

2014 TCTAP

Wrap-Up Interview

LM and Bifurcation PCI

Moderator

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Interviewees

**Yves R. Louvard, Seung-Jung Park,
David Paul Taggart**

Issues in Briefs

Left Main PCI

1. How To Do ?

Integrated Use of FFR and IVUS

Risk Stratification, SYNTAX Score ?

Single or Two Stent

What About BVS ?

2. CABG vs. PCI

Meta-analysis and EXCEL

3. Current and Future Guideline

How To Do LM PCI ?

Why FFR ?

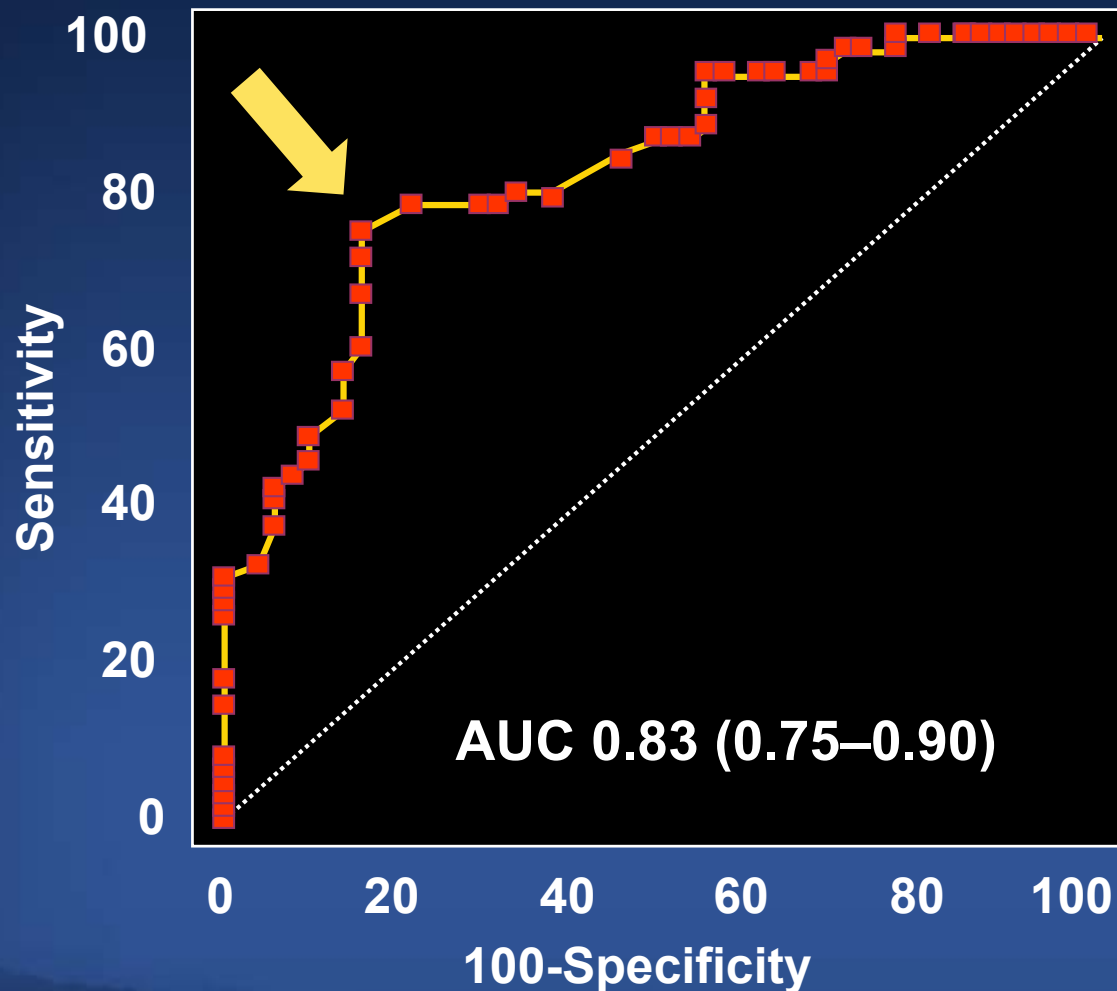
1. Accurate Diagnosis First !
Angiographic Assessment is **Not Always Enough**.
2. There are Many Visual Functional Mismatches.
FFR is Crucial for Intermediate LM Ostial and Shaft Lesions.
3. Avoid Unnecessary Procedure is the Most Important Factor to Reduce Unfavorable Outcomes.

Why IVUS Too ?

- 1. IVUS Guidance Saves Lives.**
- 2. Assessment of LM Ostium, Reference Vessel Diameter, Pattern of Remodeling, and Vulnerability of Plaque.**
- 3. Treatment Strategy Would be Simplified as Single Stent Cross-Over Depending on the Disease Status of LCX Ostium by Separate IVUS Run.**
- 4. IVUS Guided Stent Optimization and Effective Stent CSA Can Make a Good Clinical Outcomes.**
- 5. Smaller IVUS MLA 4.5 mm² Can Predict Functional Significance of LM Stenosis.**

New LM IVUS MLA

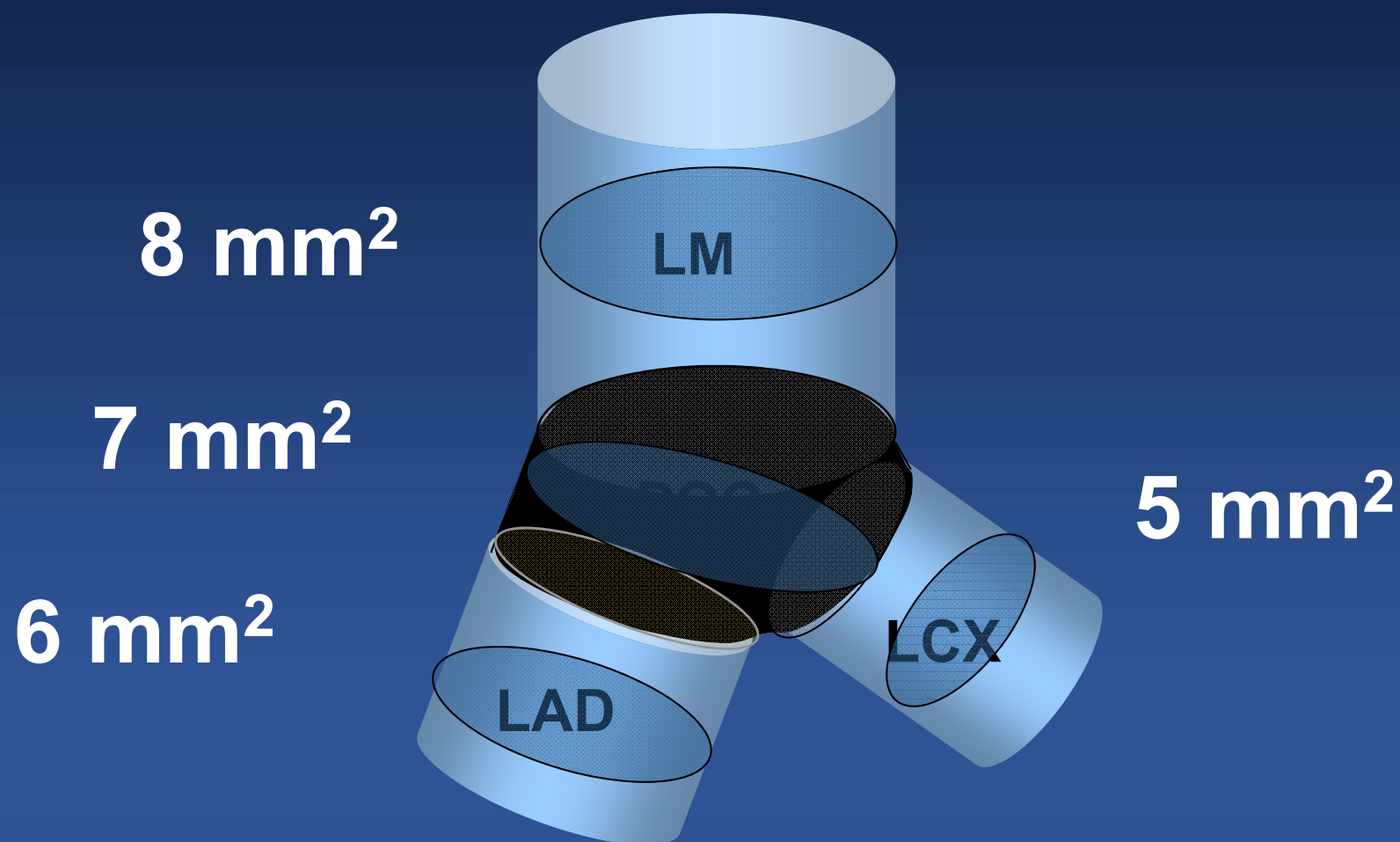
Matched with FFR <0.80,
Ostial and Shaft LM Disease (N=112)



Cut-off = 4.5 mm²

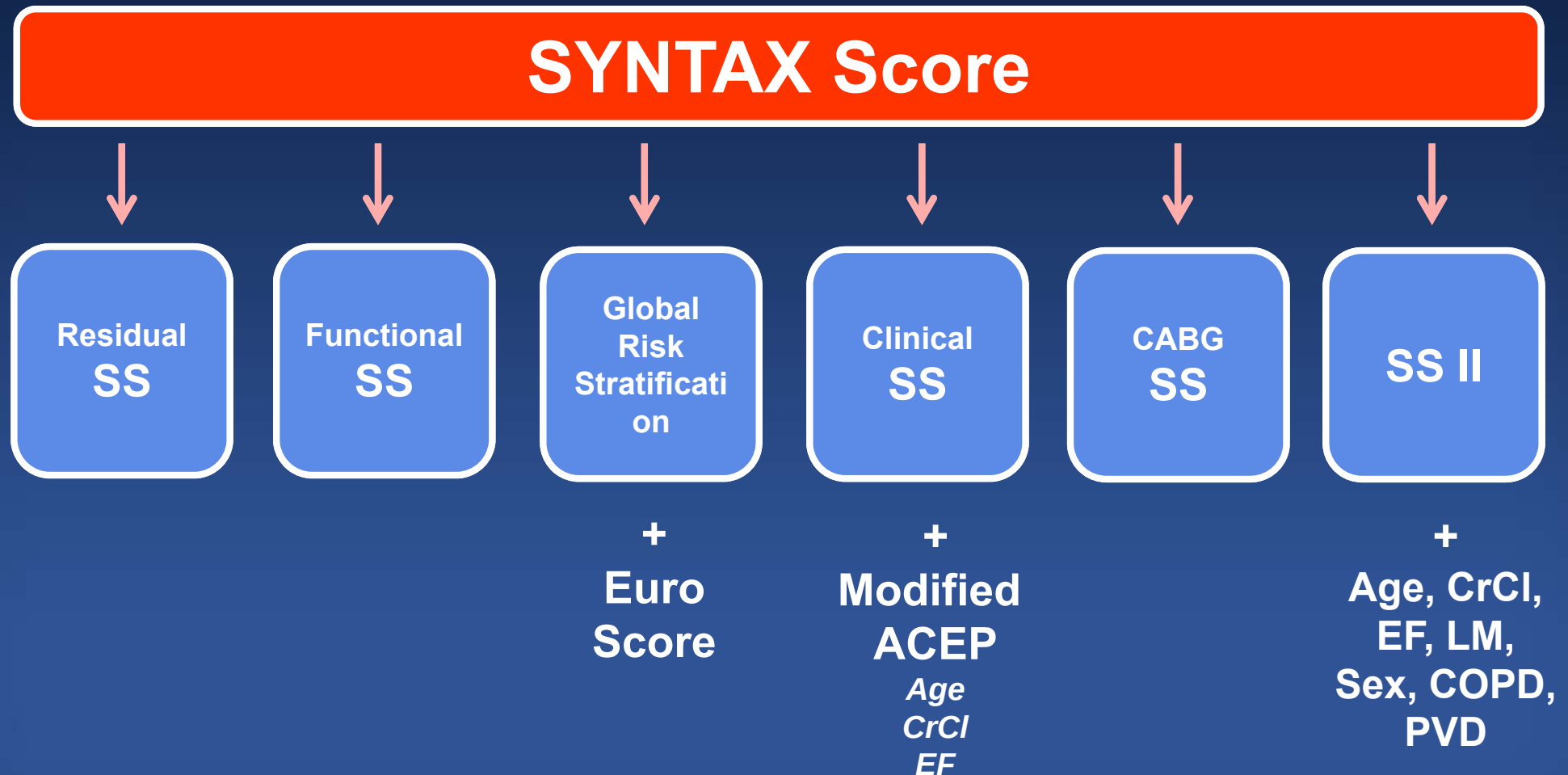
Sensitivity	79%
Specificity	80%
PPV	83%
NPV	76%
Accuracy	80%

IVUS Stent Area to Reduce Restenosis (Rule of 5,6,7,8)



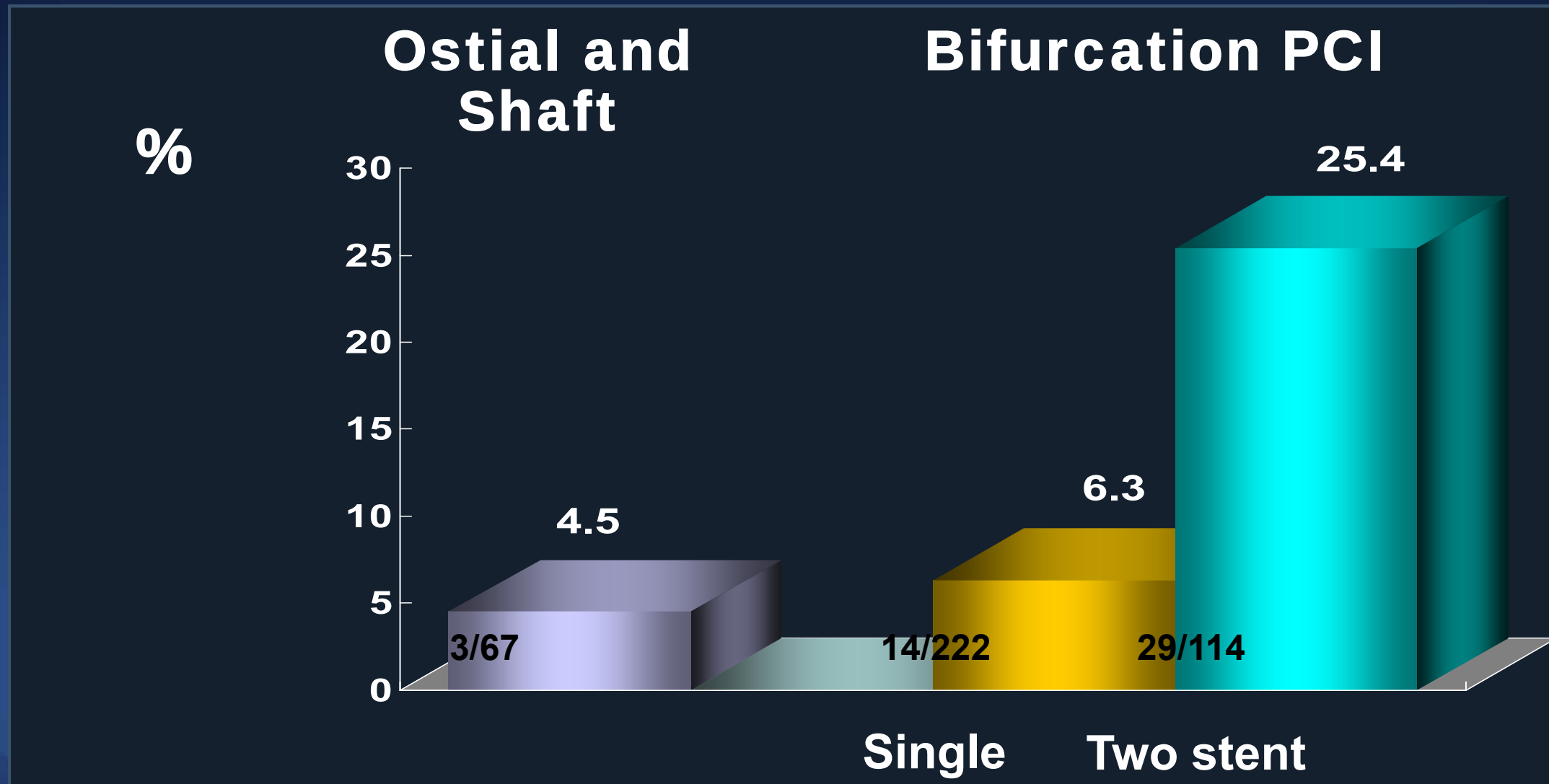
Role of SYNTAX Score and Modifiers

In Risk Prediction and Treatment Selection



Restenosis at 2 year

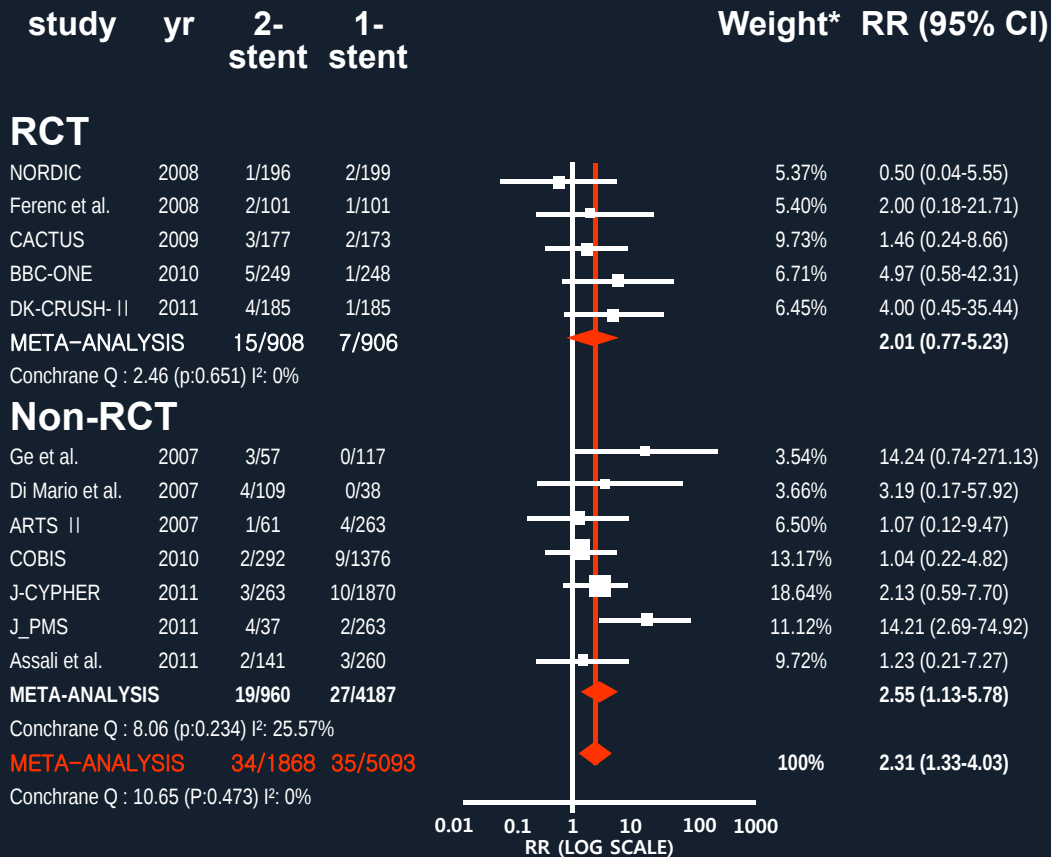
Pooled Analysis in 403 Patients with LM PCI Using SES



Single- VS. Two-stent

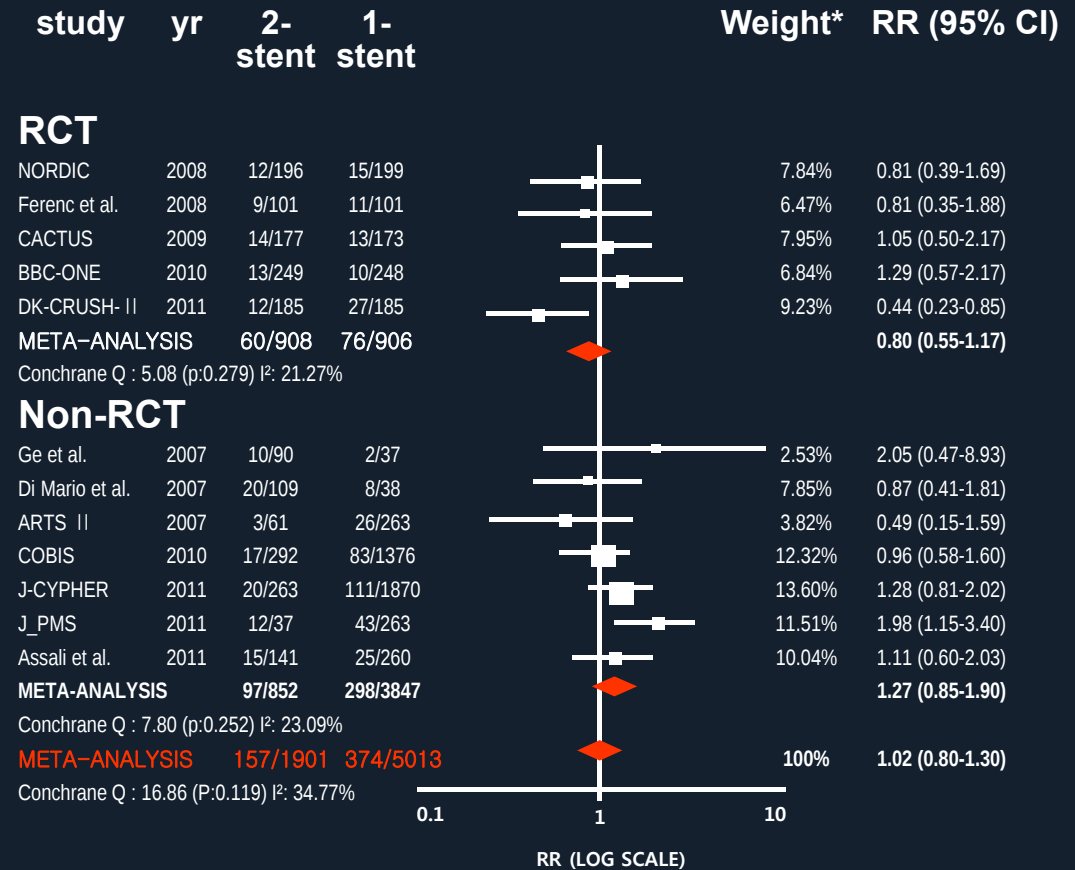
Meta-analysis

Stent Thrombosis



Favor 2-stent 1-stent

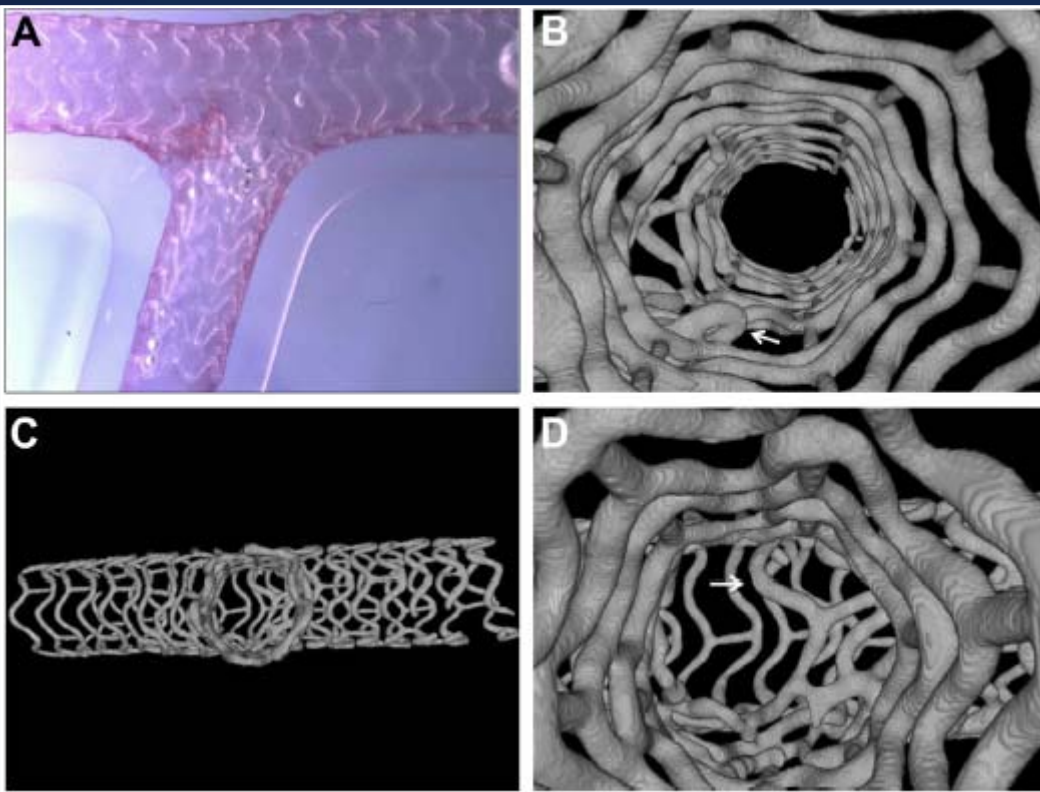
TVR



Favor 2-stent 1-stent

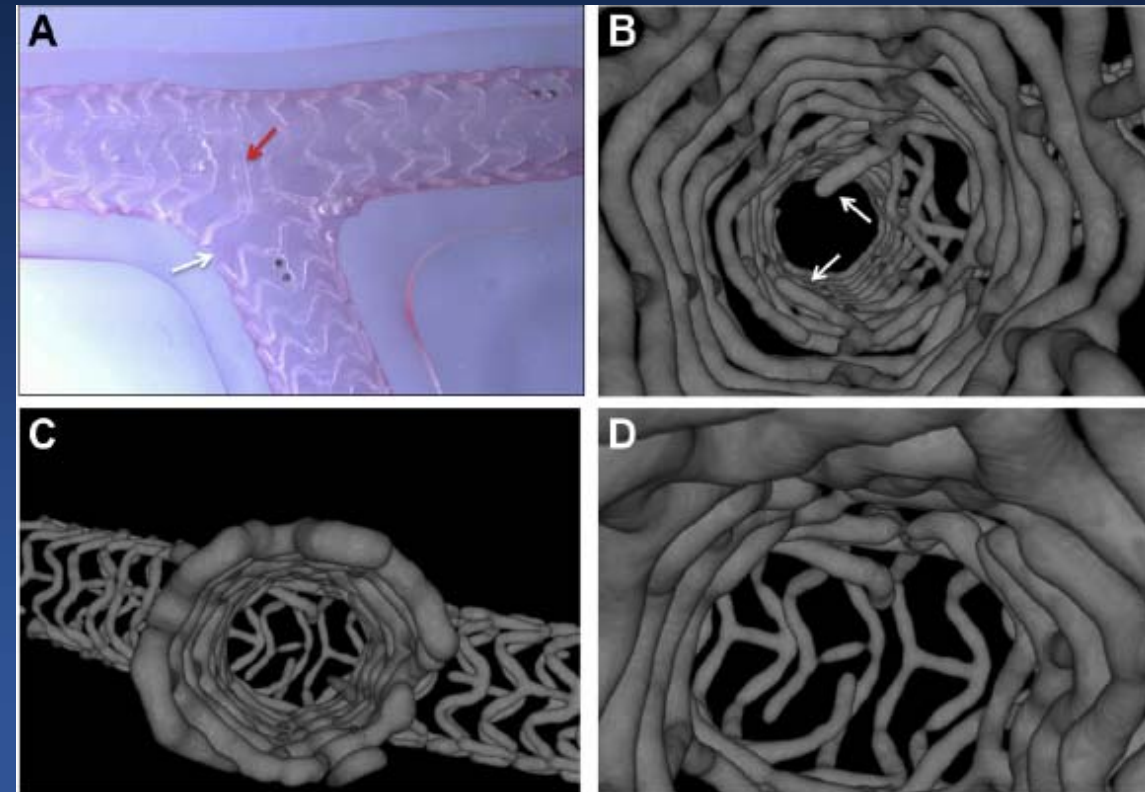
Bioresorbable BVS for Bifurcation

Mini-Crush



Arrow: deformed BVS

T-stenting with Ring Disruption

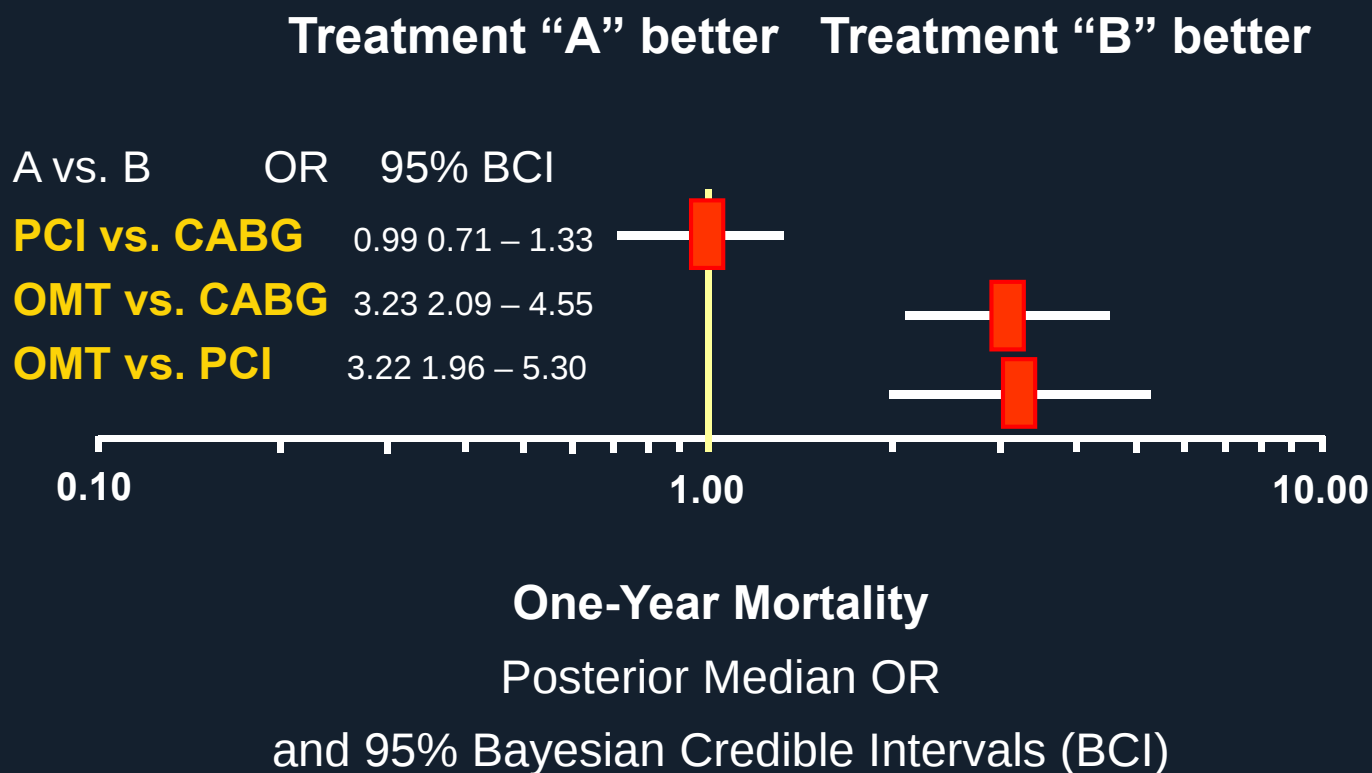
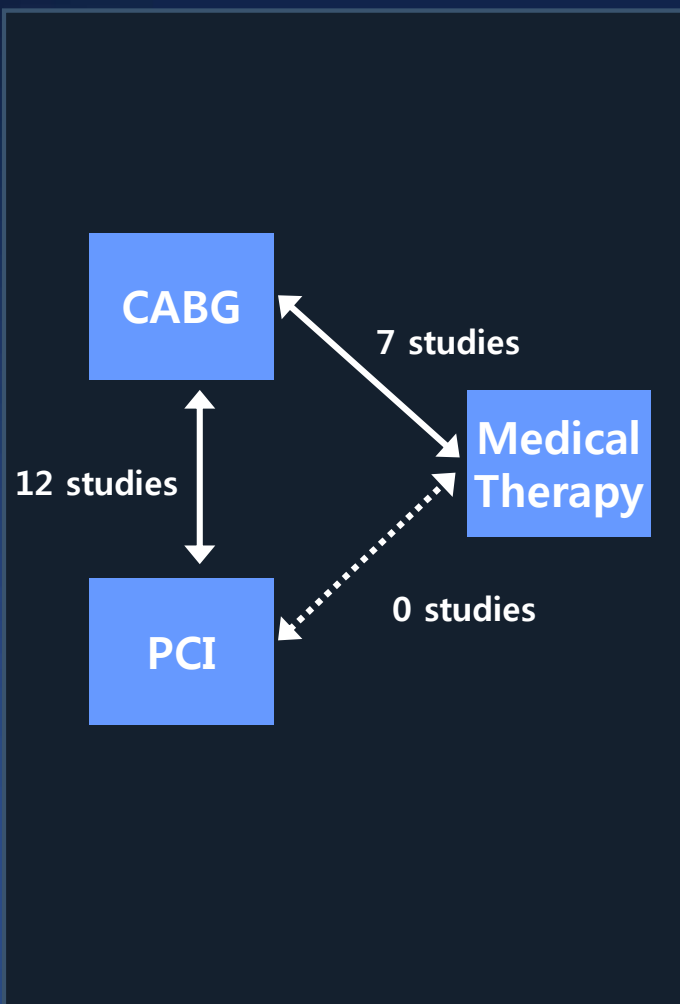


Arrow: disrupted BVS

PCI vs. CABG

PCI or CABG saves life for LM disease

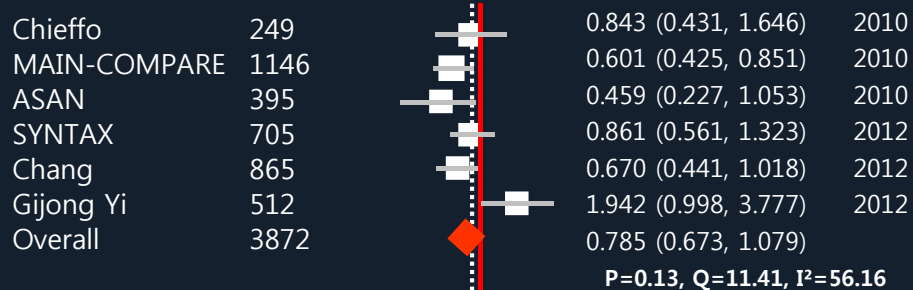
Bayesian Net-work Meta-analysis



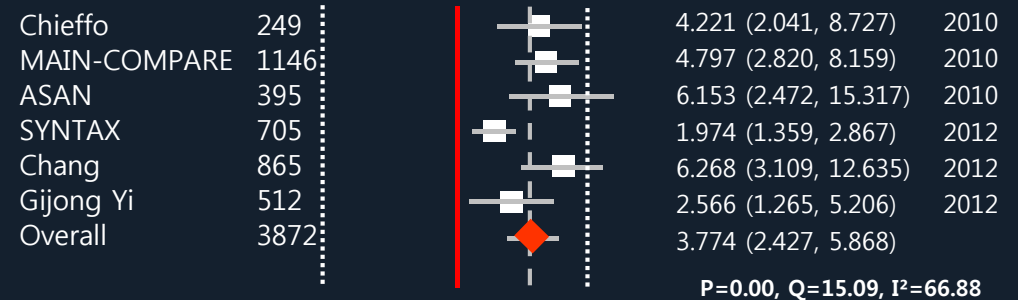
PCI VS. CABG

5-year Meta-analysis

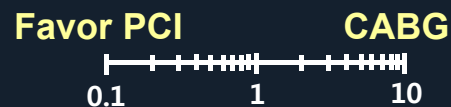
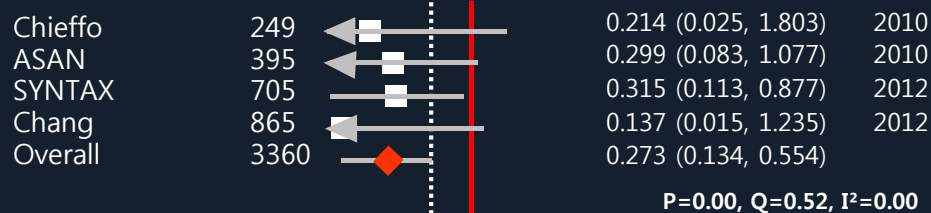
Mortality



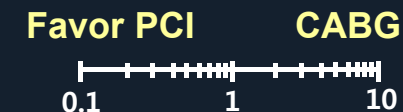
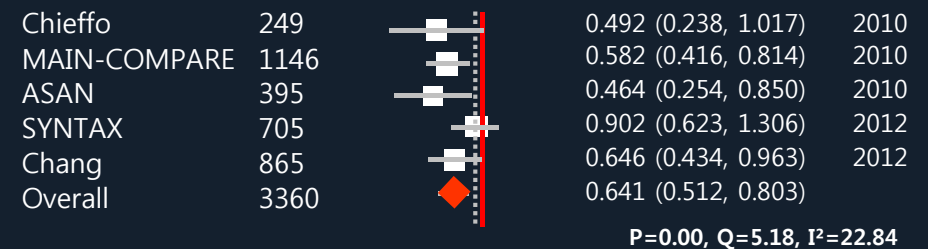
TVR



Stroke



MACCE



EXCEL Randomized Study

2900 pts with unprotected left main disease

@ 165 international sites

↓
SYNTAX score ≤ 32

Consensus agreement by heart team

↓
Yes

(N=1900)

No

(N=1000)

↓
Enrollment
registry

R

↓
PCI (Xience Prime)

(N=850)

↓
CABG

(N=850)

Clinical follow-up: 1 mo, 6 mo and yearly through 5 years

Primary end point: death, MI or stroke

ACC/AHA Guidelines 2011

Elective PCI for LM Stenosis

I	IIa	IIb	III
	B		
		B	
			B
Low risk PCI, <i>SYNTAX score</i> ≤ 22 or Ostial or Shaft LM High risk CABG ; STS risk $\geq 5\%$			
Intermediate-risk PCI, <i>SYNTAX score</i> < 33 or Bifurcation LM High risk CABG ; STS risk $\geq 2\%$ or COPD, Disabled Stroke, Redo CABG			
Unfavorable Anatomy for PCI, but Good CABG Candidate			

ESC Guidelines 2011

Elective PCI for LM Stenosis

I	IIa	IIb	III	
	B			LM with isolated or 1 VD and ostial or shaft
		B		LM with isolated or 1 VD and bifurcation LM LM with 2 or 3 VD & <i>SYNTAX score</i> ≤ 32
			B	LM with 2 or 3 VD & <i>SYNTAX score</i> ≥ 32

Discussion

Left Main PCI

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