

Stents versus Surgery for Left Main or MVD

Evolution and Current Status

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CABG vs. PCI for LM or Multi-vessel Disease

- **Most RCTs have limited power to assess the clinical equipoise between CABG & PCI with DES regarding hard outcomes.**
- **Pooling of patient-level data from RCTs increases the statistical power, allowing further analysis including hard outcomes.**

Database Pooling

- We combined the database from the BEST (n=880, EES), PRECOMBAT (n=600, SES) and SYNTAX (n=1800, PES) trials.
- Unless specified, previously reported definitions from each study were used for variables.

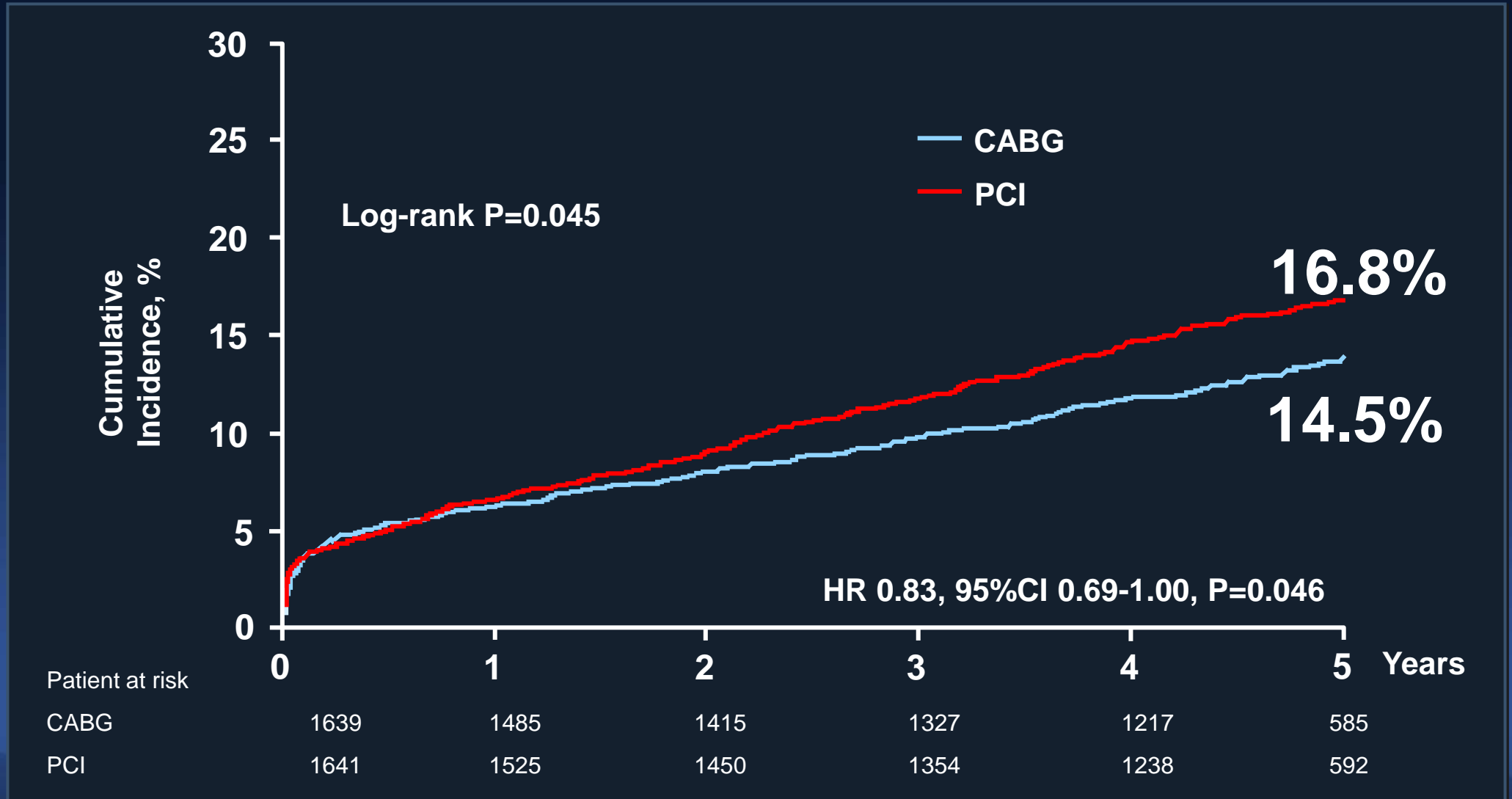
Study Outcomes

- **Primary Outcome:**
A composite of all-cause death, MI, or stroke over all available follow-up.
- **Secondary Outcomes:**
Death from any causes, cardiac death, MI, stroke, any coronary revascularization, a composite of death or MI

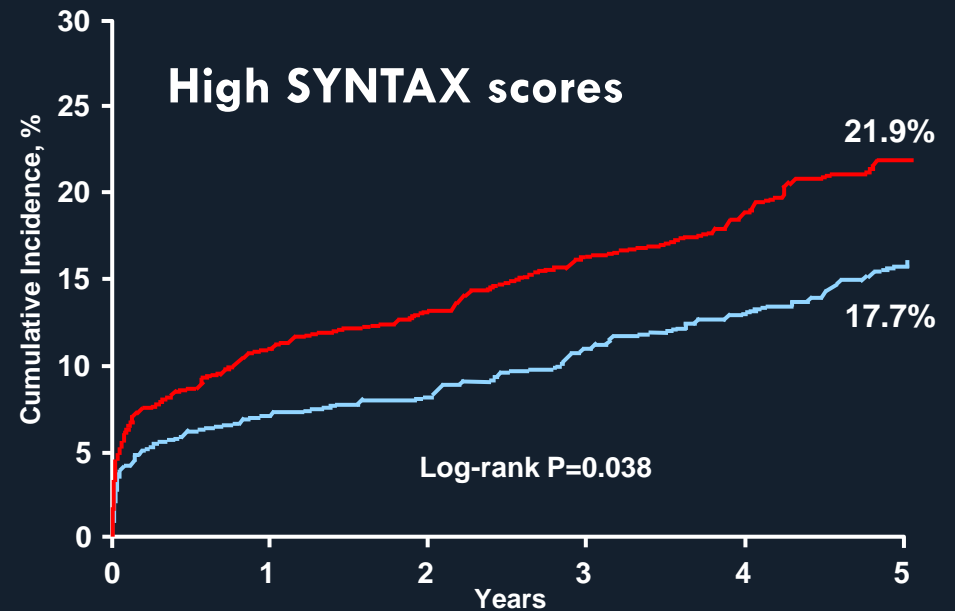
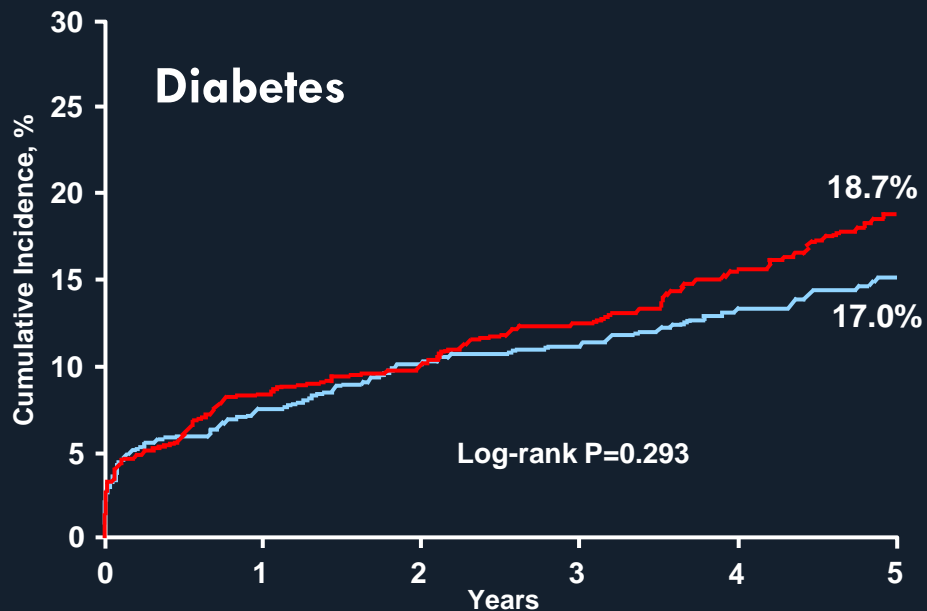
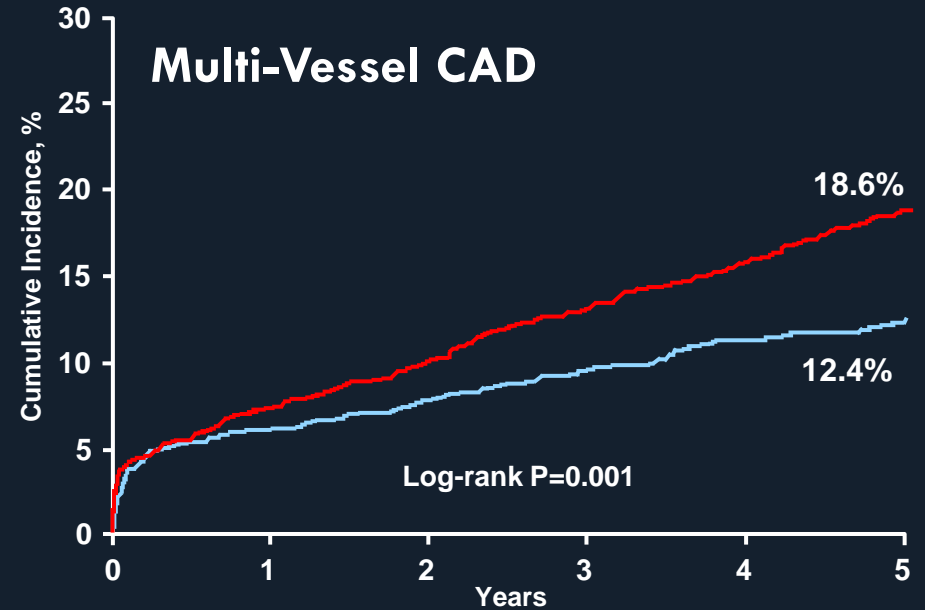
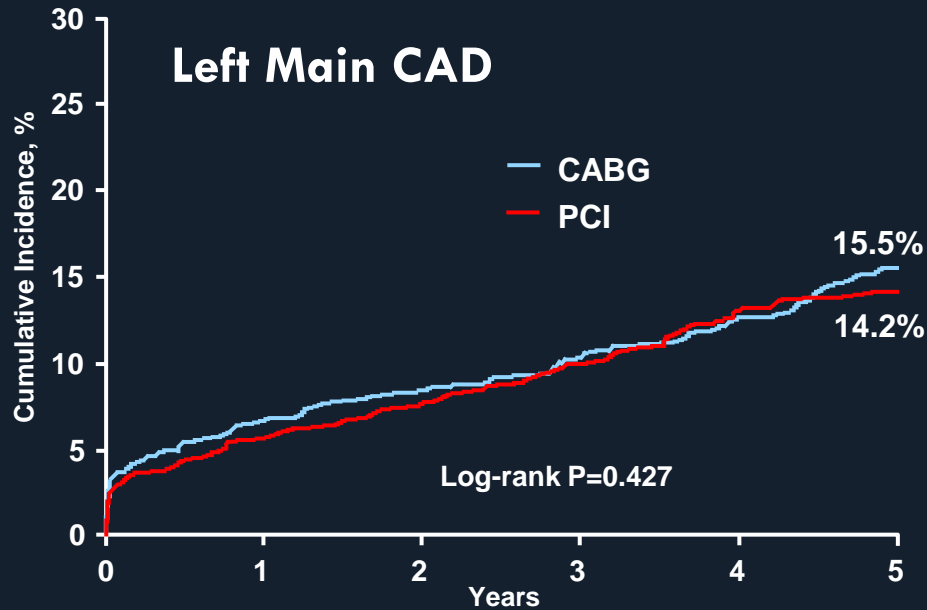
Baseline Characteristics

	CABG (n=1639)	PCI (n=1641)
Age (years)	64.5±9.7	64.2±9.7
Men	1264 (77.1%)	1222 (74.5%)
Current smoking	368 (22.5%)	344 (21.0%)
Diabetes	532 (32.5%)	534 (32.5%)
Stable CAD	987 (60.2%)	1030 (62.8%)
Previous MI	349 (21.4%)	323 (19.8%)
Previous stroke	76 (4.6%)	72 (4.4%)
LM	649 (39.6%)	657 (40.0%)
MVD	991 (60.5%)	984 (60.0%)
SYNTAX score	27.3±10.7	26.7±10.3
Follow-up (years)	4.4±1.4	4.4±1.3

Primary Outcome: Death, MI or Stroke



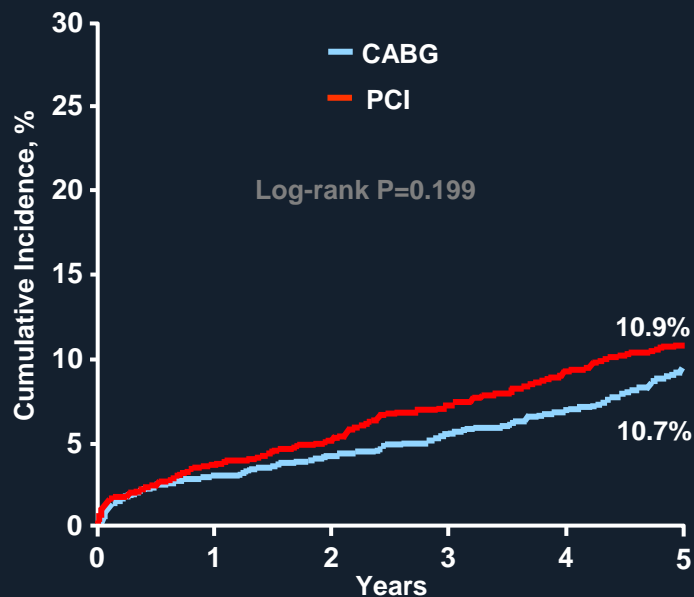
Primary Outcome in Major Subgroups



Secondary Outcomes:

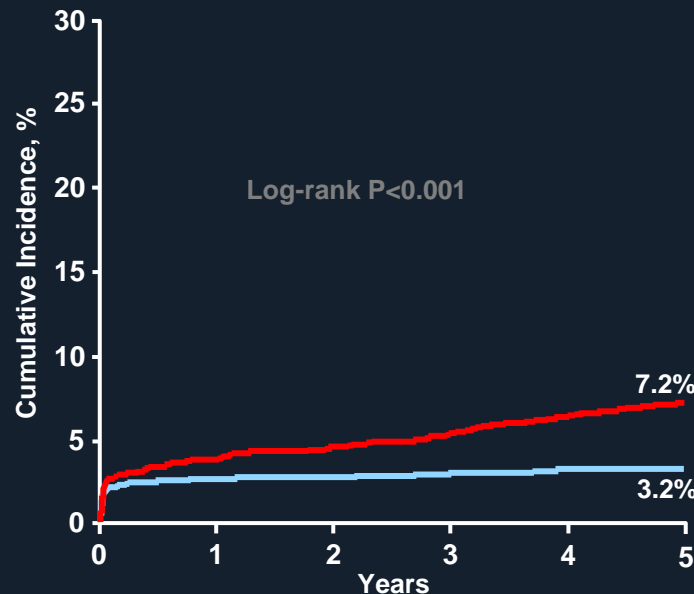
Individual Components of Primary Outcome

Death



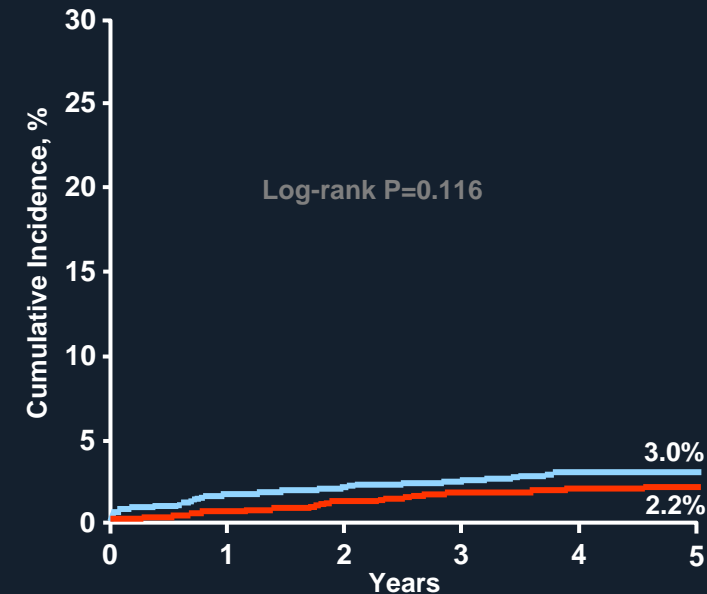
HR 0.86, 95%CI, 0.69-1.08,
P=0.199

MI



HR 0.46, 95%CI, 0.33-0.64,
P<0.001

Stroke



HR 1.43, 95%CI, 0.92-2.24,
P=0.116

Conclusions

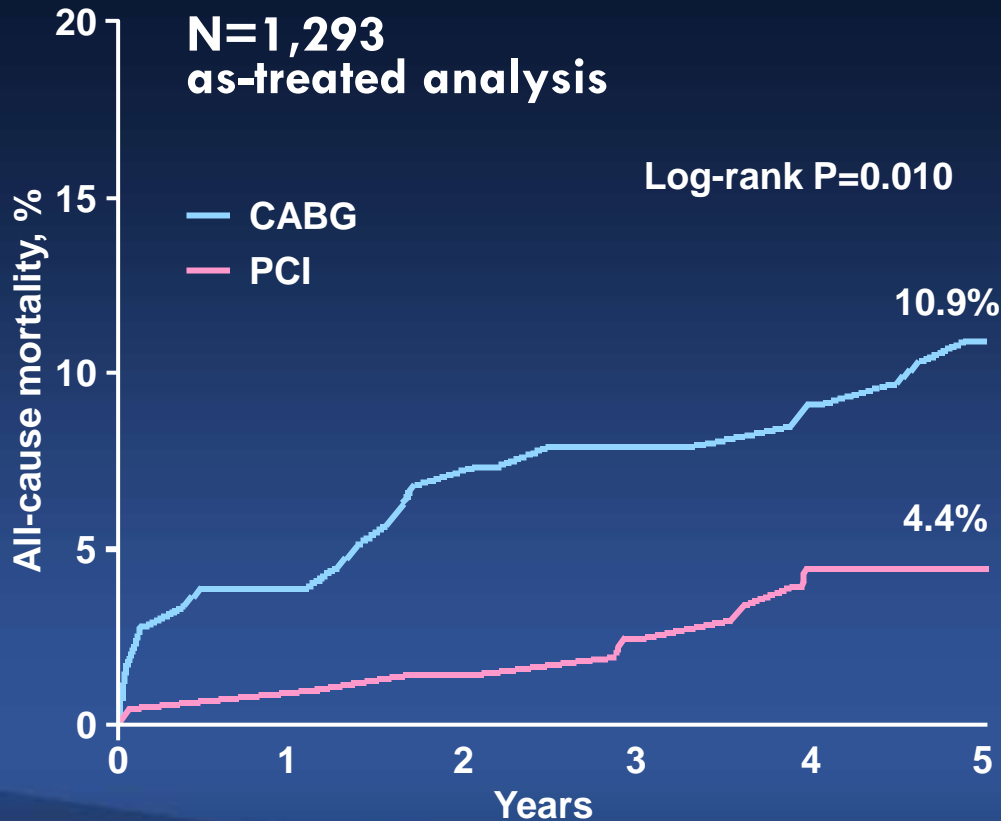
- CABG, as compared to PCI with DES, significantly reduced the risk of all-cause death, MI, or stroke in patients with left main or multivessel CAD.
- The benefit of CABG was particularly pronounced in patients with multivessel CAD, but not in those with left main CAD.

Which one is better?

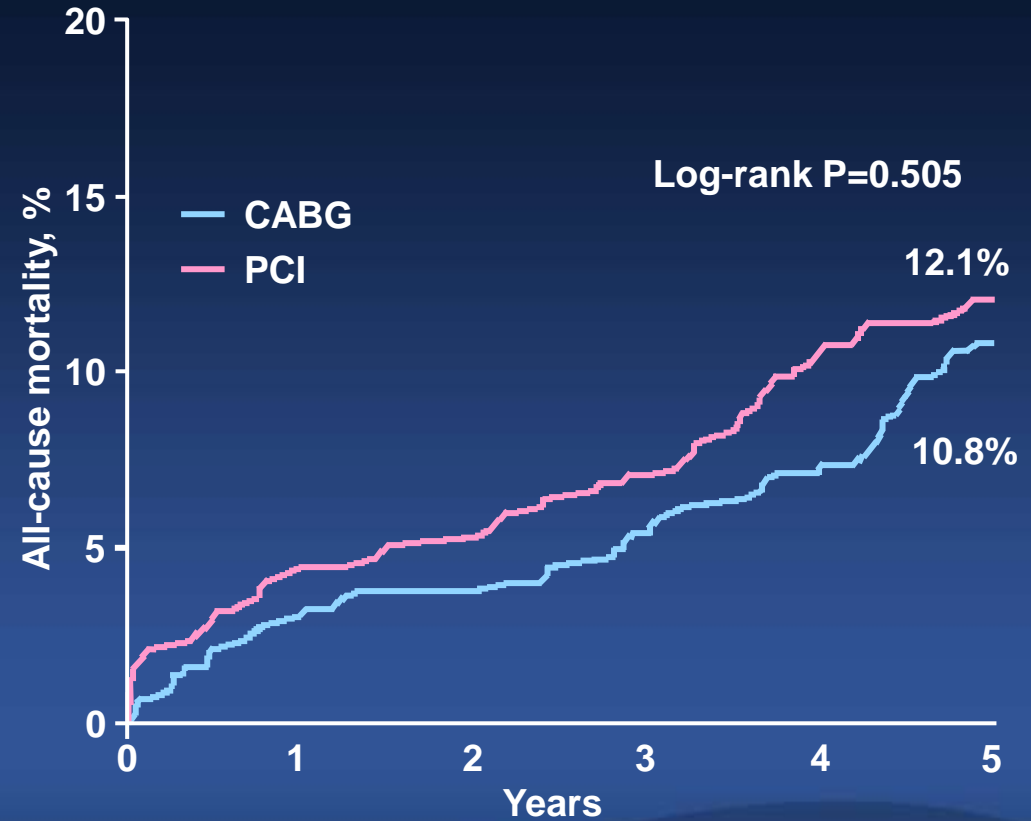
Further Insights **into long-term mortality**

Death in LM Disease: “Extent of Disease”

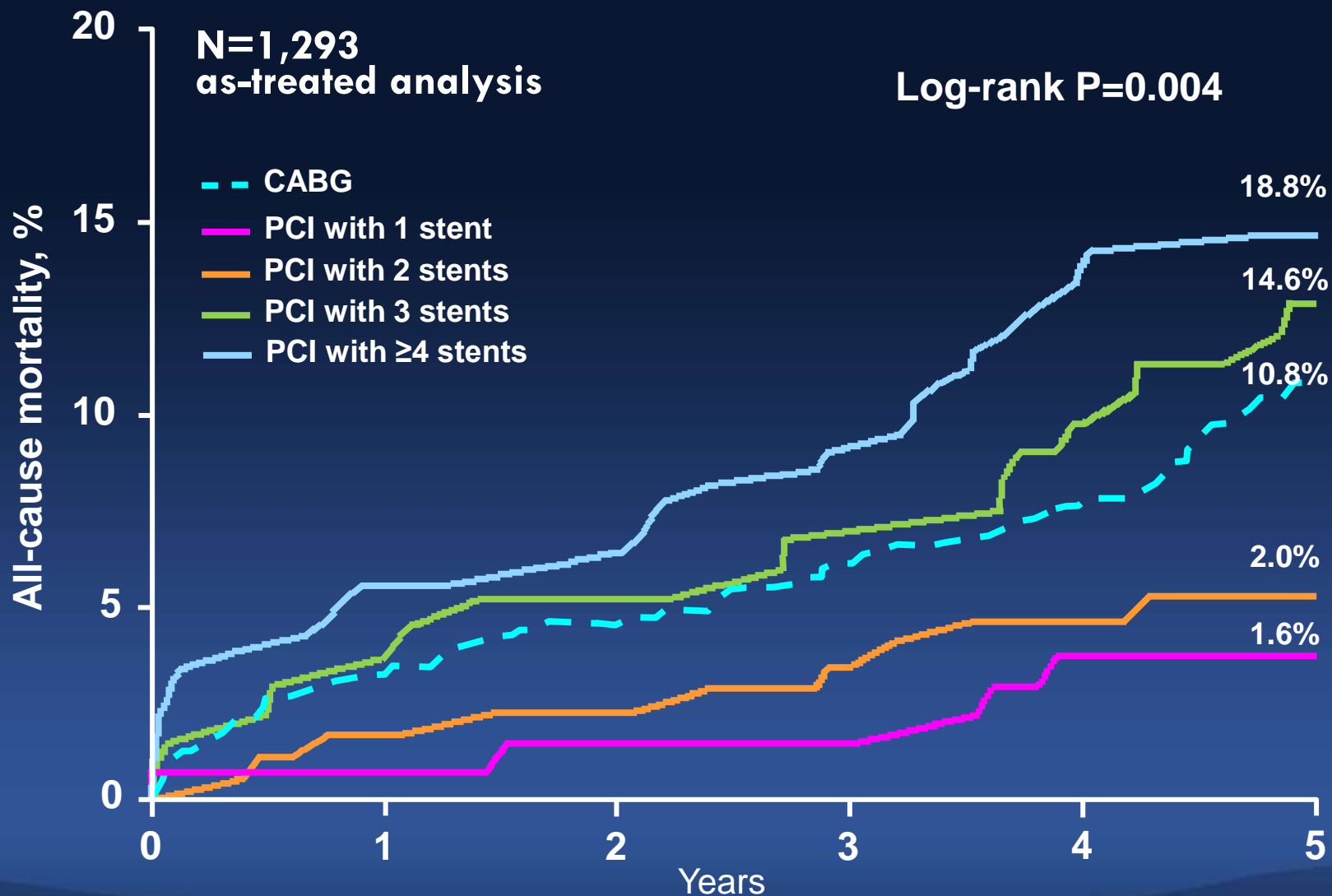
Limited LMCAD (LM alone or LM plus 1-VD)



Extensive LMCAD (LM plus 2- or 3-VD)



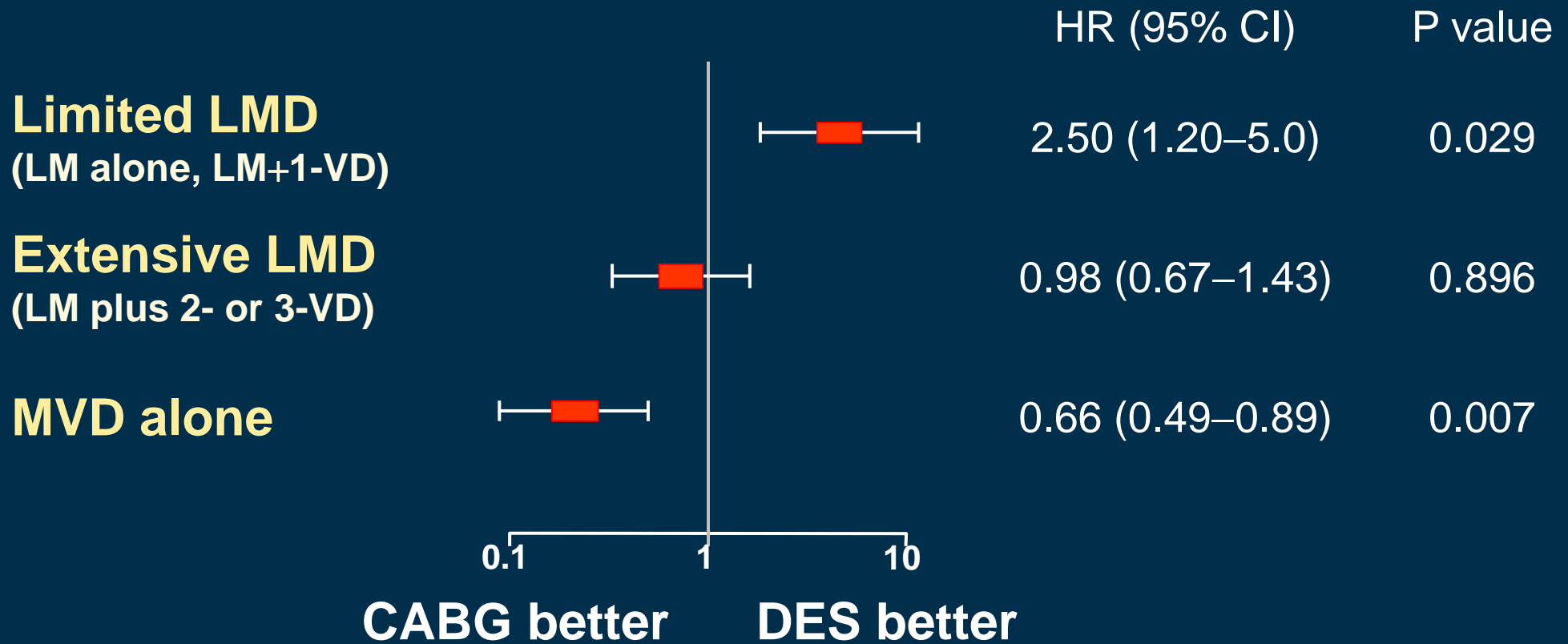
Death in LM Disease: “Number of Stents”



BEST, PRECOMBAT and SYNTAX Trial

All-Cause Mortality

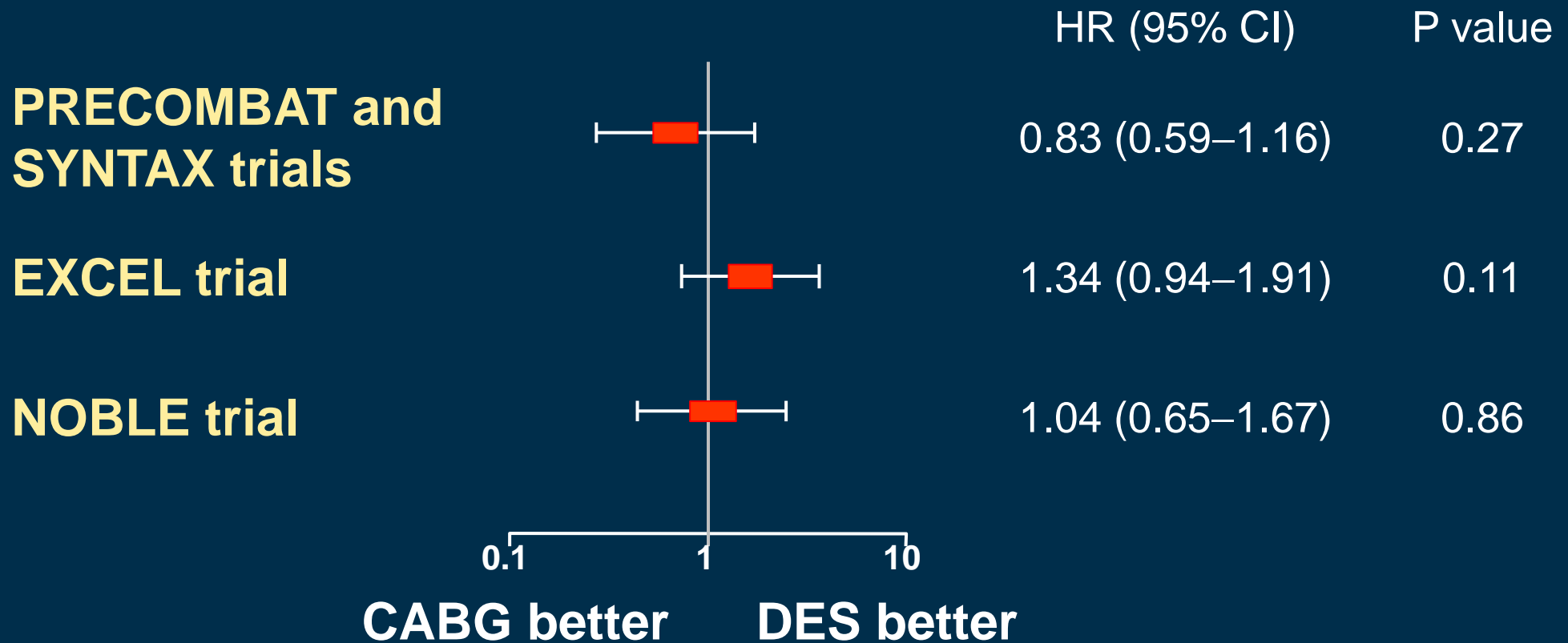
P for Interaction <0.001



What's Different between LMD and MVD?

- The left main coronary artery is large and short, leading to a lower rate of target lesion failure.
- The advantage of CABG over PCI seems to be attenuated in the presence of concomitant left main CAD (LM total: a large ischemic island, graft dependent).

All-Cause Mortality Summary (4 RCTs)



More PCI or More CABG?

The final winner here will be a simple, effective and durable treatment!

Thanks