【合同企画（PMDA 厚生労働省）】CVIT2022　HBDタウンホールセッション
今こそ産官学連携の真価を発揮する時が来た
1.HBD活動の紹介

HBD活動の成果と期待
Achievement and prospective of HBD activity

2022年7月22日（金）8:00-8:10

独立行政法人医薬品医療機器総合機構
Pharmaceuticals and Medical Devices Agency (PMDA)
医療機器審査第一部
Reviewer, Office of Medical Devices I
大橋　　萌
Moe OHASHI

日本心血管インターベンション治療学会
COI開示

筆頭発表者名：　大橋　萌

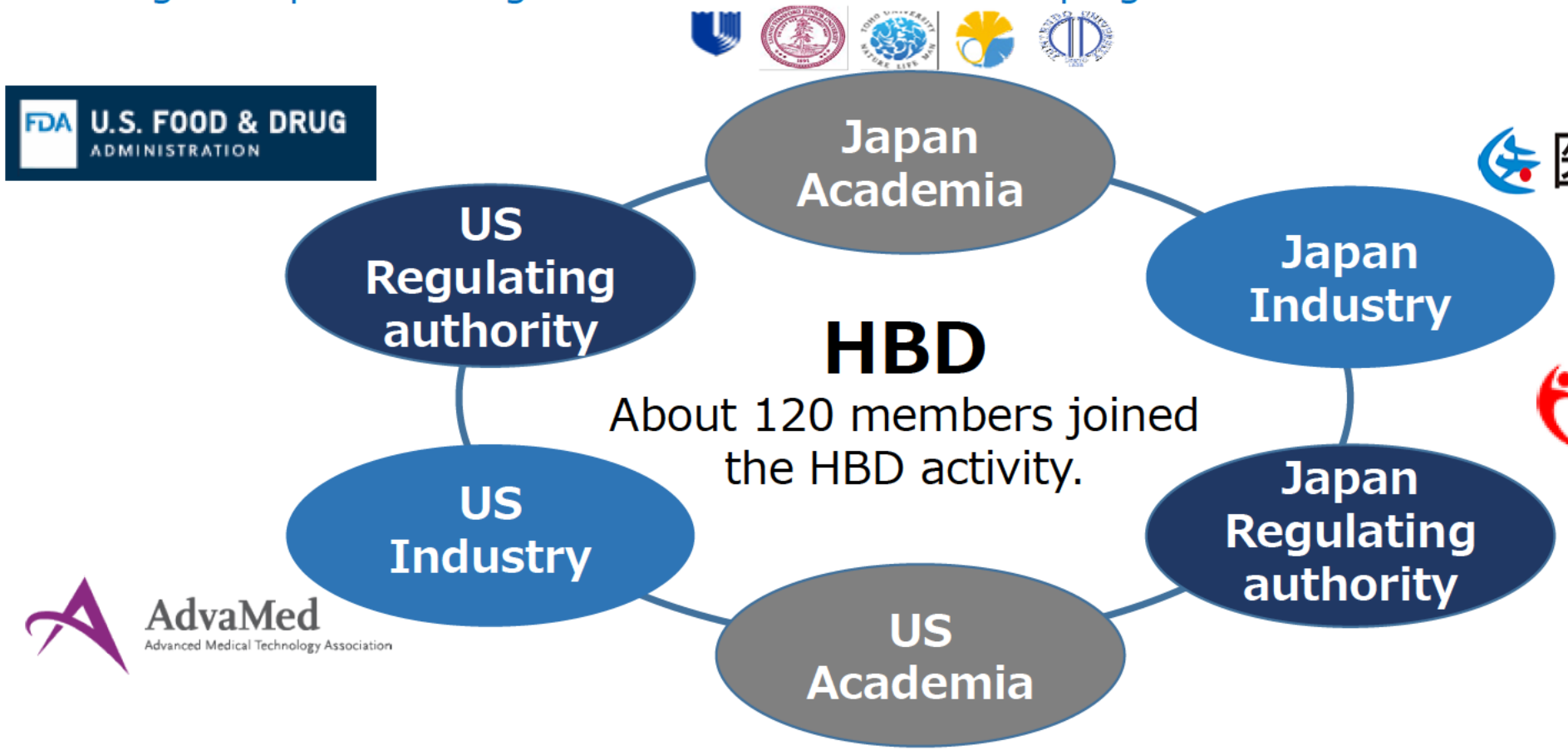
演題発表に関連し、開示すべきCOI関係にある
企業などはありません。

HBD(*H*armonization *by D*oing)活動の目的

What Is *H*armonization *by D*oing(HBD)?

目的：日米の医療機器の開発促進と規制の調和を図ることを目的として、
産官学の協力で2003年から開始された活動

Purpose : Stakeholders of Regulatory agency, academia and industry in Japan and the U.S. initiated a dialogue to promote a global clinical trial for developing innovative medical devices in 2003.



U.S. FOOD & DRUG ADMINISTRATION

AdvaMed Advanced Medical Technology Association

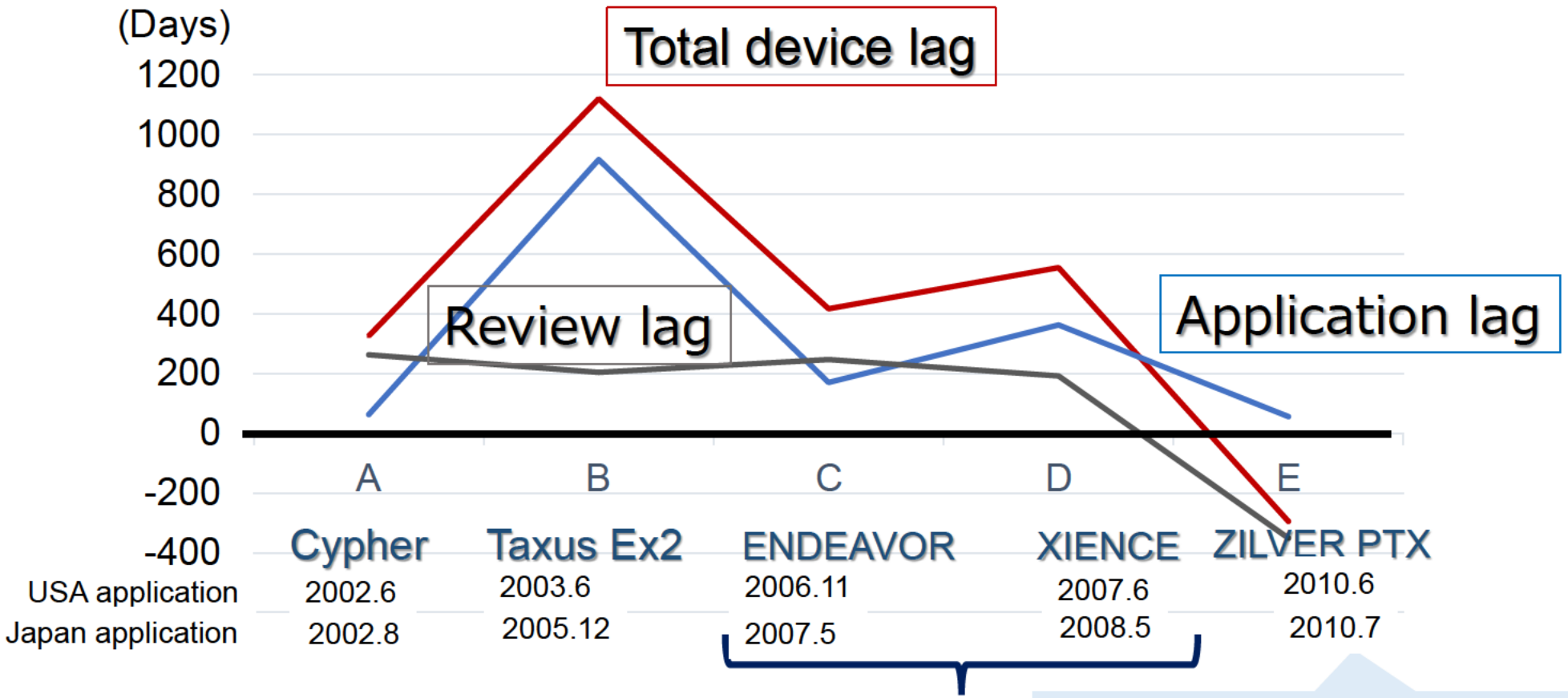
医機連 一般社団法人 日本医療機器産業連合会 JFMDA The Japan Federation of Medical Devices Associations

厚生労働省 Ministry of Health, Labour and Welfare
医療機器審査管理課

PMDA 独立行政法人 医薬品医療機器総合機構 Pharmaceuticals and Medical Devices Agency
医療機器審査第一部
医療機器審査第二部

背景：日米の薬剤溶出ステントに関するデバイスラグ

USA-Japan Device Lags for Drug Eluting Stents



- HBD POC project
- US pivotal trial and Japan trial

- **Global Clinical trial**
- US/Japan collaborative scheme project

M. Murakami *et al.*, Circ J2017 doi: 10.1253/circj.CJ-17-0533

HBD活動のこれまでの成果
Achievement of HBD Activity

2003 Established HBD
薬剤溶出型ステント2品目について、日米共同治験を実施
Conducted US-Japan joint clinical trials for two drug eluting stents
- ENDEAVOR（Medtronic Japan Co., Ltd.）
- XIENCE V（Guidant Japan K.K.（then））

ここから毎年HBDの成果を公表

2005 1st Think Tank in Tokyo

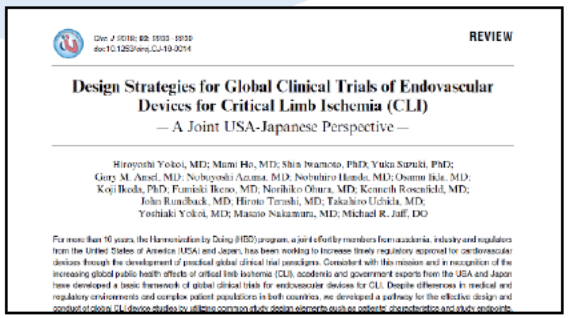
2010 Zilver PTX日米同時申請

2014 CLI国際共同治験の基本的考え方発表

2016 Started “HBD-for-Children” activity

By Doingにより
国際共同治験の実施が
可能であることを証明した
Proved By Doing that conducting global clinical trials is possible.

2018 CLI（重症下肢虚血）治療デバイスに
関する国際共同治験デザインの要素抽出（論文として公表）
Circ J. 2018; 82: 2233-2239.

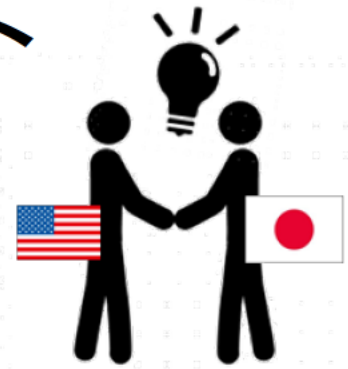

REVIEW

Design Strategies for Global Clinical Trials of Endovascular Devices for Critical Limb Ischemia (CLI)
— A Joint USA-Japanese Perspective —

医療機器における国際共同治験の実施が一般化
Global clinical trial is now common for medical devices.

POC (Proof of Concept) プロジェクト

Proof of Concept (POC) Project



Informational Meetings (Info)

Pre-sub

IDE

Step by steps !

Application

全般相談（無料）

General consultation

対面助言（有料）　治験届

CTN

Face-to-face web meetings

- Pre-development Consultation
- Consultation for necessity of CT
- Protocol Consultation for CT etc..

承認申請

- 照会・回答
- 専門協議
  - Inquiry & Response
  - Face-to-face meeting

日米共同治験を実施する製品を中心として、開発段階での日米の類似点、相違点の把握及び問題の明確化により、日米同時申請・承認を目指す

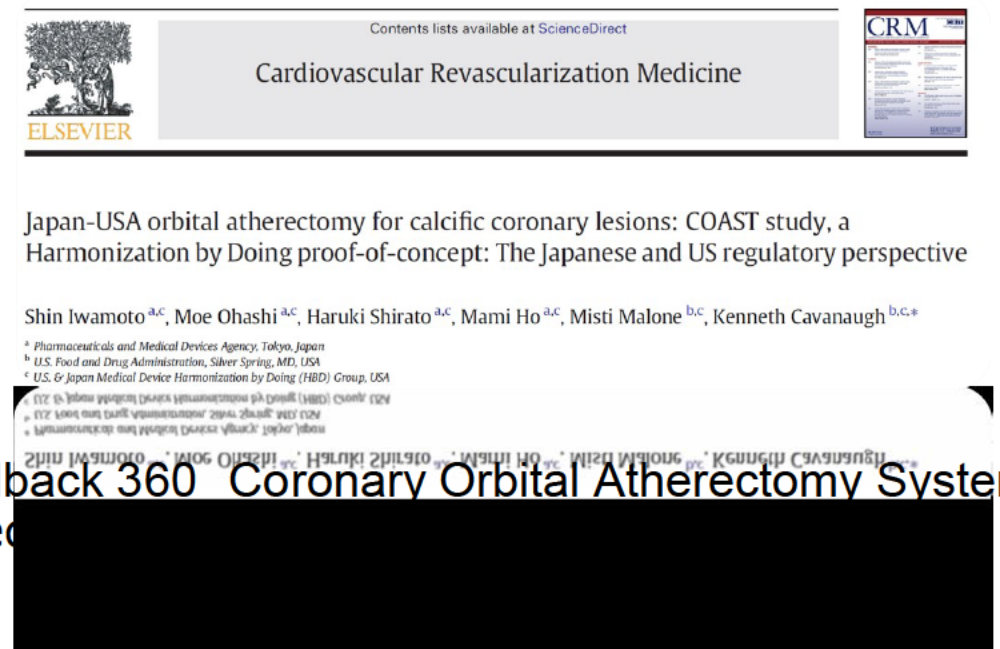
Purpose of “POC” is to promote the convergence from parallel clinical trials in the U.S. and Japan toward single clinical trial protocol and to encourage global development.

POC (Proof of Concept) プロジェクト
Proof of Concept (POC) Project

<主な対象製品:Ongoing projects>

- Transcatheter mitral valve replacement (4C Medical)
- Device for CLTI treatment (Lim Flow)
- Device for treatment of heart failure (Corvia Medical)

<これまでの成果：Achievements>


Contents lists available at ScienceDirect

Cardiovascular Revascularization Medicine

ELSEVIER

CRM

Japan-USA orbital atherectomy for calcific coronary lesions: COAST study, a Harmonization by Doing proof-of-concept: The Japanese and US regulatory perspective

Shin Iwamoto [a,c], Moe Ohashi [a,c], Haruki Shirato [a,c], Mami Ho [a,c], Misti Malone [b,c], Kenneth Cavanaugh [b,c,*]

[a] Pharmaceuticals and Medical Devices Agency, Tokyo, Japan
[b] U.S. Food and Drug Administration, Silver Spring, MD, USA
[c] U.S. & Japan Medical Device Harmonization by Doing (HBD) Group, USA

First global clinical trial including Japan for pediatric patients!

Diamondback 360® Coronary Orbital Atherectomy System (OAS)
Approved

Harmony™ Transcatheter Pulmonary Valve (TPV)
Approved in 2021 at US and JP.

POC (Proof of Concept) プロジェクト
Proof of Concept (POC) Project

1. 日米共同治験の手引き作成（論文化予定）
Publication of a concept paper about US- JP joint trials

- Based on our experiences through this activity, a concept paper will be submitted.

< Overview of the concept paper>

1. The basic regulatory pathway of US-Japan joint clinical trial
2. Lessons learned from previous global trials
3. The points to harmonize for promoting global clinical trials

2. 医療機器開発促進に関する行政制度の比較（論文化予定）
Publication of a paper comparing the latest regulation system in US and Japan

- Promotion of the use of specific programs intended to promote innovation based on points to note and utilization example of those programs.
- This paper has been drafting with US-JP stakeholders.

HBD for Children活動の役割

Prospective of HBD-for-Children Activity

- ◆ Through the HBD experience, we recognized the importance of collaboration to promote the development of innovative medical devices.
- ◆ Development of pediatric medical device tends to delay both in the U.S. and Japan.
- ◆ We had discussion to find problems and solutions for the early development of pediatric medical devices at face-to-face meetings in conferences and teleconferences.

Collaboration among academia, industry and regulatory authority

- 日米で開発が望まれる医療機器（シーズ）の洗い出し
- 日米での使用環境や対象患者の同等性、違いなどに関する検討

HBD for Children WG

国際共同治験の実施が**可能**な医療機器

- HBD for ChildrenのPOCとしてサポート。
- PMDAやFDAでの治験プロトコル相談等を活用。

（必要に応じて企業-PMDA-FDAの三者間で話合い等）

国際共同治験の実施が**困難**な医療機器

（日本での治験が困難、プロトコルを合わせることが困難など）

- 早期承認制度や先駆け審査制度の活用。
- ニーズ品目として指定。
- アカデミアからの開発製品についてはRS戦略相談なども利用。
- 少数例での国内治験の実施や、使用実績データ等の利用などを検討。

HBD for Children活動の成果

Achievement of HBD-for-Children Activity

1．日米で企業へのアンケートを実施

Questionnaire to Industries

Why do you think the developing pediatric medical device is difficult?

The most frequent answer;
The market is too small.

2. 各製品の開発状況を5つに分類し、これらを論文として発表

Classification of pediatric devices

1. Approved in US but not approved in Japan
2. Not approved in US and Japan but used as Off-label in US (or Japan)for a long time
3. Not approved and not used in US and Japan but used/approved in other countries
4. Under development
5. Approved in Japan but not approved in US

Understanding of current situation and specification of problems

Circ. J. 2020, 84, 786-791

AMED医薬品等規制調和・研究事業の成果

Report from Japanese national grant research to promote the efficient development of pediatric medical devices

研究課題名：小児用医療機器の日米同時開発に係る課題抽出等について

目的：Purpose

1. Accelerating global clinical trial of pediatric medical devices
2. Utilization of real-world data for regulatory use of pediatric medical devices

方法：Methods and goals

- Investigation of burdens for development of pediatric medical devices by literature research and hearing survey from the parties concerned
- Proposal for solutions to challenges

Collaboration with HBD activities

結論：Results

- Burdens ; Universal issues particular to children, Profitability issues for industry
- Keywords for raising industry's motivation;
  Enough profit (enough insurance reimbursement), Contribution to society

https://www.amed.go.jp/en/index.html

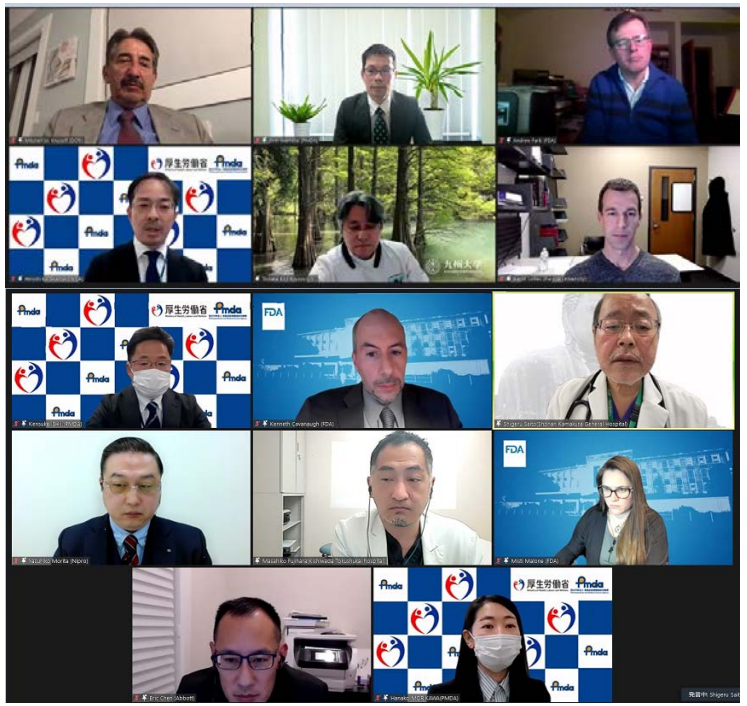
Anyone can join the meetings!

HBD Think Tank Meeting
HBD Town Hall Session

- 目的：HBDの成果を広く公表する場として、日米交互に開催

Meeting to share achievements of HBD Activities.
Discussion about the ongoing projects and future direction of HBD activities among stakeholders.

@ HBD East 2021



- 2005年の第一回（東京）開催から、これまで計11回実施

Think Tank meetings have been held more than 10 times since 2005.
HBD East 2019 – Tokyo – December 2019
HBD West 2020 –Online – March 2021
HBD-East Online –Online–January 2022

- これまでの主なトピック

Topics have been discussed…

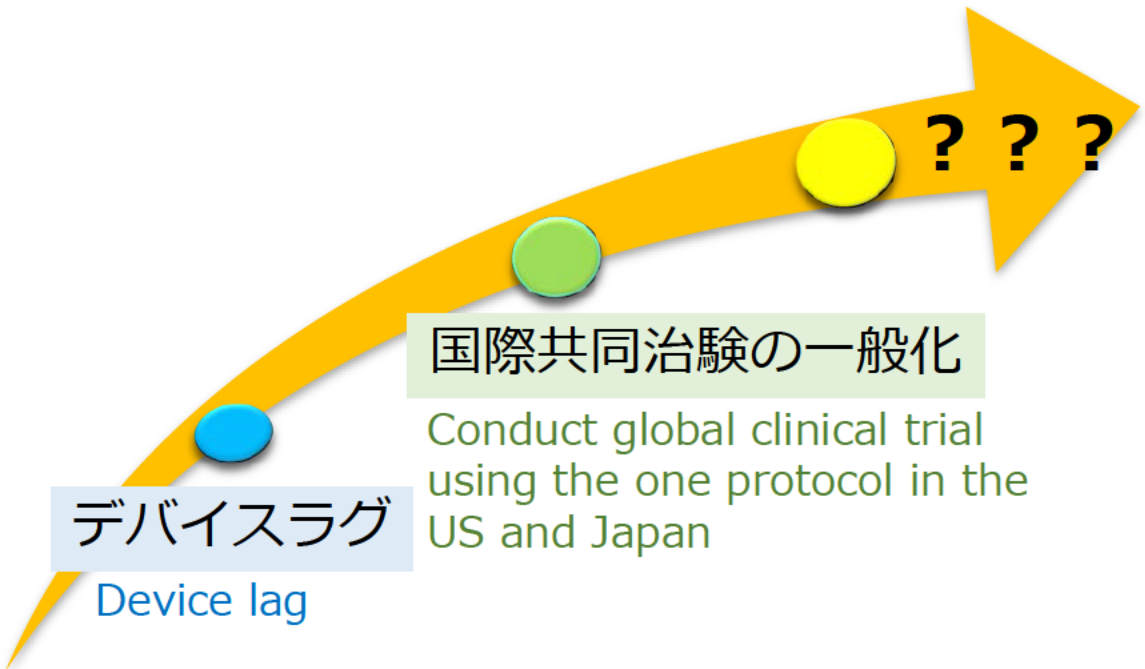
✓ Rethinking of the New Style of Global Clinical Trial
✓ Heart failure treatment devices, Venus stents, Paclitaxel issue, Critical limb ischemia
✓ Development of pediatric medical devices
✓ Review of SaMD devices
✓ Real world evidence

HBD活動における今後の期待
Challenges for the future

1. 新たな規制の枠組みを生かした早期患者アクセスの実現
Promotion of early patient access to medical devices by using new regulation system.

2. リアルワールドデータ（RWD)の利活用
Mutual Utilization of the real world data including several registry data.

3. 新たな分野の医療機器の協働に向けた情報共有
Sharing new topics and medical devices in new fields.



行動を起こしながら、国際共同治験実施に限らない規制調和のための議論
Let's continue to discuss for the harmonization between the US and Japan **by taking a real action**.

より多くの企業や医療機器がHBD活動に参画していただき、日米双方向の経験を共有
HBD can be activated by more companies & products joining in the collaborative scheme. Further JP-US regulatory harmonization is expected based on experiences in both sides.


Thank you for listening.
If you have any questions, please contact us.
(mail: hbd.contact@pmda.go.jp)
pmda