

MESA REDONDA/DEBATE: ENFERMEDAD CORONARIA Y TAVI

Luis Nombela Franco, Ignacio Amat Santos

Is there a need to treat?: Yes or Not

- Age, risk profile
- Severity, complexity, and extent of CAD
- Clinical presentation or impacting survival?

How?:

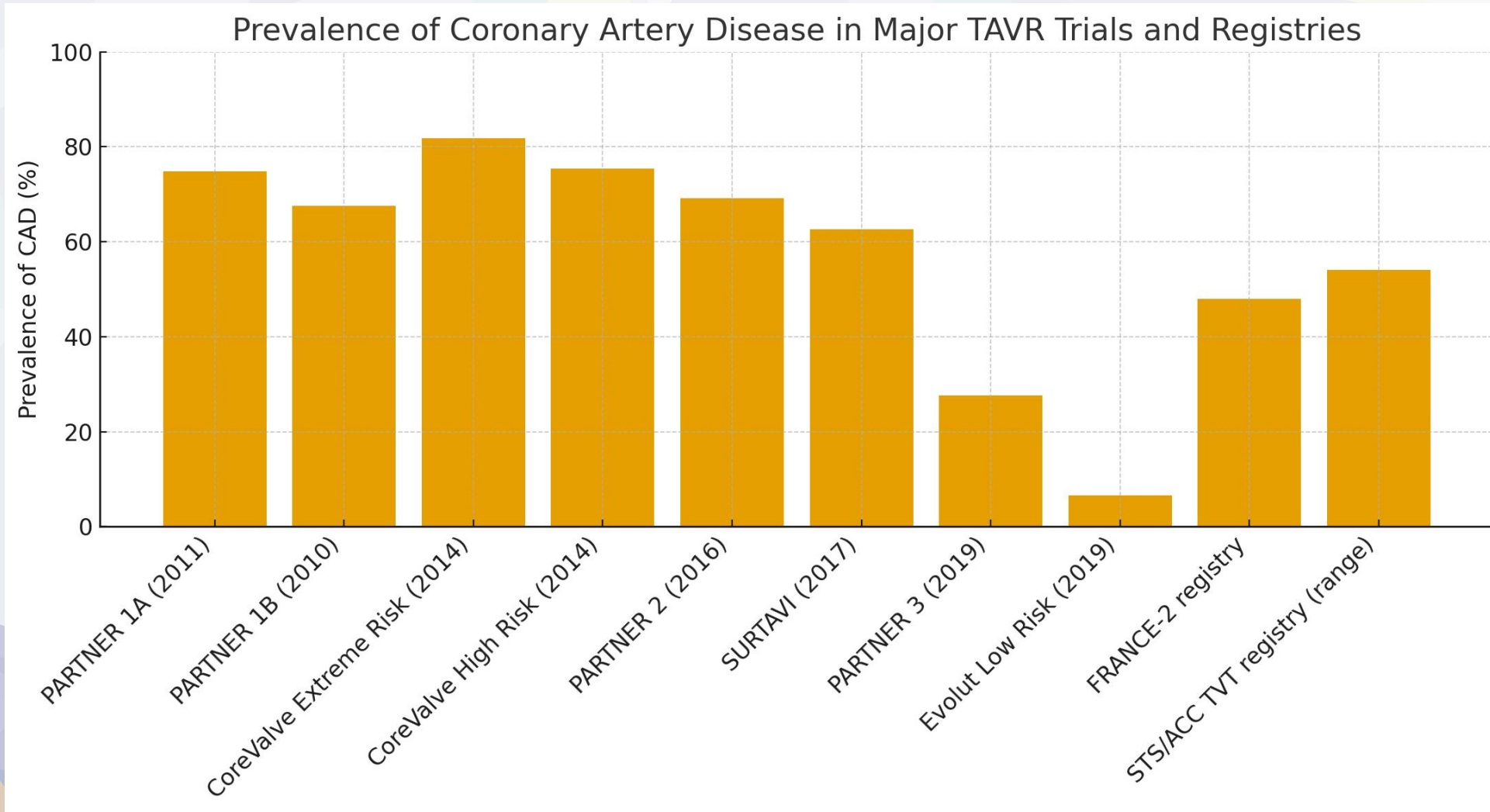
- PCI vs. CABG

When?:

- **Before vs.** During / After?



Prevalence of CAD and TAVI



Impact of CAD and TAVI

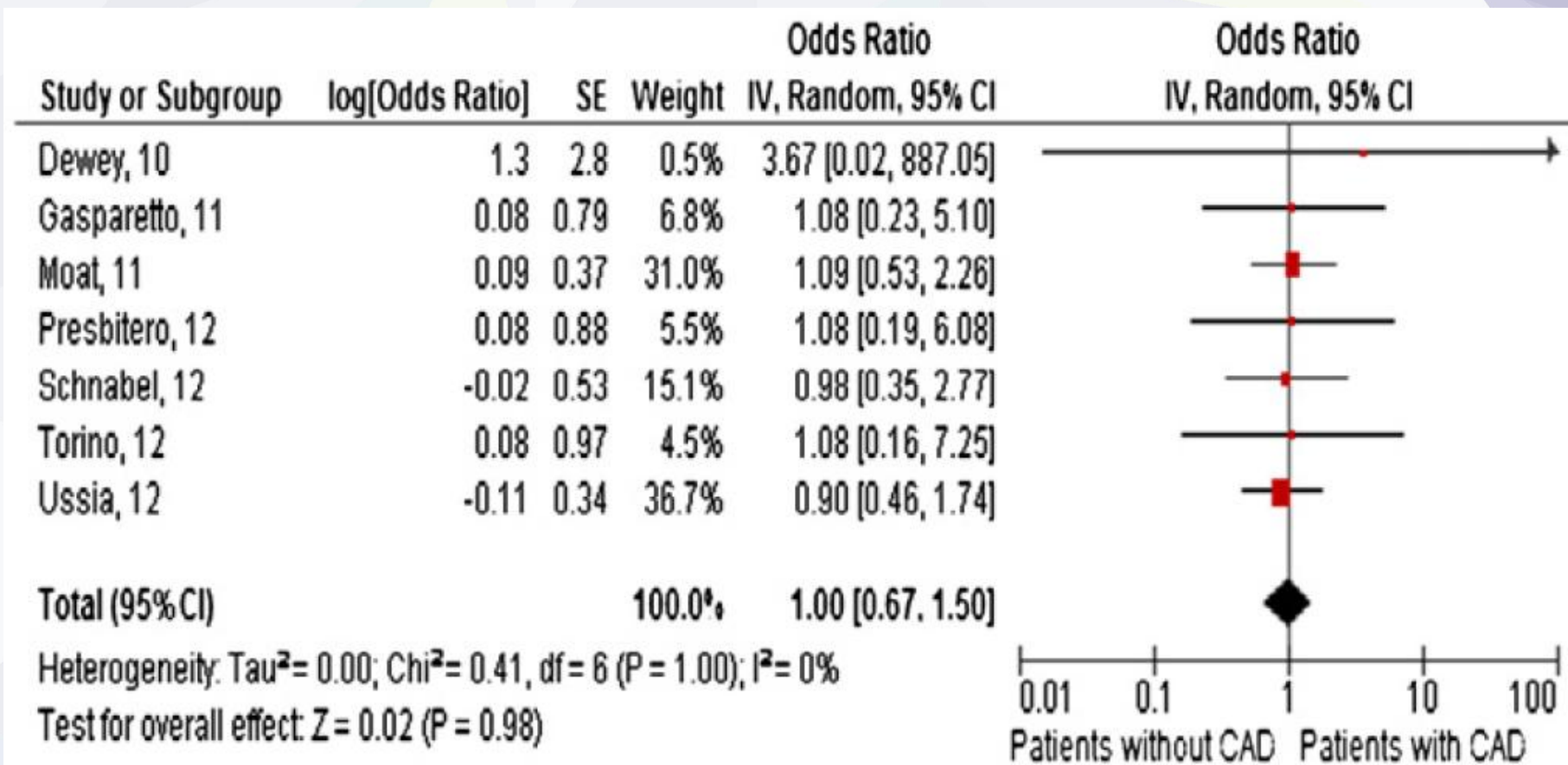


Fig. 2. Pooled adjusted OR for all cause death.

Impact of PCI and TAVI

Transcatheter Aortic Valve Implantation With or Without Percutaneous Coronary Artery Revascularization Strategy: A Systematic Review and Meta-Analysis

Mortality at 1 year

Khawaja 2015 ³⁷	6	25	15	68	4.2%	1.12 [0.38, 3.29]
Masson 2010 ⁹	3	15	26	89	2.7%	0.61 [0.16, 2.33]
Penkalla 2015 ³⁵	30	76	94	232	17.4%	0.96 [0.56, 1.63]
Tatar 2014 ³²	11	38	21	103	6.7%	1.59 [0.68, 3.72]
Subtotal (95% CI)		154		492	31.0%	1.05 [0.71, 1.56]

Total events

50

156

Heterogeneity: $\text{Tau}^2 = 0.00$; $\text{Chi}^2 = 1.69$, $\text{df} = 3$ ($P = 0.64$); $I^2 = 0\%$

Test for overall effect: $Z = 0.24$ ($P = 0.81$)

Cardiovascular mortality

Abdel-Wahab 2012 ¹²	1	55	3	70	0.9%	0.41 [0.04, 4.09]
Tatar 2014 ³²	1	38	1	103	0.6%	2.76 [0.17, 45.21]
Wenaweser 2011 ¹⁰	3	59	9	197	2.7%	1.12 [0.29, 4.27]
Subtotal (95% CI)		152		370	4.3%	1.03 [0.35, 2.99]

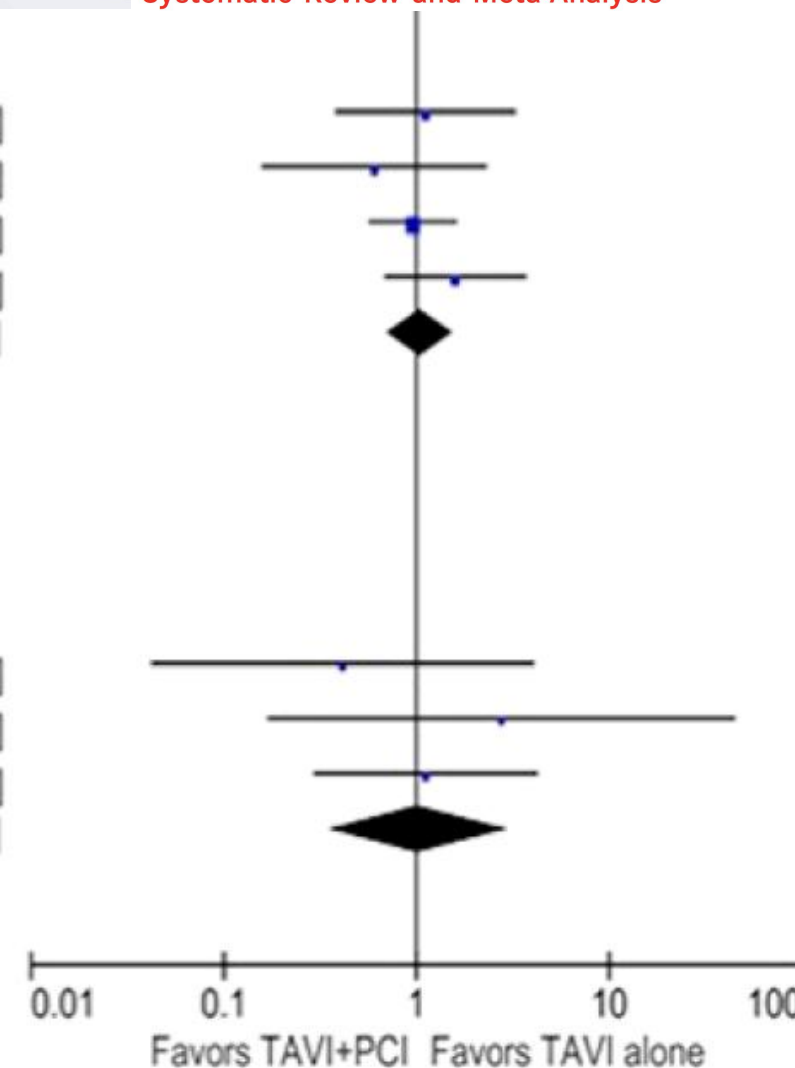
Total events

5

13

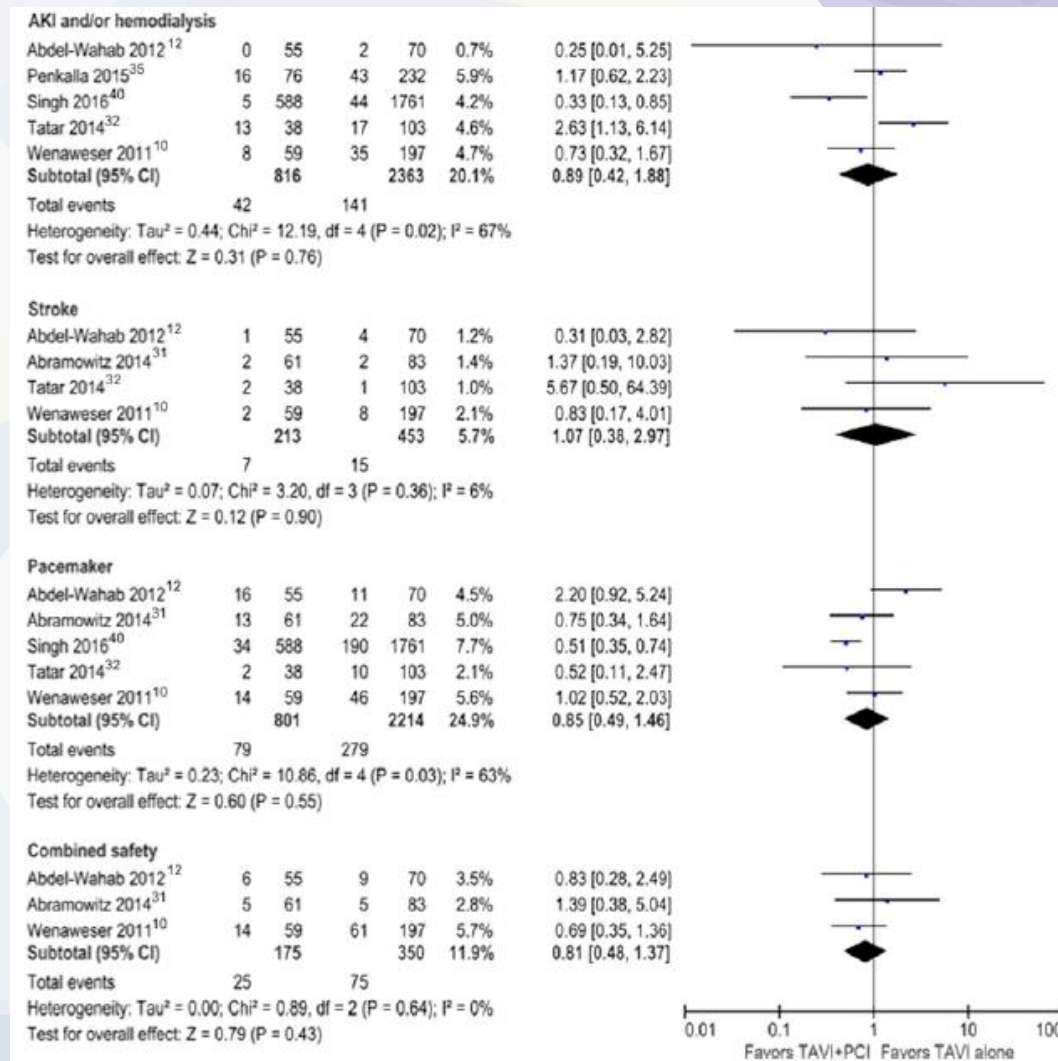
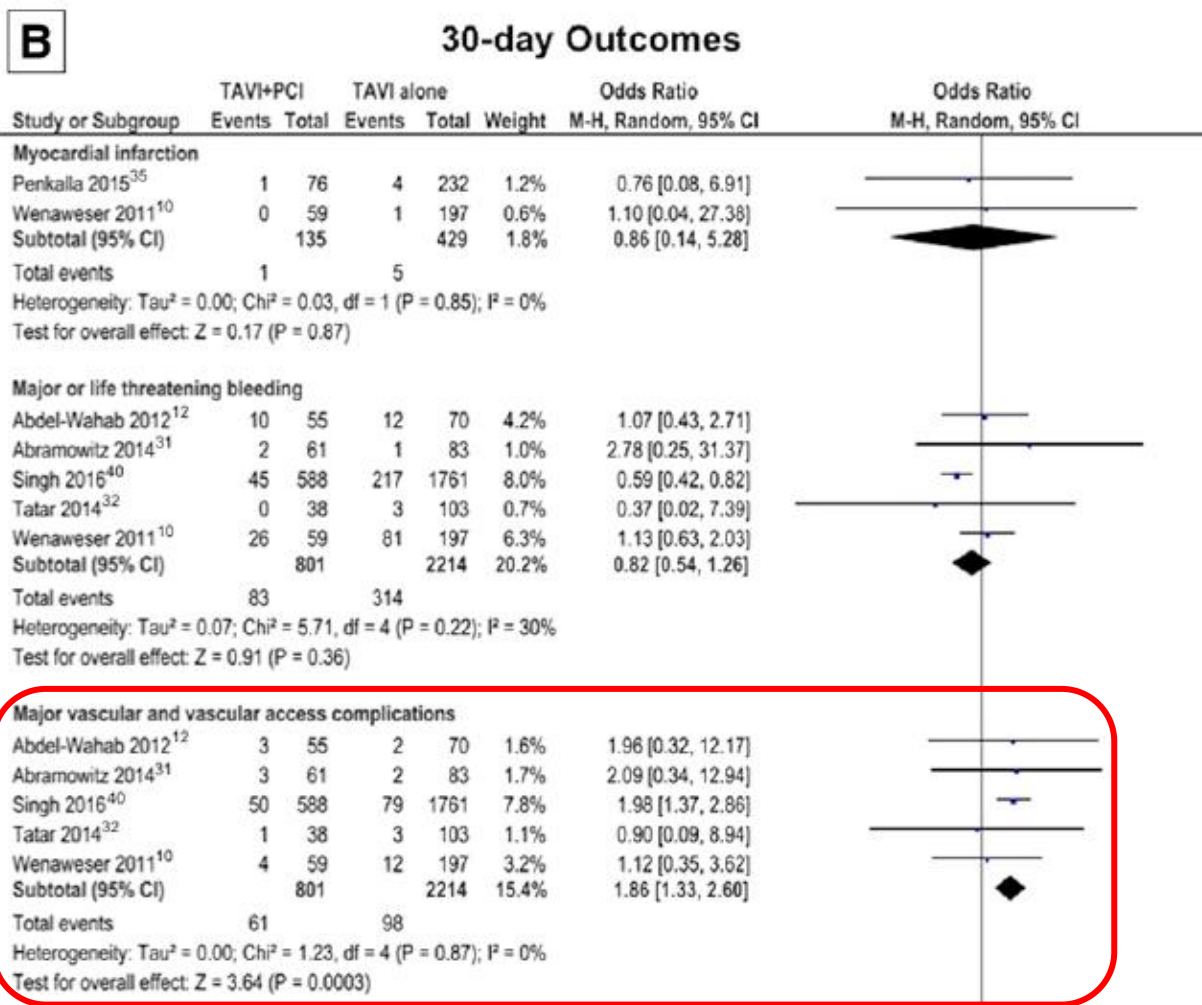
Heterogeneity: $\text{Tau}^2 = 0.00$; $\text{Chi}^2 = 1.11$, $\text{df} = 2$ ($P = 0.57$); $I^2 = 0\%$

Test for overall effect: $Z = 0.05$ ($P = 0.96$)



Impact of PCI and TAVI

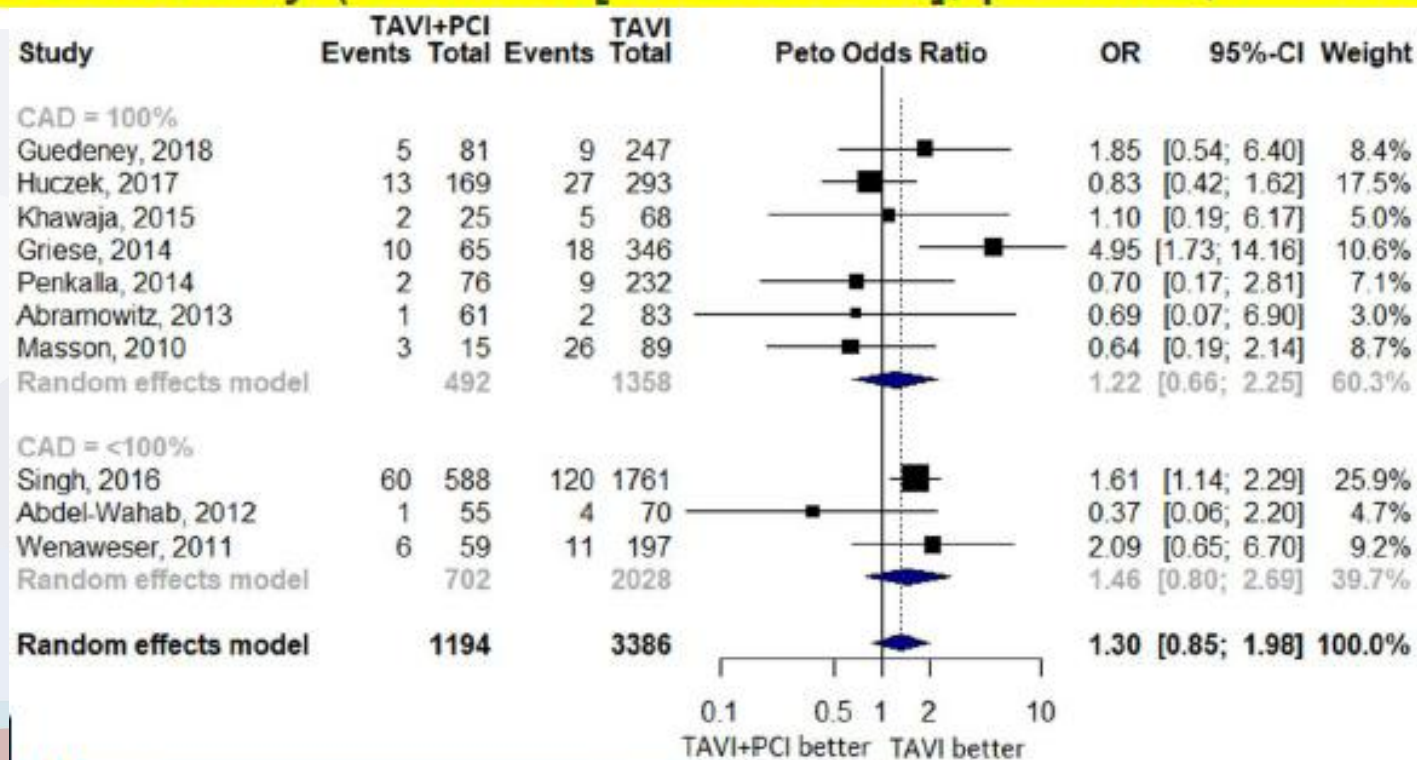
Transcatheter Aortic Valve Implantation With or Without Percutaneous Coronary Artery Revascularization Strategy: A Systematic Review and Meta-Analysis



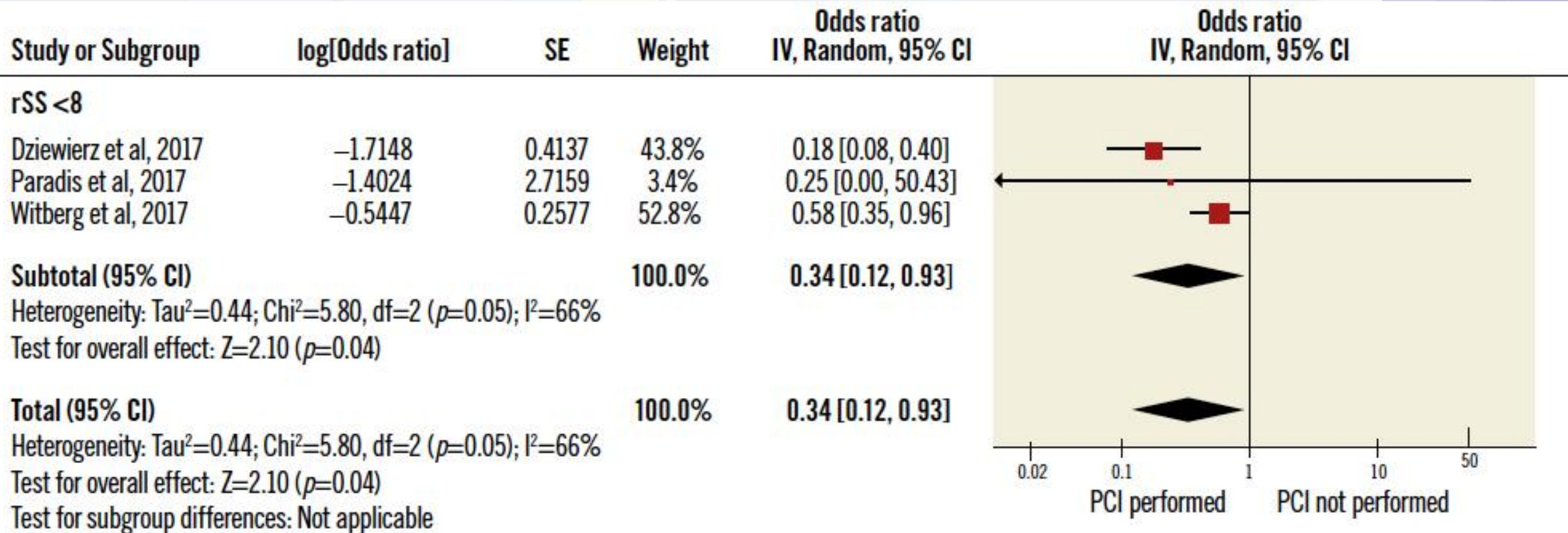
Impact of PCI and TAVI

Meta-Analysis Comparing Outcomes in Patients Undergoing Transcatheter Aortic Valve Implantation With Versus Without Percutaneous Coronary Intervention

No differences in 30-day all-cause mortality (OR 1.30 [0.85 to 1.98], $p = 0.22$, $I^2 = 37.5\%$), stroke (OR 0.7 (0.36 to 1.45), $p = 0.36$, $I^2 = 32.8\%$), MI (OR 2.71 [0.55 to 12.23], $p = 0.22$, $I^2 = 41.3\%$), acute kidney injury (OR 0.7 [0.46 to 1.06], $p = 0.08$, $I^2 = 14.4\%$) and 1-year all-cause mortality (OR 1.19 [0.92 to 1.52], $p = 0.18$, $I^2 = 0.0\%$)



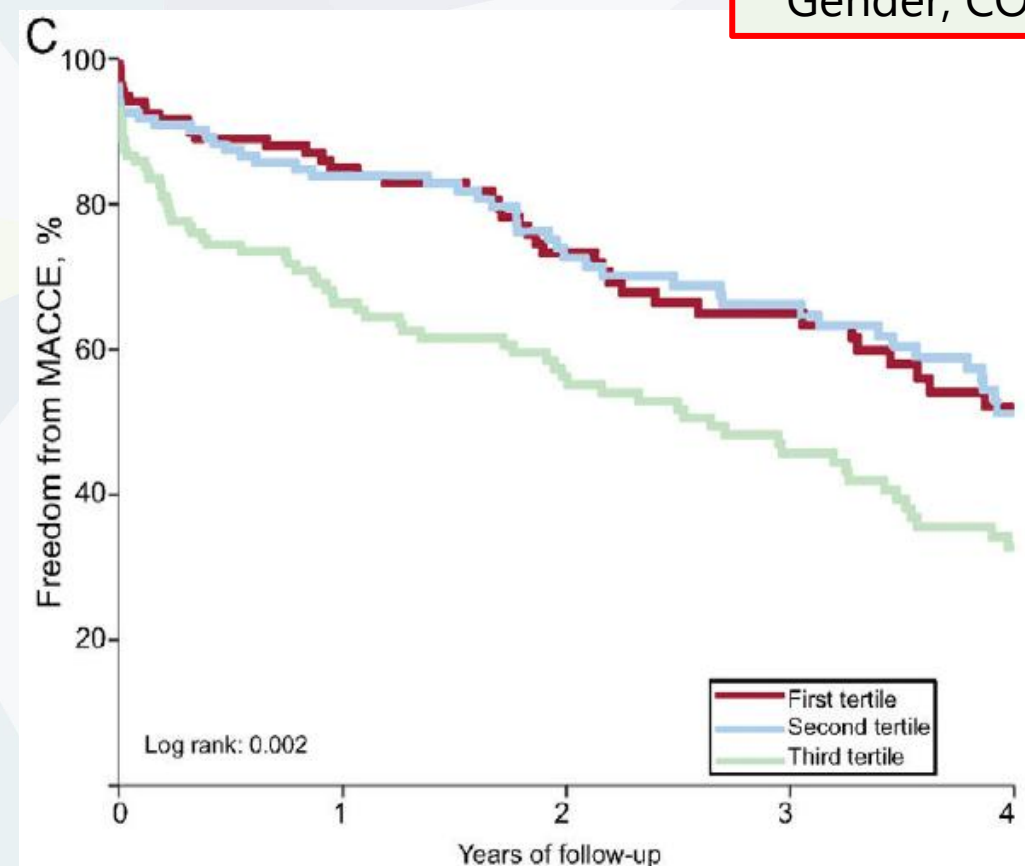
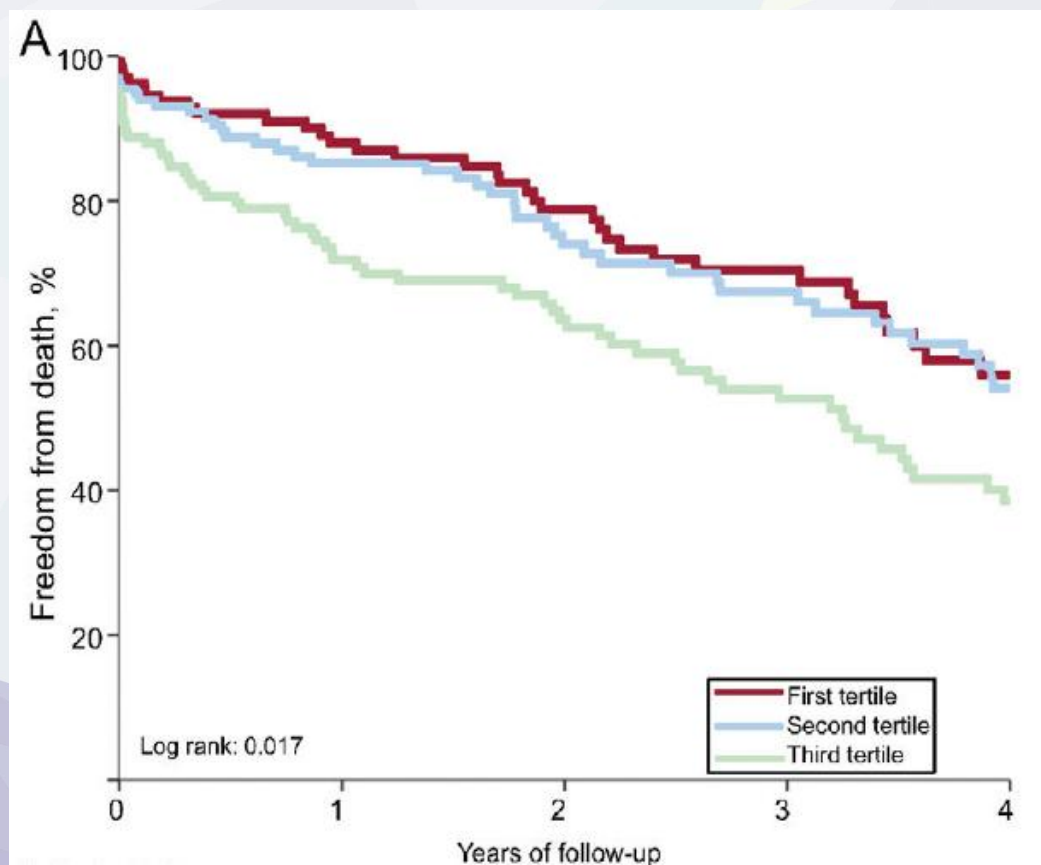
Impact of CAD/PCI and TAVI



Impact of CAD + **other clinical factors** and TAVI

The Value of the SYNTAX Score II in Predicting Clinical Outcomes in Patients Undergoing Transcatheter Aortic Valve Implantation

Age; CrCl; LVEF;
Gender; COPD



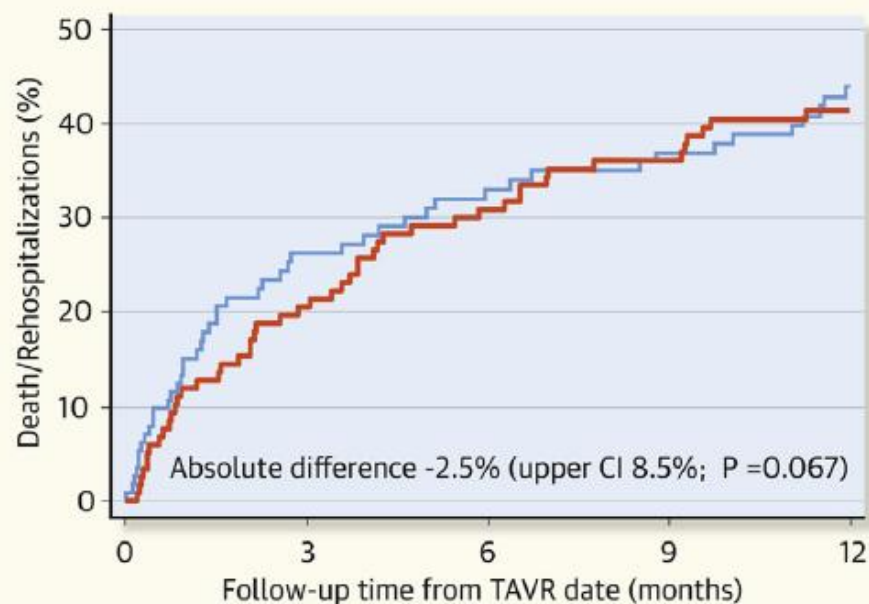
CAD and TAVI: RCT

Activation Trial

No Benefits in PCI for death-Rehospitalization
Increased Bleeding risk at 1 year

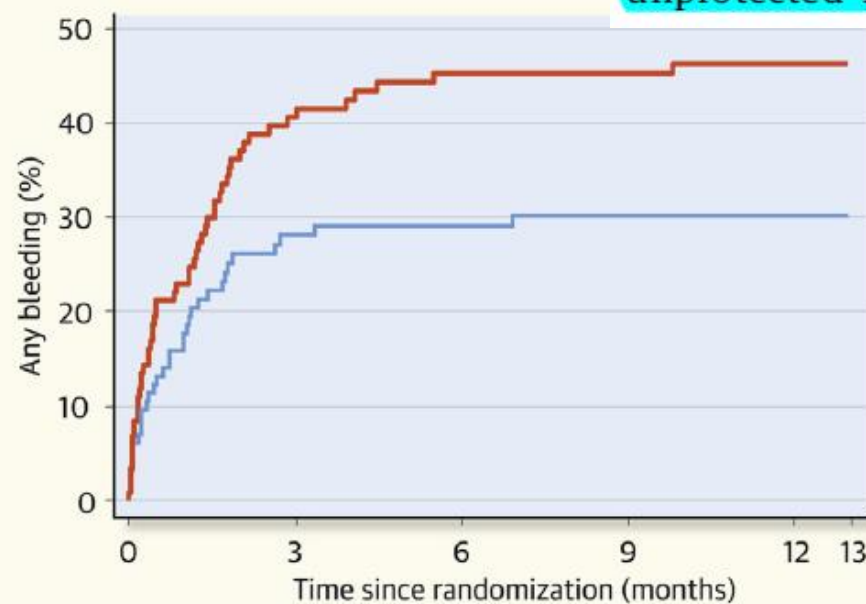
N=235

and at least 1 stenosis of $\geq 70\%$ in a major epicardial artery deemed suitable for PCI (or $\geq 50\%$ if protected left main stem or vein graft). Exclusion criteria included 1 or more of the following: acute coronary syndrome within 30 days of enrollment, Canadian Cardiovascular Society angina class III or greater, unprotected left main stem disease, or clinical fea-



No. at risk:

— PCI	119	92	80	73	56
— No PCI	116	78	69	65	50



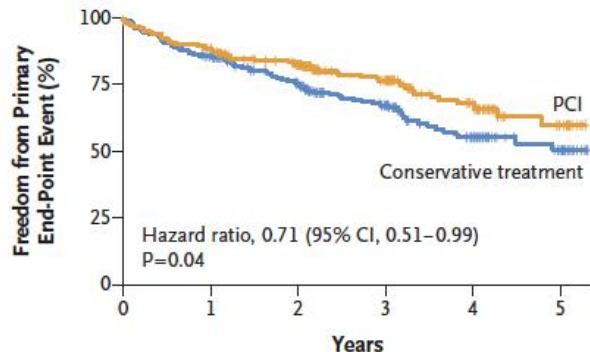
No. at risk:

— PCI	119	65	58	56	52	39
— No PCI	116	72	66	64	63	30

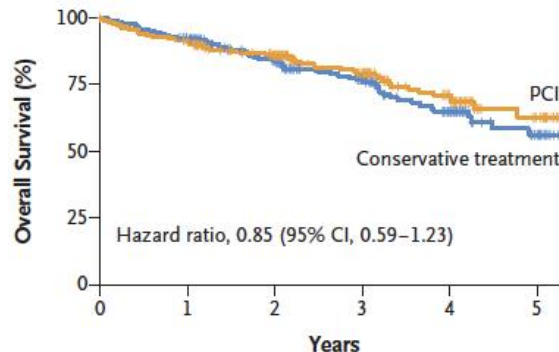
NOTION 3 TRIAL

N=455

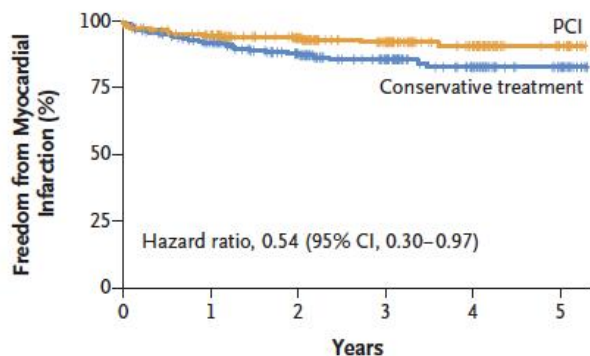
A Death from Any Cause, Myocardial Infarction, or Urgent Revascularization (primary end point)



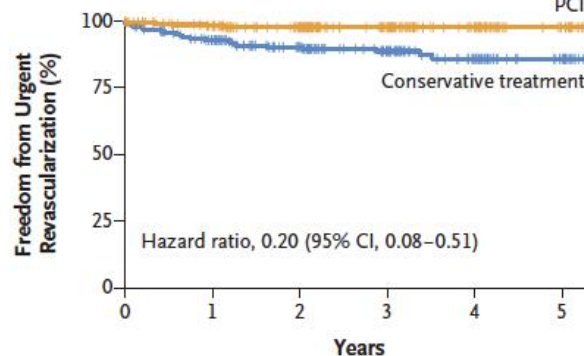
B Death from Any Cause



C Myocardial Infarction



D Urgent Revascularization



nosis in a coronary artery of at least 2.5 mm in diameter. Physiological significance was defined as an FFR of 0.80 or less or a coronary-artery diameter stenosis of at least 90% on the basis of visual assessment. TAVI was performed accord-

area), acute coronary syndrome within 14 days before the decision by the heart team in favor of TAVI, and left main coronary-artery stenosis. Life

Timing PCI: 74% before TAVI

NOTION 3 TRIAL

Vessels with significant lesions – no. (%)

LAD	143 (63)	133 (58)
LCx	34 (15)	33 (14)
RCA	69 (30)	77 (34)
PDA/diagonals/marginals/PLA	48 (21)	41 (18)

NOTION 3 TRIAL

N=455

End Point	PCI (N= 227)	Conservative Treatment (N= 228)	Hazard Ratio (95% CI)	P Value
	<i>number (percent)</i>			
Primary end point: MACE†	60 (26)	81 (36)	0.71 (0.51–0.99)	0.04
Secondary end points				
Death from any cause	53 (23)	62 (27)	0.85 (0.59–1.23)	
Myocardial infarction‡	17 (7)	31 (14)	0.54 (0.30–0.97)	
Urgent revascularization§	5 (2)	25 (11)	0.20 (0.08–0.51)	
Death from cardiovascular causes¶	20 (9)	30 (13)	0.67 (0.38–1.19)	
Any revascularization	6 (3)	48 (21)	0.12 (0.05–0.27)	
Stroke	23 (10)	35 (15)	0.67 (0.39–1.14)	
Safety end points				
Any bleeding event	64 (28)	45 (20)	1.51 (1.03–2.22)	
Life-threatening or disabling	23 (10)	16 (7)		
Major	26 (11)	22 (10)		
Minor	53 (23)	36 (16)		
Stent thrombosis	1 (<1)	2 (1)	—	
Acute kidney failure	12 (5)	26 (11)	0.45 (0.23–0.89)	

TAVI PCI Trial

The TAVI-PCI trial tests the hypothesis that the strategy “PCI after TAVI” is **non-inferior** to the strategy “PCI before TAVI” in patients with severe AS and concomitant CAD

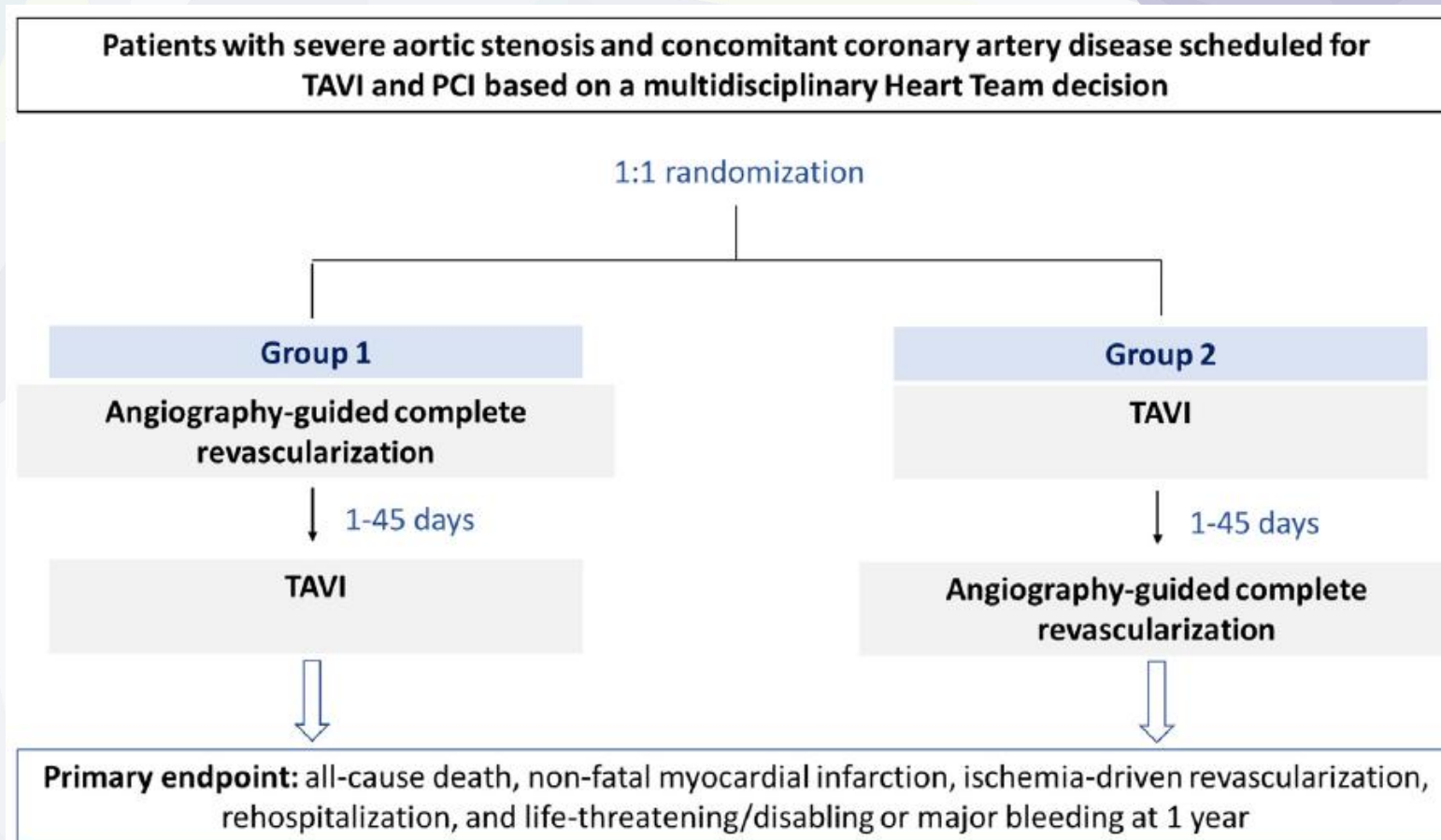
INCLUSION CRITERIA:

- $\geq 70\%$ DS (by visual estimation) in a coronary artery $\geq 2.5\text{mm}$

EXCLUSION CRITERIA:

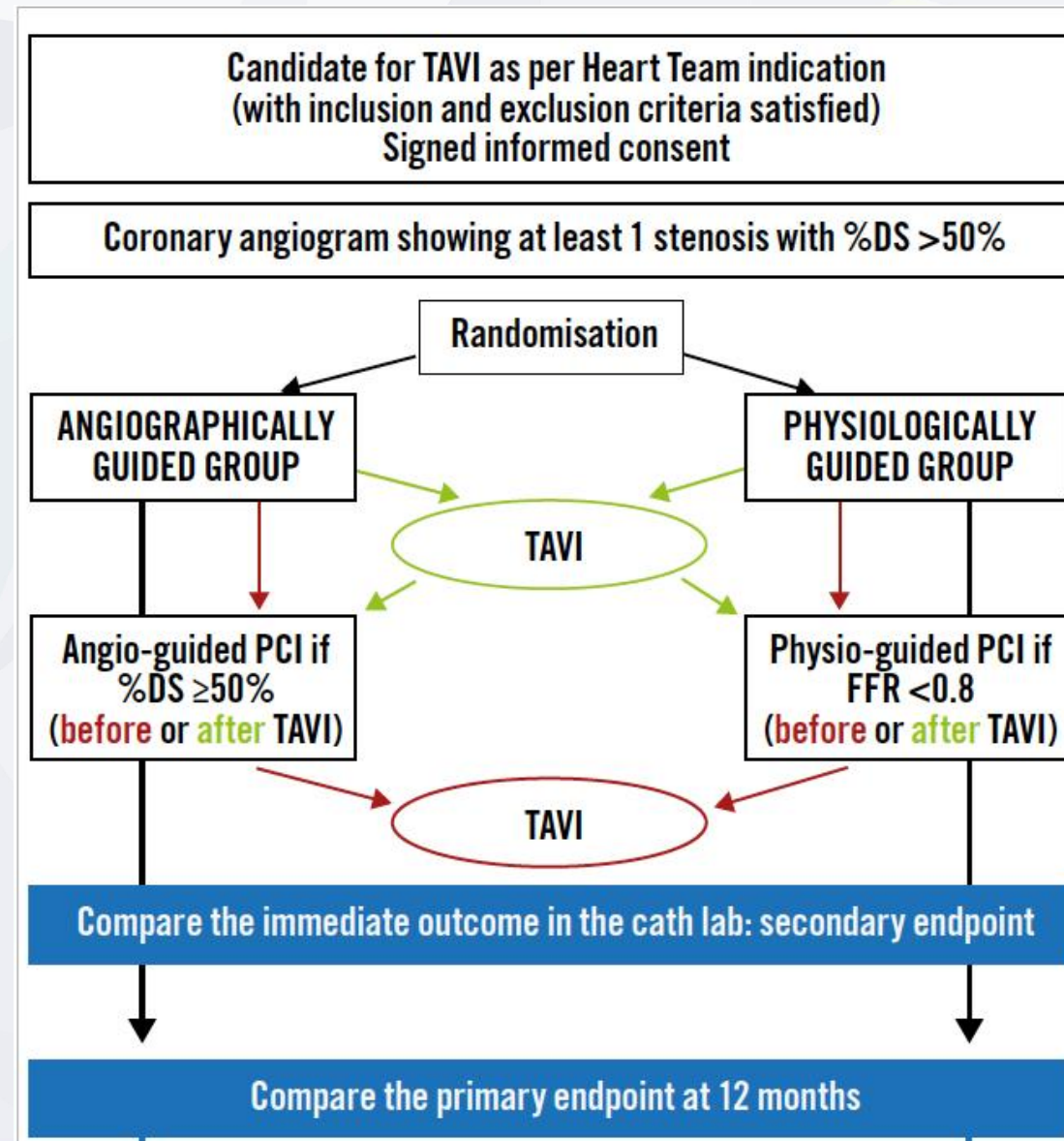
- Acute MI within 30-days

N=986



FAITAVI Trial

CAD and TAVI: Future



PRO-TAVI Trial

N=466

Inclusion criteria

1. TAVI as decided by local multidisciplinary heart team.
2. Concomitant CAD in major coronary artery with minimal diameter of 2.5 mm or bypass graft. Concomitant CAD defined as:
 - Presence of coronary stenosis of 70% to 99%.
 - Presence of intermediate coronary stenosis 40% to 70% combined with positive hemodynamic parameter.

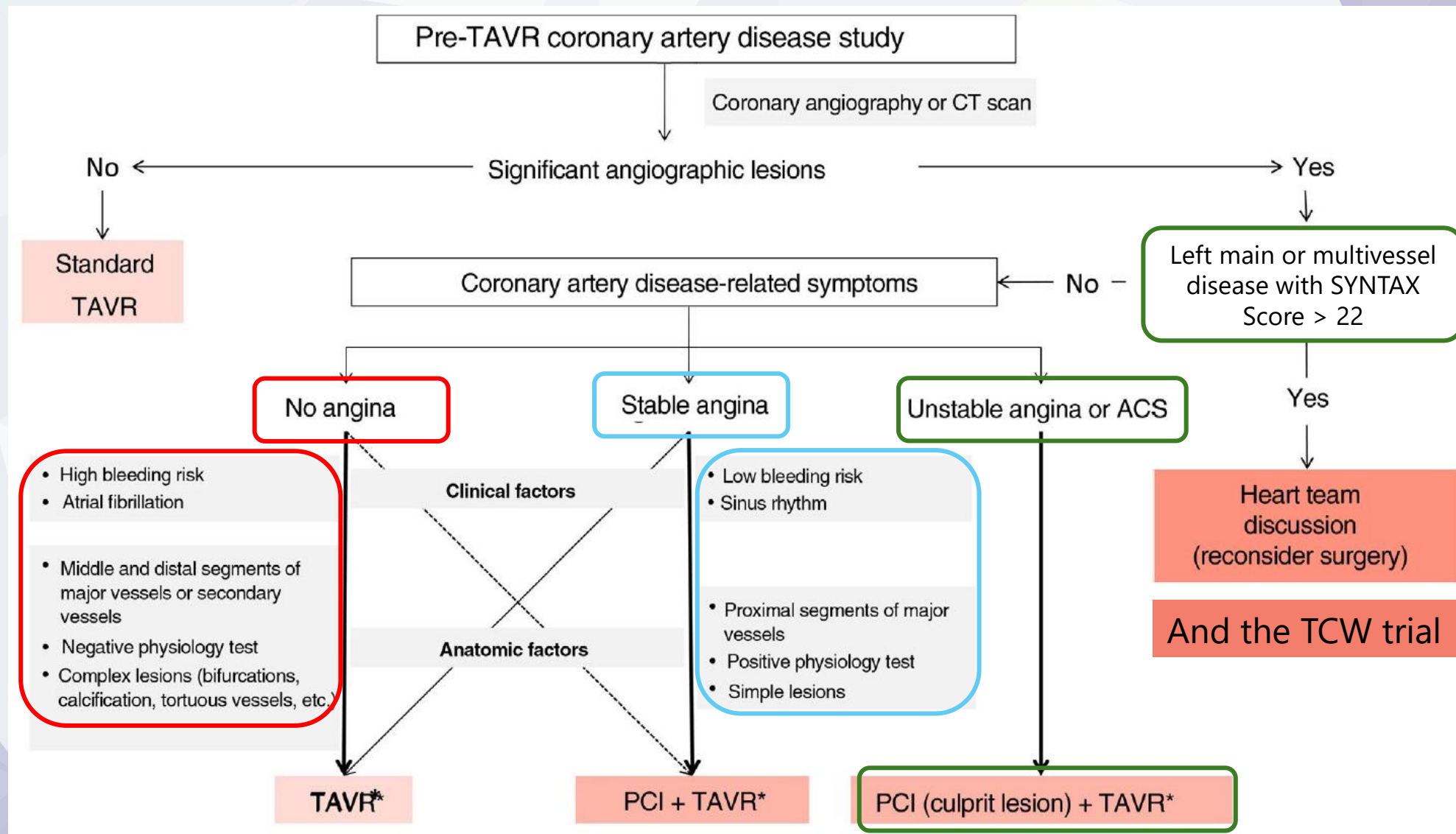
Exclusion criteria

1. Unprotected left main stenosis or left main equivalent.
2. No PCI-eligible stenosis.
3. Contraindication for DAPT.
4. Life expectancy <1 year.

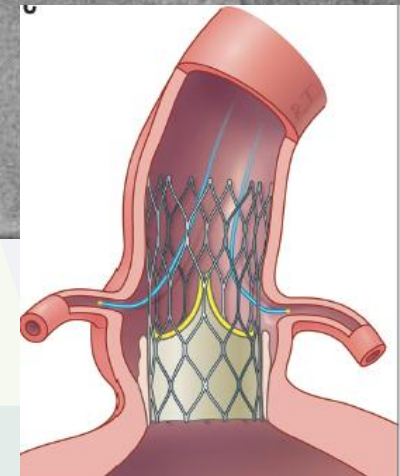
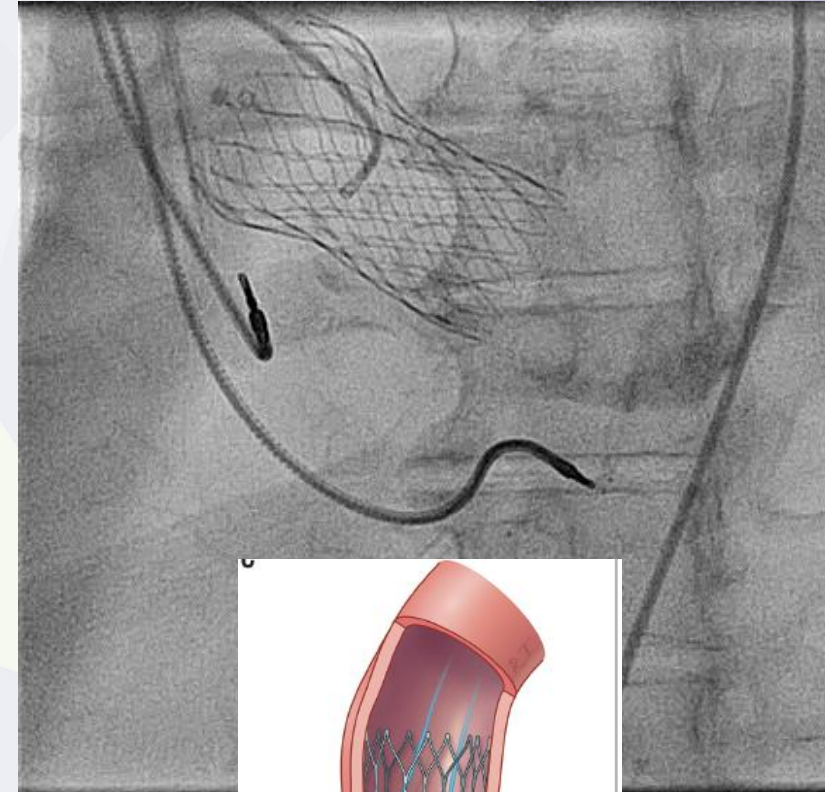
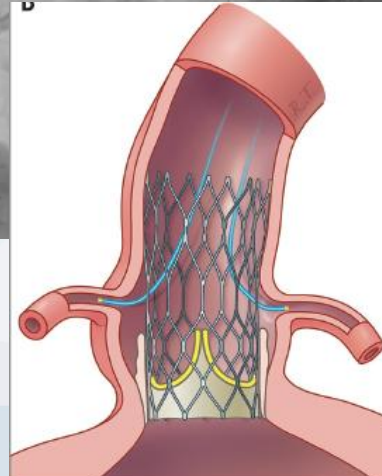
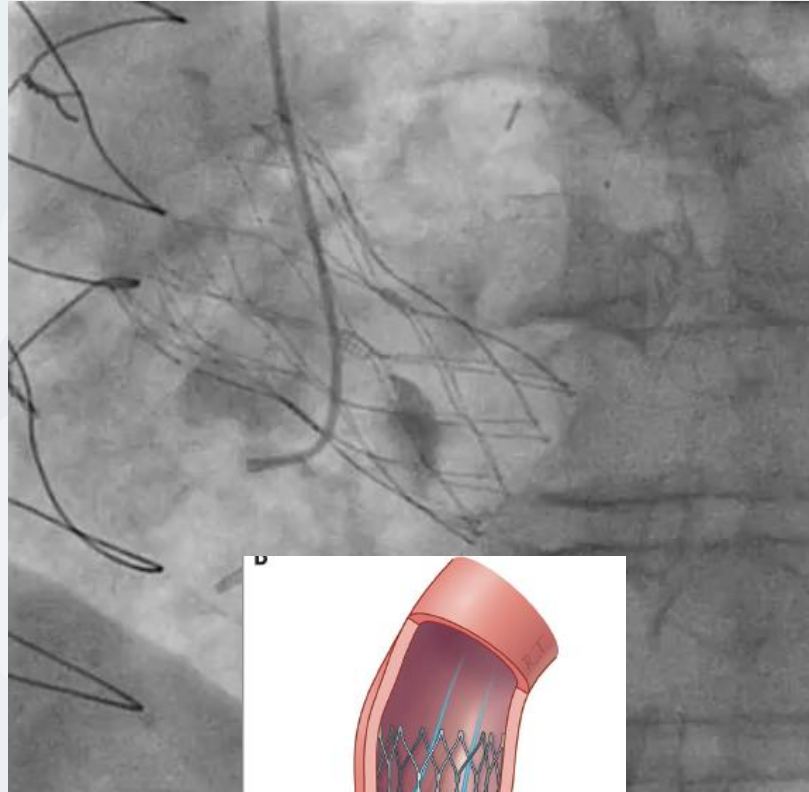
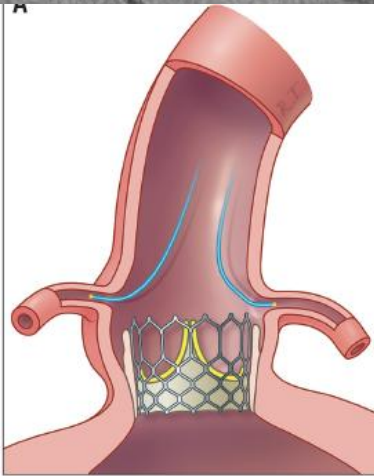
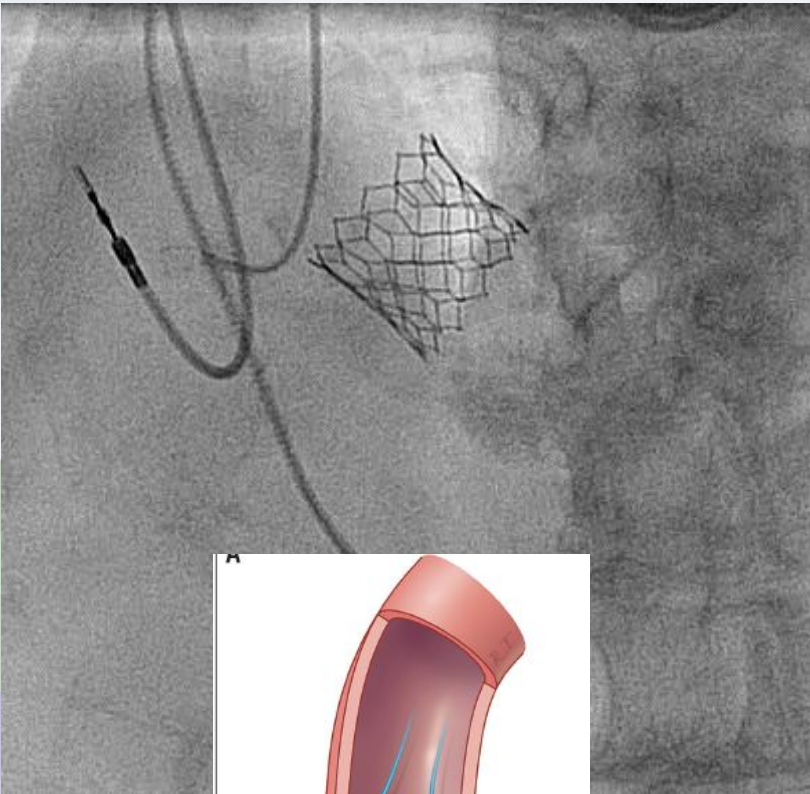
Randomization 1:1

PCI before TAVI or concomitant but before PCI

No PCI after TAVI (only if symptoms or signs of ischemia)



Selecciona bien a qué pacientes haces PCI y si tienes que hacerlo, hazlo antes de ponerte obstáculos!!

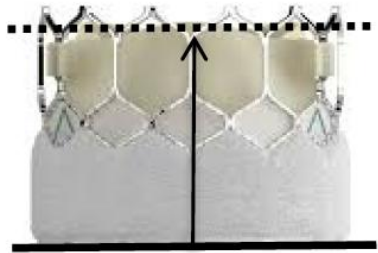


analiza la anatomía e implanta bien la válvula!!!

THV TYPE

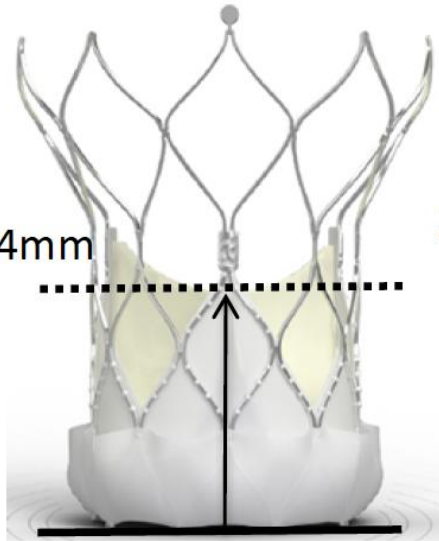
Leaflet Height

15-22mm



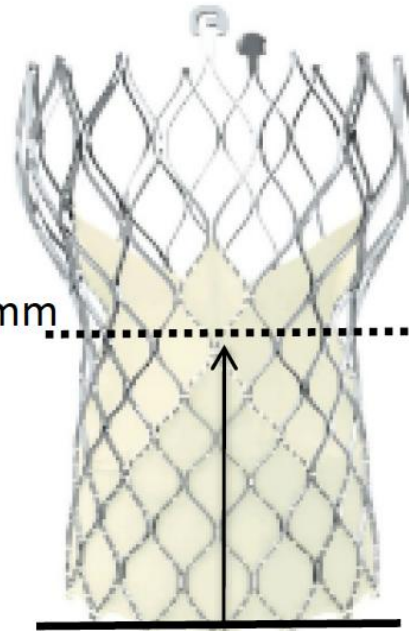
Sapien 3/ultra

21-24mm



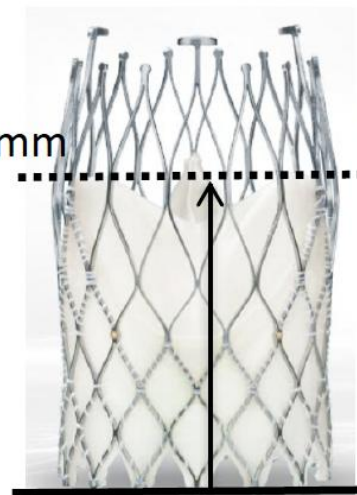
Navitor

26mm



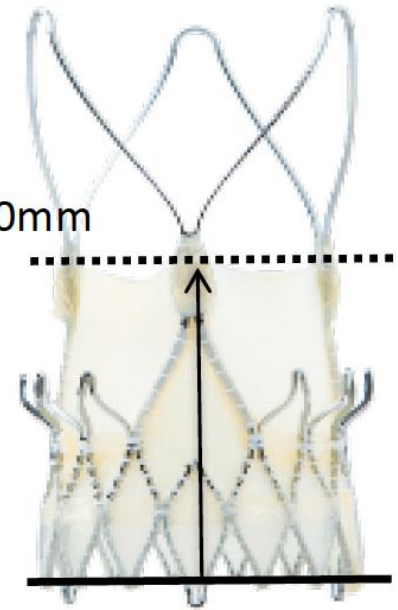
Evolut Pro

25-29mm



Allegra

25-30mm



Acurate Neo 2

Thank you

Luis Nombela-Franco
luisnombela@yahoo.com