2 Year Results from the MDT-2113 SFA Japan Trial - DCB vs. standard PTA for the treatment of atherosclerotic lesions in the SFA/PPA

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on behalf of the MDT-2113 SFA Japan Investigators

Disclosure

Speaker name: Osamu Iida, MD

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I have the following potential conflicts of interest to report:

- ☐ Consulting
- ☐ Employment in industry
- ☐ Stockholder of a healthcare company
- ☐ Owner of a healthcare company
- ☐ Other(s)

- ☒ I do not have any potential conflict of interest

MDT-2113 SFA Japan Trial
Overview

<u>Objective</u>: Assess the safety and efficacy of MDT-2113 (IN.PACT Admiral) DCB for the interventional treatment of *de novo* and non-stented restenotic lesions in the superficial femoral artery and the proximal popliteal artery as compared to treatment with standard percutaneous transluminal angioplasty

- Prospective, multi-center, randomized (2:1), single blinded trial*
- 100 subjects enrolled at 11 sites in Japan
  - MDT-2113 DCB (n=68) vs. PTA (n=32)
- Independent and blinded Duplex Ultrasound Core Lab,[1] Angiographic Core Lab,[2] and Clinical Events Committee[3]
- External Monitoring, 100% Source Data Verification

1. VasCore DUS Core Laboratory, Boston, MA, US;
2. SynvaCor Angiographic Core Laboratory, Springfield, IL, US;
3. Clinical Events Committee and Data Safety Monitoring services provided by HCRI, Boston, MA, US

* Sponsored by Medtronic plc

MDT-2113 SFA Japan Trial
Investigators and Sites

MDT-2113 SFA Japan

100 subjects enrolled at 11 sites in Japan

Shigeru Saito, MD	Shonan Kamakura General Hospital	Kamakura, Kanagawa, Japan
Masato Nakamura, MD	Toho University Medical Center, Ohashi Hospital	Meguro-Ku, Tokyo, Japan
Keisuke Hirano, MD	Yokohama Tobu Hospital	Tsurumi-Ku, Yokohama, Kan, Japan
Osamu Iida, MD	Kansai Rosai Hospital	Amagasaki, Hyogo, Japan
Kazushi Urasawa, MD	Tokeidai Memorial Hospital	Sapporo, Hokkaido, Japan
Naoto Inoue, MD	Sendai Kousei Hospital	Sendai, Miyagi, Japan
Hiroshi Ando, MD	Kasukabe Chuo General Hospital	Kasukabe, Saitama, Japan
Junko Hone, MD	Kikuna Memorial Hospital	Yokohama, Kanagawa, Japan
Takuo Nakagami, MD	Omihachiman Community Medical Center	Omihachiman, Siga, Japan
Hiroyoshi Yokoi, MD	Fukuoka Sanno Hospital	Fukuoka, Fukuoka, Japan
Kenji Ando, MD	Kokura Memorial Hospital	Kitakyushu, Fukuoka, Japan

MDT-2113 SFA Japan Trial
Primary Endpoints

Primary Effectiveness Endpoint: Primary patency at 12 months, defined as freedom from clinically-driven target lesion revascularization and freedom from restenosis as determined by duplex ultrasound-derived PSVR ≤ 2.4

Primary Safety Endpoint: Freedom from device- and procedure-related death through 30 days, and freedom from target limb major amputation and clinically-driven target vessel revascularization within 12 months post index procedure

MDT-2113 SFA Japan Trial
Key Eligibility Criteria

Key Inclusions

- RCC 2, 3 and 4
- Lesion in SFA and/or PPA
- Single *de novo* or non-stented restenotic lesion:
  - 70-99% occluded with total length ≥4 cm and ≤ 20 cm
  - 100% occluded total length ≤ 10 cm
  - Combination and tandem lesions allowed if criteria above met and lesion gap ≤ 3 cm
- Evidence of adequate distal run-off through the foot

Key Exclusions

- RCC 5 and 6
- Stroke or STEMI ≤ 3 months prior to enrollment
- Chronic renal insufficiency
- Contralateral SFA/PPA disease requiring treatment at index procedure
- Any major surgical procedure or intervention performed or planned ≤ 30 days of index
- Unsuccessful lesion crossing

MDT-2113 SFA Japan Trial
Baseline Clinical Characteristics

Subject Characteristics	MDT-2113 DCB	PTA	p-value
Age, Y ± SD	73.3 ± 7.4 (68)	74.2 ± 6.1 (32)	0.539
Male Gender (%)	73.5% (50/68)	81.3% (26/32)	0.461
Obesity (BMI ≥ 30 kg/m^2) (%)	4.4% (3/68)	0.0% (0/32)	0.549
Diabetes Mellitus (%)	58.8% (40/68)	56.3% (18/32)	0.831
Insulin Dependent Diabetes Mellitus (%)	14.7% (10/68)	18.8% (6/32)	0.771
Current Smoker (%)	26.5% (18/68)	31.3% (10/32)	0.639
Carotid Artery Disease (%)	18.5% (12/65)	16.1% (5/31)	1.000
Coronary Heart Disease (%)	50.0% (34/68)	50.0% (16/32)	1.000
Renal Insufficiency (%)	8.8% (6/68)	12.5% (4/32)	0.722
Rutherford Category (%) 2	54.4% (37/68)	59.4% (19/32)	
3	41.2% (28/68)	37.5% (12/32)	0.623
4	4.4% (3/68)	3.1% (1/32)	
ABI	0.764 ± 0.145 (68)	0.735 ± 0.166 (32)	0.384

MDT-2113 SFA Japan Trial
Baseline Lesion Characteristics

Subject Characteristics		MDT-2113 DCB n=68	PTA n=32	p-value
Lesion Type [1]	De novo	91.2% (62/68)	100.0% (32/32)	0.085
	Restenotic (non-stented)	8.8% (6/68)	0.0% (0/32)	
Prox. Popliteal Involvement		1.5% (1/68)	3.1% (1/32)	0.540
Lesion length (cm ± SD) [2]		9.15 ± 5.85 (68)	8.89 ± 6.01 (32)	0.838
Total occlusions, % (n)		16.2% (11/68)	15.6% (5/32)	1.000
Severe calcification, % (n)		7.4% (5/68)	9.4% (3/32)	0.708
Reference Vessel Diameter (mm)		4.843 ± 0.751 (68)	4.675 ± 0.661 (32)	0.280
Mean Lesion Diameter pre (mm)		0.971 ± 0.731 (68)	0.896 ± 0.594 (32)	0.610
Diameter Stenosis (%)		80.2 ± 14.1 (68)	80.7 ± 12.5 (32)	0.861

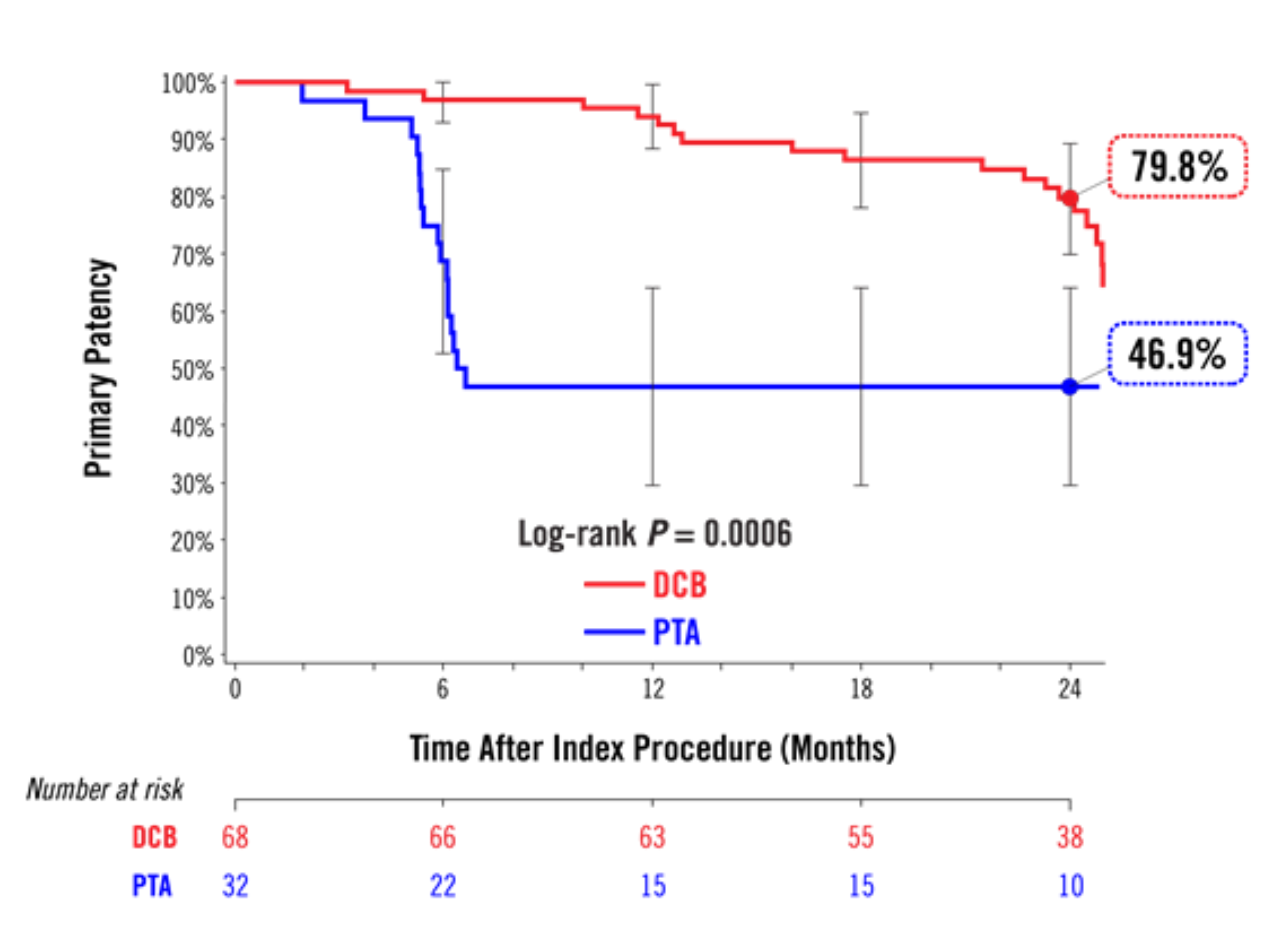
1. Site-reported
2. Normal-to-normal by Core Lab QVA evaluation

MDT-2113 SFA Japan Trial
Procedural Characteristics

Procedural Characteristics		MDT-2113 DCB (n=68 Subjects)	PTA (n=32 Subjects)	p-value
Pre-Dilatation (%) [1]		100.0% (68/68)	100.0% (32/32)	> 0.999
Post-dilatation (%) [1]		23.5% (16/68)	18.8% (6/32)	0.796
Index Procedural IVUS Use (%) [1]		39.7% (27/68)	25.0% (8/32)	0.181
Dissections (%)	0	26.5% (18/68)	28.1% (9/32)	
	A-C	73.5% (50/68)	71.9% (23/32)	0.235
	D-F	0.0% (0/68)	0.0% (0/32)	
Provisional Stenting (%) [1]		4.4% (3/68)	3.1% (1/32)	0.759
Device Success (%) [2]		100.0% (97/97)	97.1% (33/34)	0.260
Procedural Success (%) [3]		97.1% (66/68)	100.0% (32/32)	>0.999
Clinical Success (%) [4]		97.1% (66/68)	100.0% (32/32)	>0.999

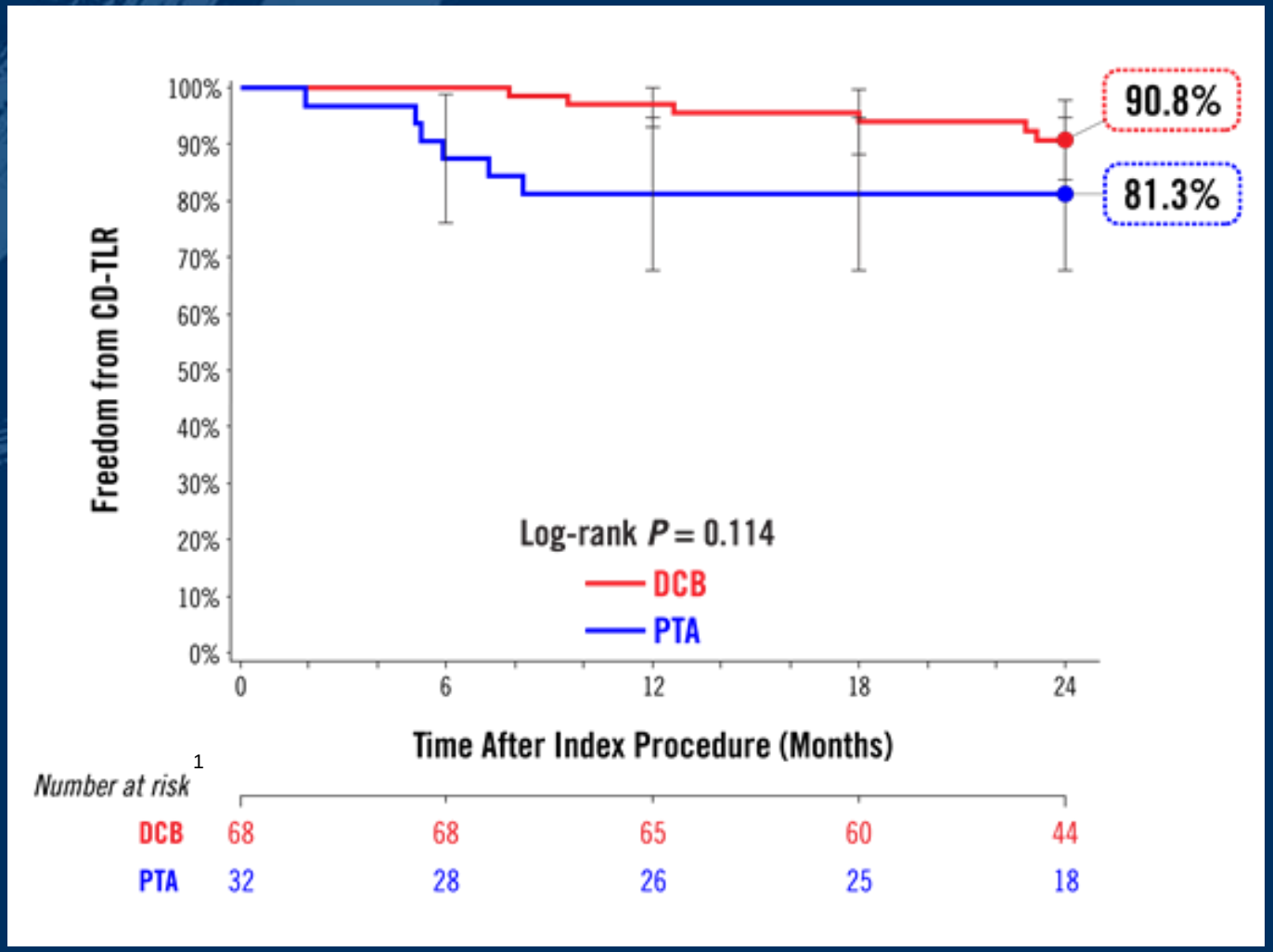
1. Site-reported
2. Device success: Successful delivery, inflation, deflation and retrieval of the intact study balloon without burst < RBP
3. Procedural success: Residual stenosis ≤ 50% for non-stented subjects or ≤ 30% for stented subjects
4. Clinical success: Procedural success without procedural complications (death, major target limb amputation, thrombosis of target lesion or TVR) prior to discharge

MDT-2113 SFA Japan Trial
Primary Patency[1] through 2 Years



1. Freedom from core laboratory-assessed restenosis (duplex ultrasound PSVR ≤2.4) and clinically-driven target lesion revascularization through 24 months (adjudicated by a Clinical Events Committee blinded to the assigned treatment)
2. Number at risk represents the number of evaluable subjects at the beginning of the 30-day window prior to each follow-up interval

MDT-2113 SFA Japan Trial
Freedom from CD-TLR through 2 Years



1. Number at risk represents the number of evaluable subjects at the beginning of the 30-day window prior to each follow-up interval

MDT-2113 SFA Japan Trial
Effectiveness Outcomes at 2 Years

	MDT-2113 DCB	PTA	p-value
Clinically-driven TLR [1]	**9.1% (6/66)**	**20.7% (6/29)**	**0.177**
All TLR [2]	9.1% (6/66)	20.7% (6/29)	0.177
Time to First CD-TLR (Days ± SD)	470.2 ± 199.8	168.2 ± 65.4	0.012
Primary Sustained Clinical Improvement [3]	75.8% (47/62)	71.4% (20/28)	0.795
ABI	0.881 ± 0.141	0.945 ± 0.110	0.038

1. Clinically-driven TLR is defined as any re-intervention within the target vessel due to symptoms or drop of ABI/TBI of ≥20% or >0.15 when compared to post-procedure baseline ABI/TBI.
2. All TLR includes clinically-driven and incidental or duplex-driven TLR
3. Freedom from target limb amputation, TVR, and increase in Rutherford class at 24 months post-procedure

MDT-2113 SFA Japan Trial
Safety Outcomes at 2 Years

	MDT-2113 DCB	PTA	p-value
Primary Safety Composite[1]	89.4% (59/66)	79.3% (23/29)	0.207
30-day Device- & Proc.-related Death	0.0% (0/68)	0.0% (0/32)	> 0.999
24-month Clinically Driven TVR	15.2% (10/66)	24.1% (7/29)	0.384
24-month Target Limb Major Amputation	0.0% (0/66)	0.0% (0/29)	> 0.999
24-month Major Adverse Event[2]	10.6% (7/66)	20.7% (6/29)	0.207
All-cause Death	6.1% (4/66)	3.4% (1/29)	1.000
Thrombosis	0.0% (0/66)	0.0% (0/29)	> 0.999

1. Primary safety composite is defined as freedom from device- and procedure-related 30-day death and freedom from target limb major amputation and clinically-driven TVR through 24 months
2. MAE is defined as composite of death, clinically-driven TVR, target limb major amputation, and thrombosis within 24 months

MDT-2113 SFA Japan Trial Summary

- First reported outcomes from an independently-adjudicated, randomized, single blind trial evaluating DCB in Japanese patients through 2 Years.
- Results demonstrate a consistent and durable treatment effect of the MDT-2113 DCB in a more complex patient demographic than typically seen in other DCB pivotal trials.

	MDT-2113 DCB	PTA	Delta (Δ)
Primary Patency	**79.8%**	46.9%	**Δ 32.9%**
CD-TLR	**9.1%**	20.7%	**Δ 11.6%**

- Data are consistent with superior treatment effect seen in the IN.PACT SFA DCB trials

Publication: 1 Year Results of the MDT-2113 SFA Japan Trial

Clinical Investigation

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Drug-Coated Balloon vs Standard Percutaneous Transluminal Angioplasty for the Treatment of Atherosclerotic Lesions in the Superficial Femoral and Proximal Popliteal Arteries: One-Year Results of the MDT-2113 SFA Japan Randomized Trial

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Abstract

Purpose: To assess the safety and effectiveness of the MDT-2113 (IN.PACT Admiral) drug-coated balloon (DCB) for the treatment of de novo and native artery restenotic lesions in the superficial femoral and proximal popliteal arteries vs percutaneous transluminal angioplasty (PTA) with an uncoated balloon in a Japanese cohort. **Methods:** MDT-2113 SFA Japan (*ClinicalTrials.gov* identifier NCT01947478) is an independently adjudicated, prospective, randomized, single-blinded trial that randomized (2:1) 100 patients (mean age 73.6±7.0 years; 76 men) from 11 Japanese centers to treatment with DCB (n=68) or PTA (n=32). Baseline characteristics were similar between the groups, including mean lesion length (9.15±5.85 and 8.89±6.01 cm for the DCB and PTA groups, respectively). The primary effectiveness outcome was primary patency at 12 months, defined as freedom from clinically-driven target lesion revascularization (CD-TLR) and freedom from restenosis as determined by duplex ultrasonography. The safety endpoint was a composite of 30-day device- and procedure-related death and target limb major amputation and clinically-driven target vessel revascularization within 12 months. **Results:** Patients treated with DCBs exhibited superior 12-month primary patency (89%) compared to patients treated with PTA (48%, p<0.001). The 12-month CD-TLR rate was 3% for DCB vs 19% for PTA (p=0.012). There were no device- or procedure-related deaths, major amputations, or thromboses in either group. Quality-of-life measures showed sustained improvement from baseline to 12 months in both groups. **Conclusion:** Results from the MDT-2113 SFA Japan trial showed superior treatment effect for DCB vs PTA, with excellent patency and low CD-TLR rates. These results are consistent with other IN.PACT SFA DCB trials and demonstrate the safety and effectiveness of this DCB for the treatment of femoropopliteal lesions in this Japanese cohort.

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