Beyond the Divide: Weighing the Pros and Cons of PCI and CABG in LM Disease

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CRF® Launches Scientific Excellence Top-10 (SET-10)

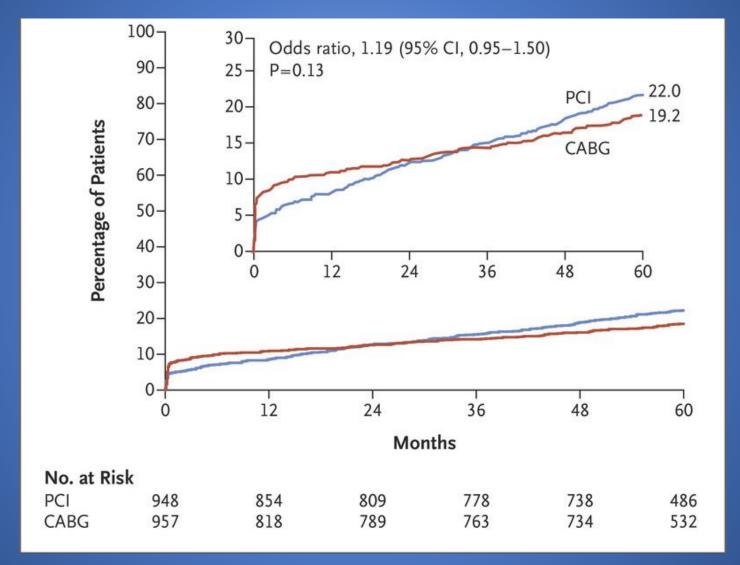
A New Annual Ranking of Global Academic and Medical Institutions Based on Academic Contribution at TCT® 2023

CRF® SET-10: Coronary Ranking

Rank	(Center	City	Country	
1		Thoraxcenter, Erasmus University Medical Center Rotterdam		Netherlands	
2		Samsung Medical Center	Seoul	South Korea	
3		Mount Sinai Hospital, Icahn School of Medicine	New York	USA	
4		Minneapolis Heart Institute	Minneapolis	USA	
5		Asan Medical Center	Seoul	South Korea	

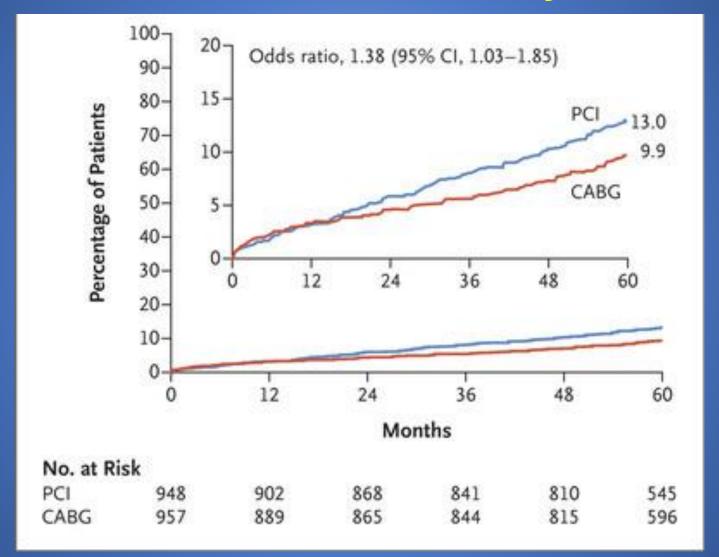


Death, Stroke or Myocardial Infarction



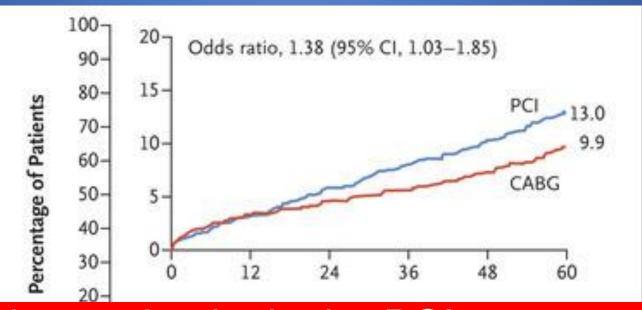


All-Cause Mortality





All-Cause Mortality



-18 of the 30 deaths in the PCI group were

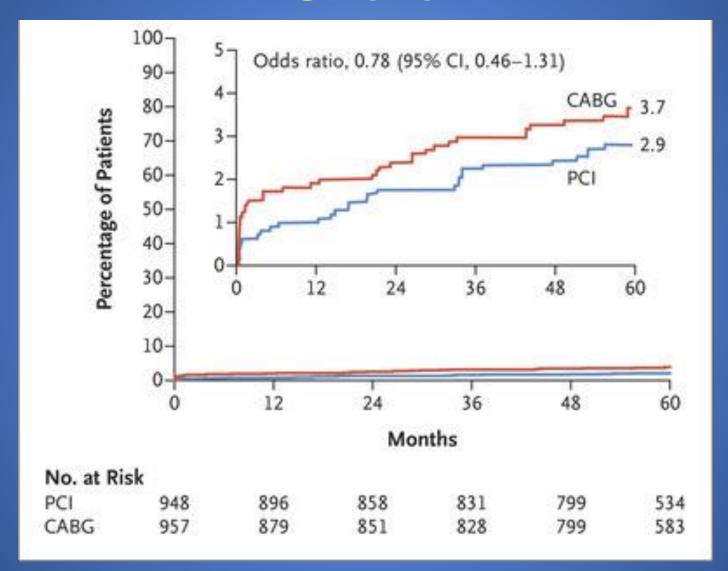
noncardiovascular 24 36 48 60

-CV death: 6.8% in the PCI arm and 5.5% in the CABG group (OR 1.26; 95% 0.85-1.85)



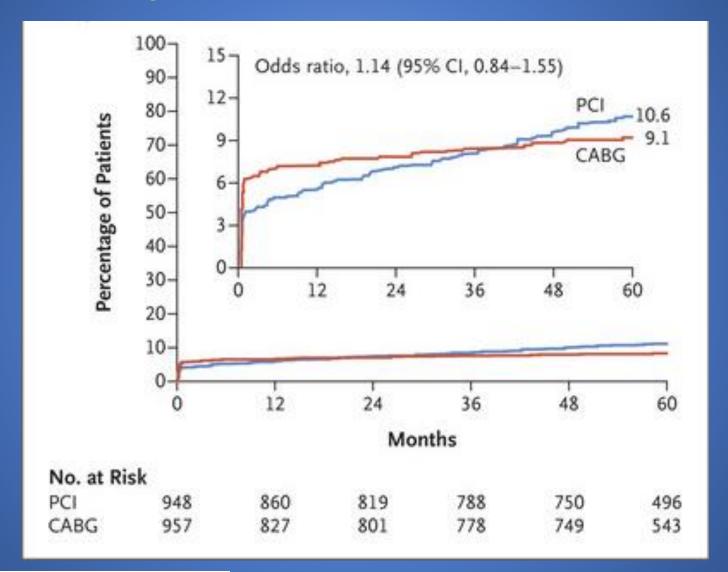


Stroke



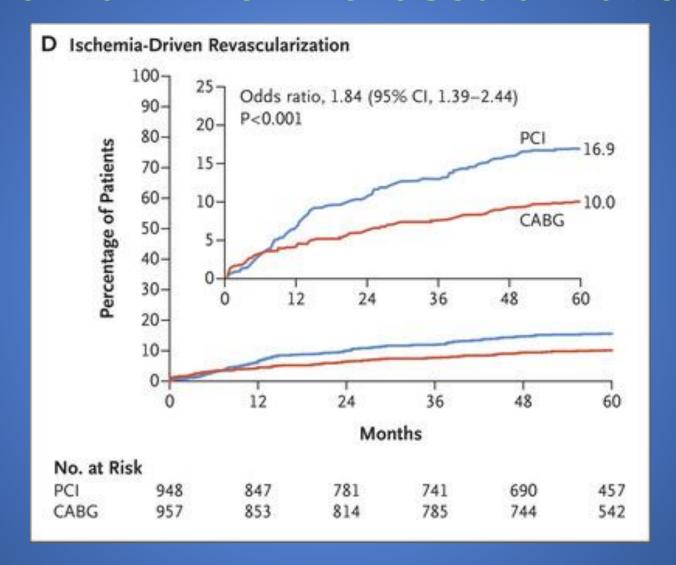


Myocardial Infarction

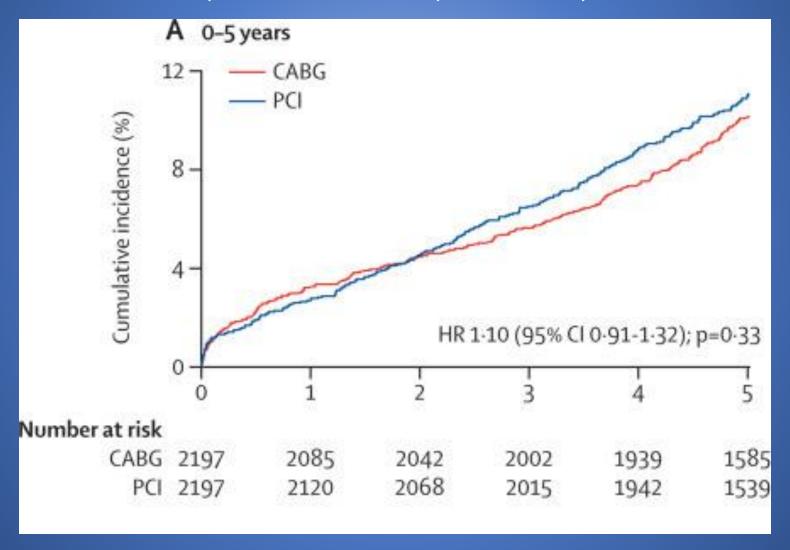




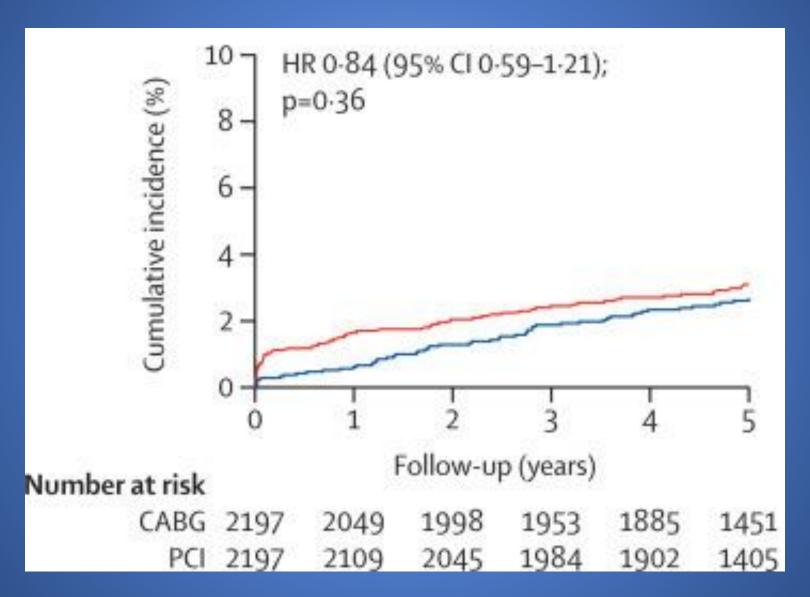
Ischemia-Driven Revascularization



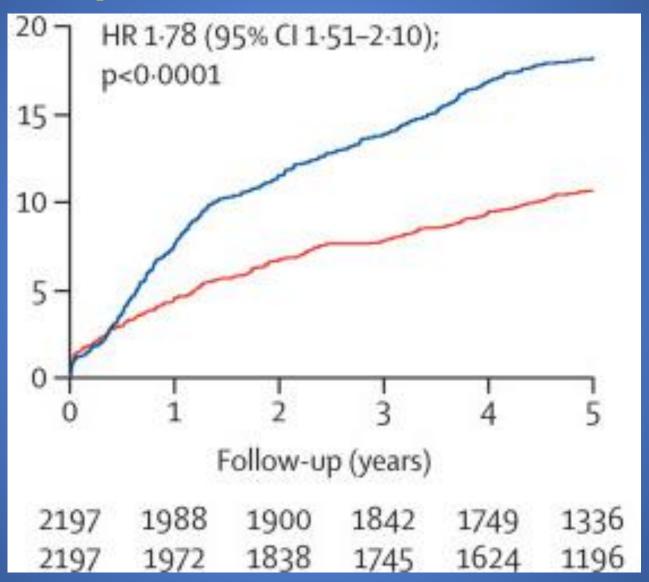
Primary Endpoint: 5-Year All-Cause Mortality EXCEL, PRE-COMBAT, SYNTAX, NOBLE



Stroke



Repeat Revascularization

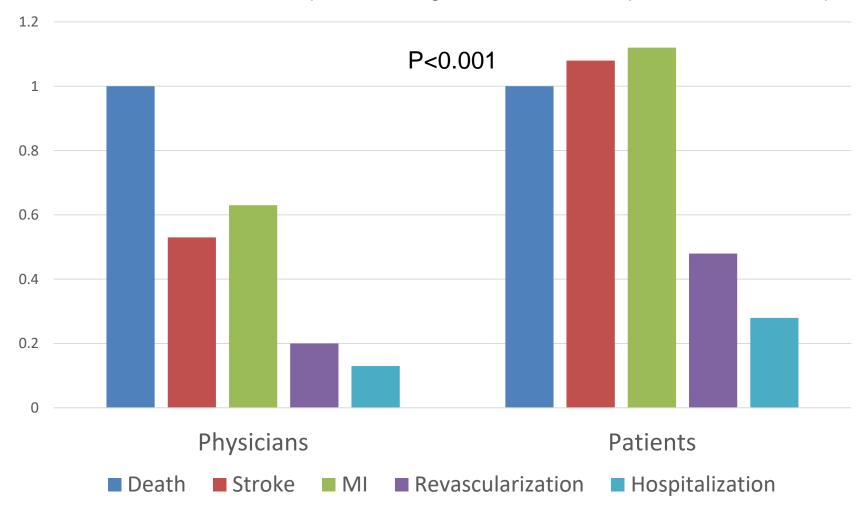


Patient Autonomy

Right of competent adults to make informed decisions about their own medical care.

What Outcomes Matter Most to Physicians and Patients

164 clinical trialists and 785 CV patients weighed the relative importance of CV endpoints



Stolker JM. Circulation 2014.130:1254-61.

Clinical Judgement

- Complex bifurcation disease
- Calcified left main disease
- Multi-vessel diffuse CAD
- Diabetes
- CTO
- Good distal targets
- Age

Favorable Features for PCI

- Ostial or midshaft lesions
- Large diameter left main
- Non-calcified left main disease
- Single-vessel CAD
- No bifurcation disease
- Complete revascularization
- No CTO
- Small LCX
- Age
- Frailty
- Poor surgical candidates

Other Considerations

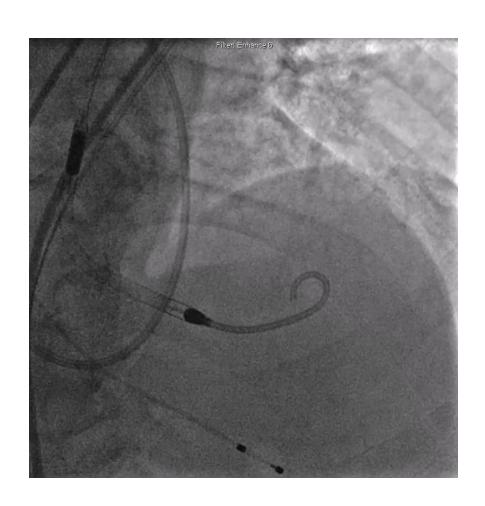
- NNT
- Soft clinical endpoints
- If cardiac surgeon had LM disease, would he choose CABG or PCI
- Choice of hospital and operator

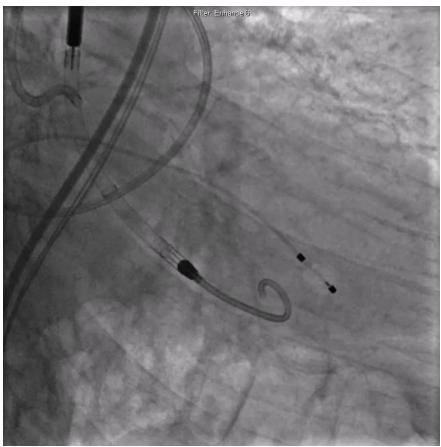


Subgroup	PCI (N=948) CAB		CABG (N	- 957)	Odds Ratio (959	Odds Ratio (95% CI)	
	Events/total patients	Event rate %	Events/total patients	Event rate %			
All patients	203/948	22.0	176/957	19.2		1.19 (0.95-150)	
Age (median cutoff)	,		210/201	22.0	_		
≥67 yr	123/466	27.2	98/472	21.8		1.39 (1.02-1.89)	
<57 yr	80/482	16.9	78/485	16.6	_•	1.00 (0.71-140)	
Sex			,			, ,	
Male	145/722	20.6	134/742	18.7	- 	1.12 (0.86-1.46)	
Female	58/226	26.3	42/215	21.1		1.39 (0.88-2.20)	
Diabetes melitus, medically treated			1422		_	and green army	
Yes	72/256	29.0	62/249	25.5		1.24 (0.83-1.86)	
No	131/692	19.4	114/707	16.9		1.17 (0.89-1.55)	
Chronickidney disease					_		
Estimated GFR ≤ 60 ml/min	54/164	34.0	37/144	27.6		1.44 (0.86-2.39)	
Estimated GFR > 60 ml/min	147/770	19.5	135/791	17.6	-is-	1.13 (0.87-1.47)	
Left ventricular ejection fraction	,						
≥50%	158/782	20.6	144/796	18.7	-is-	1.14 (0.88-1.46)	
<50%	33/111	31.5	26/115	24.2		1.35 (0.73-2.49)	
Geographic region	,		-4		_		
No th America	89/381	24.2	61/371	17.3		1.57 (1.09-2.26)	
Europe	111/534	21.1	102/541	19.6		1.09 (0.81-1.48)	
Other	3/33	9.6	13/45	29.6	4	0.24 (0.06-0.96)	
Non-left main diseased coronary arteries (core laboratory assessment)	7.0					,	
0	33/163	20.7	23/167	14.3	-	1.55 (0.86-2.78)	
1	60/ 292	21.2	61/292	21.9	——	0.94 (0.62-1.40)	
2	79/ 325	25.0	50/295	17.8		1.58 (1.06-2.36)	
3	31/162	19.2	37/182	20.7		0.93 (0.54-1.59)	
Left main bifurcation or trifurcation stenosis ≥50% (corelaboratory assessment)	,		,			,	
Yes	171/771	22.7	136/741	19.0		1.24 (0.96-1.60)	
No	32/171	19.2	35/195	18.9		1.05 (0.62-1.79)	
SYNTAX score (site reported)							
≤22	119/560	21.9	106/588	18.7	 	1.21 (0.90-1.62)	
23-32	84/ 386	22.2	70/366	20.0		1.16 (0.81-1.67)	
SYNTAX score (core laboratory assessment)							
≤22	49/294	17.2	58/364	16.7	-	0.99 (0.65-1.51)	
23-32	91/392	23.7	69/346	20.7		1.22 (0.85-1.74)	
≥33	56/ 228	25.0	42/216	20.0		1.36 (0.86-2.15)	
					0.2 0.5 1.0 15 2.0	50	
					PCI Better CAB G I	-	



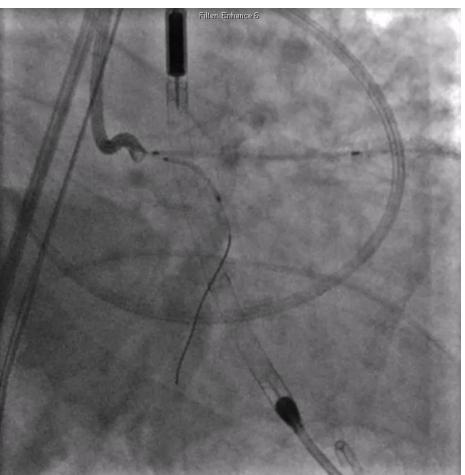
ULMCA PCIWith Impella





ULMCA PCI With Impella



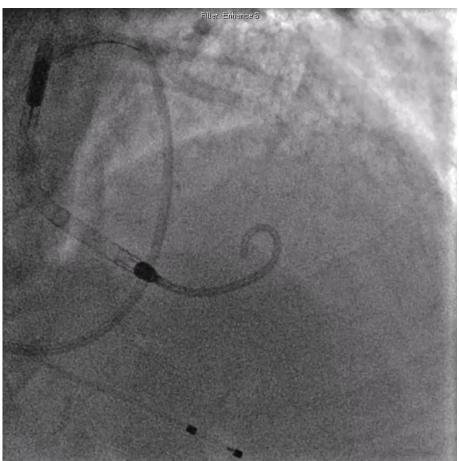


Rotational atherectomy

Crush technique

ULMCA PCI With Impella





Final angiography

Conclusions

- No difference in the 5-year composite endpoint in low/intermediate risk patients
- No difference in 5-year mortality
- Higher rates of repeat revascularization with PCI
- Lower rates of soft clinical endpoints with PCI

Thank you