

**The SYNTAX Message is Clear:
CABG is Preferred in Complex MVD**
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Presenter Disclosure Information

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**“The SYNTAX Message is Clear:
CABG is Preferred in Complex MVD”**

The following relationships exist related to this presentation:

Immediate Past President ACC

Patient Centric Care



- Stroke
- Death
- Myocardial infarction
- Repeat procedures
- Sternotomy

Patient GF

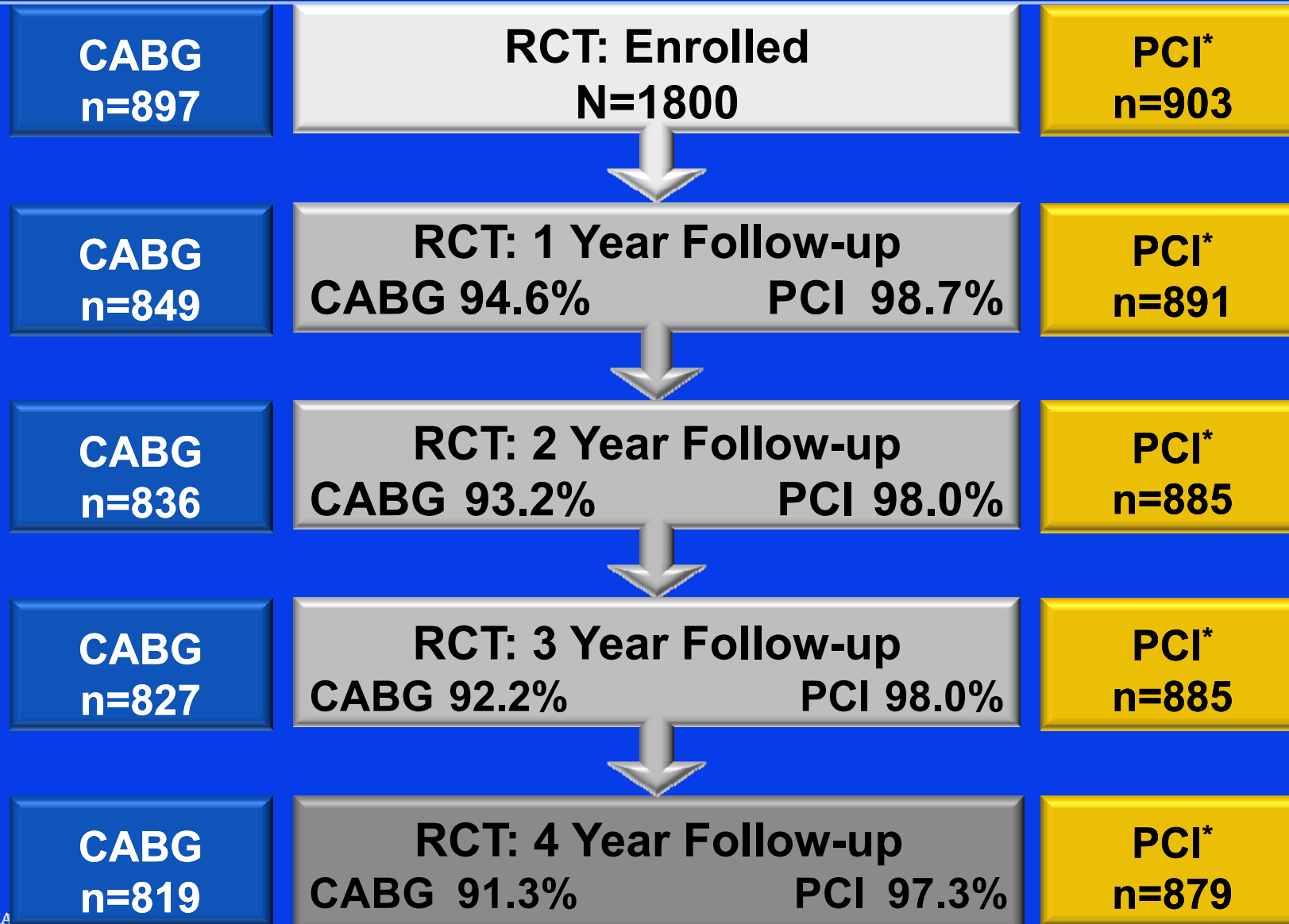
- **1979: Age 39 was the 16th patient treated with PTCA at Mayo Clinic**
- **1979 – 2007: I performed 15 different PCI procedures.**
- **2007: Office visit with patient: It went something like this.....**
- **2011: Remains asymptomatic.**

What do we know about SYNTAX

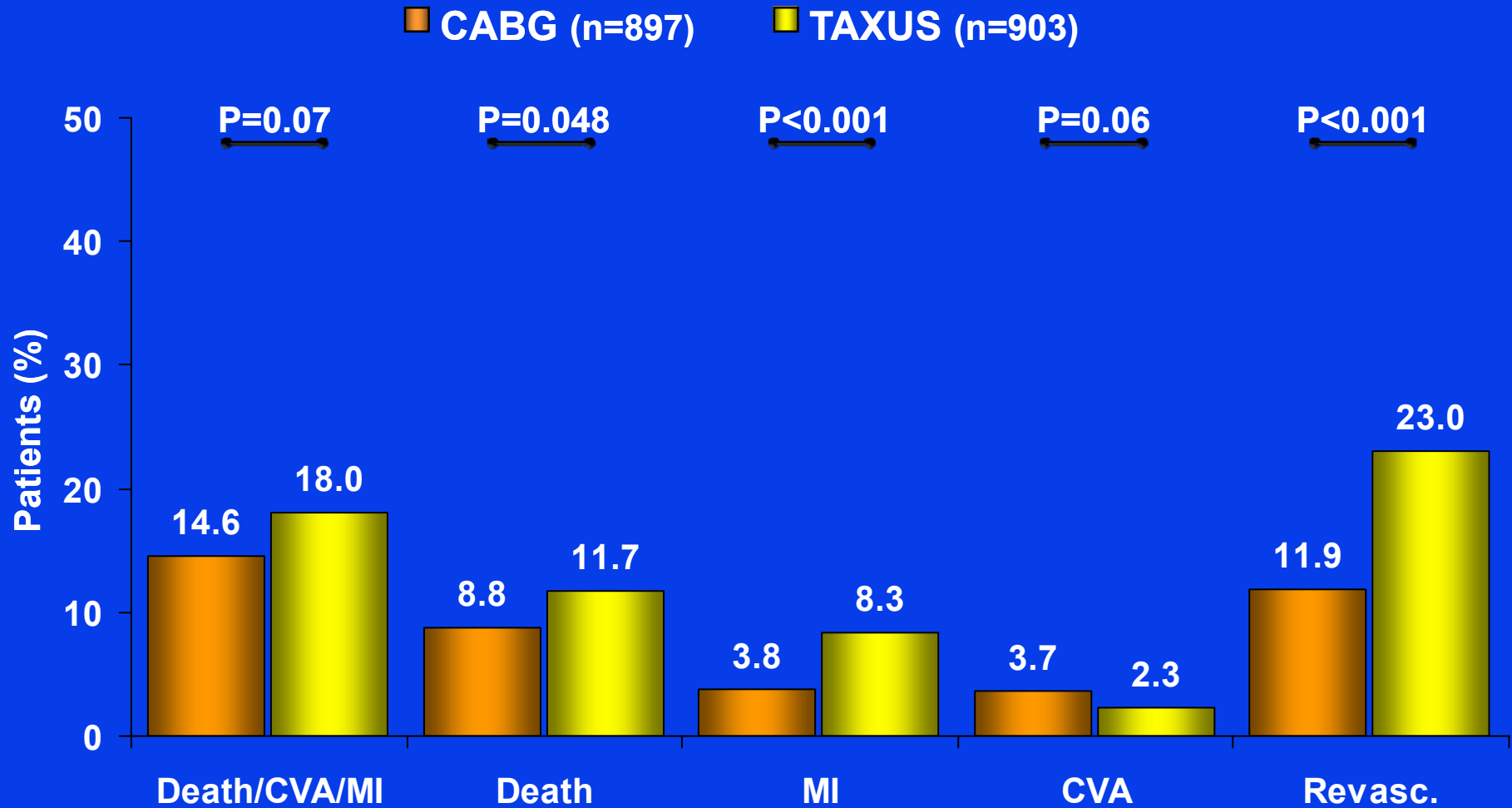
- **Constructed to be an ‘all comer’ study with limitations**
- **Carried out in expert centers by expert surgeons and expert interventional cardiologists**
- **Extensive disease which pushed the limit of PCI**
- **Excellent surgical techniques although postop meds not as optimal**
- **Stent selected – first generation, results may not be relevant to current technology**

Patient in SYNTAX

Randomized Controlled Trial Intent-to-Treat



Overall Randomized Cohort 4-year Outcomes (N=1800)



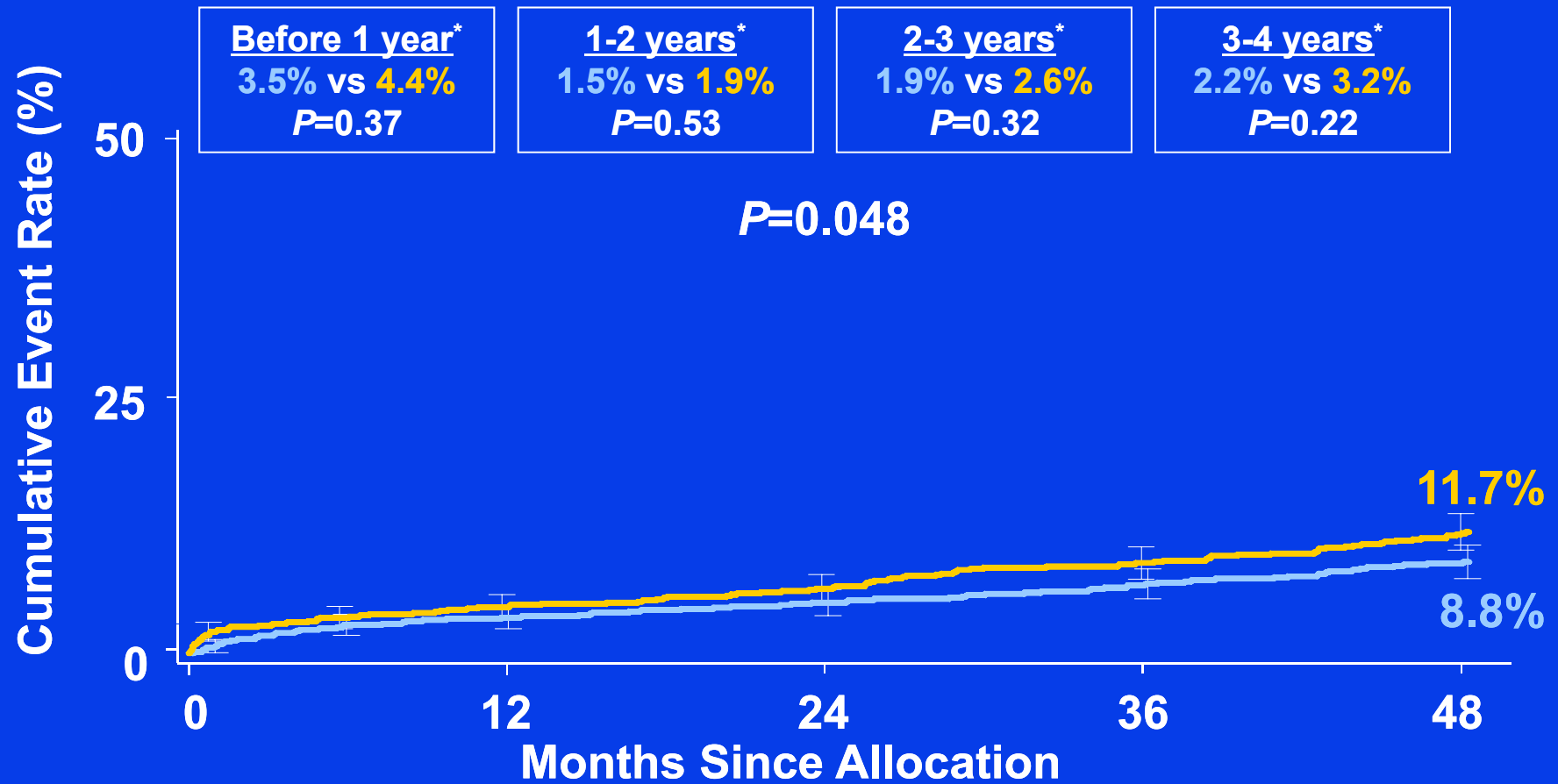
Cumulative KM Event Rate; log-rank *P* value

ITT population

All-Cause Death to 4 Years

■ CABG (N=897)

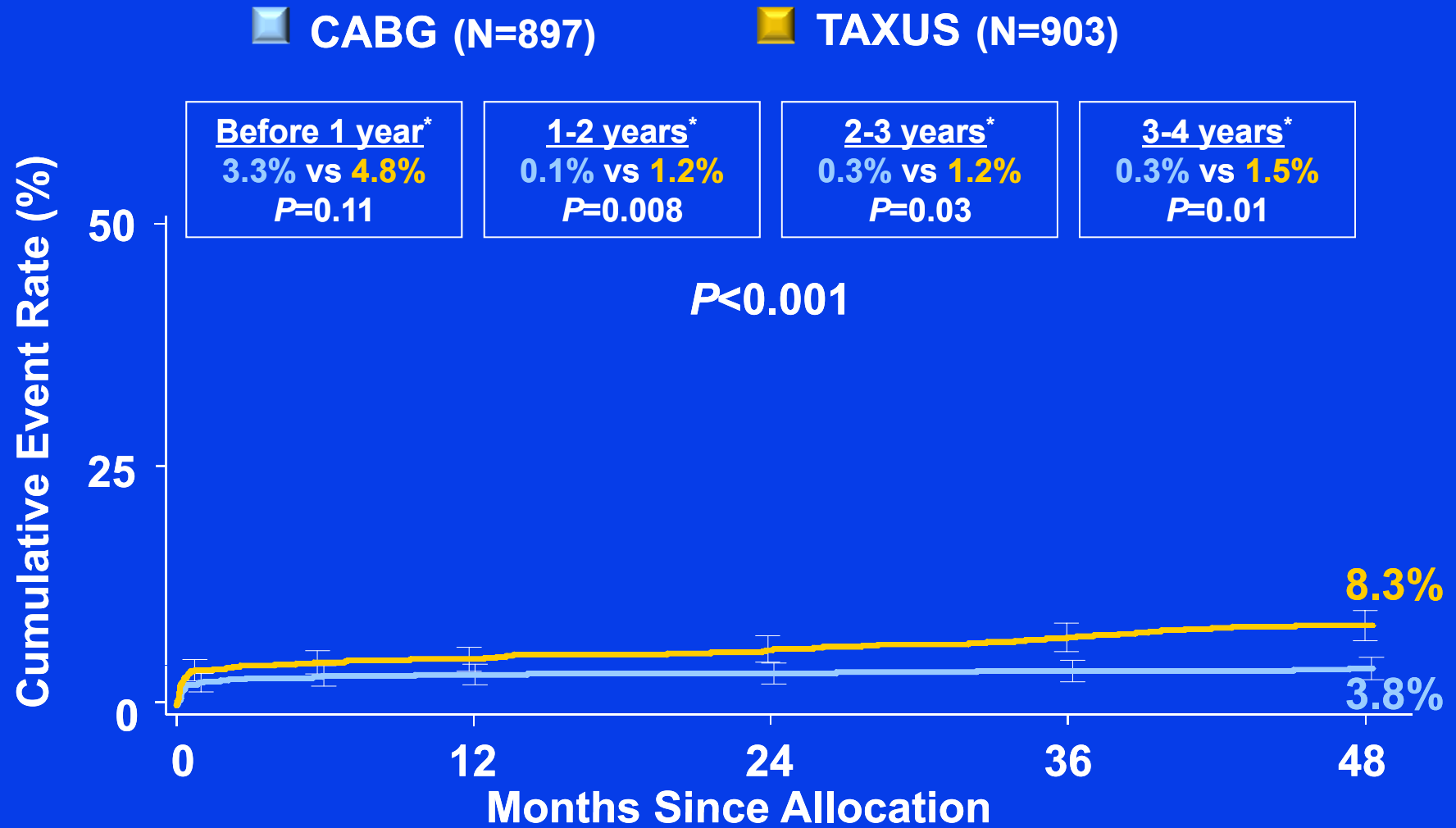
■ TAXUS (N=903)



Cumulative KM Event Rate \pm 1.5 SE; log-rank P value; *Binary rates

ITT population

Myocardial Infarction to 4 Years



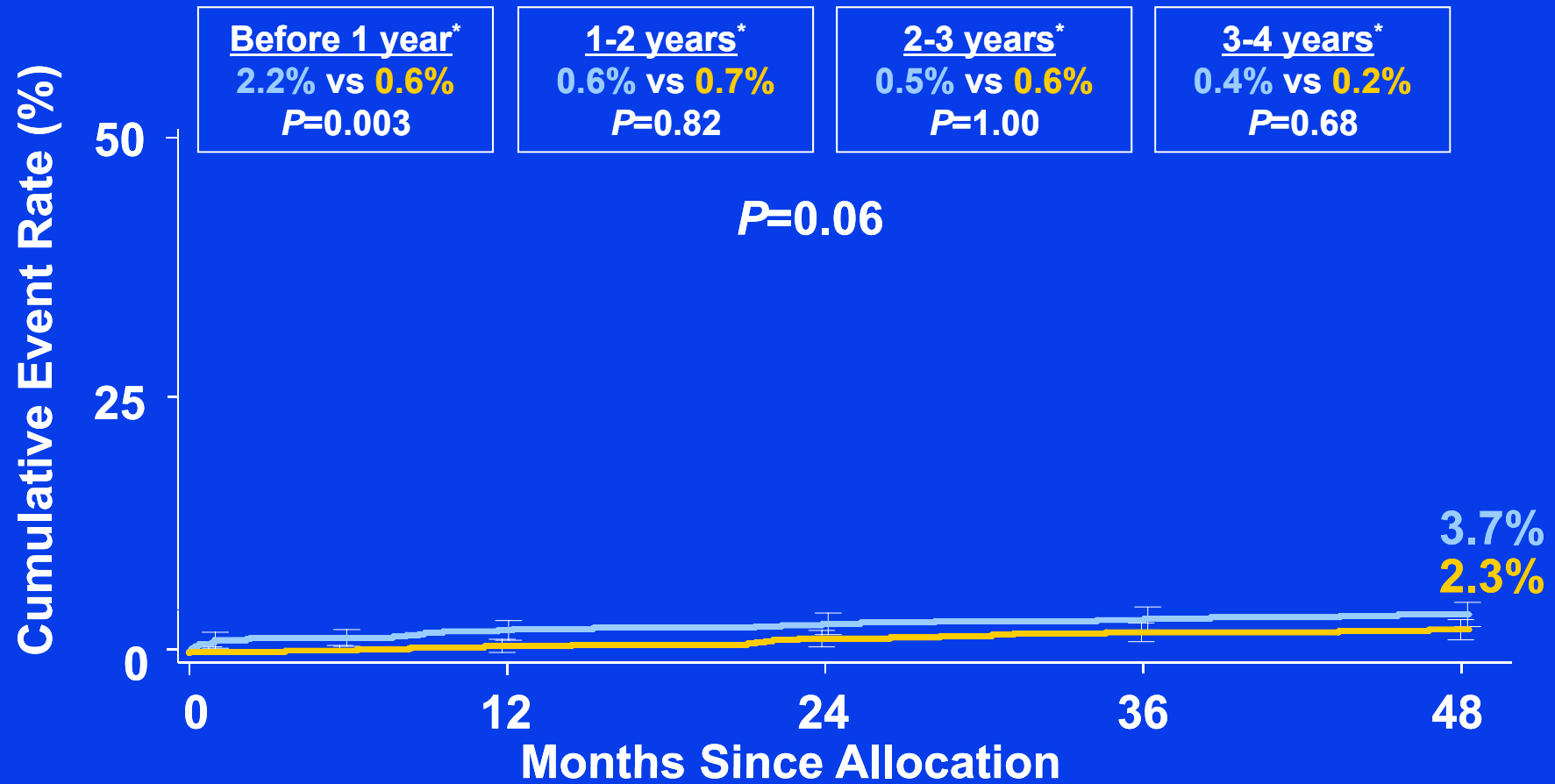
Cumulative KM Event Rate \pm 1.5 SE; log-rank *P* value; *Binary rates

ITT population

CVA to 4 Years

■ CABG (N=897)

■ TAXUS (N=903)



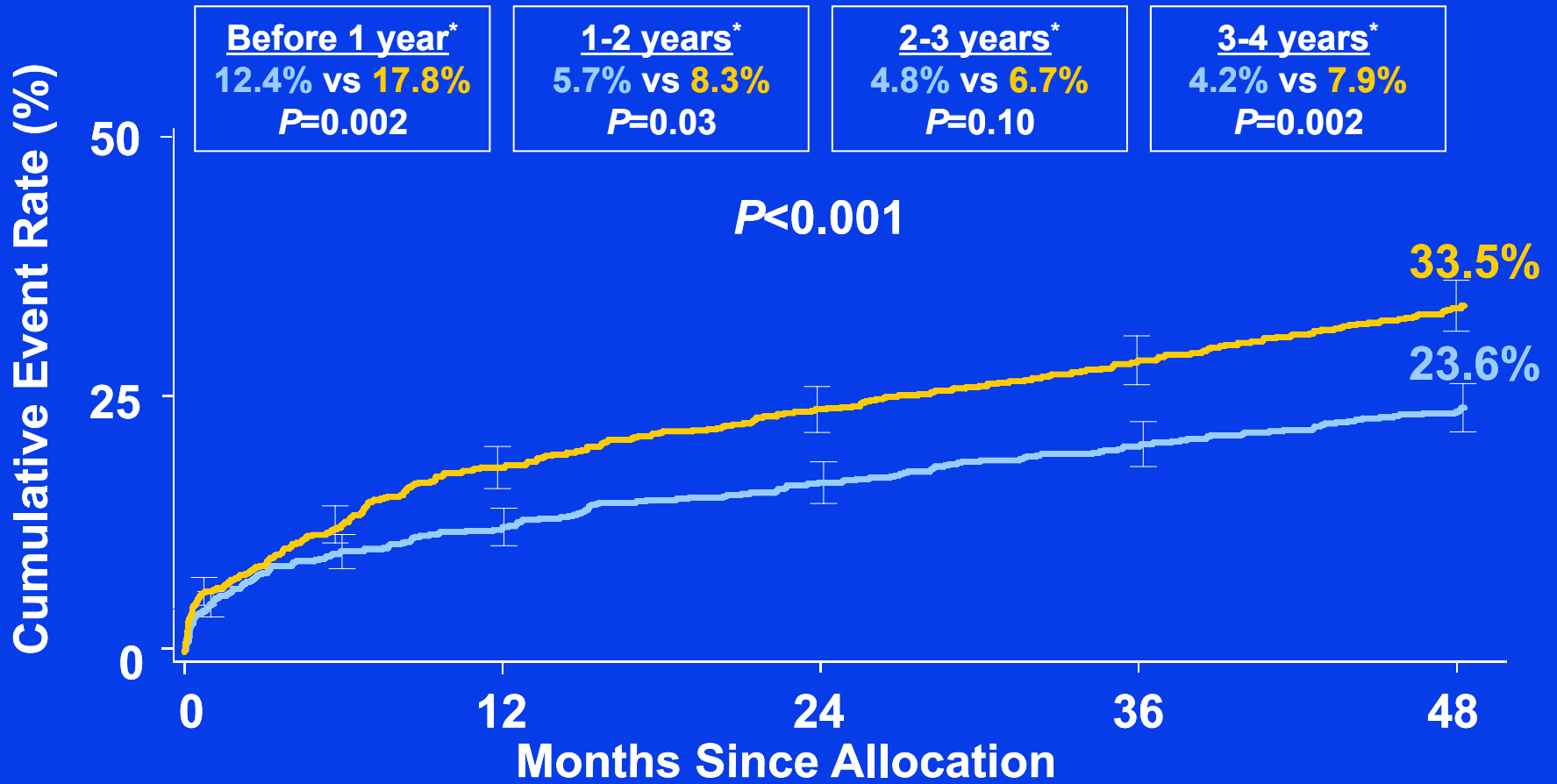
Cumulative KM Event Rate \pm 1.5 SE; log-rank P value; *Binary rates

ITT population

MACCE to 4 Years

■ CABG (N=897)

■ TAXUS (N=903)



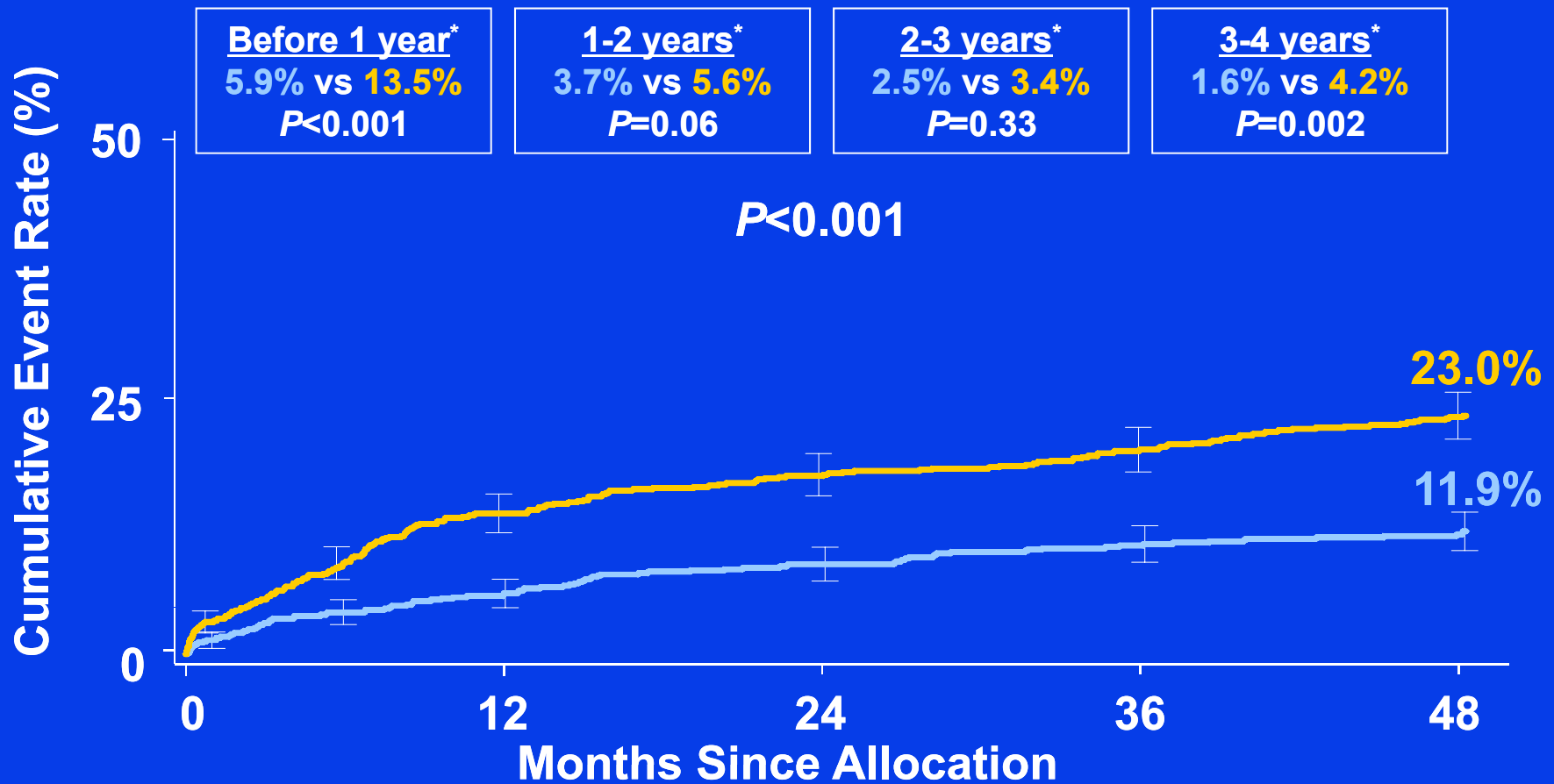
Cumulative KM Event Rate \pm 1.5 SE; log-rank P value; *Binary rates

ITT population

Repeat Revascularization to 4 Years

■ CABG (N=897)

■ TAXUS (N=903)



Cumulative KM Event Rate \pm 1.5 SE; log-rank P value; *Binary rates

ITT population

Drug-Eluting Stents vs CABG

Repeat Revascularization

Meta-Analysis EES vs PES

HR=0.51, 95% CI 0.39-0.66

SYNTAX

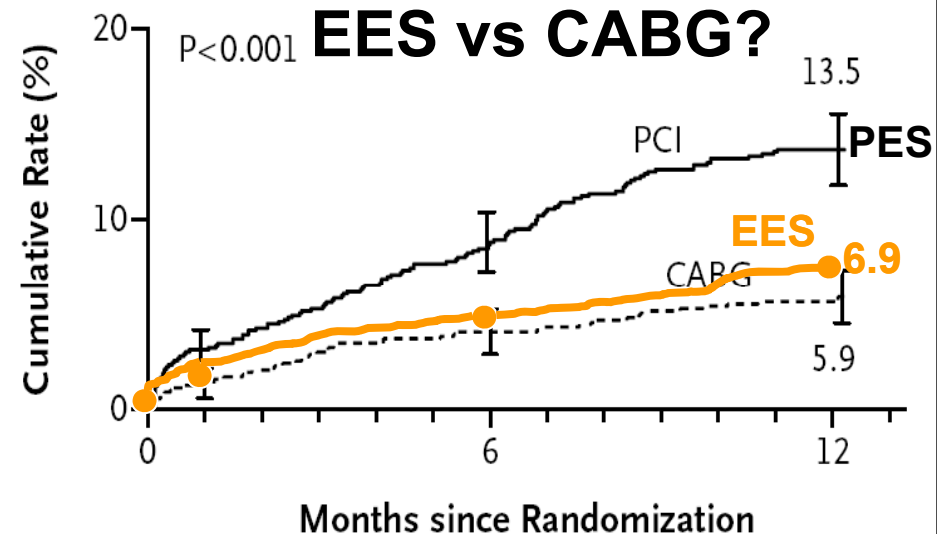
HR=2.3, 95% CI 1.7-3.1

TLR at 1 Year

Trials	EES	PES	RR (95% CI)
SPIRIT II	4/223	5/77	0.28 (0.08, 1.00)
SPIRIT III	22/669	18/333	0.61 (0.33, 1.12)
SPIRIT IV	61/2458	55/1229	0.55 (0.39, 0.79)
COMPARE	15/897	40/903	0.38 (0.21, 0.68)
Overall (I-squared = 0.0%, p = 0.491)			0.51 (0.39, 0.66)

NOTE: Weights are from random effects analysis

Risk ratio
Favors EES Favors PES



Kalesan, Juni – Updated 8/2011

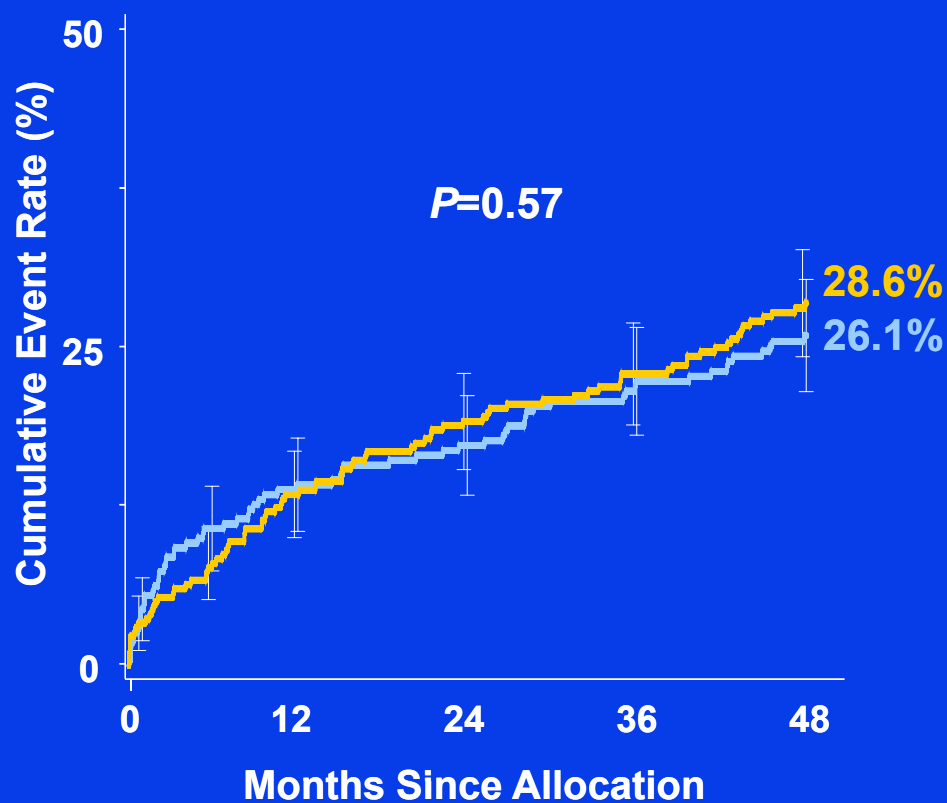
Serruys PW et al: NEJM 2009

MACCE to 4 Years by SYNTAX Score Tercile

Low Scores (0-22)

■ CABG (N=275)
■ TAXUS (N=299)

Overall



	CABG	PCI	P
Death	8.9%	8.3%	0.77
CVA	4.0%	1.4%	0.059
MI	4.2%	6.6%	0.25
Death, CVA or MI	14.6%	14.4%	0.87
Revasc	13.6%	20.0%	0.04

Cumulative KM Event Rate \pm 1.5 SE; log-rank P value

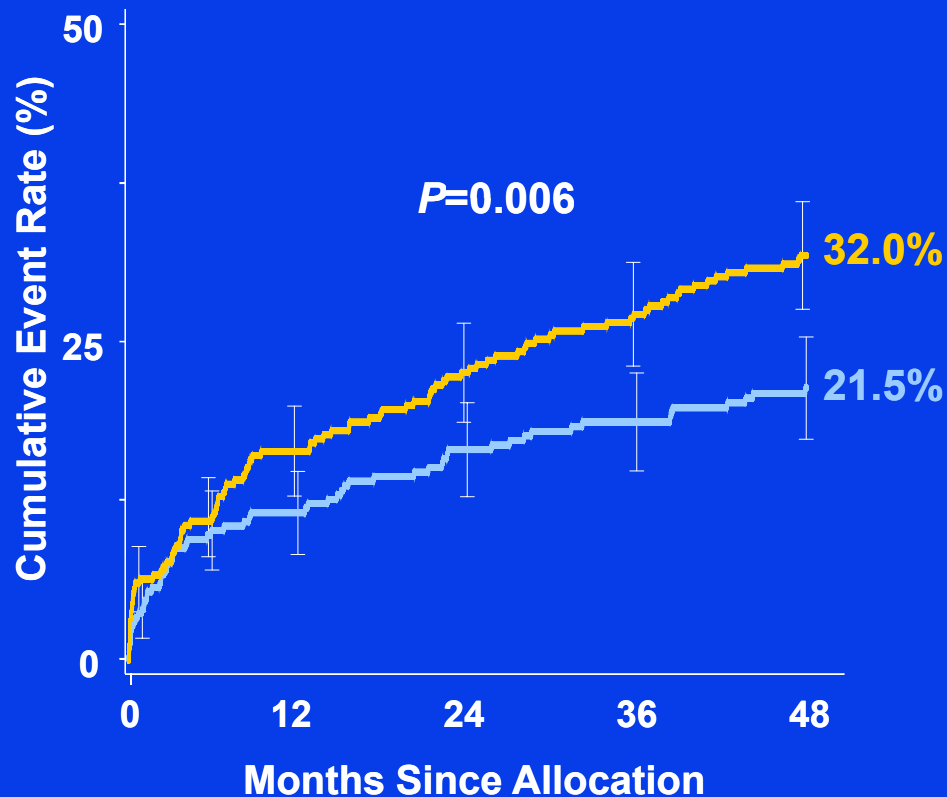
Site-reported Data; ITT population

MACCE to 4 Years by SYNTAX Score Tercile

Intermediate Scores (23-32)

■ CABG (N=300)
■ TAXUS (N=310)

Overall



	CABG	PCI	P
Death	9.3%	11.1%	0.49
CVA	3.6%	2.0%	0.25
MI	3.6%	9.0%	0.009
Death, CVA or MI	14.9%	17.3%	0.44
Revasc	10.9%	20.7%	0.002

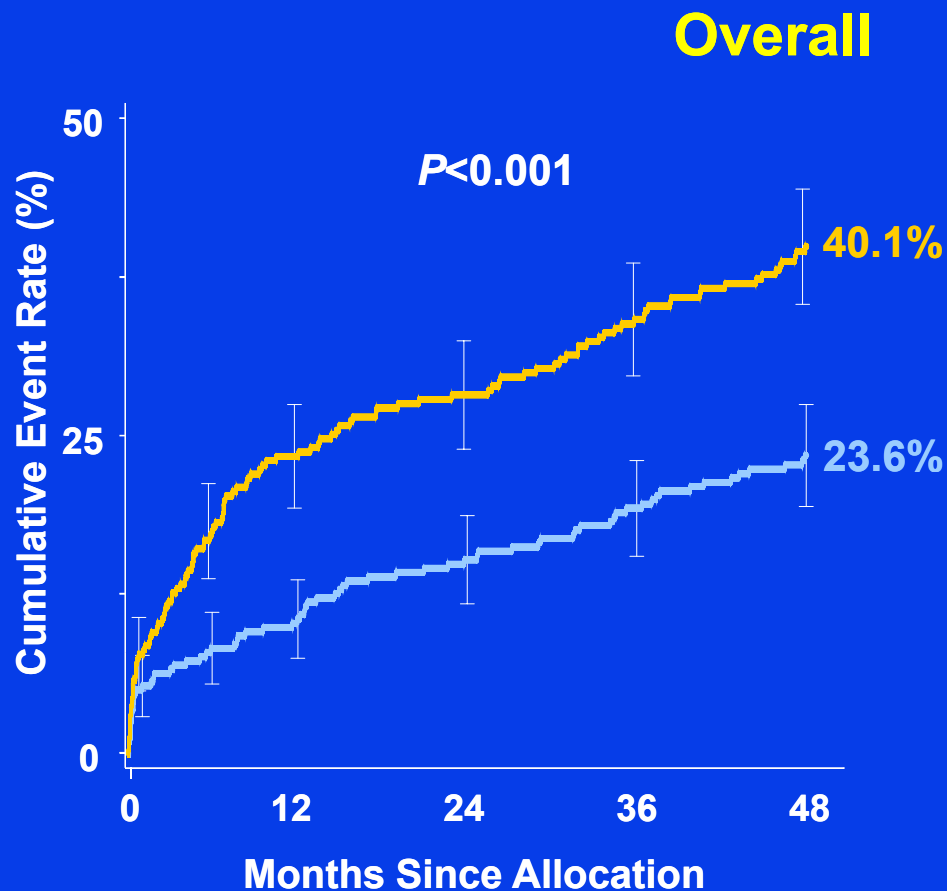
Cumulative KM Event Rate \pm 1.5 SE; log-rank P value

Site-reported Data; ITT population

MACCE to 4 Years by SYNTAX Score Tercile

High Scores (≥ 33)

■ CABG (N=315)
■ TAXUS (N=290)



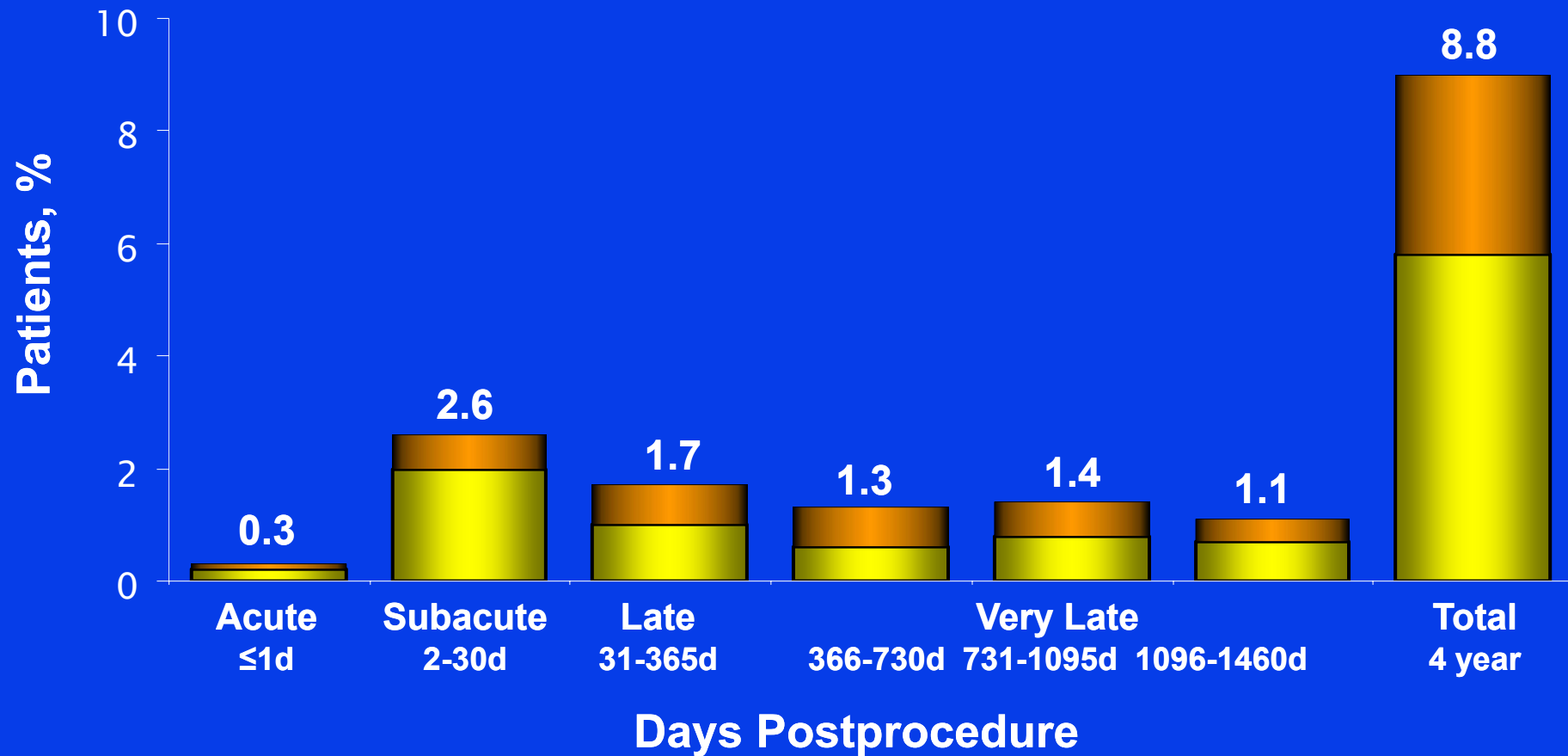
	CABG	PCI	P
Death	8.4%	16.1%	0.004
CVA	3.7%	3.5%	0.80
MI	3.9%	9.3%	0.01
Death, CVA or MI	14.6%	22.7%	0.01
Revasc	11.4%	28.8%	<0.001

Cumulative KM Event Rate \pm 1.5 SE; log-rank P value

Site-reported Data; ITT population

ARC ST

■ Definite ARC ST (Per Patient) ■ Probable ARC ST (Per Patient)

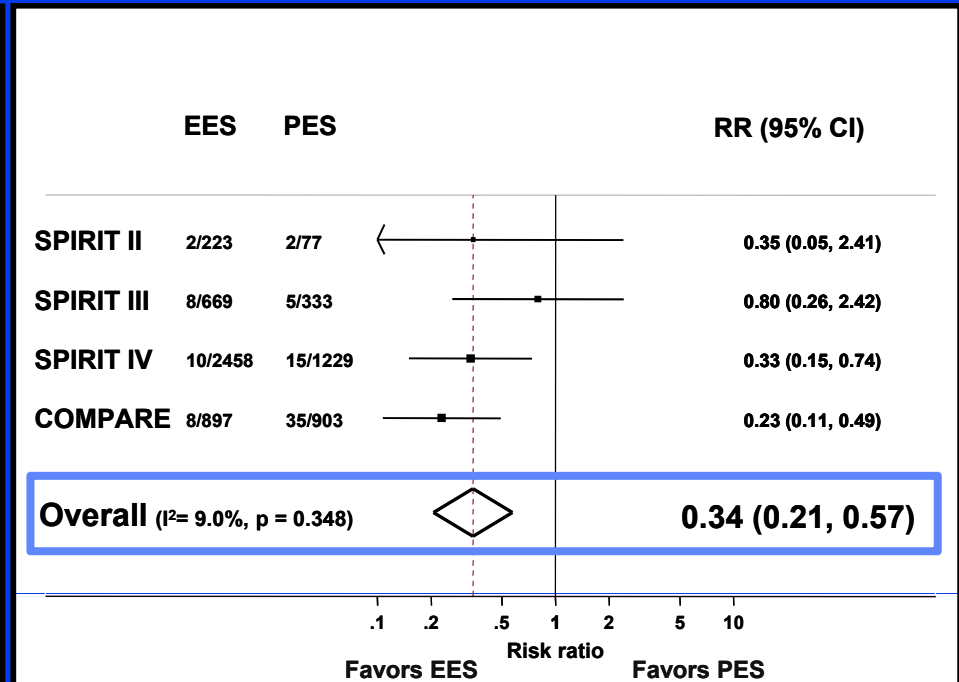
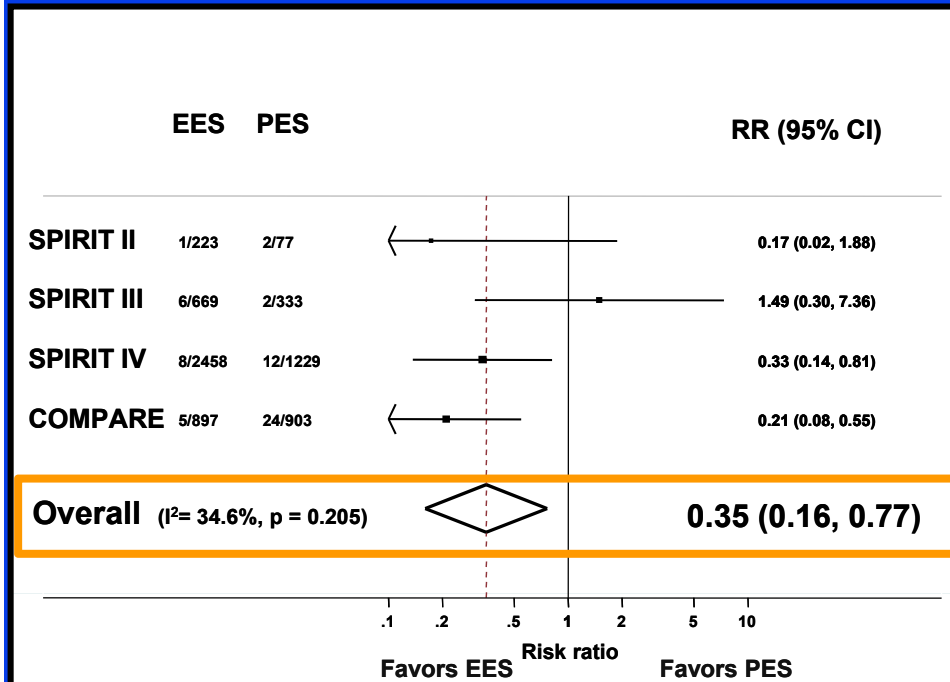


Definite plus probable per ARC definitions (Cutlip, et al. *Circulation* 2007;115:2344). 1PCI patient had an ST 1d and 6d post-procedure; therefore, counted in the ≤1d and 2-30d intervals but only once in the total.

Everolimus-Eluting vs Paclitaxel-Eluting StentsDES Safety - Risk of Stent Thrombosis

Definite ST

Definite or Probable ST



N = 6,789

Summary and Conclusions

- **Four-year MACCE rates in the overall randomized cohort were significantly higher for PCI than CABG**
- **Significant increase of cardiac death, MI and repeat revascularization in PCI vs CABG-treated patients**
- **Composite safety (death/stroke/MI) remains not significantly different between arms at 4 years (P=0.07)**
- **MACCE rates at 4 years were not significantly different for patients with a low baseline SYNTAX Score; for patients with intermediate or high SYNTAX Scores, MACCE was increased at 4 years in patients treated with PCI**
- **The 4-year SYNTAX results suggest that PCI may be an acceptable alternative revascularization method to CABG when treating patients with less complex (lower SYNTAX Score) disease including LM disease**

SYNTAX and MVD

- **The game is not over**
- **We need to know more about causes of death and MI**
- **We need to know what a current DES would behave like**
- **What about Hybrid procedures with LIMA to LAD and DES to the rest?**
- **Still, currently with very severe and extensive disease, CABG appears to be the better option**