Is There a Durable Treatment Option for Challenging Lesions? The Scientific Evidence for Drug-Coated Balloons

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Disclosure

Speaker name: **Andrew Holden, MBChB, FRANZCR**

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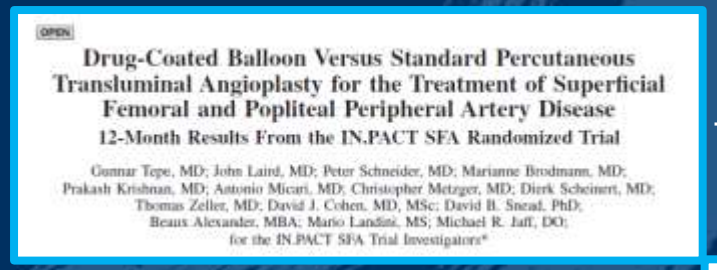
I have the following potential conflicts of interest to report:

- ☒ Consulting – Scientific Advisory Board Member, MEDTRONIC
- ☐ Employment in industry
- ☐ Stockholder of a healthcare company
- ☐ Owner of a healthcare company
- ☐ Other(s)

- ☐ I do not have any potential conflict of interest

IN.PACT SFA Trial


OPEN

Drug-Coated Balloon Versus Standard Percutaneous Transluminal Angioplasty for the Treatment of Superficial Femoral and Popliteal Peripheral Artery Disease

12-Month Results From the IN.PACT SFA Randomized Trial

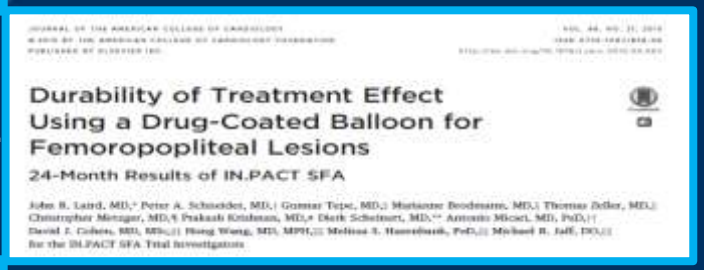
Gunnar Tepe, MD; John Laird, MD; Peter Schneider, MD; Marianne Brodmann, MD; Prakash Krishnan, MD; Antonio Micari, MD; Christopher Metzger, MD; Dierk Scheinert, MD; Thomas Zeller, MD; David J. Cohen, MD, MSc; David B. Snead, PhD; Beaux Alexander, MBA; Mario Landini, MS; Michael R. Jaff, DO; for the IN.PACT SFA Trial Investigators*

1 Year

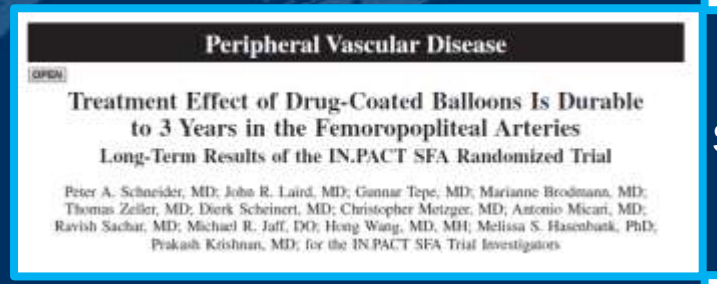
Tepe G. et al. Circ 2015;131:495-502.

2 Year

Laird J.R. et al. JACC 2015;66:2329-2338.


Durability of Treatment Effect Using a Drug-Coated Balloon for Femoropopliteal Lesions

24-Month Results of IN.PACT SFA


Peripheral Vascular Disease

OPEN

Treatment Effect of Drug-Coated Balloons Is Durable to 3 Years in the Femoropopliteal Arteries

Long-Term Results of the IN.PACT SFA Randomized Trial

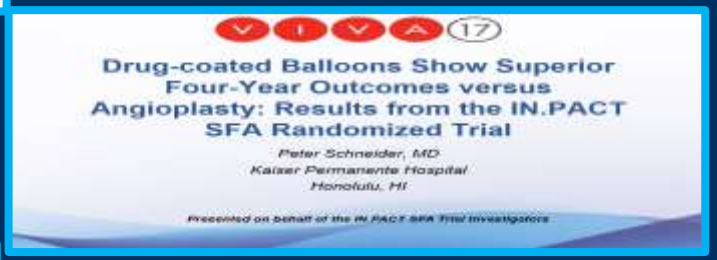
Peter A. Schneider, MD; John R. Laird, MD; Gunnar Tepe, MD; Marianne Brodmann, MD; Thomas Zeller, MD; Dierk Scheinert, MD; Christopher Metzger, MD; Antonio Micari, MD; Ravish Sachar, MD; Michael R. Jaff, DO; Hong Wang, MD, MH; Melissa S. Hasenbank, PhD; Prakash Krishnan, MD; for the IN.PACT SFA Trial Investigators

3 Year

Schneider P. et al. Circ-CI 2018;11:1-8.

4 Year

Presented by Schneider P. VIVA 2017.


VIVA 17

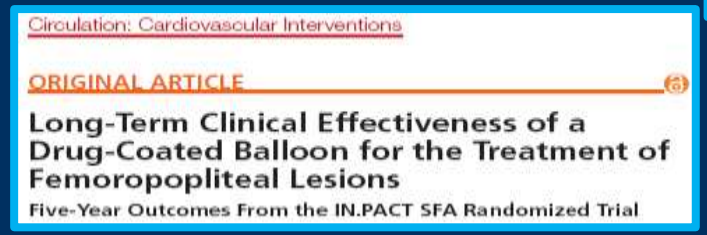
Drug-coated Balloons Show Superior Four-Year Outcomes versus Angioplasty: Results from the IN.PACT SFA Randomized Trial

Peter Schneider, MD

Kaiser Permanente Hospital

Honolulu, HI

Presented on behalf of the IN.PACT SFA Trial Investigators


Circulation: Cardiovascular Interventions

ORIGINAL ARTICLE

Long-Term Clinical Effectiveness of a Drug-Coated Balloon for the Treatment of Femoropopliteal Lesions

Five-Year Outcomes From the IN.PACT SFA Randomized Trial

5 Year

Laird J, et al. Circ-CI 2019;
12:DOI: 10.1161/CIRCINTERVENTIONS.118.007702

Longest Term Data Published

IN.PACT SFA Trial
Overview

IN.PACT SFA I
150 subjects enrolled at 13 EU sites
Sep 2010 - Apr 2011

IN.PACT SFA II
181 subjects enrolled at 44 US sites
Apr 2012 - Jan 2013

Robust Level 1 Evidence

- **Prospective**, two-phase, multicenter (EU and US), **Randomized** (2:1), **single-blinded** (subjects, sponsor trial management)

Rigorous and Unbiased

- **Independent and blinded** Duplex Ultrasound Core Lab[1], Angiographic Core Lab[2], and Clinical Events Committee[3]
- **Independent** Data Safety Monitoring Board[3]
- External monitoring with **100% source data verification**

Durability of Outcomes

- Subjects followed **up to 5 years**

1-Year Results
Tepe G, et al.
Circ 2015;131:495-502.

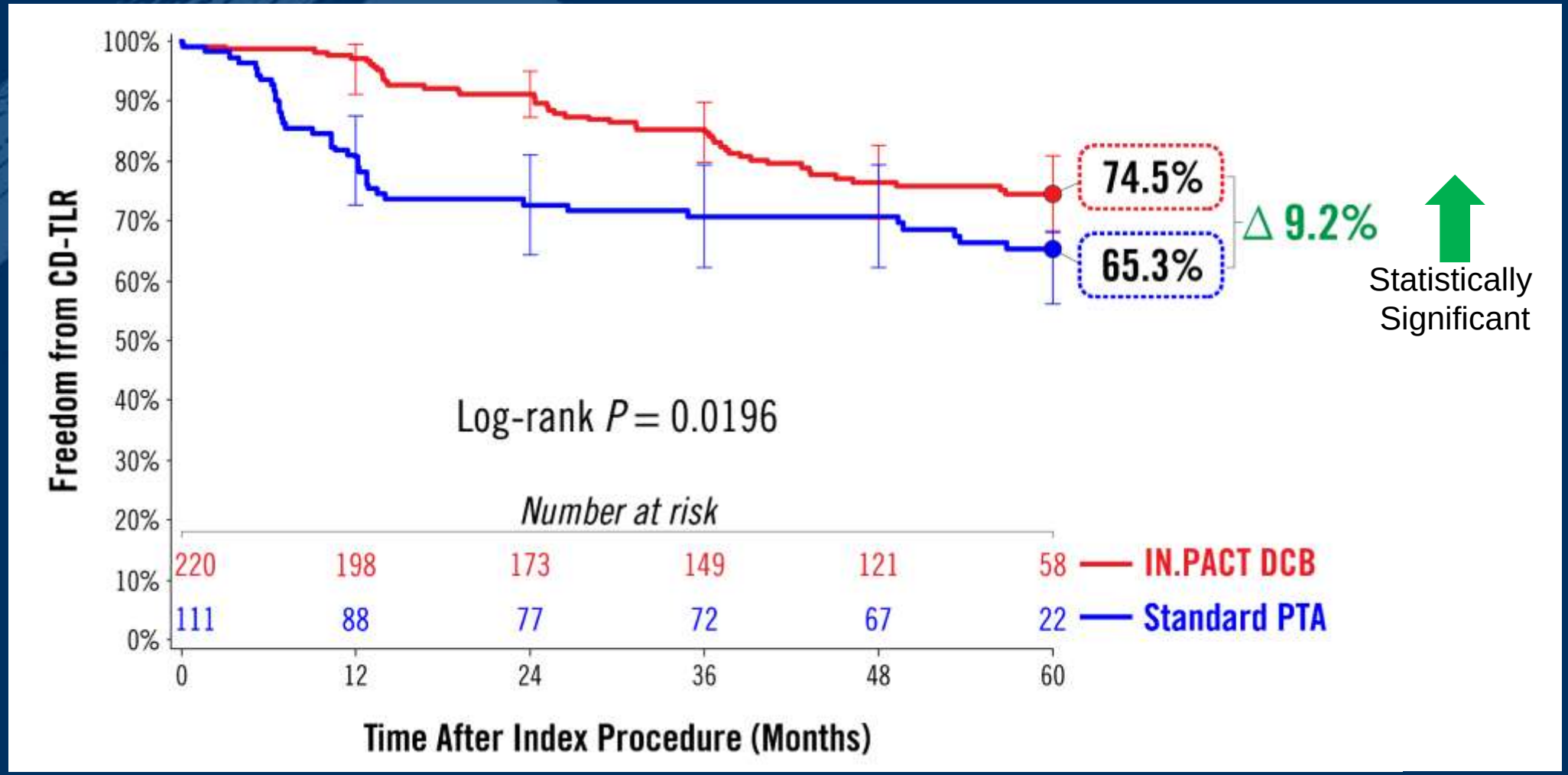
2-Year Results
Laird J, et al.
J Am Coll Cardiol
2015;66:2329-38.

3-Year Results
Schneider P, et al.
Circ Cardiovasc Interv
2018;11:e005891.

5-Year Results
Laird J, et al. Circ CI
2019;12(6):e007702

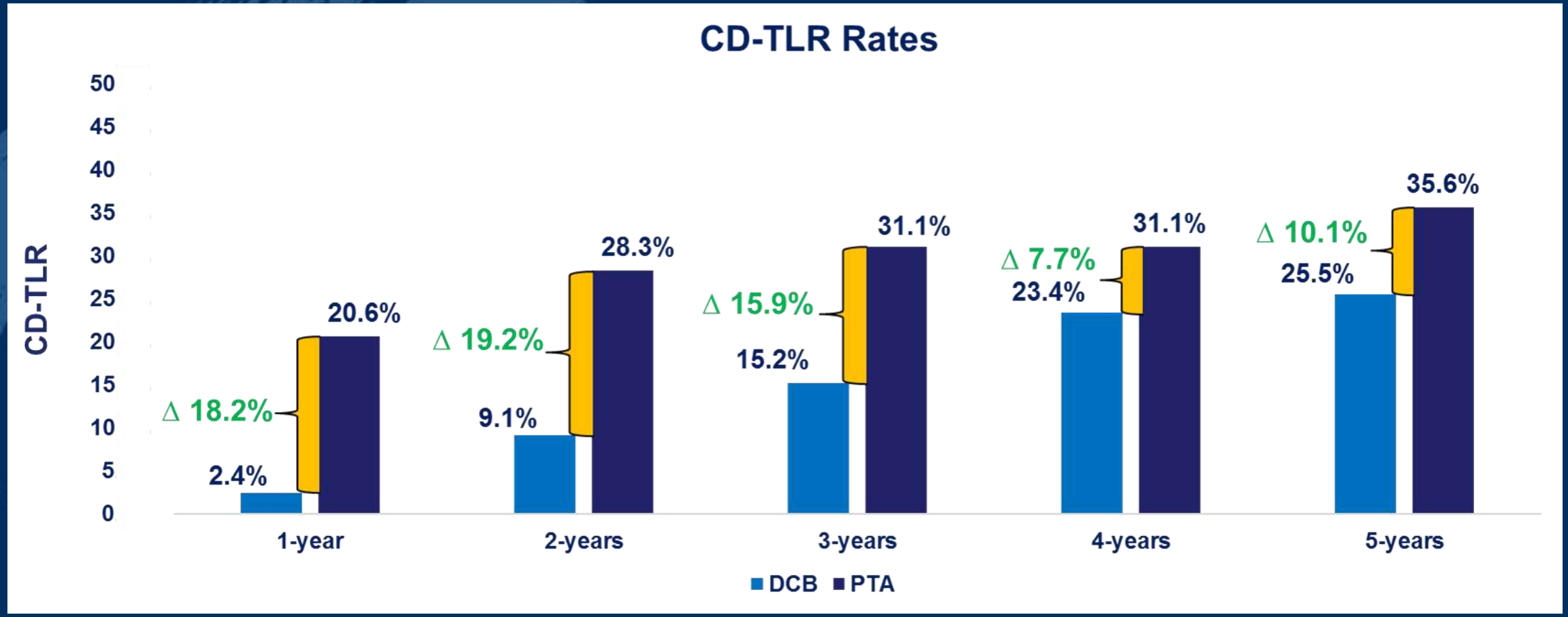
1. VasCore DUS Core Laboratory, Boston, MA, US.
2. SynvaCor Angiographic Core Laboratory, Springfield, IL, US.
3. Clinical Events Committee and Data Safety Monitoring services provided by HCRI, Boston, MA, US.

IN.PACT SFA Trial
Freedom from CD-TLR Through 5 Years



1. Laird et al. *CIRC CI*. 2019;12:e007702

IN.PACT SFA Trial
Freedom from CD-TLR Through 5 Years



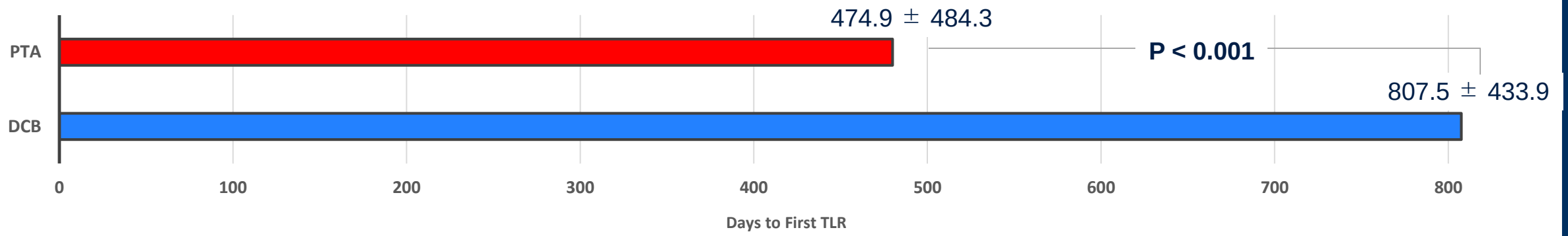
1. Laird et al. *CIRC CI*. 2019;12:e007702

IN.PACT SFA Trial
5-Year Outcomes

Additional Effectiveness Outcomes

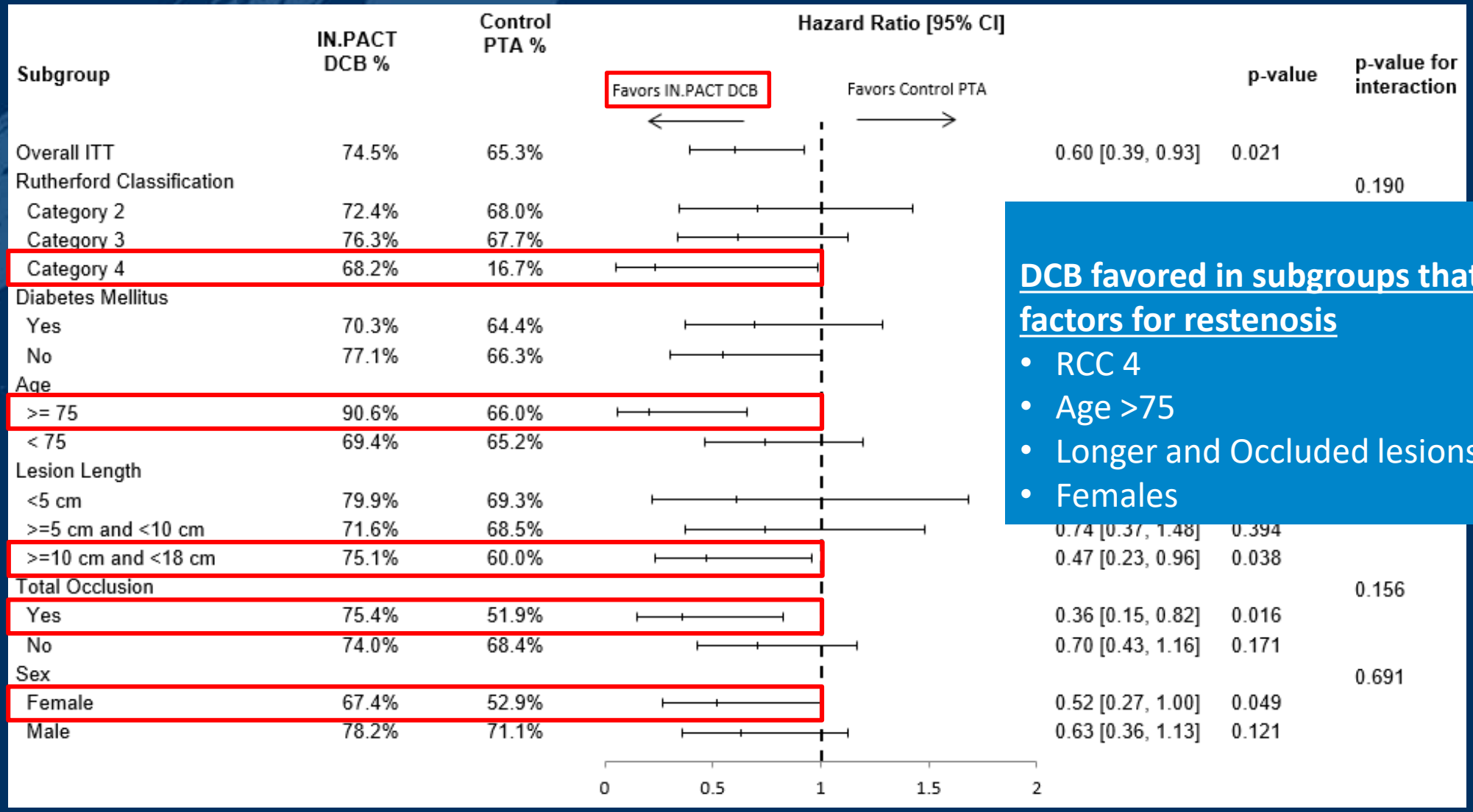
5-Year Outcome	IN.PACT Admiral DCB (n = 220)	PTA (n = 111)	P-value[1]
Clinically-driven TLR[2]	25.5% (47/184)	35.6% (37/104)	0.080
All TLR[3]	26.6% (49/184)	37.5% (39/104)	0.063

Days to First CD-TLR (mean ± SD)



1. Unless otherwise indicated, all tests were for superiority using the Fisher's exact test for binary variables and t-test for continuous variables.
2. Clinically-driven TLR adjudicated by an independent Clinical Event Committee, blinded to the assigned treatment based on any re-intervention at the target lesion due to symptoms or drop of ABI of ≥20% or >0.15 when compared to post-procedure baseline ABI.
3. Any TLR includes clinically-driven and incidental or duplex driven TLR.

IN.PACT SFA Trial: 5-Year
Hazard Ratio for CD-TLR by Subgroups (DCB v PTA)



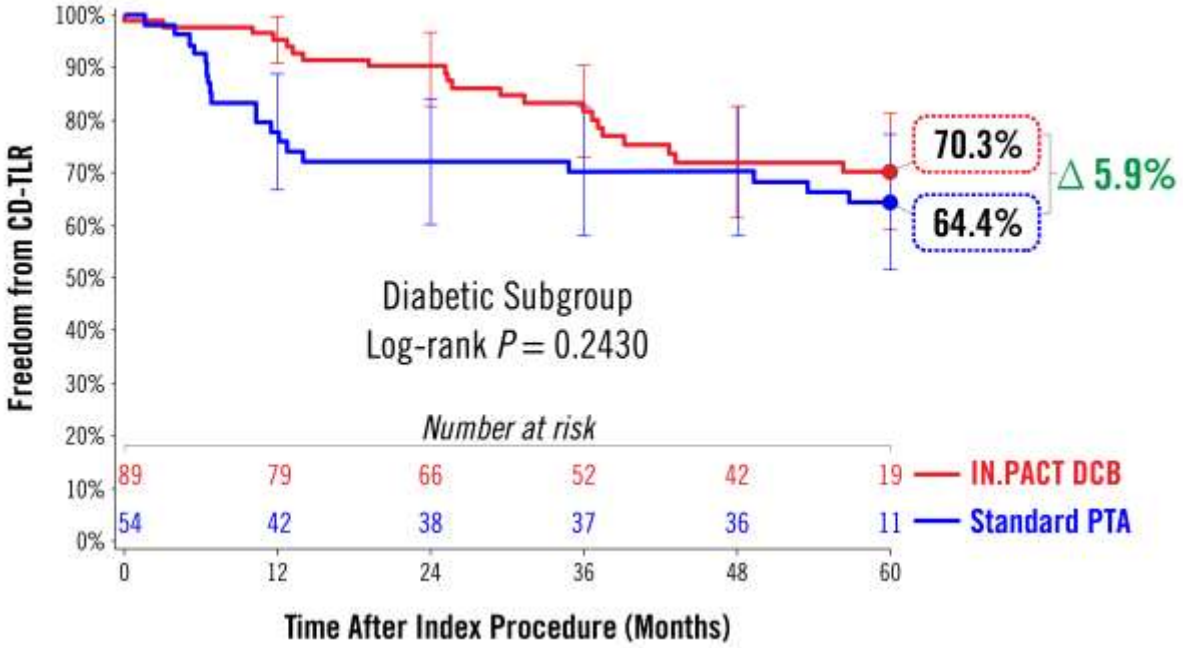
DCB favored in subgroups that are risk factors for restenosis

- RCC 4
- Age >75
- Longer and Occluded lesions
- Females

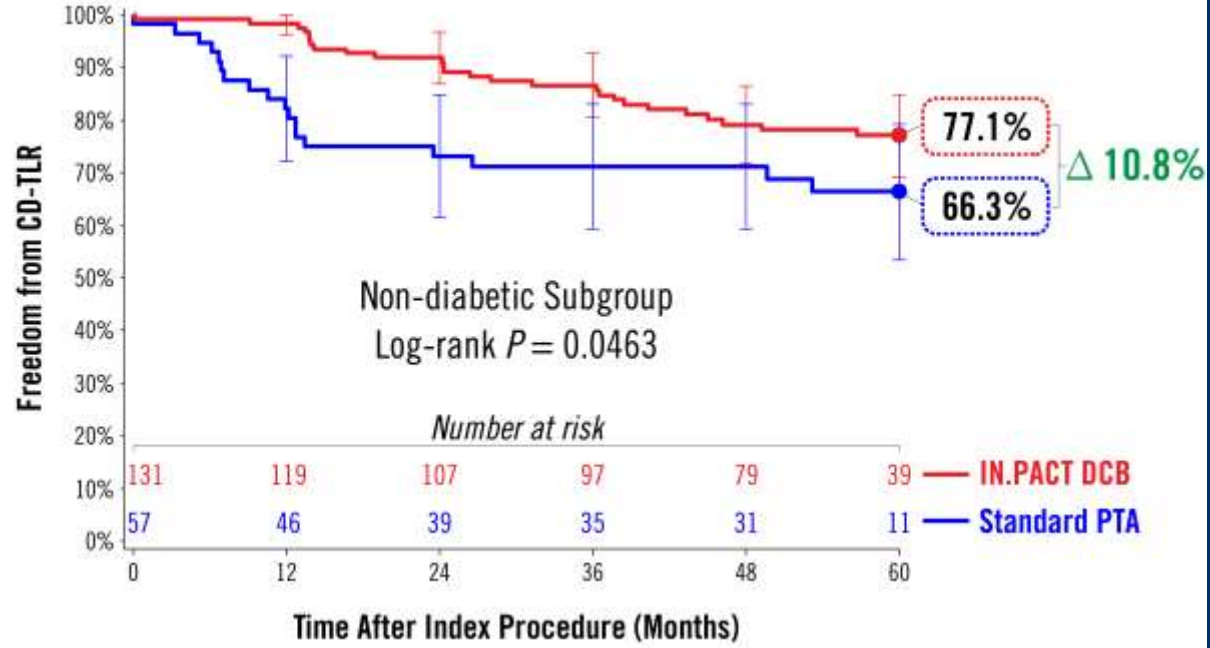
1. Laird et al. *CIRC CI*. 2019;12:e007702

IN.PACT SFA Trial: Diabetic Status
Freedom from CD-TLR Through 5 Years

Diabetics: Freedom from CD-TLR



Non-Diabetics: Freedom from CD-TLR



1. Laird et al. *CIRC CI*. 2019;12:e007702

IN.PACT Japan Trial
Overview

Objective: Assess the safety and effectiveness 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

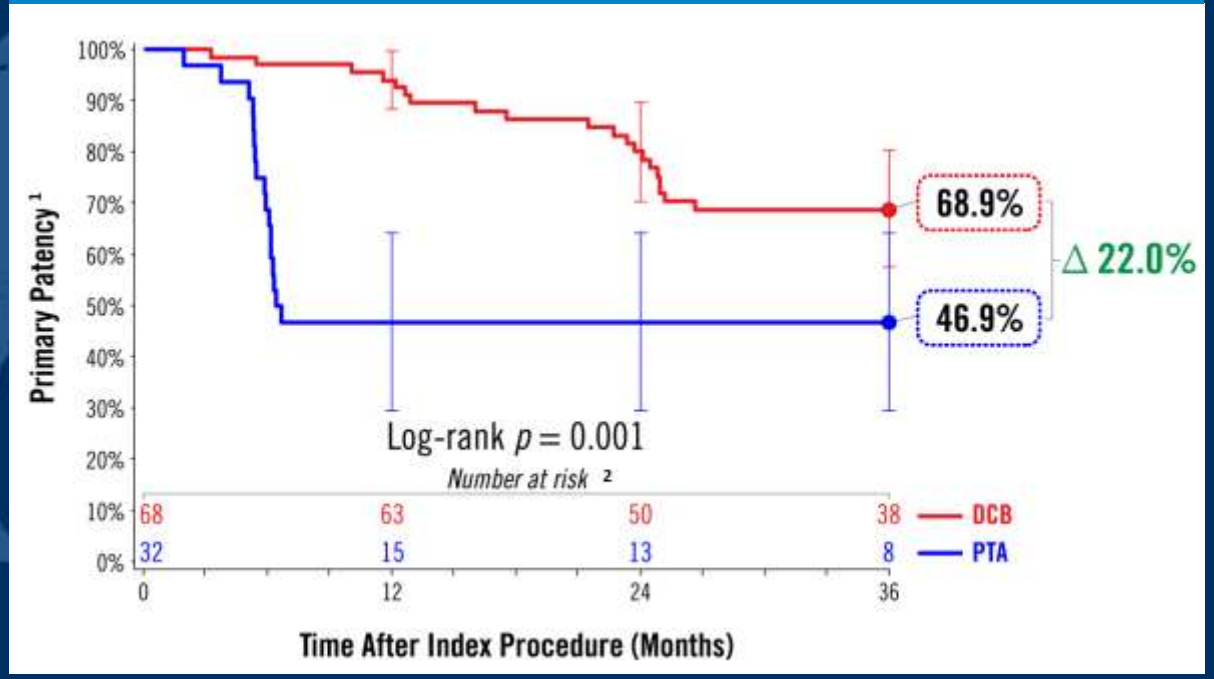
- Prospective, multi-center, randomized (2:1), single blinded trial*
- 100 subjects enrolled at 11 sites in Japan
  - MDT-2113 DCB (n=68) vs. PTA (n=32)
- Independent and blinded Duplex Ultrasound Core Lab,[1] Angiographic Core Lab,[2] and Clinical Events Committee[3]
- External Monitoring, 100% Source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

* Sponsored by Medtronic plc

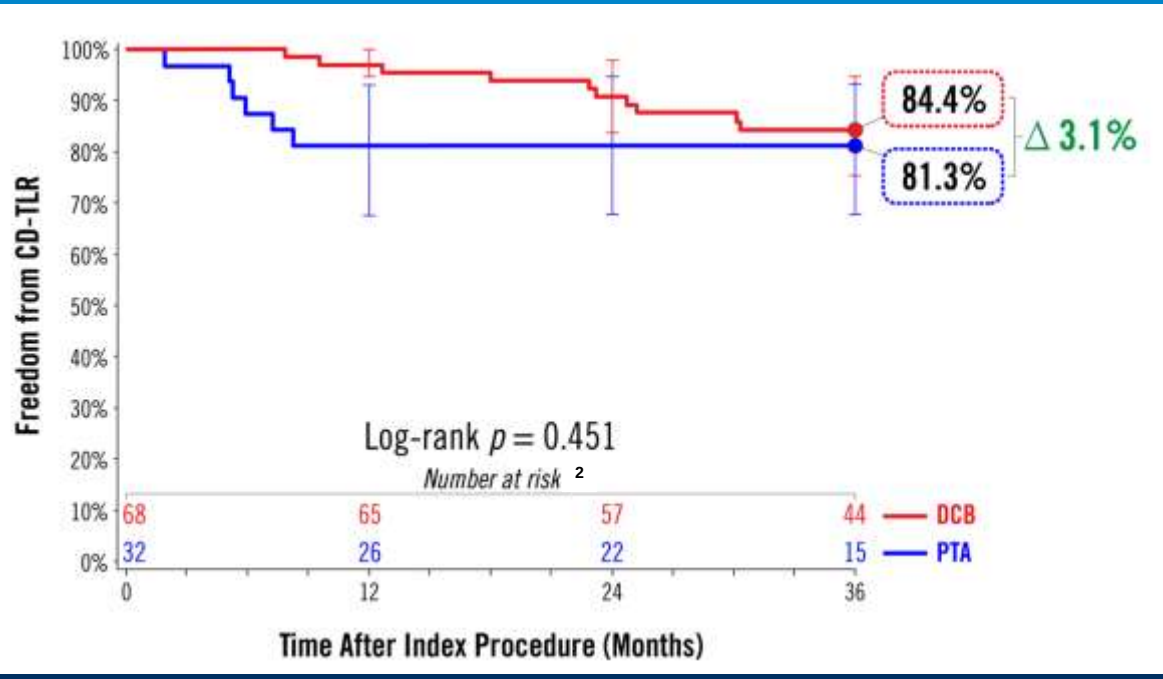
1. VasCore DUS Core Laboratory, Boston, MA, US;
2. SynvaCor Angiographic Core Laboratory, Springfield, IL, US;
3. Clinical Events Committee and Data Safety Monitoring services provided by HCRI, Boston, MA, US

IN.PACT Japan Trial
Outcomes Through 3 Years

Primary Patency



Freedom from CD-TLR



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

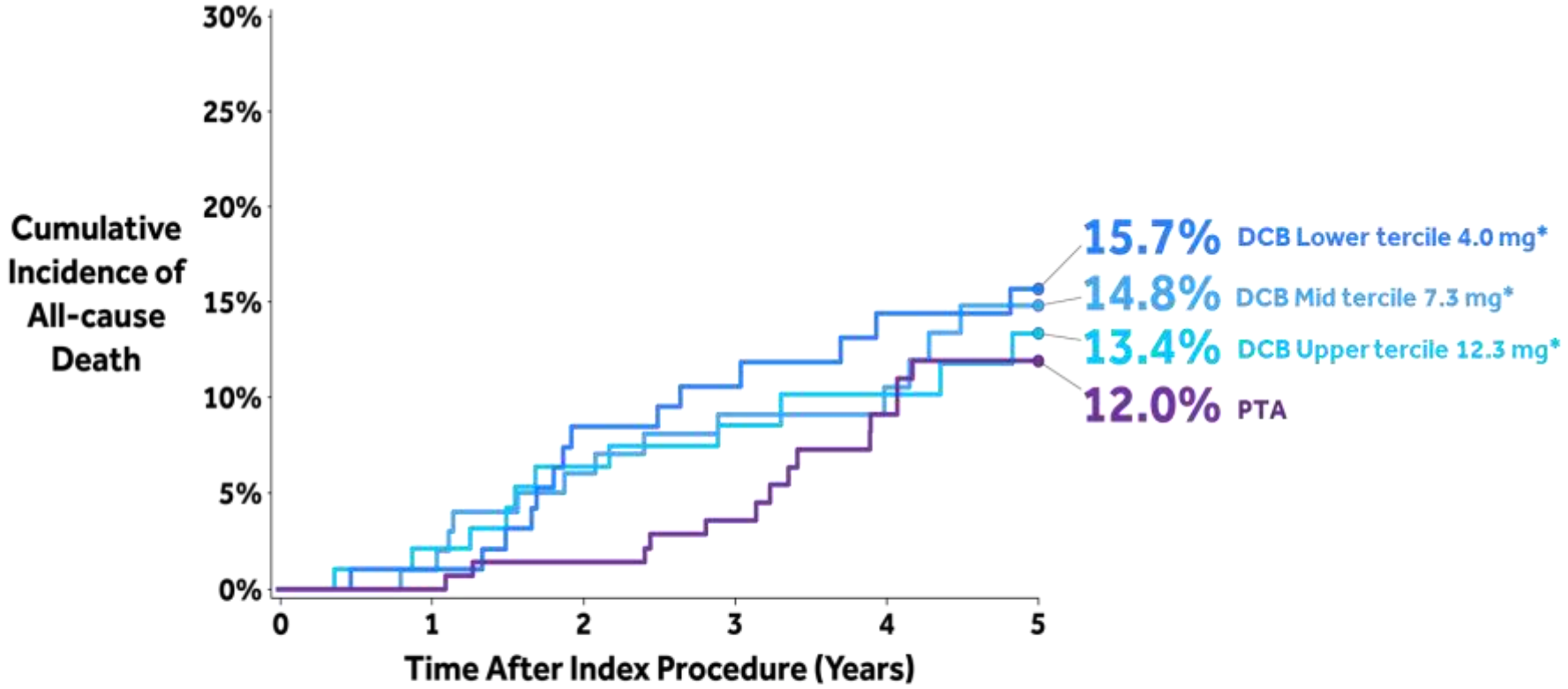
IN.PACT Japan Trial
Safety Outcomes Through 3 Years

	MDT-2113 DCB (N=68 Subjects)	PTA (N=32 Subjects)	p-value
Primary Safety Composite[1]	83.6% (56/67)	75.9% (22/29)	0.402
30-day Device- & Proc.-related Death	0.0% (0/68)	0.0% (0/32)	> 0.999
36-month Major Adverse Event[2]	20.9% (14/67)	31.0% (9/29)	0.306
36-month Target Limb Major Amputation	0.0% (0/67)	0.0% (0/29)	> 0.999
36-month Clinically Driven TVR	16.4% (11/67)	24.1% (7/29)	0.402
All-cause Death	6.0% (4/67)	6.9% (2/29)	1.000
Thrombosis	1.5% (1/67)	0.0% (0/29)	1.000

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

Pooled IN.PACT SFA and Japan RCTs
Dose Not Correlated to Mortality Through 5 Years

Mortality by Dose Tercile



Cumulative Incidence (cumulative deaths)							HR (DCB vs PTA)
PTA	0.0% (0)	0.0% (0)	1.4% (2)	3.6% (5)	9.2% (11)	12.0% (14)	NA
DCB Lower Tercile	0.0% (0)	1.1% (1)	8.5% (8)	10.6% (10)	14.4% (13)	15.7% (14)	1.50
DCB Mid Tercile	0.0% (0)	1.0% (1)	6.1% (6)	9.2% (9)	10.6% (10)	14.8% (13)	1.40
DCB Upper Tercile	0.0% (0)	2.1% (2)	6.4% (6)	8.6% (8)	10.2% (9)	13.4% (11)	1.30

p-value 0.73

*Presented by Mauri L, Circulatory System Devices Panel Meeting, Gaithersburg, MD June 19, 2019

Summary

- The IN.PACT™ Admiral™ Clinical Program remains the largest, independently adjudicated cohort treated with DCB for femoropopliteal disease
- Results from the IN.PACT RCT trials (IDE and Japan) demonstrate;
  - Long-term effectiveness and safety
  - No relationship between Paclitaxel Dose and Mortality Rate

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