



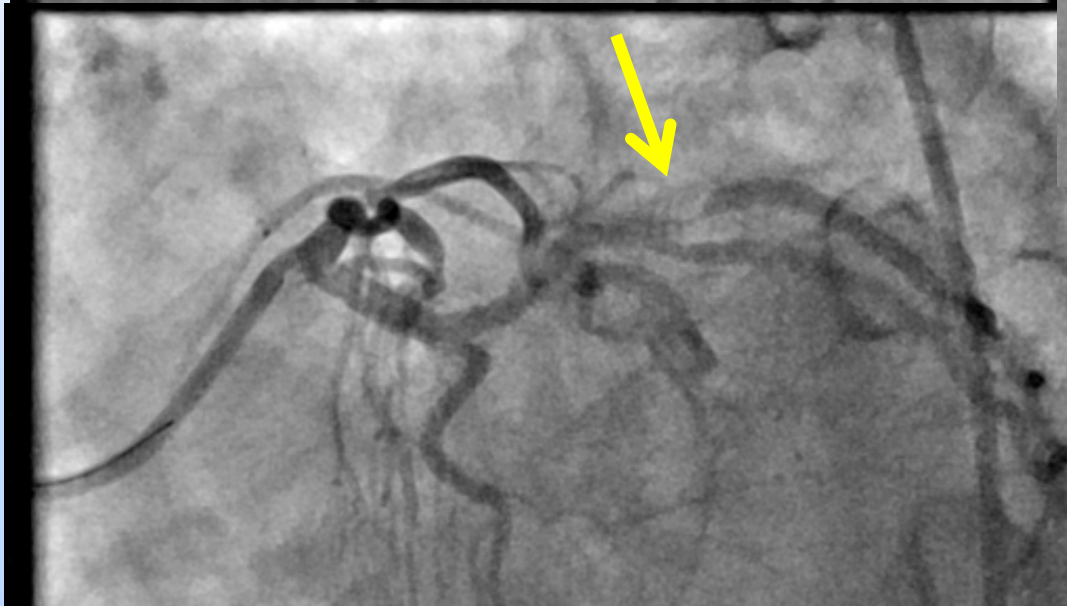
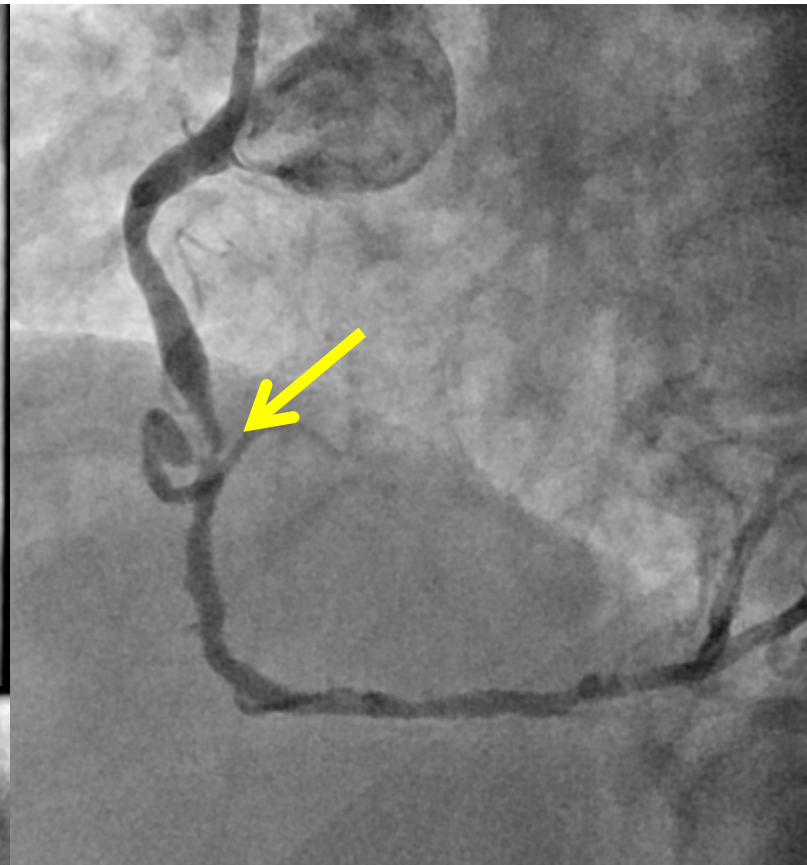
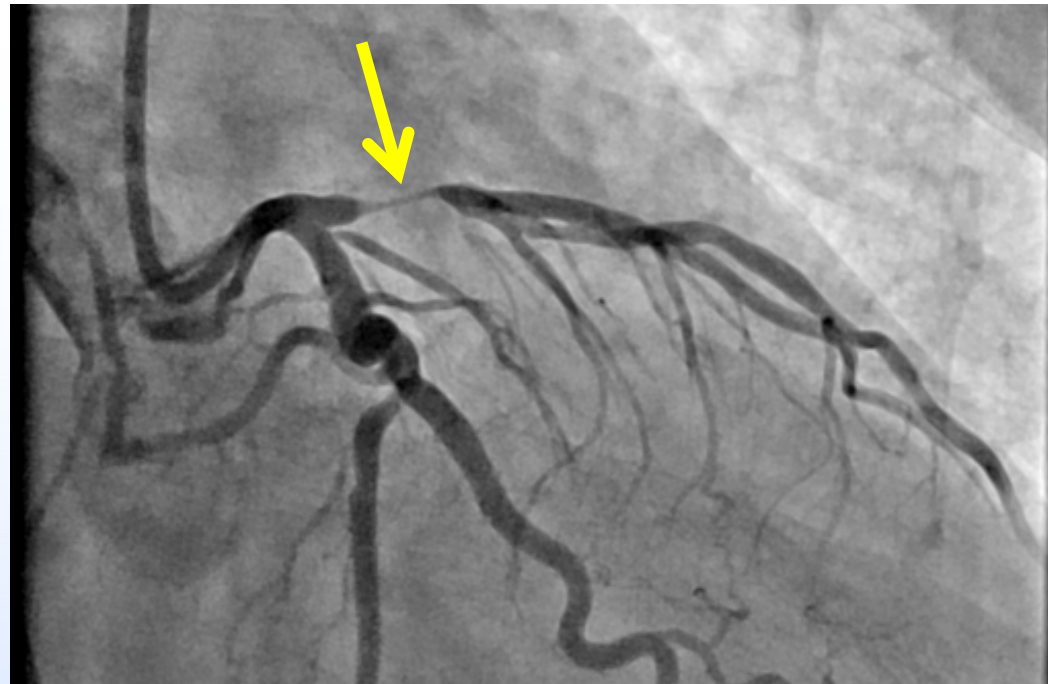
Percutaneous vs. surgical revascularization in patients with multivessel disease/diabetes

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Conflicts and disclosures - none

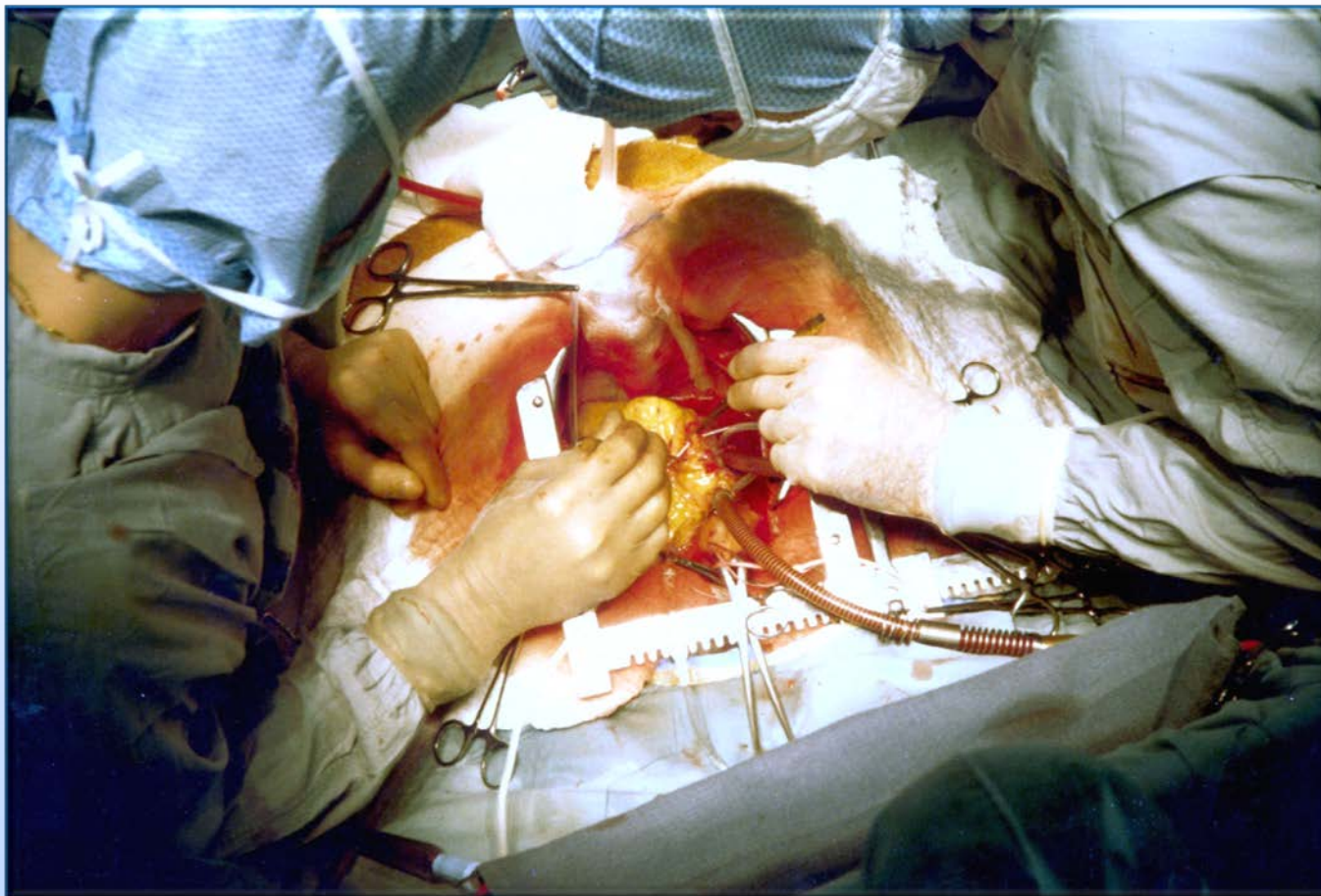
Clinical case

- 75 yr old woman with recent onset angina
- Risk factors:
 - DM2 5 years on metformin
 - Dyslipidemia on atorvastatin
 - HT on lisinopril
- CrCl = 49ml/min
- TMET: 3 minutes (angina and ST depression)
 - Duke score -15 (high risk)
- Resting Echo: LVEF 60% with no RWMA



SYNTAX Score = 17
EuroSCORE = 2.15%
STS score = 1%

Got multivessel disease?



Evidence Supporting CABG for Diabetic Patients is Consistent

BARI

BARI-2D

CARDia

SYNTAX

FREEDOM

SYNTAX Diabetes Group: 5-yr Results

Diabetes compared to no diabetes:

- Higher EuroSCORE
- Similar SYNTAX score
- More lesions treated; smaller vessels

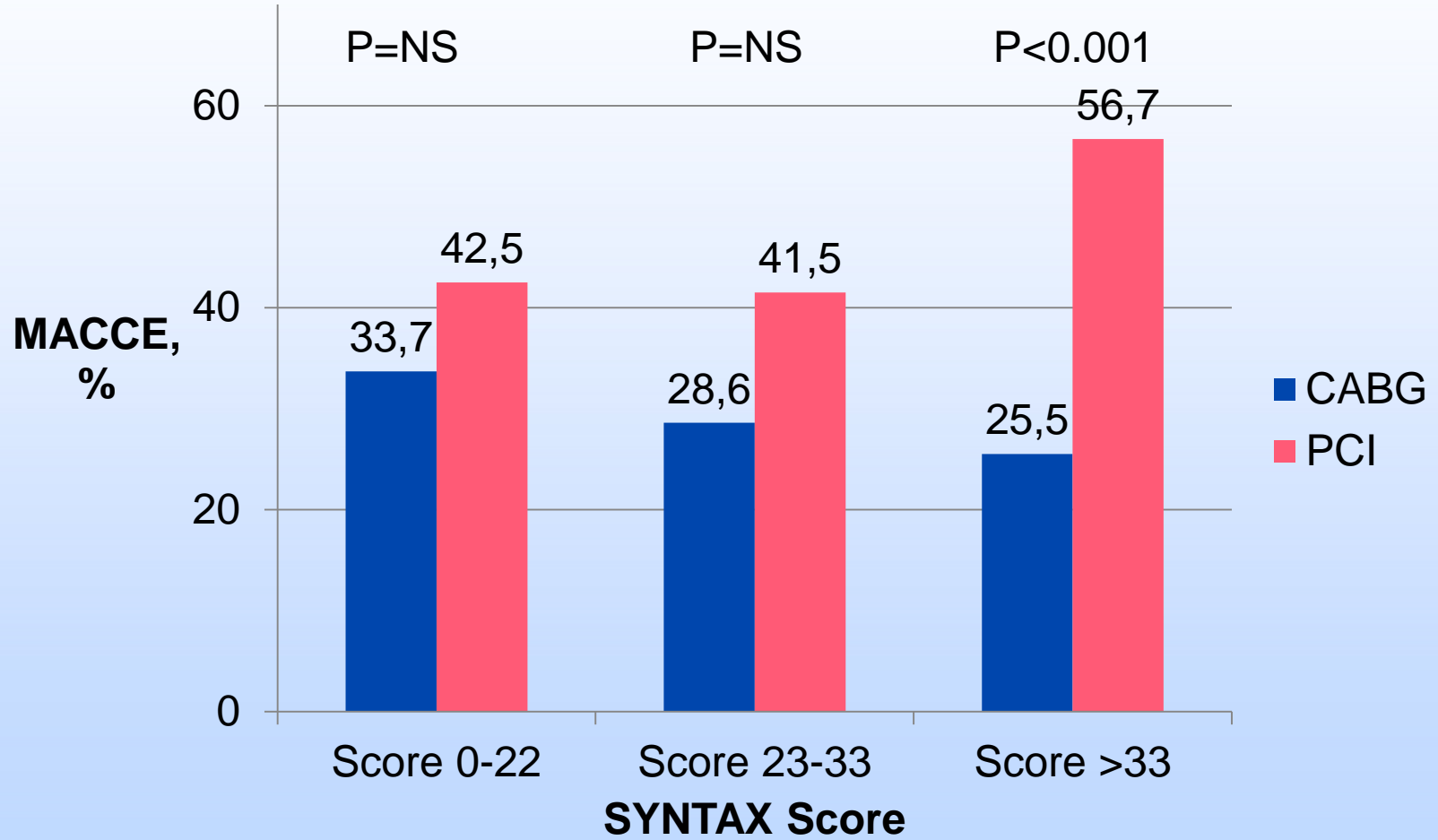
PCI compared to CABG:

More MACCE + repeat revascularization

but

Death/MI/CVA not significantly different

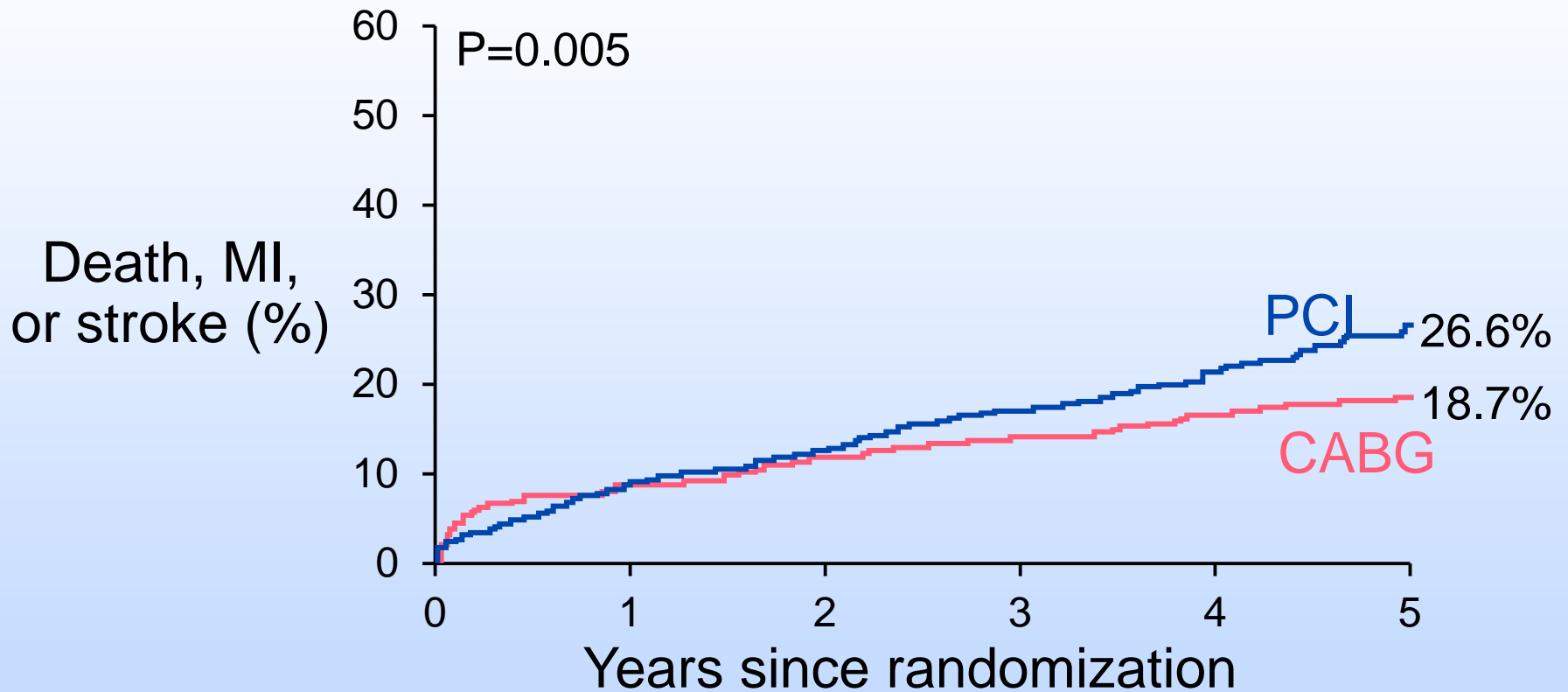
Diabetic Patients in SYNTAX Trial



Kappetein AP: Eur J Cardio-Thoracic Surg 2013

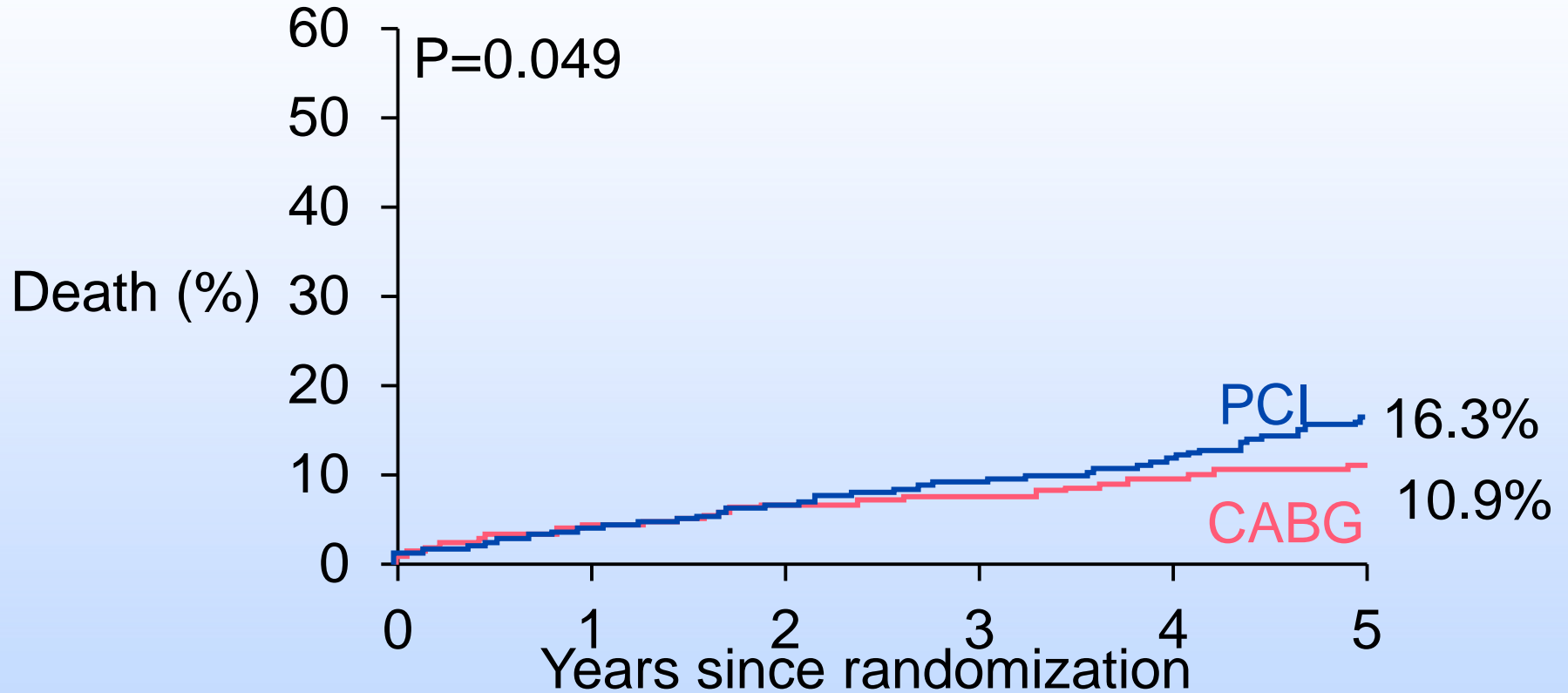
FREEDOM Trial

Primary End Point



FREEDOM Trial

Mortality



Farkouh ME: NEJM, 2012

CABG vs PCI in Diabetic Patients

Meta-analysis of RCTs

3612 patients with diabetes

BMS: ERACI II, ARTS, SoS, MASS II

DES: FREEDOM, SYNTAX, VA CARDS, CARDia

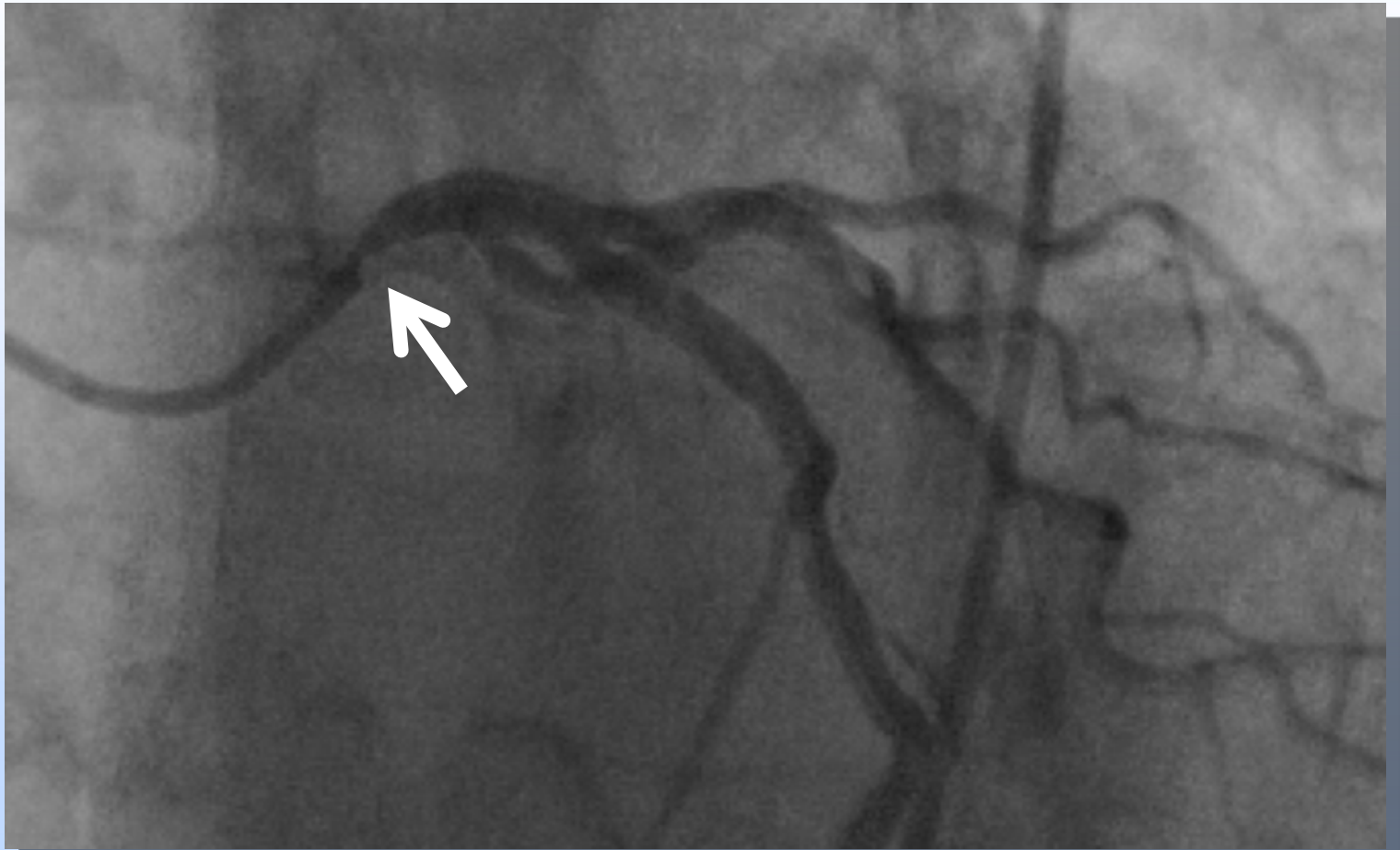
Mortality

33%

Conclusion

In carefully selected patients, CABG should be the preferred mode of revascularization for diabetic patients with multivessel disease

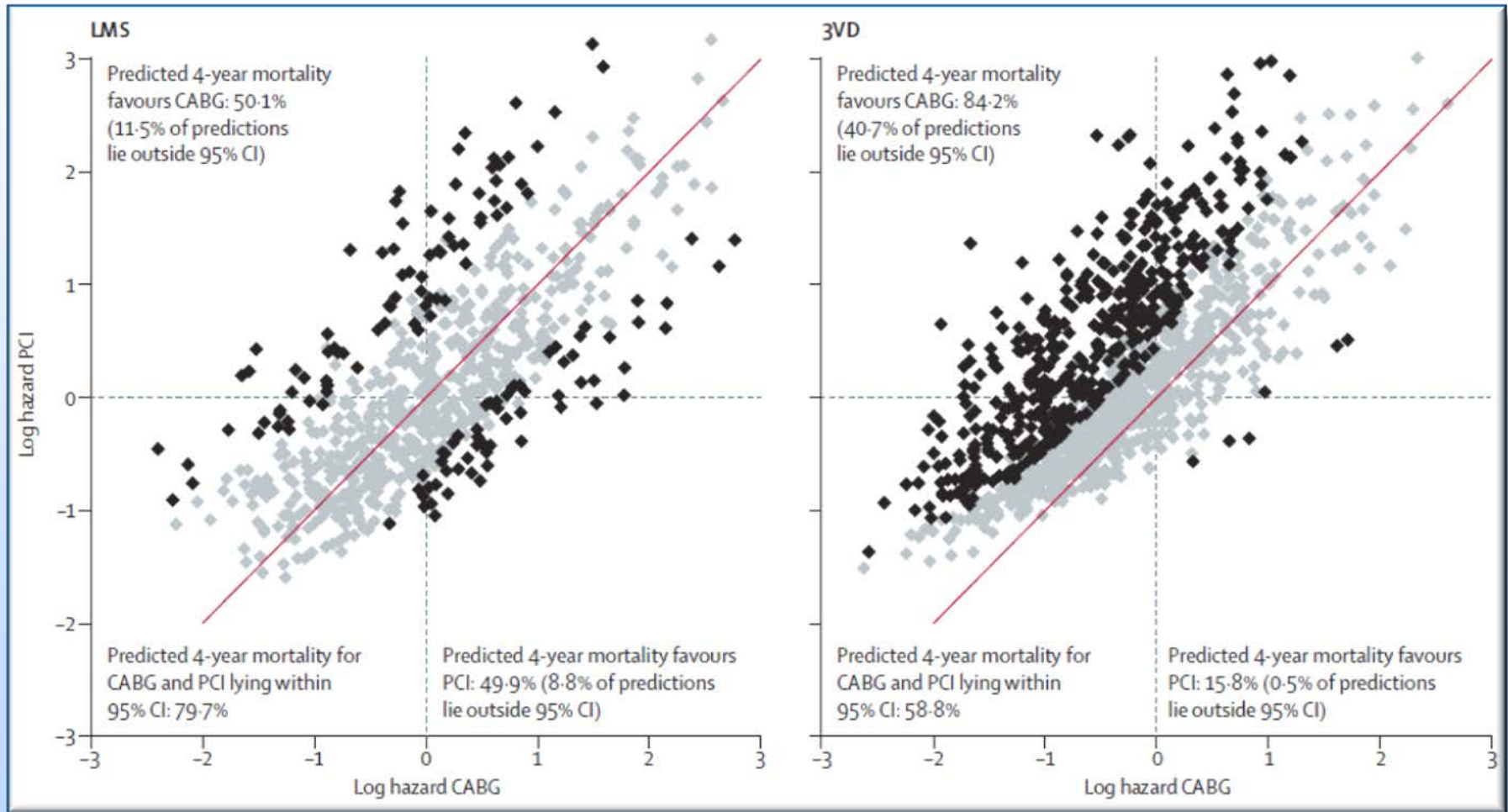
Left Main Disease



Syntax Score II and 4 Year Mortality

Left main disease

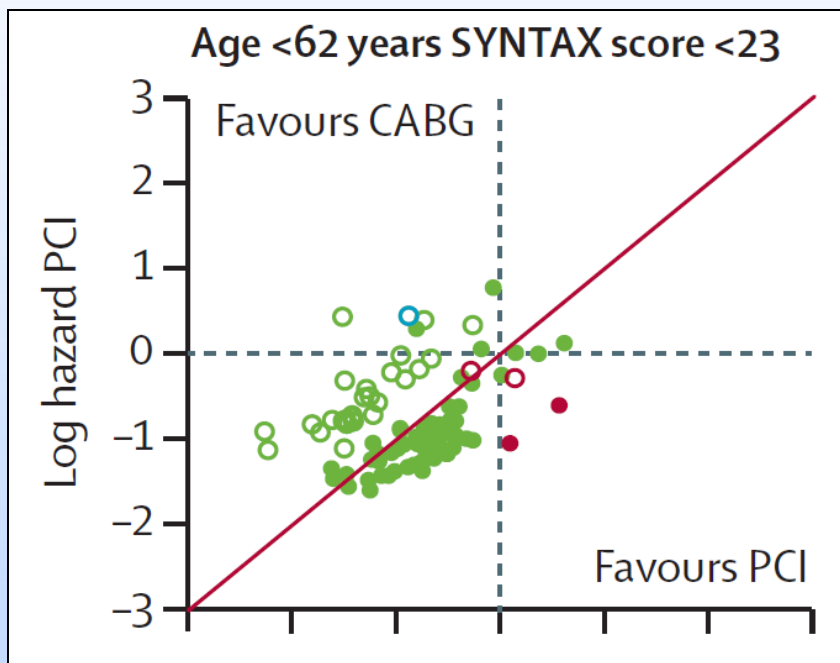
3-vessel disease



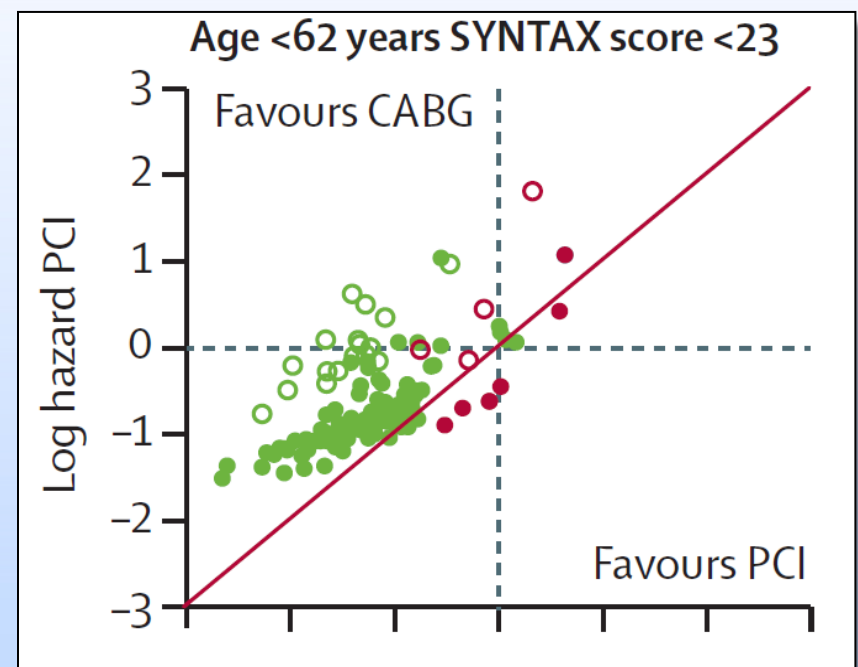
Farooq V: Lancet 2013

Predictors of 4 year mortality

Left main disease



3-vessel disease



Farooq V: Lancet 2013

SYNTAX Score II – “take home messages”

- Almost all those with 3-VD did better with CABG
- Equipoise with LMCA
- Diabetes was not independent determinant of survival

Guidelines

Opinions
and biases



Trial data

Real world
(comorbidities)

Comorbidities

Elderly
Frailty
Chronic lung disease
CVA/TIA
CKD (Stage 3-5)
Bleeding risk
Low LVEF

The patient

What end points
are important?
CVA avoidance
Expectations
Preferences
Informed - internet

Effective Heart Team

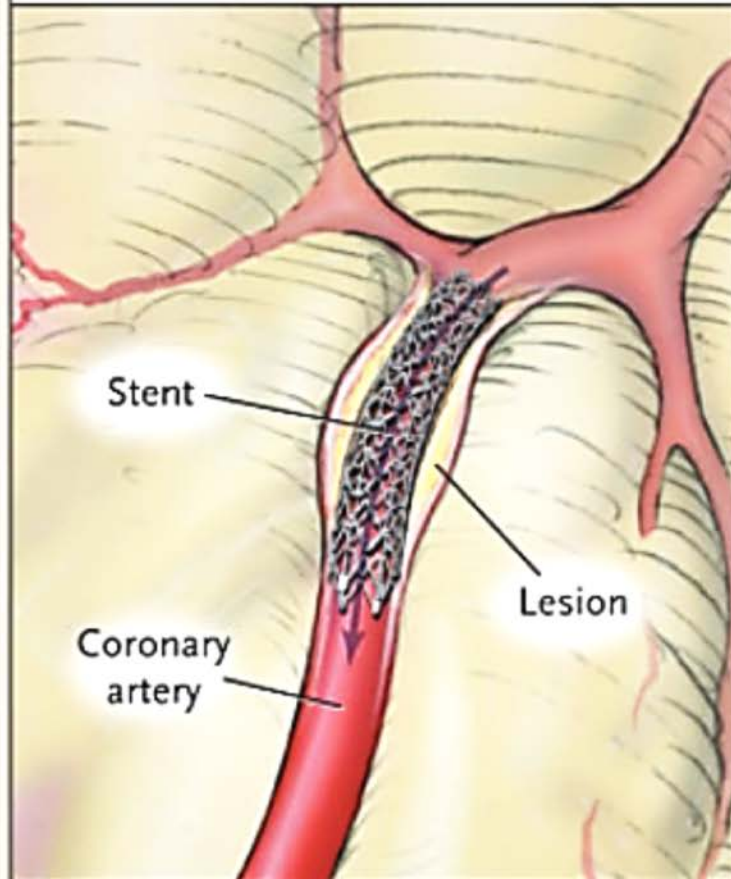
Physician
experience and
clinical judgment

Guidelines



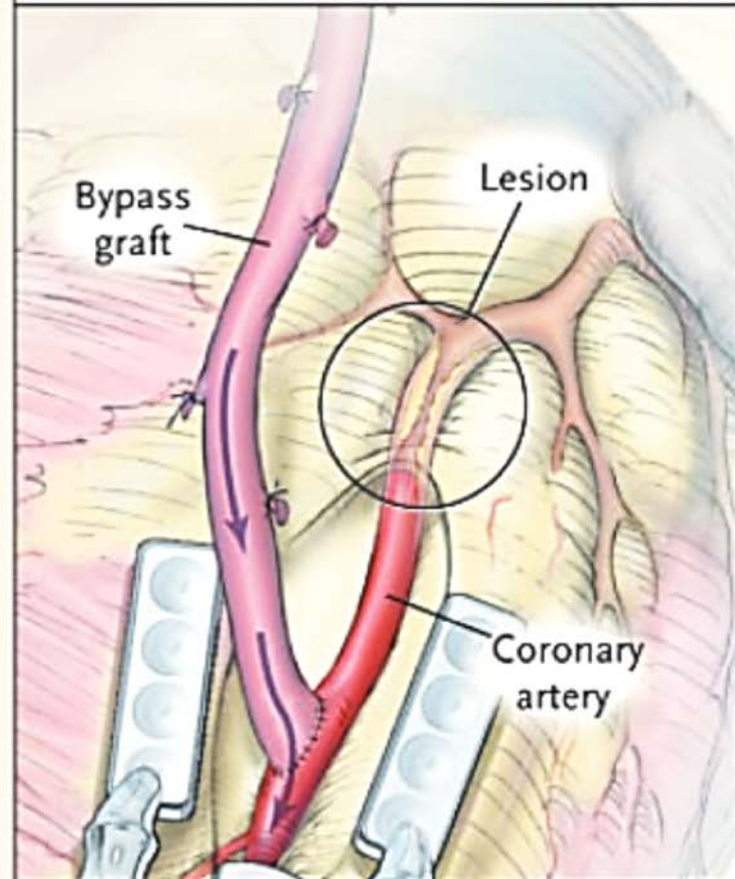
Shared Decision Making Patient-centric care

PCI



Stenting addresses the existing lesion but not future lesions.

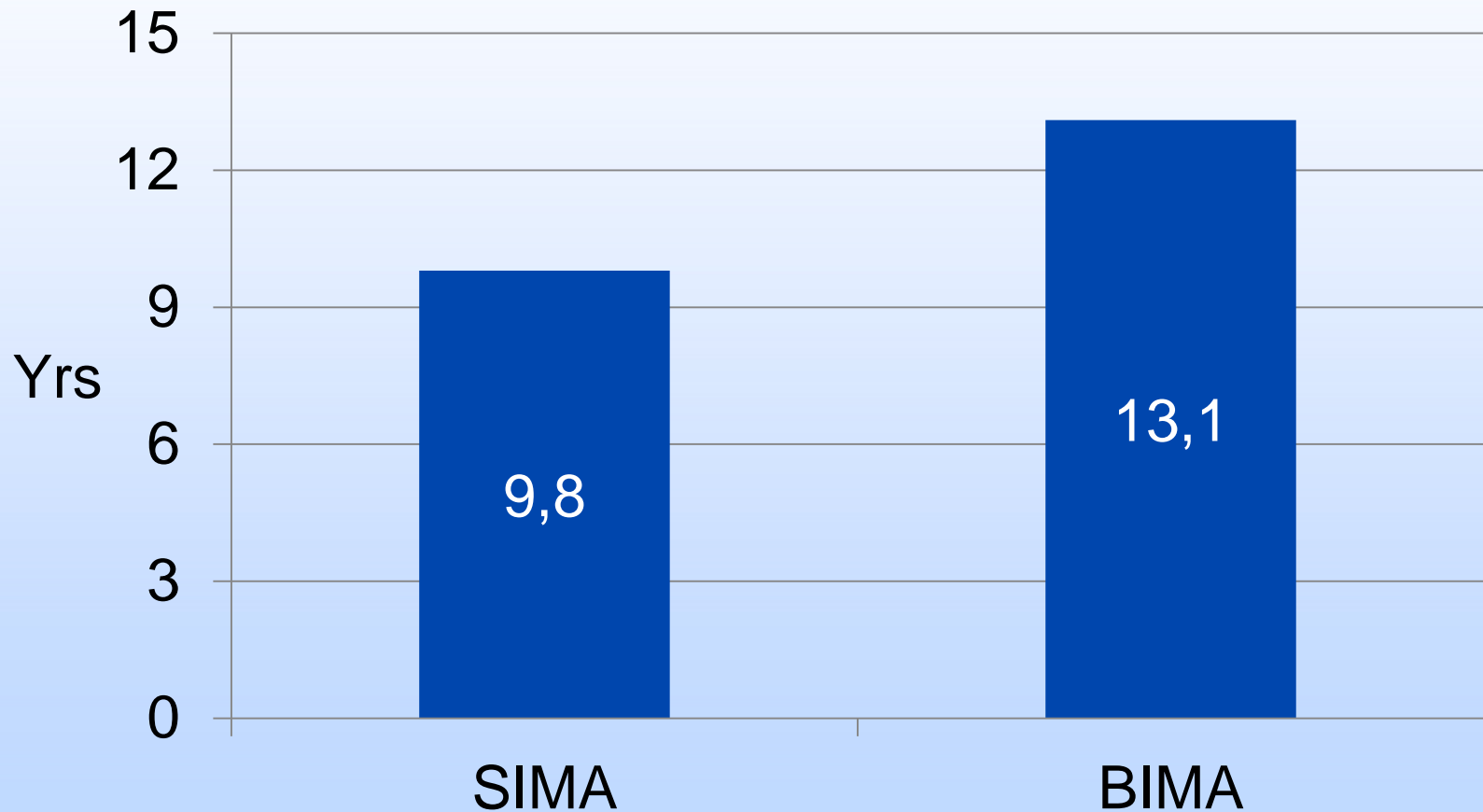
CABG



Bypass grafting addresses the existing lesion and also future culprit lesions.

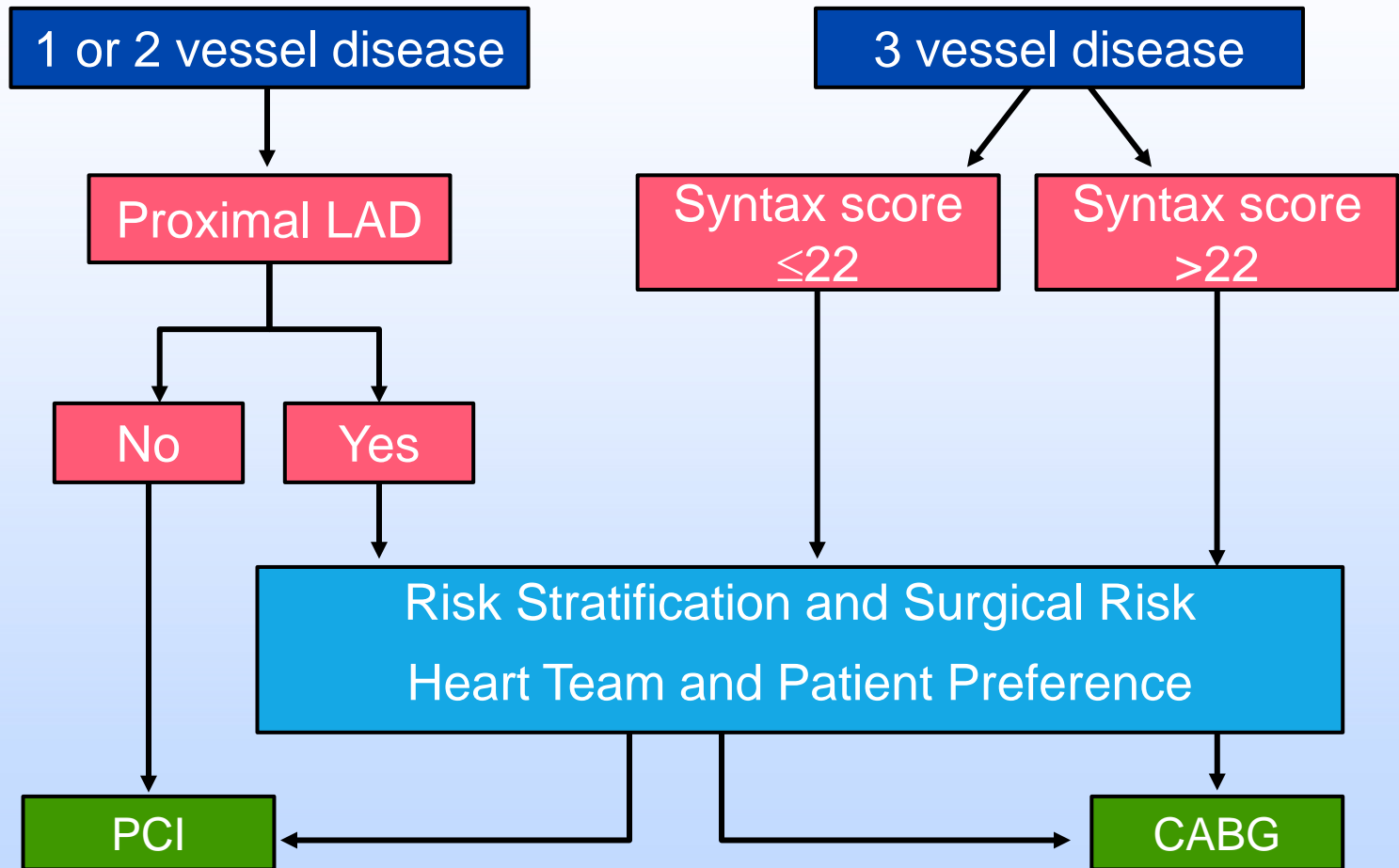
Bilateral IMA in Diabetic Patients

Median late survival in matched patients



Dorman MJ: Circ 2012

2013 ESC Guidelines



Modified from 2013 ESC Guidelines. Montalescot G: EHJ 2013

Summary

Diabetic patients with multivessel disease:

- 3VD – CABG strongly preferred
- (1 or) 2 VD – PCI reasonable to consider
- Left Main only – lack sufficient data
- Shared decision-making with patient



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