



Case 3 :

How Would I Treat the Case in Malaysia ?

3 Countries' Joint Session @ TCTAP 2017

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Malaysia

Disclosure

- Speaking & Advisory honorariums from Novartis, MSD, Roche, Solvay Pharma, Xepa-Soul Pattinson, Servier, Pfizer, Novartis, Bayer Pharma, Cordis J&J, Astra Zeneca, Lilly, Sanofi Aventis, Medtronic, Novo Nordisk, Terumo, Menarini, Alvimedica, Biosensors
- No conflict of interest with reference to this presentation



High Risk Features : Clinical

- Octogenarian – 82 years old
- Type 2DM; Renal function -?normal
- Anterior NSTEMI
- Positive biomarkers : Tn T, CK-MB,NT-proBNP
- Likely, LV dysfunction (Diastolic HF ± transient LV systolic dysfunction) or just Beta-blocker induced bronchospasm
- GRACE ACS Risk Score : 231 –
Very High Risk : In-hospital mortality - rate 36%

The Battle – PCI vs CABG vs OMT?



Clearly my choice :
'Early' Revascularisation
On background of Optimal Medical Therapy

Not Doing Anything (Medical Rx alone) is
NOT an Option !

The Real Battle – PCI vs CABG?



Asian Cultural Thing : “I’m old, Leave me alone”

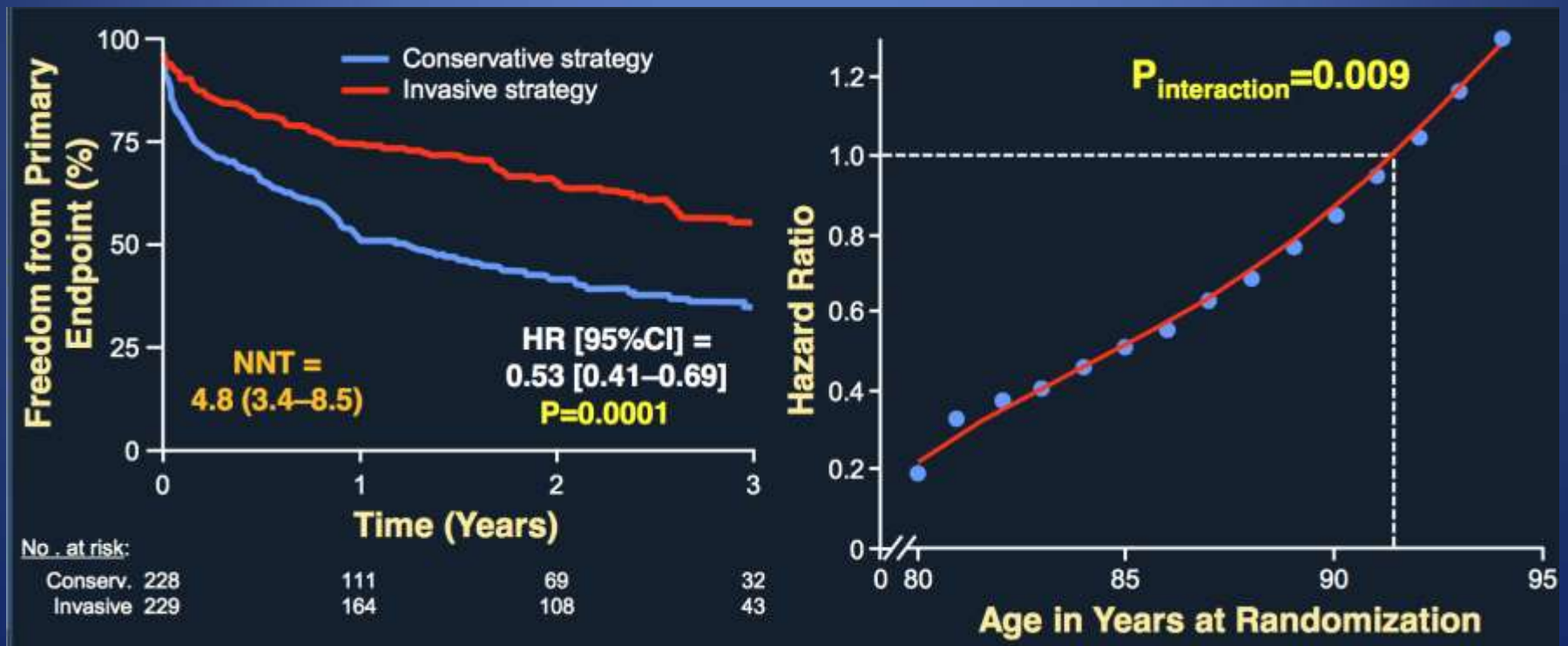


AFTER EIGHTY : Primary Endpoint (Primary endpoint = death, MI, urgent revascularisation or stroke)

447 pts ≥ 80 years old with NSTEMI/UA randomized to invasive vs. conservative strategy

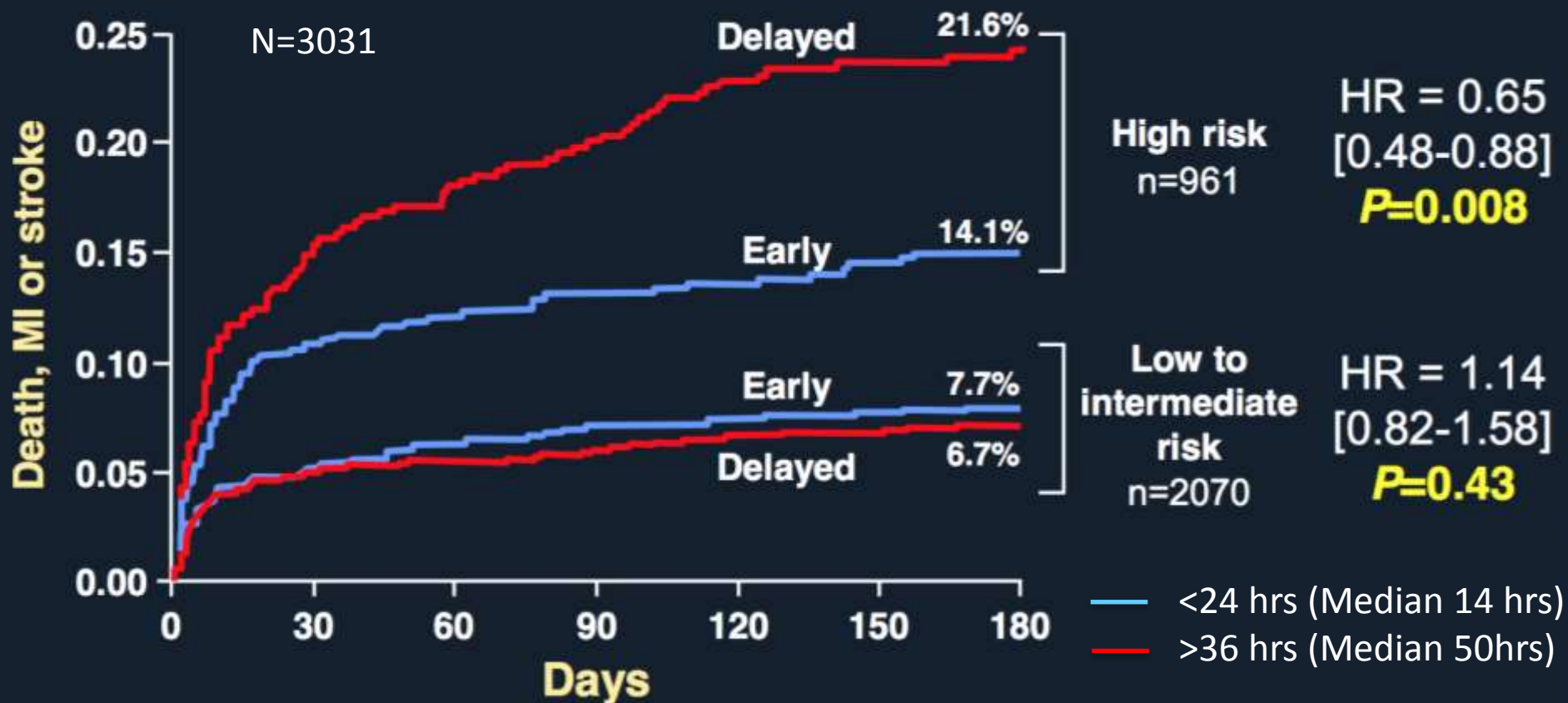
Norway. Mean age 84.8 yrs, 40% female, median Grace score 138

Invasive Angio/Revasc 96%/50% (mean 3 days) vs. Conservative : 0%



TIMACS :

6 months Death/MI/Stroke (%) based on high (≥ 140) vs low (< 140) GRACE score



Which Revascularisation Option : Heart Team Approach



2011 ACCF/AHA/SCAI

Heart Team Approach to Revascularization Decisions:
Recommendations CLASS I.
Level of Evidence: C
- A Heart Team approach to revascularization is recommended in patients with **unprotected left main or complex CAD** .

2014 ESC/EACTS

It is recommended to base the revascularization strategy (*ad hoc* culprit-lesion PCI/multivessel PCI/CABG) on the clinical status and comorbidities as well as the disease severity, i.e. distribution and angiographic lesion characteristics (e.g. SYNTAX score), according to the local Heart Team protocol.

I

C

GN. Levine, ER. Bates, JC. Blankenship et al. 2011 ACCF/AHA/SCAI Guideline for Percutaneous Coronary Intervention
Journal of the American College of Cardiology Dec 2011, 58 (24)

S Windecker, P Kolh, F Alfonso , et al. 2014 ESC/EACTS Guidelines on myocardial revascularization. European Heart Journal (2014) 35, 2541–2619
doi:10.1093/eurheartj/ehu278

Evidence & Guidelines: CABG preferred revascularisation

Heart Team Concept is rarely implemented in Malaysia

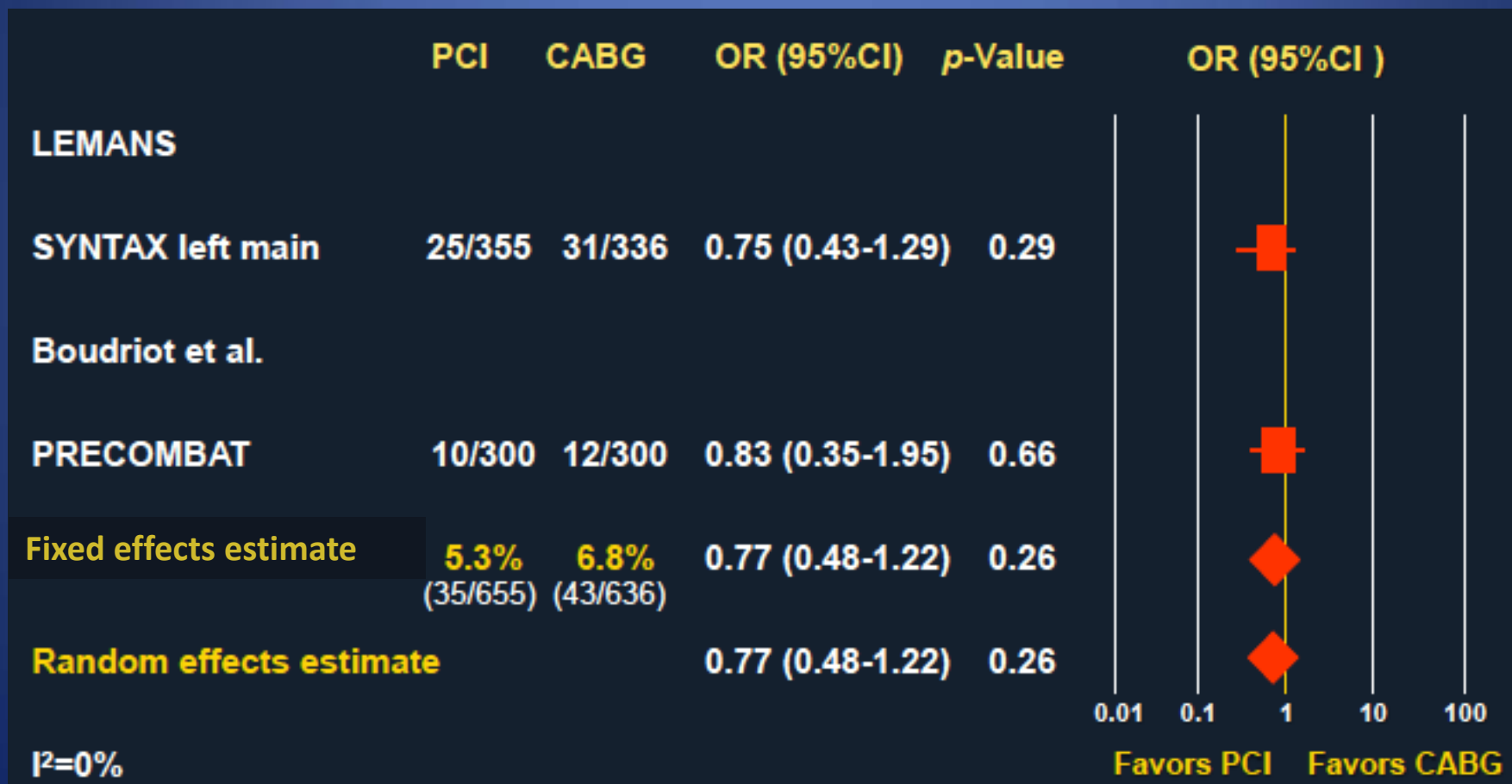
Recommendations according to extent of CAD	CABG		PCI	
	Class ^a	Level ^b	Class ^a	Level ^b
One or two-vessel disease without proximal LAD stenosis.	IIb	C	I	C
One-vessel disease with proximal LAD stenosis.	I	A	I	A
Two-vessel disease with proximal LAD stenosis.	I	B	I	C
Left main disease with a SYNTAX score ≤ 22.	I	B	I	B
Left main disease with a SYNTAX score 23–32.	I	B	IIa	B
Left main disease with a SYNTAX score >32.	I	B	III	B
Three-vessel disease with a SYNTAX score ≤ 22.	I	A	I	B
Three-vessel disease with a SYNTAX score 23–32.	I	A	III	B
Three-vessel disease with a SYNTAX score >32.	I	A	III	B

S Windecker, P Kolh, F Alfonso, et al. 2014 ESC/EACTS Guidelines on myocardial revascularization. European Heart Journal (2014) 35, 2541–2619 doi:10.1093/eurheartj/ehu278

PCI vs. CABG for Left Main Disease

Meta-analysis of 4 RCTs.

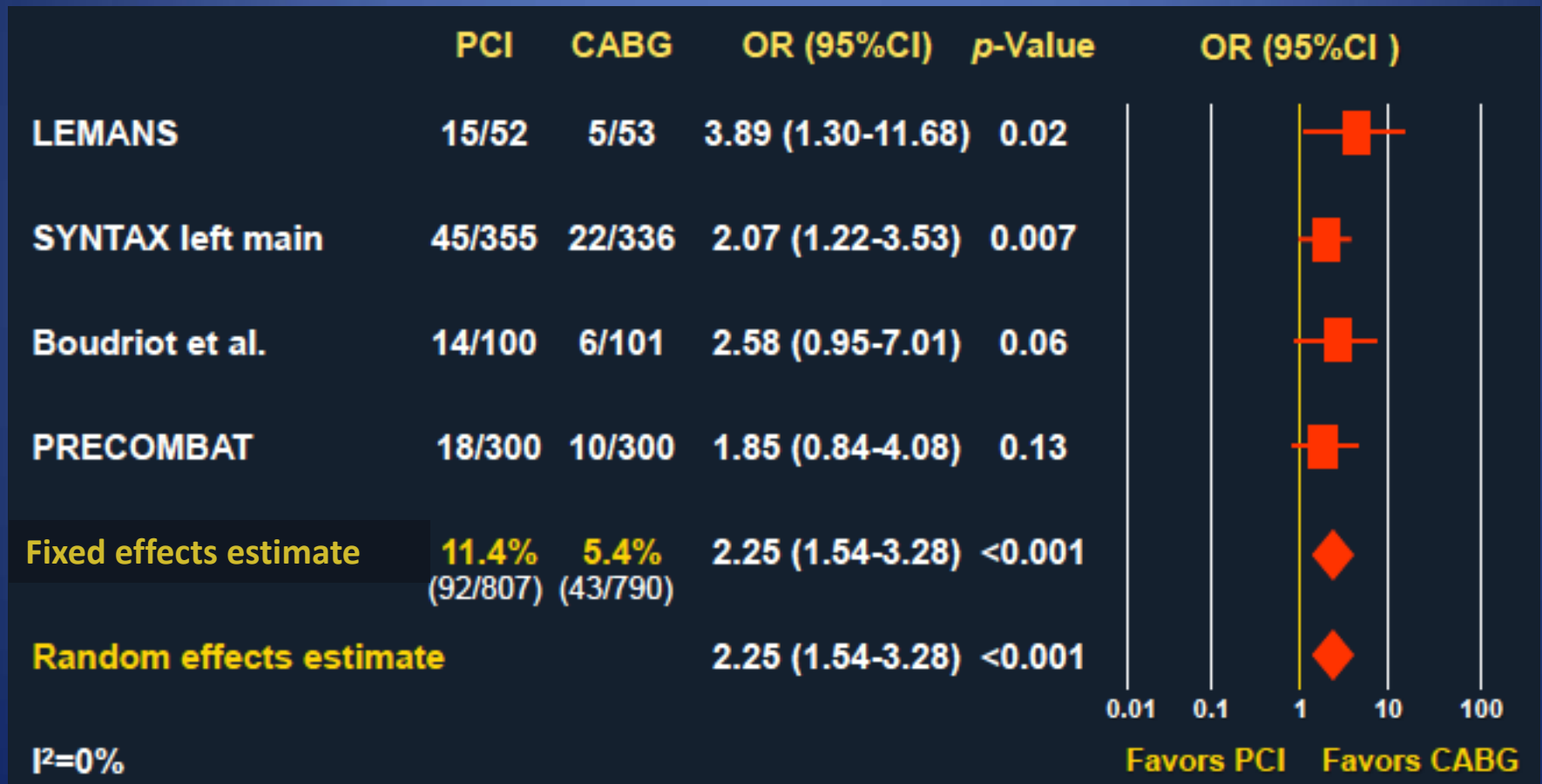
1 year Death/MI/Stroke



PCI vs. CABG for Left Main Disease

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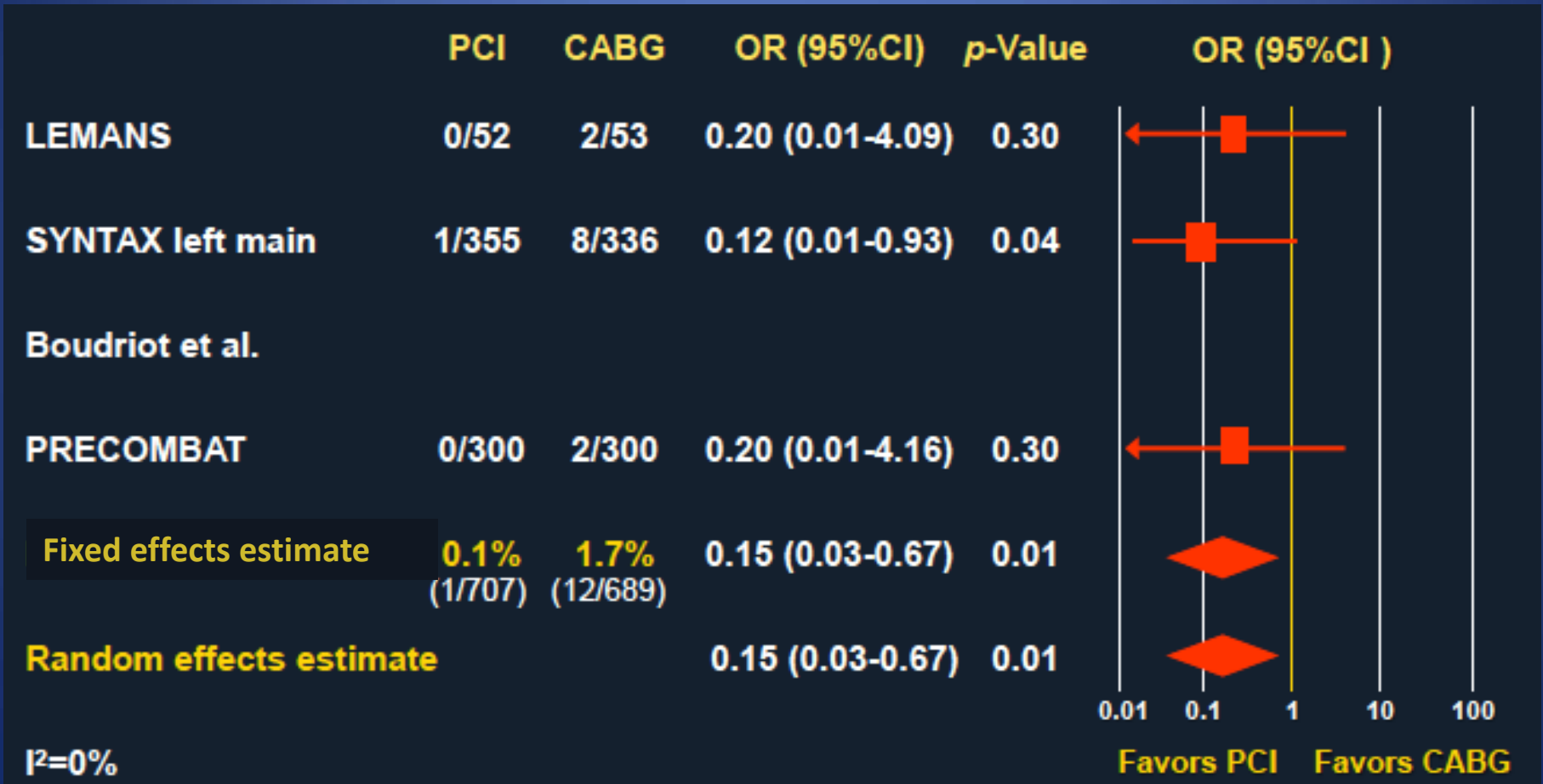
1 year TVR



PCI vs. CABG for Left Main Disease

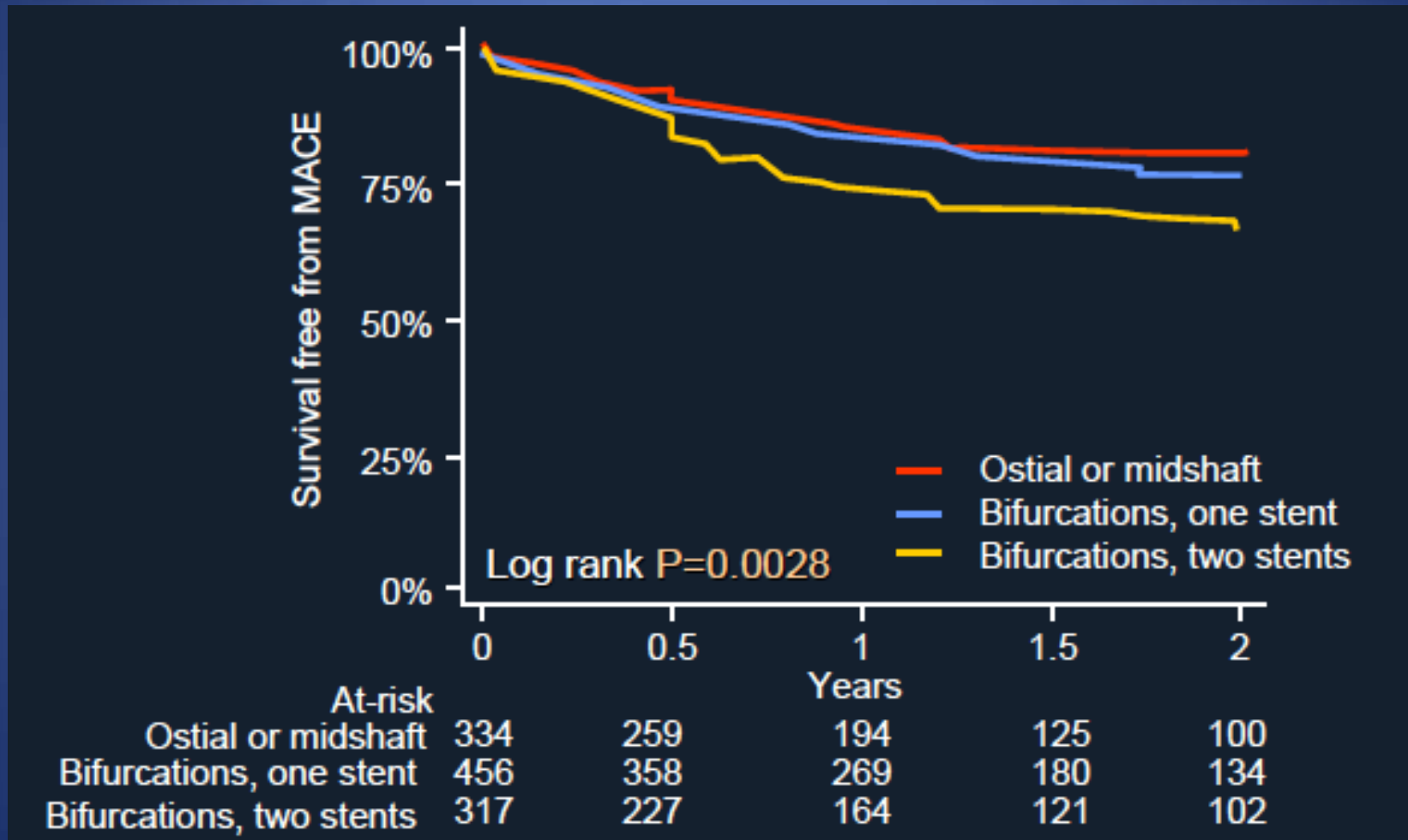
Meta-analysis of 4 RCTs.

1 year stroke



Ostial and Mid-shaft vs. Bifurcation in LMCA PCI

1111 patients treated with DES; 2 year follow-up



Dr. Anek : How will you treat ?

- A) CABG => She refuse surgery
- B) PCI to RCA, follow by stage PCI to LM
- C) PCI to (only)Ostium LM, follow by stage PCI to RCA
- D) PCI to CTO LAD, follow by stage PCI to RCA
- E) PCI to Ostium LM + CTO LAD, follow by stage PCI to RCA
- F) Medications
- G) Other(s) option

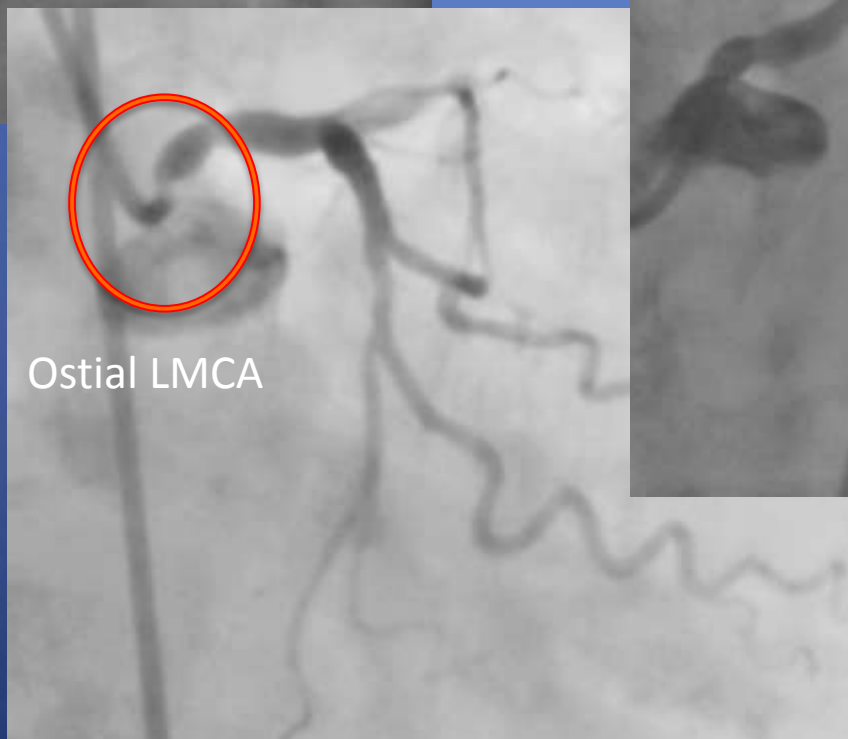
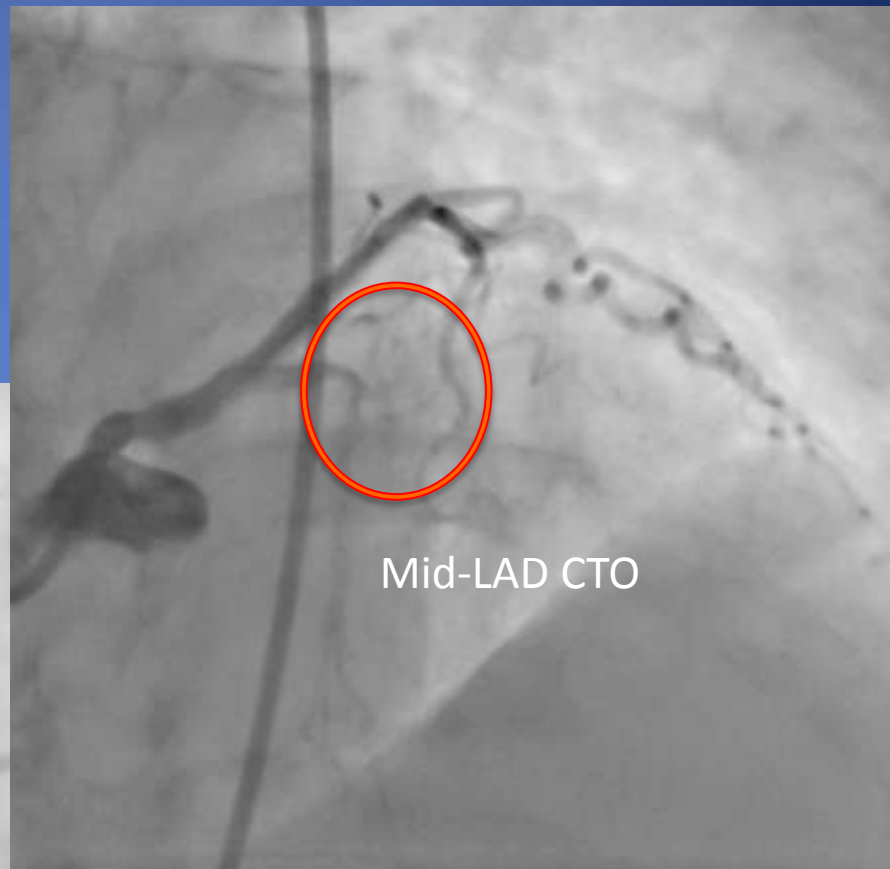
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PCI Strategy : How ?

- Anatomically 2-vessel CAD with moderate SYNTAX score with ostial LMCA involvement
- Procedural medical Rx:
- DAPT: Aspirin + Ticagrelor
- UFH
- Background pre-Rx: LMWH, Statin, ACEi, Beta-blocker

PCI Targets:



How would I treat?

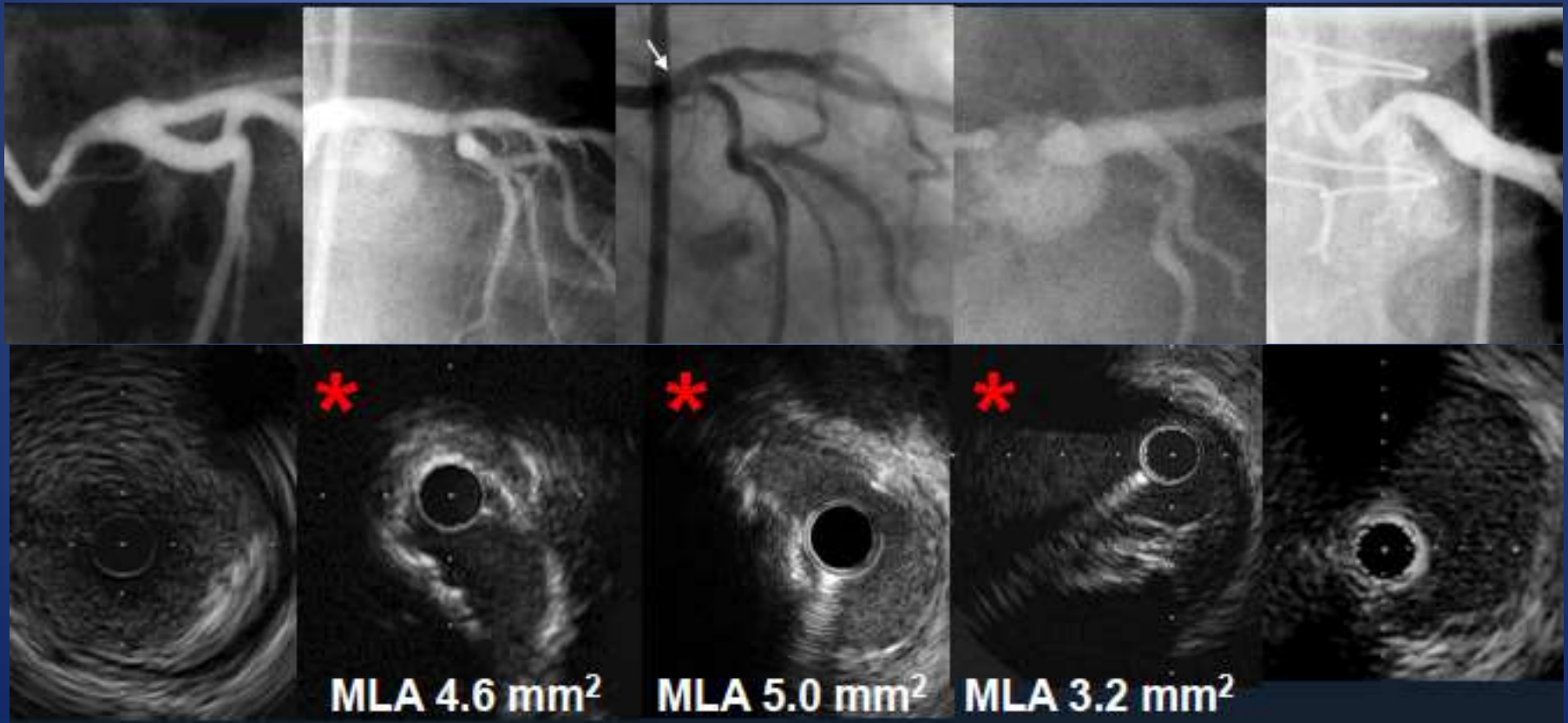
- Trans-radial access; 7Fr Sheath or 7Fr Glidesheath slender; 6Fr or 7Fr Guiding catheters
- ? Haemodynamic Support – IABP/Impella
- PCI Sequence :
 - a) Mid-RCA stenosis 1st.
 - b) Then Ostial LMCA : Single stent strategy
 - c) LAD CTO – staged or same sitting (depending on procedure duration, contrast load, pt's comfort level)

LMCA Intervention

- IVUS guidance – Significance of LM stenosis, Stent optimisation, Prognosis
- ? FFR
- New generation DES
(ISAR LM-2, PRE-COMBAT 1 & 2); Appropriate sizing -IVUS guided
- Single stent : ostial-body LMCA placement

Left Main Disease:

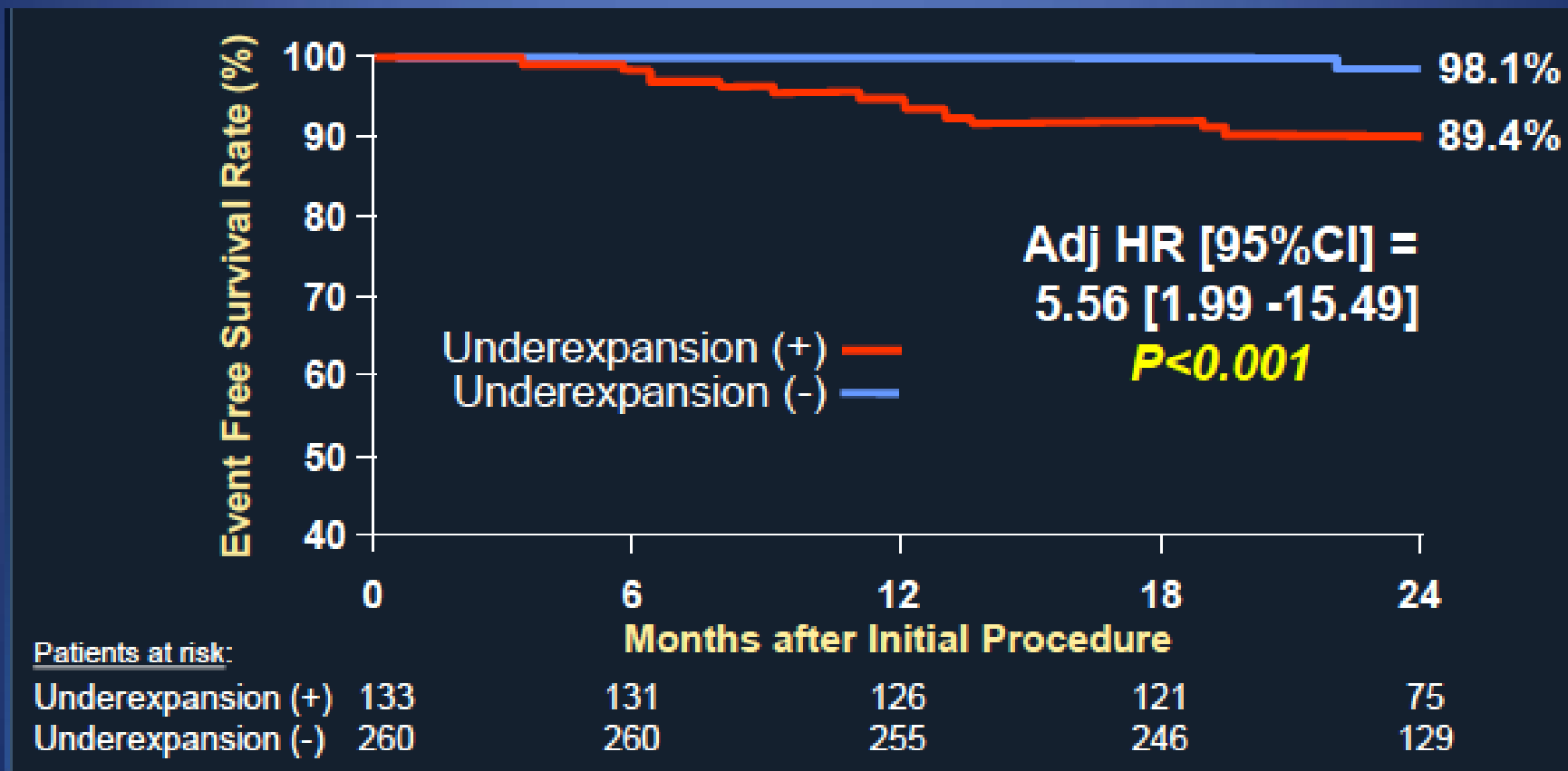
Which is Significant Angiographically –
Versus IVUS Assessment



Stent Underexpansion Predicts MACE

133 pts (33.8%) had ≥ 1 segment underexpansion(UE)

N=403; Routine 9-mth Angio F/up



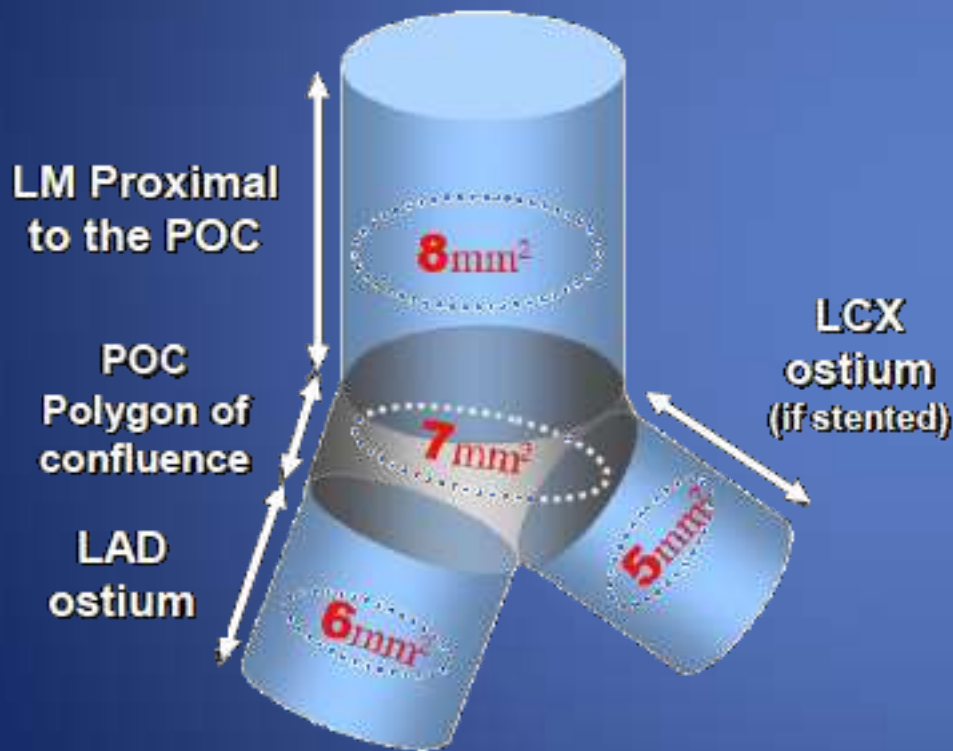
LCX not imaged
in 10 2-stent pts

Stent Underexpansion Predicts MACE & TLR

133 pts (33.8%) had ≥ 1 segment underexpansion(UE)

N=403; Routine 9-mth Angio F/up

Optimal expansion criteria (post hoc)

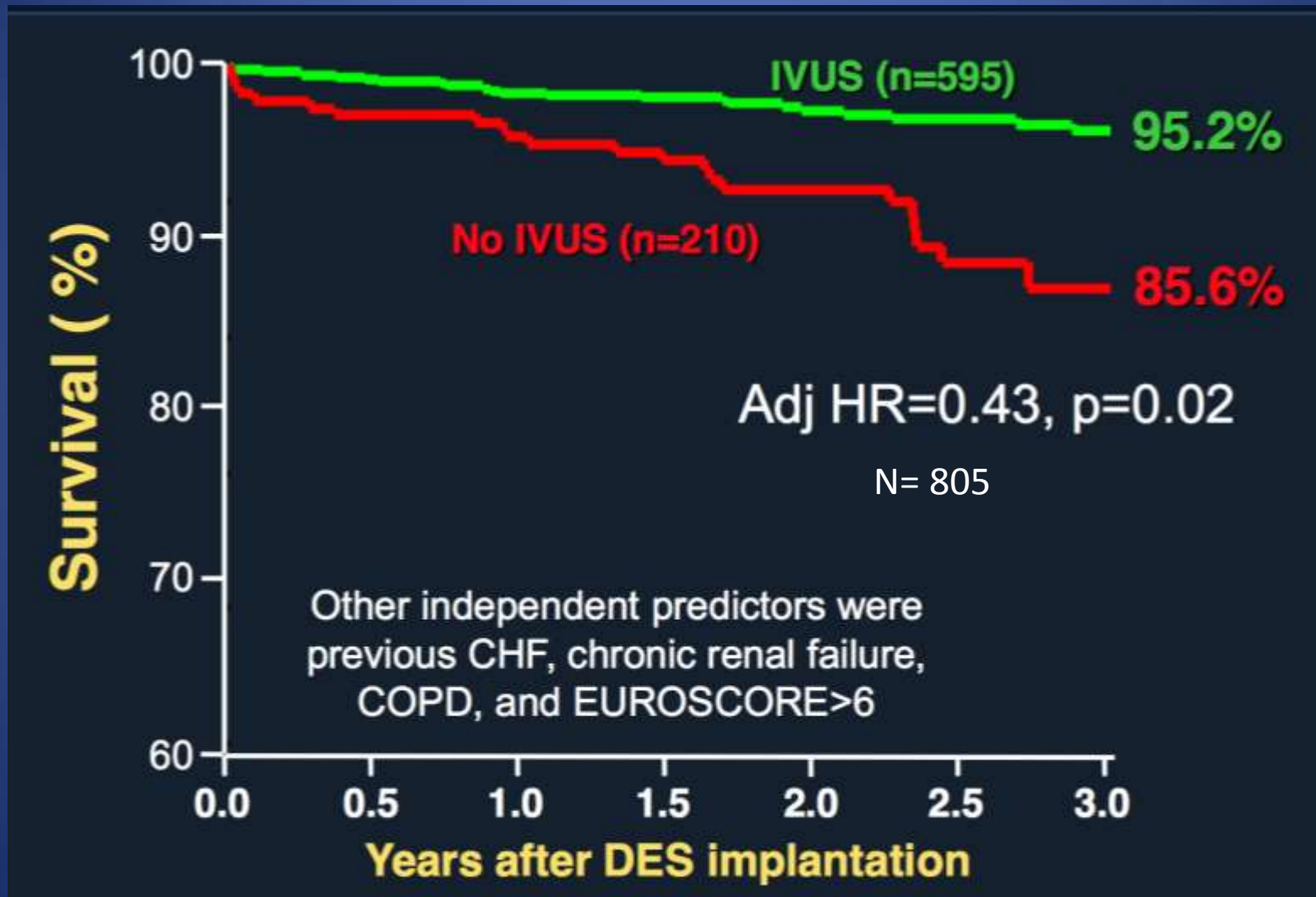


2-year MACE-free survival was lower in pts with vs. without underexpansion (89.4% vs. 98.1%; adj HR 5.56 [1.99 - 15.49]; P<0.001)

2-year TLR-free survival was lower in pts with vs. without underexpansion (90.9% vs 98.5%; adj HR 6.08 [1.94 - 19.02]; P=0.002); 12/16 TLRs (80%) occurred in cases with underexpansion

LCX not imaged in 10 2-stent pts

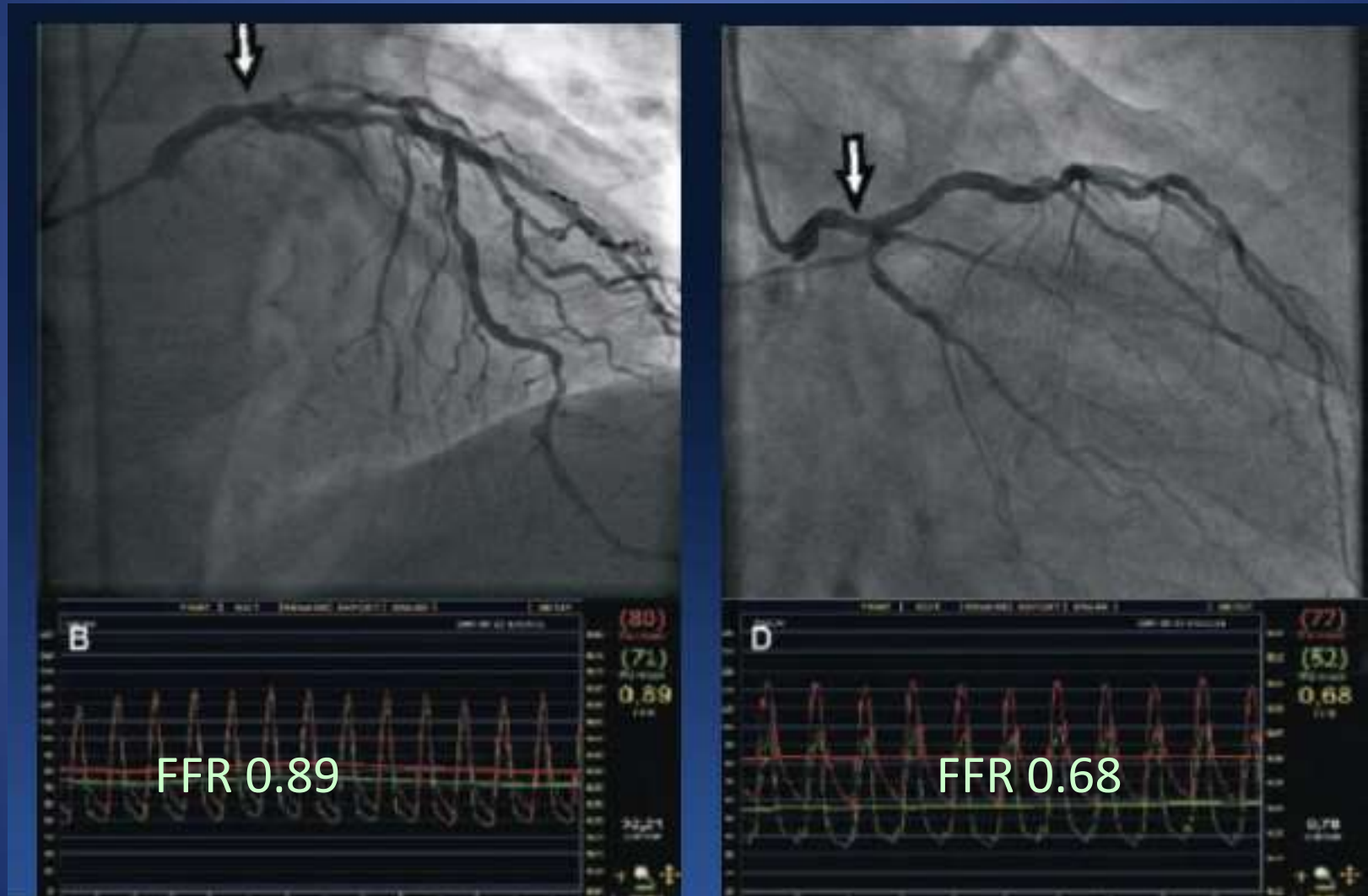
MAIN-COMPARE: Impact of IVUS guidance on mortality after LMCA-DES Implantation



LMCA Intervention

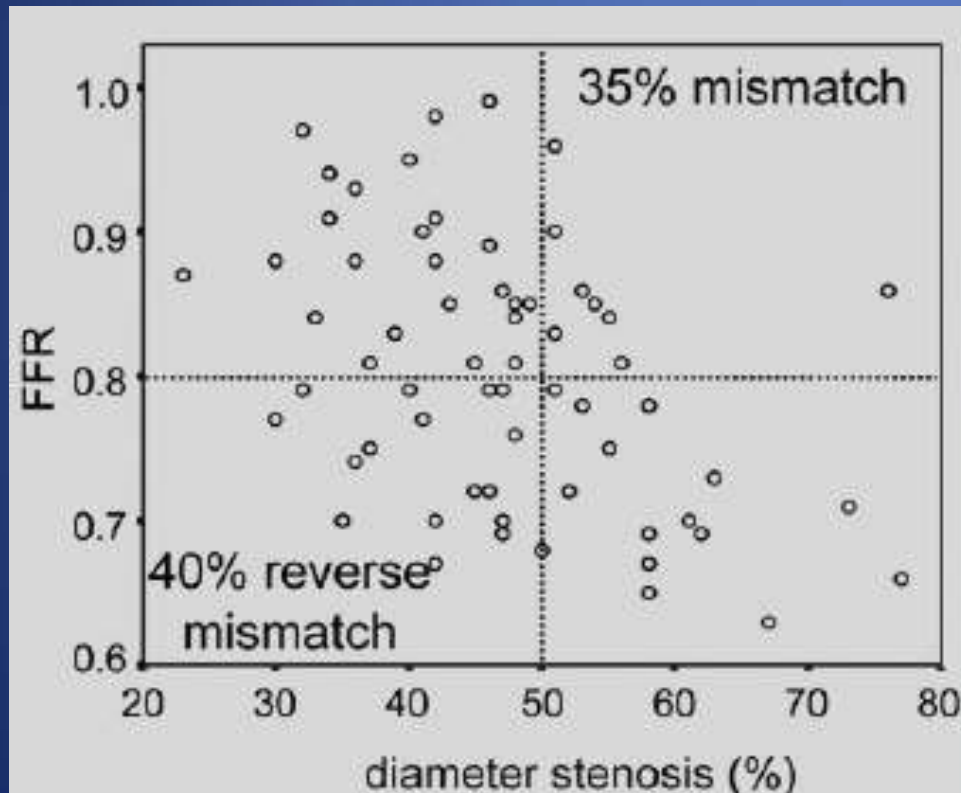
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Visual assessment vs. LM FFR



Visual-Functional Mismatch in LMCA Lesions: FFR vs. QCA

63 LMCA lesions included in overall analyses



- LMCA lesions had a greater frequency of reverse mismatch (**underestimation**), but lower mismatch (**overestimation**)
- The presence of plaque rupture influenced the assessment of mismatches

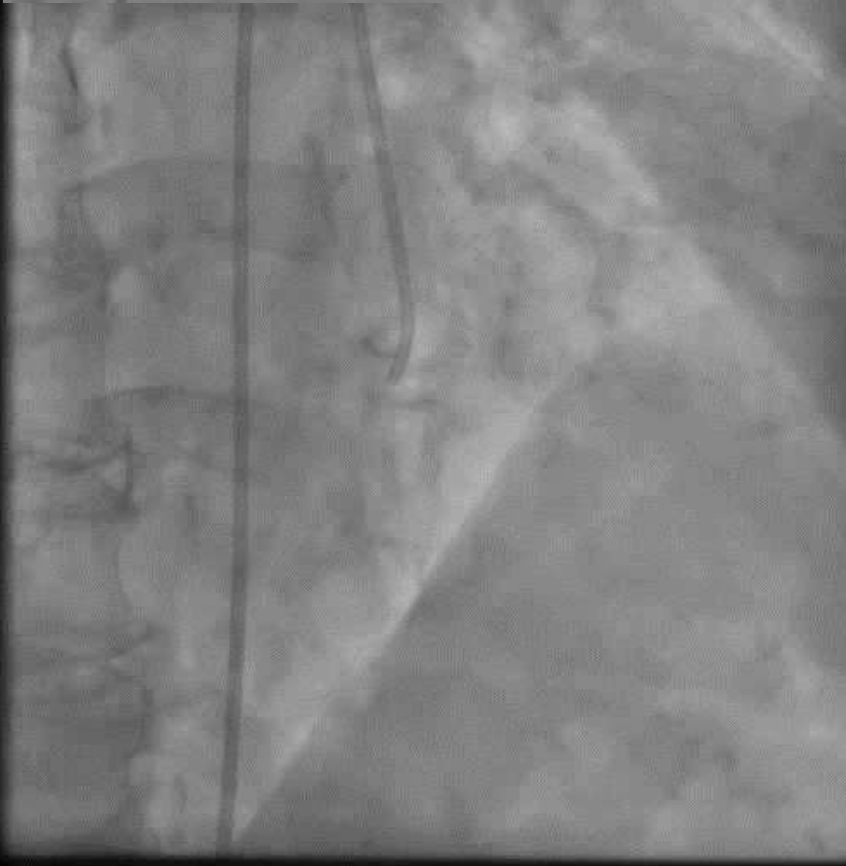
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LAD CTO Intervention :

Blunt proximal CTO cap

Good collateral options as Interventional Channels



Initial Antegrade attempt but likely, Retrograde CTO Intervention

Long Term Management

- DAPT x 1 year or more (Clopidogrel after 1st. Year)
- Surveillance – CT angiography or functional tests
- Optimal Medical Rx: Statin, ACEi

Thank You !

Terimakasih !

ขอบคุณครับ !

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감사합니다 !