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Summary of investigation results

Filgrastim, Lenograstim, Nartograstim, Pegfilgrastim

September 13, 2016

Non-proprietary name

a. Filgrastim (genetical recombination) (including follow-on biologics/biosimilars) (See attachment)

b. Lenograstim (genetical recombination)

c. Nartograstim (genetical recombination)

d. Pegfilgrastim (genetical recombination)

Brand name (Marketing authorization holder)

a. GRAN injection 75 μg, 150 μg, GRAN injection M 300 μg, GRAN SYRINGE 75 μg, 150 μg, GRAN SYRINGE M 300 μg (Kyowa Hakko Kirin Co., Ltd.) and the other follow-on biologics/biosimilars (See attachment)

b. NEUTROGIN injection 50 μg, 100 μg, 250 μg (Chugai Pharmaceutical Co., Ltd.)

c. Neu-up injection 25 μg, 50 μg, 100 μg, 250 μg (Yakult Honsha Co., Ltd.)

d. G-LASTA Subcutaneous Injection 3.6 mg (Kyowa Hakko Kirin Co., Ltd.)

Indications

See attachment.

Summary of revision

a–d.

1. Description regarding skin test should be deleted from the Important Precautions section.

a–c.

2. “Anaphylaxis” should be added to the “Shock” subsection in the Clinically significant adverse reaction section.

Background of the revision and investigation results

1. Skin test

Pharmaceuticals and Medical Devices Agency
Office of Safety I
3-3-2 Kasumigaseki, Chiyoda-ku, Tokyo 100-0013 Japan
E-mail: safety.info@pmda.go.jp

A petition was submitted by an academic society. We performed an investigation to determine the implementation status of skin test and adverse reaction reports in the post-marketing stage. In addition, we considered descriptions of package inserts overseas and guidelines. Following an investigation result based on the opinions of expert advisors and the available evidence, the MHLW/PMDA concluded that the description for skin test should be deleted in the package insert.

2. Anaphylaxis

Cases have been reported in Japan since the marketing in patients treated with filgrastim (genetical recombination), lenograstim (genetical recombination), and nartograstim (genetical recombination). Considering these reports and following an investigation result based on the opinions of expert advisers and available evidence, the MHLW/PMDA concluded that revision of the package insert was necessary.

The number of reported adverse reactions and fatal cases in the last 3 fiscal years in Japan

1. N/A
2.
   a. A total of 4 cases associated with anaphylaxis has been reported (including a case for which a causal relationship to the product could not be ruled out). No fatality has been reported.
   b. No case associated with anaphylaxis has been reported.
   c. No case associated with anaphylaxis has been reported.

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Attachment

	Active ingredients	Applicable brand names	Indications	Name of company
a.	Filgrastim (genetical recombination)	GRAN injection 75 μg GRAN injection 150 μg GRAN injection M 300 μg GRAN SYRINGE 75 μg GRAN SYRINGE 150 μg GRAN SYRINGE M 300 μg	− Mobilization of hematopoietic stem cells into peripheral blood − Acceleration of an increase of neutrophil count in hematopoietic stem-cell transplantation − Cancer chemotherapy-induced neutropenia − Neutropenia that precludes treatment for human immunodeficiency virus (HIV) infection − Neutropenia in myelodysplastic	Kyowa Hakko Kirin Co., Ltd.
	Filgrastim (genetical recombination) ［filgrastim biosimilar 1］	Filgrastim BS 75 μg Syringe for Inj. MOCHIDA Filgrastim BS 150 μg Syringe for Inj. MOCHIDA Filgrastim BS 300 μg Syringe for Inj. MOCHIDA		Mochida Pharmaceutical Sales Co., Ltd.
		Filgrastim BS Injection Syringe “F” 75 μg		Fuji Pharma Co., Ltd.

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	Active ingredients	Applicable brand names	Indications	Name of company
		Filgrastim BS Injection Syringe “F” 150 μg Filgrastim BS Injection Syringe “F” 300 μg	syndrome – Neutropenia in aplastic anemia – Congenital or idiopathic neutropenia	
	Filgrastim (genetical recombination) ［filgrastim biosimilar 2］	Filgrastim BS Inj. 75 μg Syringe “NK” Filgrastim BS Inj. 150 μg Syringe “NK” Filgrastim BS Inj. 300 μg Syringe “NK”		Nippon Kayaku Co., Ltd.
		Filgrastim BS Inj. 75 μg Syringe “TEVA” Filgrastim BS Inj. 150 μg Syringe “TEVA” Filgrastim BS Inj. 300 μg Syringe “TEVA”		Teva Pharma Japan Inc.
	Filgrastim (genetical	Filgrastim BS Inj. 75 μg Syringe [SANDOZ]		Sandoz K.K.

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	Active ingredients	Applicable brand names	Indications	Name of company
	recombination) ［filgrastim biosimilar 3］	Filgrastim BS Inj. 150 μg Syringe [SANDOZ] Filgrastim BS Inj. 300 μg Syringe [SANDOZ]		
b.	Lenograstim (genetical recombination)	NEUTROGIN injection 50 μg NEUTROGIN injection 100 μg NEUTROGIN injection 250 μg	− Mobilization of hematopoietic stem cells into peripheral blood − Acceleration of an increase of neutrophil count in hematopoietic stem-cell transplantation − Cancer chemotherapy-induced neutropenia − Neutropenia in myelodysplastic syndrome − Neutropenia in aplastic	Chugai Pharmaceutical Co., Ltd.

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	Active ingredients	Applicable brand names	Indications	Name of company
			anemia − Congenital or idiopathic neutropenia − Neutropenia that precludes treatment for HIV infection − Neutropenia in immunosuppressive therapy (renal transplant)	

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	Active ingredients	Applicable brand names	Indications	Name of company
c.	Nartograstim (genetical recombination)	Neu-up injection 25 μg Neu-up injection 50 μg Neu-up injection 100 μg Neu-up injection 250 μg	− Acceleration of an increase of neutrophil count in bone marrow transplant − Cancer chemotherapy-induced neutropenia − Neutropenia in pediatric aplastic anemia − Congenital or idiopathic neutropenia	Yakult Honsha Co., Ltd.
d.	Pegfilgrastim (genetical recombination)	G-LASTA Subcutaneous Injection 3.6 mg	Reduction of the risk of cancer chemotherapy-induced febrile neutropenia	Kyowa Hakko Kirin Co., Ltd.

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