SYNTAX: TAXUS versus CABG in Multivessel and Left Main Disease

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12:00 -12:10

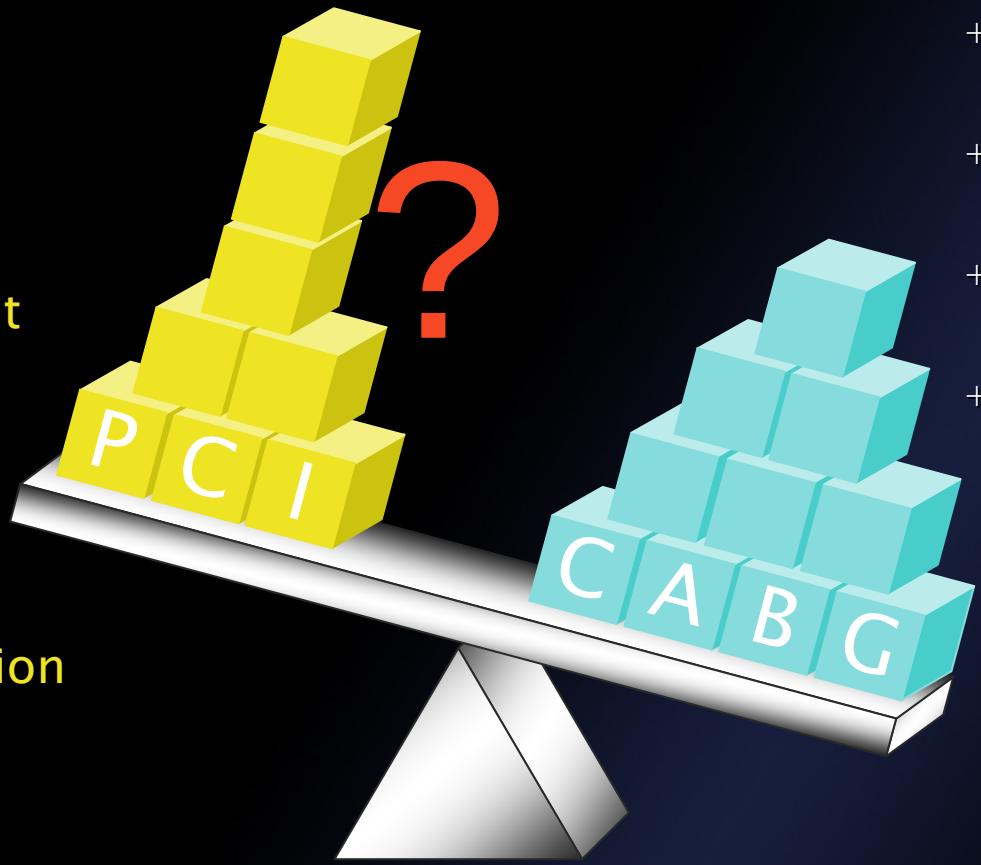
Washington Convention Ctr. Ballroom C, 3rd level

Evolution of Revascularization

SYNTAX

+ Improved technique
+ Improved stent design
+ DES

- Restenosis
- Repeat revascularization



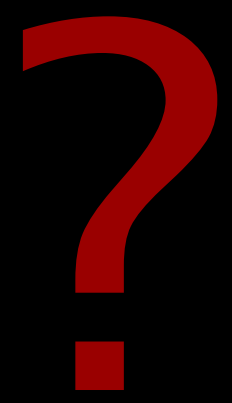
+ Off pump technique
+ Less invasive approach
+ Increased arterial revascularization
+ Optimal perioperative monitoring

- High costs
- Invasive

→ *Over the last decade, the standard of care for both CABG and PCI has continuously improved, leveling the playing field.*

Questions

Have these changes in techniques shifted the boundaries between operative (CABG) and percutaneous revascularization (PCI)?



- How does modern CABG compare to PCI in high risk patients eligible for both techniques?
- Which patient population continues to be solely eligible for CABG (CABG only)?
- What characterizes high risk patients not eligible for CABG (PCI only)?

CABG vs PCI Trials *1-year results summnary*

Superior Treatment Modality

SYNTAX

No stents used / *Stents used* / Trial	Clinical Parameters		
	Mortality & MI	Angina Relief	Repeat Revascularization
GABI	PCI	PCI	CABG
EAST	No difference	CABG	CABG
RITA	No difference	CABG	CABG
ERACI	No difference	CABG	CABG
CABRI	No difference	CABG	CABG
BARI	No difference	n/a	Significant decrease of revascularization expected with DES
MASS-2	CABG (MI)	n/a	
AWESOME	No difference	No difference	CABG
ERACI-2	PCI	CABG	CABG
SoS	CABG (Mortality)	CABG	CABG
ARTS	No difference	CABG	CABG

PCI *: superior to CABG* **CABG** *: superior to PCI* **n/a** *: not available*

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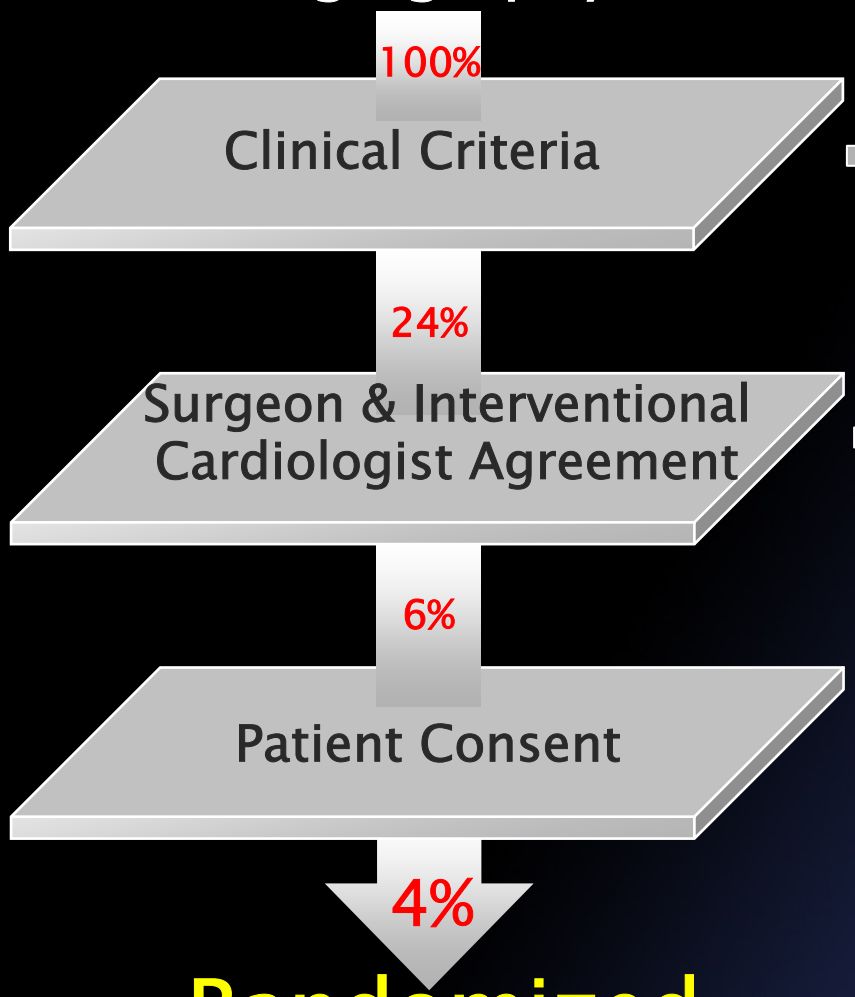
Trials studied highly selected patients

FM SYNTAX

Percentages based on original pt. pool.



76% do not meet clinical inclusion/exclusion criteria

18% physicians cannot agree amenable to either revascularization methodology

2% patients will not agree to participate

SYNTAX, FREEDOM,CARDIA Trials of A New Type

allcomer study
instead of **highly selected patient population**

consensus physician agreement **(surgeon & cardiologist)**
instead of **inclusion & exclusion criteria**

nested registry **for CABG only and PCI only patients to define patient characteristics and outcomes**

SYNTAX Eligible Patients

De novo disease

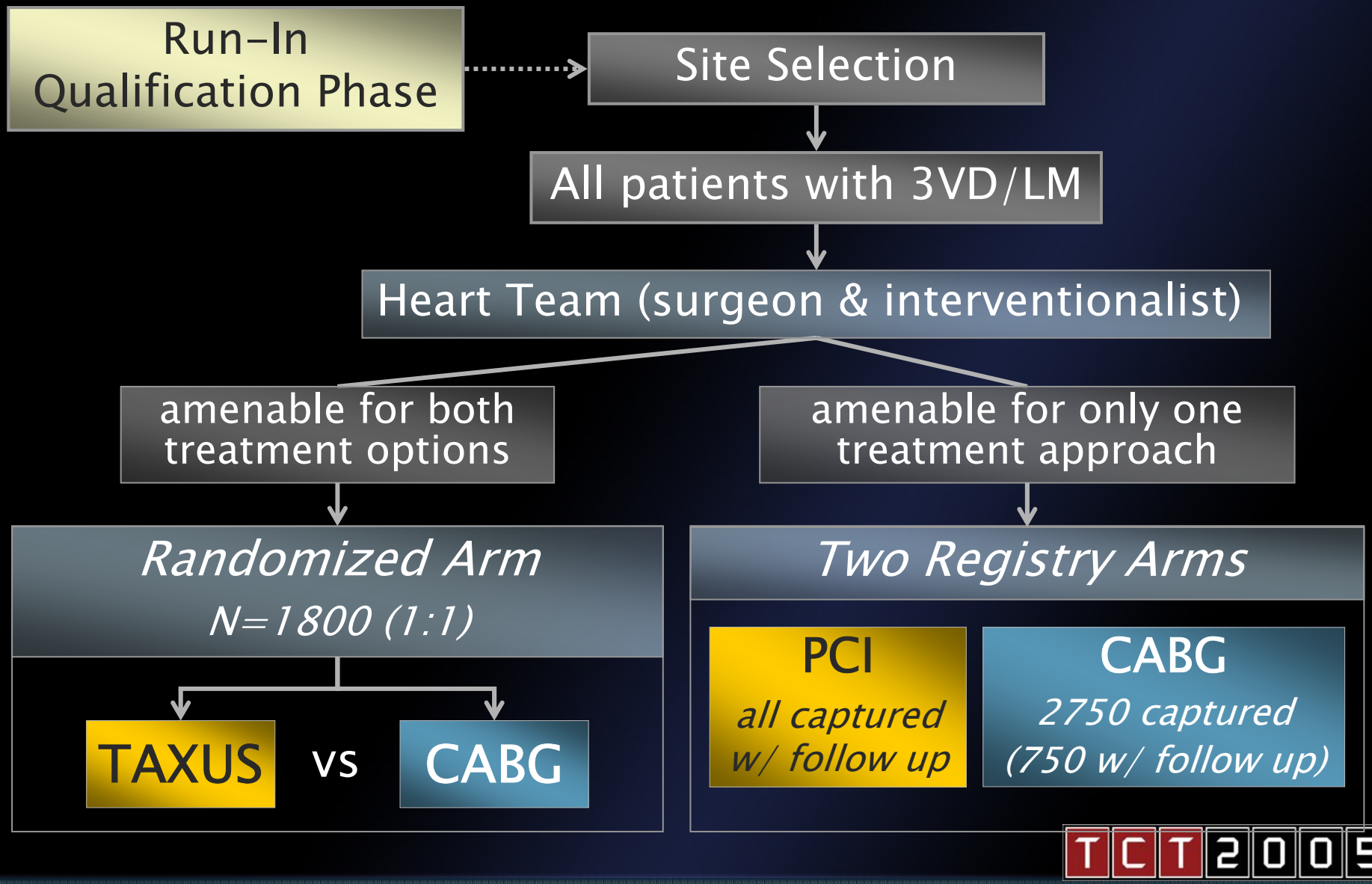
- Isolated left main
- left main + 1-vessel disease
- left main + 2-vessel disease
- left main + 3-vessel disease
- 3-vessel disease

Revascularization in all 3 vascular territories

Limited Exclusion Criteria

- Previous interventions (PCI or CABG)
- Acute MI with CPK>2x
- Concomitant valve surgery

All-Comers Design



Primary Endpoint
– Randomized Trial Arm –

SYNTAX

12-month binary major adverse cardiovascular or cerebrovascular events (MACCE*) rate.

Definition:

- all cause death
- myocardial infarction
  Within 7 days: new abnormal Q-waves with CK-MB/peak total CK >10% or >5xCKMB upper limit of normal)
  After 7 days: new Q-waves or enzyme changes defined as more than 10% of the ratio of peak CK-MB/peak total CK on one or more than one sample
- cerebrovascular events
- repeat revascularization (CABG or PCI)

*CEC adjudicated

Culmination of SYNTAX

Randomized Trial PCI & CABG	Registry PCI only	Registry CABG only

Profile patient population deemed eligible for both revascularization methods in a real world setting

Define optimal treatment approach (safety, efficacy)

Characterize high risk patients eligible for only one revascularization method

Evaluation of new tool (SYNTAX score) to effectively characterize coronary vasculature and predict outcomes

Patient Profiling

Local Heart Team (surgeon & interventional cardiologist) will assess each patient based on:

- Patient's operative risk
  - EuroSCORE[1] and Parsonnet Score[1]
- Coronary vascular lesion complexity
  - Newly developed SYNTAX score
- Characterizes vasculature based on lesion frequency, complexities, and location
- Provides guidance to physicians on optimal revascularization strategies for high risk patients

[1]Euro and Parsonnet Scores: prognostic scoring systems calculating predicted operative mortality particular for high risk patients

SYNTAX

EuroIntervention

The SYNTAX Score: an angiographic tool grading the complexity of coronary artery disease

Georgios Sianos[1], MD, PhD; Marie-Angèle Morel[2], BSc; Arie Pieter Kappetein[3], MD, PhD; Marie-Claude Morice[4], MD; Antonio Colombo[5], MD; Keith Dawkins[6], MD; Marcel van den Brand[7], MD, PhD; Nic Van Dyck[8], RN; Mary E Russell[9], MD; Friedrich W. Mohr[10], MD; Patrick W Serruys[1]* MD, PhD

Sianos G, et al. Eurointervention 2005; 1:2

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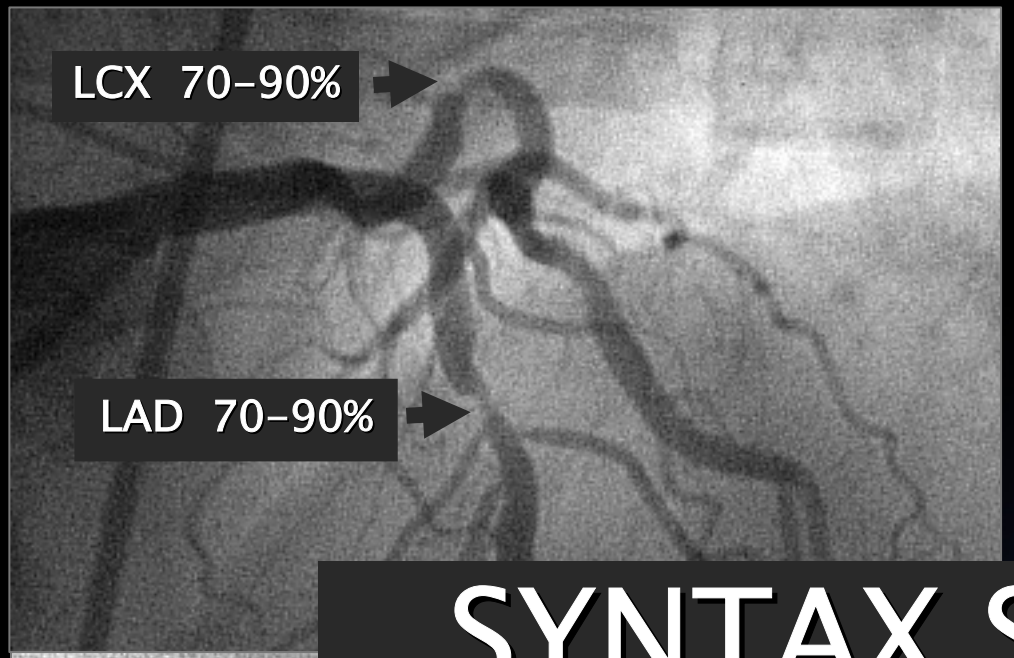
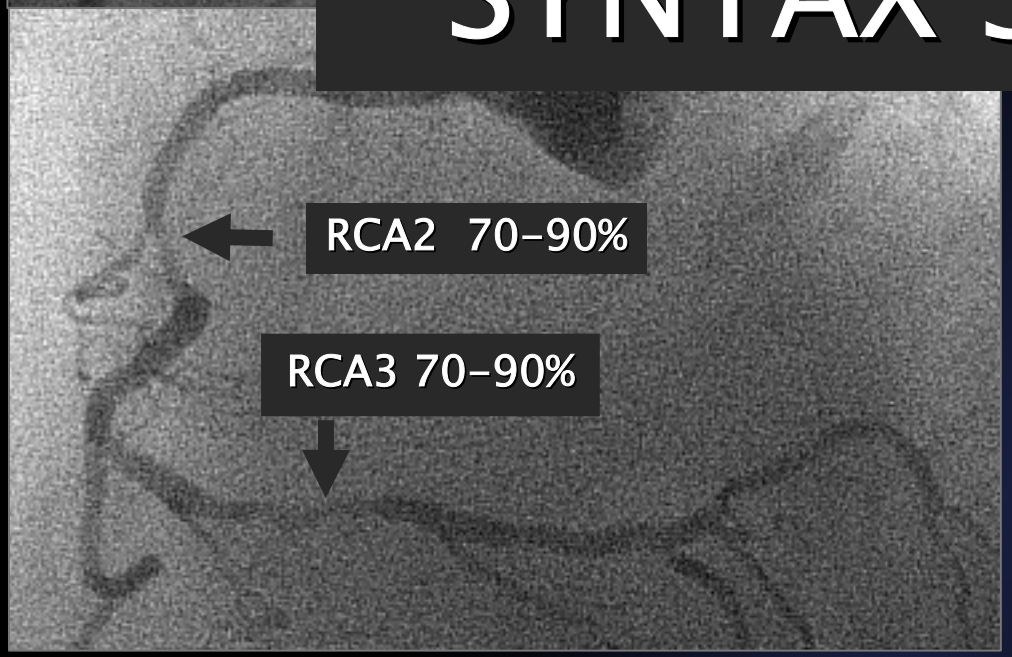
The Syntaxscore incorporates information collected through:

- BARI classification of the coronary tree segments modified for the ARTS study (*Semin Interv Cardiol. 1999 Dec;4(4):209-19).*
- Modified Leaman score (*Circulation 1981; 63(2): 285-292).*
- ACC/AHA lesions classification system *(Circulation, 2001;103:3019-3041).*
- Combination of the Duke and ICPS classification of Bifurcation *(Cathet. Cardiovasc. Intervent, 2000; 49:274-283)*
- Total occlusion classification *(JACC,1997;30:649-56)*
- Consultation of experts





SYNTAX

SYNTAX SCORE 21

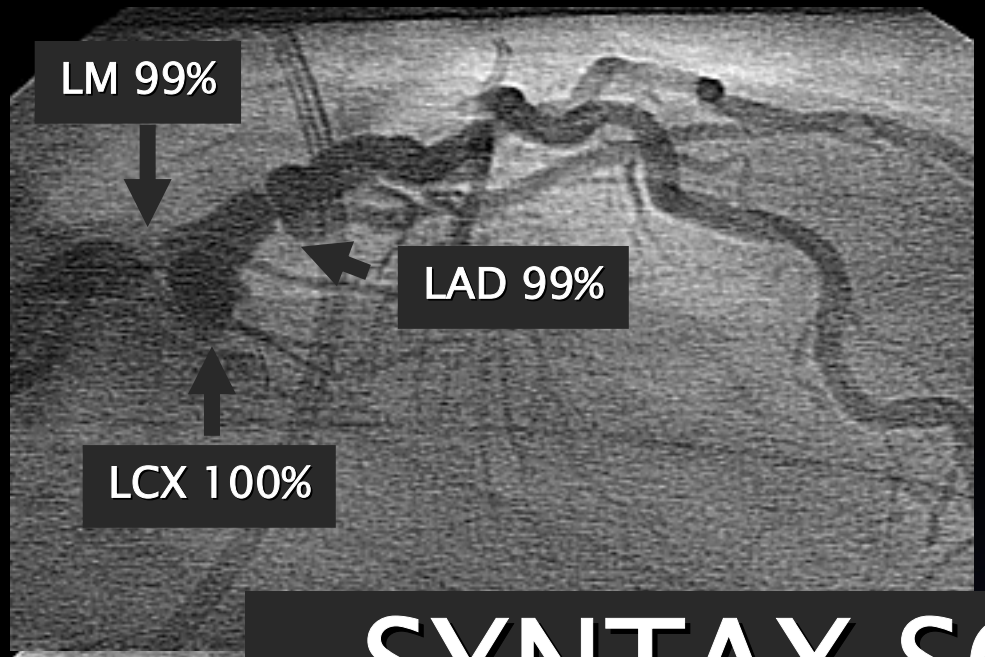
3-VD patient 1

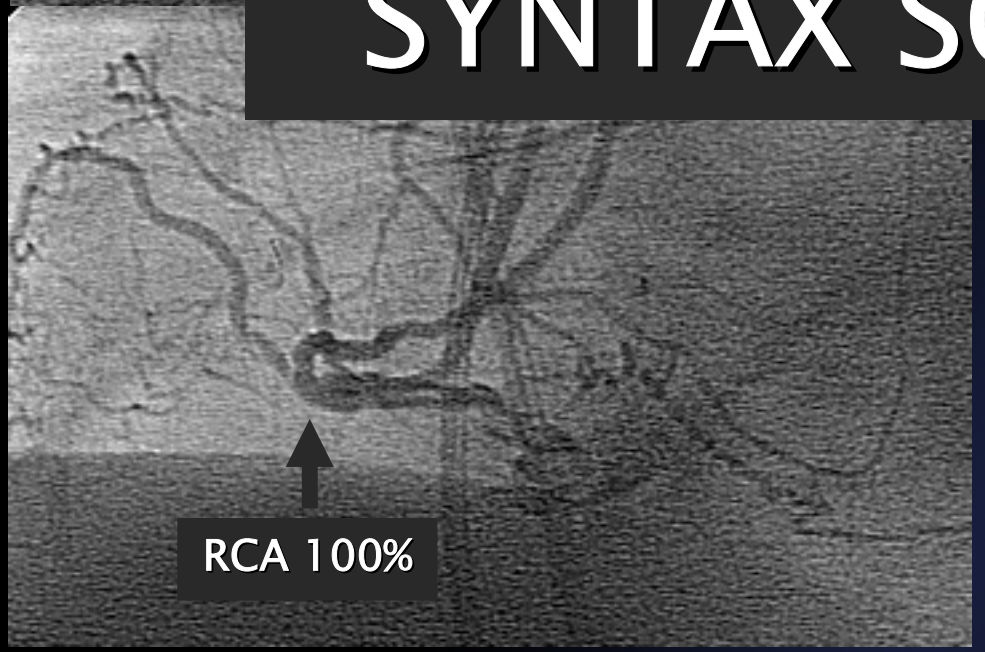
- Right Dominance
- 4 lesions

- Lesion 1 involves segment numbers: 1, 2

- Lesion 3 involves segment numbers: 7

- Lesion 4 involves segment numbers: 13





SYNTAX

3-VD patient 2

- Right Dominance
- 4 lesions

- Lesion 1 involves segment number: 1 (total occlusion)

SYNTAX SCORE 54.5

- Lesion 3 involves segment number: 11 (total occlusion)

- Lesion 4 involves segment number: 6 (bifurcation)

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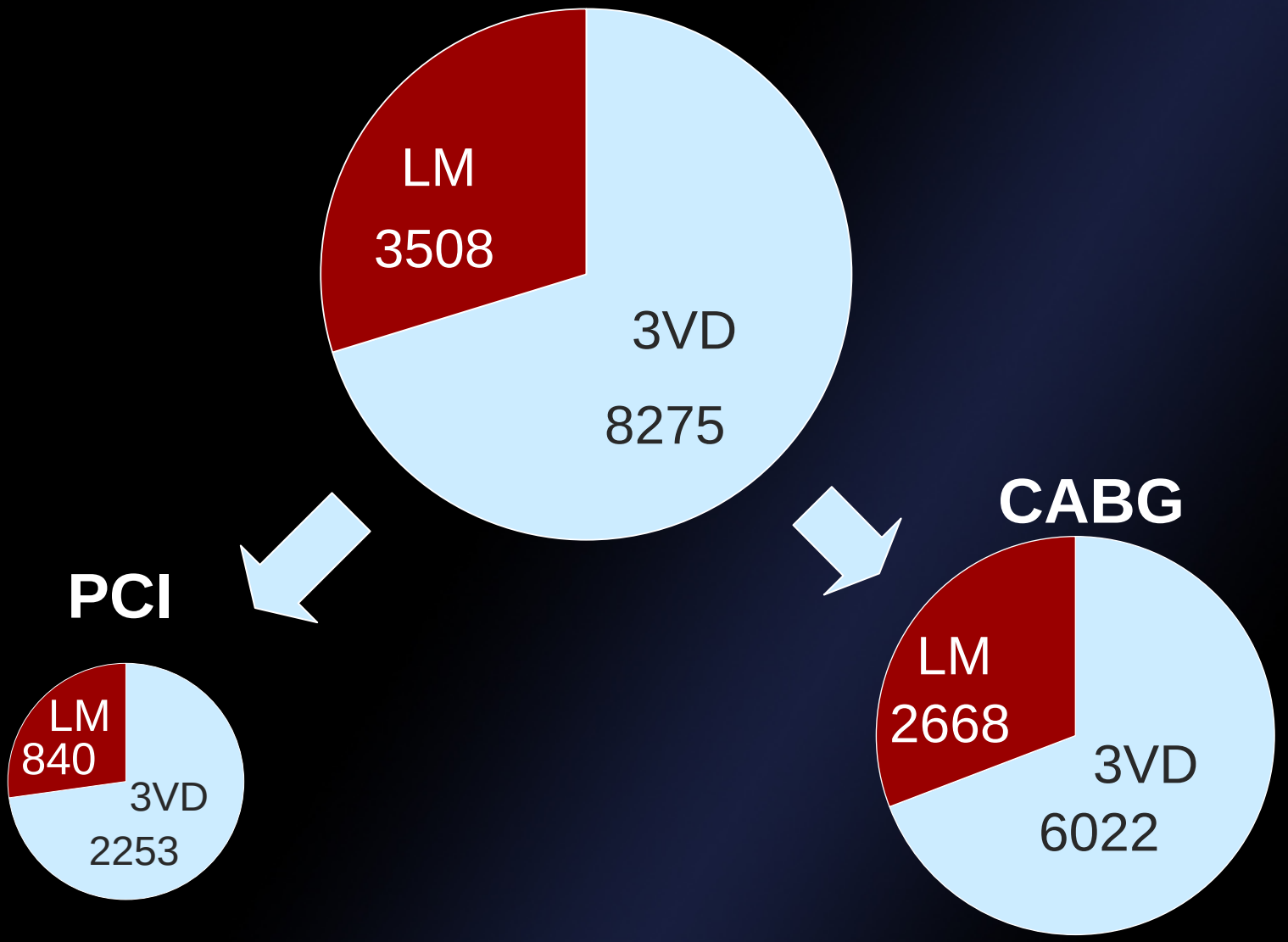
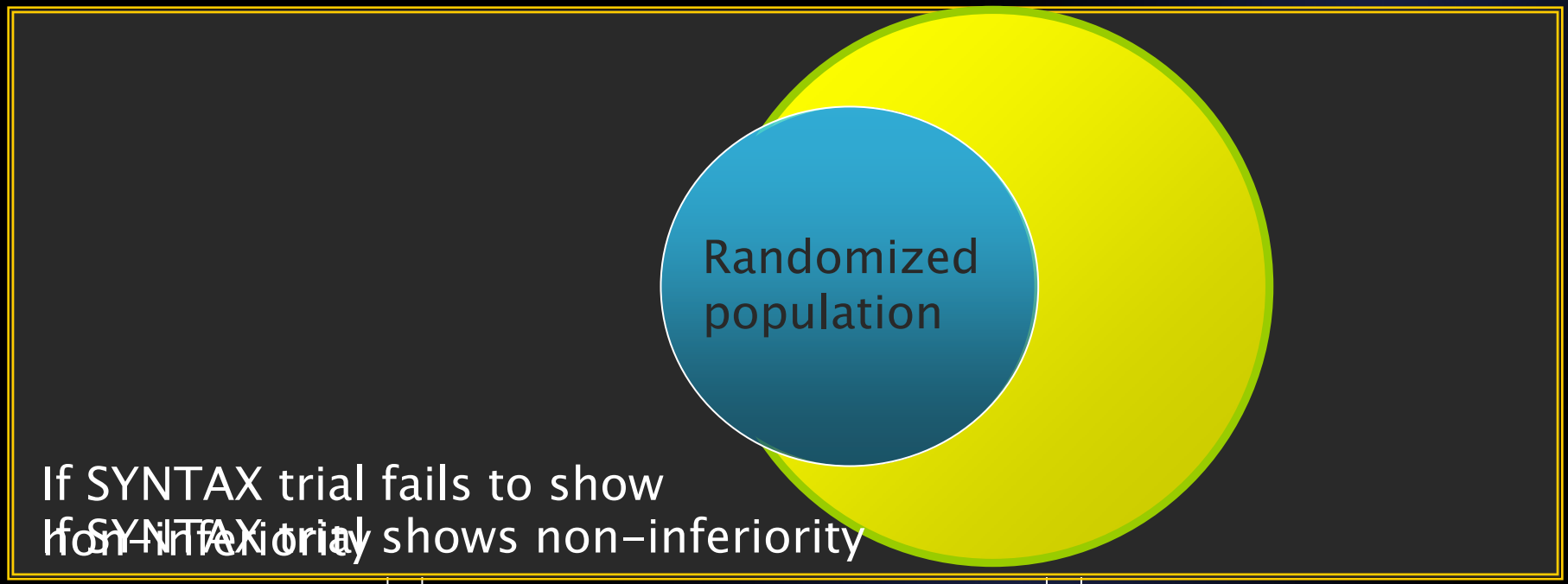
Practice-Based Medecine ….

Run-in data, Jan-Mar 2004, 102 centres

SYNTAX



Overall Outcome of SYNTAX



This population with LM/3VD will become eligible for PCI

Better definition of "gold standard" for treatment of LM/3VD

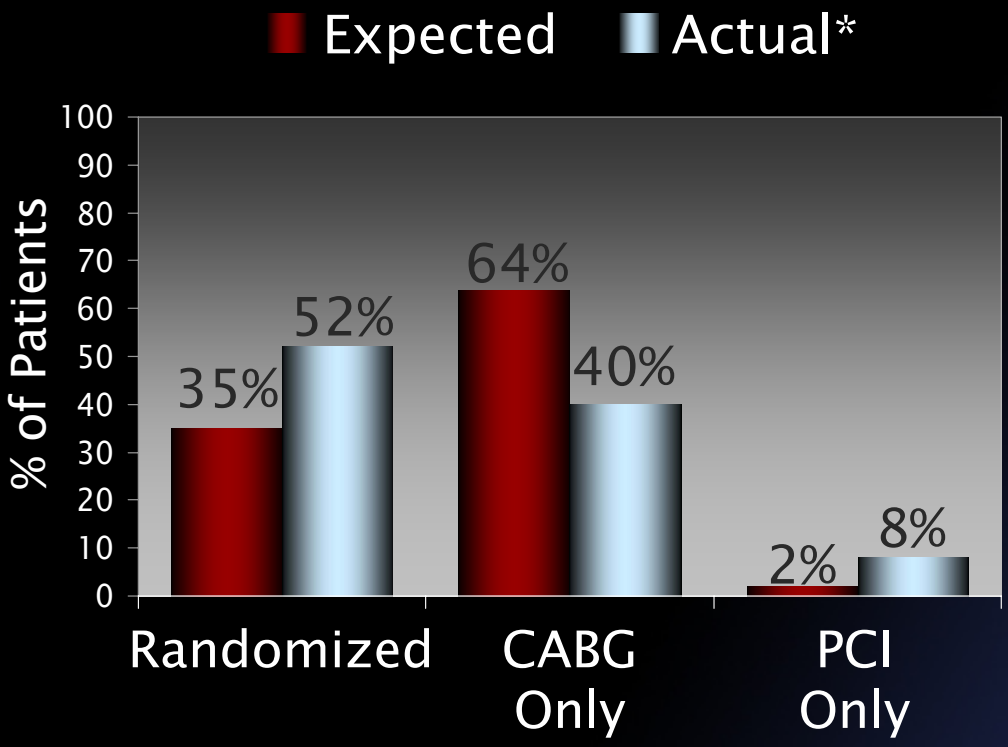
CABG remains the standard for LM/3VD to be treated by CABG

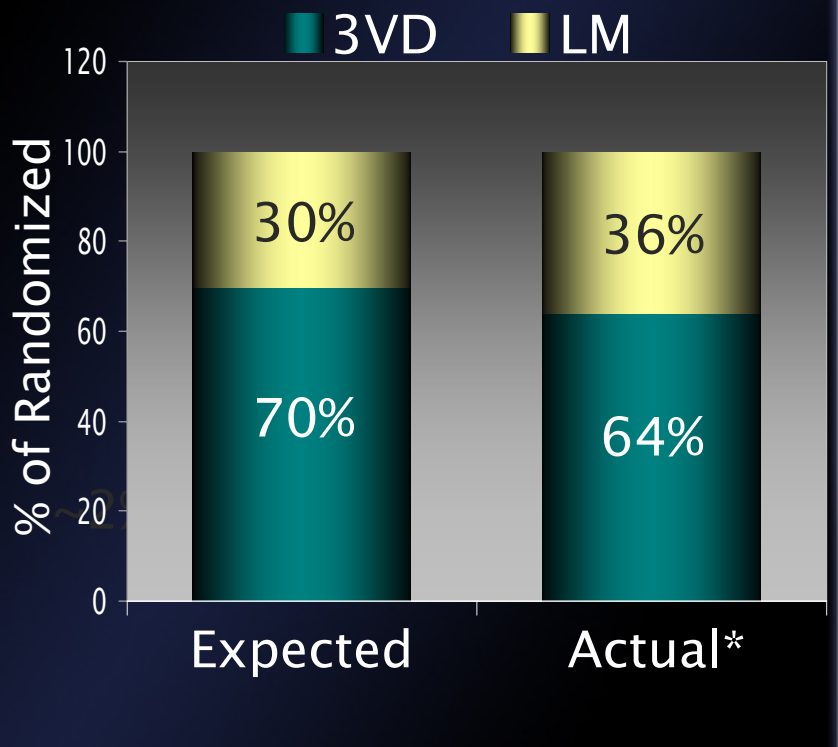
SYNTAX Trial Status

- First patient enrolled:
  - In registry arm: 29 March 2005
  - In randomized arm: 5 April 2005
- Total # of sites: 81 (37 currently enrolling)
- Total patients enrolled as of 13 October 2005: 858
  - 161 Left Main Disease randomized
  - 282 3-Vessel Disease only randomized

Randomized (CABG or PCI)	CABG Registry	PCI Registry
443	347	68

Actual Enrollment Does Not Match Expectations





Currently enrolling more left main and less CABG only patients than anticipated.

*Actual enrollment as of 13 October 2005.

Conclusions

The SYNTAX trial will

- Provide evidence-based medicine comparing PCI to CABG for the treatment of high risk lesions
- Reflect current standard of care for optimal revascularization in a real world, high risk patient population
- Define the populations eligible for treatment with PCI only or CABG only