CABG vs DES for Non-STE ACS

; Pooled Data from the BEST, PRECOMBAT and SYNTAX

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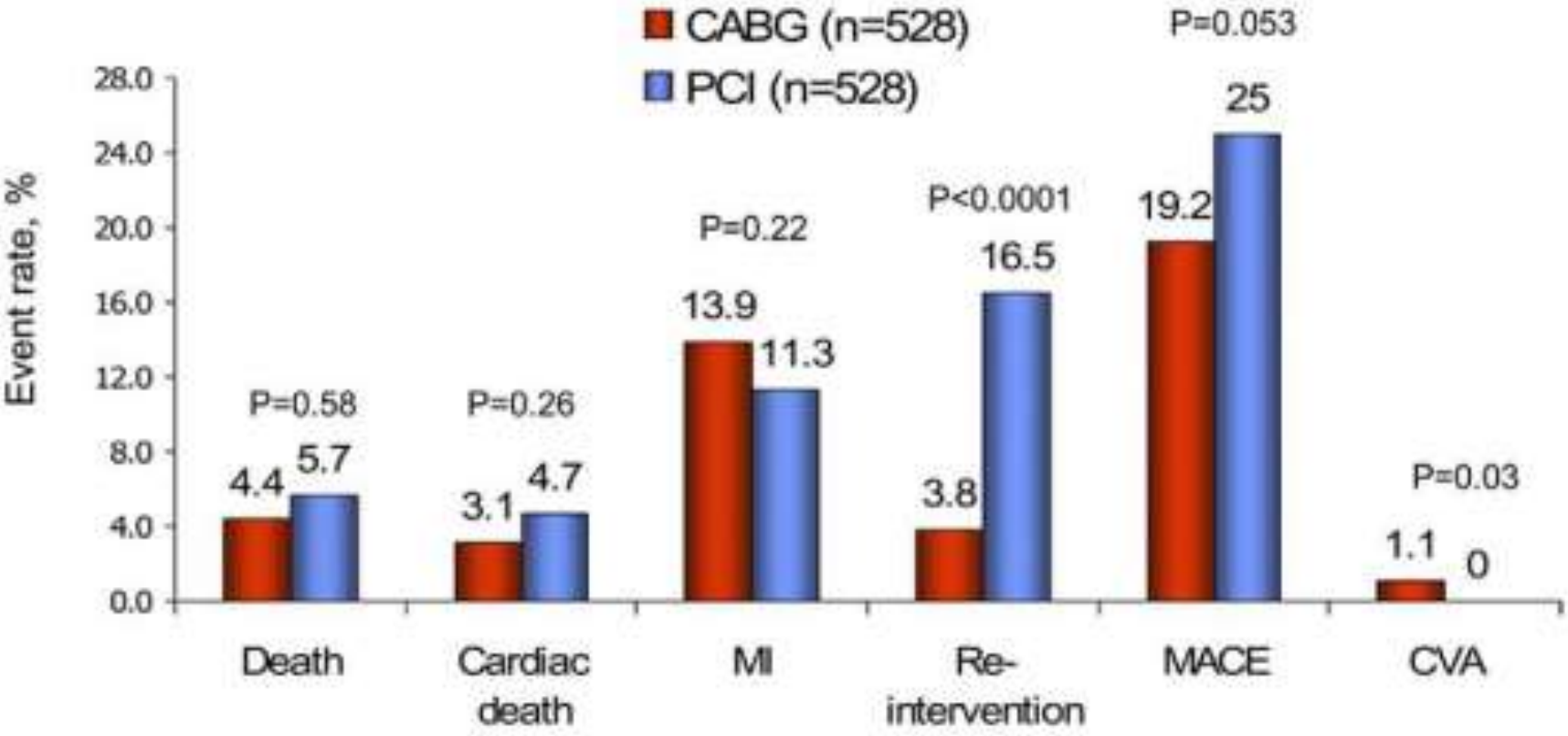
Background

- Among patients with NSTE-ACS, a substantial proportion has a left main or multivessel CAD.
- Patients with ACS remain at high risk of recurrent cardiovascular events.
- There have been no specific randomized trials that directly compared CABG versus PCI in an NSTE-ACS setting.

ACUITY trial



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Background

- However, these previous results were relatively short-term outcomes and included more of BMS from non-randomized studies.

Study Purpose

- We aimed to compare the effects of CABG vs. PCI with DES on long-term cardiovascular outcomes in patients with NSTE-ACS for left main or multivessel CAD.

Methods

- Individual patient data from the SYNTAX (n=1800, PES), PRECOMBAT (n=600, SES) and BEST (n=880, EES) trials were pooled.

- Study population
  - Among these patients, we identified 1,246 NSTE-ACS patients with multivessel CAD or LM disease.

Study outcomes

- Primary outcome
  - Composite of death, MI, or stroke
- Secondary outcomes
  - Death from any cause
  - Myocardial infarction
  - Stroke
  - Repeat revascularization

Statistics

- All analyses were performed according to the intention-to-treat principle.
- The outcomes were displayed using the Kaplan-Meier and compared by the log-rank test.
- All reported P values are 2 sided, and values of $P<0.05$ were considered to indicate statistical significance.

Baseline Characteristics

	CABG (n=634)	PCI (n=612)
Age (years)	65.1±9.8	64.1±10.2
Male sex	465 (73.3%)	427 (69.8%)
Current smoker	157 (24.9%)	138 (22.5%)
Hypertension	383 (60.4%)	376 (61.4%)
Diabetes mellitus	207 (32.6%)	225 (36.8%)
Clinical presentation		
Unstable angina	594 (93.7%)	575 (94.0%)
NSTEMI	40 (6.3%)	37 (6.0%)
Previous MI	145 (22.9%)	135 (22.2%)
Previous stroke	27 (5.6%)	30 (6.2%)
LV EF <40%	24 (4.3%)	36 (7.1%)
Follow-up (years)	4.3±1.4	4.4±1.3

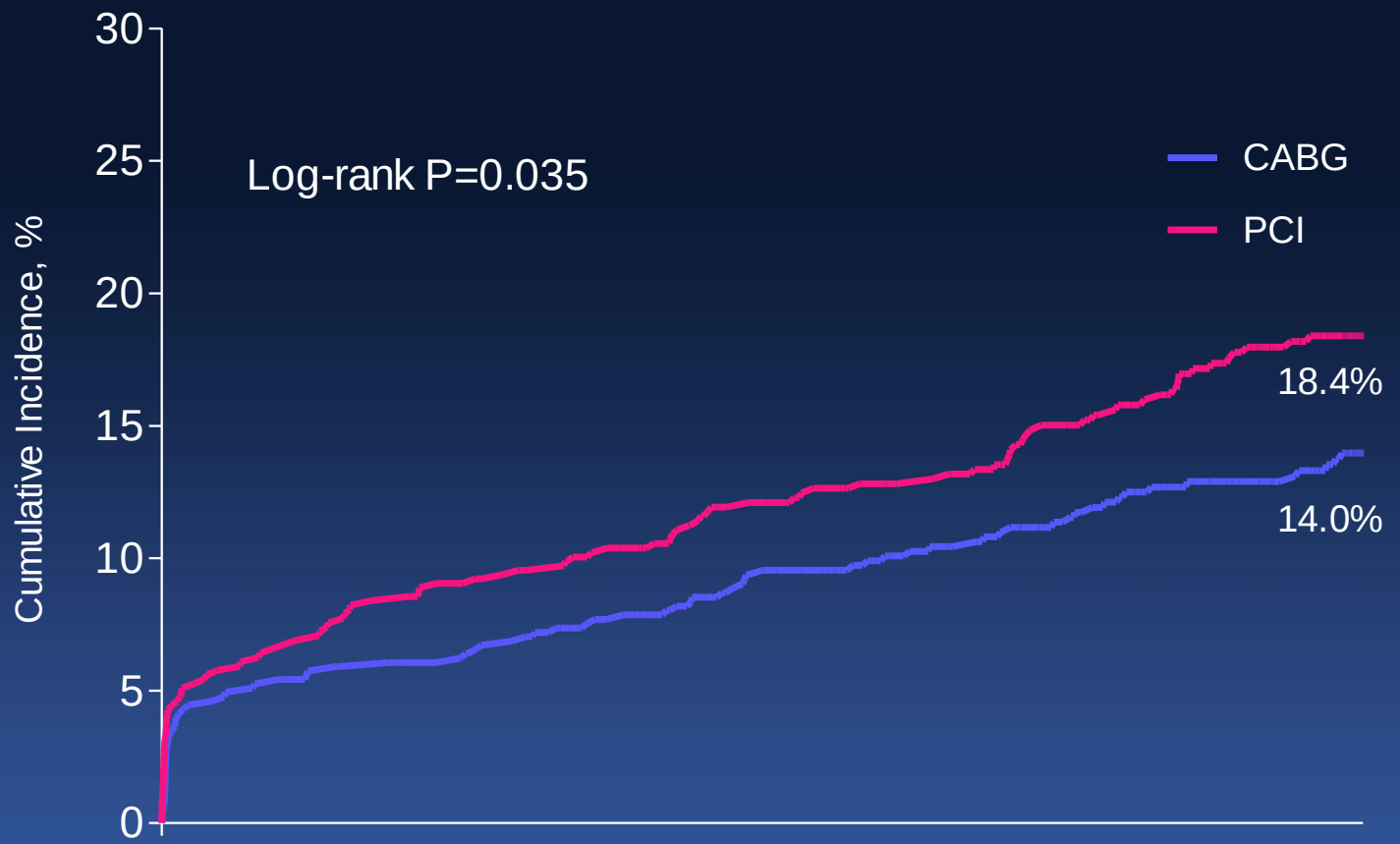
Angiographic findings

	CABG (n=634)	PCI (n=612)
pLAD disease	401 (63.3%)	382 (62.6%)
2VD	59 (9.3%)	57 (9.3%)
3VD	326 (51.4%)	316 (51.6%)
Isolated LM disease	33 (5.2%)	24 (3.9%)
LM + 1VD	47 (7.4%)	41 (6.7%)
LM + 2VD	68 (10.7%)	76 (12.4%)
LM + 3VD	101 (15.9%)	98 (16.0%)
SYNTAX Score	26.9±10.6	26.8±10.8

Medications

Medication	CABG (n=634)	PCI (n=612)	P-value
Aspirin			
At discharge	596 (95.2%)	592 (97.4%)	0.045
At 5 year	356 (79.3%)	372 (85.1%)	0.023
$P2Y_{12}$ inhibitors			
At discharge	398 (63.6%)	586 (96.4%)	<0.001
At 5 year	137 (30.6%)	198 (45.3%)	<0.001
Statins			
At discharge	471 (75.2%)	510 (83.9%)	<0.001
At 5 year	320 (71.3%)	333 (76.2%)	0.095

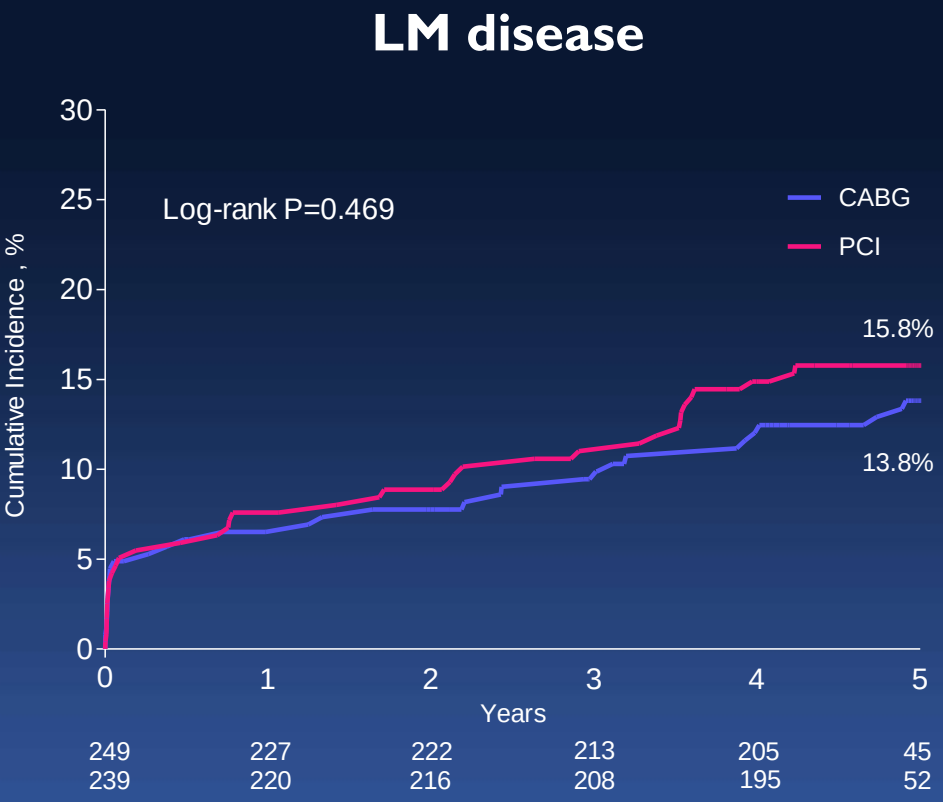
Primary outcome

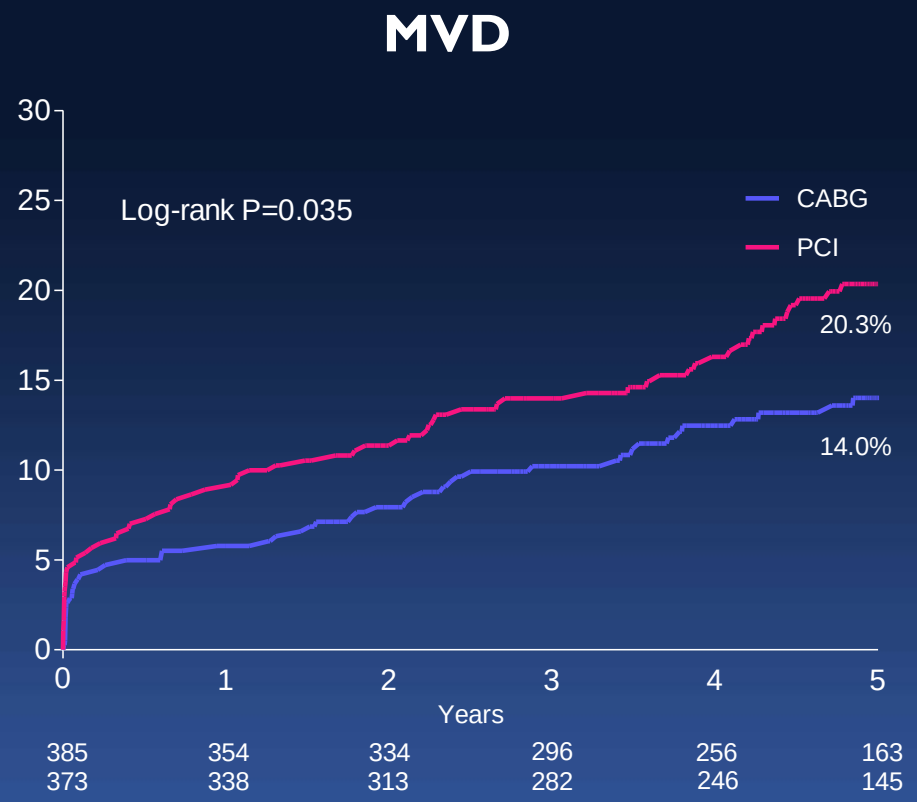


Patient at risk

CABG	634	580	555	508	460	208
PCI	612	557	528	489	440	192

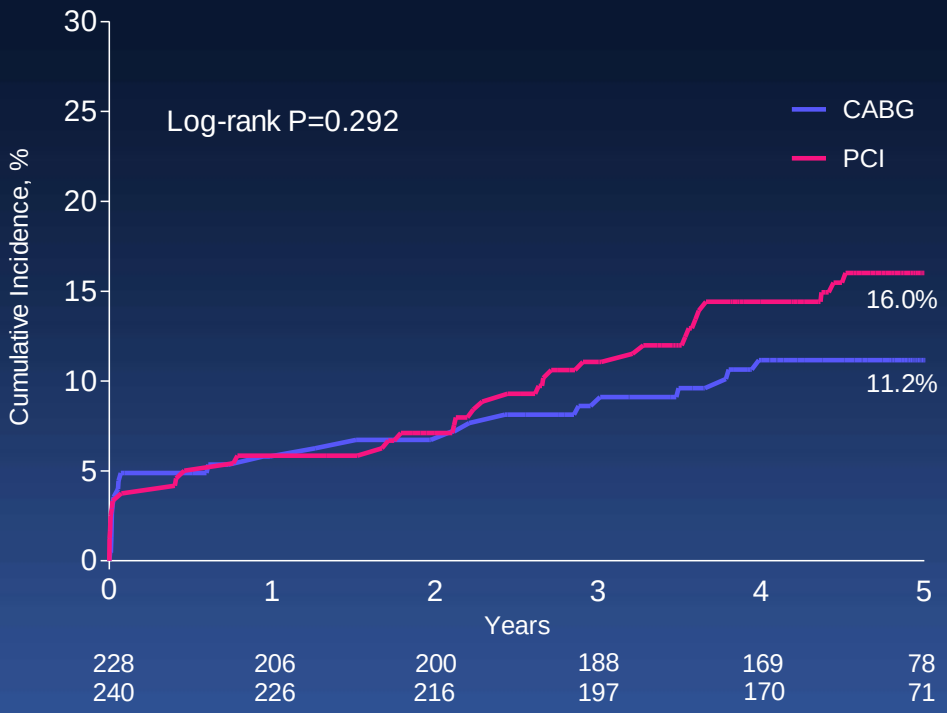
Subgroup analysis



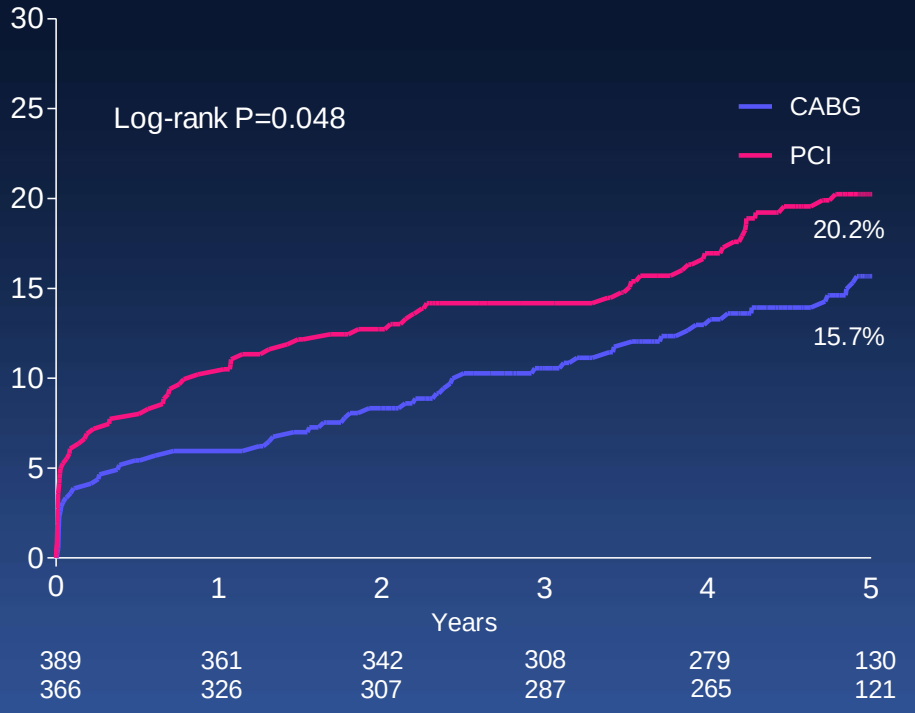


Subgroup analysis

Low SYNTAX

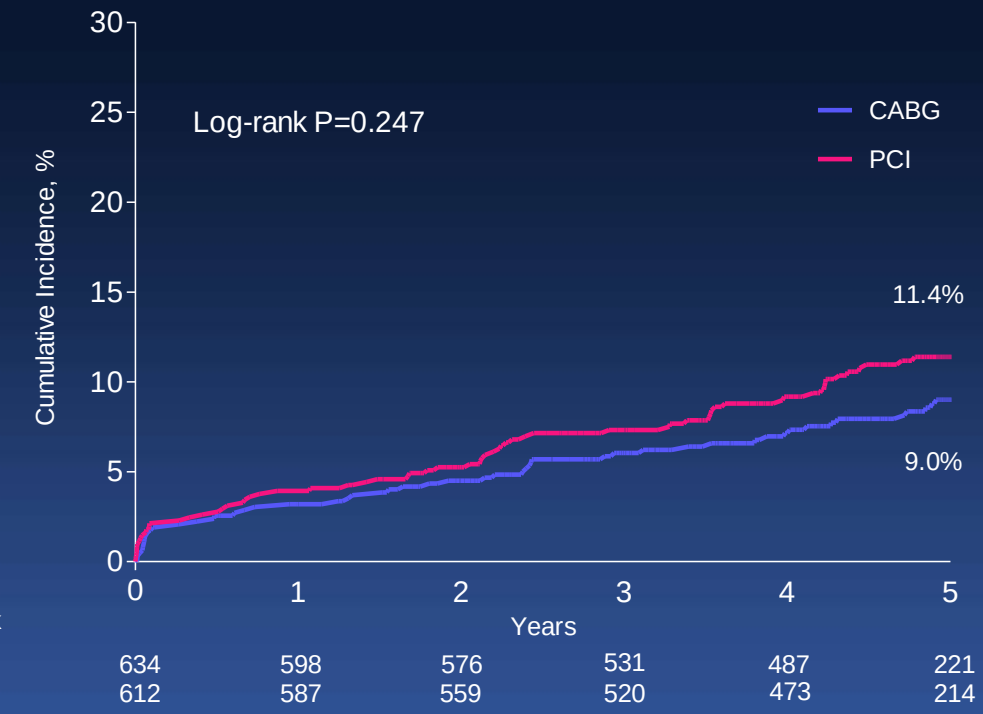


Intermediate-High SYNTAX

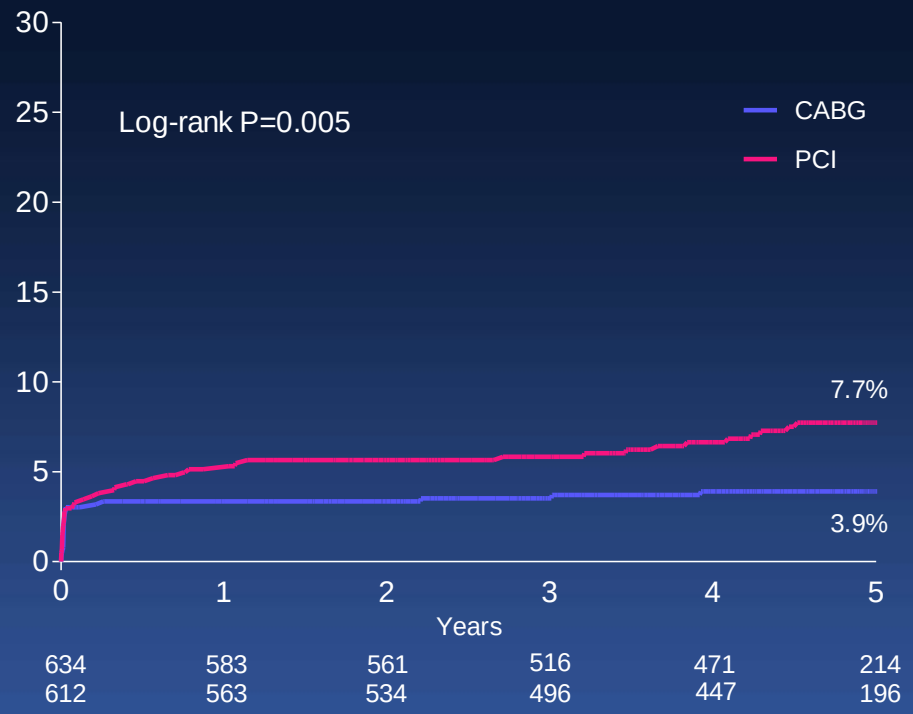


Secondary outcomes

Death

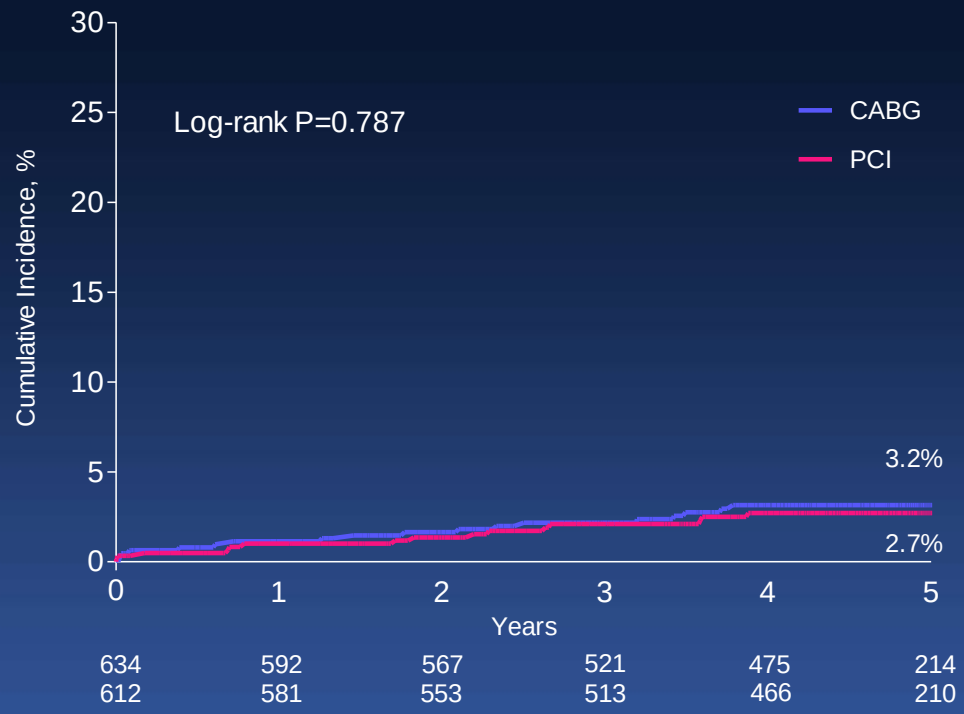


Myocardial Infarction

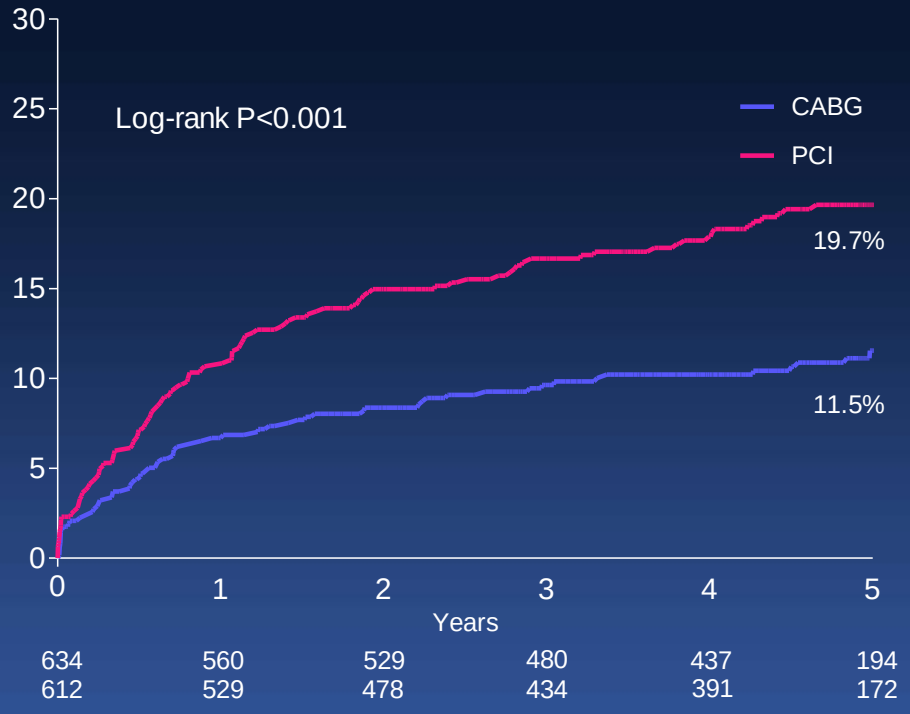


Secondary outcomes

Stroke



Revascularization



Study Limitations

- Very limited number of patients with NSTE-myocardial infarction are analysed in this study.
- The timing of CABG could not be specified in our present study.
- This study contains a mixture of generations of DES.
- Standard medications were less frequently used in the CABG group compared with the PCI group

Conclusions

- In conclusion, in patients with NSTE-ACS for left main or multivessel CAD, CABG is associated with a lower risk of death from any causes, myocardial infarction, or stroke when compared to PCI with DES.

Thank you for your attention