.76	8.70	11.11	9.38	4.01
Min, Max	-73.4, 244.4	-77.3, 263.6	-75.4, 489.5	-77.3, 489.5	-81.1, 666.7
Week 8					
n	727	693	669	1362	328
Mean	11.22	13.49	16.43	14.94	11.96
SD	38.065	36.697	42.890	39.872	40.181
Median	5.36	7.69	10.20	8.33	5.16
Min, Max	-80.4, 260.0	-71.6, 178.6	-78.3, 328.6	-78.3, 328.6	-58.9, 250.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Monocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	9.61	9.29	10.72	9.99	12.63
SD	38.866	36.337	39.957	38.143	61.126
Median	3.70	2.94	4.17	3.85	3.57
Min, Max	-74.5, 238.9	-63.9, 272.7	-81.3, 262.5	-81.3, 272.7	-65.8, 777.8
Week 24					
n	698	664	646	1310	315
Mean	9.23	5.81	9.35	7.55	12.41
SD	39.539	36.370	41.283	38.896	47.040
Median	4.26	0.00	3.13	0.00	6.45
Min, Max	-85.7, 230.0	-70.7, 163.6	-78.7, 293.8	-78.7, 293.8	-67.7, 325.0
Week 36					
n	654	634	615	1249	306
Mean	11.37	6.05	8.44	7.23	8.82
SD	45.205	39.581	41.756	40.668	41.176
Median	5.56	0.00	0.00	0.00	3.70
Min, Max	-86.1, 633.3	-65.0, 230.0	-76.5, 356.3	-76.5, 356.3	-76.1, 222.2

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Monocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	607	609	604	1213	298
Mean	6.72	1.16	3.65	2.40	7.18
SD	43.572	35.383	36.785	36.094	45.846
Median	0.00	-4.17	0.00	-2.94	0.00
Min, Max	-69.4, 391.3	-90.0, 207.7	-72.7, 281.3	-90.0, 281.3	-75.4, 333.3
Week 60					
n	565	594	584	1178	286
Mean	12.58	2.62	5.82	4.21	11.56
SD	39.962	34.178	37.752	36.014	48.463
Median	6.90	-2.41	0.00	0.00	4.17
Min, Max	-74.1, 342.3	-82.8, 172.2	-71.8, 162.5	-82.8, 172.2	-73.0, 400.0
Week 72					
n	526	572	567	1139	279
Mean	8.40	5.09	9.87	7.47	13.62
SD	35.767	38.005	44.055	41.180	57.535
Median	4.60	-2.28	3.03	0.00	4.17
Min, Max	-80.8, 190.0	-66.3, 200.0	-78.9, 240.9	-78.9, 240.9	-87.8, 633.3

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Monocytes (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	519	562	553	1115	263
Mean	13.85	5.77	9.42	7.58	15.77
SD	45.233	36.097	43.012	39.702	59.133
Median	6.12	0.00	2.70	2.17	8.70
Min, Max	-78.1, 256.3	-77.8, 154.5	-85.4, 381.3	-85.4, 381.3	-55.8, 622.2
Week 96					
n	479	526	503	1029	251
Mean	7.88	3.04	7.31	5.13	7.76
SD	40.146	37.751	39.753	38.783	37.132
Median	0.00	-3.00	0.00	0.00	3.70
Min, Max	-78.5, 247.1	-72.0, 336.7	-78.6, 183.3	-78.6, 336.7	-63.2, 225.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Eosinophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	740	724	711	1435	329
Mean	12.60	215.36	141.25	178.64	90.13
SD	68.767	697.997	392.793	568.684	149.681
Median	0.00	28.39	25.00	25.81	50.00
Min, Max	-100.0, 500.0	-100.0, 8728.6	-100.0, 3808.3	-100.0, 8728.6	-100.0, 1200.0
Week 8					
n	723	688	659	1347	325
Mean	14.74	43.90	30.64	37.41	159.03
SD	69.928	150.567	105.025	130.412	270.203
Median	0.00	9.31	0.00	5.88	80.00
Min, Max	-100.0, 700.0	-100.0, 2100.0	-100.0, 1243.8	-100.0, 2100.0	-100.0, 2133.3

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Eosinophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	722	692	658	1350	321
Mean	18.54	27.66	20.14	24.00	125.04
SD	76.639	111.624	87.806	100.754	216.884
Median	0.00	0.00	0.00	0.00	59.46
Min, Max	-100.0, 733.3	-100.0, 1366.7	-100.0, 950.0	-100.0, 1366.7	-100.0, 1375.0
Week 24					
n	694	660	637	1297	312
Mean	17.48	11.84	12.44	12.14	93.42
SD	80.794	103.689	103.864	103.735	153.608
Median	0.00	-11.11	-9.09	-9.52	50.00
Min, Max	-100.0, 600.0	-100.0, 1287.5	-100.0, 1800.0	-100.0, 1800.0	-100.0, 931.3
Week 36					
n	651	630	608	1238	303
Mean	23.45	7.11	8.25	7.67	82.15
SD	100.931	80.578	82.255	81.375	148.308
Median	0.00	-14.29	-14.29	-14.29	33.33
Min, Max	-100.0, 1200.0	-100.0, 700.0	-100.0, 600.0	-100.0, 700.0	-100.0, 900.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Eosinophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	603	605	597	1202	295
Mean	21.23	5.08	2.86	3.98	65.02
SD	82.438	80.504	64.285	72.879	121.798
Median	0.00	-12.50	-14.29	-12.50	36.36
Min, Max	-100.0, 1100.0	-100.0, 866.7	-100.0, 350.0	-100.0, 866.7	-100.0, 875.0
Week 60					
n	563	590	578	1168	283
Mean	19.88	9.69	6.48	8.10	76.53
SD	93.458	100.348	77.273	89.651	157.374
Median	0.00	-10.00	-13.19	-12.50	33.33
Min, Max	-100.0, 1375.0	-100.0, 1300.0	-100.0, 700.0	-100.0, 1300.0	-79.2, 1100.0
Week 72					
n	525	568	560	1128	276
Mean	26.12	13.37	11.61	12.50	86.78
SD	98.346	97.973	89.489	93.819	155.817
Median	3.23	-8.71	-10.00	-9.09	37.50
Min, Max	-100.0, 1150.0	-100.0, 766.7	-100.0, 850.0	-100.0, 850.0	-100.0, 920.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Eosinophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	518	558	546	1104	260
Mean	27.41	26.46	7.24	16.95	91.58
SD	107.527	177.418	98.952	144.313	171.956
Median	0.00	-11.11	-15.19	-12.77	44.44
Min, Max	-100.0, 933.3	-100.0, 2333.3	-100.0, 1000.0	-100.0, 2333.3	-100.0, 1500.0
Week 96					
n	478	523	495	1018	249
Mean	26.70	12.86	14.31	13.57	79.51
SD	108.605	94.314	140.941	119.227	161.505
Median	0.00	-9.09	-11.11	-9.52	33.33
Min, Max	-100.0, 1150.0	-100.0, 862.5	-100.0, 2466.7	-100.0, 2466.7	-100.0, 1700.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Basophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	719	710	699	1409	325
Mean	6.61	14.40	20.84	17.60	14.61
SD	63.611	81.797	91.049	86.540	68.693
Median	0.00	0.00	0.00	0.00	0.00
Min, Max	-100.0, 566.7	-100.0, 800.0	-100.0, 850.0	-100.0, 850.0	-100.0, 400.0
Week 8					
n	703	674	647	1321	321
Mean	4.21	5.08	8.90	6.95	9.85
SD	58.801	78.308	80.614	79.439	61.905
Median	0.00	-12.50	0.00	0.00	0.00
Min, Max	-100.0, 300.0	-100.0, 800.0	-100.0, 900.0	-100.0, 900.0	-100.0, 300.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Basophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	701	679	646	1325	317
Mean	4.76	6.14	7.81	6.95	16.50
SD	64.542	91.215	104.512	97.890	76.371
Median	0.00	-14.29	0.00	-12.50	0.00
Min, Max	-100.0, 400.0	-100.0, 1100.0	-100.0, 1333.3	-100.0, 1333.3	-100.0, 333.3
Week 24					
n	676	647	625	1272	309
Mean	8.39	-5.76	2.60	-1.65	2.53
SD	74.561	88.758	117.435	103.886	62.499
Median	0.00	-25.00	-20.00	-25.00	0.00
Min, Max	-100.0, 550.0	-100.0, 700.0	-100.0, 2000.0	-100.0, 2000.0	-100.0, 375.0
Week 36					
n	635	620	597	1217	300
Mean	6.77	-9.41	-6.91	-8.19	-2.28
SD	81.306	80.271	86.145	83.180	63.794
Median	0.00	-25.00	-25.00	-25.00	-20.00
Min, Max	-100.0, 900.0	-100.0, 666.7	-100.0, 1200.0	-100.0, 1200.0	-100.0, 300.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Basophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	586	595	587	1182	291
Mean	8.72	-13.66	-10.45	-12.07	10.49
SD	83.703	71.282	71.853	71.554	81.634
Median	0.00	-30.00	-25.00	-28.57	0.00
Min, Max	-100.0, 600.0	-100.0, 500.0	-100.0, 500.0	-100.0, 500.0	-100.0, 466.7
Week 60					
n	547	580	568	1148	279
Mean	2.59	-12.44	-9.95	-11.21	0.40
SD	68.415	83.221	78.069	80.687	69.371
Median	0.00	-33.33	-25.00	-28.57	-20.00
Min, Max	-100.0, 500.0	-100.0, 750.0	-100.0, 900.0	-100.0, 900.0	-100.0, 300.0
Week 72					
n	510	558	550	1108	272
Mean	4.68	-16.58	-6.48	-11.56	3.31
SD	82.072	64.476	79.522	72.481	75.862
Median	-5.00	-28.57	-25.00	-25.00	-12.50
Min, Max	-100.0, 600.0	-100.0, 500.0	-100.0, 600.0	-100.0, 600.0	-100.0, 500.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Basophils (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	502	548	537	1085	257
Mean	2.03	-12.95	-9.21	-11.10	17.95
SD	67.697	66.984	79.988	73.697	104.792
Median	-9.55	-30.00	-25.00	-28.57	0.00
Min, Max	-100.0, 500.0	-100.0, 400.0	-100.0, 1133.3	-100.0, 1133.3	-100.0, 800.0
Week 96					
n	466	514	487	1001	245
Mean	8.91	-10.76	-1.91	-6.45	9.47
SD	90.717	73.047	84.502	78.912	70.504
Median	-12.50	-25.00	-20.00	-25.00	0.00
Min, Max	-100.0, 766.7	-100.0, 1000.0	-100.0, 650.0	-100.0, 1000.0	-100.0, 350.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: RBC (x10^12/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	745	730	719	1449	332
Mean	-0.06	-1.73	-2.00	-1.87	-1.05
SD	4.812	4.870	4.776	4.824	5.057
Median	0.00	-2.13	-2.17	-2.13	0.00
Min, Max	-19.6, 23.3	-16.3, 14.0	-13.7, 16.2	-16.3, 16.2	-26.1, 15.8
Week 8					
n	727	693	669	1362	328
Mean	0.33	-1.25	-1.64	-1.44	-0.61
SD	5.315	5.252	5.258	5.257	5.629
Median	0.00	-1.96	-2.08	-2.00	0.00
Min, Max	-24.5, 26.7	-16.1, 26.5	-14.6, 16.3	-16.1, 26.5	-17.8, 23.5

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: RBC (x10^12/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	0.33	-0.43	-0.84	-0.63	-0.13
SD	5.501	5.412	5.387	5.402	6.086
Median	0.00	0.00	0.00	0.00	0.00
Min, Max	-23.2, 31.7	-16.3, 25.7	-18.8, 23.7	-18.8, 25.7	-14.0, 34.2
Week 24					
n	698	664	646	1310	315
Mean	-0.12	-1.09	-1.68	-1.38	0.47
SD	6.205	5.658	5.773	5.720	6.154
Median	0.00	-1.89	-2.04	-2.00	0.00
Min, Max	-60.9, 26.2	-33.3, 19.0	-32.6, 17.9	-33.3, 19.0	-16.0, 29.3
Week 36					
n	654	634	615	1249	306
Mean	0.26	-1.17	-1.83	-1.49	0.11
SD	5.686	5.699	5.894	5.803	6.025
Median	0.00	-1.90	-2.13	-2.04	0.00
Min, Max	-23.2, 29.5	-35.4, 17.1	-16.7, 34.2	-35.4, 34.2	-12.3, 31.7

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: RBC (x10^12/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	608	609	604	1213	298
Mean	0.46	-0.86	-1.61	-1.23	-0.13
SD	6.195	5.435	5.855	5.658	5.945
Median	0.00	0.00	-2.08	-1.96	0.00
Min, Max	-15.4, 52.3	-20.5, 23.8	-27.9, 25.0	-27.9, 25.0	-15.6, 34.2
Week 60					
n	565	594	584	1178	286
Mean	0.22	-1.59	-1.60	-1.59	-0.01
SD	5.493	5.695	5.577	5.635	6.054
Median	0.00	-2.04	-2.13	-2.04	0.00
Min, Max	-16.3, 24.4	-15.9, 35.7	-15.9, 22.2	-15.9, 35.7	-19.6, 34.2
Week 72					
n	526	573	568	1141	279
Mean	0.52	-1.26	-1.69	-1.47	-0.25
SD	6.675	5.477	5.638	5.559	6.134
Median	0.00	-1.85	-2.13	-2.04	0.00
Min, Max	-17.6, 75.0	-20.5, 17.5	-19.2, 27.0	-20.5, 27.0	-17.8, 36.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: RBC (x10^12/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	521	562	554	1116	263
Mean	0.59	-1.09	-2.05	-1.57	-0.22
SD	6.685	6.234	5.780	6.030	6.649
Median	0.00	-1.82	-2.17	-2.04	0.00
Min, Max	-50.0, 59.1	-25.5, 47.6	-18.2, 22.2	-25.5, 47.6	-15.6, 39.1
Week 96					
n	479	526	503	1029	251
Mean	0.30	-0.74	-1.77	-1.24	-0.42
SD	6.327	6.421	5.434	5.978	6.246
Median	0.00	-1.85	-2.08	-2.00	0.00
Min, Max	-22.7, 33.3	-25.6, 51.2	-20.4, 18.6	-25.6, 51.2	-17.8, 31.6

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Hemoglobin (g/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	745	730	719	1449	332
Mean	-0.27	-1.82	-2.11	-1.96	-1.25
SD	4.790	4.725	4.779	4.752	5.084
Median	-0.65	-1.87	-2.29	-2.11	-0.94
Min, Max	-29.2, 23.9	-15.9, 14.8	-16.1, 23.1	-16.1, 23.1	-26.7, 17.0
Week 8					
n	727	693	669	1362	328
Mean	-0.03	-1.58	-1.83	-1.70	-1.21
SD	5.341	5.422	5.210	5.319	5.511
Median	-0.64	-1.64	-1.99	-1.88	-1.32
Min, Max	-27.7, 28.3	-29.7, 45.5	-18.5, 36.3	-29.7, 45.5	-20.8, 23.5

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Hemoglobin (g/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	727	697	667	1364	324
Mean	-0.10	-1.09	-1.25	-1.17	-1.13
SD	5.663	5.671	5.352	5.516	6.008
Median	0.00	-1.41	-1.46	-1.44	-1.26
Min, Max	-23.0, 36.0	-19.5, 57.1	-21.4, 22.7	-21.4, 57.1	-14.9, 35.8
Week 24					
n	698	664	646	1310	315
Mean	-0.50	-1.66	-2.02	-1.84	-0.72
SD	6.978	6.371	6.109	6.243	6.116
Median	-0.74	-1.99	-1.98	-1.98	-1.24
Min, Max	-58.3, 71.9	-20.4, 53.2	-33.8, 23.5	-33.8, 53.2	-19.8, 19.8
Week 36					
n	654	632	615	1247	306
Mean	-0.18	-1.46	-1.89	-1.67	-1.15
SD	6.751	6.922	6.399	6.670	6.322
Median	-0.64	-1.59	-2.14	-1.94	-1.28
Min, Max	-23.0, 46.7	-26.1, 57.1	-41.1, 40.0	-41.1, 57.1	-22.0, 33.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Hemoglobin (g/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	608	608	604	1212	297
Mean	0.17	-0.92	-1.33	-1.12	-1.67
SD	7.287	6.822	7.136	6.980	6.627
Median	-0.70	-0.77	-1.32	-0.82	-2.01
Min, Max	-22.7, 57.4	-35.2, 48.1	-36.1, 57.5	-36.1, 57.5	-29.3, 42.5
Week 60					
n	565	592	582	1174	284
Mean	-0.19	-1.60	-1.31	-1.45	-1.01
SD	6.548	6.734	7.279	7.008	6.429
Median	0.00	-1.42	-1.46	-1.44	-0.73
Min, Max	-26.2, 43.8	-29.1, 42.9	-27.6, 67.5	-29.1, 67.5	-20.6, 41.5
Week 72					
n	526	572	568	1140	279
Mean	-0.09	-1.18	-1.61	-1.40	-1.15
SD	7.308	7.260	7.092	7.177	6.985
Median	0.00	-0.77	-1.54	-1.34	-1.44
Min, Max	-21.5, 82.7	-34.2, 55.8	-28.3, 62.5	-34.2, 62.5	-19.5, 42.5

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Hemoglobin (g/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	521	562	554	1116	263
Mean	0.11	-1.05	-1.81	-1.43	-1.33
SD	7.504	6.948	7.515	7.242	6.934
Median	0.00	-1.26	-1.81	-1.47	-1.37
Min, Max	-57.1, 57.6	-25.6, 46.8	-27.6, 67.5	-27.6, 67.5	-24.8, 34.0
Week 96					
n	479	526	503	1029	251
Mean	0.22	-0.71	-1.35	-1.02	-1.07
SD	7.285	7.659	7.116	7.402	6.901
Median	0.00	-0.75	-1.44	-1.16	-1.31
Min, Max	-44.4, 35.6	-32.3, 51.1	-40.3, 58.8	-40.3, 58.8	-21.6, 36.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Hematocrit (%)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	735	717	714	1431	327
Mean	0.53	-0.93	-1.13	-1.03	-0.68
SD	6.028	5.606	5.882	5.744	5.892
Median	0.00	-2.04	-2.13	-2.08	0.00
Min, Max	-20.8, 25.8	-18.2, 17.9	-17.1, 21.6	-18.2, 21.6	-24.4, 22.6
Week 8					
n	719	688	666	1354	326
Mean	0.56	-0.58	-1.20	-0.89	-1.24
SD	6.633	6.199	6.344	6.276	6.495
Median	0.00	0.00	-2.13	0.00	-2.27
Min, Max	-22.5, 28.9	-23.8, 36.0	-18.6, 20.7	-23.8, 36.0	-17.0, 25.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Hematocrit (%)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	716	686	661	1347	321
Mean	0.09	-0.68	-1.29	-0.98	-1.27
SD	6.987	6.573	6.568	6.575	6.870
Median	0.00	0.00	-2.08	0.00	-2.22
Min, Max	-27.1, 31.0	-16.7, 44.0	-22.0, 17.5	-22.0, 44.0	-17.5, 34.4
Week 24					
n	689	658	642	1300	310
Mean	0.03	-1.34	-2.05	-1.69	-1.23
SD	8.028	7.285	7.295	7.295	7.141
Median	0.00	-2.27	-2.33	-2.27	-2.27
Min, Max	-60.0, 62.1	-22.9, 48.0	-37.5, 26.5	-37.5, 48.0	-20.5, 19.4
Week 36					
n	645	630	610	1240	304
Mean	0.48	-1.22	-1.89	-1.55	-1.18
SD	7.646	7.472	7.206	7.347	7.168
Median	0.00	0.00	-2.38	-2.22	0.00
Min, Max	-22.9, 34.5	-23.4, 52.0	-34.1, 21.2	-34.1, 52.0	-17.5, 21.9

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Hematocrit (%)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	598	604	601	1205	295
Mean	0.87	-0.66	-1.35	-1.01	0.14
SD	7.782	7.018	7.176	7.103	7.562
Median	0.00	0.00	0.00	0.00	0.00
Min, Max	-19.2, 47.4	-22.9, 36.0	-33.3, 34.5	-33.3, 36.0	-20.6, 31.3
Week 60					
n	557	582	578	1160	278
Mean	0.95	-1.04	-0.96	-1.00	0.43
SD	6.963	7.016	7.369	7.191	6.767
Median	0.00	0.00	0.00	0.00	0.00
Min, Max	-19.5, 27.6	-22.2, 32.0	-22.2, 37.9	-22.2, 37.9	-20.5, 37.5
Week 72					
n	517	564	562	1126	274
Mean	1.81	-0.10	-0.59	-0.35	-0.01
SD	8.538	7.672	7.383	7.530	7.820
Median	2.22	0.00	0.00	0.00	0.00
Min, Max	-22.5, 82.4	-27.8, 34.4	-23.8, 27.6	-27.8, 34.4	-22.7, 43.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
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Lab test: Hematocrit (%)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	515	557	551	1108	261
Mean	2.14	0.13	-0.77	-0.32	0.08
SD	8.558	8.013	7.953	7.992	8.259
Median	2.27	0.00	0.00	0.00	0.00
Min, Max	-50.0, 46.3	-23.9, 36.0	-21.6, 34.5	-23.9, 36.0	-26.8, 31.3
Week 96					
n	473	518	497	1015	250
Mean	2.07	0.62	-0.28	0.18	0.60
SD	8.302	8.688	6.993	7.912	8.127
Median	2.38	0.00	0.00	0.00	0.00
Min, Max	-32.5, 31.4	-30.0, 52.0	-20.5, 31.3	-30.0, 52.0	-20.6, 34.4

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
Page 37 of 40
Lab test: Platelets (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Week 4					
n	740	718	714	1432	328
Mean	2.41	3.31	4.16	3.73	1.37
SD	49.334	14.675	16.359	15.538	14.916
Median	-0.34	2.32	2.79	2.49	0.13
Min, Max	-52.5, 1288.2	-39.3, 95.0	-50.7, 78.0	-50.7, 95.0	-46.6, 101.0
Week 8					
n	721	689	666	1355	324
Mean	3.99	0.00	0.51	0.25	0.60
SD	67.144	14.481	14.942	14.706	14.397
Median	1.08	-1.48	-0.59	-1.02	0.42
Min, Max	-43.9, 1764.7	-43.0, 88.1	-40.6, 96.8	-43.0, 96.8	-46.8, 70.9

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
Page 38 of 40
Lab test: Platelets (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 12					
n	723	692	662	1354	321
Mean	4.81	-1.16	-0.56	-0.87	2.23
SD	71.919	13.987	14.692	14.334	16.166
Median	1.20	-2.21	-1.64	-2.02	0.72
Min, Max	-75.3, 1894.1	-44.6, 66.7	-35.8, 83.4	-44.6, 83.4	-55.2, 93.2
Week 24					
n	693	657	644	1301	314
Mean	4.81	-1.37	-0.42	-0.90	3.12
SD	75.942	17.156	16.474	16.822	18.859
Median	0.84	-3.50	-1.63	-2.67	1.93
Min, Max	-85.5, 1952.9	-37.8, 99.4	-60.4, 74.3	-60.4, 99.4	-56.2, 160.2
Week 36					
n	654	629	611	1240	302
Mean	5.97	-1.69	-1.41	-1.55	3.23
SD	77.550	16.061	15.344	15.706	16.132
Median	1.05	-3.48	-2.53	-3.05	1.97
Min, Max	-47.6, 1941.2	-48.7, 104.4	-40.2, 83.4	-48.7, 104.4	-60.2, 120.4

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
Page 39 of 40
Lab test: Platelets (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	603	606	601	1207	294
Mean	5.02	-2.34	-1.10	-1.72	2.91
SD	65.415	15.176	16.025	15.610	19.952
Median	1.47	-2.93	-2.40	-2.60	2.08
Min, Max	-58.9, 1564.7	-62.2, 67.3	-46.3, 110.8	-62.2, 110.8	-58.6, 175.8
Week 60					
n	561	590	578	1168	285
Mean	3.20	-1.89	-1.29	-1.59	0.81
SD	17.883	16.340	16.229	16.281	14.634
Median	2.37	-3.30	-2.67	-3.02	1.01
Min, Max	-44.9, 140.9	-47.0, 115.3	-62.7, 117.2	-62.7, 117.2	-66.2, 59.2
Week 72					
n	523	570	564	1134	278
Mean	0.90	-3.49	-2.50	-3.00	1.42
SD	14.982	16.577	16.882	16.729	22.293
Median	-0.32	-4.91	-3.79	-4.34	-0.45
Min, Max	-41.2, 61.8	-80.6, 87.3	-54.9, 116.6	-80.6, 116.6	-56.2, 218.2

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Summary of hematology laboratory parameters - percentage change from baseline by visit: Studies 109MS301 and 109MS302
Page 40 of 40
Lab test: Platelets (x10^9/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	515	561	551	1112	260
Mean	1.09	-2.50	-2.39	-2.45	1.85
SD	16.346	17.165	17.024	17.087	16.208
Median	0.00	-4.40	-3.37	-4.05	0.98
Min, Max	-40.2, 72.5	-73.1, 123.9	-53.0, 135.0	-73.1, 135.0	-44.4, 99.0
Week 96					
n	478	524	500	1024	248
Mean	0.51	-4.24	-3.52	-3.89	1.01
SD	16.661	15.842	16.867	16.347	16.928
Median	-0.94	-4.79	-5.34	-5.01	0.00
Min, Max	-68.8, 73.3	-81.0, 80.8	-44.4, 119.1	-81.0, 119.1	-50.4, 91.3

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-HE-PCTCHG-A.SAS DATE: 02DEC2015

Table 232: Summary of Hematology Laboratory Parameters: Change From Baseline by Visit – Part I (Placebo-Controlled Period)

Summary of hematology laboratory parameters: change from baseline by visit
–Part I (placebo-controlled period)
Page 1 of 20
Lab test: WBC (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	0.032	0.421
SD	1.4145	1.5193
Median	0.065	0.270
Min, Max	-4.18, 3.87	-3.02, 6.14
Week 8		
n	111	107
Mean	0.175	-0.264
SD	1.3439	2.4592
Median	0.120	-0.070
Min, Max	-3.45, 5.66	-18.57, 5.55
Week 12		
n	110	106
Mean	0.123	-0.291
SD	1.2368	2.9487
Median	0.130	-0.315
Min, Max	-4.49, 3.41	-18.33, 17.42

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 2 of 20
Lab test: WBC (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	0.281	-0.609
SD	1.5588	2.5019
Median	0.250	-0.440
Min, Max	-4.22, 6.30	-20.71, 4.56
Week 20		
n	108	106
Mean	0.220	-0.278
SD	1.8736	1.6766
Median	0.055	-0.243
Min, Max	-5.68, 10.40	-4.20, 5.95
Week 24		
n	107	104
Mean	-0.064	-0.307
SD	1.3996	1.5831
Median	-0.190	-0.325
Min, Max	-5.68, 4.59	-4.17, 4.71

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 3 of 20
Lab test: Lymphocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	-0.013	-0.032
SD	0.3620	0.4339
Median	0.005	-0.060
Min, Max	-0.89, 1.39	-1.04, 1.37
Week 8		
n	111	107
Mean	0.060	-0.167
SD	0.4071	0.4351
Median	0.000	-0.100
Min, Max	-0.65, 2.23	-1.35, 0.67
Week 12		
n	110	106
Mean	-0.010	-0.238
SD	0.3640	0.5168
Median	-0.020	-0.175
Min, Max	-1.09, 0.85	-1.58, 2.30

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 4 of 20
Lab test: Lymphocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	-0.006	-0.248
SD	0.3877	0.4946
Median	-0.055	-0.180
Min, Max	-0.87, 1.38	-1.83, 1.60
Week 20		
n	108	106
Mean	0.024	-0.319
SD	0.3889	0.4452
Median	0.020	-0.270
Min, Max	-0.97, 0.95	-1.89, 0.88
Week 24		
n	107	104
Mean	0.000	-0.319
SD	0.3191	0.5036
Median	0.000	-0.275
Min, Max	-0.83, 0.80	-2.14, 0.92

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 5 of 20
Lab test: Neutrophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	0.055	0.278
SD	1.2513	1.2104
Median	-0.025	0.130
Min, Max	-3.28, 3.30	-2.61, 5.58
Week 8		
n	111	107
Mean	0.121	-0.107
SD	1.2463	2.3953
Median	0.070	-0.200
Min, Max	-3.03, 5.75	-18.82, 6.21
Week 12		
n	110	106
Mean	0.134	-0.076
SD	1.1249	2.5889
Median	0.153	-0.075
Min, Max	-3.86, 2.81	-18.42, 11.95

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 6 of 20
Lab test: Neutrophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	0.287	-0.351
SD	1.4138	2.3625
Median	0.245	-0.250
Min, Max	-3.78, 6.15	-20.15, 4.98
Week 20		
n	108	106
Mean	0.201	0.060
SD	1.7237	1.5534
Median	0.100	0.045
Min, Max	-4.48, 11.14	-3.75, 6.17
Week 24		
n	107	104
Mean	-0.054	0.047
SD	1.2337	1.4519
Median	-0.100	-0.015
Min, Max	-4.95, 4.46	-2.65, 4.86

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 7 of 20
Lab test: Monocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	-0.011	0.026
SD	0.0980	0.1084
Median	-0.010	0.040
Min, Max	-0.31, 0.29	-0.41, 0.41
Week 8		
n	111	107
Mean	-0.006	0.013
SD	0.0870	0.1165
Median	-0.010	0.010
Min, Max	-0.24, 0.26	-0.36, 0.37
Week 12		
n	110	106
Mean	-0.003	0.015
SD	0.0930	0.1302
Median	0.010	0.020
Min, Max	-0.42, 0.20	-0.46, 0.70

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 8 of 20
Lab test: Monocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	-0.007	0.011
SD	0.1014	0.1263
Median	-0.005	0.010
Min, Max	-0.45, 0.35	-0.48, 0.28
Week 20		
n	108	106
Mean	-0.002	0.014
SD	0.1212	0.1128
Median	0.000	0.020
Min, Max	-0.46, 0.52	-0.28, 0.35
Week 24		
n	107	104
Mean	-0.010	0.003
SD	0.1041	0.1226
Median	-0.010	0.015
Min, Max	-0.27, 0.30	-0.43, 0.25

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 9 of 20
Lab test: Eosinophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	0.002	0.145
SD	0.0571	0.5372
Median	0.000	0.020
Min, Max	-0.17, 0.16	-0.41, 3.63
Week 8		
n	111	107
Mean	-0.002	-0.003
SD	0.0678	0.1324
Median	0.000	0.000
Min, Max	-0.21, 0.18	-0.61, 0.71
Week 12		
n	110	106
Mean	0.003	-0.017
SD	0.0740	0.1418
Median	0.010	-0.015
Min, Max	-0.23, 0.25	-0.63, 0.77

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 10 of 20
Lab test: Eosinophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	0.008	-0.017
SD	0.0782	0.1391
Median	0.000	-0.010
Min, Max	-0.16, 0.31	-0.54, 0.83
Week 20		
n	108	106
Mean	0.001	-0.031
SD	0.0783	0.1244
Median	0.003	-0.020
Min, Max	-0.22, 0.27	-0.63, 0.42
Week 24		
n	107	104
Mean	-0.001	-0.035
SD	0.0809	0.1199
Median	0.000	-0.010
Min, Max	-0.23, 0.27	-0.67, 0.37

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 11 of 20
Lab test: Basophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	-0.002	0.002
SD	0.0183	0.0199
Median	0.000	0.000
Min, Max	-0.06, 0.07	-0.06, 0.06
Week 8		
n	111	107
Mean	0.000	-0.002
SD	0.0245	0.0192
Median	0.000	0.000
Min, Max	-0.08, 0.09	-0.07, 0.06
Week 12		
n	110	106
Mean	-0.001	-0.002
SD	0.0219	0.0218
Median	0.000	0.000
Min, Max	-0.08, 0.06	-0.06, 0.07

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 12 of 20
Lab test: Basophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	-0.001	-0.004
SD	0.0222	0.0264
Median	0.000	0.000
Min, Max	-0.07, 0.08	-0.08, 0.17
Week 20		
n	108	106
Mean	-0.004	-0.003
SD	0.0252	0.0246
Median	0.000	-0.005
Min, Max	-0.09, 0.07	-0.06, 0.09
Week 24		
n	107	104
Mean	0.002	-0.006
SD	0.0334	0.0212
Median	0.000	-0.010
Min, Max	-0.08, 0.23	-0.07, 0.10

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 13 of 20
Lab test: RBC (TI/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	-0.01	-0.05
SD	0.217	0.239
Median	0.00	-0.05
Min, Max	-0.6, 0.6	-0.7, 0.5
Week 8		
n	111	107
Mean	-0.01	-0.04
SD	0.221	0.248
Median	0.00	-0.10
Min, Max	-0.4, 0.6	-0.8, 0.5
Week 12		
n	110	106
Mean	0.02	-0.02
SD	0.212	0.236
Median	0.00	0.00
Min, Max	-0.5, 0.5	-0.7, 0.7

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 14 of 20
Lab test: RBC (TI/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	0.04	0.01
SD	0.246	0.259
Median	0.00	0.00
Min, Max	-0.6, 0.9	-0.5, 0.7
Week 20		
n	108	106
Mean	0.01	-0.01
SD	0.217	0.265
Median	0.00	0.00
Min, Max	-0.5, 0.5	-0.8, 0.6
Week 24		
n	107	104
Mean	0.02	-0.02
SD	0.226	0.305
Median	0.00	0.00
Min, Max	-0.5, 0.6	-0.8, 0.9

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 15 of 20
Lab test: Hemoglobin (g/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	0.0	-1.3
SD	7.03	6.83
Median	0.0	-2.0
Min, Max	-15, 25	-19, 14
Week 8		
n	111	107
Mean	0.2	-1.4
SD	7.46	7.34
Median	0.0	-1.0
Min, Max	-13, 41	-27, 13
Week 12		
n	110	106
Mean	1.2	-0.6
SD	7.05	7.36
Median	1.0	0.0
Min, Max	-16, 34	-25, 20

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 16 of 20
Lab test: Hemoglobin (g/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	2.0	0.0
SD	8.85	7.17
Median	2.0	0.0
Min, Max	-21, 52	-19, 20
Week 20		
n	108	106
Mean	0.8	-0.5
SD	7.89	7.99
Median	1.0	-1.0
Min, Max	-18, 34	-21, 18
Week 24		
n	107	104
Mean	0.8	-0.3
SD	8.11	9.10
Median	1.0	0.0
Min, Max	-26, 24	-25, 29

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 17 of 20
Lab test: Hematocrit (%)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	-0.3	-0.4
SD	2.14	2.12
Median	0.0	0.0
Min, Max	-6, 7	-7, 5
Week 8		
n	111	107
Mean	-0.2	-0.5
SD	2.28	2.22
Median	0.0	-0.5
Min, Max	-5, 10	-7, 4
Week 12		
n	110	106
Mean	0.1	-0.6
SD	2.07	2.11
Median	0.0	-1.0
Min, Max	-6, 6	-7, 4

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 18 of 20
Lab test: Hematocrit (%)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	109	107
Mean	0.2	-0.5
SD	2.72	2.18
Median	0.0	-1.0
Min, Max	-6, 14	-5, 5
Week 20		
n	108	106
Mean	0.0	-0.5
SD	2.34	2.36
Median	0.0	-1.0
Min, Max	-5, 8	-7, 5
Week 24		
n	107	104
Mean	0.0	-0.5
SD	2.40	2.94
Median	0.0	-1.0
Min, Max	-6, 6	-10, 7

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 19 of 20
Lab test: Platelets (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	111	109
Mean	2.5	12.7
SD	32.34	40.50
Median	7.0	11.0
Min, Max	-125, 89	-84, 228
Week 8		
n	110	107
Mean	4.9	0.1
SD	32.99	41.11
Median	2.5	2.0
Min, Max	-113, 82	-168, 106
Week 12		
n	109	106
Mean	5.7	0.7
SD	35.67	42.61
Median	5.0	0.5
Min, Max	-110, 113	-160, 203

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Summary of hematology laboratory parameters: change from baseline by visit
-Part I (placebo-controlled period)
Page 20 of 20
Lab test: Platelets (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	108	107
Mean	5.2	1.2
SD	37.78	41.64
Median	4.0	-2.0
Min, Max	-117, 107	-86, 197
Week 20		
n	107	106
Mean	2.4	-0.3
SD	39.84	44.02
Median	2.0	-1.0
Min, Max	-131, 110	-90, 190
Week 24		
n	106	104
Mean	6.2	1.1
SD	42.45	43.06
Median	8.5	-0.5
Min, Max	-169, 107	-153, 175

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-CHG-HEM.SAS DATE: 25SEP2015

Table 233: Summary of Hematology Laboratory Parameters: Percent Change From Baseline by Visit – Part I (Placebo-Controlled Period)

Summary of hematology laboratory parameters: percent change from baseline by visit
–Part I (placebo-controlled period)
Page 1 of 20
Lab test: WBC (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	2.777	8.720
SD	23.3924	26.1883
Median	1.141	3.846
Min, Max	-41.84, 66.39	-34.68, 115.41
Week 8		
n	111	107
Mean	4.825	-0.691
SD	22.5608	26.7171
Median	2.395	-2.029
Min, Max	-37.61, 103.28	-73.41, 78.11
Week 12		
n	110	106
Mean	4.057	-2.254
SD	20.4294	31.7100
Median	2.400	-6.391
Min, Max	-47.92, 71.49	-72.45, 190.80

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 2 of 20
Lab test: WBC (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	6.941	-5.079
SD	26.0691	25.3807
Median	3.587	-8.646
Min, Max	-52.50, 101.12	-81.86, 70.15
Week 20		
n	108	106
Mean	7.111	-2.799
SD	34.4991	24.9045
Median	1.055	-3.679
Min, Max	-48.03, 219.87	-46.48, 87.52
Week 24		
n	107	104
Mean	1.279	-2.956
SD	22.6773	25.2030
Median	-3.016	-4.791
Min, Max	-43.76, 70.62	-64.15, 81.91

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 3 of 20
Lab test: Lymphocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	2.204	0.480
SD	22.8514	24.2188
Median	0.207	-3.030
Min, Max	-52.35, 87.36	-38.81, 74.19
Week 8		
n	111	107
Mean	5.550	-6.502
SD	23.8508	23.2714
Median	0.000	-6.800
Min, Max	-32.61, 112.63	-57.21, 59.46
Week 12		
n	110	106
Mean	2.265	-9.924
SD	23.0262	29.4133
Median	-1.361	-10.722
Min, Max	-50.46, 66.98	-66.17, 161.97

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 4 of 20
Lab test: Lymphocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	2.031	-10.810
SD	23.6062	29.6284
Median	-2.971	-13.333
Min, Max	-52.60, 81.18	-64.93, 163.27
Week 20		
n	108	106
Mean	3.869	-15.605
SD	25.4361	24.0617
Median	1.187	-17.024
Min, Max	-53.85, 86.46	-65.17, 80.61
Week 24		
n	107	104
Mean	2.284	-15.927
SD	21.4608	27.1083
Median	0.000	-15.221
Min, Max	-39.26, 76.70	-83.27, 93.88

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 5 of 20
Lab test: Neutrophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	5.757	11.713
SD	34.3633	37.3657
Median	-0.734	4.924
Min, Max	-57.49, 109.42	-45.43, 214.62
Week 8		
n	111	107
Mean	7.841	3.986
SD	35.1462	40.1624
Median	2.222	-6.158
Min, Max	-52.86, 150.13	-81.00, 149.64
Week 12		
n	110	106
Mean	7.995	3.612
SD	30.3713	41.0840
Median	4.977	-2.077
Min, Max	-61.86, 96.23	-79.29, 173.19

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 6 of 20
Lab test: Neutrophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	12.421	-0.379
SD	38.6106	36.2083
Median	8.013	-9.381
Min, Max	-69.04, 163.56	-86.74, 116.36
Week 20		
n	108	106
Mean	10.644	5.465
SD	50.0416	38.0259
Median	3.427	1.703
Min, Max	-67.63, 334.53	-59.34, 165.42
Week 24		
n	107	104
Mean	3.522	6.174
SD	34.3200	40.3931
Median	-3.650	-0.381
Min, Max	-59.13, 157.04	-60.75, 171.73

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 7 of 20
Lab test: Monocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	1.865	15.445
SD	42.5764	39.2941
Median	-3.775	12.121
Min, Max	-64.86, 322.22	-48.81, 225.00
Week 8		
n	111	107
Mean	2.829	10.829
SD	38.7081	42.2206
Median	-2.083	4.762
Min, Max	-60.71, 283.33	-53.06, 200.00
Week 12		
n	110	106
Mean	2.674	11.052
SD	30.6292	37.6352
Median	2.929	8.167
Min, Max	-53.85, 200.00	-54.76, 194.44

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 8 of 20
Lab test: Monocytes (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	3.564	12.471
SD	46.7041	38.3961
Median	-1.042	4.167
Min, Max	-65.38, 388.89	-63.27, 127.78
Week 20		
n	108	106
Mean	7.481	9.713
SD	63.7148	37.1857
Median	0.000	6.202
Min, Max	-68.89, 577.78	-57.50, 194.44
Week 24		
n	107	104
Mean	2.524	8.559
SD	40.5721	37.0691
Median	-4.167	5.296
Min, Max	-52.00, 288.89	-80.77, 100.00

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 9 of 20
Lab test: Eosinophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	9.680	113.847
SD	46.2154	311.3357
Median	0.000	22.222
Min, Max	-70.00, 183.33	-100.00, 2485.71
Week 8		
n	111	107
Mean	8.092	28.630
SD	54.6830	154.2747
Median	0.000	0.000
Min, Max	-85.71, 200.00	-83.33, 1420.00
Week 12		
n	110	106
Mean	16.575	19.845
SD	67.9428	163.6257
Median	2.306	-8.388
Min, Max	-82.14, 400.00	-100.00, 1540.00

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 10 of 20
Lab test: Eosinophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	19.264	27.178
SD	69.0732	172.8519
Median	0.000	-9.091
Min, Max	-70.59, 300.00	-80.65, 1660.00
Week 20		
n	108	106
Mean	13.050	9.716
SD	62.9900	97.7670
Median	2.273	-15.000
Min, Max	-83.33, 366.67	-79.55, 766.67
Week 24		
n	107	104
Mean	17.608	2.617
SD	74.7500	63.2043
Median	0.000	-14.550
Min, Max	-82.14, 340.00	-83.75, 216.67

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 11 of 20
Lab test: Basophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	111	108
Mean	1.632	11.455
SD	38.2025	49.1667
Median	0.000	0.000
Min, Max	-75.00, 140.00	-100.00, 200.00
Week 8		
n	110	106
Mean	17.028	0.177
SD	104.2315	43.3891
Median	0.000	0.000
Min, Max	-88.89, 800.00	-70.00, 150.00
Week 12		
n	109	105
Mean	9.571	2.009
SD	73.7352	58.7096
Median	0.000	0.000
Min, Max	-100.00, 600.00	-100.00, 350.00

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 12 of 20
Lab test: Basophils (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	109	106
Mean	10.444	-2.321
SD	62.2122	55.7902
Median	0.000	-6.250
Min, Max	-100.00, 300.00	-100.00, 340.00
Week 20		
n	107	105
Mean	0.648	4.681
SD	53.6199	63.3541
Median	0.000	-10.000
Min, Max	-100.00, 200.00	-75.00, 300.00
Week 24		
n	106	103
Mean	18.489	-8.098
SD	90.6885	51.4090
Median	0.000	-20.000
Min, Max	-88.89, 575.00	-100.00, 250.00

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 13 of 20
Lab test: RBC (TI/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	-0.21	-1.07
SD	4.935	5.277
Median	0.00	-0.96
Min, Max	-13.0, 16.7	-13.7, 12.8
Week 8		
n	111	107
Mean	-0.08	-0.80
SD	5.058	5.469
Median	0.00	-2.00
Min, Max	-9.3, 16.7	-16.0, 12.8
Week 12		
n	110	106
Mean	0.58	-0.45
SD	4.872	5.169
Median	0.00	0.00
Min, Max	-11.9, 13.5	-14.0, 15.4

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 14 of 20
Lab test: RBC (TI/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	1.04	0.46
SD	5.745	5.761
Median	0.00	0.00
Min, Max	-13.3, 25.0	-10.9, 17.9
Week 20		
n	108	106
Mean	0.38	-0.08
SD	5.004	5.886
Median	0.00	0.00
Min, Max	-11.4, 13.5	-15.9, 15.4
Week 24		
n	107	104
Mean	0.58	-0.16
SD	5.134	6.897
Median	0.00	0.00
Min, Max	-10.2, 12.2	-16.7, 23.7

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
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Lab test: Hemoglobin (g/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	0.2	-1.0
SD	5.97	5.12
Median	0.0	-1.3
Min, Max	-11, 34	-14, 11
Week 8		
n	111	107
Mean	0.5	-1.1
SD	7.35	5.36
Median	0.0	-0.7
Min, Max	-10, 56	-19, 10
Week 12		
n	110	106
Mean	1.2	-0.5
SD	6.72	5.37
Median	0.8	0.0
Min, Max	-11, 47	-17, 14

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 16 of 20
Lab test: Hemoglobin (g/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	110	107
Mean	1.9	0.1
SD	9.11	5.28
Median	1.7	0.0
Min, Max	-19, 71	-13, 14
Week 20		
n	108	106
Mean	0.8	-0.4
SD	7.11	5.94
Median	0.7	-0.7
Min, Max	-17, 47	-15, 16
Week 24		
n	107	104
Mean	0.7	-0.1
SD	6.37	6.90
Median	0.6	0.0
Min, Max	-24, 20	-17, 24

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 17 of 20
Lab test: Hematocrit (%)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	112	109
Mean	-0.5	-1.0
SD	5.64	5.16
Median	0.0	0.0
Min, Max	-15, 27	-16, 14
Week 8		
n	111	107
Mean	-0.4	-1.1
SD	6.34	5.33
Median	0.0	-1.4
Min, Max	-11, 38	-16, 11
Week 12		
n	110	106
Mean	0.3	-1.3
SD	5.50	5.08
Median	0.0	-2.2
Min, Max	-14, 23	-16, 10

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 18 of 20
Lab test: Hematocrit (%)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	109	107
Mean	0.8	-1.1
SD	7.96	5.32
Median	0.0	-2.3
Min, Max	-15, 54	-12, 11
Week 20		
n	108	106
Mean	0.3	-1.1
SD	6.24	5.72
Median	0.0	-2.3
Min, Max	-13, 31	-14, 12
Week 24		
n	107	104
Mean	0.2	-1.0
SD	5.99	7.22
Median	0.0	-2.2
Min, Max	-15, 16	-23, 19

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 19 of 20
Lab test: Platelets (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Number of subjects in the safety population	113 (100)	111 (100)
Week 4		
n	111	109
Mean	1.3	6.3
SD	13.05	16.18
Median	2.5	5.3
Min, Max	-47, 40	-25, 83
Week 8		
n	110	107
Mean	2.7	1.5
SD	12.95	16.65
Median	1.2	0.8
Min, Max	-24, 36	-36, 52
Week 12		
n	109	106
Mean	3.1	1.5
SD	14.51	16.51
Median	2.2	0.3
Min, Max	-24, 54	-34, 59

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Summary of hematology laboratory parameters: percent change from baseline by visit
-Part I (placebo-controlled period)
Page 20 of 20
Lab test: Platelets (x10^9/L)

Parameters/Visit	Placebo	BG00012 240 mg BID
Week 16		
n	108	107
Mean	2.9	1.3
SD	15.27	17.56
Median	1.7	-1.0
Min, Max	-29, 60	-32, 85
Week 20		
n	107	106
Mean	2.0	1.5
SD	16.37	18.93
Median	0.9	-0.6
Min, Max	-35, 56	-28, 82
Week 24		
n	106	104
Mean	3.8	2.2
SD	17.01	18.11
Median	3.2	-0.3
Min, Max	-36, 48	-32, 76

NOTE: Data after subjects switched to alternative MS medications are excluded.

SOURCE: BG12MS/109MS305/PART1/T-LB-PCHG-HEM.SAS DATE: 29SEP2015

Table 234: Summary of Blood Chemistry Laboratory Parameters - Actual Values by Visit: Studies 109MS301 and 109MS302

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: ALT/SGPT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	769	767	759	1526	351
Mean	21.0	21.4	21.2	21.3	22.9
SD	12.60	15.70	14.29	15.01	17.56
Median	17.0	18.0	17.0	18.0	18.0
Min, Max	5, 129	7, 253	2, 177	2, 253	5, 180
Week 4					
n	753	732	728	1460	335
Mean	21.4	32.8	36.4	34.6	22.6
SD	16.34	26.51	33.78	30.40	18.17
Median	18.0	26.0	27.0	26.0	18.0
Min, Max	4, 239	6, 398	7, 389	6, 398	2, 193

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: ALT/SGPT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	729	700	679	1379	326
Mean	22.6	27.7	28.5	28.1	22.9
SD	30.43	19.76	18.53	19.16	16.66
Median	18.0	22.0	23.0	23.0	18.0
Min, Max	2, 506	5, 211	5, 141	5, 211	6, 127
Week 12					
n	719	690	669	1359	322
Mean	22.0	25.2	26.3	25.8	23.2
SD	25.02	14.82	17.04	15.96	19.01
Median	18.0	21.0	21.0	21.0	18.0
Min, Max	5, 588	7, 168	5, 131	5, 168	6, 148
Week 16					
n	708	662	647	1309	313
Mean	20.9	24.8	24.9	24.9	23.8
SD	15.06	15.80	15.09	15.45	25.79
Median	17.0	20.0	21.0	20.0	18.0
Min, Max	4, 207	6, 128	2, 146	2, 146	7, 380

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: ALT/SGPT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	691	643	633	1276	310
Mean	20.2	23.8	23.8	23.8	21.6
SD	11.50	15.92	13.43	14.73	12.81
Median	17.0	19.0	20.0	20.0	18.0
Min, Max	5, 147	7, 204	2, 106	2, 204	6, 89
Week 24					
n	681	657	630	1287	315
Mean	20.5	23.3	23.7	23.4	22.9
SD	12.67	16.43	14.64	15.58	18.30
Median	17.0	19.0	19.0	19.0	18.0
Min, Max	2, 153	5, 189	5, 133	5, 189	7, 165
Week 28					
n	660	621	602	1223	296
Mean	21.0	22.4	23.2	22.8	22.9
SD	14.43	18.98	16.80	17.94	21.57
Median	17.0	19.0	19.0	19.0	18.0
Min, Max	5, 142	5, 366	2, 211	2, 366	7, 265

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: ALT/SGPT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	641	622	602	1224	298
Mean	21.0	21.9	22.3	22.1	25.1
SD	21.51	13.12	14.72	13.93	28.45
Median	17.0	18.0	19.0	18.0	18.0
Min, Max	2, 413	6, 102	5, 205	5, 205	6, 267
Week 36					
n	652	628	615	1243	306
Mean	20.3	21.9	22.4	22.1	23.2
SD	10.80	13.66	13.66	13.66	21.66
Median	17.0	19.0	19.0	19.0	17.5
Min, Max	5, 91	5, 129	5, 126	5, 129	7, 229
Week 40					
n	629	606	598	1204	294
Mean	21.5	21.7	21.3	21.5	23.5
SD	20.47	17.63	12.17	15.16	32.75
Median	17.0	18.0	18.0	18.0	17.0
Min, Max	6, 314	5, 303	7, 107	5, 303	7, 512

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: ALT/SGPT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	607	586	591	1177	295
Mean	22.4	21.0	22.1	21.6	22.8
SD	37.24	11.86	15.02	13.55	36.30
Median	17.0	18.0	18.0	18.0	17.0
Min, Max	2, 796	4, 87	6, 201	4, 201	5, 587
Week 48					
n	599	599	603	1202	295
Mean	20.4	21.5	22.7	22.1	22.8
SD	12.02	14.00	16.47	15.29	27.00
Median	17.0	18.0	18.0	18.0	17.0
Min, Max	2, 130	6, 204	5, 238	5, 238	6, 415
Week 52					
n	558	577	571	1148	286
Mean	20.2	21.0	22.6	21.8	23.5
SD	11.07	12.82	21.53	17.71	24.62
Median	17.0	18.0	18.0	18.0	17.0
Min, Max	4, 94	6, 160	6, 390	6, 390	5, 267

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: ALT/SGPT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	566	559	563	1122	282
Mean	21.0	20.9	21.8	21.4	22.4
SD	15.51	11.93	13.68	12.84	16.91
Median	17.0	18.0	18.0	18.0	17.0
Min, Max	4, 199	7, 112	6, 123	6, 123	5, 151
Week 60					
n	560	578	586	1164	287
Mean	21.2	21.2	22.2	21.7	21.3
SD	16.75	13.26	14.04	13.66	12.51
Median	17.0	18.0	18.0	18.0	17.0
Min, Max	5, 206	5, 187	6, 123	5, 187	6, 106
Week 64					
n	539	564	549	1113	267
Mean	21.1	23.0	21.6	22.3	20.5
SD	26.90	54.13	13.56	39.68	11.99
Median	17.0	18.0	18.0	18.0	17.0
Min, Max	2, 587	7, 1276	4, 167	4, 1276	4, 90

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: ALT/SGPT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	525	552	548	1100	276
Mean	22.7	20.6	20.9	20.8	20.7
SD	32.22	10.88	12.30	11.60	12.66
Median	18.0	18.0	17.3	18.0	17.0
Min, Max	5, 462	5, 110	6, 107	5, 110	6, 114
Week 72					
n	522	566	565	1131	274
Mean	20.5	20.8	21.5	21.1	22.3
SD	11.90	11.46	12.77	12.13	14.78
Median	17.0	17.0	18.0	18.0	18.0
Min, Max	2, 146	6, 116	5, 130	5, 130	6, 107
Week 76					
n	508	546	544	1090	265
Mean	20.4	20.8	21.2	21.0	20.4
SD	12.44	11.39	12.41	11.91	12.70
Median	17.0	18.0	18.0	18.0	17.0
Min, Max	6, 137	6, 114	5, 106	5, 114	2, 141

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: ALT/SGPT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	506	534	531	1065	265
Mean	20.1	20.5	21.5	21.0	21.0
SD	12.03	12.37	12.90	12.64	14.43
Median	16.5	17.0	18.0	17.0	17.0
Min, Max	2, 143	5, 111	5, 102	5, 111	2, 164
Week 84					
n	514	552	552	1104	271
Mean	21.1	20.9	21.4	21.1	20.2
SD	14.38	12.27	12.00	12.13	11.59
Median	17.0	17.0	18.0	18.0	17.0
Min, Max	6, 160	6, 112	5, 110	5, 112	7, 114
Week 88					
n	500	533	530	1063	259
Mean	20.7	20.5	21.7	21.1	20.3
SD	13.14	14.53	15.40	14.97	10.80
Median	17.0	17.0	17.0	17.0	17.0
Min, Max	2, 127	6, 172	5, 156	5, 172	7, 81

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: ALT/SGPT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	487	518	517	1035	257
Mean	21.1	20.5	21.0	20.7	20.5
SD	18.00	12.83	12.52	12.67	11.75
Median	17.0	17.0	18.0	17.0	17.0
Min, Max	5, 310	6, 106	5, 108	5, 108	6, 90
Week 96					
n	485	532	518	1050	260
Mean	21.2	21.0	21.0	21.0	20.8
SD	14.08	14.34	11.99	13.23	12.24
Median	17.0	18.0	17.0	18.0	17.0
Min, Max	6, 153	6, 182	2, 103	2, 182	6, 123

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: AST/SGOT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	768	767	759	1526	351
Mean	19.8	20.1	20.1	20.1	20.5
SD	6.41	6.99	7.83	7.42	7.97
Median	19.0	19.0	19.0	19.0	19.0
Min, Max	9, 74	6, 99	6, 118	6, 118	10, 78
Week 4					
n	748	728	723	1451	334
Mean	19.8	24.9	26.3	25.6	20.5
SD	7.71	13.61	16.38	15.07	8.40
Median	18.0	22.0	22.0	22.0	19.0
Min, Max	8, 121	7, 193	9, 167	7, 193	10, 98

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: AST/SGOT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	725	696	676	1372	324
Mean	20.4	22.4	22.9	22.6	20.6
SD	17.24	9.40	9.23	9.32	8.71
Median	18.0	20.0	21.0	20.0	19.0
Min, Max	9, 379	9, 107	7, 91	7, 107	10, 87
Week 12					
n	714	687	667	1354	320
Mean	19.9	21.2	21.8	21.5	20.6
SD	11.25	6.91	8.10	7.52	9.78
Median	18.0	20.0	20.0	20.0	18.0
Min, Max	9, 265	9, 72	9, 78	9, 78	10, 91
Week 16					
n	704	661	646	1307	309
Mean	19.5	21.0	21.5	21.2	21.3
SD	7.83	7.44	15.39	12.04	18.28
Median	18.0	19.0	19.0	19.0	19.0
Min, Max	8, 100	7, 65	7, 366	7, 366	10, 312

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: AST/SGOT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	687	640	625	1265	308
Mean	18.7	20.6	20.5	20.5	19.7
SD	5.35	8.68	7.07	7.92	6.92
Median	18.0	19.0	19.0	19.0	18.0
Min, Max	9, 65	9, 120	7, 68	7, 120	10, 77
Week 24					
n	679	655	621	1276	311
Mean	19.1	20.4	20.4	20.4	21.7
SD	6.37	8.00	7.48	7.75	18.17
Median	18.0	19.0	19.0	19.0	19.0
Min, Max	8, 76	8, 134	6, 103	6, 134	9, 283
Week 28					
n	658	613	596	1209	295
Mean	19.5	20.2	20.0	20.1	20.5
SD	10.04	16.46	8.37	13.10	8.98
Median	18.0	18.0	19.0	18.0	19.0
Min, Max	8, 212	7, 394	9, 159	7, 394	10, 124

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: AST/SGOT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	634	616	600	1216	295
Mean	20.3	19.7	19.7	19.7	21.5
SD	31.50	6.72	6.84	6.78	13.71
Median	18.0	18.0	18.0	18.0	18.0
Min, Max	7, 795	8, 76	7, 94	7, 94	10, 163
Week 36					
n	647	620	613	1233	305
Mean	19.1	19.6	19.7	19.6	20.8
SD	5.55	7.55	6.99	7.28	9.81
Median	18.0	18.0	18.0	18.0	19.0
Min, Max	9, 70	9, 128	6, 99	6, 128	10, 116
Week 40					
n	625	602	594	1196	292
Mean	19.3	19.4	19.2	19.3	20.9
SD	8.40	8.10	5.90	7.09	14.65
Median	18.0	18.0	18.0	18.0	18.5
Min, Max	9, 150	7, 138	7, 57	7, 138	11, 229

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: AST/SGOT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	604	581	588	1169	293
Mean	19.8	19.0	20.2	19.6	20.6
SD	17.29	5.53	22.94	16.74	16.37
Median	18.0	18.0	18.0	18.0	18.0
Min, Max	7, 401	2, 53	9, 556	2, 556	8, 266
Week 48					
n	595	596	600	1196	294
Mean	19.0	19.2	19.7	19.4	20.6
SD	6.30	6.28	7.06	6.69	10.54
Median	18.0	18.0	18.0	18.0	18.0
Min, Max	8, 83	8, 74	5, 88	5, 88	10, 143
Week 52					
n	555	574	571	1145	285
Mean	19.2	18.9	19.8	19.4	21.2
SD	10.58	6.18	10.89	8.85	15.55
Median	18.0	18.0	18.0	18.0	18.0
Min, Max	8, 232	6, 94	2, 208	2, 208	10, 230

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: AST/SGOT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	559	555	560	1115	280
Mean	19.6	19.1	19.4	19.2	20.8
SD	16.20	6.52	6.42	6.47	9.43
Median	18.0	18.0	18.0	18.0	19.0
Min, Max	6, 358	7, 100	7, 63	7, 100	10, 111
Week 60					
n	555	571	580	1151	286
Mean	19.4	19.3	19.5	19.4	20.0
SD	8.41	7.72	6.66	7.20	6.33
Median	18.0	18.0	18.0	18.0	18.0
Min, Max	9, 87	9, 136	7, 81	7, 136	11, 55
Week 64					
n	535	562	545	1107	267
Mean	19.5	20.6	19.0	19.8	19.6
SD	12.19	34.77	5.87	25.12	5.87
Median	18.0	18.0	18.0	18.0	18.0
Min, Max	9, 260	8, 827	5, 71	5, 827	9, 49

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: AST/SGOT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	523	546	545	1091	273
Mean	20.9	18.9	18.9	18.9	19.6
SD	22.90	6.58	5.72	6.16	5.80
Median	18.0	18.0	18.0	18.0	18.0
Min, Max	6, 331	6, 87	6, 48	6, 87	9, 53
Week 72					
n	519	560	560	1120	272
Mean	19.0	18.9	19.1	19.0	20.8
SD	6.65	5.71	6.64	6.19	9.18
Median	18.0	18.0	18.0	18.0	19.0
Min, Max	9, 102	5, 55	7, 102	5, 102	9, 102
Week 76					
n	504	542	544	1086	264
Mean	19.0	18.9	19.1	19.0	19.3
SD	6.71	6.32	6.02	6.17	5.36
Median	18.0	18.0	18.0	18.0	18.0
Min, Max	8, 95	8, 95	7, 57	7, 95	9, 56

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: AST/SGOT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	504	532	531	1063	260
Mean	18.7	18.8	19.2	19.0	20.0
SD	6.28	5.48	6.30	5.90	7.38
Median	18.0	18.0	18.0	18.0	19.0
Min, Max	8, 79	7, 50	7, 63	7, 63	8, 109
Week 84					
n	509	547	551	1098	270
Mean	19.0	19.0	19.0	19.0	19.5
SD	6.44	6.64	6.23	6.43	5.73
Median	17.0	18.0	18.0	18.0	19.0
Min, Max	8, 62	7, 85	9, 83	7, 85	9, 69
Week 88					
n	496	530	529	1059	257
Mean	19.2	19.0	19.3	19.1	19.4
SD	6.55	8.01	7.71	7.86	5.61
Median	18.0	18.0	18.0	18.0	18.0
Min, Max	9, 61	6, 119	7, 127	6, 127	11, 56

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: AST/SGOT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	482	511	514	1025	257
Mean	19.0	19.0	18.9	18.9	19.7
SD	5.92	7.76	5.72	6.81	5.44
Median	18.0	18.0	18.0	18.0	19.0
Min, Max	8, 51	8, 93	7, 57	7, 93	10, 45
Week 96					
n	484	527	514	1041	260
Mean	19.5	19.3	19.2	19.2	20.3
SD	7.27	8.15	5.98	7.16	9.13
Median	18.0	18.0	18.0	18.0	19.0
Min, Max	5, 86	6, 140	8, 66	6, 140	4, 143

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Alkaline phosphatase (ALP) (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	769	768	760	1528	351
Mean	66.5	64.3	64.9	64.6	65.1
SD	22.10	19.41	18.97	19.18	19.16
Median	62.0	61.0	62.0	62.0	63.0
Min, Max	9, 207	25, 148	24, 170	24, 170	22, 142
Week 4					
n	755	733	732	1465	340
Mean	65.8	61.0	61.6	61.3	67.4
SD	21.90	17.98	17.93	17.95	21.25
Median	62.0	58.0	59.0	59.0	63.0
Min, Max	9, 203	26, 155	24, 157	24, 157	25, 161

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Alkaline phosphatase (ALP) (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	733	707	683	1390	328
Mean	66.2	61.1	59.9	60.5	67.8
SD	22.29	23.50	16.46	20.35	20.03
Median	63.0	58.0	58.0	58.0	66.0
Min, Max	9, 213	23, 453	20, 136	20, 453	28, 153
Week 12					
n	723	692	672	1364	328
Mean	66.7	60.7	60.3	60.5	67.3
SD	21.86	18.29	18.93	18.60	19.72
Median	63.0	58.0	58.0	58.0	65.0
Min, Max	9, 213	27, 153	23, 286	23, 286	22, 159
Week 16					
n	709	664	651	1315	317
Mean	65.4	60.7	60.2	60.5	67.0
SD	21.48	18.15	17.43	17.79	20.90
Median	61.0	58.0	59.0	59.0	64.0
Min, Max	9, 209	28, 153	23, 157	23, 157	25, 203

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Alkaline phosphatase (ALP) (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	693	652	637	1289	313
Mean	65.7	60.8	59.7	60.3	66.5
SD	22.08	18.72	17.42	18.09	19.16
Median	61.0	58.0	58.0	58.0	65.0
Min, Max	9, 196	27, 180	23, 158	23, 180	23, 142
Week 24					
n	683	659	637	1296	316
Mean	66.1	61.1	60.5	60.8	66.5
SD	22.45	18.69	17.07	17.91	19.32
Median	62.0	59.0	59.0	59.0	63.0
Min, Max	9, 210	27, 169	23, 151	23, 169	25, 138
Week 28					
n	667	627	609	1236	299
Mean	66.4	61.1	60.0	60.6	66.3
SD	23.11	22.85	17.14	20.24	19.69
Median	63.0	59.0	58.0	59.0	64.0
Min, Max	9, 197	27, 420	23, 149	23, 420	25, 151

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Alkaline phosphatase (ALP) (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	647	625	604	1229	300
Mean	66.1	61.2	60.0	60.6	66.6
SD	23.65	18.90	17.39	18.18	19.42
Median	62.0	58.0	58.0	58.0	63.5
Min, Max	9, 287	28, 166	23, 165	23, 166	24, 137
Week 36					
n	654	631	619	1250	309
Mean	66.5	61.1	60.3	60.7	66.6
SD	22.02	20.36	17.29	18.90	20.17
Median	63.0	58.0	59.0	58.0	63.0
Min, Max	9, 184	27, 287	21, 137	21, 287	23, 137
Week 40					
n	632	607	601	1208	297
Mean	66.2	60.4	60.0	60.2	66.4
SD	21.94	18.08	17.66	17.87	20.14
Median	62.0	58.0	58.0	58.0	63.0
Min, Max	9, 220	26, 154	24, 188	24, 188	23, 143

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Alkaline phosphatase (ALP) (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	610	593	595	1188	296
Mean	66.5	60.0	60.5	60.3	65.9
SD	21.84	17.68	17.55	17.61	19.29
Median	63.0	57.0	59.0	58.0	62.0
Min, Max	9, 168	29, 142	25, 129	25, 142	25, 128
Week 48					
n	606	604	608	1212	296
Mean	67.2	60.4	60.9	60.7	66.1
SD	21.43	17.63	17.91	17.77	20.58
Median	64.0	58.0	59.0	58.0	63.5
Min, Max	9, 174	26, 123	24, 173	24, 173	20, 197
Week 52					
n	567	578	576	1154	288
Mean	65.9	60.1	60.3	60.2	66.0
SD	21.81	17.97	17.72	17.84	20.13
Median	62.0	58.0	58.0	58.0	63.0
Min, Max	9, 164	28, 161	25, 204	25, 204	23, 152

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Alkaline phosphatase (ALP) (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	571	566	569	1135	284
Mean	66.5	60.1	60.4	60.3	66.0
SD	20.77	18.48	19.43	18.95	19.97
Median	63.0	57.0	58.0	57.0	62.0
Min, Max	9, 145	23, 151	27, 290	23, 290	26, 148
Week 60					
n	563	580	588	1168	291
Mean	66.6	60.5	61.2	60.9	65.1
SD	21.33	18.15	18.21	18.18	18.80
Median	63.0	58.0	59.0	58.0	61.0
Min, Max	9, 154	26, 148	28, 199	26, 199	25, 144
Week 64					
n	543	567	559	1126	271
Mean	66.0	60.1	60.7	60.4	64.3
SD	20.96	18.64	19.00	18.81	18.38
Median	63.0	58.0	58.0	58.0	61.0
Min, Max	18, 141	26, 151	24, 243	24, 243	27, 123

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Alkaline phosphatase (ALP) (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	526	557	552	1109	278
Mean	66.3	60.3	59.8	60.0	64.9
SD	21.45	18.21	16.64	17.44	19.82
Median	63.0	58.0	58.0	58.0	62.0
Min, Max	9, 146	26, 134	21, 171	21, 171	27, 141
Week 72					
n	523	569	567	1136	276
Mean	66.8	60.6	60.5	60.5	64.9
SD	22.34	18.77	16.71	17.76	19.38
Median	64.0	57.0	58.0	58.0	62.0
Min, Max	18, 233	27, 166	22, 142	22, 166	28, 151
Week 76					
n	512	547	547	1094	266
Mean	66.3	59.9	60.0	59.9	64.4
SD	21.10	18.35	16.45	17.42	19.44
Median	63.0	57.0	58.0	57.0	60.0
Min, Max	19, 172	20, 136	22, 131	20, 136	26, 140

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Alkaline phosphatase (ALP) (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	509	541	533	1074	268
Mean	66.1	59.2	60.3	59.7	64.8
SD	20.88	17.34	17.40	17.37	20.31
Median	63.0	57.0	58.0	57.0	61.0
Min, Max	21, 146	25, 133	24, 162	24, 162	25, 171
Week 84					
n	517	556	556	1112	271
Mean	66.3	60.0	60.5	60.3	64.8
SD	21.29	18.29	16.49	17.41	17.60
Median	63.0	57.0	59.0	58.0	62.0
Min, Max	9, 150	20, 167	24, 121	20, 167	27, 125
Week 88					
n	504	533	534	1067	261
Mean	66.3	59.3	60.2	59.8	64.9
SD	21.62	18.23	16.93	17.59	18.74
Median	63.0	57.0	58.0	57.0	63.0
Min, Max	19, 190	26, 180	23, 124	23, 180	26, 126

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Alkaline phosphatase (ALP) (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	490	523	523	1046	258
Mean	66.7	59.1	60.4	59.8	64.6
SD	21.23	17.17	17.13	17.15	18.28
Median	63.0	57.0	59.0	58.0	62.0
Min, Max	20, 149	29, 138	27, 198	27, 198	25, 122
Week 96					
n	491	535	522	1057	262
Mean	67.7	60.4	60.9	60.7	64.9
SD	22.21	17.66	16.79	17.23	18.48
Median	65.0	59.0	59.0	59.0	62.0
Min, Max	9, 168	27, 134	24, 137	24, 137	25, 127

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Total bilirubin (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	769	767	759	1526	351
Mean	8.213	8.015	8.578	8.295	8.834
SD	4.4183	4.2558	5.3713	4.8494	5.5125
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 32.00	1.50, 38.00	1.50, 61.56	1.50, 61.56	1.50, 50.00
Week 4					
n	753	734	728	1462	335
Mean	8.246	7.429	7.613	7.521	8.020
SD	4.8572	4.0594	4.1863	4.1227	4.4808
Median	7.000	6.840	6.840	6.840	6.840
Min, Max	1.50, 57.00	1.50, 41.04	1.50, 33.00	1.50, 41.04	1.50, 32.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Total bilirubin (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	731	702	680	1382	327
Mean	8.467	7.737	7.797	7.767	7.753
SD	5.5235	4.1396	4.6488	4.3960	4.2299
Median	7.000	7.000	6.840	7.000	6.840
Min, Max	1.50, 68.00	1.50, 40.00	1.50, 46.00	1.50, 46.00	1.50, 27.00
Week 12					
n	719	692	670	1362	322
Mean	8.327	8.018	8.071	8.044	7.692
SD	5.2832	4.2738	4.6521	4.4623	4.3388
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 68.00	1.50, 37.00	1.50, 37.62	1.50, 37.62	1.50, 38.00
Week 16					
n	708	663	648	1311	314
Mean	8.372	7.935	8.283	8.107	7.938
SD	4.5980	4.6538	5.0014	4.8300	5.0189
Median	7.000	7.000	7.000	7.000	6.920
Min, Max	1.50, 33.00	1.50, 53.00	1.50, 52.00	1.50, 53.00	1.50, 43.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Total bilirubin (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	691	646	633	1279	311
Mean	8.440	8.313	8.504	8.407	8.022
SD	4.7196	4.7701	4.8675	4.8176	5.3529
Median	7.000	7.000	7.000	7.000	6.840
Min, Max	1.50, 41.00	1.50, 41.00	1.50, 36.00	1.50, 41.00	1.50, 49.00
Week 24					
n	683	657	632	1289	315
Mean	8.258	8.358	8.430	8.394	8.092
SD	4.9177	4.7411	5.0415	4.8889	4.8623
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 61.00	1.50, 44.00	1.50, 40.00	1.50, 44.00	1.50, 35.00
Week 28					
n	662	625	602	1227	297
Mean	8.447	8.301	8.425	8.362	8.259
SD	5.1546	4.4307	4.7185	4.5727	5.5409
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 55.00	1.50, 41.00	1.50, 35.50	1.50, 41.00	1.50, 49.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Total bilirubin (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	642	625	603	1228	299
Mean	8.530	8.309	8.311	8.310	8.193
SD	5.2267	4.6010	4.9175	4.7571	4.9304
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 55.00	1.50, 59.00	1.50, 42.00	1.50, 59.00	1.50, 41.00
Week 36					
n	652	629	616	1245	306
Mean	8.335	8.239	8.548	8.392	8.107
SD	4.5908	4.2511	5.2143	4.7528	4.7595
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 39.00	1.50, 36.00	1.50, 51.00	1.50, 51.00	1.50, 39.00
Week 40					
n	629	606	600	1206	295
Mean	8.257	8.417	8.524	8.470	8.304
SD	5.1145	4.4761	4.9392	4.7105	5.0822
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 57.00	1.50, 42.75	1.50, 37.00	1.50, 42.75	1.50, 34.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Total bilirubin (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	609	586	592	1178	295
Mean	8.368	8.359	8.390	8.375	8.134
SD	5.1839	4.1632	4.5734	4.3724	4.7158
Median	7.000	7.500	7.000	7.000	7.000
Min, Max	1.50, 49.00	1.50, 38.00	1.50, 39.00	1.50, 39.00	1.50, 34.00
Week 48					
n	603	601	605	1206	296
Mean	8.484	8.359	8.504	8.432	7.992
SD	5.7160	4.4082	5.2157	4.8288	4.6545
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 67.00	1.50, 34.00	1.50, 38.00	1.50, 38.00	1.50, 43.00
Week 52					
n	560	577	573	1150	286
Mean	8.519	8.257	8.574	8.415	8.105
SD	4.9795	4.2056	5.0882	4.6670	4.9896
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 38.00	1.50, 42.75	1.50, 41.00	1.50, 42.75	1.50, 43.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Total bilirubin (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	567	561	565	1126	282
Mean	8.453	8.265	8.346	8.306	8.442
SD	5.0995	4.2864	4.8266	4.5636	5.0660
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 46.00	1.50, 37.62	1.50, 38.00	1.50, 38.00	1.50, 33.00
Week 60					
n	562	579	589	1168	287
Mean	8.435	8.196	8.464	8.332	8.289
SD	5.2003	4.3389	5.2564	4.8233	4.8877
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 44.00	1.50, 38.00	1.50, 51.00	1.50, 51.00	1.50, 42.00
Week 64					
n	540	566	551	1117	267
Mean	8.432	8.292	8.278	8.285	8.404
SD	5.0991	4.6105	4.8741	4.7403	5.9362
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 49.00	1.50, 44.46	1.50, 47.00	1.50, 47.00	1.50, 57.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Total bilirubin (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	526	555	548	1103	276
Mean	8.428	8.280	8.443	8.361	8.428
SD	5.3227	4.2548	4.7302	4.4960	5.9216
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 55.00	1.50, 30.78	1.50, 38.00	1.50, 38.00	1.50, 53.00
Week 72					
n	522	567	566	1133	275
Mean	8.374	8.109	8.247	8.178	8.325
SD	4.9106	3.9537	4.5587	4.2653	5.1093
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 46.00	1.50, 27.00	1.50, 37.00	1.50, 37.00	1.50, 39.00
Week 76					
n	510	546	545	1091	266
Mean	8.561	8.303	8.206	8.254	8.215
SD	4.9656	4.4643	4.2046	4.3348	5.1588
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 43.00	1.50, 47.88	1.50, 33.00	1.50, 47.88	1.50, 44.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Total bilirubin (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	507	536	535	1071	265
Mean	8.506	8.412	8.426	8.419	8.084
SD	4.8891	4.9795	4.8649	4.9203	4.4792
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 41.00	1.50, 50.00	1.50, 37.00	1.50, 50.00	1.50, 32.00
Week 84					
n	516	554	552	1106	271
Mean	8.537	7.903	8.461	8.182	8.345
SD	5.0719	3.9751	5.0476	4.5486	4.8915
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 42.00	1.50, 25.00	1.50, 42.00	1.50, 42.00	1.50, 35.00
Week 88					
n	500	533	530	1063	260
Mean	8.326	8.353	8.241	8.297	8.175
SD	4.5552	4.5206	4.7897	4.6549	5.0729
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 44.00	1.50, 38.00	1.50, 41.00	1.50, 41.00	1.50, 44.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Total bilirubin (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	489	519	518	1037	257
Mean	8.370	8.120	8.503	8.311	8.330
SD	5.2594	4.2119	4.7715	4.5021	5.3126
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 54.00	1.50, 35.91	1.50, 39.00	1.50, 39.00	1.50, 44.00
Week 96					
n	489	533	519	1052	261
Mean	8.174	8.202	8.308	8.255	8.583
SD	4.8928	4.2929	4.7990	4.5477	5.9586
Median	7.000	7.000	7.000	7.000	7.000
Min, Max	1.50, 45.00	1.50, 34.00	1.50, 40.00	1.50, 40.00	1.50, 59.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: GGT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	769	768	760	1528	351
Mean	19.9	19.9	20.6	20.3	20.9
SD	17.80	16.06	17.20	16.63	17.02
Median	15.0	15.0	15.0	15.0	15.0
Min, Max	4, 272	2, 219	2, 205	2, 219	5, 206
Week 4					
n	755	733	732	1465	340
Mean	19.5	23.1	26.3	24.7	20.6
SD	15.51	17.44	25.87	22.11	18.34
Median	15.0	17.0	18.5	18.0	15.0
Min, Max	5, 186	6, 150	2, 302	2, 302	5, 223

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: GGT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	733	707	683	1390	328
Mean	20.2	22.6	23.8	23.2	20.5
SD	16.27	18.22	19.11	18.67	15.97
Median	15.0	17.0	18.0	18.0	15.0
Min, Max	5, 160	4, 154	2, 228	2, 228	5, 140
Week 12					
n	723	692	672	1364	328
Mean	20.6	21.5	22.9	22.2	21.0
SD	17.19	16.69	17.95	17.33	16.96
Median	15.0	16.0	17.0	17.0	15.0
Min, Max	5, 181	6, 214	4, 213	4, 214	5, 163
Week 16					
n	709	664	651	1315	317
Mean	20.0	21.6	23.0	22.3	21.1
SD	16.22	17.19	19.34	18.29	21.13
Median	15.0	16.0	17.0	16.0	15.0
Min, Max	5, 159	6, 172	6, 291	6, 291	2, 198

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: GGT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	693	652	637	1289	313
Mean	20.3	21.3	22.3	21.8	20.6
SD	18.18	15.54	18.37	17.00	18.93
Median	15.0	16.0	17.0	16.0	15.0
Min, Max	5, 187	5, 105	5, 250	5, 250	5, 217
Week 24					
n	683	659	637	1296	316
Mean	20.6	21.0	22.3	21.6	21.0
SD	18.56	16.60	17.93	17.27	17.36
Median	16.0	16.0	16.0	16.0	15.0
Min, Max	5, 216	6, 152	6, 201	6, 201	4, 115
Week 28					
n	667	628	609	1237	299
Mean	20.9	20.3	22.4	21.4	21.4
SD	20.32	16.36	18.82	17.64	21.73
Median	15.0	16.0	17.0	16.0	15.0
Min, Max	5, 231	5, 215	5, 181	5, 215	4, 249

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: GGT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	647	625	604	1229	301
Mean	21.2	20.9	21.9	21.4	21.4
SD	23.37	18.88	17.61	18.26	18.81
Median	15.0	15.0	16.0	16.0	15.0
Min, Max	5, 328	6, 255	2, 154	2, 255	5, 160
Week 36					
n	654	631	619	1250	309
Mean	20.9	21.1	22.3	21.7	21.2
SD	17.01	20.54	17.62	19.15	19.13
Median	16.0	15.0	17.0	16.0	15.0
Min, Max	5, 189	2, 336	4, 129	2, 336	4, 118
Week 40					
n	632	606	601	1207	297
Mean	20.7	20.3	21.5	20.9	21.0
SD	16.55	16.52	17.55	17.05	19.83
Median	15.0	15.0	16.0	16.0	14.0
Min, Max	5, 123	6, 167	4, 135	4, 167	4, 170

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: GGT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	610	593	595	1188	296
Mean	21.4	20.5	22.8	21.7	20.2
SD	20.37	16.83	21.31	19.23	16.53
Median	15.0	15.0	16.0	16.0	15.0
Min, Max	5, 229	2, 211	2, 225	2, 225	5, 129
Week 48					
n	606	603	608	1211	296
Mean	21.8	20.7	22.5	21.6	20.6
SD	21.01	15.33	17.83	16.65	16.43
Median	16.0	16.0	17.0	16.0	15.0
Min, Max	2, 277	2, 115	5, 138	2, 138	2, 103
Week 52					
n	567	578	576	1154	288
Mean	21.4	20.1	21.9	21.0	21.4
SD	21.45	18.46	17.11	17.81	20.01
Median	15.0	15.0	16.0	16.0	15.0
Min, Max	2, 221	2, 329	5, 158	2, 329	5, 151

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: GGT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	571	566	569	1135	284
Mean	21.9	20.2	21.8	21.0	20.9
SD	21.01	17.65	18.57	18.13	17.35
Median	16.0	15.0	16.0	16.0	15.0
Min, Max	2, 228	5, 272	2, 187	2, 272	2, 117
Week 60					
n	563	580	588	1168	291
Mean	22.0	20.3	22.2	21.3	20.9
SD	23.94	15.37	18.61	17.10	17.78
Median	16.0	15.0	16.0	16.0	15.0
Min, Max	5, 331	4, 129	4, 162	4, 162	5, 150
Week 64					
n	543	567	559	1126	271
Mean	21.0	20.1	22.4	21.2	20.8
SD	20.79	16.09	19.76	18.03	17.43
Median	16.0	15.0	16.0	16.0	15.0
Min, Max	5, 232	5, 173	2, 210	2, 210	4, 116

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: GGT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	526	557	552	1109	278
Mean	22.2	20.1	22.0	21.1	21.6
SD	23.34	15.16	18.68	17.02	21.49
Median	15.0	16.0	16.0	16.0	15.0
Min, Max	5, 263	5, 164	2, 154	2, 164	5, 209
Week 72					
n	523	569	567	1136	276
Mean	22.0	20.3	22.1	21.2	22.5
SD	21.69	14.37	17.15	15.84	24.81
Median	16.0	16.0	16.0	16.0	16.0
Min, Max	5, 221	2, 129	4, 122	2, 129	2, 309
Week 76					
n	511	545	547	1092	266
Mean	21.2	19.8	21.8	20.8	21.5
SD	20.49	15.24	16.68	16.00	19.85
Median	15.0	15.0	16.0	16.0	15.0
Min, Max	5, 240	2, 136	2, 130	2, 136	2, 130

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: GGT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	509	541	533	1074	268
Mean	22.0	20.4	21.2	20.8	21.4
SD	22.94	16.03	15.44	15.74	18.66
Median	15.0	15.0	16.0	15.0	15.0
Min, Max	2, 239	5, 136	5, 115	5, 136	5, 123
Week 84					
n	517	556	556	1112	271
Mean	21.7	20.3	22.2	21.3	21.0
SD	22.47	15.30	17.46	16.44	17.71
Median	15.0	15.5	16.0	16.0	15.0
Min, Max	5, 239	5, 158	2, 146	2, 158	4, 110
Week 88					
n	504	533	534	1067	261
Mean	21.1	20.6	22.0	21.3	21.4
SD	20.80	17.32	18.50	17.93	19.01
Median	15.5	15.0	16.0	16.0	15.0
Min, Max	5, 225	2, 147	4, 170	2, 170	6, 135

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: GGT (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	490	523	523	1046	258
Mean	22.6	20.0	21.8	20.9	21.2
SD	24.18	14.56	19.26	17.09	17.92
Median	15.0	15.0	16.0	16.0	15.0
Min, Max	5, 281	5, 89	5, 249	5, 249	5, 116
Week 96					
n	491	535	522	1057	262
Mean	22.6	20.5	21.7	21.1	22.0
SD	22.03	15.23	16.42	15.83	18.10
Median	16.0	15.0	16.0	16.0	16.0
Min, Max	5, 214	5, 108	2, 103	2, 108	5, 121

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: LDH (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	767	766	756	1522	351
Mean	154.4	154.3	155.7	155.0	156.1
SD	27.21	27.66	27.55	27.60	28.75
Median	153.0	153.0	153.0	153.0	154.0
Min, Max	56, 261	65, 329	47, 287	47, 329	69, 293
Week 4					
n	739	720	719	1439	334
Mean	152.9	151.1	152.5	151.8	156.4
SD	30.73	28.33	28.62	28.48	27.65
Median	150.0	148.0	150.0	149.0	152.0
Min, Max	61, 458	61, 274	34, 259	34, 274	75, 264

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: LDH (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	719	693	666	1359	323
Mean	153.3	149.2	149.5	149.3	156.1
SD	28.82	26.62	26.54	26.57	25.75
Median	149.0	148.0	147.0	147.0	155.0
Min, Max	61, 343	12, 242	35, 241	12, 242	64, 272
Week 12					
n	711	681	660	1341	324
Mean	153.4	148.9	148.6	148.8	154.7
SD	29.14	26.71	26.65	26.67	26.02
Median	150.0	148.0	146.0	147.0	151.0
Min, Max	56, 319	57, 238	41, 289	41, 289	79, 270
Week 16					
n	696	656	643	1299	312
Mean	151.7	147.7	149.2	148.4	153.9
SD	26.32	27.93	30.58	29.27	27.04
Median	150.0	145.0	145.0	145.0	150.0
Min, Max	68, 310	52, 299	49, 409	49, 409	72, 328

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: LDH (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	677	639	624	1263	310
Mean	151.5	147.0	146.9	147.0	152.2
SD	27.20	27.03	26.51	26.77	24.79
Median	149.0	143.0	144.0	144.0	150.5
Min, Max	59, 275	57, 274	47, 262	47, 274	79, 238
Week 24					
n	672	649	614	1263	306
Mean	152.4	148.0	147.8	147.9	154.8
SD	28.71	38.25	26.83	33.18	30.65
Median	150.0	145.0	146.0	145.0	149.0
Min, Max	69, 388	58, 848	37, 252	37, 848	79, 354
Week 28					
n	658	606	598	1204	296
Mean	151.8	147.0	145.9	146.5	152.7
SD	31.23	34.74	26.14	30.76	30.20
Median	150.0	143.0	143.0	143.0	148.0
Min, Max	53, 583	59, 554	43, 240	43, 554	60, 317

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: LDH (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	631	610	594	1204	293
Mean	152.4	143.7	144.8	144.2	153.0
SD	33.16	26.90	27.18	27.03	29.20
Median	149.0	142.0	143.0	142.0	151.0
Min, Max	50, 606	54, 290	43, 289	43, 290	68, 274
Week 36					
n	637	617	608	1225	306
Mean	152.5	146.7	147.1	146.9	153.0
SD	27.22	27.66	28.46	28.05	28.35
Median	150.0	144.0	144.5	144.0	149.0
Min, Max	61, 257	57, 287	43, 367	43, 367	76, 336
Week 40					
n	620	594	581	1175	290
Mean	151.5	144.5	144.9	144.7	152.9
SD	28.27	28.26	27.15	27.70	27.47
Median	149.0	140.0	142.0	141.0	148.0
Min, Max	60, 349	59, 385	35, 266	35, 385	59, 264

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: LDH (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	593	584	587	1171	292
Mean	150.7	143.2	144.8	144.0	153.0
SD	27.53	27.00	29.29	28.17	27.60
Median	148.0	141.0	142.0	141.0	152.0
Min, Max	54, 284	61, 253	46, 422	46, 422	65, 257
Week 48					
n	593	590	598	1188	293
Mean	152.2	144.1	147.5	145.8	154.7
SD	26.84	26.16	27.20	26.73	29.56
Median	150.0	142.0	146.0	144.0	151.0
Min, Max	66, 240	51, 277	38, 316	38, 316	67, 353
Week 52					
n	556	568	564	1132	285
Mean	150.5	142.9	142.7	142.8	152.6
SD	29.29	25.76	25.58	25.66	33.74
Median	147.0	142.0	140.0	141.0	149.0
Min, Max	57, 309	53, 273	48, 226	48, 273	65, 501

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: LDH (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	554	553	559	1112	277
Mean	150.7	142.5	143.2	142.8	152.2
SD	29.07	26.64	25.48	26.05	27.81
Median	147.0	141.0	141.0	141.0	148.0
Min, Max	57, 300	58, 257	41, 247	41, 257	75, 271
Week 60					
n	554	565	573	1138	287
Mean	151.1	144.1	145.4	144.7	152.1
SD	27.31	27.25	26.41	26.83	25.49
Median	149.0	142.0	143.0	142.0	148.0
Min, Max	53, 283	56, 272	48, 248	48, 272	75, 231
Week 64					
n	529	554	550	1104	268
Mean	150.6	143.1	142.8	143.0	149.6
SD	30.77	27.75	26.74	27.24	24.74
Median	148.0	141.0	141.0	141.0	148.0
Min, Max	59, 400	53, 307	50, 271	50, 307	75, 221

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: LDH (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	518	545	542	1087	271
Mean	150.8	143.2	143.4	143.3	149.3
SD	30.97	27.36	26.67	27.00	25.52
Median	147.0	140.0	141.0	141.0	147.5
Min, Max	60, 347	56, 270	37, 243	37, 270	74, 237
Week 72					
n	516	560	555	1115	267
Mean	151.2	144.7	145.8	145.2	152.0
SD	28.48	26.95	26.77	26.86	29.03
Median	148.0	143.0	144.0	143.0	148.0
Min, Max	64, 253	55, 245	38, 271	38, 271	75, 308
Week 76					
n	501	537	541	1078	262
Mean	150.6	144.3	145.6	144.9	150.5
SD	29.15	28.58	28.36	28.46	29.31
Median	147.0	141.0	143.0	141.5	149.0
Min, Max	60, 310	61, 306	44, 294	44, 306	70, 367

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: LDH (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	502	532	525	1057	260
Mean	149.6	143.3	145.0	144.2	151.9
SD	28.40	26.61	26.31	26.46	29.37
Median	147.0	141.0	141.0	141.0	150.0
Min, Max	55, 297	56, 238	59, 265	56, 265	76, 380
Week 84					
n	507	546	549	1095	265
Mean	150.7	145.5	146.2	145.9	151.5
SD	28.16	29.15	27.21	28.18	25.56
Median	147.0	142.0	144.0	143.0	148.0
Min, Max	59, 277	64, 332	41, 274	41, 332	97, 283
Week 88					
n	497	526	531	1057	256
Mean	151.4	143.6	144.1	143.9	150.7
SD	30.15	29.82	28.35	29.08	26.73
Median	147.0	140.0	141.0	140.0	147.0
Min, Max	52, 272	59, 400	43, 307	43, 400	54, 247

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: LDH (U/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	480	513	513	1026	255
Mean	151.0	143.8	144.0	143.9	149.3
SD	29.38	28.69	26.46	27.58	24.29
Median	148.0	139.0	141.0	140.0	147.0
Min, Max	55, 292	54, 433	40, 249	40, 433	66, 242
Week 96					
n	484	524	514	1038	255
Mean	153.0	145.8	145.6	145.7	151.5
SD	28.38	28.28	27.14	27.71	24.57
Median	149.0	143.0	143.0	143.0	149.0
Min, Max	58, 270	58, 290	47, 268	47, 290	84, 235

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: BUN/urea (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	769	768	760	1528	351
Mean	4.387	4.514	4.457	4.485	4.477
SD	1.2246	1.3631	1.2305	1.2987	1.3003
Median	4.284	4.300	4.350	4.300	4.300
Min, Max	1.10, 8.40	1.43, 10.35	1.30, 9.70	1.30, 10.35	1.70, 10.71
Week 4					
n	755	735	732	1467	340
Mean	4.530	4.438	4.361	4.400	4.427
SD	1.3041	1.3401	1.2796	1.3104	1.2850
Median	4.300	4.300	4.200	4.284	4.300
Min, Max	1.30, 10.71	1.70, 9.80	1.50, 9.95	1.50, 9.95	1.79, 8.50

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: BUN/urea (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	734	707	684	1391	329
Mean	4.501	4.452	4.387	4.420	4.488
SD	1.2960	1.3360	1.3060	1.3213	1.2553
Median	4.400	4.300	4.300	4.300	4.400
Min, Max	1.60, 10.00	1.10, 9.20	1.00, 9.20	1.00, 9.20	1.70, 8.80
Week 12					
n	723	693	672	1365	328
Mean	4.484	4.486	4.441	4.464	4.477
SD	1.2531	1.3300	1.3387	1.3340	1.2694
Median	4.300	4.300	4.300	4.300	4.400
Min, Max	1.60, 9.40	1.20, 8.80	0.90, 10.30	0.90, 10.30	1.70, 8.70
Week 16					
n	709	665	652	1317	318
Mean	4.471	4.483	4.494	4.489	4.457
SD	1.3490	1.2462	1.2958	1.2705	1.2477
Median	4.300	4.300	4.300	4.300	4.300
Min, Max	1.40, 10.80	1.40, 8.90	1.10, 9.64	1.10, 9.64	1.79, 9.10

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: BUN/urea (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	693	652	637	1289	314
Mean	4.463	4.522	4.432	4.477	4.547
SD	1.2261	1.3120	1.3140	1.3133	1.3406
Median	4.300	4.400	4.300	4.400	4.400
Min, Max	1.70, 9.30	1.40, 9.60	1.30, 10.71	1.30, 10.71	1.80, 10.35
Week 24					
n	684	659	638	1297	317
Mean	4.460	4.501	4.455	4.478	4.477
SD	1.2736	1.3740	1.3488	1.3614	1.2780
Median	4.300	4.300	4.300	4.300	4.300
Min, Max	1.30, 9.80	1.20, 10.40	1.30, 9.30	1.20, 10.40	1.70, 8.60
Week 28					
n	667	627	609	1236	299
Mean	4.493	4.509	4.429	4.470	4.465
SD	1.3059	1.3459	1.2766	1.3123	1.1929
Median	4.400	4.400	4.300	4.400	4.300
Min, Max	1.90, 10.60	1.30, 11.00	1.10, 9.60	1.10, 11.00	1.80, 7.85

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: BUN/urea (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	647	627	604	1231	302
Mean	4.526	4.549	4.469	4.510	4.501
SD	1.2590	1.3513	1.2865	1.3200	1.1471
Median	4.400	4.400	4.300	4.400	4.400
Min, Max	1.79, 10.35	1.40, 9.90	1.80, 9.28	1.40, 9.90	1.80, 10.00
Week 36					
n	654	631	620	1251	309
Mean	4.508	4.503	4.502	4.503	4.532
SD	1.2733	1.2583	1.2827	1.2700	1.1772
Median	4.400	4.400	4.350	4.400	4.500
Min, Max	1.50, 11.42	1.20, 8.70	1.50, 11.07	1.20, 11.07	1.79, 8.10
Week 40					
n	632	607	600	1207	297
Mean	4.525	4.521	4.540	4.531	4.507
SD	1.2205	1.2921	1.4067	1.3498	1.2092
Median	4.400	4.400	4.300	4.400	4.400
Min, Max	1.60, 9.70	1.40, 9.64	1.20, 14.70	1.20, 14.70	1.79, 8.50

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: BUN/urea (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	610	593	595	1188	296
Mean	4.485	4.516	4.492	4.504	4.514
SD	1.2935	1.3020	1.3068	1.3039	1.2681
Median	4.300	4.400	4.400	4.400	4.450
Min, Max	1.70, 9.28	1.40, 10.90	1.50, 9.00	1.40, 10.90	1.80, 10.80
Week 48					
n	606	605	608	1213	296
Mean	4.459	4.510	4.489	4.499	4.577
SD	1.2323	1.3715	1.3083	1.3397	1.3348
Median	4.400	4.300	4.400	4.300	4.400
Min, Max	1.50, 9.30	1.40, 11.80	1.40, 9.64	1.40, 11.80	1.79, 9.64
Week 52					
n	568	578	577	1155	288
Mean	4.526	4.553	4.516	4.535	4.568
SD	1.2925	1.3754	1.2280	1.3035	1.2398
Median	4.400	4.400	4.400	4.400	4.500
Min, Max	1.40, 10.71	1.43, 8.70	1.50, 8.90	1.43, 8.90	1.60, 8.93

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: BUN/urea (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	571	565	569	1134	284
Mean	4.561	4.541	4.497	4.519	4.605
SD	1.3032	1.3084	1.2410	1.2746	1.2517
Median	4.400	4.400	4.400	4.400	4.500
Min, Max	1.40, 10.35	1.50, 11.30	1.60, 8.57	1.50, 11.30	1.70, 10.10
Week 60					
n	564	580	591	1171	291
Mean	4.534	4.609	4.590	4.600	4.539
SD	1.2830	1.3702	1.3873	1.3783	1.2512
Median	4.300	4.400	4.500	4.500	4.400
Min, Max	1.70, 9.70	1.60, 11.00	1.60, 9.28	1.60, 11.00	1.70, 7.90
Week 64					
n	543	568	559	1127	271
Mean	4.615	4.524	4.532	4.528	4.652
SD	1.3043	1.3160	1.3693	1.3421	1.2802
Median	4.400	4.400	4.300	4.400	4.600
Min, Max	1.20, 10.35	1.50, 9.30	1.70, 10.00	1.50, 10.00	1.90, 9.28

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: BUN/urea (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	528	559	552	1111	278
Mean	4.596	4.592	4.431	4.512	4.606
SD	1.3157	1.3547	1.3028	1.3310	1.2875
Median	4.500	4.500	4.284	4.400	4.500
Min, Max	1.70, 14.60	1.43, 9.80	1.50, 8.93	1.43, 9.80	2.00, 9.50
Week 72					
n	523	570	567	1137	276
Mean	4.583	4.584	4.491	4.538	4.615
SD	1.3273	1.3872	1.2890	1.3393	1.2816
Median	4.400	4.500	4.300	4.400	4.400
Min, Max	1.40, 10.00	1.43, 9.80	1.00, 8.70	1.00, 9.80	1.80, 9.28
Week 76					
n	512	547	548	1095	267
Mean	4.575	4.560	4.502	4.531	4.663
SD	1.2225	1.3127	1.2631	1.2879	1.2838
Median	4.400	4.400	4.400	4.400	4.500
Min, Max	1.40, 9.64	1.30, 9.80	1.50, 9.30	1.30, 9.80	2.14, 10.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: BUN/urea (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	509	542	535	1077	268
Mean	4.631	4.595	4.558	4.577	4.677
SD	1.3138	1.3714	1.3739	1.3721	1.2742
Median	4.500	4.450	4.400	4.400	4.600
Min, Max	1.70, 10.10	1.70, 13.10	1.40, 10.71	1.40, 13.10	1.79, 8.10
Week 84					
n	517	557	555	1112	271
Mean	4.605	4.636	4.536	4.586	4.588
SD	1.3061	1.3317	1.2703	1.3018	1.2727
Median	4.400	4.500	4.500	4.500	4.400
Min, Max	1.80, 8.93	1.79, 9.30	1.30, 11.50	1.30, 11.50	2.14, 8.90
Week 88					
n	504	533	534	1067	262
Mean	4.647	4.624	4.552	4.588	4.575
SD	1.3349	1.4113	1.2353	1.3260	1.2756
Median	4.600	4.500	4.400	4.500	4.400
Min, Max	1.60, 10.20	1.60, 10.20	1.30, 9.10	1.30, 10.20	2.00, 9.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: BUN/urea (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	490	524	524	1048	258
Mean	4.659	4.611	4.548	4.580	4.657
SD	1.2809	1.2841	1.3133	1.2986	1.2857
Median	4.550	4.500	4.400	4.500	4.641
Min, Max	0.90, 9.64	1.60, 8.80	1.30, 9.64	1.30, 9.64	2.10, 8.93
Week 96					
n	491	535	523	1058	263
Mean	4.639	4.558	4.499	4.529	4.706
SD	1.2999	1.3821	1.3362	1.3593	1.3047
Median	4.600	4.400	4.300	4.400	4.641
Min, Max	1.70, 9.30	1.10, 10.00	1.80, 9.30	1.10, 10.00	2.10, 9.40

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Creatinine (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	769	768	760	1528	351
Mean	67.556	67.559	66.451	67.008	68.279
SD	11.8115	12.8680	11.4102	12.1734	13.8705
Median	67.000	66.000	65.000	65.000	66.000
Min, Max	41.00, 114.92	39.00, 194.48	41.00, 115.00	39.00, 194.48	44.00, 114.92
Week 4					
n	755	735	732	1467	340
Mean	67.733	63.075	60.039	61.560	67.595
SD	11.8887	12.6821	11.3973	12.1493	13.1009
Median	67.000	61.880	60.000	61.000	65.000
Min, Max	40.00, 114.92	35.00, 133.00	33.00, 114.92	33.00, 133.00	43.00, 114.92

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Creatinine (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	734	707	684	1391	329
Mean	68.364	62.533	59.726	61.153	68.157
SD	14.1342	12.3056	12.2006	12.3298	16.5386
Median	67.000	61.880	58.000	60.000	64.000
Min, Max	34.00, 259.00	30.00, 106.08	31.00, 127.00	30.00, 127.00	41.00, 238.00
Week 12					
n	723	693	672	1365	328
Mean	68.164	62.661	59.779	61.242	68.295
SD	12.2883	12.8392	12.4699	12.7359	13.2557
Median	67.000	61.880	58.000	60.000	67.000
Min, Max	37.00, 120.00	35.00, 131.00	33.00, 133.00	33.00, 133.00	44.00, 114.92
Week 16					
n	709	665	652	1317	318
Mean	68.250	62.820	59.877	61.363	68.571
SD	12.2709	15.0454	12.3904	13.8681	13.8300
Median	67.000	61.880	58.000	60.000	67.000
Min, Max	40.00, 118.00	33.00, 279.00	33.00, 146.00	33.00, 279.00	44.00, 123.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Creatinine (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	693	652	637	1289	314
Mean	68.278	62.171	59.512	60.857	68.756
SD	12.5245	12.3353	11.8319	12.1574	14.1206
Median	67.000	61.000	58.000	59.000	66.000
Min, Max	37.00, 126.00	31.00, 114.92	34.00, 118.00	31.00, 118.00	42.00, 123.76
Week 24					
n	684	659	638	1297	317
Mean	67.574	62.204	59.653	60.949	68.130
SD	12.1541	12.6712	12.0913	12.4501	13.6805
Median	66.000	61.880	58.000	60.000	65.000
Min, Max	40.00, 117.00	35.00, 108.00	30.00, 125.00	30.00, 125.00	39.00, 129.00
Week 28					
n	667	627	610	1237	299
Mean	69.275	64.061	60.562	62.335	69.107
SD	12.4732	15.5566	13.8675	14.8454	12.9489
Median	69.000	61.880	59.000	61.880	67.000
Min, Max	42.00, 132.60	35.00, 287.00	35.00, 253.00	35.00, 287.00	41.00, 106.08

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Creatinine (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	647	627	604	1231	302
Mean	69.373	63.798	60.413	62.137	69.795
SD	12.0527	17.3815	12.4218	15.2404	13.7035
Median	69.000	61.880	59.000	61.000	68.000
Min, Max	44.00, 117.00	35.00, 363.00	17.00, 143.00	17.00, 363.00	44.00, 114.92
Week 36					
n	654	630	619	1249	309
Mean	68.198	63.261	60.204	61.746	68.933
SD	12.5830	14.8993	13.8778	14.4773	13.2413
Median	67.000	61.880	58.000	60.000	68.000
Min, Max	43.00, 123.76	37.00, 199.00	33.00, 223.00	33.00, 223.00	39.00, 114.00
Week 40					
n	632	607	600	1207	297
Mean	69.456	63.853	61.815	62.840	70.167
SD	12.5522	12.7337	14.9933	13.9345	13.3554
Median	69.000	61.880	59.000	61.000	69.000
Min, Max	39.00, 125.00	35.00, 114.92	32.00, 253.00	32.00, 253.00	46.00, 107.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Creatinine (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	610	593	595	1188	296
Mean	69.538	63.771	61.163	62.465	69.626
SD	12.4594	12.5894	12.2569	12.4871	13.8454
Median	69.000	61.880	60.000	61.000	68.000
Min, Max	38.00, 114.92	38.00, 114.92	32.00, 106.08	32.00, 114.92	41.00, 124.00
Week 48					
n	606	605	608	1213	296
Mean	68.343	62.576	60.267	61.419	67.953
SD	13.1377	13.1137	12.3251	12.7716	13.2737
Median	67.000	61.880	59.000	60.000	65.500
Min, Max	37.00, 176.80	30.00, 106.08	33.00, 122.00	30.00, 122.00	37.00, 104.00
Week 52					
n	568	578	577	1155	288
Mean	70.126	63.581	60.960	62.272	70.091
SD	13.1345	12.7345	12.3399	12.6019	13.3827
Median	69.000	61.880	59.000	61.000	68.000
Min, Max	44.00, 167.96	36.00, 114.92	32.00, 107.00	32.00, 114.92	44.00, 111.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Creatinine (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	571	566	569	1135	284
Mean	70.413	63.913	61.196	62.551	70.150
SD	12.6866	13.1593	12.6496	12.9720	13.7334
Median	70.000	62.000	60.000	61.880	69.000
Min, Max	41.00, 138.00	31.00, 147.00	33.00, 164.00	31.00, 164.00	43.00, 111.00
Week 60					
n	564	580	591	1171	291
Mean	68.883	63.382	60.835	62.096	69.601
SD	12.7621	13.1037	12.6441	12.9312	13.3153
Median	68.000	61.880	59.000	61.000	68.000
Min, Max	32.00, 123.76	35.00, 120.00	30.00, 117.00	30.00, 120.00	44.20, 106.08
Week 64					
n	543	568	559	1127	271
Mean	70.694	63.923	61.391	62.667	71.139
SD	12.5766	12.6336	12.8719	12.8095	13.7429
Median	70.720	61.880	61.000	61.880	69.000
Min, Max	43.00, 123.76	34.00, 106.08	35.00, 124.00	34.00, 124.00	47.00, 118.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Creatinine (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	528	559	552	1111	278
Mean	71.009	64.481	60.867	62.685	70.743
SD	16.6028	13.5036	12.1546	12.9719	13.4312
Median	70.000	62.000	60.000	61.880	69.000
Min, Max	35.00, 315.00	33.00, 134.00	34.00, 97.24	33.00, 134.00	38.00, 106.08
Week 72					
n	523	570	567	1137	276
Mean	69.171	63.372	60.498	61.939	69.487
SD	12.5290	13.1640	13.4940	13.4010	13.4649
Median	68.000	61.880	59.000	61.000	68.000
Min, Max	39.00, 118.00	34.00, 114.92	28.00, 186.00	28.00, 186.00	44.20, 114.92
Week 76					
n	512	547	548	1095	267
Mean	70.980	64.279	61.698	62.987	71.041
SD	12.4359	12.8927	12.0923	12.5594	13.3959
Median	70.720	62.000	60.000	61.880	70.000
Min, Max	41.00, 132.60	30.00, 123.00	32.00, 99.00	30.00, 123.00	45.00, 106.08

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Creatinine (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	509	542	535	1077	268
Mean	70.718	65.754	61.911	63.845	70.833
SD	12.4748	22.7266	12.6473	18.5140	13.1978
Median	70.720	63.000	61.000	61.880	70.000
Min, Max	40.00, 123.76	34.00, 499.00	33.00, 145.00	33.00, 499.00	35.36, 106.08
Week 84					
n	517	557	555	1112	271
Mean	70.339	63.778	60.987	62.385	70.976
SD	15.3193	12.6339	12.4288	12.6039	15.6127
Median	69.000	62.000	60.000	61.880	70.000
Min, Max	40.00, 256.36	33.00, 114.92	33.00, 120.00	33.00, 120.00	42.00, 209.00
Week 88					
n	504	533	535	1068	262
Mean	70.815	65.123	61.613	63.365	71.571
SD	12.2708	13.4418	12.8022	13.2361	12.9321
Median	70.720	62.000	61.000	61.880	70.000
Min, Max	39.00, 123.76	35.00, 119.00	36.00, 123.00	35.00, 123.00	47.00, 114.92

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Creatinine (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	490	524	524	1048	258
Mean	70.947	64.762	61.725	63.244	71.924
SD	12.6515	12.9767	12.2877	12.7219	13.6663
Median	70.000	62.000	61.000	61.880	70.720
Min, Max	40.00, 141.44	35.00, 106.08	35.00, 110.00	35.00, 110.00	41.00, 127.00
Week 96					
n	491	535	523	1058	263
Mean	69.906	63.864	61.034	62.465	71.066
SD	12.8357	13.2525	12.6836	13.0453	12.8428
Median	70.000	62.000	60.000	61.880	69.000
Min, Max	38.00, 123.76	34.00, 114.92	35.00, 131.00	34.00, 131.00	44.00, 106.08

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Sodium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	769	768	760	1528	351
Mean	140.9	141.1	140.8	141.0	141.1
SD	2.35	2.18	2.25	2.22	2.11
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	124, 162	132, 149	133, 149	132, 149	135, 150
Week 4					
n	755	735	732	1467	339
Mean	140.7	141.2	140.9	141.0	141.1
SD	2.13	2.21	2.76	2.50	2.19
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	131, 152	133, 153	102, 151	102, 153	132, 149

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Sodium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	733	706	684	1390	329
Mean	140.8	141.0	140.8	140.9	140.9
SD	2.08	2.28	2.47	2.38	2.01
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	134, 153	130, 155	112, 148	112, 155	134, 148
Week 12					
n	723	693	672	1365	328
Mean	140.8	141.1	140.8	140.9	141.3
SD	2.08	2.22	2.18	2.20	2.43
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	134, 153	132, 154	134, 152	132, 154	134, 157
Week 16					
n	708	665	652	1317	317
Mean	140.7	141.0	140.8	140.9	141.0
SD	2.08	2.15	2.41	2.29	2.41
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	132, 152	132, 149	132, 154	132, 154	134, 154

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Sodium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	692	652	637	1289	314
Mean	140.8	140.8	140.6	140.7	141.0
SD	2.32	2.10	2.25	2.18	2.12
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	125, 154	129, 149	128, 151	128, 151	133, 148
Week 24					
n	684	659	638	1297	316
Mean	140.8	141.0	140.9	141.0	141.1
SD	2.10	2.11	2.36	2.23	2.26
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	134, 151	135, 154	131, 155	131, 155	135, 154
Week 28					
n	667	628	610	1238	299
Mean	140.7	140.9	140.8	140.9	141.0
SD	2.16	2.22	2.16	2.19	2.19
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	133, 149	133, 150	134, 148	133, 150	135, 151

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Sodium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	646	626	603	1229	302
Mean	140.8	140.9	140.7	140.8	140.9
SD	2.32	2.20	2.46	2.33	2.21
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	132, 154	135, 154	122, 154	122, 154	134, 149
Week 36					
n	654	630	619	1249	309
Mean	140.6	140.9	140.7	140.8	141.1
SD	2.37	2.07	2.22	2.15	2.21
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	109, 150	133, 148	131, 151	131, 151	135, 150
Week 40					
n	632	607	600	1207	297
Mean	140.7	141.0	140.8	140.9	140.7
SD	2.26	2.32	2.24	2.28	2.37
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	133, 150	128, 151	133, 148	128, 151	125, 147

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Sodium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	609	590	595	1185	296
Mean	140.7	140.8	140.9	140.9	140.7
SD	2.31	2.29	2.31	2.30	2.10
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	127, 152	128, 152	135, 155	128, 155	136, 148
Week 48					
n	606	605	608	1213	296
Mean	140.6	141.0	140.8	140.9	140.8
SD	2.25	2.66	2.36	2.52	2.16
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	124, 151	101, 154	131, 156	101, 156	134, 149
Week 52					
n	568	578	576	1154	288
Mean	140.7	140.9	140.7	140.8	141.0
SD	2.23	2.04	2.14	2.09	2.28
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	132, 150	133, 150	134, 154	133, 154	134, 149

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Sodium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	571	565	569	1134	284
Mean	140.7	140.9	140.8	140.9	140.9
SD	2.26	2.25	2.33	2.29	2.12
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	133, 149	130, 150	134, 150	130, 150	134, 150
Week 60					
n	564	580	589	1169	291
Mean	140.5	140.9	140.8	140.8	140.8
SD	2.28	2.03	2.31	2.18	2.16
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	121, 150	134, 152	133, 152	133, 152	136, 155
Week 64					
n	543	568	558	1126	271
Mean	140.7	141.0	140.7	140.8	141.1
SD	2.29	2.12	2.13	2.13	2.23
Median	141.0	141.0	140.0	141.0	141.0
Min, Max	132, 151	133, 149	134, 148	133, 149	136, 154

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Sodium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	528	559	551	1110	278
Mean	140.7	140.8	140.6	140.7	141.0
SD	2.16	2.15	2.56	2.36	2.25
Median	141.0	141.0	140.0	141.0	141.0
Min, Max	134, 148	135, 149	132, 167	132, 167	135, 151
Week 72					
n	523	569	567	1136	276
Mean	140.7	141.0	140.6	140.8	141.1
SD	2.28	2.21	2.26	2.24	2.33
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	134, 156	132, 153	131, 152	131, 153	134, 151
Week 76					
n	512	545	548	1093	265
Mean	140.7	140.8	140.7	140.8	140.9
SD	2.18	2.23	2.41	2.32	2.09
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	133, 148	135, 149	127, 150	127, 150	135, 148

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Sodium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	509	542	534	1076	268
Mean	140.6	140.8	140.6	140.7	140.9
SD	2.25	2.37	2.47	2.42	1.93
Median	140.0	141.0	140.0	141.0	141.0
Min, Max	129, 155	130, 161	125, 153	125, 161	136, 148
Week 84					
n	517	557	556	1113	271
Mean	140.7	140.9	140.6	140.7	141.2
SD	2.10	2.05	2.21	2.13	2.58
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	133, 150	131, 149	125, 147	125, 149	134, 156
Week 88					
n	504	533	534	1067	262
Mean	140.7	140.7	140.7	140.7	140.8
SD	2.15	2.20	2.26	2.23	2.13
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	131, 148	135, 153	126, 152	126, 153	135, 150

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Sodium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	490	523	524	1047	258
Mean	140.4	140.7	140.7	140.7	140.9
SD	2.05	2.14	2.33	2.24	2.41
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	134, 149	131, 148	124, 148	124, 148	131, 151
Week 96					
n	491	534	523	1057	263
Mean	140.9	141.0	140.8	140.9	140.9
SD	2.24	2.37	2.20	2.29	2.37
Median	141.0	141.0	141.0	141.0	141.0
Min, Max	135, 154	131, 157	130, 151	130, 157	134, 155

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Potassium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	769	768	759	1527	351
Mean	4.29	4.26	4.25	4.25	4.28
SD	0.348	0.360	0.358	0.359	0.378
Median	4.30	4.20	4.20	4.20	4.20
Min, Max	3.4, 6.0	3.1, 5.8	3.0, 6.2	3.0, 6.2	3.3, 5.9
Week 4					
n	753	731	730	1461	339
Mean	4.30	4.32	4.30	4.31	4.27
SD	0.362	0.390	0.394	0.392	0.390
Median	4.30	4.30	4.30	4.30	4.30
Min, Max	3.2, 5.6	3.2, 6.2	2.9, 6.2	2.9, 6.2	3.1, 5.5

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Potassium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	731	704	682	1386	328
Mean	4.30	4.32	4.28	4.30	4.30
SD	0.429	0.383	0.384	0.384	0.388
Median	4.30	4.30	4.30	4.30	4.20
Min, Max	3.2, 11.0	3.3, 6.2	3.0, 5.9	3.0, 6.2	3.3, 5.9
Week 12					
n	723	690	670	1360	328
Mean	4.30	4.31	4.29	4.30	4.31
SD	0.364	0.385	0.380	0.383	0.365
Median	4.30	4.30	4.30	4.30	4.30
Min, Max	3.3, 6.6	3.2, 5.7	2.9, 5.9	2.9, 5.9	3.4, 5.7
Week 16					
n	708	664	649	1313	316
Mean	4.33	4.33	4.31	4.32	4.33
SD	0.375	0.389	0.384	0.387	0.414
Median	4.30	4.30	4.30	4.30	4.30
Min, Max	3.4, 6.1	3.3, 5.8	3.3, 6.0	3.3, 6.0	3.4, 5.9

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Potassium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	690	647	635	1282	313
Mean	4.33	4.31	4.28	4.30	4.35
SD	0.371	0.378	0.388	0.383	0.381
Median	4.30	4.30	4.20	4.30	4.30
Min, Max	3.1, 5.6	3.3, 5.9	3.1, 5.7	3.1, 5.9	3.5, 6.0
Week 24					
n	681	658	634	1292	314
Mean	4.31	4.32	4.30	4.31	4.31
SD	0.362	0.390	0.389	0.390	0.378
Median	4.30	4.30	4.30	4.30	4.30
Min, Max	3.4, 6.0	3.1, 5.9	3.0, 6.0	3.0, 6.0	3.2, 5.8
Week 28					
n	665	623	609	1232	297
Mean	4.31	4.34	4.29	4.31	4.30
SD	0.459	0.368	0.485	0.431	0.397
Median	4.30	4.30	4.30	4.30	4.30
Min, Max	3.2, 11.0	3.4, 5.5	3.0, 11.0	3.0, 11.0	3.2, 6.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Potassium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	645	620	603	1223	297
Mean	4.29	4.31	4.28	4.29	4.31
SD	0.367	0.386	0.475	0.432	0.443
Median	4.20	4.30	4.20	4.20	4.20
Min, Max	3.1, 6.0	3.3, 6.0	3.2, 11.0	3.2, 11.0	3.5, 6.2
Week 36					
n	653	627	618	1245	309
Mean	4.33	4.32	4.30	4.31	4.32
SD	0.363	0.382	0.381	0.382	0.391
Median	4.30	4.30	4.30	4.30	4.30
Min, Max	3.3, 5.8	3.4, 6.0	3.2, 5.6	3.2, 6.0	3.5, 5.5
Week 40					
n	632	606	595	1201	296
Mean	4.27	4.29	4.28	4.29	4.32
SD	0.361	0.376	0.404	0.390	0.411
Median	4.20	4.25	4.20	4.20	4.20
Min, Max	3.4, 5.7	3.3, 5.8	3.1, 6.2	3.1, 6.2	3.5, 5.6

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Potassium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	606	590	593	1183	294
Mean	4.30	4.29	4.29	4.29	4.28
SD	0.349	0.383	0.395	0.389	0.422
Median	4.30	4.20	4.20	4.20	4.20
Min, Max	3.5, 5.4	3.4, 5.8	3.4, 5.9	3.4, 5.9	3.2, 5.9
Week 48					
n	601	602	606	1208	295
Mean	4.27	4.28	4.25	4.26	4.25
SD	0.427	0.352	0.353	0.352	0.357
Median	4.20	4.30	4.20	4.20	4.20
Min, Max	3.5, 11.0	2.7, 5.7	3.1, 5.6	2.7, 5.7	3.3, 5.3
Week 52					
n	562	577	573	1150	287
Mean	4.29	4.28	4.28	4.28	4.28
SD	0.366	0.374	0.399	0.387	0.430
Median	4.25	4.20	4.20	4.20	4.20
Min, Max	3.4, 5.7	3.4, 5.7	3.2, 6.2	3.2, 6.2	3.3, 6.3

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Potassium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	569	563	566	1129	281
Mean	4.26	4.32	4.25	4.28	4.30
SD	0.353	0.392	0.397	0.396	0.403
Median	4.20	4.30	4.20	4.20	4.20
Min, Max	3.4, 5.9	3.5, 5.6	3.1, 5.9	3.1, 5.9	3.3, 5.7
Week 60					
n	562	578	586	1164	290
Mean	4.32	4.32	4.31	4.32	4.32
SD	0.364	0.371	0.404	0.388	0.407
Median	4.30	4.30	4.30	4.30	4.30
Min, Max	3.3, 5.9	3.4, 5.8	3.4, 6.1	3.4, 6.1	3.1, 5.9
Week 64					
n	540	564	555	1119	270
Mean	4.27	4.31	4.26	4.29	4.30
SD	0.358	0.380	0.384	0.383	0.404
Median	4.30	4.30	4.20	4.20	4.30
Min, Max	3.5, 5.9	3.3, 5.6	3.3, 5.7	3.3, 5.7	3.4, 5.6

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Potassium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	525	552	550	1102	277
Mean	4.26	4.30	4.28	4.29	4.33
SD	0.381	0.385	0.401	0.393	0.444
Median	4.20	4.30	4.20	4.20	4.20
Min, Max	3.2, 5.8	3.3, 5.8	3.4, 6.1	3.3, 6.1	3.3, 6.2
Week 72					
n	523	568	564	1132	275
Mean	4.28	4.32	4.28	4.30	4.31
SD	0.352	0.363	0.364	0.364	0.382
Median	4.20	4.30	4.20	4.30	4.30
Min, Max	3.1, 5.8	3.2, 5.6	3.3, 5.9	3.2, 5.9	3.4, 6.0
Week 76					
n	510	543	546	1089	262
Mean	4.28	4.31	4.29	4.30	4.30
SD	0.371	0.385	0.384	0.384	0.381
Median	4.20	4.30	4.20	4.30	4.30
Min, Max	3.3, 5.7	3.4, 5.9	3.2, 6.0	3.2, 6.0	3.2, 6.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Potassium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	508	540	529	1069	268
Mean	4.27	4.29	4.27	4.28	4.30
SD	0.361	0.414	0.405	0.409	0.444
Median	4.20	4.20	4.20	4.20	4.20
Min, Max	3.5, 5.6	3.3, 6.0	3.1, 6.0	3.1, 6.0	3.4, 6.4
Week 84					
n	515	553	555	1108	271
Mean	4.32	4.34	4.30	4.32	4.35
SD	0.378	0.379	0.386	0.383	0.415
Median	4.30	4.30	4.30	4.30	4.30
Min, Max	3.4, 6.0	3.4, 5.6	3.4, 6.0	3.4, 6.0	3.5, 5.8
Week 88					
n	503	532	534	1066	260
Mean	4.28	4.31	4.26	4.28	4.31
SD	0.381	0.391	0.397	0.394	0.409
Median	4.30	4.30	4.20	4.20	4.20
Min, Max	3.3, 6.3	3.1, 5.7	3.2, 6.5	3.1, 6.5	3.2, 6.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Potassium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	488	521	523	1044	257
Mean	4.28	4.30	4.28	4.29	4.31
SD	0.371	0.408	0.404	0.406	0.418
Median	4.20	4.30	4.25	4.30	4.30
Min, Max	3.2, 5.5	3.3, 6.4	3.3, 6.0	3.3, 6.4	3.4, 5.7
Week 96					
n	487	531	522	1053	262
Mean	4.25	4.30	4.24	4.27	4.24
SD	0.353	0.357	0.366	0.363	0.389
Median	4.20	4.30	4.20	4.20	4.20
Min, Max	3.4, 5.5	3.1, 5.7	3.2, 5.8	3.1, 5.8	3.4, 6.0

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Chloride (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	769	768	760	1528	351
Mean	104.2	104.3	104.0	104.1	104.1
SD	2.25	2.27	2.18	2.24	2.04
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	89, 122	96, 112	95, 110	95, 112	97, 112
Week 4					
n	755	735	732	1467	339
Mean	104.3	104.3	103.8	104.0	104.3
SD	2.25	2.24	2.59	2.43	2.08
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	96, 113	97, 114	74, 115	74, 115	99, 112

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Chloride (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	733	706	684	1390	329
Mean	104.4	104.0	103.8	103.9	104.3
SD	2.14	2.32	2.35	2.34	2.32
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	97, 113	90, 115	81, 112	81, 115	97, 113
Week 12					
n	723	693	672	1365	328
Mean	104.4	103.9	103.8	103.8	104.5
SD	2.15	2.25	2.17	2.21	2.11
Median	104.0	104.0	104.0	104.0	105.0
Min, Max	96, 112	93, 114	97, 113	93, 114	99, 113
Week 16					
n	708	665	652	1317	317
Mean	104.3	103.9	103.7	103.8	104.3
SD	2.16	2.17	2.28	2.23	2.21
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	97, 111	95, 114	95, 113	95, 114	98, 112

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Chloride (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	692	652	637	1289	314
Mean	104.4	103.8	103.6	103.7	104.2
SD	2.36	2.17	2.19	2.18	2.24
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	90, 116	95, 111	97, 111	95, 111	95, 111
Week 24					
n	684	659	638	1297	316
Mean	104.4	103.9	103.7	103.8	104.4
SD	2.13	2.30	2.34	2.32	2.40
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	98, 111	95, 115	95, 115	95, 115	96, 119
Week 28					
n	667	628	610	1238	299
Mean	104.3	103.8	103.5	103.6	104.2
SD	2.17	2.30	2.24	2.27	2.19
Median	104.0	104.0	103.0	104.0	104.0
Min, Max	97, 112	97, 114	96, 111	96, 114	98, 111

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Chloride (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	646	626	604	1230	302
Mean	104.3	103.7	103.5	103.6	104.1
SD	2.27	2.29	2.42	2.35	2.06
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	96, 116	97, 115	90, 117	90, 117	97, 111
Week 36					
n	654	630	620	1250	309
Mean	104.2	103.8	103.6	103.7	104.4
SD	2.35	2.17	2.30	2.24	2.11
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	80, 111	96, 111	96, 113	96, 113	95, 110
Week 40					
n	632	607	600	1207	297
Mean	104.1	103.8	103.6	103.7	104.0
SD	2.18	2.26	2.28	2.27	2.47
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	97, 110	93, 112	96, 112	93, 112	92, 111

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Chloride (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	610	591	595	1186	296
Mean	104.3	103.8	103.7	103.7	104.1
SD	2.24	2.23	2.26	2.25	2.22
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	94, 114	94, 113	97, 112	94, 113	98, 110
Week 48					
n	606	605	608	1213	296
Mean	104.1	103.8	103.6	103.7	104.2
SD	2.39	2.50	2.43	2.47	2.08
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	86, 114	73, 111	95, 119	73, 119	98, 110
Week 52					
n	568	578	576	1154	288
Mean	104.2	103.9	103.6	103.7	104.3
SD	2.18	2.24	2.21	2.23	2.19
Median	104.0	104.0	103.0	104.0	104.0
Min, Max	96, 112	95, 113	96, 114	95, 114	97, 110

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Chloride (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	571	565	569	1134	284
Mean	104.1	103.8	103.6	103.7	104.2
SD	2.33	2.41	2.38	2.40	2.01
Median	104.0	104.0	103.0	104.0	104.0
Min, Max	95, 113	95, 114	93, 111	93, 114	98, 110
Week 60					
n	564	580	589	1169	291
Mean	104.2	104.1	103.7	103.9	104.3
SD	2.37	2.14	2.26	2.20	2.20
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	90, 112	97, 112	96, 112	96, 112	99, 112
Week 64					
n	543	568	558	1126	271
Mean	104.3	103.9	103.5	103.7	104.2
SD	2.32	2.23	2.31	2.28	2.20
Median	104.0	104.0	103.0	104.0	104.0
Min, Max	92, 114	97, 112	96, 111	96, 112	99, 114

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Chloride (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	528	559	551	1110	278
Mean	104.1	103.7	103.5	103.6	104.2
SD	2.14	2.29	2.46	2.38	2.17
Median	104.0	104.0	103.0	104.0	104.0
Min, Max	96, 111	95, 113	96, 126	95, 126	98, 112
Week 72					
n	523	569	567	1136	276
Mean	104.2	103.9	103.7	103.8	104.3
SD	2.42	2.16	2.29	2.23	2.47
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	97, 120	97, 110	92, 110	92, 110	97, 113
Week 76					
n	511	545	548	1093	265
Mean	104.2	103.7	103.6	103.6	104.0
SD	2.26	2.33	2.42	2.38	2.23
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	96, 110	97, 111	91, 110	91, 111	97, 110

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Chloride (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	509	542	534	1076	268
Mean	104.2	103.8	103.6	103.7	104.2
SD	2.28	2.40	2.33	2.37	2.11
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	95, 111	94, 121	91, 113	91, 121	97, 110
Week 84					
n	517	557	556	1113	271
Mean	104.3	104.0	103.7	103.9	104.5
SD	2.35	2.22	2.46	2.35	2.24
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	95, 113	95, 112	90, 112	90, 112	98, 114
Week 88					
n	504	533	534	1067	262
Mean	104.3	103.8	103.7	103.8	104.2
SD	2.33	2.22	2.36	2.29	2.11
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	96, 110	96, 115	93, 116	93, 116	97, 111

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Chloride (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	490	523	524	1047	258
Mean	104.0	103.7	103.6	103.7	104.1
SD	2.14	2.28	2.21	2.25	2.33
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	92, 110	91, 110	90, 113	90, 113	92, 110
Week 96					
n	491	534	523	1057	263
Mean	104.2	103.9	103.7	103.8	104.0
SD	2.39	2.39	2.25	2.32	2.26
Median	104.0	104.0	104.0	104.0	104.0
Min, Max	95, 115	94, 118	96, 111	94, 118	97, 113

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Bicarbonate (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	769	766	759	1525	351
Mean	25.17	25.24	25.10	25.17	25.27
SD	2.776	2.783	2.823	2.803	2.927
Median	25.40	25.40	25.30	25.30	25.60
Min, Max	14.0, 33.9	16.3, 31.9	16.7, 32.5	16.3, 32.5	14.9, 30.9
Week 4					
n	753	733	728	1461	335
Mean	25.35	25.83	25.67	25.75	25.44
SD	2.802	2.831	2.891	2.861	2.909
Median	25.70	26.20	25.90	26.00	25.80
Min, Max	13.4, 32.5	12.6, 33.1	14.6, 32.5	12.6, 33.1	16.0, 31.7

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Bicarbonate (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	731	702	680	1382	327
Mean	25.31	25.90	25.63	25.77	25.42
SD	2.866	2.809	2.709	2.763	2.864
Median	25.70	26.10	25.75	25.90	25.80
Min, Max	12.0, 31.6	15.1, 32.5	15.2, 32.2	15.1, 32.5	14.9, 32.2
Week 12					
n	719	692	669	1361	322
Mean	25.34	25.84	25.57	25.71	25.44
SD	2.897	2.933	2.822	2.881	2.754
Median	25.50	26.10	25.70	25.90	25.80
Min, Max	13.5, 32.3	16.1, 33.8	16.6, 34.1	16.1, 34.1	15.8, 31.2
Week 16					
n	707	662	647	1309	313
Mean	25.50	25.98	25.73	25.85	25.82
SD	2.843	2.976	3.004	2.991	3.072
Median	25.80	26.20	26.10	26.20	26.40
Min, Max	14.9, 32.7	14.4, 32.5	11.9, 34.0	11.9, 34.0	13.7, 32.7

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Bicarbonate (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	689	646	633	1279	311
Mean	25.63	25.94	25.80	25.87	25.71
SD	2.653	2.874	2.818	2.846	3.088
Median	25.70	26.10	25.90	26.00	26.10
Min, Max	14.8, 32.4	10.3, 32.9	14.7, 34.0	10.3, 34.0	12.4, 32.4
Week 24					
n	681	657	632	1289	315
Mean	25.29	25.93	25.90	25.92	25.56
SD	2.784	2.971	2.867	2.920	3.057
Median	25.50	26.30	26.20	26.20	26.00
Min, Max	14.8, 34.1	15.3, 32.6	13.8, 33.2	13.8, 33.2	14.9, 33.7
Week 28					
n	661	623	602	1225	297
Mean	23.75	24.18	23.97	24.08	23.96
SD	2.532	2.621	2.455	2.542	2.322
Median	23.80	24.20	23.90	24.10	23.90
Min, Max	12.6, 29.8	11.4, 32.6	14.1, 35.3	11.4, 35.3	15.5, 29.2

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Bicarbonate (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	641	625	603	1228	297
Mean	23.54	24.26	24.13	24.20	23.96
SD	2.418	2.544	2.556	2.550	2.430
Median	23.80	24.40	24.20	24.30	24.10
Min, Max	14.8, 30.0	12.2, 30.9	15.8, 31.1	12.2, 31.1	16.0, 30.2
Week 36					
n	651	628	615	1243	306
Mean	25.35	25.81	25.73	25.77	25.83
SD	2.973	3.053	2.916	2.985	2.930
Median	25.60	26.20	25.90	26.10	26.10
Min, Max	13.9, 34.3	13.8, 32.7	15.2, 35.3	13.8, 35.3	14.7, 33.1
Week 40					
n	629	606	599	1205	295
Mean	23.90	24.15	24.01	24.08	23.98
SD	2.429	2.509	2.615	2.562	2.423
Median	24.10	24.40	24.30	24.30	23.90
Min, Max	14.5, 30.9	15.0, 30.8	14.0, 32.2	14.0, 32.2	17.2, 29.7

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Bicarbonate (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	609	585	592	1177	295
Mean	23.68	24.11	24.18	24.14	23.82
SD	2.423	2.607	2.640	2.623	2.366
Median	23.80	24.20	24.30	24.20	23.90
Min, Max	15.1, 31.5	12.9, 31.2	15.1, 31.9	12.9, 31.9	15.1, 29.8
Week 48					
n	603	601	605	1206	296
Mean	25.03	25.67	25.53	25.60	25.37
SD	2.918	3.122	3.013	3.068	2.657
Median	25.20	26.00	25.70	25.80	25.70
Min, Max	14.0, 34.0	14.5, 33.3	14.1, 32.0	14.1, 33.3	18.0, 30.5
Week 52					
n	558	576	573	1149	286
Mean	23.72	24.07	24.10	24.08	23.66
SD	2.501	2.644	2.640	2.641	2.414
Median	23.75	24.20	24.10	24.20	23.60
Min, Max	16.0, 31.4	14.9, 30.2	13.4, 33.9	13.4, 33.9	15.5, 30.5

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Bicarbonate (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	567	560	564	1124	282
Mean	23.73	24.25	24.00	24.13	23.78
SD	2.504	2.531	2.713	2.626	2.384
Median	24.00	24.35	24.10	24.30	24.00
Min, Max	15.2, 30.6	14.2, 31.0	13.4, 30.9	13.4, 31.0	15.3, 30.1
Week 60					
n	562	579	588	1167	287
Mean	25.29	25.63	25.42	25.53	25.26
SD	2.952	3.096	3.196	3.148	3.159
Median	25.55	25.90	25.85	25.90	25.80
Min, Max	15.2, 32.1	15.0, 32.7	14.4, 33.6	14.4, 33.6	12.8, 32.2
Week 64					
n	539	564	550	1114	267
Mean	23.68	24.13	23.98	24.06	23.88
SD	2.467	2.585	2.638	2.611	2.345
Median	23.80	24.30	24.10	24.20	24.00
Min, Max	15.3, 30.4	15.1, 31.5	14.5, 33.1	14.5, 33.1	14.0, 28.8

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Bicarbonate (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	527	555	547	1102	276
Mean	23.63	24.03	23.95	23.99	23.91
SD	2.531	2.685	2.681	2.682	2.444
Median	23.80	24.20	24.20	24.20	24.10
Min, Max	14.8, 30.0	12.3, 32.4	14.7, 33.1	12.3, 33.1	15.9, 30.2
Week 72					
n	522	566	566	1132	275
Mean	25.15	25.60	25.31	25.45	25.37
SD	3.023	3.122	3.001	3.065	3.034
Median	25.35	25.80	25.50	25.60	25.80
Min, Max	14.1, 33.5	11.7, 35.1	14.7, 34.0	11.7, 35.1	14.7, 31.6
Week 76					
n	510	546	545	1091	266
Mean	23.52	23.85	23.58	23.71	23.71
SD	2.570	2.557	2.625	2.594	2.542
Median	23.70	24.00	23.60	23.80	23.80
Min, Max	12.5, 30.0	13.9, 30.4	14.0, 30.8	13.9, 30.8	13.8, 29.2

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Bicarbonate (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	507	534	532	1066	265
Mean	23.30	23.73	23.75	23.74	23.83
SD	2.512	2.565	2.586	2.574	2.440
Median	23.40	23.90	23.90	23.90	24.10
Min, Max	14.8, 31.1	15.2, 30.9	15.2, 33.1	15.2, 33.1	16.4, 32.7
Week 84					
n	516	553	551	1104	269
Mean	25.10	25.45	25.45	25.45	25.52
SD	3.090	3.087	2.918	3.002	2.864
Median	25.50	25.80	25.70	25.70	25.90
Min, Max	12.8, 33.5	14.8, 33.9	14.9, 32.9	14.8, 33.9	14.1, 31.9
Week 88					
n	500	533	530	1063	259
Mean	23.41	23.82	23.79	23.80	23.63
SD	2.665	2.630	2.638	2.633	2.435
Median	23.50	24.00	23.90	23.90	23.60
Min, Max	5.4, 31.1	14.6, 32.5	12.4, 31.6	12.4, 32.5	15.0, 29.7

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Bicarbonate (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	489	519	517	1036	257
Mean	23.63	23.91	23.74	23.82	23.78
SD	2.551	2.668	2.635	2.652	2.503
Median	23.70	24.10	23.80	23.90	23.70
Min, Max	16.0, 31.9	14.6, 30.9	15.2, 31.1	14.6, 31.1	16.3, 30.8
Week 96					
n	489	532	517	1049	259
Mean	25.00	25.36	25.19	25.27	25.21
SD	3.017	3.155	3.009	3.084	2.863
Median	25.20	25.60	25.60	25.60	25.50
Min, Max	16.0, 32.1	11.6, 34.9	16.0, 31.9	11.6, 34.9	16.9, 32.4

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Calcium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	743	744	741	1485	348
Mean	2.425	2.418	2.424	2.421	2.437
SD	0.0942	0.0927	0.0960	0.0944	0.1020
Median	2.420	2.420	2.425	2.420	2.430
Min, Max	2.10, 2.75	2.10, 2.88	2.05, 2.75	2.05, 2.88	2.11, 2.89
Week 4					
n	739	722	718	1440	338
Mean	2.414	2.417	2.416	2.417	2.418
SD	0.0947	0.0959	0.0959	0.0959	0.0926
Median	2.410	2.420	2.420	2.420	2.420
Min, Max	2.05, 2.90	2.10, 2.70	2.00, 2.75	2.00, 2.75	2.15, 2.89

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Calcium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	725	701	680	1381	327
Mean	2.410	2.421	2.420	2.421	2.410
SD	0.0918	0.0926	0.0887	0.0907	0.0994
Median	2.410	2.420	2.420	2.420	2.410
Min, Max	2.16, 2.81	2.09, 2.72	2.10, 2.68	2.09, 2.72	2.11, 3.07
Week 12					
n	716	690	670	1360	328
Mean	2.411	2.428	2.429	2.428	2.413
SD	0.0929	0.0948	0.0944	0.0946	0.0953
Median	2.410	2.423	2.430	2.425	2.400
Min, Max	2.16, 2.75	2.08, 2.73	2.05, 2.78	2.05, 2.78	2.17, 2.96
Week 16					
n	706	662	652	1314	318
Mean	2.404	2.418	2.420	2.419	2.409
SD	0.0917	0.0883	0.0923	0.0903	0.1012
Median	2.400	2.420	2.420	2.420	2.400
Min, Max	2.17, 2.73	2.09, 2.68	2.13, 2.74	2.09, 2.74	2.14, 2.80

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Calcium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	691	652	637	1289	314
Mean	2.405	2.413	2.415	2.414	2.408
SD	0.0941	0.0898	0.0930	0.0914	0.0964
Median	2.400	2.420	2.420	2.420	2.400
Min, Max	2.12, 3.00	2.09, 2.70	2.04, 2.75	2.04, 2.75	2.17, 2.94
Week 24					
n	682	659	638	1297	317
Mean	2.400	2.419	2.425	2.422	2.395
SD	0.0946	0.0917	0.0952	0.0935	0.1176
Median	2.400	2.420	2.425	2.420	2.390
Min, Max	1.93, 2.79	2.11, 2.78	2.08, 2.78	2.08, 2.78	1.63, 2.92
Week 28					
n	667	628	609	1237	299
Mean	2.398	2.411	2.413	2.412	2.398
SD	0.0926	0.0865	0.0908	0.0886	0.1018
Median	2.400	2.410	2.410	2.410	2.390
Min, Max	2.05, 2.76	2.10, 2.66	2.13, 2.73	2.10, 2.73	2.10, 2.92

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Calcium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	646	627	604	1231	302
Mean	2.396	2.407	2.409	2.408	2.400
SD	0.0943	0.0958	0.0881	0.0921	0.1001
Median	2.390	2.400	2.410	2.400	2.390
Min, Max	2.17, 3.06	2.10, 2.94	2.10, 2.65	2.10, 2.94	2.12, 2.78
Week 36					
n	654	631	620	1251	309
Mean	2.402	2.415	2.414	2.414	2.403
SD	0.0973	0.0918	0.0924	0.0920	0.0999
Median	2.400	2.400	2.410	2.410	2.400
Min, Max	1.74, 2.73	2.11, 2.78	1.98, 2.72	1.98, 2.78	2.14, 3.02
Week 40					
n	631	607	600	1207	297
Mean	2.388	2.401	2.407	2.404	2.395
SD	0.0910	0.0965	0.0913	0.0940	0.1031
Median	2.380	2.400	2.400	2.400	2.390
Min, Max	2.15, 2.78	2.04, 2.69	2.08, 2.66	2.04, 2.69	2.12, 2.98

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Calcium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	610	593	595	1188	296
Mean	2.391	2.400	2.406	2.403	2.387
SD	0.0913	0.0965	0.0936	0.0951	0.0938
Median	2.400	2.400	2.400	2.400	2.385
Min, Max	2.14, 2.77	1.90, 2.74	2.10, 2.71	1.90, 2.74	2.14, 2.92
Week 48					
n	606	605	608	1213	296
Mean	2.393	2.405	2.410	2.408	2.379
SD	0.0929	0.1017	0.0964	0.0990	0.1088
Median	2.400	2.400	2.410	2.410	2.380
Min, Max	2.00, 2.69	1.68, 2.68	2.01, 2.72	1.68, 2.72	1.90, 2.93
Week 52					
n	568	578	577	1155	288
Mean	2.379	2.391	2.400	2.396	2.385
SD	0.0865	0.0886	0.0893	0.0890	0.1028
Median	2.375	2.390	2.400	2.400	2.380
Min, Max	2.13, 2.67	2.12, 2.67	2.16, 2.73	2.12, 2.73	2.08, 2.94

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Calcium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	570	565	569	1134	284
Mean	2.386	2.398	2.397	2.397	2.389
SD	0.0905	0.0907	0.0906	0.0906	0.1016
Median	2.380	2.400	2.400	2.400	2.390
Min, Max	2.12, 2.70	2.14, 2.67	2.12, 2.68	2.12, 2.68	1.77, 2.93
Week 60					
n	564	580	590	1170	291
Mean	2.390	2.397	2.408	2.403	2.407
SD	0.0879	0.0936	0.0911	0.0925	0.0921
Median	2.390	2.400	2.410	2.400	2.400
Min, Max	1.97, 2.63	2.13, 2.68	2.12, 2.65	2.12, 2.68	2.20, 2.91
Week 64					
n	542	568	558	1126	271
Mean	2.386	2.393	2.398	2.396	2.391
SD	0.0851	0.0945	0.0872	0.0909	0.0867
Median	2.390	2.390	2.400	2.390	2.390
Min, Max	2.13, 2.75	2.07, 2.68	2.11, 2.67	2.07, 2.68	2.18, 2.73

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Calcium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	528	559	552	1111	278
Mean	2.380	2.397	2.393	2.395	2.393
SD	0.0929	0.0911	0.1003	0.0958	0.0866
Median	2.375	2.400	2.400	2.400	2.390
Min, Max	2.08, 2.63	1.99, 2.68	1.53, 2.73	1.53, 2.73	2.17, 2.89
Week 72					
n	522	569	567	1136	276
Mean	2.386	2.402	2.399	2.401	2.403
SD	0.0887	0.0952	0.0907	0.0930	0.1005
Median	2.380	2.400	2.400	2.400	2.400
Min, Max	2.15, 2.70	2.07, 2.73	2.12, 2.65	2.07, 2.73	1.81, 2.78
Week 76					
n	512	546	548	1094	267
Mean	2.381	2.394	2.398	2.396	2.399
SD	0.0939	0.0940	0.0899	0.0919	0.0931
Median	2.375	2.390	2.400	2.400	2.400
Min, Max	2.13, 2.79	2.07, 2.70	1.98, 2.68	1.98, 2.70	2.18, 2.95

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Calcium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	509	542	535	1077	267
Mean	2.381	2.395	2.394	2.394	2.395
SD	0.0876	0.0968	0.0849	0.0910	0.0982
Median	2.380	2.395	2.390	2.390	2.400
Min, Max	2.10, 2.66	2.08, 2.75	2.16, 2.70	2.08, 2.75	2.16, 2.90
Week 84					
n	517	557	555	1112	271
Mean	2.390	2.400	2.401	2.401	2.412
SD	0.0905	0.0955	0.0929	0.0942	0.0996
Median	2.390	2.400	2.400	2.400	2.410
Min, Max	2.05, 2.77	2.06, 2.65	2.03, 2.73	2.03, 2.73	2.17, 2.88
Week 88					
n	504	533	534	1067	262
Mean	2.379	2.393	2.393	2.393	2.396
SD	0.0925	0.0961	0.0910	0.0936	0.0944
Median	2.380	2.390	2.400	2.390	2.390
Min, Max	2.09, 2.73	2.12, 2.70	2.09, 2.68	2.09, 2.70	2.14, 2.84

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Calcium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	490	524	524	1048	258
Mean	2.383	2.397	2.398	2.398	2.399
SD	0.0866	0.0958	0.0929	0.0943	0.0957
Median	2.380	2.400	2.400	2.400	2.390
Min, Max	2.16, 2.73	1.88, 2.73	1.90, 2.71	1.88, 2.73	2.13, 2.92
Week 96					
n	491	535	523	1058	263
Mean	2.388	2.405	2.402	2.403	2.412
SD	0.1281	0.1024	0.1011	0.1017	0.1015
Median	2.390	2.400	2.400	2.400	2.410
Min, Max	0.63, 2.82	2.05, 2.73	2.00, 2.71	2.00, 2.73	2.12, 2.90

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Magnesium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	743	744	741	1485	348
Mean	0.879	0.880	0.877	0.879	0.877
SD	0.0699	0.0656	0.0655	0.0655	0.0637
Median	0.880	0.880	0.880	0.880	0.870
Min, Max	0.50, 1.28	0.72, 1.44	0.70, 1.32	0.70, 1.44	0.69, 1.04
Week 4					
n	739	722	719	1441	338
Mean	0.871	0.867	0.862	0.865	0.871
SD	0.0669	0.0637	0.0623	0.0630	0.0618
Median	0.870	0.864	0.864	0.864	0.867
Min, Max	0.54, 1.11	0.68, 1.07	0.66, 1.10	0.66, 1.10	0.70, 1.07

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Magnesium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	725	701	680	1381	327
Mean	0.874	0.863	0.858	0.861	0.873
SD	0.0624	0.0618	0.0597	0.0608	0.0632
Median	0.870	0.860	0.860	0.860	0.870
Min, Max	0.50, 1.08	0.66, 1.04	0.66, 1.11	0.66, 1.11	0.70, 1.24
Week 12					
n	716	690	670	1360	328
Mean	0.873	0.867	0.858	0.863	0.875
SD	0.0659	0.0604	0.0632	0.0620	0.0650
Median	0.870	0.864	0.860	0.864	0.880
Min, Max	0.53, 1.14	0.70, 1.07	0.69, 1.07	0.69, 1.07	0.70, 1.26
Week 16					
n	706	662	652	1314	318
Mean	0.872	0.864	0.859	0.862	0.866
SD	0.0643	0.0639	0.0595	0.0618	0.0533
Median	0.870	0.864	0.860	0.860	0.864
Min, Max	0.51, 1.07	0.70, 1.09	0.66, 1.03	0.66, 1.09	0.70, 1.05

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Magnesium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	690	652	637	1289	314
Mean	0.872	0.865	0.856	0.860	0.873
SD	0.0639	0.0627	0.0594	0.0612	0.0637
Median	0.870	0.864	0.860	0.860	0.870
Min, Max	0.58, 1.07	0.68, 1.12	0.69, 1.03	0.68, 1.12	0.62, 1.08
Week 24					
n	682	659	638	1297	317
Mean	0.874	0.865	0.863	0.864	0.874
SD	0.0658	0.0643	0.0610	0.0627	0.0618
Median	0.870	0.864	0.860	0.860	0.870
Min, Max	0.48, 1.07	0.70, 1.21	0.66, 1.09	0.66, 1.21	0.66, 1.15
Week 28					
n	667	628	609	1237	299
Mean	0.870	0.865	0.858	0.862	0.873
SD	0.0656	0.0632	0.0591	0.0613	0.0623
Median	0.864	0.864	0.860	0.860	0.870
Min, Max	0.48, 1.09	0.66, 1.06	0.58, 1.04	0.58, 1.06	0.70, 1.11

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Magnesium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	646	627	603	1230	301
Mean	0.871	0.860	0.858	0.859	0.873
SD	0.0666	0.0662	0.0611	0.0637	0.0653
Median	0.864	0.860	0.860	0.860	0.870
Min, Max	0.62, 1.12	0.64, 1.15	0.66, 1.08	0.64, 1.15	0.66, 1.19
Week 36					
n	654	630	620	1250	309
Mean	0.873	0.864	0.859	0.861	0.867
SD	0.0668	0.0664	0.0612	0.0639	0.0610
Median	0.870	0.860	0.860	0.860	0.864
Min, Max	0.53, 1.25	0.67, 1.11	0.66, 1.15	0.66, 1.15	0.70, 1.05
Week 40					
n	632	607	600	1207	297
Mean	0.870	0.861	0.857	0.859	0.868
SD	0.0639	0.0637	0.0603	0.0620	0.0561
Median	0.870	0.860	0.860	0.860	0.864
Min, Max	0.53, 1.19	0.65, 1.11	0.67, 1.07	0.65, 1.11	0.66, 0.99

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Magnesium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	609	592	595	1187	296
Mean	0.868	0.860	0.862	0.861	0.862
SD	0.0637	0.0630	0.0628	0.0629	0.0588
Median	0.870	0.860	0.864	0.860	0.864
Min, Max	0.60, 1.14	0.68, 1.10	0.66, 1.11	0.66, 1.11	0.70, 1.03
Week 48					
n	606	605	608	1213	296
Mean	0.870	0.865	0.862	0.864	0.868
SD	0.0673	0.0633	0.0621	0.0627	0.0600
Median	0.864	0.864	0.864	0.864	0.870
Min, Max	0.51, 1.08	0.62, 1.07	0.70, 1.11	0.62, 1.11	0.66, 1.01
Week 52					
n	568	578	577	1155	288
Mean	0.869	0.861	0.858	0.859	0.863
SD	0.0654	0.0619	0.0604	0.0612	0.0636
Median	0.864	0.864	0.860	0.860	0.864
Min, Max	0.53, 1.09	0.69, 1.04	0.70, 1.03	0.69, 1.04	0.64, 1.03

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Magnesium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	571	564	569	1133	284
Mean	0.870	0.861	0.857	0.859	0.867
SD	0.0659	0.0625	0.0623	0.0624	0.0636
Median	0.864	0.860	0.860	0.860	0.870
Min, Max	0.50, 1.11	0.70, 1.06	0.68, 1.04	0.68, 1.06	0.69, 1.15
Week 60					
n	564	580	591	1171	291
Mean	0.868	0.861	0.859	0.860	0.863
SD	0.0638	0.0628	0.0603	0.0615	0.0636
Median	0.864	0.860	0.860	0.860	0.860
Min, Max	0.59, 1.07	0.69, 1.08	0.69, 1.07	0.69, 1.08	0.65, 1.06
Week 64					
n	543	568	558	1126	271
Mean	0.865	0.857	0.854	0.856	0.862
SD	0.0616	0.0618	0.0610	0.0614	0.0578
Median	0.864	0.860	0.860	0.860	0.864
Min, Max	0.59, 1.04	0.66, 1.07	0.70, 1.06	0.66, 1.07	0.62, 1.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Magnesium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	527	559	552	1111	278
Mean	0.868	0.859	0.856	0.857	0.867
SD	0.0644	0.0614	0.0590	0.0602	0.0563
Median	0.864	0.860	0.860	0.860	0.870
Min, Max	0.58, 1.13	0.67, 1.03	0.56, 1.04	0.56, 1.04	0.73, 1.03
Week 72					
n	522	570	567	1137	276
Mean	0.867	0.859	0.860	0.859	0.869
SD	0.0599	0.0633	0.0611	0.0622	0.0578
Median	0.870	0.860	0.860	0.860	0.870
Min, Max	0.60, 1.04	0.63, 1.05	0.62, 1.02	0.62, 1.05	0.73, 1.07
Week 76					
n	511	546	548	1094	267
Mean	0.865	0.859	0.858	0.858	0.869
SD	0.0613	0.0603	0.0634	0.0618	0.0569
Median	0.864	0.860	0.860	0.860	0.864
Min, Max	0.56, 1.09	0.63, 1.03	0.66, 1.06	0.63, 1.06	0.70, 1.04

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Magnesium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	509	540	534	1074	268
Mean	0.865	0.857	0.853	0.855	0.867
SD	0.0651	0.0655	0.0606	0.0631	0.0610
Median	0.864	0.860	0.860	0.860	0.864
Min, Max	0.50, 1.04	0.65, 1.15	0.66, 1.03	0.65, 1.15	0.66, 1.05
Week 84					
n	517	557	556	1113	271
Mean	0.869	0.862	0.859	0.861	0.874
SD	0.0639	0.0628	0.0619	0.0623	0.0592
Median	0.864	0.864	0.860	0.860	0.880
Min, Max	0.51, 1.10	0.67, 1.07	0.68, 1.05	0.67, 1.07	0.72, 1.08
Week 88					
n	504	533	534	1067	262
Mean	0.864	0.861	0.852	0.856	0.865
SD	0.0630	0.0631	0.0623	0.0628	0.0623
Median	0.864	0.860	0.860	0.860	0.864
Min, Max	0.49, 1.11	0.67, 1.10	0.62, 1.07	0.62, 1.10	0.69, 1.09

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Magnesium (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	490	524	524	1048	258
Mean	0.868	0.857	0.855	0.856	0.868
SD	0.0596	0.0662	0.0629	0.0646	0.0580
Median	0.864	0.860	0.860	0.860	0.870
Min, Max	0.52, 1.06	0.60, 1.11	0.70, 1.07	0.60, 1.11	0.62, 1.07
Week 96					
n	491	535	523	1058	263
Mean	0.870	0.865	0.859	0.862	0.872
SD	0.0656	0.0633	0.0592	0.0614	0.0626
Median	0.864	0.864	0.860	0.860	0.870
Min, Max	0.49, 1.05	0.69, 1.10	0.71, 1.15	0.69, 1.15	0.69, 1.04

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Phosphorus (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	743	744	740	1484	348
Mean	1.147	1.143	1.148	1.146	1.153
SD	0.1691	0.1688	0.1781	0.1735	0.1780
Median	1.140	1.150	1.150	1.150	1.150
Min, Max	0.61, 1.72	0.32, 1.61	0.52, 1.73	0.32, 1.73	0.55, 1.77
Week 4					
n	738	721	717	1438	338
Mean	1.150	1.132	1.126	1.129	1.125
SD	0.1843	0.1720	0.1786	0.1753	0.1746
Median	1.140	1.130	1.120	1.130	1.120
Min, Max	0.55, 2.12	0.55, 1.76	0.54, 1.78	0.54, 1.78	0.66, 1.69

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Phosphorus (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	725	701	679	1380	327
Mean	1.136	1.132	1.138	1.135	1.126
SD	0.1766	0.1694	0.1809	0.1751	0.1604
Median	1.140	1.130	1.150	1.130	1.120
Min, Max	0.54, 1.85	0.60, 1.88	0.53, 1.69	0.53, 1.88	0.61, 1.62
Week 12					
n	716	689	669	1358	328
Mean	1.138	1.147	1.130	1.139	1.122
SD	0.1736	0.1642	0.1793	0.1719	0.1699
Median	1.140	1.140	1.130	1.140	1.120
Min, Max	0.61, 1.65	0.62, 1.71	0.57, 1.75	0.57, 1.75	0.68, 1.61
Week 16					
n	706	662	649	1311	318
Mean	1.136	1.149	1.147	1.148	1.123
SD	0.1693	0.1733	0.1811	0.1771	0.1774
Median	1.130	1.140	1.140	1.140	1.125
Min, Max	0.58, 1.73	0.61, 1.81	0.50, 2.10	0.50, 2.10	0.55, 1.58

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Phosphorus (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	689	650	635	1285	313
Mean	1.136	1.143	1.134	1.139	1.128
SD	0.1637	0.1784	0.1795	0.1789	0.1729
Median	1.130	1.140	1.140	1.140	1.130
Min, Max	0.67, 1.78	0.54, 2.29	0.60, 1.72	0.54, 2.29	0.53, 1.63
Week 24					
n	681	658	636	1294	315
Mean	1.147	1.148	1.156	1.152	1.132
SD	0.1653	0.1764	0.1711	0.1738	0.1589
Median	1.140	1.150	1.150	1.150	1.130
Min, Max	0.67, 1.64	0.58, 1.78	0.68, 1.70	0.58, 1.78	0.63, 1.68
Week 28					
n	667	626	609	1235	298
Mean	1.140	1.145	1.135	1.140	1.111
SD	0.3611	0.1770	0.1740	0.1755	0.1608
Median	1.130	1.150	1.130	1.140	1.100
Min, Max	0.65, 8.97	0.58, 1.95	0.55, 1.75	0.55, 1.95	0.79, 1.61

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Phosphorus (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	646	625	604	1229	298
Mean	1.125	1.133	1.130	1.131	1.112
SD	0.1725	0.1703	0.1761	0.1731	0.1643
Median	1.130	1.130	1.130	1.130	1.105
Min, Max	0.56, 1.96	0.64, 1.75	0.65, 1.74	0.64, 1.75	0.74, 1.59
Week 36					
n	653	630	618	1248	309
Mean	1.147	1.140	1.139	1.139	1.123
SD	0.1706	0.1737	0.1739	0.1737	0.1595
Median	1.150	1.130	1.130	1.130	1.130
Min, Max	0.61, 1.77	0.61, 1.74	0.63, 1.70	0.61, 1.74	0.68, 1.52
Week 40					
n	632	606	598	1204	297
Mean	1.124	1.135	1.123	1.129	1.117
SD	0.1713	0.1708	0.1722	0.1715	0.1563
Median	1.130	1.130	1.130	1.130	1.110
Min, Max	0.53, 1.91	0.55, 1.62	0.63, 1.67	0.55, 1.67	0.73, 1.61

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Phosphorus (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	608	592	594	1186	294
Mean	1.126	1.130	1.117	1.123	1.111
SD	0.1768	0.1731	0.1723	0.1728	0.1650
Median	1.130	1.130	1.125	1.130	1.110
Min, Max	0.59, 2.20	0.56, 2.10	0.44, 1.76	0.44, 2.10	0.66, 1.65
Week 48					
n	605	603	608	1211	296
Mean	1.143	1.144	1.143	1.144	1.119
SD	0.1598	0.1695	0.1720	0.1707	0.1731
Median	1.140	1.140	1.140	1.140	1.100
Min, Max	0.67, 1.83	0.66, 1.67	0.63, 1.64	0.63, 1.67	0.66, 1.78
Week 52					
n	563	577	575	1152	287
Mean	1.121	1.133	1.132	1.132	1.101
SD	0.1661	0.1662	0.1957	0.1815	0.1620
Median	1.110	1.140	1.120	1.130	1.100
Min, Max	0.65, 1.75	0.60, 1.91	0.55, 2.22	0.55, 2.22	0.68, 1.58

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Phosphorus (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	569	566	567	1133	281
Mean	1.119	1.133	1.115	1.124	1.117
SD	0.1630	0.1784	0.1814	0.1800	0.1710
Median	1.125	1.130	1.110	1.120	1.110
Min, Max	0.60, 1.61	0.65, 1.88	0.61, 1.91	0.61, 1.91	0.72, 1.71
Week 60					
n	563	580	590	1170	291
Mean	1.131	1.139	1.141	1.140	1.135
SD	0.1584	0.1624	0.1681	0.1652	0.1674
Median	1.130	1.130	1.140	1.140	1.130
Min, Max	0.65, 1.62	0.49, 1.68	0.68, 1.81	0.49, 1.81	0.72, 1.75
Week 64					
n	540	565	558	1123	270
Mean	1.125	1.128	1.114	1.121	1.113
SD	0.1792	0.1655	0.1779	0.1718	0.1734
Median	1.120	1.130	1.110	1.120	1.110
Min, Max	0.51, 1.65	0.59, 1.69	0.65, 1.78	0.59, 1.78	0.65, 1.76

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Phosphorus (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	525	555	551	1106	278
Mean	1.120	1.123	1.109	1.116	1.125
SD	0.1817	0.1766	0.1918	0.1844	0.1698
Median	1.110	1.130	1.110	1.110	1.120
Min, Max	0.57, 1.84	0.65, 1.91	0.50, 2.86	0.50, 2.86	0.67, 1.60
Week 72					
n	522	570	565	1135	276
Mean	1.132	1.137	1.125	1.131	1.126
SD	0.1685	0.1750	0.1731	0.1740	0.1595
Median	1.135	1.140	1.130	1.130	1.130
Min, Max	0.61, 1.71	0.56, 1.77	0.65, 1.62	0.56, 1.77	0.72, 1.61
Week 76					
n	511	545	546	1091	265
Mean	1.119	1.121	1.120	1.121	1.125
SD	0.1749	0.1641	0.1697	0.1668	0.1641
Median	1.120	1.120	1.120	1.120	1.130
Min, Max	0.46, 1.63	0.53, 1.74	0.60, 1.65	0.53, 1.74	0.67, 1.59

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Phosphorus (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	509	541	532	1073	268
Mean	1.109	1.110	1.117	1.114	1.114
SD	0.1694	0.1808	0.1820	0.1813	0.1718
Median	1.110	1.110	1.115	1.110	1.110
Min, Max	0.58, 1.61	0.55, 2.42	0.61, 1.65	0.55, 2.42	0.52, 1.67
Week 84					
n	517	555	554	1109	271
Mean	1.130	1.133	1.132	1.132	1.130
SD	0.1741	0.1688	0.1687	0.1687	0.1655
Median	1.140	1.130	1.130	1.130	1.130
Min, Max	0.49, 2.30	0.54, 1.65	0.64, 1.58	0.54, 1.65	0.67, 1.57
Week 88					
n	503	532	534	1066	260
Mean	1.117	1.108	1.111	1.110	1.104
SD	0.2142	0.1759	0.1715	0.1737	0.1754
Median	1.120	1.100	1.120	1.110	1.110
Min, Max	0.52, 4.00	0.65, 1.79	0.48, 1.58	0.48, 1.79	0.51, 1.57

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Phosphorus (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	490	523	523	1046	257
Mean	1.115	1.119	1.126	1.122	1.110
SD	0.1667	0.1590	0.1765	0.1679	0.1710
Median	1.130	1.120	1.130	1.125	1.120
Min, Max	0.60, 1.59	0.62, 1.58	0.54, 1.77	0.54, 1.77	0.68, 1.65
Week 96					
n	491	533	522	1055	263
Mean	1.138	1.136	1.131	1.134	1.138
SD	0.1683	0.1625	0.1756	0.1690	0.1793
Median	1.140	1.140	1.130	1.130	1.150
Min, Max	0.61, 1.68	0.61, 1.69	0.63, 1.58	0.61, 1.69	0.66, 2.30

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Glucose (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	743	743	739	1482	348
Mean	5.144	5.130	5.168	5.149	5.121
SD	1.0090	0.9174	1.1523	1.0410	0.8364
Median	5.000	5.000	5.000	5.000	5.000
Min, Max	2.20, 18.20	1.82, 15.13	2.70, 20.90	1.82, 20.90	3.19, 12.00
Week 4					
n	735	718	713	1431	333
Mean	5.198	5.248	5.271	5.260	5.220
SD	1.0113	0.9897	1.4391	1.2338	0.9869
Median	5.060	5.100	5.100	5.100	5.100
Min, Max	3.19, 13.30	2.50, 16.80	3.25, 32.70	2.50, 32.70	2.30, 13.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Glucose (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	722	697	674	1371	325
Mean	5.228	5.199	5.249	5.224	5.272
SD	1.0348	0.8775	1.0734	0.9787	1.0115
Median	5.100	5.100	5.100	5.100	5.100
Min, Max	2.75, 13.50	2.59, 11.22	2.75, 15.80	2.59, 15.80	3.08, 13.53
Week 12					
n	712	688	666	1354	322
Mean	5.226	5.221	5.269	5.245	5.197
SD	1.0382	1.2238	0.9900	1.1148	0.9322
Median	5.100	5.100	5.115	5.100	5.080
Min, Max	3.00, 16.90	2.92, 28.10	2.70, 16.56	2.70, 28.10	2.97, 15.29
Week 16					
n	704	660	645	1305	314
Mean	5.208	5.177	5.293	5.234	5.195
SD	1.0107	0.8031	1.0387	0.9285	0.9562
Median	5.100	5.100	5.100	5.100	5.100
Min, Max	2.60, 13.50	2.75, 11.33	2.40, 16.01	2.40, 16.01	3.70, 15.57

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Glucose (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	687	643	631	1274	311
Mean	5.224	5.221	5.305	5.262	5.196
SD	1.0051	0.9915	1.0396	1.0161	0.9031
Median	5.100	5.100	5.100	5.100	5.100
Min, Max	2.90, 15.51	2.81, 20.63	2.90, 12.00	2.81, 20.63	1.70, 10.70
Week 24					
n	679	656	630	1286	315
Mean	5.174	5.166	5.198	5.182	5.154
SD	1.2338	0.9498	1.0327	0.9911	0.8033
Median	5.000	5.100	5.100	5.100	5.060
Min, Max	2.75, 22.11	2.40, 19.10	2.42, 15.00	2.40, 19.10	3.40, 10.95
Week 28					
n	662	621	602	1223	296
Mean	5.255	5.197	5.295	5.245	5.273
SD	1.1872	0.9079	1.0594	0.9862	1.0295
Median	5.100	5.100	5.100	5.100	5.100
Min, Max	2.70, 19.10	2.53, 14.96	3.10, 16.30	2.53, 16.30	3.30, 12.21

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Glucose (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	640	622	603	1225	296
Mean	5.223	5.204	5.322	5.262	5.190
SD	1.0757	0.8034	1.1125	0.9693	0.9062
Median	5.100	5.100	5.100	5.100	5.100
Min, Max	2.86, 18.10	3.19, 10.70	2.86, 17.99	2.86, 17.99	2.40, 11.20
Week 36					
n	651	626	615	1241	306
Mean	5.161	5.205	5.255	5.230	5.212
SD	0.9407	0.8139	1.0188	0.9211	0.8326
Median	5.060	5.100	5.100	5.100	5.100
Min, Max	2.20, 15.90	3.19, 10.40	2.60, 15.46	2.60, 15.46	3.36, 10.40
Week 40					
n	629	605	597	1202	295
Mean	5.284	5.227	5.339	5.283	5.221
SD	1.1520	0.8580	1.0192	0.9428	0.9508
Median	5.100	5.100	5.200	5.100	5.100
Min, Max	2.50, 15.80	2.60, 9.90	2.60, 14.63	2.60, 14.63	2.40, 14.74

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Glucose (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	607	584	591	1175	293
Mean	5.202	5.205	5.328	5.266	5.207
SD	1.0159	0.7517	1.0106	0.8931	0.8807
Median	5.100	5.100	5.200	5.100	5.100
Min, Max	2.20, 14.10	3.20, 10.29	2.60, 15.68	2.60, 15.68	3.20, 9.30
Week 48					
n	601	600	605	1205	296
Mean	5.209	5.132	5.204	5.168	5.096
SD	1.1282	1.0043	1.0691	1.0375	0.7344
Median	5.000	5.000	5.060	5.005	5.000
Min, Max	2.40, 15.90	2.80, 18.70	2.70, 16.50	2.70, 18.70	2.53, 9.00
Week 52					
n	556	576	571	1147	285
Mean	5.220	5.161	5.307	5.234	5.207
SD	1.0157	0.8581	0.9193	0.8918	0.8147
Median	5.100	5.100	5.200	5.100	5.100
Min, Max	2.92, 14.40	2.75, 11.39	2.30, 11.66	2.30, 11.66	2.50, 10.30

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Glucose (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	565	560	563	1123	279
Mean	5.224	5.177	5.315	5.247	5.142
SD	0.8718	0.7391	0.9806	0.8710	0.7488
Median	5.060	5.100	5.115	5.100	5.100
Min, Max	2.90, 10.90	2.60, 9.60	2.50, 14.58	2.50, 14.58	2.40, 9.57
Week 60					
n	562	579	589	1168	287
Mean	5.172	5.209	5.237	5.223	5.183
SD	0.9335	0.8244	1.0032	0.9187	0.7931
Median	5.000	5.100	5.115	5.100	5.100
Min, Max	2.64, 14.90	2.90, 9.79	2.70, 16.67	2.70, 16.67	2.40, 9.68
Week 64					
n	538	564	549	1113	266
Mean	5.211	5.178	5.332	5.254	5.261
SD	1.0483	0.8256	0.9619	0.8983	0.9911
Median	5.100	5.100	5.170	5.100	5.100
Min, Max	2.50, 17.80	2.80, 9.80	3.40, 13.81	2.80, 13.81	3.10, 14.80

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Glucose (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	526	552	547	1099	276
Mean	5.201	5.239	5.296	5.267	5.251
SD	0.9992	0.8499	0.9192	0.8851	0.8979
Median	5.100	5.100	5.200	5.170	5.200
Min, Max	3.08, 16.20	2.30, 8.60	3.19, 11.50	2.30, 11.50	2.60, 10.56
Week 72					
n	521	566	564	1130	275
Mean	5.240	5.200	5.287	5.243	5.162
SD	1.1115	1.2461	1.0468	1.1513	0.7731
Median	5.100	5.000	5.100	5.100	5.005
Min, Max	2.70, 16.00	3.10, 27.60	3.30, 15.80	3.10, 27.60	3.10, 8.70
Week 76					
n	510	546	543	1089	264
Mean	5.270	5.264	5.262	5.263	5.251
SD	1.1983	0.9425	0.9604	0.9510	0.8964
Median	5.100	5.108	5.100	5.100	5.100
Min, Max	2.40, 20.80	2.70, 13.53	2.81, 12.27	2.70, 13.53	2.42, 9.96

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Glucose (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	507	536	532	1068	265
Mean	5.274	5.269	5.352	5.310	5.150
SD	1.1428	0.8923	1.2311	1.0748	0.9181
Median	5.100	5.115	5.200	5.200	5.100
Min, Max	2.70, 19.20	1.93, 11.30	3.00, 21.73	1.93, 21.73	2.40, 10.73
Week 84					
n	515	552	551	1103	270
Mean	5.231	5.181	5.231	5.206	5.178
SD	1.1004	0.7986	0.8673	0.8336	0.8453
Median	5.000	5.100	5.100	5.100	5.100
Min, Max	2.70, 13.50	3.00, 9.10	2.90, 12.82	2.90, 12.82	3.10, 10.29
Week 88					
n	498	532	530	1062	258
Mean	5.274	5.245	5.352	5.299	5.223
SD	1.2387	0.8200	0.9504	0.8887	0.9025
Median	5.060	5.200	5.200	5.200	5.108
Min, Max	2.48, 17.40	2.70, 13.00	3.36, 12.60	2.70, 13.00	2.50, 10.23

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Glucose (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	489	518	518	1036	255
Mean	5.201	5.247	5.324	5.286	5.243
SD	1.1222	0.8689	1.0178	0.9466	0.7791
Median	5.100	5.115	5.200	5.200	5.100
Min, Max	3.14, 18.00	2.64, 9.50	2.70, 14.19	2.64, 14.19	2.97, 8.40
Week 96					
n	488	531	518	1049	261
Mean	5.217	5.143	5.240	5.191	5.098
SD	1.1911	0.7767	0.9773	0.8824	0.7279
Median	5.033	5.000	5.100	5.060	5.000
Min, Max	2.31, 19.30	2.86, 8.69	3.19, 12.80	2.86, 12.80	3.00, 8.70

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Cholesterol (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	771	769	760	1529	351
Mean	5.235	5.234	5.242	5.238	5.279
SD	1.0385	1.0397	1.0381	1.0386	1.0713
Median	5.146	5.140	5.155	5.140	5.230
Min, Max	2.09, 13.21	2.20, 9.03	2.39, 9.56	2.20, 9.56	2.37, 8.92
Week 4					
n	756	737	734	1471	339
Mean	5.147	5.113	5.159	5.135	5.106
SD	0.9987	0.9627	1.0000	0.9814	1.0304
Median	5.050	5.043	5.100	5.060	5.050
Min, Max	1.94, 10.84	1.78, 9.25	2.64, 9.42	1.78, 9.42	2.55, 8.52

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Cholesterol (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	735	706	684	1390	329
Mean	5.159	5.128	5.158	5.143	5.073
SD	1.0175	0.9860	0.9678	0.9768	1.0313
Median	5.100	5.070	5.105	5.094	4.940
Min, Max	2.29, 13.87	2.67, 8.91	2.50, 9.23	2.50, 9.23	2.54, 8.87
Week 12					
n	722	693	671	1364	328
Mean	5.163	5.158	5.211	5.184	5.070
SD	0.9811	0.9630	1.0269	0.9949	1.0039
Median	5.075	5.094	5.140	5.100	4.980
Min, Max	1.96, 12.45	2.69, 8.66	2.45, 9.11	2.45, 9.11	2.79, 8.11
Week 16					
n	707	666	651	1317	318
Mean	5.155	5.167	5.214	5.190	5.072
SD	1.0236	0.9743	1.0163	0.9952	0.9957
Median	5.030	5.105	5.080	5.100	4.980
Min, Max	1.93, 11.30	2.55, 8.35	2.81, 9.17	2.55, 9.17	2.91, 8.91

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Cholesterol (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	696	654	638	1292	314
Mean	5.140	5.127	5.189	5.157	5.077
SD	1.0197	0.9677	1.0240	0.9959	1.0288
Median	5.041	5.070	5.070	5.070	4.939
Min, Max	2.04, 12.16	2.09, 8.54	2.82, 9.52	2.09, 9.52	2.99, 10.07
Week 24					
n	704	672	656	1328	319
Mean	5.122	5.154	5.190	5.172	5.073
SD	1.0396	0.9617	1.0073	0.9843	1.0627
Median	5.041	5.092	5.100	5.097	5.020
Min, Max	1.67, 10.74	2.48, 8.46	2.89, 9.29	2.48, 9.29	2.80, 9.13
Week 36					
n	669	647	632	1279	315
Mean	5.150	5.156	5.186	5.171	5.068
SD	0.9896	1.0056	0.9916	0.9984	1.0361
Median	5.060	5.094	5.070	5.090	4.970
Min, Max	1.90, 11.38	2.69, 8.48	3.05, 8.49	2.69, 8.49	2.50, 8.99

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Cholesterol (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	618	625	620	1245	304
Mean	5.212	5.210	5.215	5.212	5.150
SD	1.0546	1.0170	0.9951	1.0057	1.0739
Median	5.120	5.170	5.097	5.146	5.020
Min, Max	1.98, 10.57	2.75, 9.31	2.59, 9.11	2.59, 9.31	2.87, 9.13
Week 60					
n	576	604	602	1206	294
Mean	5.158	5.138	5.234	5.186	5.103
SD	1.0270	0.9842	0.9907	0.9882	1.0234
Median	5.020	5.085	5.115	5.100	5.020
Min, Max	2.45, 10.53	2.31, 8.60	2.98, 9.30	2.31, 9.30	1.89, 8.62
Week 72					
n	538	589	574	1163	284
Mean	5.117	5.194	5.219	5.206	5.166
SD	0.9946	0.9929	1.0322	1.0121	1.0432
Median	4.990	5.150	5.065	5.090	5.100
Min, Max	2.08, 9.03	2.65, 8.87	2.68, 10.89	2.65, 10.89	2.79, 8.76

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Cholesterol (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	530	573	565	1138	278
Mean	5.164	5.184	5.160	5.173	5.109
SD	1.0376	1.0120	0.9897	1.0006	1.0859
Median	5.069	5.120	5.030	5.070	4.939
Min, Max	2.08, 8.68	2.65, 9.31	3.10, 8.57	2.65, 9.31	2.38, 11.48
Week 96					
n	491	532	522	1054	262
Mean	5.203	5.248	5.221	5.234	5.194
SD	1.0606	1.0333	1.0464	1.0394	1.0852
Median	5.060	5.205	5.080	5.130	5.140
Min, Max	1.95, 9.41	2.36, 10.00	3.03, 9.05	2.36, 10.00	2.40, 10.90

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Triglycerides (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	771	769	760	1529	351
Mean	1.447	1.424	1.455	1.439	1.412
SD	0.9589	0.8268	0.9212	0.8748	0.7995
Median	1.208	1.200	1.210	1.200	1.180
Min, Max	0.32, 11.16	0.37, 5.78	0.32, 8.33	0.32, 8.33	0.36, 4.87
Week 4					
n	756	737	734	1471	339
Mean	1.464	1.254	1.316	1.285	1.404
SD	1.0015	0.6468	0.7373	0.6939	0.8010
Median	1.240	1.080	1.140	1.100	1.200
Min, Max	0.37, 13.82	0.32, 4.35	0.29, 6.36	0.29, 6.36	0.37, 7.30

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Triglycerides (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	735	706	684	1390	329
Mean	1.465	1.271	1.339	1.305	1.383
SD	1.0263	0.7126	0.7711	0.7424	0.7311
Median	1.242	1.061	1.120	1.098	1.208
Min, Max	0.36, 13.71	0.30, 5.99	0.39, 5.51	0.30, 5.99	0.29, 4.95
Week 12					
n	722	693	671	1364	328
Mean	1.421	1.279	1.342	1.310	1.373
SD	0.8744	0.7039	0.8294	0.7685	0.7781
Median	1.210	1.080	1.152	1.110	1.150
Min, Max	0.31, 12.74	0.27, 4.80	0.33, 11.00	0.27, 11.00	0.28, 6.23
Week 16					
n	707	666	651	1317	318
Mean	1.454	1.270	1.331	1.301	1.388
SD	1.2860	0.7531	0.8551	0.8054	0.7800
Median	1.200	1.040	1.110	1.090	1.170
Min, Max	0.34, 22.35	0.31, 5.73	0.35, 13.42	0.31, 13.42	0.42, 6.08

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Triglycerides (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	696	654	638	1292	314
Mean	1.419	1.279	1.367	1.322	1.464
SD	0.8724	0.8502	0.9324	0.8925	1.0093
Median	1.180	1.045	1.145	1.090	1.247
Min, Max	0.37, 10.79	0.32, 8.78	0.32, 12.87	0.32, 12.87	0.35, 12.78
Week 24					
n	704	672	656	1328	319
Mean	1.427	1.278	1.330	1.304	1.410
SD	0.8104	0.7658	0.7398	0.7532	0.8217
Median	1.215	1.071	1.166	1.110	1.210
Min, Max	0.38, 9.69	0.37, 6.77	0.33, 6.37	0.33, 6.77	0.41, 6.57
Week 36					
n	669	647	632	1279	315
Mean	1.488	1.289	1.316	1.302	1.393
SD	0.9481	0.7572	0.7956	0.7762	0.8622
Median	1.240	1.070	1.120	1.095	1.163
Min, Max	0.29, 9.80	0.12, 7.57	0.30, 9.25	0.12, 9.25	0.40, 8.68

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Triglycerides (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 48					
n	618	625	620	1245	304
Mean	1.490	1.286	1.349	1.317	1.451
SD	0.7846	0.7039	0.7334	0.7192	0.8263
Median	1.299	1.073	1.156	1.110	1.235
Min, Max	0.33, 5.65	0.27, 4.65	0.28, 4.88	0.27, 4.88	0.38, 5.19
Week 60					
n	576	604	602	1206	294
Mean	1.456	1.281	1.311	1.296	1.407
SD	0.9574	0.7605	0.7151	0.7380	0.8263
Median	1.240	1.087	1.130	1.110	1.172
Min, Max	0.46, 16.08	0.28, 6.11	0.28, 6.05	0.28, 6.11	0.35, 7.59
Week 72					
n	538	589	574	1163	284
Mean	1.425	1.289	1.352	1.320	1.495
SD	0.7833	0.7622	0.7978	0.7803	0.9577
Median	1.240	1.070	1.140	1.100	1.198
Min, Max	0.23, 8.25	0.35, 6.45	0.38, 7.27	0.35, 7.27	0.34, 5.90

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Triglycerides (mmol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 84					
n	530	573	565	1138	278
Mean	1.443	1.300	1.366	1.333	1.439
SD	0.9484	0.7764	0.8603	0.8194	0.9216
Median	1.225	1.100	1.160	1.135	1.200
Min, Max	0.37, 13.04	0.37, 5.65	0.32, 9.89	0.32, 9.89	0.39, 7.42
Week 96					
n	491	532	522	1054	262
Mean	1.489	1.268	1.348	1.308	1.418
SD	0.8899	0.7467	0.8134	0.7811	0.8754
Median	1.240	1.055	1.140	1.100	1.191
Min, Max	0.35, 8.65	0.26, 5.70	0.36, 8.63	0.26, 8.63	0.38, 7.50

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Uric Acid (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Number of subjects in safety population	771	769	760	1529	351
Baseline					
n	743	744	741	1485	348
Mean	265.458	267.204	265.681	266.444	269.200
SD	72.2025	76.0275	73.1097	74.5645	78.4534
Median	256.000	255.000	256.000	255.764	258.500
Min, Max	29.50, 559.11	105.00, 577.00	64.00, 529.37	64.00, 577.00	124.91, 576.00
Week 4					
n	739	722	719	1441	338
Mean	265.875	265.885	260.320	263.108	267.903
SD	74.8597	79.8718	74.4377	77.2316	76.6467
Median	260.000	255.000	249.816	253.000	259.000
Min, Max	29.50, 544.00	100.00, 541.00	103.00, 558.00	100.00, 558.00	104.00, 491.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Uric Acid (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 8					
n	725	701	680	1381	327
Mean	267.402	268.646	263.716	266.218	265.803
SD	75.2027	77.8818	76.9800	77.4503	80.8660
Median	257.000	259.000	254.000	256.000	256.000
Min, Max	29.50, 559.11	99.00, 571.00	77.00, 600.00	77.00, 600.00	86.00, 515.00
Week 12					
n	716	690	670	1360	328
Mean	266.479	270.034	265.973	268.033	273.348
SD	72.3669	78.6593	76.4262	77.5653	77.4886
Median	257.000	263.500	256.000	261.356	263.000
Min, Max	29.50, 499.63	91.00, 541.27	95.00, 570.00	91.00, 570.00	118.00, 558.00
Week 16					
n	705	662	652	1314	318
Mean	265.636	269.191	265.299	267.260	270.067
SD	73.2682	77.7272	74.3554	76.0688	78.1574
Median	258.000	261.712	255.382	258.000	259.500
Min, Max	29.50, 545.00	98.00, 666.00	99.00, 547.22	98.00, 666.00	129.00, 529.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Uric Acid (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 20					
n	691	652	637	1289	314
Mean	265.466	269.707	265.486	267.621	272.206
SD	70.5158	79.6945	74.6477	77.2406	78.7683
Median	255.764	261.356	255.000	257.000	260.500
Min, Max	29.50, 499.63	79.00, 571.00	86.00, 571.01	79.00, 571.01	131.00, 615.00
Week 24					
n	682	659	638	1297	317
Mean	266.767	272.925	265.137	269.094	270.140
SD	72.6423	81.2571	73.5798	77.6435	80.2417
Median	257.000	259.000	255.882	257.000	257.000
Min, Max	29.50, 541.27	102.00, 601.00	89.22, 617.00	89.22, 617.00	106.00, 582.90
Week 28					
n	667	628	610	1238	299
Mean	267.053	271.634	265.327	268.526	266.846
SD	74.0025	79.4736	74.0364	76.8764	77.9303
Median	261.000	262.500	256.000	260.000	255.000
Min, Max	29.50, 538.00	109.00, 565.06	92.00, 568.00	92.00, 568.00	76.00, 541.27

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Uric Acid (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 32					
n	646	627	604	1231	302
Mean	265.642	268.969	266.204	267.612	272.075
SD	71.0574	77.7704	77.4883	77.6129	80.8292
Median	259.000	261.000	257.500	259.000	261.356
Min, Max	29.50, 535.32	87.00, 577.00	78.00, 636.00	78.00, 636.00	118.00, 606.70
Week 36					
n	654	631	620	1251	309
Mean	268.378	270.229	266.844	268.552	273.587
SD	72.3745	79.2794	78.2029	78.7344	78.8823
Median	260.000	256.000	256.000	256.000	261.712
Min, Max	29.50, 553.16	83.00, 594.80	93.00, 608.00	83.00, 608.00	142.00, 571.01
Week 40					
n	632	607	600	1207	297
Mean	269.751	270.207	266.467	268.348	271.791
SD	77.1614	77.1244	75.8066	76.4634	78.7453
Median	261.712	261.000	256.000	259.000	261.000
Min, Max	29.50, 950.00	100.00, 571.00	86.00, 602.00	86.00, 602.00	112.00, 571.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Uric Acid (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 44					
n	610	592	595	1187	296
Mean	271.552	269.030	264.451	266.735	274.416
SD	76.0541	76.2728	73.3807	74.8406	79.0894
Median	261.856	258.500	256.000	257.000	261.856
Min, Max	29.50, 547.22	90.00, 517.48	90.00, 527.00	90.00, 527.00	132.00, 541.27
Week 48					
n	606	605	608	1213	296
Mean	267.657	268.880	266.233	267.553	270.982
SD	73.8294	78.8293	75.0944	76.9595	79.0230
Median	260.000	256.000	259.500	258.000	261.856
Min, Max	29.50, 580.00	75.00, 558.00	92.00, 535.00	75.00, 558.00	112.00, 529.37
Week 52					
n	568	578	577	1155	288
Mean	269.057	268.375	268.287	268.331	275.509
SD	74.0854	78.4594	75.7182	77.0688	82.0515
Median	261.712	264.500	258.000	262.000	260.500
Min, Max	29.50, 576.96	86.00, 600.75	79.00, 538.00	79.00, 600.75	127.00, 607.00

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Uric Acid (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 56					
n	571	566	569	1135	284
Mean	269.761	269.526	267.730	268.626	276.182
SD	77.5738	78.1428	74.6735	76.3948	81.4727
Median	258.000	256.000	258.000	257.000	263.000
Min, Max	29.50, 600.75	98.00, 553.16	98.00, 535.32	98.00, 553.16	130.00, 541.00
Week 60					
n	564	580	591	1171	291
Mean	270.534	270.053	266.481	268.250	271.990
SD	75.4216	79.6775	75.6978	77.6817	77.2674
Median	261.856	256.000	258.000	258.000	262.000
Min, Max	29.50, 563.00	93.00, 576.96	80.00, 511.53	80.00, 576.96	105.00, 559.11
Week 64					
n	543	568	558	1126	271
Mean	270.298	268.635	268.633	268.634	275.045
SD	75.0365	78.7144	77.1795	77.9229	79.8369
Median	264.000	256.000	256.000	256.000	264.000
Min, Max	29.50, 535.32	104.00, 571.01	90.00, 564.00	90.00, 571.01	130.00, 535.32

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Uric Acid (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 68					
n	528	559	552	1111	278
Mean	270.706	272.334	264.701	268.542	273.375
SD	74.9434	78.5614	74.0295	76.4044	78.7225
Median	260.000	261.712	257.000	258.000	263.000
Min, Max	29.50, 571.00	73.00, 559.00	68.00, 544.00	68.00, 559.00	134.00, 582.90
Week 72					
n	522	570	567	1137	276
Mean	269.802	270.868	265.834	268.358	275.906
SD	74.5869	80.2573	74.4943	77.4439	81.5891
Median	264.500	256.000	256.000	256.000	267.000
Min, Max	29.50, 505.58	83.00, 600.75	71.00, 535.32	71.00, 600.75	123.00, 594.80
Week 76					
n	512	547	548	1095	267
Mean	270.858	270.641	268.890	269.765	274.545
SD	74.5902	77.4884	75.9740	76.7042	81.9098
Median	266.500	261.000	261.356	261.000	267.660
Min, Max	29.50, 511.53	96.00, 547.22	88.00, 565.06	88.00, 565.06	94.00, 571.01

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Uric Acid (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 80					
n	509	542	535	1077	268
Mean	268.586	272.496	268.484	270.503	273.018
SD	72.6071	78.0993	76.3210	77.2113	82.4083
Median	260.000	261.856	261.712	261.712	262.500
Min, Max	29.50, 553.16	100.00, 553.16	84.00, 559.11	84.00, 559.11	108.00, 561.00
Week 84					
n	517	557	555	1112	271
Mean	270.523	272.389	268.973	270.684	274.501
SD	74.6377	77.4165	77.2005	77.2929	81.5786
Median	262.000	263.000	257.000	261.856	262.000
Min, Max	29.50, 547.22	92.00, 616.00	67.00, 618.00	67.00, 618.00	113.00, 559.11
Week 88					
n	504	533	534	1067	262
Mean	269.778	271.889	270.395	271.141	273.831
SD	73.3385	79.5472	76.6815	78.0931	78.8256
Median	262.000	265.000	261.856	264.000	262.000
Min, Max	29.50, 505.58	106.00, 571.00	83.00, 571.01	83.00, 571.01	124.00, 529.37

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Summary of blood chemistry laboratory parameters - actual values by visit : Studies 109MS301 and 109MS302
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Lab test: Uric Acid (umol/L)

	Placebo	BG00012 240 mg BID	BG00012 240 mg TID	Total BG00012	GA
Week 92					
n	490	524	524	1048	258
Mean	269.526	271.498	267.943	269.721	277.779
SD	72.2368	77.9170	76.0762	76.9858	80.6507
Median	261.712	260.500	256.000	258.000	264.000
Min, Max	29.50, 565.06	89.00, 555.00	84.00, 523.00	84.00, 555.00	140.00, 534.00
Week 96					
n	491	535	523	1058	263
Mean	269.847	272.952	268.009	270.509	273.745
SD	72.9320	78.9630	74.2749	76.6851	81.7357
Median	262.000	264.000	259.000	261.712	260.000
Min, Max	29.50, 523.42	84.00, 594.80	86.00, 555.00	84.00, 594.80	123.00, 565.06

NOTE: Data after subjects switched to alternative MS medications are excluded. Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-A.SAS DATE: 03DEC2015

Table 235: Summary of Shifts From Baseline - Blood Chemistry Laboratory Parameters: 24 Weeks of Studies 109MS301 and 109MS302

Summary of shifts from baseline - Blood Chemistry laboratory parameters:
24 weeks of studies 109MS301 and 109MS302
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	Placebo		BG00012 240 mg BID		BG00012 240 mg TID	
Laboratory Parameters	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)
ALT/SGPT	7/765(<1)	110/714(15)	3/756(<1)	248/709(35)	3/741(<1)	275/681(40)
AST/SGOT	10/765(1)	57/744(8)	2/754(<1)	137/736(19)	4/742(<1)	161/721(22)
Alkaline Phosphatase	10/763(1)	22/741(3)	20/749(3)	15/740(2)	16/741(2)	12/732(2)
Total Bilirubin	88/739(12)	26/751(3)	92/733(13)	21/745(3)	96/719(13)	26/719(4)
GGT	10/759(1)	44/741(6)	4/746(<1)	50/731(7)	3/737(<1)	63/714(9)
LDH	0/766	28/759(4)	2/756(<1)	18/749(2)	0/743	21/737(3)
BUN/urea	2/765(<1)	13/766(2)	3/757(<1)	14/750(2)	3/743(<1)	11/742(1)
Creatinine	0/766	9/764(1)	1/757(<1)	5/755(<1)	2/744(<1)	5/743(<1)
Sodium	1/765(<1)	20/760(3)	3/757(<1)	27/752(4)	5/744(<1)	20/741(3)
Potassium	7/766(<1)	18/762(2)	11/752(1)	21/754(3)	16/742(2)	28/742(4)
Chloride	1/765(<1)	4/765(<1)	1/757(<1)	6/757(<1)	3/744(<1)	5/744(<1)
Bicarbonate	18/764(2)	43/758(6)	16/754(2)	71/744(10)	17/742(2)	67/731(9)
Calcium	2/765(<1)	16/754(2)	0/754	28/748(4)	1/743(<1)	27/734(4)
Magnesium	1/764(<1)	0/765	0/754	0/753	0/744	0/743
Phosphorus	17/761(2)	9/764(1)	18/749(2)	14/754(2)	22/738(3)	11/739(1)
Glucose	77/744(10)	133/717(19)	73/735(10)	145/721(20)	60/731(8)	144/697(21)
Cholesterol	78/734(11)	89/708(13)	73/718(10)	64/685(9)	83/711(12)	83/685(12)
Triglycerides	38/757(5)	101/691(15)	66/750(9)	64/678(9)	52/729(7)	81/663(12)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: Entries are number low (or high)/number at risk. Number at risk for shift to low (or high) is the number of subjects whose baseline value was not low (or high) and who had at least one post- baseline value. Numbers in parentheses are percentages based on number at risk.
(a) Shift to low includes normal to low, high to low, and unknown to low.
(b) Shift to high includes normal to high, low to high, and unknown to high.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-SHFT-A-24W.SAS DATE: 16OCT2015

Summary of shifts from baseline - Blood Chemistry laboratory parameters:
24 weeks of studies 109MS301 and 109MS302
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Laboratory Parameters	Total BG00012		GA	
	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)
ALT/SGPT	6/1497(<1)	523/1390(38)	1/345 (<1)	46/309 (15)
AST/SGOT	6/1496(<1)	298/1457(20)	1/346 (<1)	29/328 (9)
Alkaline Phosphatase	36/1490(2)	27/1472(2)	3/343 (<1)	13/339 (4)
Total Bilirubin	188/1452(13)	47/1464(3)	42/337 (12)	9/336 (3)
GGT	7/1483(<1)	113/1445(8)	8/344 (2)	25/334 (7)
LDH	2/1499(<1)	39/1486(3)	0/346	12/341 (4)
BUN/urea	6/1500(<1)	25/1492(2)	0/347	5/346 (1)
Creatinine	3/1501(<1)	10/1498(<1)	0/347	7/344 (2)
Sodium	8/1501(<1)	47/1493(3)	0/347	17/346 (5)
Potassium	27/1494(2)	49/1496(3)	3/344 (<1)	8/345 (2)
Chloride	4/1501(<1)	11/1501(<1)	0/347	3/347 (<1)
Bicarbonate	33/1496(2)	138/1475(9)	17/343 (5)	22/343 (6)
Calcium	1/1497(<1)	55/1482(4)	4/347 (1)	13/340 (4)
Magnesium	0/1498	0/1496	0/347	0/347
Phosphorus	40/1487(3)	25/1493(2)	9/343 (3)	2/346 (<1)
Glucose	133/1466(9)	289/1418(20)	32/343 (9)	58/333 (17)
Cholesterol	156/1429(11)	147/1370(11)	44/325 (14)	27/305 (9)
Triglycerides	118/1479(8)	145/1341(11)	17/341 (5)	53/318 (17)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: Entries are number low (or high)/number at risk. Number at risk for shift to low (or high) is the number of subjects whose baseline value was not low (or high) and who had at least one post- baseline value. Numbers in parentheses are percentages based on number at risk.
(a) Shift to low includes normal to low, high to low, and unknown to low.
(b) Shift to high includes normal to high, low to high, and unknown to high.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-SHFT-A-24W.SAS DATE: 16OCT2015

Summary of shifts from baseline - Blood Chemistry laboratory parameters:
24 weeks of studies 109MS301 and 109MS302
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Laboratory Parameters	Placebo		BG00012 240 mg BID		BG00012 240 mg TID	
	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)
Uric Acid	13/760(2)	12/757(2)	21/748(3)	20/743(3)	14/737(2)	18/739(2)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: Entries are number low (or high)/number at risk. Number at risk for shift to low (or high) is the number of subjects whose baseline value was not low (or high) and who had at least one post- baseline value. Numbers in parentheses are percentages based on number at risk.
(a) Shift to low includes normal to low, high to low, and unknown to low.
(b) Shift to high includes normal to high, low to high, and unknown to high.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-SHFT-A-24W.SAS DATE: 16OCT2015

Summary of shifts from baseline - Blood Chemistry laboratory parameters:
24 weeks of studies 109MS301 and 109MS302
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Laboratory Parameters	Total BG00012		GA	
	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)
Uric Acid	35/1485(2)	38/1482(3)	11/346 (3)	9/342 (3)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: Entries are number low (or high)/number at risk. Number at risk for shift to low (or high) is the number of subjects whose baseline value was not low (or high) and who had at least one post- baseline value. Numbers in parentheses are percentages based on number at risk.
(a) Shift to low includes normal to low, high to low, and unknown to low.
(b) Shift to high includes normal to high, low to high, and unknown to high.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-SHFT-A-24W.SAS DATE: 16OCT2015

Table 236: Summary of Shifts From Baseline - Blood Chemistry Laboratory Parameters: Studies 109MS301 and 109MS302

Summary of shifts from baseline - Blood Chemistry laboratory parameters: Studies 109MS301 and 109MS302
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	Placebo		BG00012 240 mg BID		BG00012 240 mg TID	
Laboratory Parameters	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)
ALT/SGPT	16/765(2)	232/714(32)	8/756(1)	321/709(45)	10/741(1)	342/681(50)
AST/SGOT	33/765(4)	155/744(21)	17/754(2)	187/736(25)	15/742(2)	218/721(30)
Alkaline Phosphatase	20/763(3)	55/741(7)	33/749(4)	34/740(5)	23/741(3)	30/732(4)
Total Bilirubin	174/739(24)	46/751(6)	170/733(23)	40/745(5)	182/719(25)	45/719(6)
GGT	30/759(4)	96/741(13)	24/746(3)	100/731(14)	20/737(3)	107/714(15)
LDH	2/766(<1)	61/759(8)	3/756(<1)	47/749(6)	2/743(<1)	42/737(6)
BUN/urea	4/765(<1)	34/766(4)	6/757(<1)	35/750(5)	8/743(1)	34/742(5)
Creatinine	1/766(<1)	25/764(3)	2/757(<1)	25/755(3)	5/744(<1)	15/743(2)
Sodium	5/765(<1)	67/760(9)	9/757(1)	79/752(11)	13/744(2)	73/741(10)
Potassium	17/766(2)	47/762(6)	24/752(3)	60/754(8)	39/742(5)	62/742(8)
Chloride	5/765(<1)	21/765(3)	4/757(<1)	17/757(2)	10/744(1)	18/744(2)
Bicarbonate	70/764(9)	76/758(10)	61/754(8)	119/744(16)	65/742(9)	115/731(16)
Calcium	9/766(1)	34/755(5)	11/754(1)	62/748(8)	11/743(1)	47/734(6)
Magnesium	2/765(<1)	0/766	1/754(<1)	0/753	3/744(<1)	0/743
Phosphorus	50/762(7)	29/765(4)	44/749(6)	37/754(5)	57/738(8)	27/739(4)
Glucose	178/745(24)	269/718(37)	176/735(24)	288/721(40)	143/731(20)	286/697(41)
Cholesterol	119/734(16)	130/708(18)	113/718(16)	104/685(15)	126/711(18)	114/685(17)
Triglycerides	53/757(7)	152/691(22)	95/750(13)	109/678(16)	83/729(11)	114/663(17)
Uric Acid	28/761(4)	34/758(4)	37/748(5)	31/743(4)	28/737(4)	36/739(5)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: Entries are number low (or high)/number at risk. Number at risk for shift to low (or high) is the number of subjects whose baseline value was not low (or high) and who had at least one post- baseline value. Numbers in parentheses are percentages based on number at risk.
(a) Shift to low includes normal to low, high to low, and unknown to low.
(b) Shift to high includes normal to high, low to high, and unknown to high.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-SHFT-A.SAS DATE: 01OCT2015

Summary of shifts from baseline - Blood Chemistry laboratory parameters: Studies 109MS301 and 109MS302
Page 2 of 2

Laboratory Parameters	Total BG00012 Shift to Low (a)	Total BG00012 Shift to High (b)	GA Shift to Low (a)	GA Shift to High (b)
ALT/SGPT	18/1497(1)	663/1390(48)	2/345 (<1)	95/309 (31)
AST/SGOT	32/1496(2)	405/1457(28)	5/346 (1)	72/328 (22)
Alkaline Phosphatase	56/1490(4)	64/1472(4)	7/343 (2)	25/339 (7)
Total Bilirubin	352/1452(24)	85/1464(6)	97/337 (29)	17/336 (5)
GGT	44/1483(3)	207/1445(14)	18/344 (5)	45/334 (13)
LDH	5/1499(<1)	89/1486(6)	0/346	31/341 (9)
BUN/urea	14/1500(<1)	69/1492(5)	0/347	14/346 (4)
Creatinine	7/1501(<1)	40/1498(3)	1/347 (<1)	17/344 (5)
Sodium	22/1501(1)	152/1493(10)	2/347 (<1)	46/346 (13)
Potassium	63/1494(4)	122/1496(8)	12/344 (3)	31/345 (9)
Chloride	14/1501(<1)	35/1501(2)	2/347 (<1)	8/347 (2)
Bicarbonate	126/1496(8)	234/1475(16)	35/343 (10)	35/343 (10)
Calcium	22/1497(1)	109/1482(7)	9/347 (3)	25/340 (7)
Magnesium	4/1498(<1)	0/1496	0/347	0/347
Phosphorus	101/1487(7)	64/1493(4)	22/343 (6)	8/346 (2)
Glucose	319/1466(22)	574/1418(40)	69/343 (20)	112/333 (34)
Cholesterol	239/1429(17)	218/1370(16)	62/325 (19)	41/305 (13)
Triglycerides	178/1479(12)	223/1341(17)	31/341 (9)	79/318 (25)
Uric Acid	65/1485(4)	67/1482(5)	22/346 (6)	20/342 (6)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Baseline is defined as the latest available value prior to or on the date of first exposure to study treatment.
3: Entries are number low (or high)/number at risk. Number at risk for shift to low (or high) is the number of subjects whose baseline value was not low (or high) and who had at least one post- baseline value. Numbers in parentheses are percentages based on number at risk.
(a) Shift to low includes normal to low, high to low, and unknown to low.
(b) Shift to high includes normal to high, low to high, and unknown to high.

SOURCE: BG12MS/JAPAN/ISS/T-LB-BC-SHFT-A.SAS DATE: 01OCT2015

Table 237: Summary of Shifts From Baseline – Blood Chemistry – Part I (Placebo-Controlled Period)

Summary of shifts from baseline - blood chemistry
- Part I (placebo-controlled period)
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Laboratory Parameters	Placebo		BG00012 240 mg BID	
	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)
Liver enzyme tests				
ALT/SGPT	0/113	13/110 (12)	0/111	28/101 (28)
AST/SGOT	1/111 (<1)	10/112 (9)	1/111 (<1)	25/109 (23)
Alkaline Phosphatase (ALP)	1/110 (<1)	1/112 (<1)	2/111 (2)	0/110
Total Bilirubin	14/106 (13)	4/108 (4)	19/106 (18)	3/110 (3)
GGT	2/112 (2)	4/107 (4)	0/108	9/106 (8)
LDH	0/113	4/111 (4)	0/111	3/109 (3)
Kidney function tests and electrolytes				
BUN/urea	0/113	2/112 (2)	0/111	1/111 (<1)
Creatinine	0/113	1/113 (<1)	0/111	0/111
Sodium	0/113	0/113	1/111 (<1)	0/111
Potassium	4/113 (4)	2/113 (2)	4/110 (4)	0/111
Chloride	0/113	0/113	1/111 (<1)	0/111
Bicarbonate	0/112	0/113	0/111	1/111 (<1)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Entries are number low (or high)/number at risk. Number at risk for shift to low (or high) is the number of subjects whose baseline value was not low (or high) and who had at least one post-baseline value.
Numbers in parentheses are percentages based on number at risk.
(a) Shift to low includes normal to low, high to low, and unknown to low.
(b) Shift to high includes normal to high, low to high, and unknown to high.

SOURCE: BG12MS/109MS305/PART1/T-LB-SHIFT-BC.SAS DATE: 25SEP2015

Summary of shifts from baseline - blood chemistry
- Part I (placebo-controlled period)
Page 2 of 2

Laboratory Parameters	Placebo		BG00012 240 mg BID	
	Shift to Low (a)	Shift to High (b)	Shift to Low (a)	Shift to High (b)
Other tests				
Calcium	1/113 (<1)	2/113 (2)	2/111 (2)	3/111 (3)
Magnesium	0/113	0/113	0/111	0/111
Phosphorus	1/113 (<1)	2/113 (2)	2/111 (2)	1/111 (<1)
Glucose	9/112 (8)	39/91 (43)	8/110 (7)	49/94 (52)
Cholesterol	13/106 (12)	12/106 (11)	7/109 (6)	12/102 (12)
Triglycerides	9/107 (8)	14/107 (13)	15/109 (14)	9/103 (9)
Uric Acid	0/111	0/112	0/109	7/109 (6)

NOTE 1: Data after subjects switched to alternative MS medications are excluded.
2: Entries are number low (or high)/number at risk. Number at risk for shift to low (or high) is the number of subjects whose baseline value was not low (or high) and who had at least one post-baseline value.
Numbers in parentheses are percentages based on number at risk.
(a) Shift to low includes normal to low, high to low, and unknown to low.
(b) Shift to high includes normal to high, low to high, and unknown to high.

SOURCE: BG12MS/109MS305/PART1/T-LB-SHIFT-BC.SAS DATE: 25SEP2015