

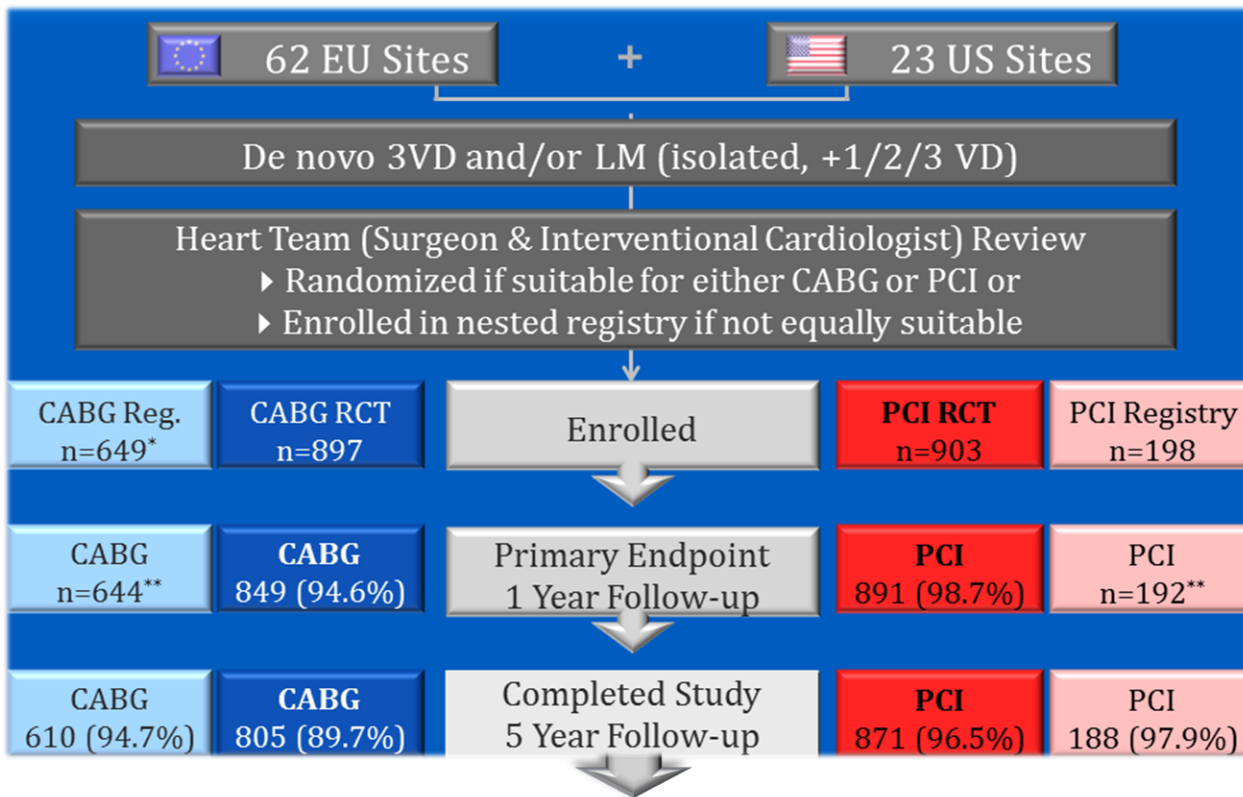
10-Year Survival after Bypass Surgery versus  
Drug-Eluting Stents:  
Preliminary Results of the Randomized  
**SYNTAX** Extended Survival study  
“**SYNTAXES**”

24<sup>th</sup> CARDIOVASCULAR SUMMIT  
**TCTAP2019**

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for all SYNTAXES investigators

# Conflict of Interest

I, MC Morice **DO NOT** have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.



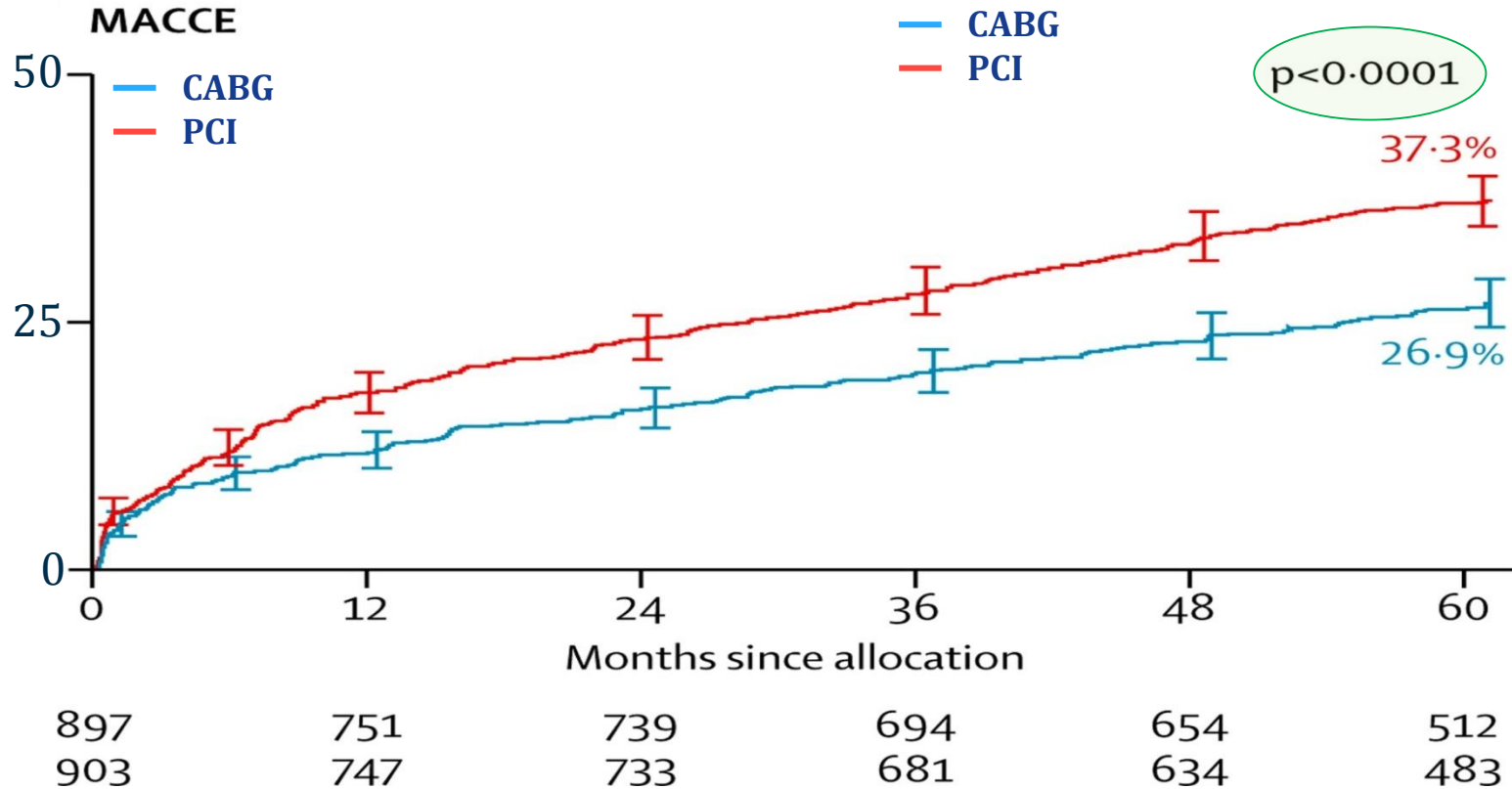
**SYNTAXES 10 Year Follow-up**  
**Goal: 10-Year Survival after CABG vs. PCI**  
 \*No data on MI, stroke or repeat revascularization

# Baseline Characteristics

SYNTAX baseline characteristics	CABG (n = 897)	PCI (n = 903)	P-value
Age - years	65.0 ± 9.8	65.2 ± 9.7	0.55
Sex, Male - %	78.9	76.4	0.20
Body Mass Index	27.9 ± 4.5	28.1 ± 4.8	0.37
Medically treated diabetes - %	24.6	25.6	0.64
Insulin	10.4	9.9	0.72
Previous MI - %	33.8	31.9	0.39
Previous stroke - %	4.8	3.9	0.33
Previous TIA <sup>c</sup> - %	5.1	4.3	0.46
Smoker - %	22.0	18.5	0.06
Hypertension (≥135/85 mmHg) - %	64.0	68.9	0.03
Congestive Heart Failure - %	5.3	4.0	0.18
Hyperlipidemia - %	77.2	78.7	0.44
Angina - %			
Stable	57.2	56.9	0.91
Unstable	28.0	28.9	0.66
3VD only - %	66.3	65.4	0.70
Left Main, any - %	33.7	34.6	0.70
EuroSCORE	3.8 ± 2.7	3.8 ± 2.6	0.78
SYNTAX score	29.1 ± 11.4	28.4 ± 11.5	0.19
Complete revascularization - %	63.2	56.7	0.005



# SYNTAX - 5 Year Outcomes



# SYNTAXES – Methods

- Investigator-driven
- Partly funded by the German Heart Foundation (*F/34/17*)
- ClinicalTrials.gov : [NCT03417050](#)
- Primary Endpoint: **10 Year All-Cause Death** in patients who underwent **CABG** or **PCI**



# SYNTAXES – Sites & Data

- **GREEN** sites (Data received from: 65 sites out of 85) = **76.5% = 1301 patients**
- **ORANGE** sites (collecting data: 18 sites out of 85) = **21.1% = 473 patients**
- **RED** sites (not participating: 2 sites out of 85) = **2.4% = 26 patients**
- **CURRENT SYNTAXES DATA = 1301** randomized patients out of **1800 = 72.3%**

<b>10 YEAR RECEIVED DATA</b>	<b>Overall Data (n=1301) %</b>	<b>CABG (n=653) %</b>	<b>PCI (n=648) %</b>
COMPLETENESS of FOLLOW-UP	93.5	94.0	92.8

# SYNTAXES 10 YEAR – Baseline Characteristics –

Characteristics	Data received (n=1301)	Not yet received (n=499)	P-value
	%	%	
Age – years	<b>64.9 ± 9.8</b>	<b>65.7 ± 9.5</b>	0.12
Sex, Male	<b>77.9</b>	<b>76.9</b>	0.65
Body Mass Index (kg/m <sup>2</sup> ) – median	<b>27.0</b>	<b>27.0</b>	0.42
Diabetes – medically treated	<b>26.5</b>	<b>21.4</b>	0.026
Insulin	<b>11.2</b>	<b>7.8</b>	0.034
Previous MI	<b>32.2</b>	<b>33.3</b>	0.42
Previous Stroke	<b>4.1</b>	<b>5.0</b>	0.27
Previous TIA	<b>4.4</b>	<b>5.4</b>	0.65
Smoker (current or previous)	<b>64.4</b>	<b>64.7</b>	0.87
Hypertension (≥135/85 mmHg)	<b>75.4</b>	<b>73.8</b>	0.76
Congestive Heart Failure	<b>5.1</b>	<b>3.4</b>	0.19
Hyperlipidemia	<b>74.3</b>	<b>85.2</b>	<0.001
Angina			
Stable	<b>57.1</b>	<b>56.9</b>	0.94
Unstable	<b>27.9</b>	<b>30.1</b>	0.36
3VD only	<b>67.3</b>	<b>62.0</b>	0.03
Left Main, any (core lab. assessed)	<b>32.7</b>	<b>38.0</b>	0.03
Logistic EuroSCORE (mean)	<b>3.8 ± 3.7</b>	<b>3.8 ± 3.7</b>	0.93
SYNTAX score (mean – core lab. assesed)	<b>28.7 ± 11.5</b>	<b>28.8 ± 11.3</b>	0.82



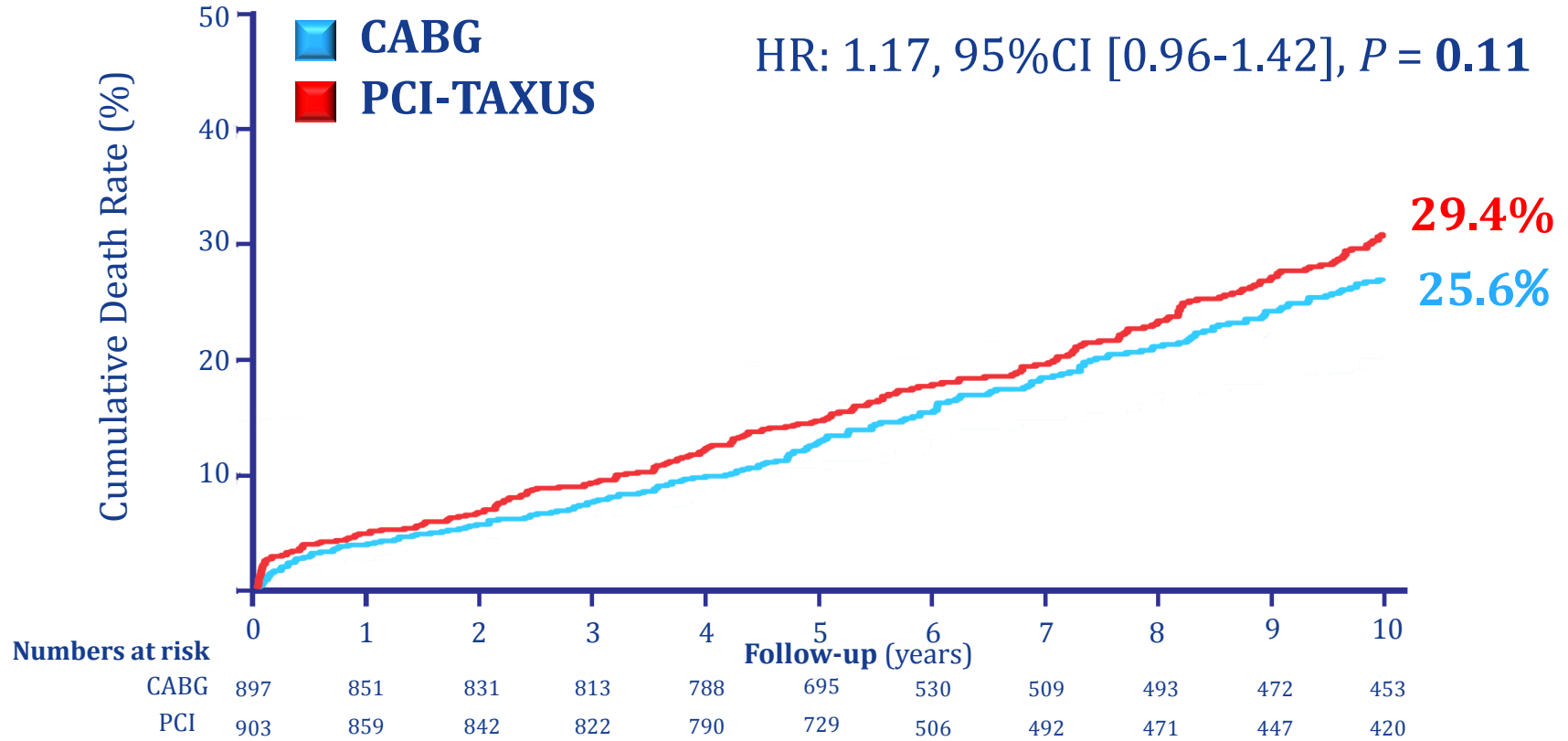
# SYNTAXES 5 year All-Cause Death



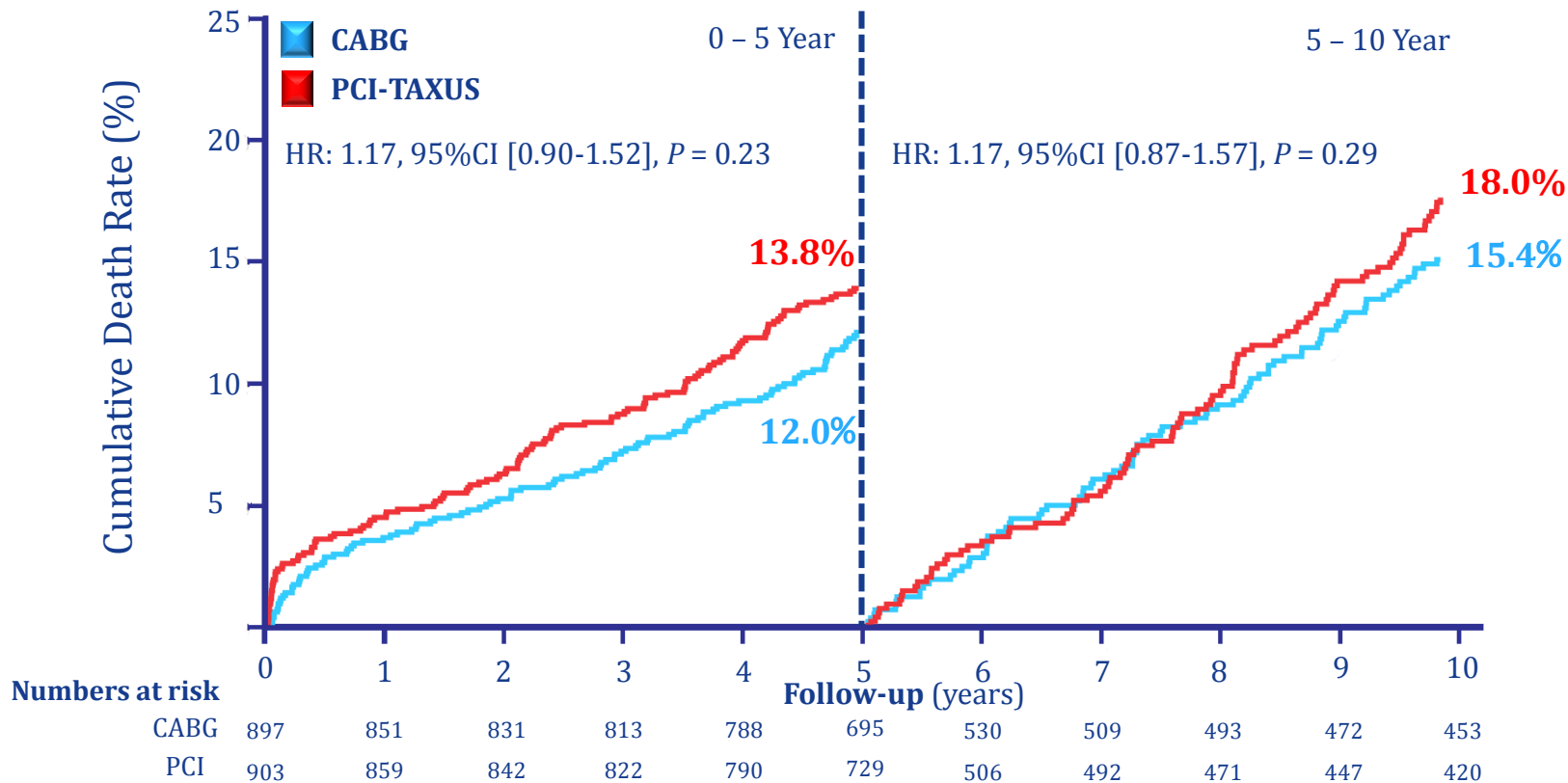
*PCI data*

	0	1	2	3	4	5
Numbers at risk						
RECEIVED	1608	1010	604	508	1582	1502
NOT-RECEIVED	299	239	238	230	204	239

# SYNTAXES 10 Year All-Cause Death

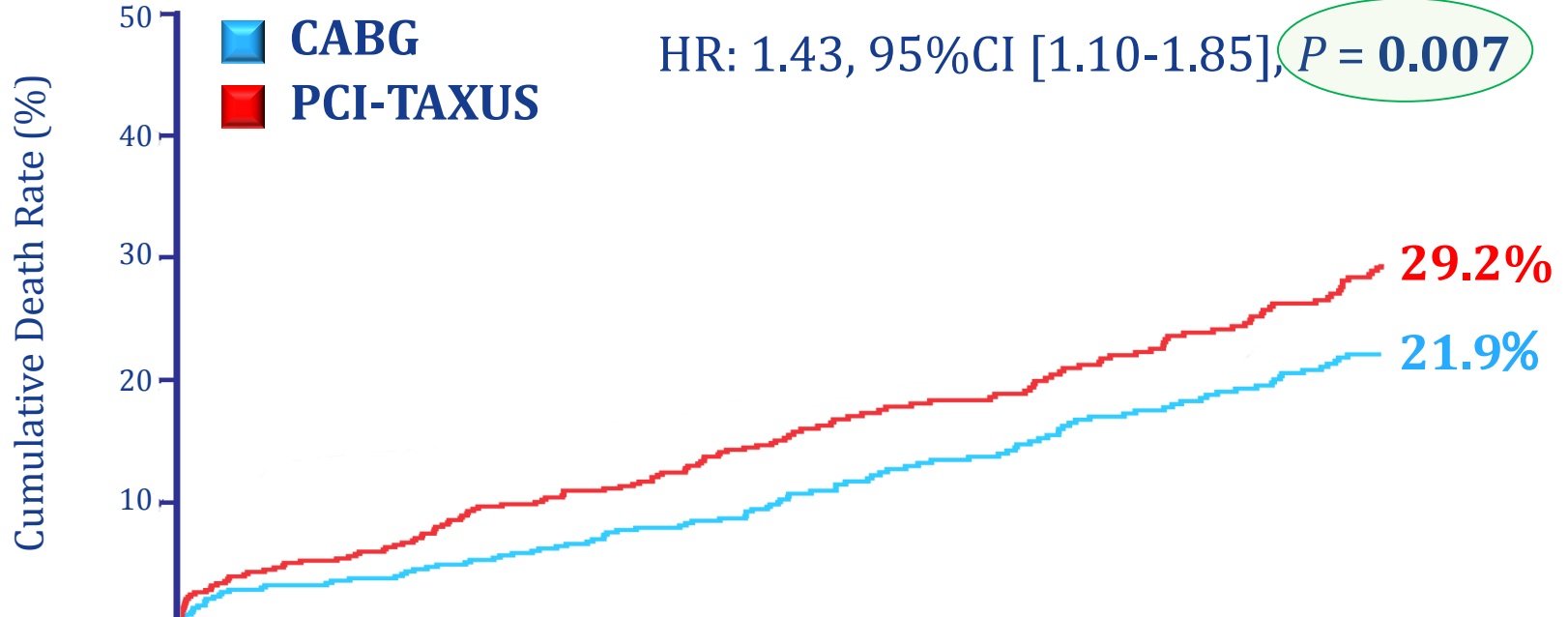


# Landmark Analysis All-Cause Death



# Triple Vessel (3VD)

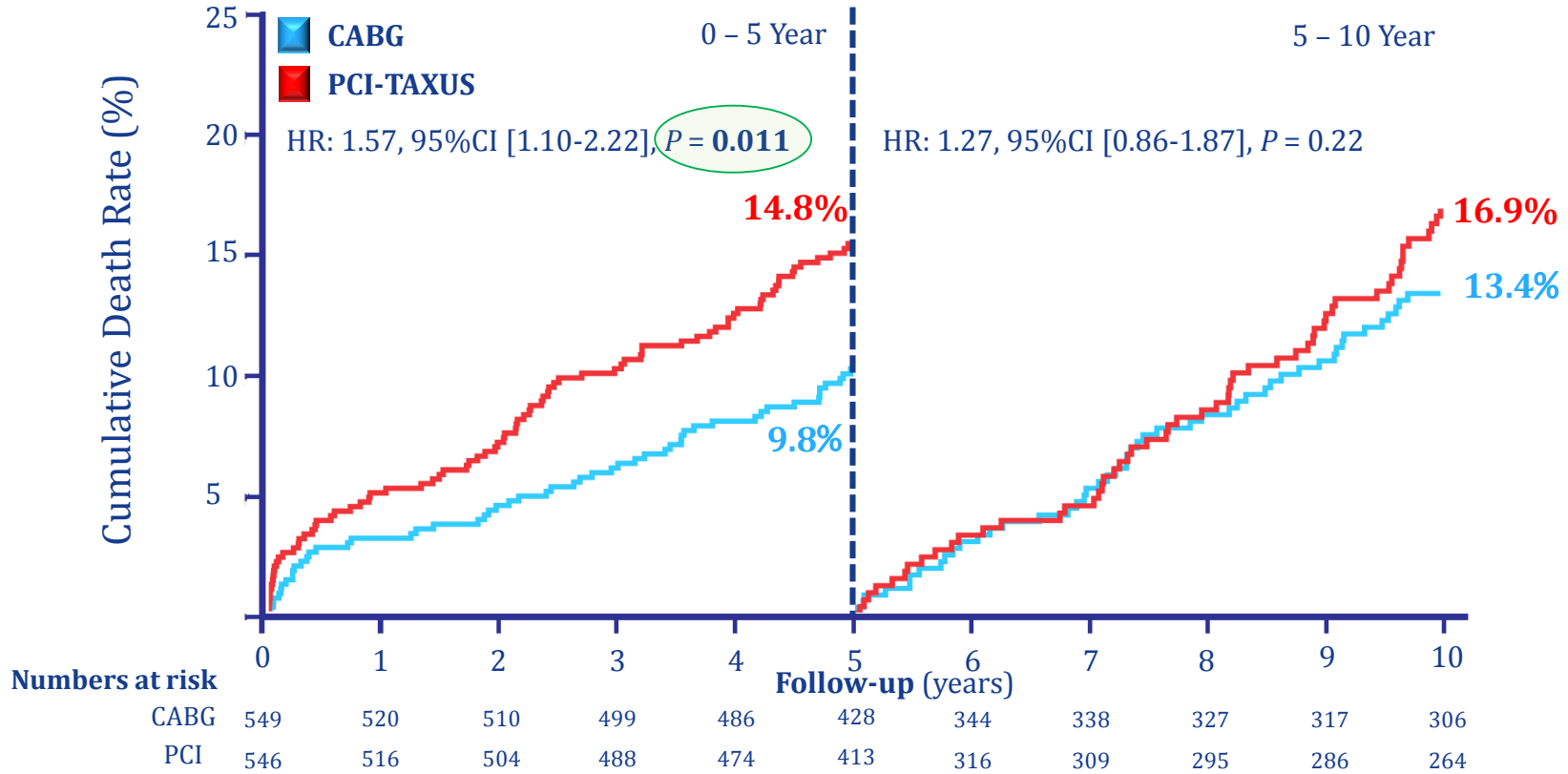
HR: 1.43, 95%CI [1.10-1.85], *P* = 0.007



Numbers at risk

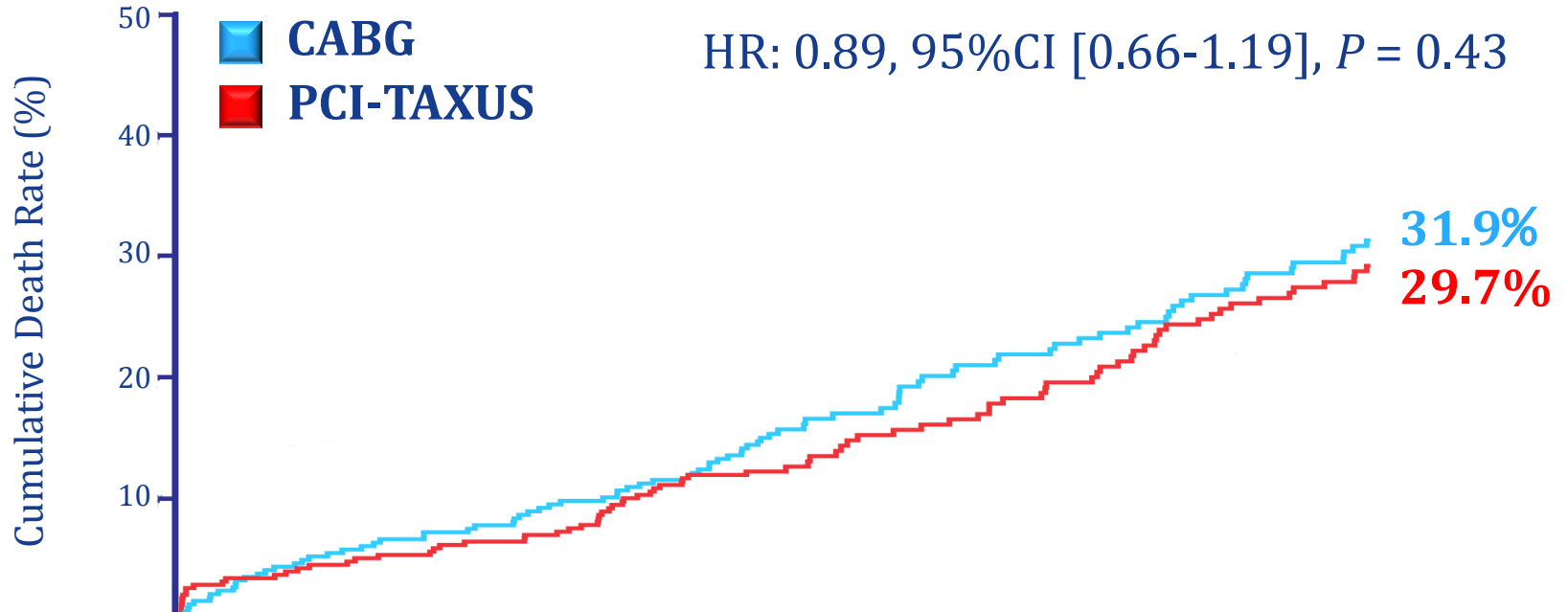
	0	1	2	3	4	5	6	7	8	9	10
CABG	549	520	510	499	486	428	344	338	327	317	306
PCI	546	516	504	488	474	413	316	309	295	286	264

# Landmark Analysis – Triple Vessel



# Left-Main (LM)

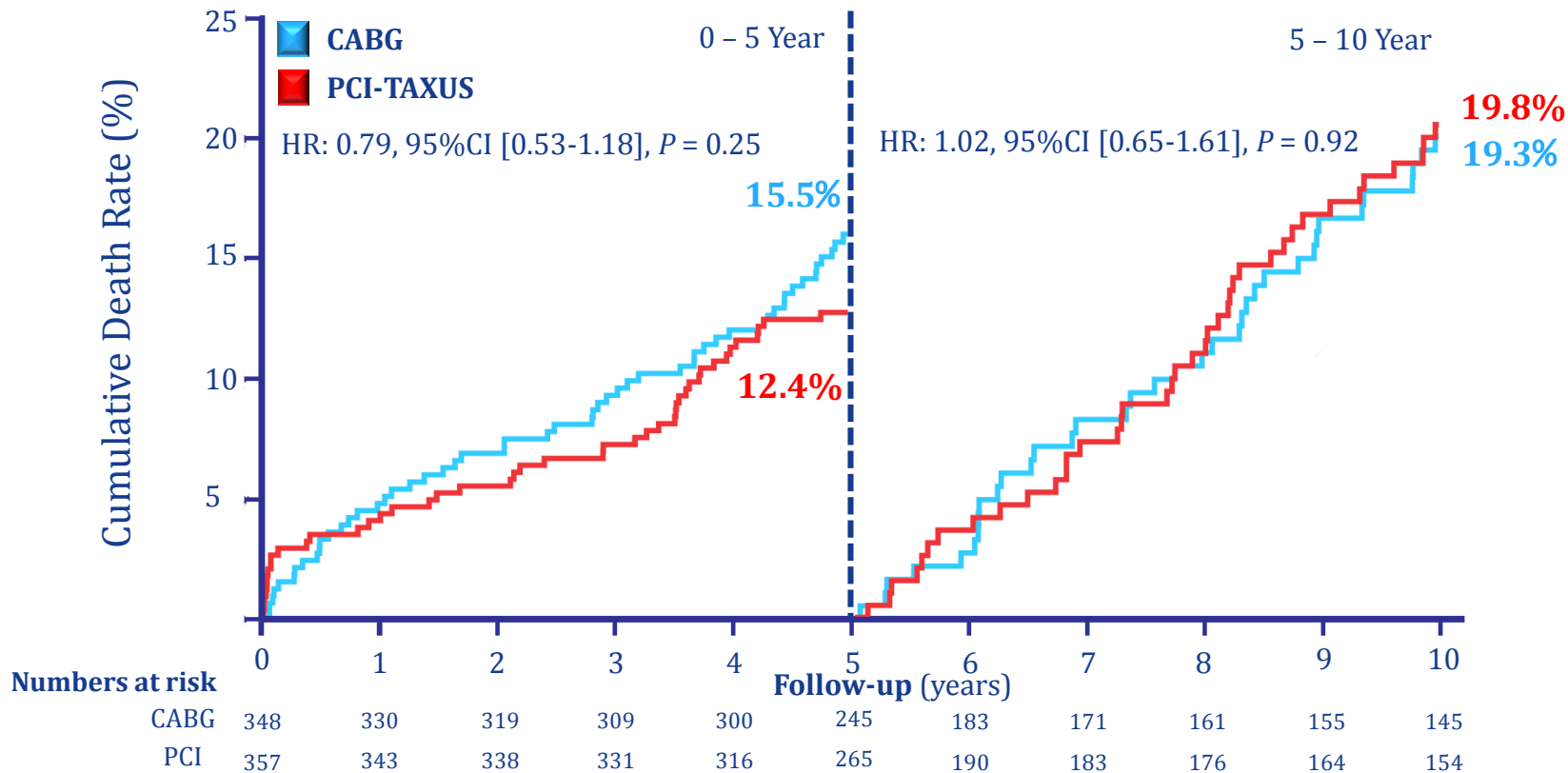
HR: 0.89, 95%CI [0.66-1.19],  $P = 0.43$



Numbers at risk

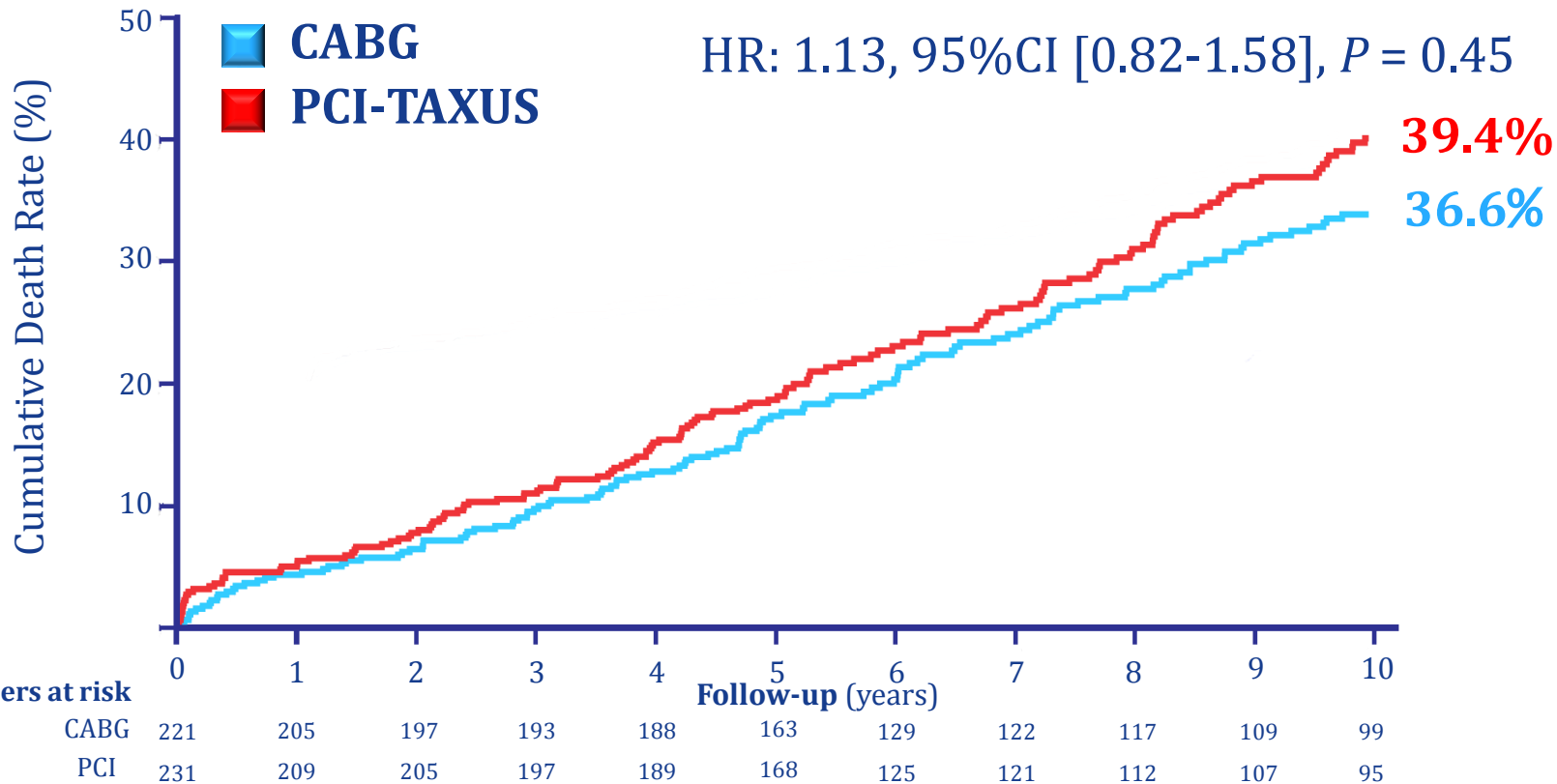
	0	1	2	3	4	5	6	7	8	9	10
CABG	348	330	319	309	300	245	183	171	161	155	145
PCI	357	343	338	331	316	265	190	183	176	164	154

# Landmark Analysis – Left Main



# Diabetes

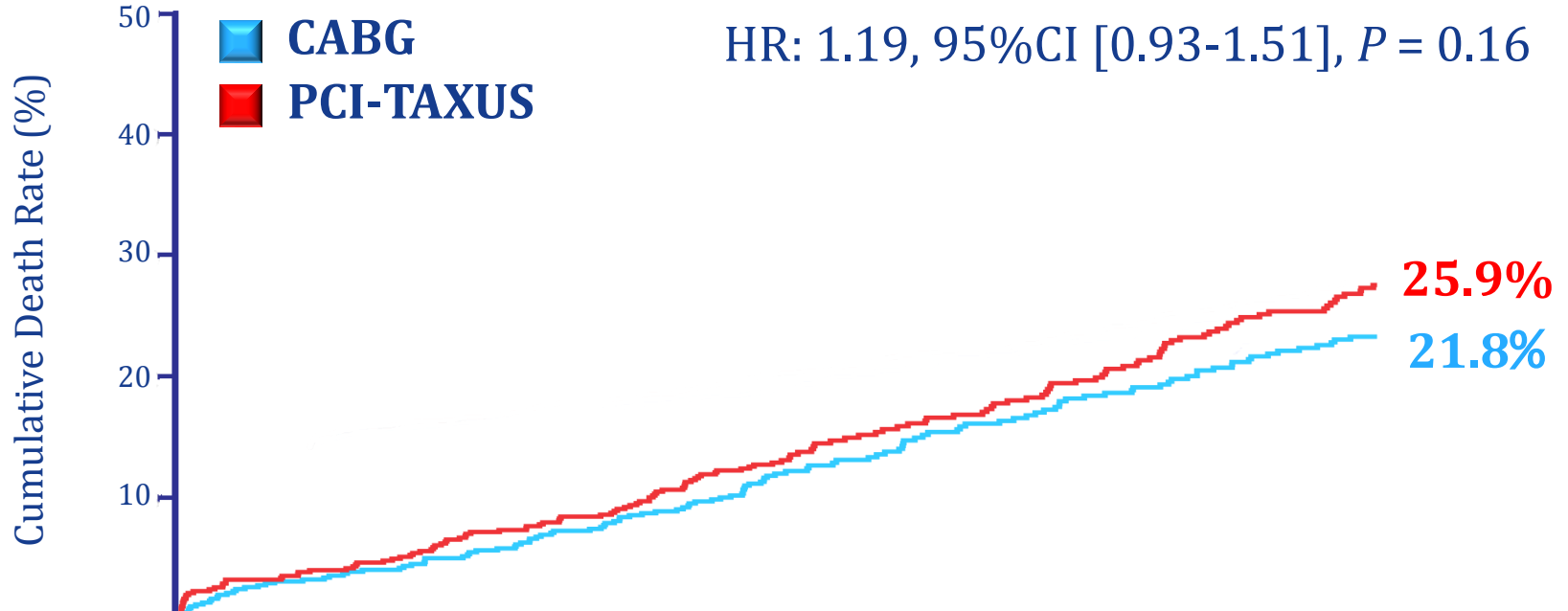
HR: 1.13, 95%CI [0.82-1.58],  $P = 0.45$





# Non-Diabetes

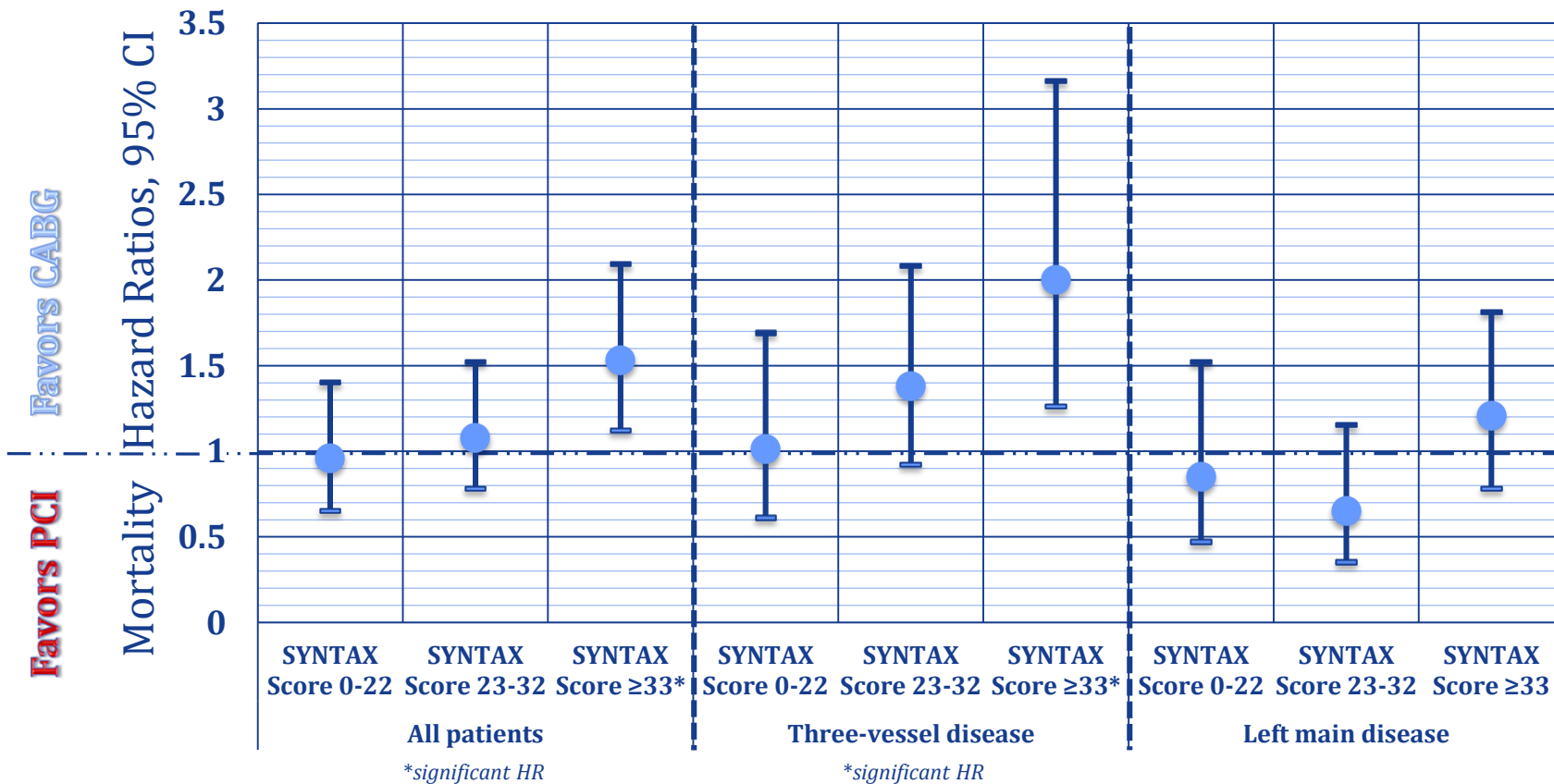
HR: 1.19, 95%CI [0.93-1.51],  $P = 0.16$



Numbers at risk

	0	1	2	3	4	5	6	7	8	9	10
CABG	676	645	632	615	598	511	401	387	376	363	352
PCI	672	650	637	622	601	510	381	371	359	340	323

# SYNTAX scores - 10 Year All-Cause Death



# Limitations and Strengths

- No data on MI, stroke or repeat revascularization
- Current results are based on 72.3% of the data (n=1301/1800)
- First generation drug eluting stent (DES)
- ✓ **SYNTAXES** = first randomized study to report 10-year survival after CABG vs. PCI-DES
- ✓ **More complete data** that at 5-year follow-up
- ✓ Survival data of 473 patients is now being collected (26.3%)

# Take Home Message

Based on 72.3% of the SYNTAXES 10 Year data:

- 1) There was **no survival benefit of CABG or PCI at 10-year** follow-up
- 2) CABG provided a survival benefit in patients with **3VD**
- 3) PCI had comparable survival to CABG in patients with **LM-disease**
- 4) The SYNTAXES study anticipates to be completed in 2019

# Thank you and thanks to all **SYNTAXES** collaborators

Mario F.L. Gaudino, Jeremy R. Leonard, Filip Casselman , Bernard de Bruyne, Evald Høj Christiansen, Juan M. Ruiz-Nodar, Paul Vermeersch, Manel Sabaté, Olivier Darremont, P. den Heijer, Martinus Vrakking, Peter den Heijer, Istvan Preda, Robert C. Stoler, Michael J. Mack, Tamas Szerafin, John K. Buckner, Myles S. Guber, Niels Verberkmoes, Ferdi Akca, Ted Feldman, Friedhelm Beyersdorf, Benny Drieghe, Kevin Wolschleger, John Heiser, Pim van der Harst, Massimo A. Mariani, Hermann Reichenspurner, Richard Zelman, Christina Grothusen, Dariusz Dudek, George Heyrich, Victor LeGrand, Philippe Kolh, Pedro Coelho, Sara Fernandez, Javier Escaned, Reddy Guera, Alaide Chieffo, Alvise Spolaor, Maarten Jan Suttorp, Knut Endresen, Umberto Canosi, Ivan Horvath, Robert Kramer, Michael Aschermann, Inga Narbute, David Holmes, Francesco Burzotta, Ad J.J.C. Bogers, Helene Eltchaninoff, Jacques Berland, Ignacio Cruz Gonzalez, Anders Ahlsson, Matthias Corbascio, Thomas V. Bilfinger, Didier Carrie, Karl-Eugen Hauptman, Stefan James, Elisabeth Stahle, Sigrid Sandner, Günther Laufer, Irene Lang, Adam Witkowski, Harry Suryapranata, Agata Krauze, Andrzej Bochenek, Kimberly Barber, Alessandra Parlanti, Sergio Berti, Stephan Ensminger, Boris Nasser, Giulio Stefanini, Stefan Kiesz, Bartłomiej Gora, Christian Hagl, Oliver Heyn, Richard Ingemansson, Goran Olivecrona, Christoffer Stark, Mika Laine, Nicholas Burke, Michael Mooney, Ronald A. Stine, Werner Schultz, Herko Grubitzsch, Piroze Davierwala, Thilo Noack, Phillip A. Horwitz, Jeffrey Everett