DCB IDE below-the-knee six-month results with in-depth look at diabetic patients

A Prospective, Multicenter, Single Blind, Randomized, Controlled Trial Comparing the Lutonix Drug Coated Balloon vs. Standard Balloon Angioplasty for Treatment of Below-the-Knee (BTK) Arteries

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Disclosure Statement

I have the following potential conflicts of interest to report:

- Consulting:
  - Medtronic
  - Becton Dickinson (Bard) / Lutonix
  - Intact Vascular
  - Avinger
  - Limb Flow
  - Philips (Spectranetics)

Lutonix Global BTK Study Enrollment (Randomized)

	DCB (N = 287)	PTA (N = 155)	Total (N = 442)
US 32 Sites	178 Patients 62% of Enrollment	97 Patients 63% of Enrollment	275 Patients 62% of Enrollment
Europe* 14 Sites	84 Patients 29% of Enrollment	43 Patients 28% of Enrollment	127 Patients 29% of Enrollment
Japan 5 Sites	25 Patients 9% of Enrollment	15 Patients 10% of Enrollment	40 Patients 9% of Enrollment

* Includes Canada, N=5

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Study Synopsis

Objective

To demonstrate the superior efficacy and non-inferior safety of the Lutonix® 014 DCB by direct comparison to standard PTA for treatment of stenosis or occlusion of below-the-knee arteries

Study Design

Prospective, Multicenter, Single Blind, Randomized, Safety and Efficacy

Test Device

Lutonix® 0.014” OTW Drug Coated PTA Dilatation Catheter

Randomization

Subjects will be randomized 2:1 to Lutonix DCB or standard PTA catheter.

Clinical Follow-up

1, 6, 12, 24, 36 Months

Primary Endpoints

SAFETY

Freedom from Major Adverse Limb Events (MALE) & All-Cause Perioperative Death (POD) at 30 Days

★ ***Amputation (above ankle)***
★ ***Major re-intervention***
- New bypass graft
- Jump/interposition graft revision
- Thrombectomy/thrombolysis

EFFICACY

Composite of Limb Salvage and Primary Patency at 6 Months

★ ***Defined as freedom from a composite of above ankle amputation, target lesion occlusion, and clinically-driven target lesion revascularization***

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Demographics and Risk Factors

	DCB N=287	PTA N=155	P-Value
Age, Mean ± SD (n)	72.9 ± 9.65 (287)	72.9 ± 9.62 (155)	0.9586
Gender, % (n/N)			0.5173
Male	70.4% (202/287)	67.1% (104/155)	
Female	29.6% (85/287)	32.9% (51/155)	
Race, % (n/N)			0.7468
American Indian or Alaska Native	0.3% (1/287)	0.0% (0/155)	
Asian	8.7% (25/287)	9.7% (15/155)	
Black or African American	11.5% (33/287)	7.7% (12/155)	
White	78.7% (226/287)	81.9% (127/155)	
Other	0.7% (2/287)	0.6% (1/155)	

Demographics and Risk Factors

	DCB N=287	PTA N=155	P-Value
History of Risk Factors, % (n/N) Diabetes Dyslipidemia Hypertension Cigarette Smoking Current Former	99.3% (285/287) 71.1% (204/287) 78.4% (225/287) 92.0% (264/287) 59.2% (170/287) 15.0% (43/287) 44.3% (127/287)	100.0% (155/155) 68.4% (106/155) 74.8% (116/155) 95.5% (148/155) 57.4% (89/155) 12.3% (19/155) 45.2% (70/155)	0.5436
Any Intervention by Subject	72.8% (209/287)	74.8% (116/155)	0.735
Subject has Undergone Previous Peripheral Vascular Interventions	53.7% (154/287)	54.2% (84/115)	0.921

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Baseline Rutherford Category

DCB (N=287)

PTA (N=155)

~90% of subjects had CLI

Category 3
Category 4
Category 5

P-Value 0.9181

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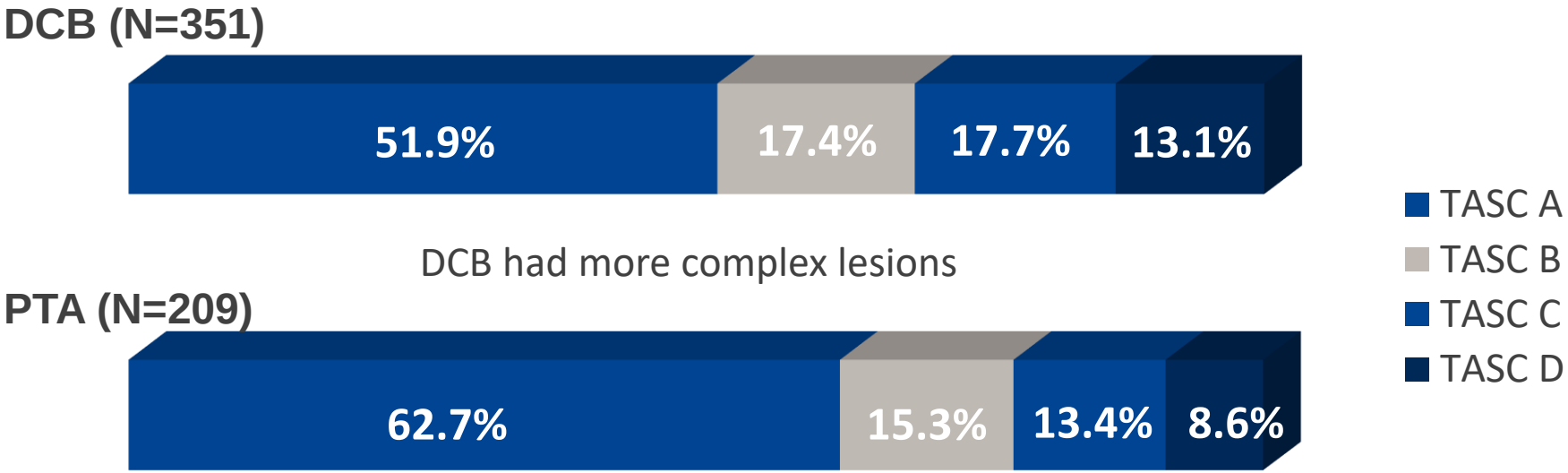
Baseline TASC Category



Baseline Angio Data

	Treated Lesions DCB	Treated Lesions PTA
Number of Lesions by Vessel, % (n/N) 1 2 3 6	 85.4% (275/322) 12.1% (39/322) 2.2% (7/322) 0.3% (1/322)	 79.2% (145/183) 18.6% (34/183) 2.2% (4/183) 0.0% (0/183)
Mean Target Lesion Length, mm (n/N)	111.8 ± 92.6 mm (349/352)	94.7 ± 85.4 mm (206/213)
Mean Initial % Stenosis, % (n/N)	86.7 ± 14.5% (352/352)	84.8 ± 14.5% (212/213)

Baseline Angio Data (Continued)

	Treated Lesions DCB	Treated Lesions PTA
Mean RVD, mm (n/N)	2.5 ± 0.61 mm (350/352)	2.6 ± 0.62 mm (212/213)
Run-off Present through Foot, % (n/N)	94.5% (310/328)	95.0% (192/202)
Any Calcification, % (n/N)	59.9% (211/352)	54.2% (115/212)
Severe Calcification, % (n/N)	15.1% (53/352)	13.2% (28/212)
CTO, % (n/N)	36.1% (137/380)	33.3% (75/225)

Baseline Angio Data (Continued)

	DCB	PTA
Lesion Locations, % (n/N)		
Popliteal	8.7% (33 / 380)	7.6% (17 / 225)
Tibioperoneal Trunk	23.9% (91 / 380)	25.3% (57 / 225)
Anterior Tibial	38.4% (146 / 380)	36.0% (81 / 225)
Posterior Tibial	23.7% (90 / 380)	25.8% (58 / 225)
Peroneal	23.4% (89 / 380)	20.9% (47 / 225)

Primary Endpoint (30-Day Safety*)

	DCB N=287 % (n/N)	PTA N=155 % (n/N)	Difference in Response % (95% CI)	P-Value
Free from Primary Safety Event at 30 Days	99.3% (283/285)	99.4% (154/155)	-0.1% (-3.9%, 3.8%)	<.0001

*Freedom at 30 days from all-cause death, above ankle amputation or major reintervention (new bypass graft, jump/interposition graft revision, or thrombectomy/thrombolysis) of the index limb involving a below-the-knee artery.

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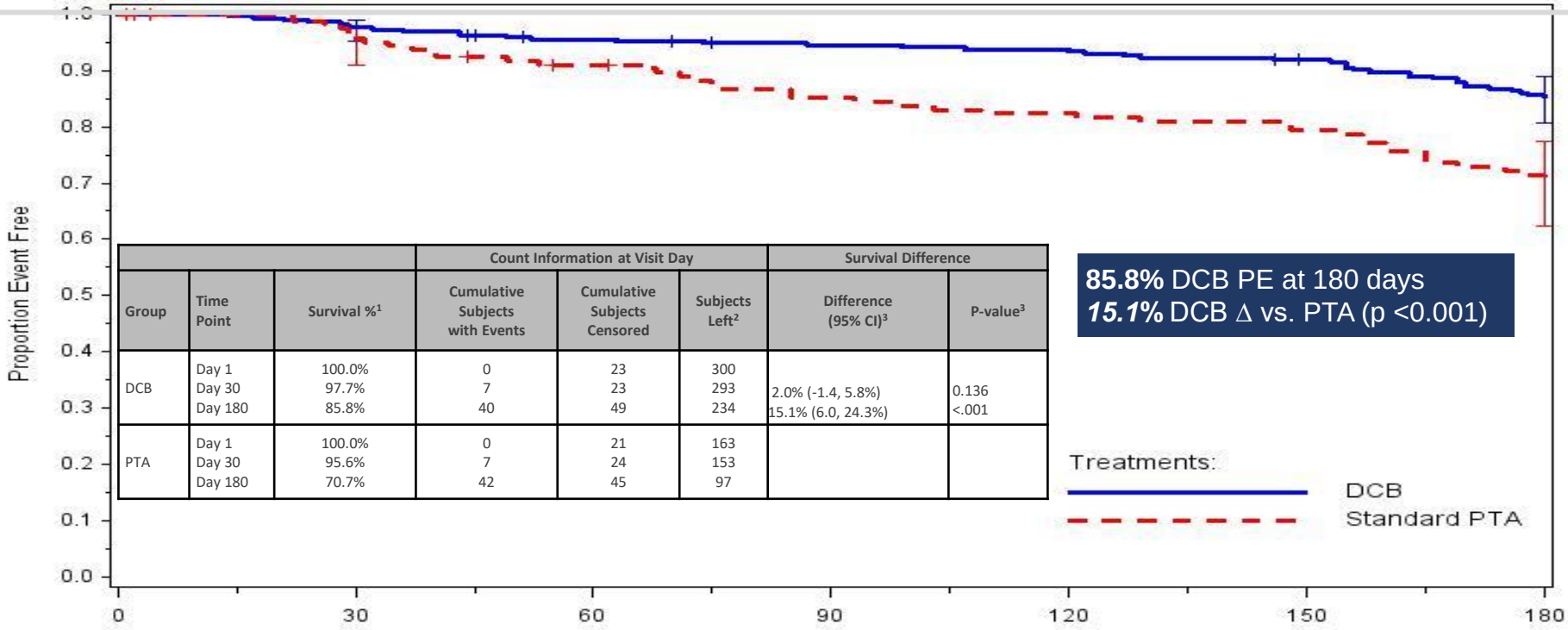
Primary Endpoint* (KM 6 Mo. Efficacy)



Group	Time Point	Survival %[1]	Count Information at Visit Day: Cumulative Subjects with Events	Count Information at Visit Day: Cumulative Subjects Censored	Count Information at Visit Day: Subjects Left[2]	Survival Difference: Difference (95% CI)[3]	Survival Difference: P-value[3]
DCB	Day 1	100.0%	0	23	300		
	Day 30	97.7%	7	23	293	2.0% (-1.4, 5.8%)	0.136
	Day 180	85.8%	40	49	234	15.1% (6.0, 24.3%)	<.001
PTA	Day 1	100.0%	0	21	163		
	Day 30	95.6%	7	24	153		
	Day 180	70.7%	42	45	97		

85.8% DCB PE at 180 days
15.1% DCB Δ vs. PTA (p <0.001)

*Composite of Limb Salvage and Primary Patency at 6 Months - Defined as freedom from the composite of above ankle amputation, target lesion occlusion, and clinically-driven target lesion reintervention

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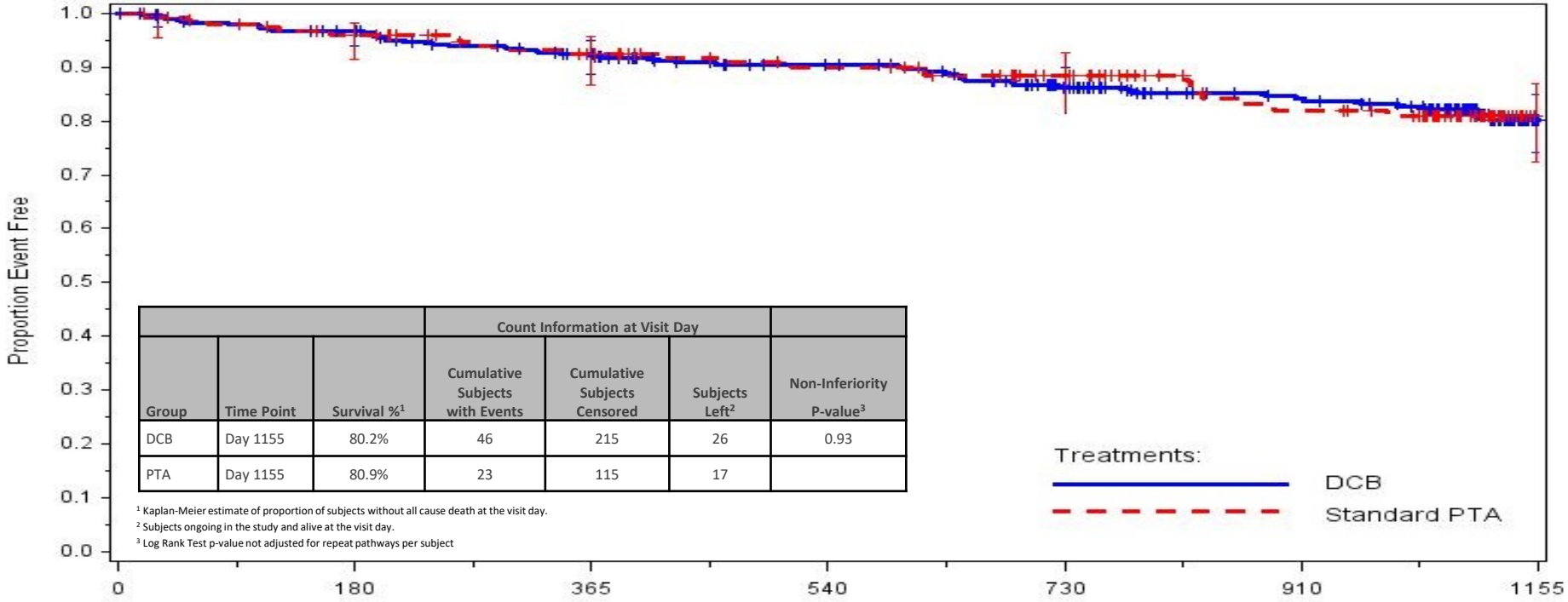
All Cause Death



			Count Information at Visit Day			
Group	Time Point	Survival %[1]	Cumulative Subjects with Events	Cumulative Subjects Censored	Subjects Left[2]	Non-Inferiority P-value[3]
DCB	Day 1155	80.2%	46	215	26	0.93
PTA	Day 1155	80.9%	23	115	17	

[1] Kaplan-Meier estimate of proportion of subjects without all cause death at the visit day.
[2] Subjects ongoing in the study and alive at the visit day.
[3] Log Rank Test p-value not adjusted for repeat pathways per subject

Diabetic / All DCB Subjects
Demographics and Risk Factors

	Subjects	
	Diabetic DCB (N=204)	All DCB (N=287)
Age (Years):		
N	204	287
Mean (SD)	71.1 (9.17)	72.9 (9.65)
Gender, % (n)		
Male	72.5% (148 / 204)	70.4% (202 / 287)
Female	27.5% (56 / 204)	29.6% (85 / 287)
History of Risk Factors, % (n)	100.0% (204 / 204)	99.3% (285 / 287)
Diabetes	100.0%(204 / 204)	71.1% (204 / 287)
Dyslipidemia	78.9% (161 / 204)	78.4% (225 / 287)
Hypertension	93.6% (191 / 204)	92.0% (264 / 287)
Cigarette Smoking	59.3% (121 / 204)	59.2% (170 / 287)
Current	16.7% (34 / 204)	15.0% (43 / 287)
Former	42.6% (87 / 204)	44.3% (127 / 287)

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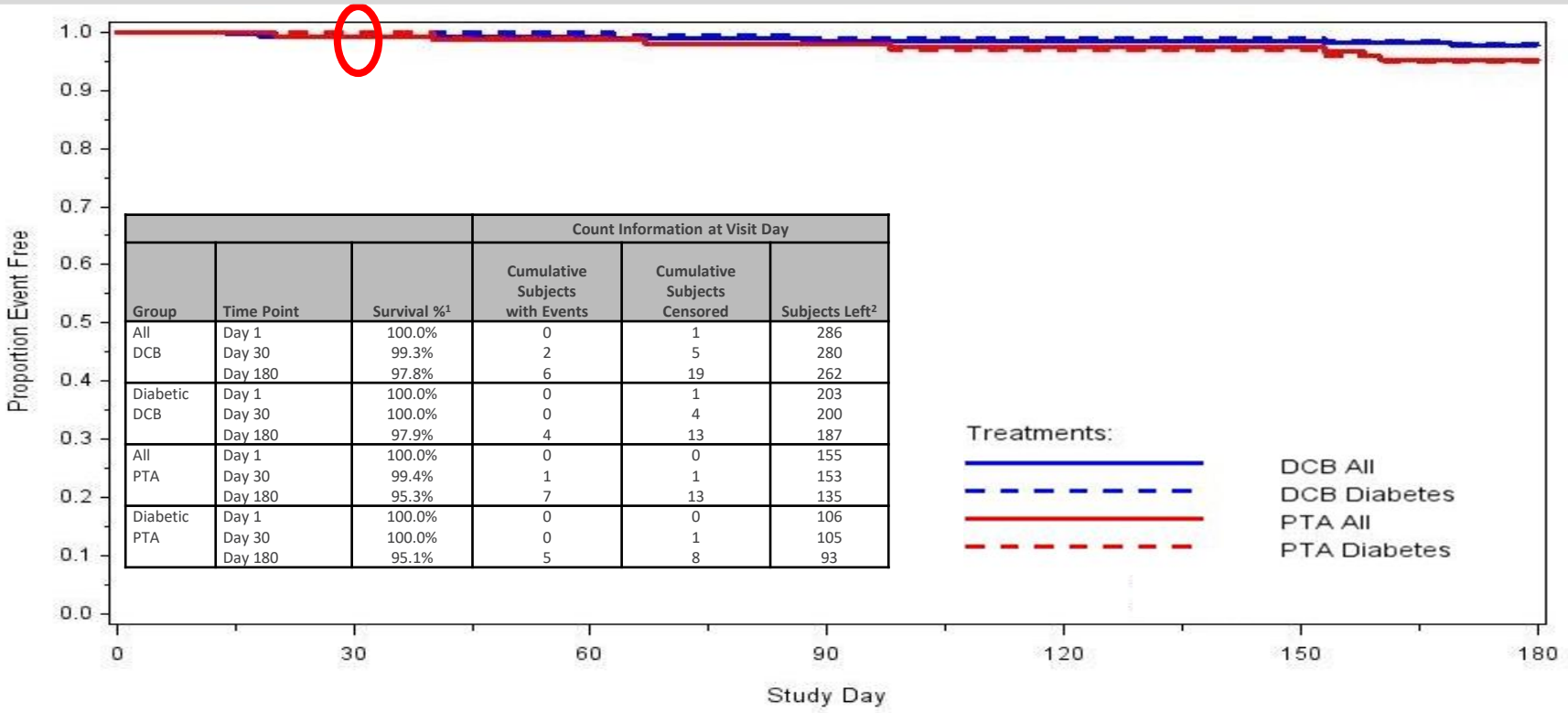
Diabetic / All DCB Subjects

Baseline Angio Data

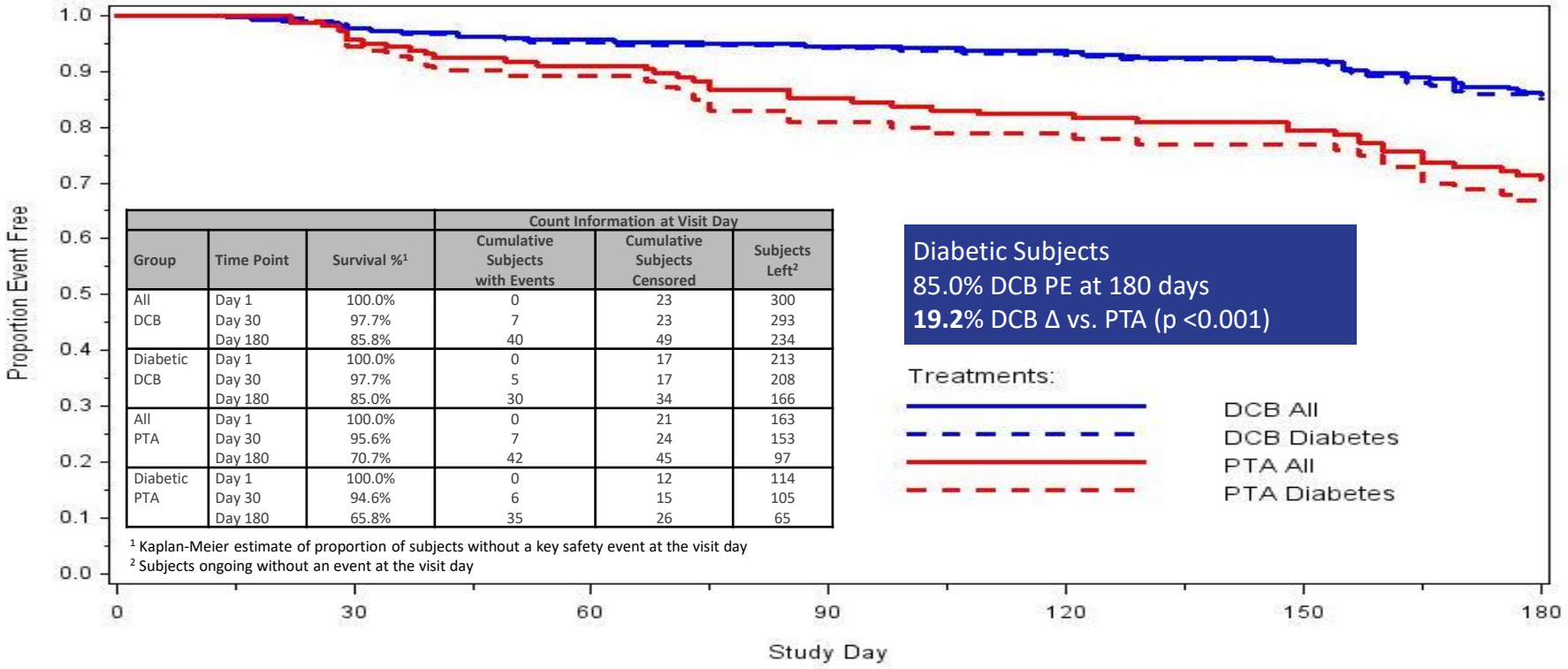
	Treated Lesions	
	Diabetic DCB	All DCB
Total Target Lesion Length, mm (n/N)	110.7 (252/254)	111.8 (349/352)
Mean Initial % Stenosis, % (n/N)	87.0% (254/254)	86.7% (352/352)
Average RVD mm, (n/N)	2.5 (253/254)	2.5 (350/352)
Run-off Present through Foot, % (n/N)	94.5% (223/236)	94.5% (310/328)
Any Calcification, % (n/N)	63.0% (160/254)	59.9% (211/352)
Severe Calcification, % (n/N)	16.9% (43/254)	15.1% (53/352)
TASC Lesion Type, % (n/N)		
A	53.0% (134/253)	51.9% (182/351)
B	17.0% (43/253)	17.4% (61/351)
C	16.2% (41/253)	17.7% (62/351)
D	13.8% (35/253)	13.1% (46/351)

Safety Endpoint - Diabetic / All DCB Subjects



			Count Information at Visit Day		
Group	Time Point	Survival %[1]	Cumulative Subjects with Events	Cumulative Subjects Censored	Subjects Left[2]
All DCB	Day 1	100.0%	0	1	286
	Day 30	99.3%	2	5	280
	Day 180	97.8%	6	19	262
Diabetic DCB	Day 1	100.0%	0	1	203
	Day 30	100.0%	0	4	200
	Day 180	97.9%	4	13	187
All PTA	Day 1	100.0%	0	0	155
	Day 30	99.4%	1	1	153
	Day 180	95.3%	7	13	135
Diabetic PTA	Day 1	100.0%	0	0	106
	Day 30	100.0%	0	1	105
	Day 180	95.1%	5	8	93

All DCB & Diabetic - Primary Endpoint (6 Mo. Efficacy)



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All DCB	Day 1	100.0%	0	23	300
	Day 30	97.7%	7	23	293
	Day 180	85.8%	40	49	234
Diabetic DCB	Day 1	100.0%	0	17	213
	Day 30	97.7%	5	17	208
	Day 180	85.0%	30	34	166
All PTA	Day 1	100.0%	0	21	163
	Day 30	95.6%	7	24	153
	Day 180	70.7%	42	45	97
Diabetic PTA	Day 1	100.0%	0	12	114
	Day 30	94.6%	6	15	105
	Day 180	65.8%	35	26	65

[1] Kaplan-Meier estimate of proportion of subjects without a key safety event at the visit day
[2] Subjects ongoing without an event at the visit day

Diabetic Subjects
85.0% DCB PE at 180 days
19.2% DCB Δ vs. PTA (p <0.001)

Treatments:

DCB All
DCB Diabetes
PTA All
PTA Diabetes

Conclusion

- Diabetic subset had more complex patients
  - Longer lesions
  - More calcification
  - More severe calcification
- Comparable safety between all subjects and diabetic subjects
- Comparable treatment effect between all subjects and diabetic subjects
- No difference in all cause death (DCB vs. PTA)