

TAVI BEST CANDIDATE AND OPTIMIZED LONG TERM FOLLOW-UP

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PRELIMINARY PROGRAM

ADVANCES IN CARDIAC ARRHYTHMIAS
and
GREAT INNOVATIONS IN CARDIOLOGY
XXVII GIORNATE CARDIOLOGICHE TORINESI



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Indications for transcatheter aortic valve implantation

	Class	Level
TAVI should only be undertaken with a multidisciplinary “heart team” including cardiologists and cardiac surgeons and other specialists if necessary.	I	C
TAVI should only be performed in hospitals with cardiac surgery on-site.	I	C
TAVI is indicated in patients with severe symptomatic AS who are not suitable for AVR as assessed by a “heart team” and who are likely to gain improvement in their quality of life and to have a life expectancy of more than 1 year after consideration of their comorbidities.	I	B
TAVI should be considered in high risk patients with severe symptomatic AS who may still be suitable for surgery, but in whom TAVI is favoured by a “heart team” based on the individual risk profile and anatomic suitability.	Ila	B

« At the present stage, TAVI should not be performed in patients at intermediate risk for surgery and trials are required in this population. »

Contraindications for transcatheter aortic valve implantation

Absolute contraindications

Absence of a "heart team" and no cardiac surgery on the site.
Appropriateness of TAVI, as an alternative to AVR, not confirmed by a "heart team".

Clinical

- Estimated life expectancy < 1 year.
- Improvement of quality of life by TAVI unlikely because of comorbidities.
- Severe primary associated disease of other valves with major contribution to the patient's symptoms that can be treated only by surgery.

Anatomical

- Inadequate annulus size (< 18 mm, > 29 mm).
- Thrombus in the left ventricle.
- Active endocarditis.
- Elevated risk of coronary ostium obstruction (asymmetric valve calcification, short distance between annulus and coronary ostium, small aortic sinuses).
- Plaques with mobile thrombi in the ascending aorta, or arch.
- For transfemoral/subclavian approach: inadequate vascular access (vessel size, calcification, tortuosity).

Relative contraindications

- Bicuspid or non-calcified valves.
- Untreated coronary artery disease requiring revascularization.
- Haemodynamic instability.
- LVEF < 20%.
- For transapical approach: severe pulmonary disease, LV apex not accessible.

European Heart Journal 2012 - doi:10.1093/eurheartj/ehs109 &
European Journal of Cardio-Thoracic Surgery 2012 -
doi:10.1093/ejcts/ezs455).

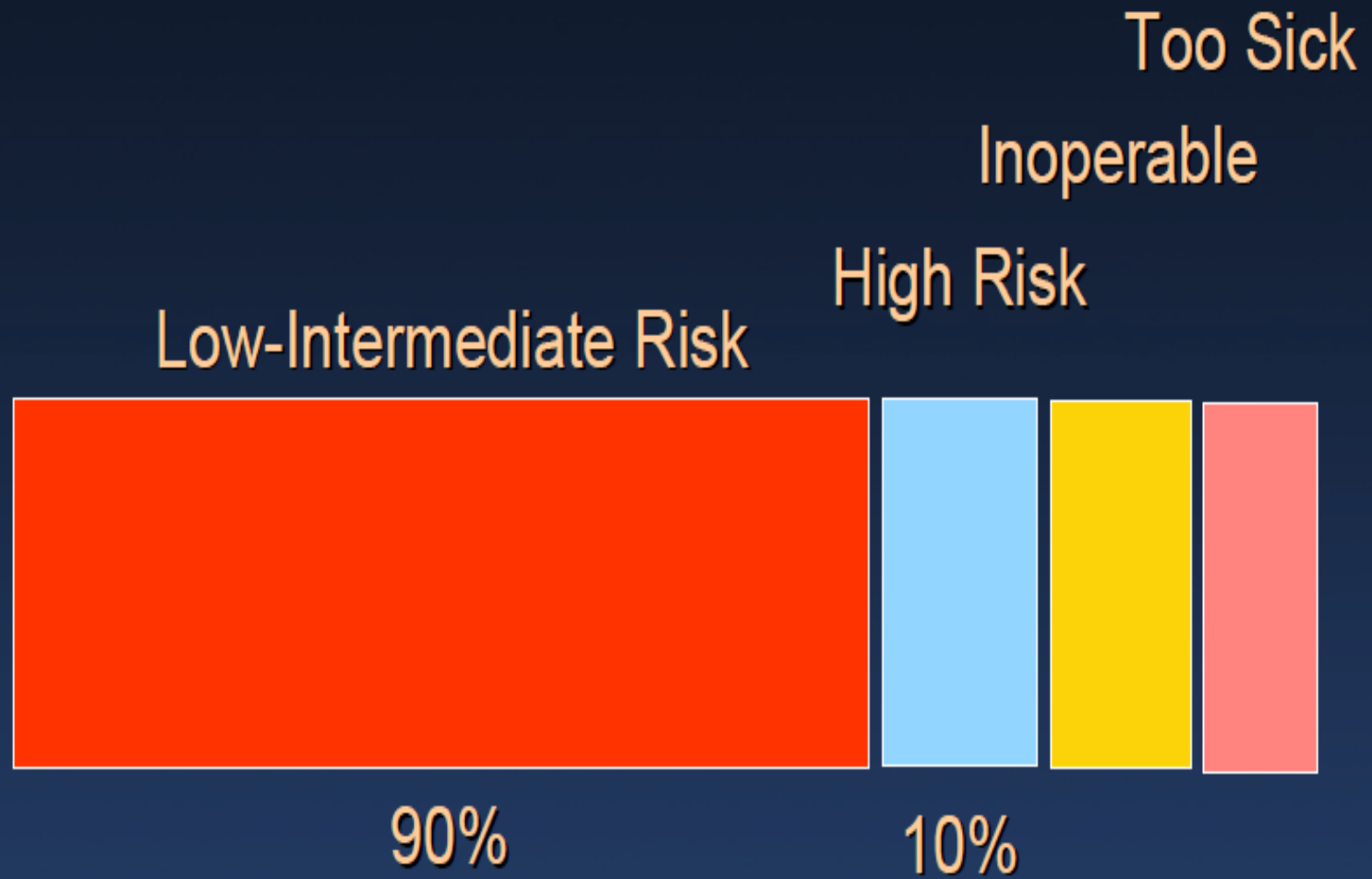
Regional Guidelines for TAVI implantation

Indicazioni all'impianto di protesi aortiche trans-catetere
(Percutanee e Transapicali)

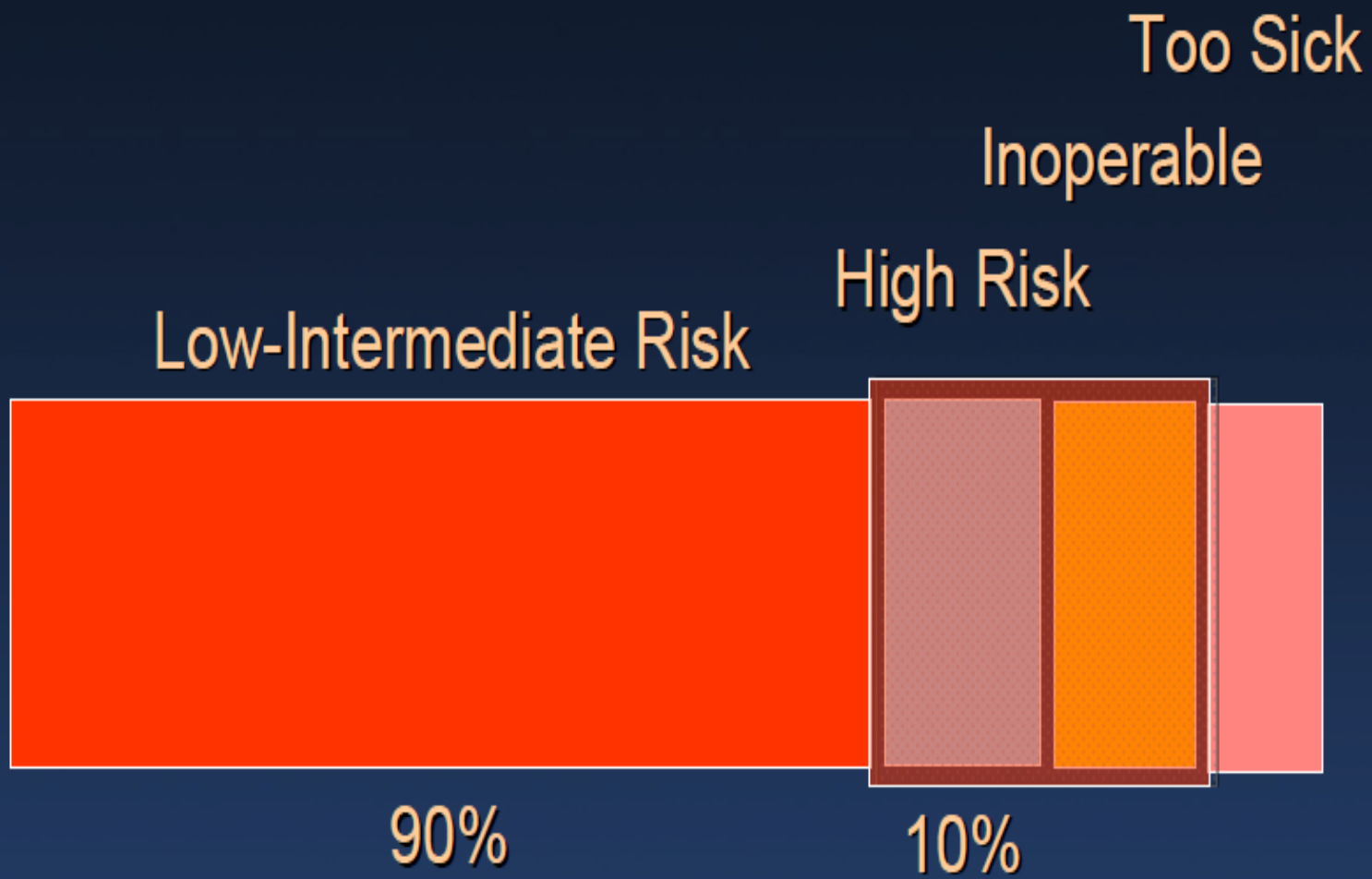
D.G.R. n° 16 – 11109 del 30/03/2009

1. *Stenosi aortica valvolare severa*
2. *Elevato/proibitivo rischio chirurgico: Euroscore additivo > 10*
3. *Parere multidisciplinare di non operabilità*
4. *Parere combinato cardiologo interventista, cardiocirurgo, anestesista rianimatore*
5. *Presenza di unità operativa di cardiocirurgia*
6. *Parere del paziente (l'esplicita richiesta del pz non può essere considerata un'indicazione al trattamento)*
7. *Consenso informato scritto*

Operable AS patients



Operable AS patients



RISK SCORE

- ✓ EUROSCORE Logistic
- ✓ EUROSCORE Standard
- ✓ EUROSCORE II
- ✓ STS score

PROCEDURAL SUCCESS

- LEE score
- ADL score
- 15 feet walking test
- Prension test

FRAILITY

Inaccuracy of available surgical risk scores to predict outcomes after transcatheter aortic valve replacement

Fabrizio D'Ascenzo^a, Flavia Ballocca^a, Claudio Moretti^a, Marco Barbanti^c, Valeria Gasparetto^f, Marco Mennuni^e, Maurizio D'Amico^a, Federico Conrotto^a, Stefano Salizzoni^b, Pierluigi Omedè^a, Chiara Colaci^a, Giuseppe B. Zoccai^d, Mario Lupo^b, Giuseppe Tarantini^f, Massimo Napodanno^f, Patrizia Presbitero^e, Imad Sheiban^a, Corrado Tamburino^c, Sebastiano Marra^a and Fiorenzo Gaita^a

J Cardiovasc Med 2013, 14:894–898

In TAVI patients, ACEF score, STS score and Logistic Euroscore provided only a moderate correlation and a low accuracy both for 30-day and medium-term outcomes.

Dedicated scores are needed to properly tailor time and kind of approach.

PREDICTORS

- BASELINE
- PROCEDURAL
- PERI-PROCEDURAL COMPLICATION

Transcatheter Aortic Valve Implantation in the United Kingdom

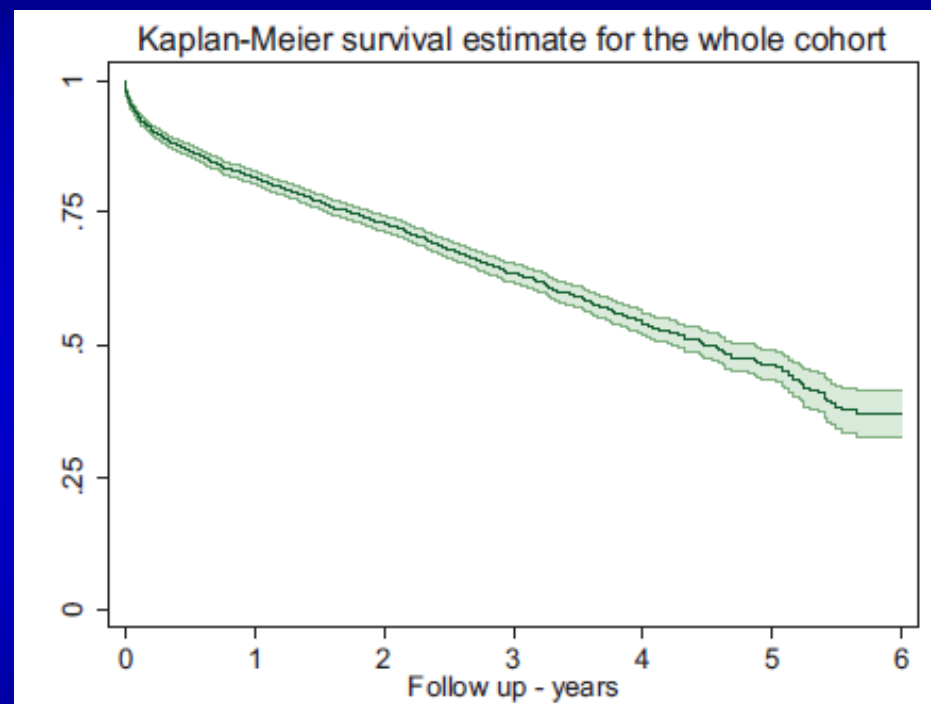
Temporal Trends, Predictors of Outcome, and 6-Year Follow-Up:
A Report From the UK Transcatheter Aortic Valve Implantation (TAVI)
Registry, 2007 to 2012

Ludman et al. Circulation. 2015;131:1181-1190. DOI: 10.1161

- moderately impaired left ventricular function (left ventricular ejection fraction, 30%–49%)
- peripheral vascular disease
- COPD
- creatinine >200 $\mu\text{mol/L}$
- Logistic EuroSCORE, ≥ 40

At multivariate analysis only Logistic EuroSCORE, ≥ 40 was independent predictor of 30-days mortality.

30-day mortality

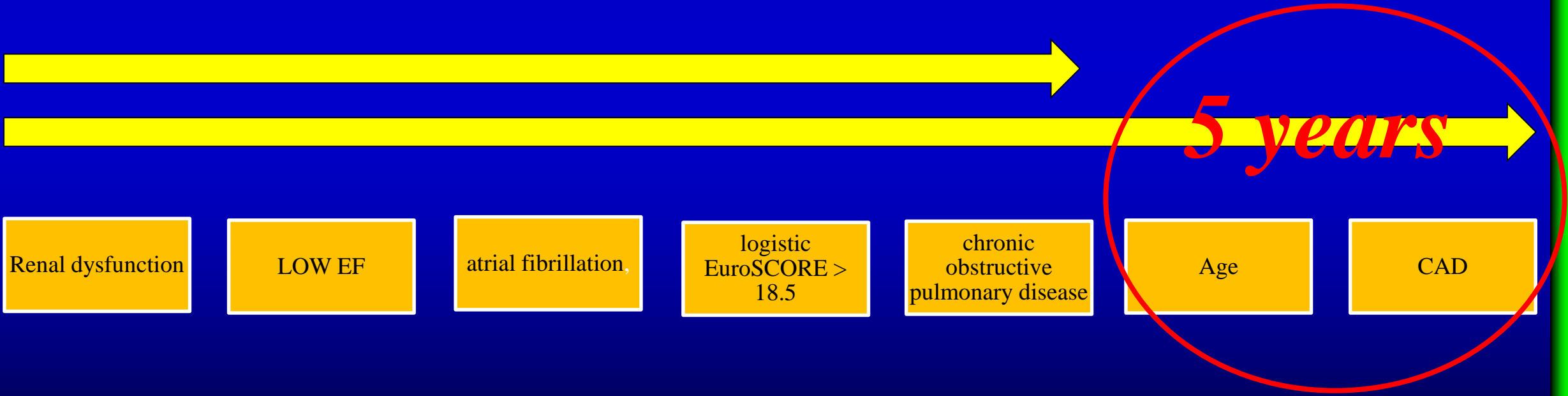


The 30-day mortality: 9.7% in in 2007 and 2008 and 5.8% in 2012 ($P=0.089$).

Predictors of mortality at 3 and 5 years

Long-Term Outcomes After Transcatheter Aortic Valve Replacement in High-Risk Patients With Severe Aortic Stenosis

The U.K. Transcatheter Aortic Valve Implantation Registry

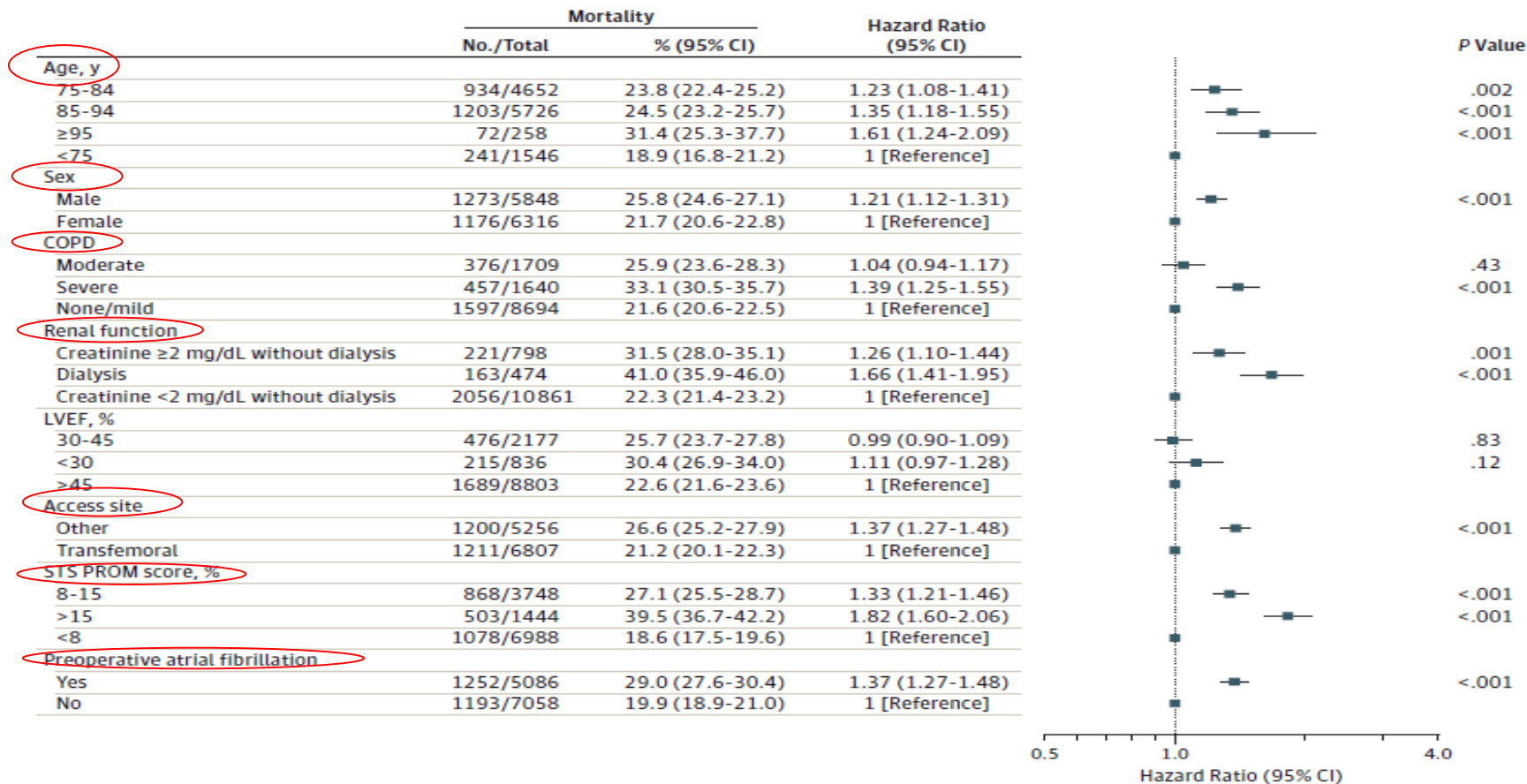


Clinical Outcomes at 1 Year Following Transcatheter Aortic Valve Replacement

JAMA. 2015;313(10):1019-1028. doi:10.1001/jama.2015.1474

David R. Holmes Jr, MD; J. Matthew Brennan, MD, MPH; John S. Rumsfeld, MD, PhD; David Dai, PhD; Sean M. O'Brien, PhD; Sreekanth Vemulapalli, MD; Fred H. Edwards, MD; John Carroll, MD; David Shahian, MD; Fred Grover, MD; E. Murat Tuzcu, MD; Eric D. Peterson, MD, MPH; Ralph G. Brindis, MD, MPH; Michael J. Mack, MD; for the STS/ACC TVT Registry

Figure 2. Multivariate Risk-Adjusted Outcome of Mortality



Registry of Transcatheter Aortic-Valve Implantation in High-Risk Patients

Martine Gilard et al, for the FRANCE 2 investigators, NEJM

Outcomes	All Patients (N=3195)	Transfemoral Approach (N=2361)	Transapical Approach (N=567)	Subclavian Approach (N=184)	P Value†	Edwards SAPIEN (N=2107)	Medtronic CoreValve (N=1043)
Periprosthetic regurgitation at 30 days — no./total no. (%)					0.09		
Grade 0	724/1915 (37.8)	483/1418 (34.1)	173/334 (51.8)	37/112 (33.0)		515/1256 (41.0)	203/642 (31.6)
Grade 1	875/1915 (45.7)	671/1418 (47.3)	131/334 (39.2)	58/112 (51.8)		567/1256 (45.1)	301/642 (46.9)
Grade 2	301/1915 (15.7)	251/1418 (17.7)	30/334 (9.0)	15/112 (13.4)		169/1256 (13.5)	128/642 (19.9)
Grade 3	15/1915 (0.8)	13/1418 (0.9)	0	2/112 (1.8)		5/1256 (0.4)	10/642 (1.6)
Complications at 1 yr — no. (%)							
Stroke							
Major	72 (2.3)	51 (2.2)	12 (2.1)	5 (2.7)	0.88	41 (1.9)	27 (2.6)
Minor	59 (1.8)	36 (1.5)	13 (2.3)	8 (4.3)	0.07	41 (1.9)	18 (1.7)
Myocardial infarction	37 (1.2)	20 (0.8)	10 (1.8)	6 (3.3)	0.004	16 (0.8)	20 (1.9)
Bleeding							
Life-threatening	39 (1.2)	29 (1.2)	8 (1.4)	1 (0.5)	0.76	32 (1.5)	6 (0.6)
Major	144 (4.5)	36 (1.5)	19 (3.4)	6 (3.3)	<0.001	42 (2.0)	16 (1.5)
Minor	236 (7.4)	161 (6.8)	54 (9.5)	13 (7.1)	0.08	166 (7.9)	70 (6.7)
Vascular complication							
Major	150 (4.7)	129 (5.5)	11 (1.9)	8 (4.3)	0.002	57 (2.7)	47 (4.5)
Minor	160 (5.0)	139 (5.9)	9 (1.6)	12 (6.5)	<0.001	60 (2.8)	49 (4.7)
New pacemaker	497 (15.6)	359 (15.2)	77 (13.6)	47 (25.5)	<0.001	243 (11.5)	252 (24.2)
Valve migration	40 (1.3)	28 (1.2)	8 (1.4)	2 (1.1)	0.91	23 (1.1)	17 (1.6)

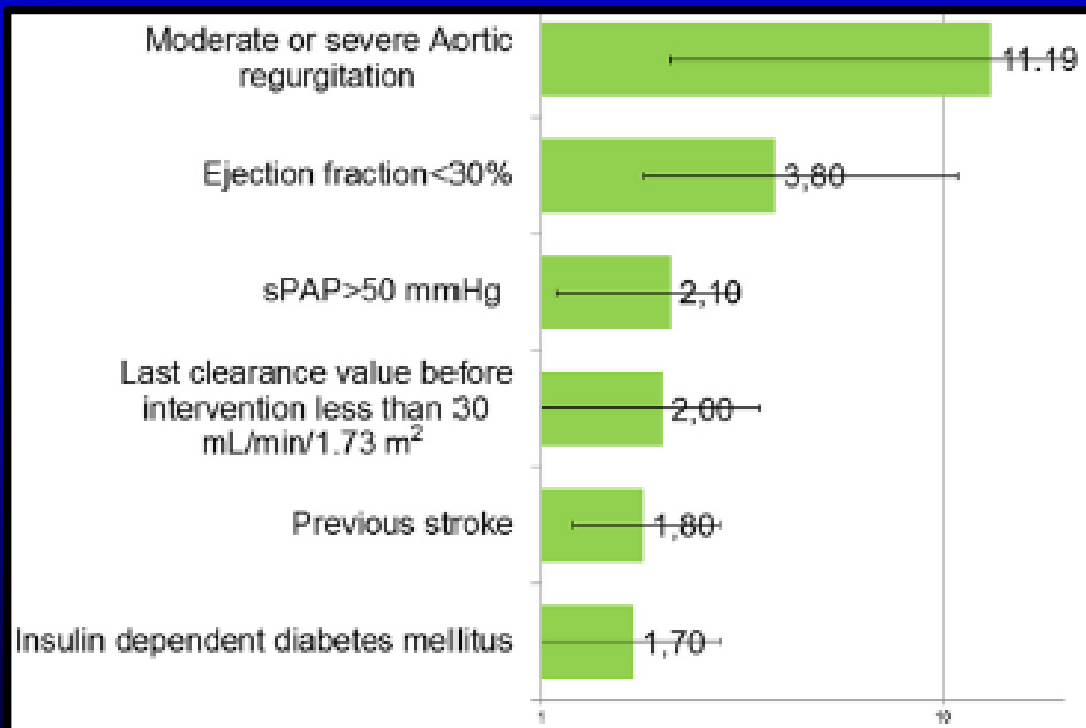
- an increased logistic EuroSCORE
- NYHA functional class III or IV versus class I or II
- transapical approach versus transfemoral approach
- periprosthetic regurgitation grade of 2 or higher versus a grade of less than 2

A Gender Based Analysis of Predictors of All Cause Death After Transcatheter Aortic Valve Implantation

Federico Conrotto, MD^{a,*}, Fabrizio D'Ascenzo, MD^b, Stefano Salizzoni, MD^c, Patrizia Presbitero, MD^d, Pierfrancesco Agostoni, MD, PhD^e, Corrado Tamburino, MD, PhD^f, Giuseppe Tarantini, MD, PhD^g, Francesco Bedogni, MD^b, Freek Nijhoff, MD^e, Valeria Gasparetto, MD^g, Massimo Napodano, MD^g, Giuseppe Ferrante, MD^d, Marco Luciano Rossi, MD^d, Pieter Stella, MD, PhD^e, Nedy Brambilla, MD^h, Marco Barbanti, MD^f, Francesca Giordana, MD^b, Costanza Grasso, MD^a, Giuseppe Biondi Zoccai, MDⁱ, Claudio Moretti, MD^b, Maurizio D'Amico, MD^a, Mauro Rinaldi, MD^c, Fiorenzo Gaita, MD^b, and Sebastiano Marra, MD^a

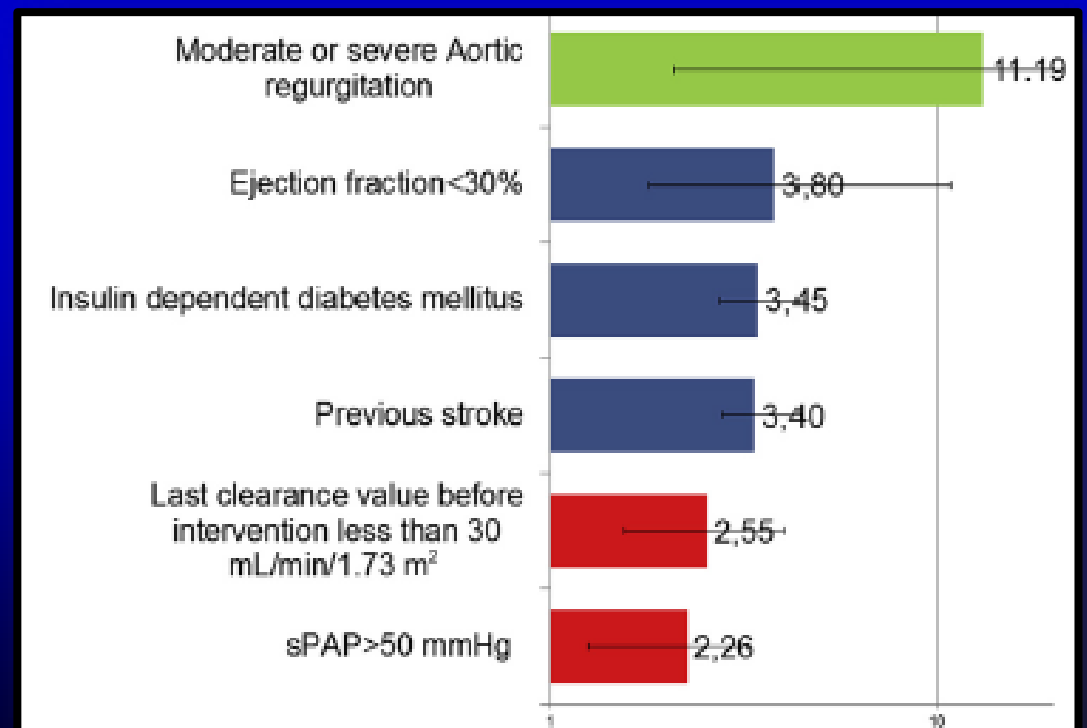
Am J Cardiol 2014;114:1269e1274

Independent predictors of adverse events at midterm follow-up in the overall population.



TAVI patients from June 2007 to December 2012 at 6 institutions
464 female and 372 male

Independent predictors of adverse events at midterm follow-up according to gender (red, female patients; blue, male patients; green, all patients)..



BASELINE PREDICTORS

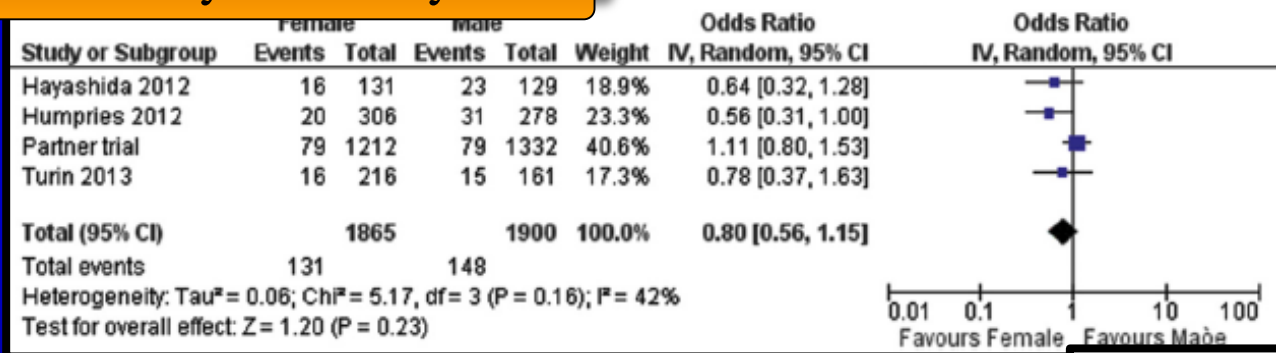
Effect of Gender After Transcatheter Aortic Valve Implantation: A Meta-Analysis

Ann Thorac Surg 2015;99:809–16

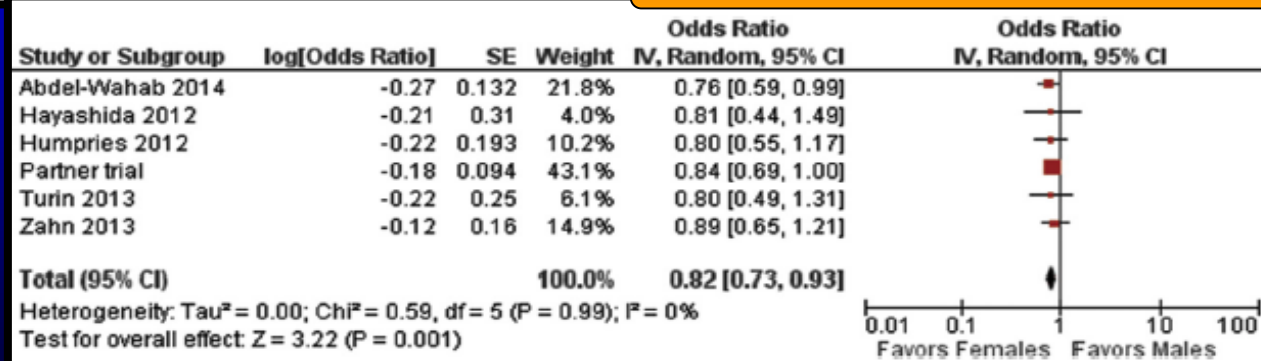
Federico Conrotto, MD, Fabrizio D'Ascenzo, MD, Patrizia Presbitero, MD, Karin H. Humphries, DS, John G. Webb, MD, Stephen A. O'Connor, MD, Marie-Claude Morice, MD, Thierry Lefèvre, MD, Costanza Grasso, MD, Pierluigi Sbarra, MD, Salma Taha, MD, Pierluigi Omedè, MD, Walter Grosso Marra, MD, Stefano Salizzoni, MD, Claudio Moretti, MD, Maurizio D'Amico, MD, Giuseppe Biondi-Zoccai, MD, Fiorenzo Gaita, MD, and Sebastiano Marra, MD

Six studies
6,645 patients were included
50% women
EuroSCORE 26.2 vs 22.4
women vs men

30-days mortality



Mid-term mortality



Significantly higher risk of major bleeding, vascular complications and a lower rate of postprocedural moderate to severe aortic regurgitation in women compared with men

Impact of Diabetes Mellitus on Early and Midterm Outcomes After Transcatheter Aortic Valve Implantation (from a Multicenter Registry)

Conrotto et al Am J Cardiol 2014;113:529e534

Variable	Diabetes Mellitus			p Value
	None (n = 361), n (%)	Orally Treated (n = 78), n (%)	Insulin Treated (n = 72), n (%)	
Valve				0.38
Core valve	190 (52.6)	53 (67.9)	29 (40.3)	
Edwards SAPIEN	171 (47.4)	25 (32.1)	43 (59.7)	
Approach				0.38
Transapical	87 (24.1)	13 (16.7)	19 (26.4)	
Transfemoral	206 (57.1)	46 (59)	43 (59.7)	
Trans-subclavian	68 (18.8)	19 (24.3)	10 (13.9)	
In-hospital outcomes				
Death (any cause)	17 (4.7)	5 (6.4)	7 (9.7)	0.09
Cardiovascular death	16 (4.4)	5 (6.4)	6 (8.3)	0.15
TIA	2 (0.5)	1 (1.2)	0	0.81
Stroke	5 (1.4)	1 (1.2)	3 (4.1)	0.1
Bleeding (major and life threatening)	158 (43.8)	33 (42.3)	29 (40.3)	0.57
Major vascular complication	25 (6.9)	3 (3.8)	8 (11.1)	0.42
Periprocedural myocardial infarction	3 (0.85)	0	2 (2.8)	0.25
Myocardial infarction >72 h	0	0	1 (1.4)	0.05
Acute kidney injury	74 (20.5)	19 (24.3)	15 (20.1)	0.76

Procedural characteristics and in-hospital outcomes

Diabetes does not significantly affect rates of procedural complications in TAVI patients, but a trend of higher short-term mortality in diabetic patients was recorded

Impact of Diabetes Mellitus on Early and Midterm Outcomes After Transcatheter Aortic Valve Implantation (from a Multicenter Registry)

Mid-term follow-up

Am J Cardiol 2014;113:529e534

Variable	Diabetes Mellitus			p Value
	None (n = 361), n (%)	Orally Treated (n = 78), n (%)	Insulin Treated (n = 72), n (%)	
Death	67 (18.6)	13 (16.6)	24 (33.3)	0.01*
Cardiovascular death	42 (11.6)	8 (10.2)	11 (15.3)	0.51
Stroke	9 (2.4)	1 (1.3)	4 (5.5)	0.27
Transient ischemic attack	4 (1.1)	0	1 (1.4)	0.91
Myocardial infarction	5 (1.4)	0	6 (8.3)	0.002*
Reintervention	3 (0.8)	0	0	0.29

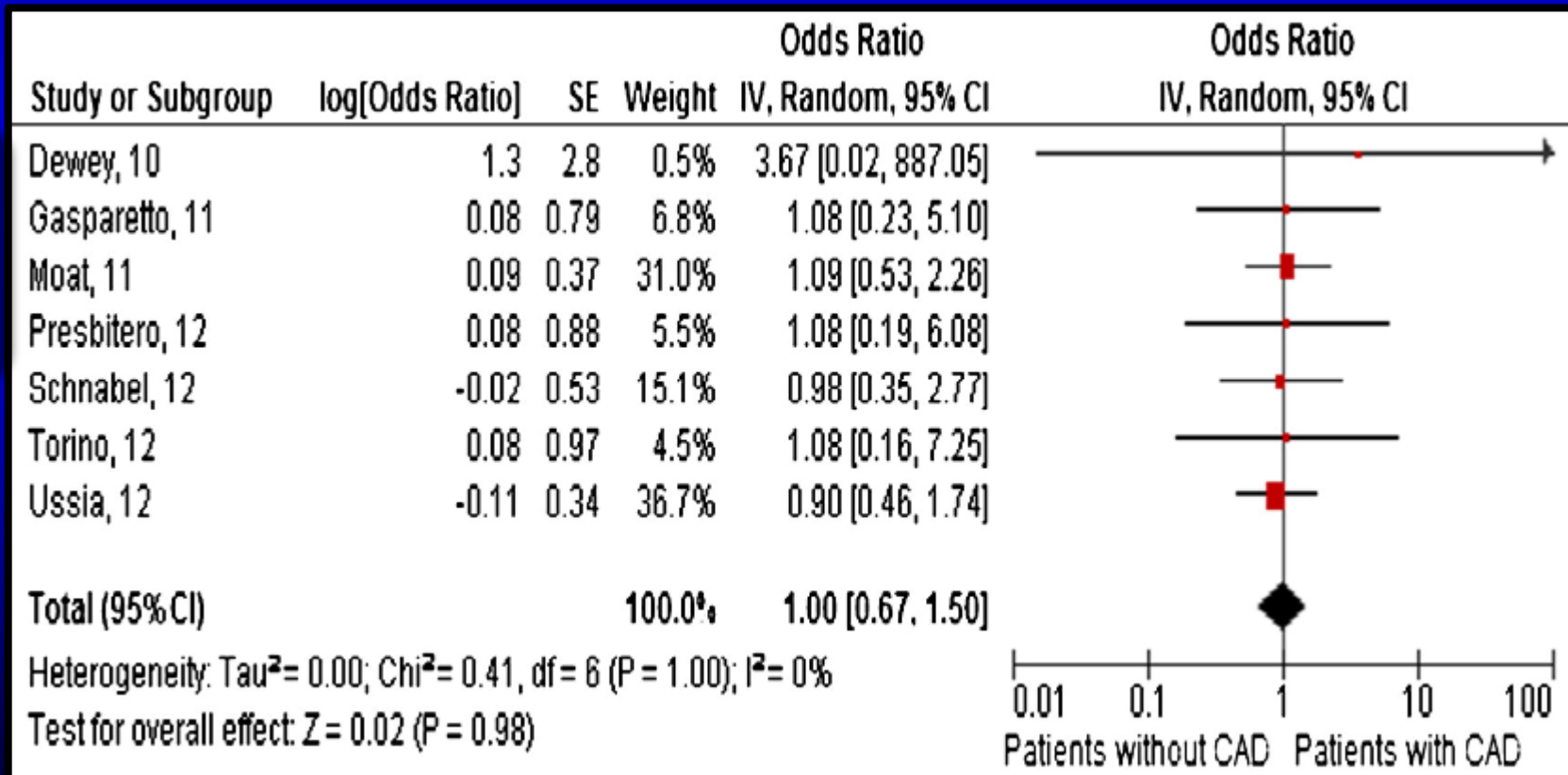
After multivariable adjustment, **insulin-treated DM** was independently correlated with death and myocardial infarction

Mid-term prognostic value of coronary artery disease in patients undergoing transcatheter aortic valve implantation: A meta-analysis of adjusted observational results

F. D'Ascenzo^{1,1}, F. Conrotto^{1,1}, F. Giordana¹, C. Moretti^{1,1}, M. D'Amico¹, S. Salizzoni¹, P. Omedè¹, M. La Torre¹, M. Thomas², Z. Khawaja³, D. Hildick-Smith⁴, Gp. Ussia⁵, M. Barbanti^{6,7}, C. Tamburino⁸, John Webb⁹, R.B. Schnabel¹⁰, M. Seiffert¹¹, S. Wilde¹², H. Treede¹³, V. Gasparetto¹⁴, M. Napodano¹⁵, G. Tarantini¹⁶, P. Presbitero¹⁷, M. Mennuni¹⁸, M.L. Rossi¹⁹, M. Gasparini²⁰, G. Biondi Zoccai²¹, M. Lupo²², M. Rinaldi²³, F. Gaita²⁴, S. Marra¹

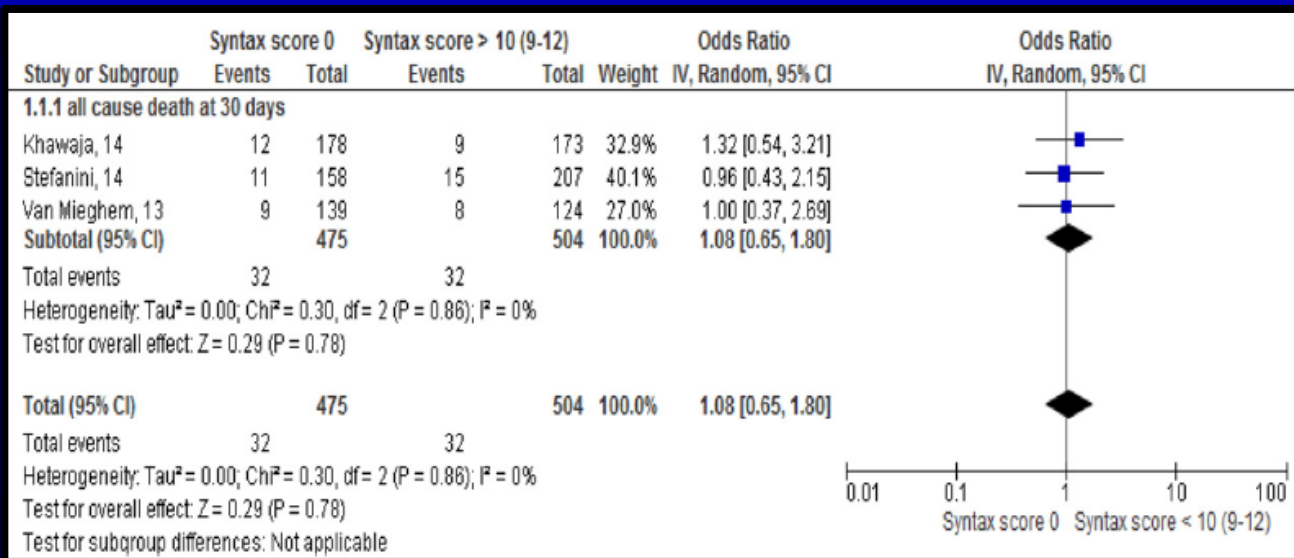
Int J Cardiol. 2013 Oct 3;168(3):2528-32.

- 2472 patients
- mean follow-up 452 d (357–585)



Impact of residual coronary artery disease on patients undergoing TAVI: A meta-analysis of adjusted observational studies

Salma Taha^{a,c,*}, Claudio Moretti^a, Fabrizio D'Ascenzo^a, Nicolas M. Van Mieghem^d, Pierluigi Omedè^a, Antonio Montefusco^a, Mohamed Abdel Ghany^c, Doaa Fouaad^c, Salwa Demitry^c, Giuseppe Biondi Zoccai^b, Fiorenzo Gaita^a



Impact of residual Syntax less than 10 (9–12) on all cause death at 30 days

No impact of residual Syntax less than 10 (9–12) on acute myocardial infarction, stroke and AKI at 30 days

Patients with a Syntax score ≤ 10 seem to undergo TAVI procedure without additional risk

30 days and midterm outcomes of patients undergoing percutaneous replacement of aortic valve according to their renal function: A multicenter study

Fabrizio D'Ascenzo ^a, Claudio Moretti ^a, Stefano Salizzoni ^b, Mario Bollati ^a, Maurizio D'Amico ^a, Flavia Ballocca ^a, Francesca Giordana ^a, Marco Barbanti ^d, Gian Paolo Ussia ^d, Nedy Brambilla ^c, Francesco Bedogni ^c, Giuseppe Biondi Zoccai ^e, Corrado Tamburino ^a, Fiorenzo Gaita ^d, Imad Sheiban ^{a,*}

International Journal of Cardiology 167 (2013) 1514–1518

- 72 patients with a preserved renal function 219 with moderate CKD 73 with severe CKD
- Period: January 2007 to December 2011
- Median follow-up of 540±250 days

Patients with severe renal disease showed a trend toward a high risk of complications, bleeding and stroke, and of death

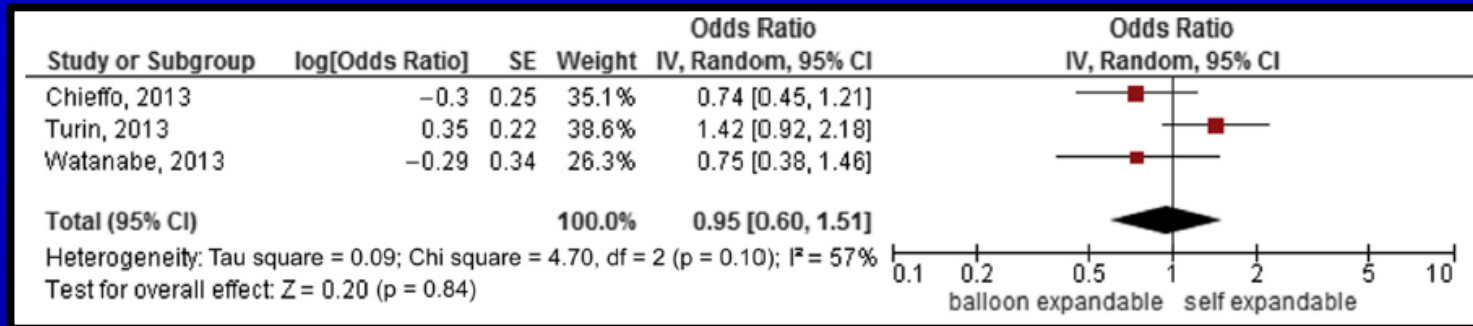
After TAVI implantation especially patients with severe kidney impairment showed an improvement in renal function

PROCEDURAL and POST-PROCEDURAL
PREDICTORS

Meta-Analysis of Comparison Between Self-Expandable and Balloon-Expandable Valves for Patients Having Transcatheter Aortic Valve Implantation

Am J Cardiol 2015;115:1720e1725

Claudio Moretti, PhD^a, Fabrizio D'Ascenzo, MD^a, Marco Mennuni, MD^b, Salma Taha, MD^{a,c,*}, Nedy Brambilla, MD^d, Freek Nijhoff, MD^e, Chiara Fraccaro, MD^f, Marco Barbanti, MD^g, Corrado Tamburino, MD^g, Giuseppe Tarantini, MD^f, Marco L. Rossi, MD^b, Patrizia Presbitero, MD^b, Massimo Napodanno, MD^f, Pieter Stella, PhD^e, Francesco Bedogni, MD^d, Pierluigi Omedè, MD^a, Federico Conrotto, MD^h, Antonio Montefusco, MD^a, Francesca Giordana, MD^a, Giuseppe Biondi Zoccai, MDⁱ, Piefrancesco Agostoni, PhD^e, Maurizio D'Amico, MD^h, Mauro Rinaldi, MD^j, Sebastiano Marra, MD^h, and Fiorenzo Gaita, MD^a



Mortalità a lungo termine

Risks of moderate or severe AR and pacemaker implantation were lower with the balloon-expandable devices

Impact of Access on TAVI Procedural and Midterm Follow-Up: A Meta-Analysis of 13 Studies and 10,468 Patients

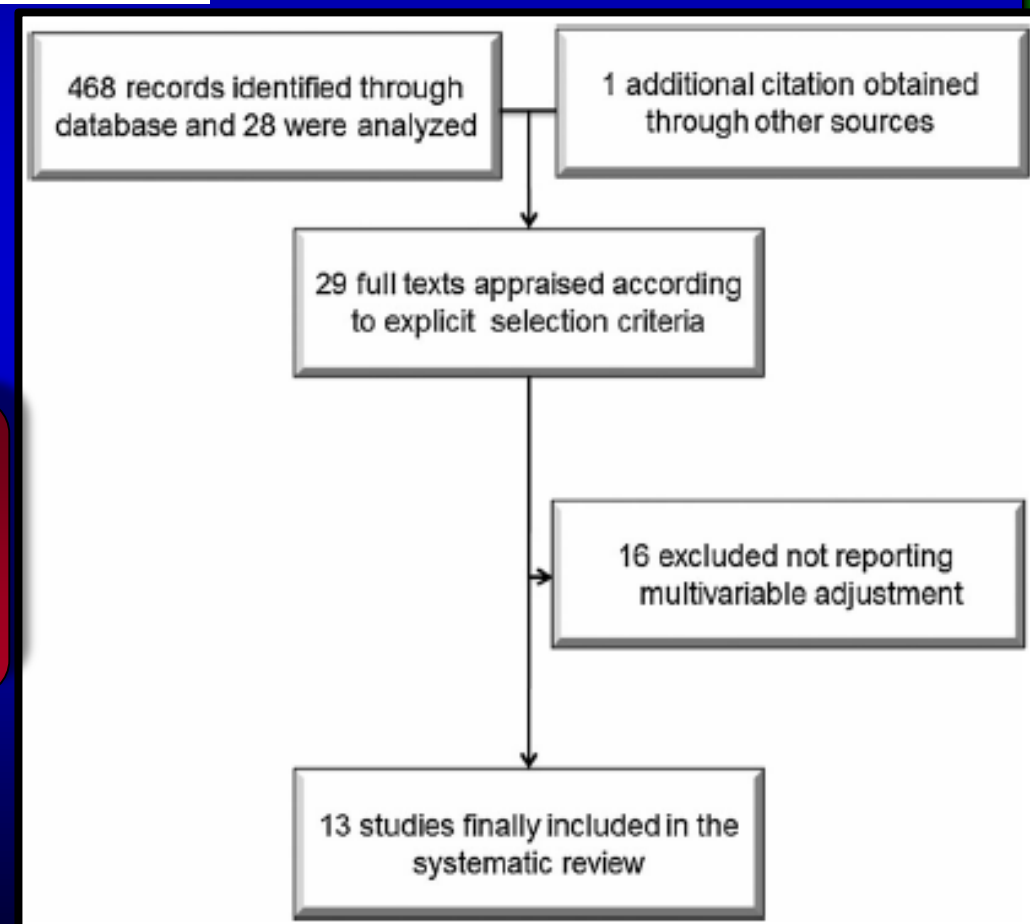
J Interven Cardiol 2014;27:500–50

FEDERICO CONROTTO, M.D.,¹ FABRIZIO D'ASCENZO, M.D.,¹ GIORDANA FRANCESCA, M.D.,¹
CHIARA COLACI, M.D.,¹ PAOLO SACCIATELLA, M.D.,¹ GIUSEPPE BIONDI-ZOCCAI, M.D.,²
CLAUDIO MORETTI, M.D.,¹ MAURIZIO D'AMICO, M.D.,¹ FIORENZO GAITA, M.D.,¹ and
SEBASTIANO MARRA, M.D.¹

10468 pts
Median age: 82 years
50% male
Studies from 2005-2012

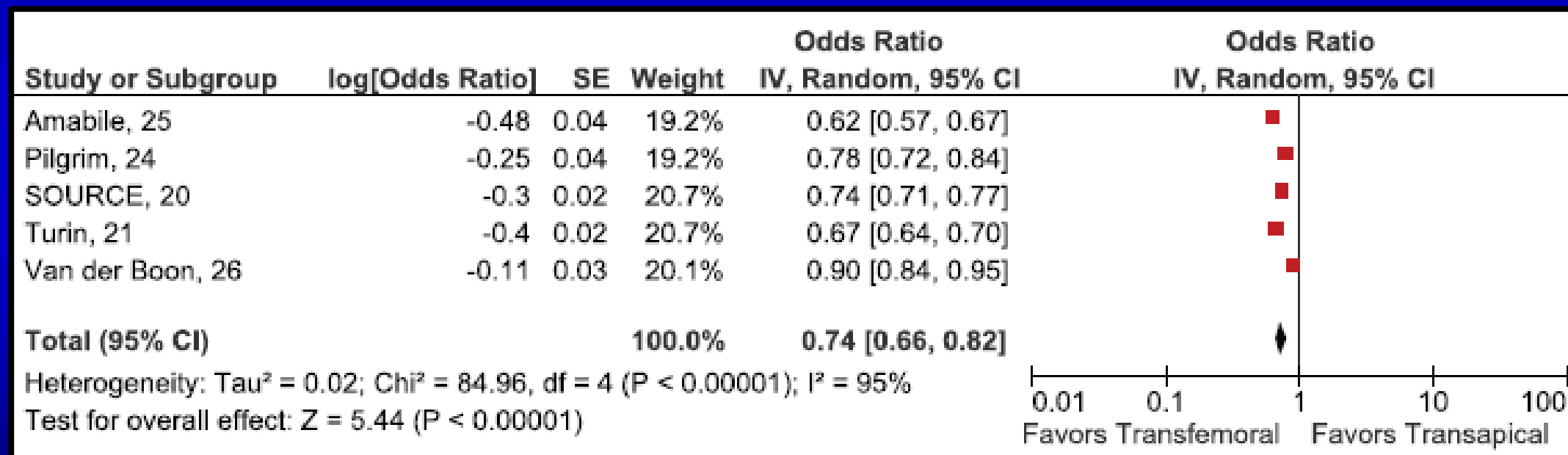
Mean Logistic EuroSCORE more than 20% in all the studies, except for one (18.5%),
Logistic EUROSCORE higher in TA patients if compared to TF patients in the 4 studies that reported it

Mean STS score > 5%



Impact of Access on TAVI Procedural and Midterm Follow-Up: A Meta-Analysis of 13 Studies and 10,468 Patients

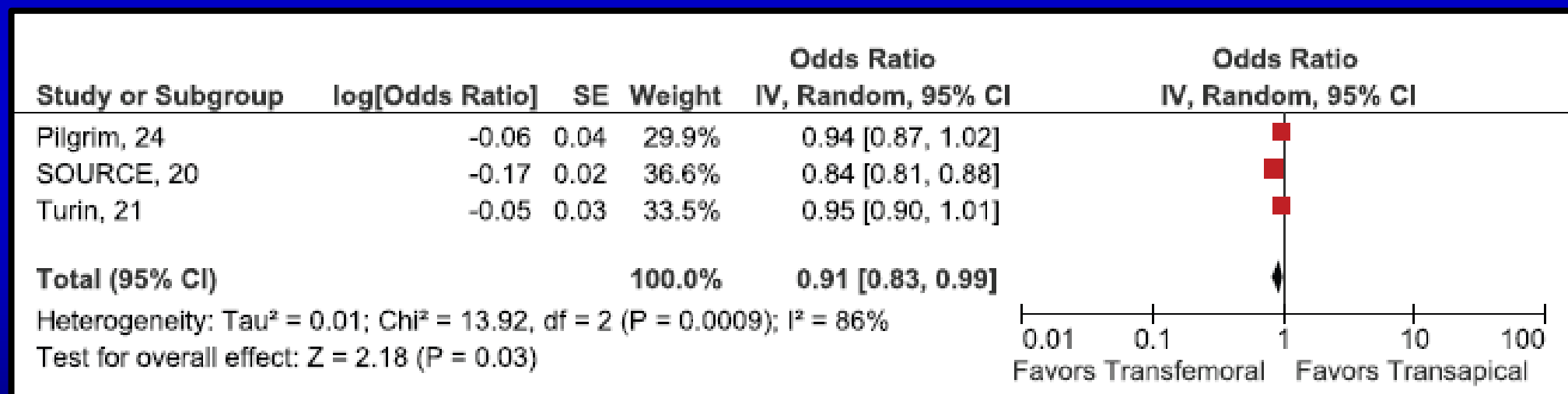
J Interven Cardiol 2014;27:500–50



Pooled adjusted odds ratio for peri-procedural bleedings

Impact of Access on TAVI Procedural and Midterm Follow-Up: A Meta-Analysis of 13 Studies and 10,468 Patients

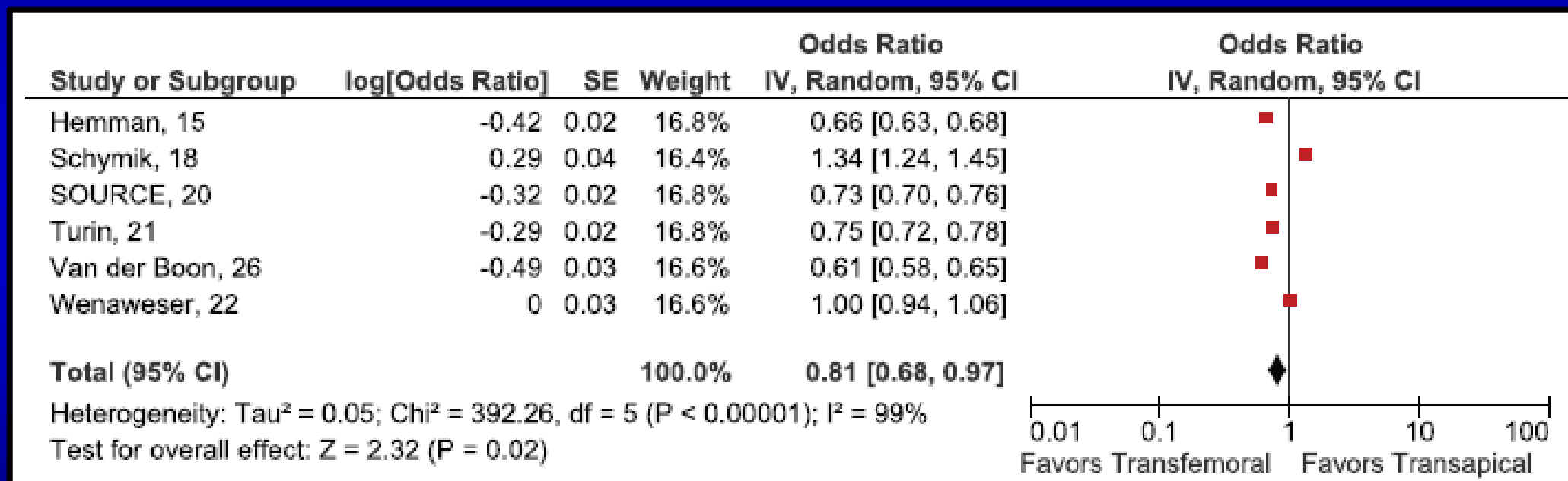
J Interven Cardiol 2014;27:500–50



Pooled adjusted odds ratio for peri-procedural stroke

Impact of Access on TAVI Procedural and Midterm Follow-Up: A Meta-Analysis of 13 Studies and 10,468 Patients

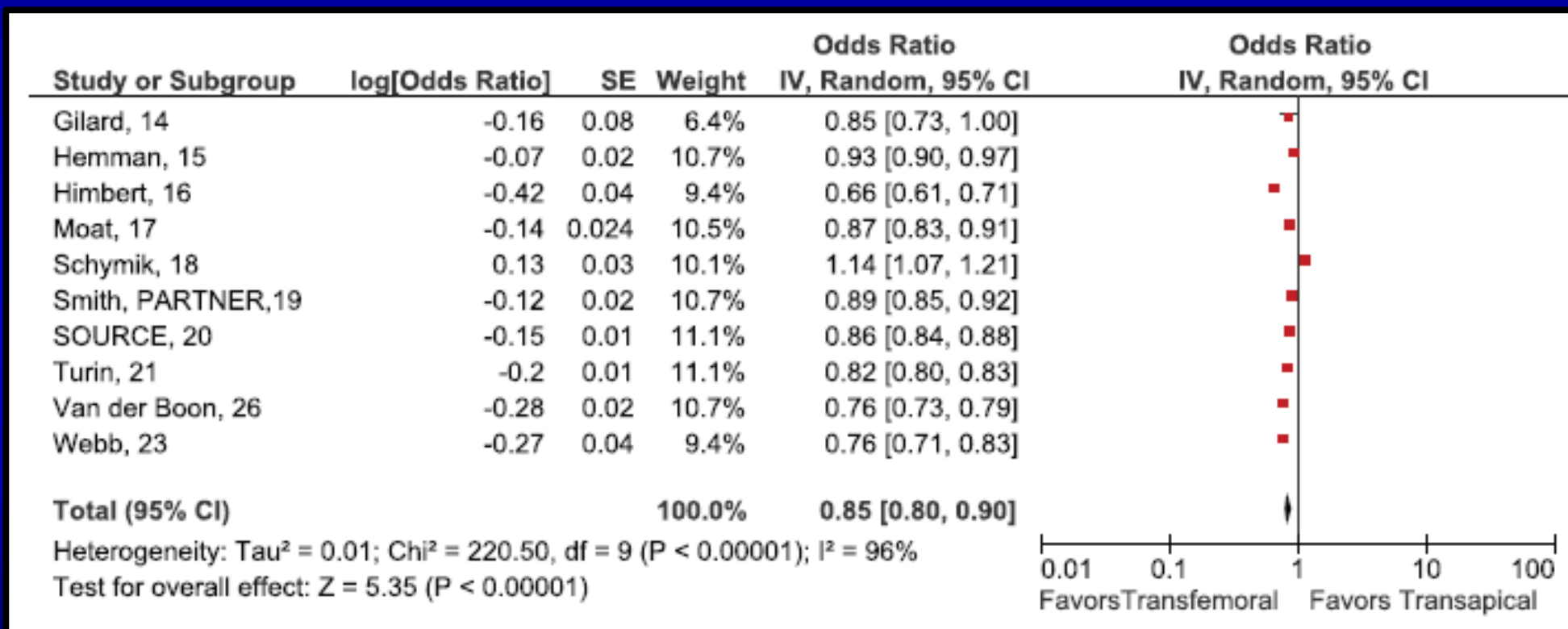
J Interven Cardiol 2014;27:500–50



Pooled adjusted odds ratio for 30-days mortality

Impact of Access on TAVI Procedural and Midterm Follow-Up: A Meta-Analysis of 13 Studies and 10,468 Patients

J Interven Cardiol 2014;27:500–50

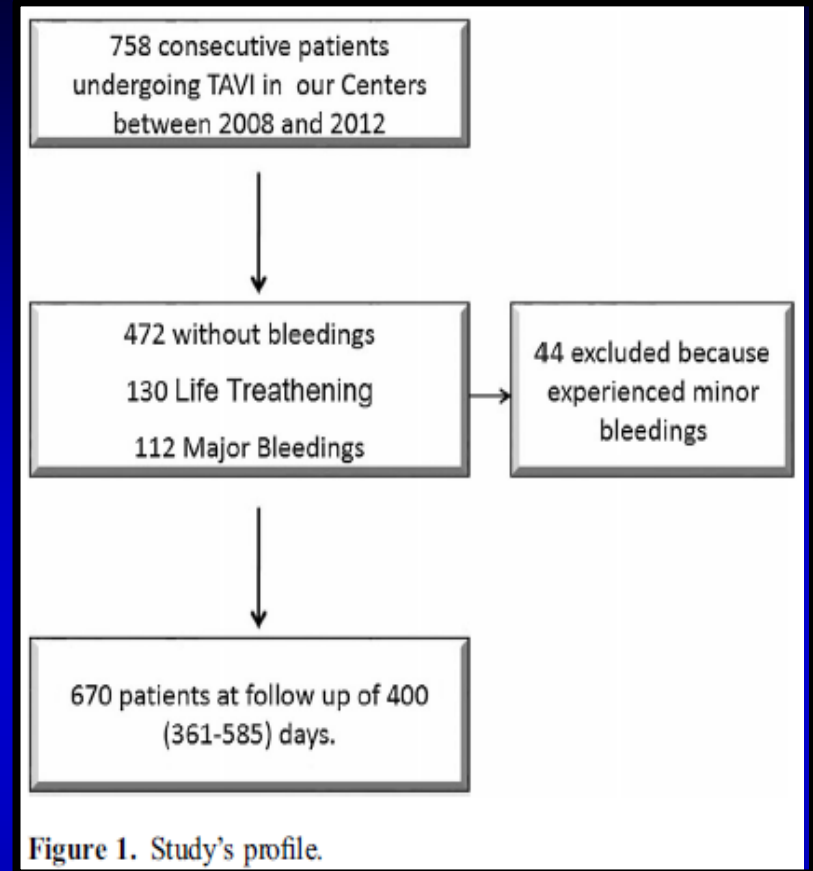


Pooled adjusted odds ratio for mid-term mortality (1 y)

Impact on Prognosis of Periprocedural Bleeding after TAVI: Mid-Term Follow-Up of a Multicenter Prospective Study

CLAUDIO MORETTI, M.D.,^{1,2} MAURIZIO D'AMICO, M.D.,³ FABRIZIO D'ASCENZO, M.D.,¹
CHIARA COLACI, M.D.,¹ STEFANO SALIZZONI, M.D.,⁴ CORRADO TAMBURINO, M.D.,⁵
PATRIZIA PRESBITERO, M.D.,³ SEBASTIANO MARRA, M.D.,⁴ IMAD SHEIBAN,²
and FIORENZO GAITA¹

J Interven Cardiol 2014;27:293–299

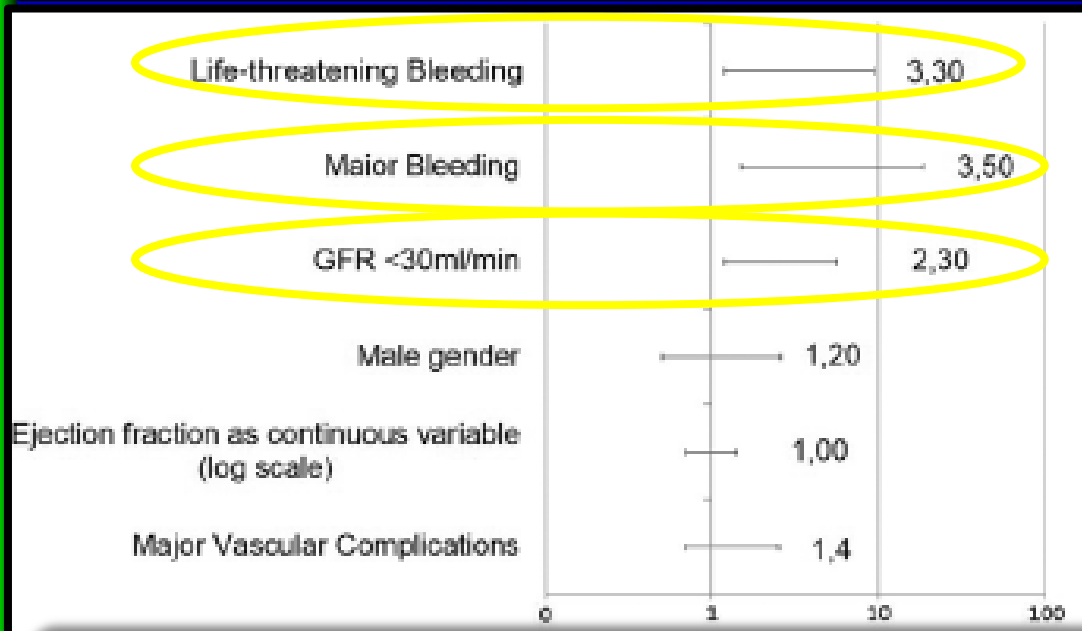


At 30 days and mid-term follow-up all-cause and cardiovascular deaths were higher in patients with bleeding compared to the “no bleeding” group

Impact on Prognosis of Periprocedural Bleeding after TAVI: Mid-Term Follow-Up of a Multicenter Prospective Study

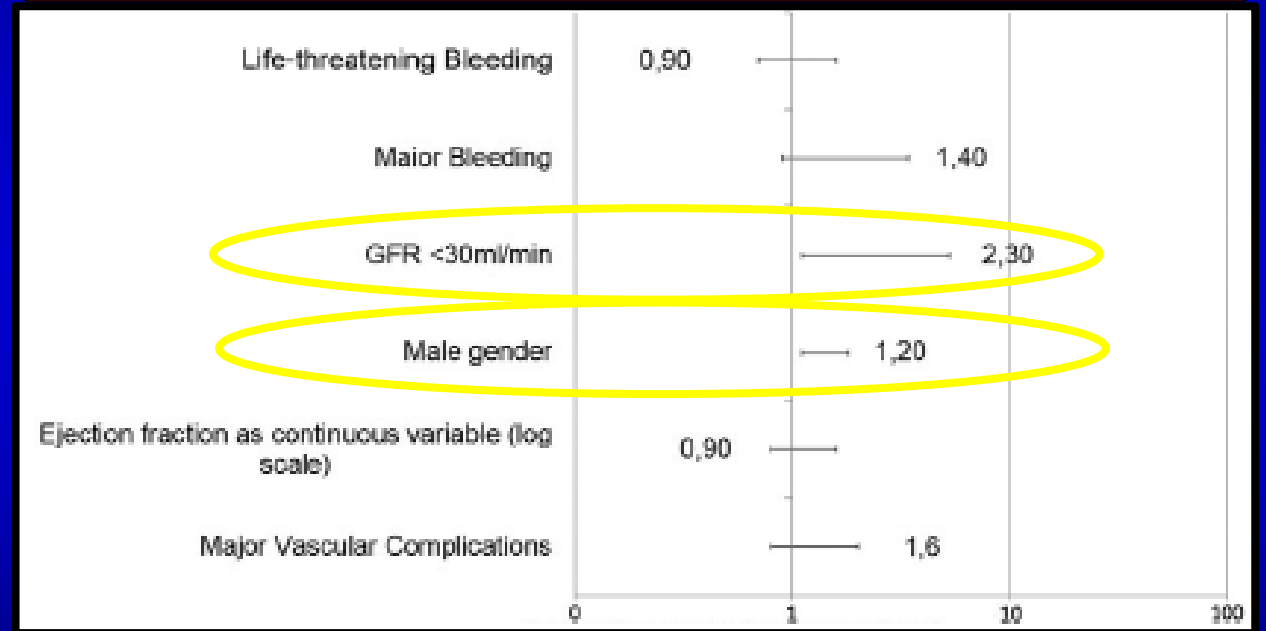
J Interven Cardiol 2014;27:293–299

Cox-multivariate analysis for 30 days all-cause death.



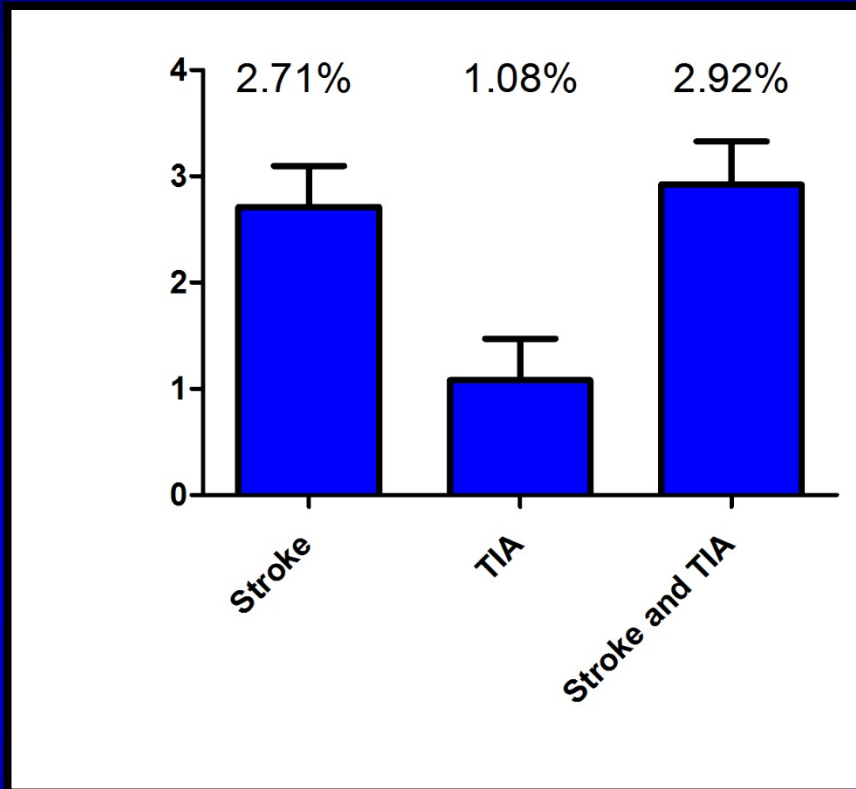
Life-threatening and major bleedings, procedural GFR<30 ml/min were independent predictors of death.

Cox-multivariate analysis for mid-term all-cause death.

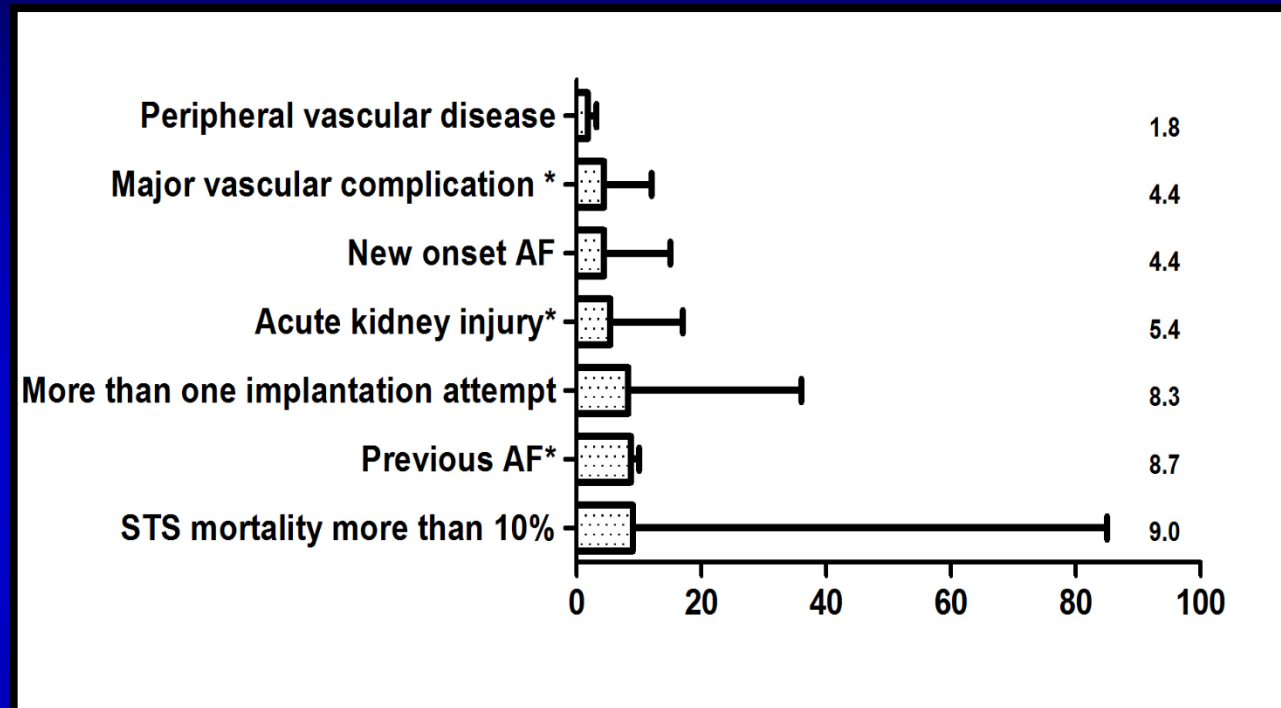


Procedural GFR<30 ml/min and male gender were independent predictors of death

STROKE and TAVI - METANALISYS



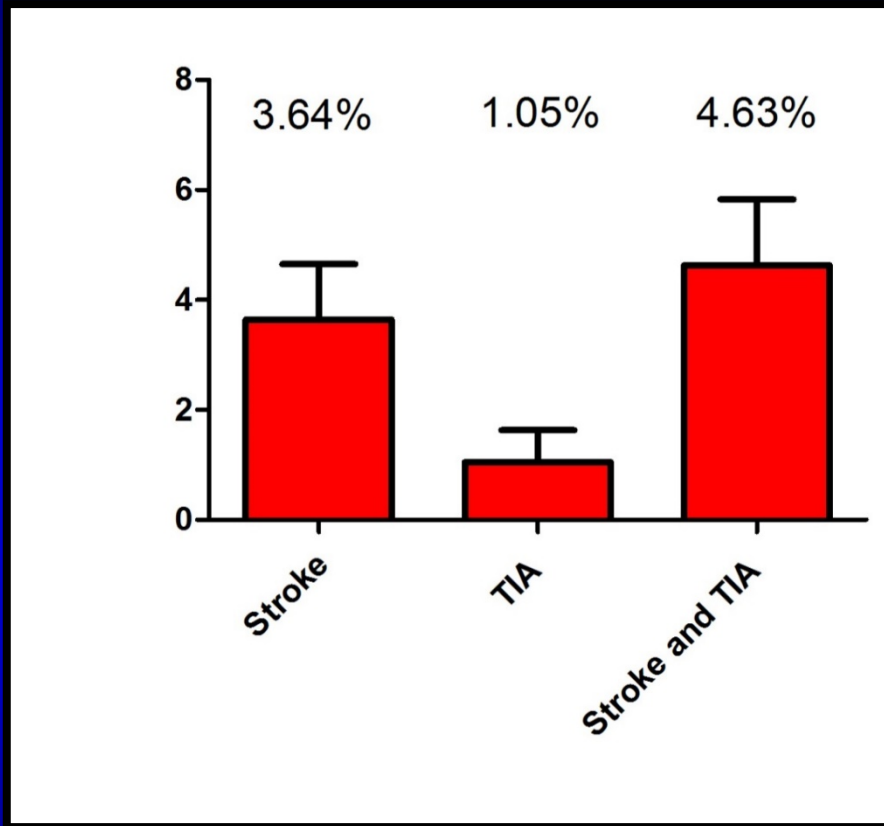
Incidence of stroke, of TIA and of stroke or TIA at 30 days.



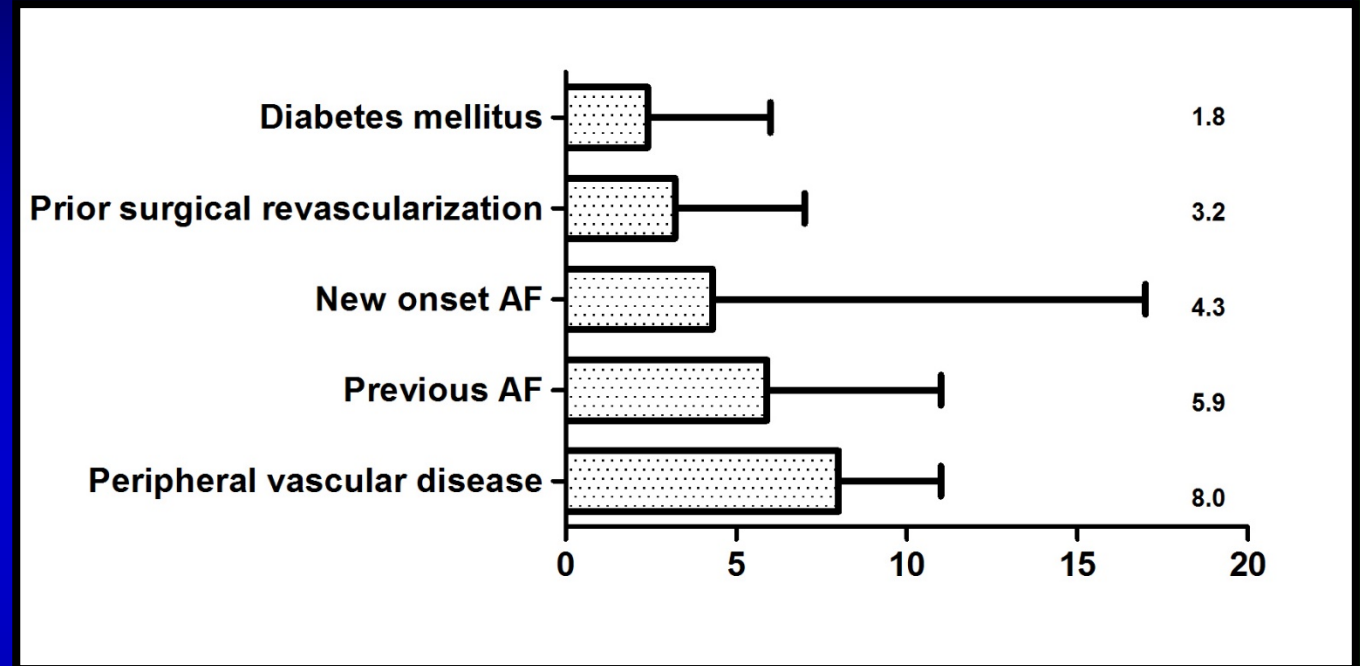
Independent predictors of stroke at 30 days
(variables with * have been reported in at least two studies)

Work in progress,
Turin 2015

STROKE and TAVI - META-ANALYSIS



Incidence of stroke, of TIA and of stroke or TIA after a follow up of 14 (11-17) months.



Independent predictors of stroke at follow up

Work in progress,
Turin 2015

Meta-Analysis of Predictors of All-Cause Mortality After Transcatheter Aortic Valve Implantation



Francesca Giordana, MD^{a,*}, Fabrizio D'Ascenzo, MD^a, Freek Nijhoff, MD^b, Claudio Moretti, MD^a,
Maurizio D'Amico, MD^a, Giuseppe Biondi Zoccai, MD^c, Jan Malte Sinning, MD^d,
George Nickenig, MD^d, Nicolas M. Van Mieghem, MD^e, Adelaide Chieffo, MD^f,
Nicolas Dumonteil, MD^g, Didier Tchetché, MD^h, Israel M. Barbash, MDⁱ, Ron Waksman, MDⁱ,
Augusto D'Onofrio, MD^j, Thierry Lefevre, MD^k, Thomas Pilgrim, MD^l, Nicolas Amabile, MD^m,
Pablo Codner, MD^{n,o}, Ran Kornowski, MD^{n,o}, Ze Yie Yong, MD^p, Jan Baan, MD^p, Antonio Colombo, MD^q,
Azeem Latib, MD^q, Stefano Salizzoni, MD^r, Pierluigi Omedè, MD^a, Federico Conrotto, MD^a,
Michele La Torre, MD^r, Sebastiano Marra, MD^a, Mauro Rinaldi, MD^r, and Fiorenzo Gaita, MD^a

Predictors of 30-days mortality

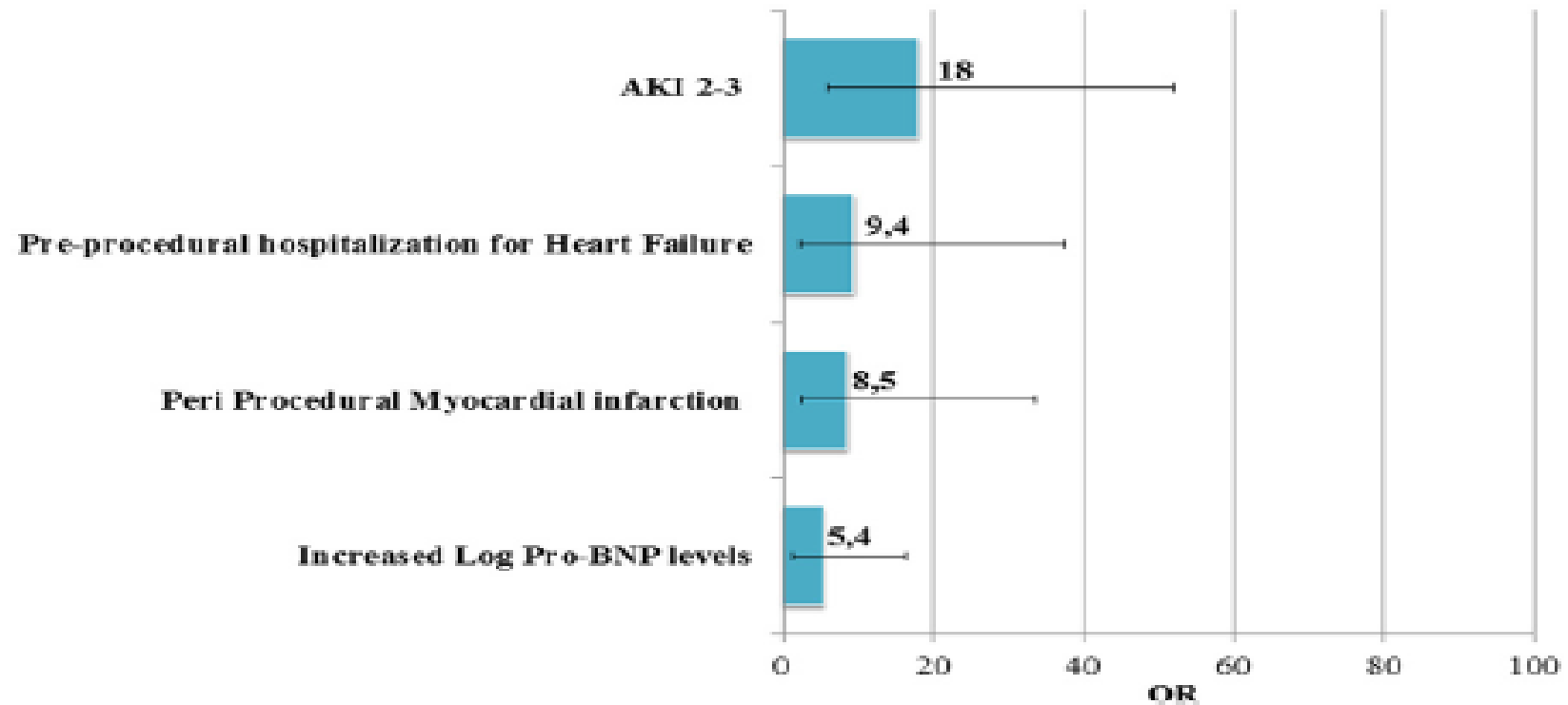
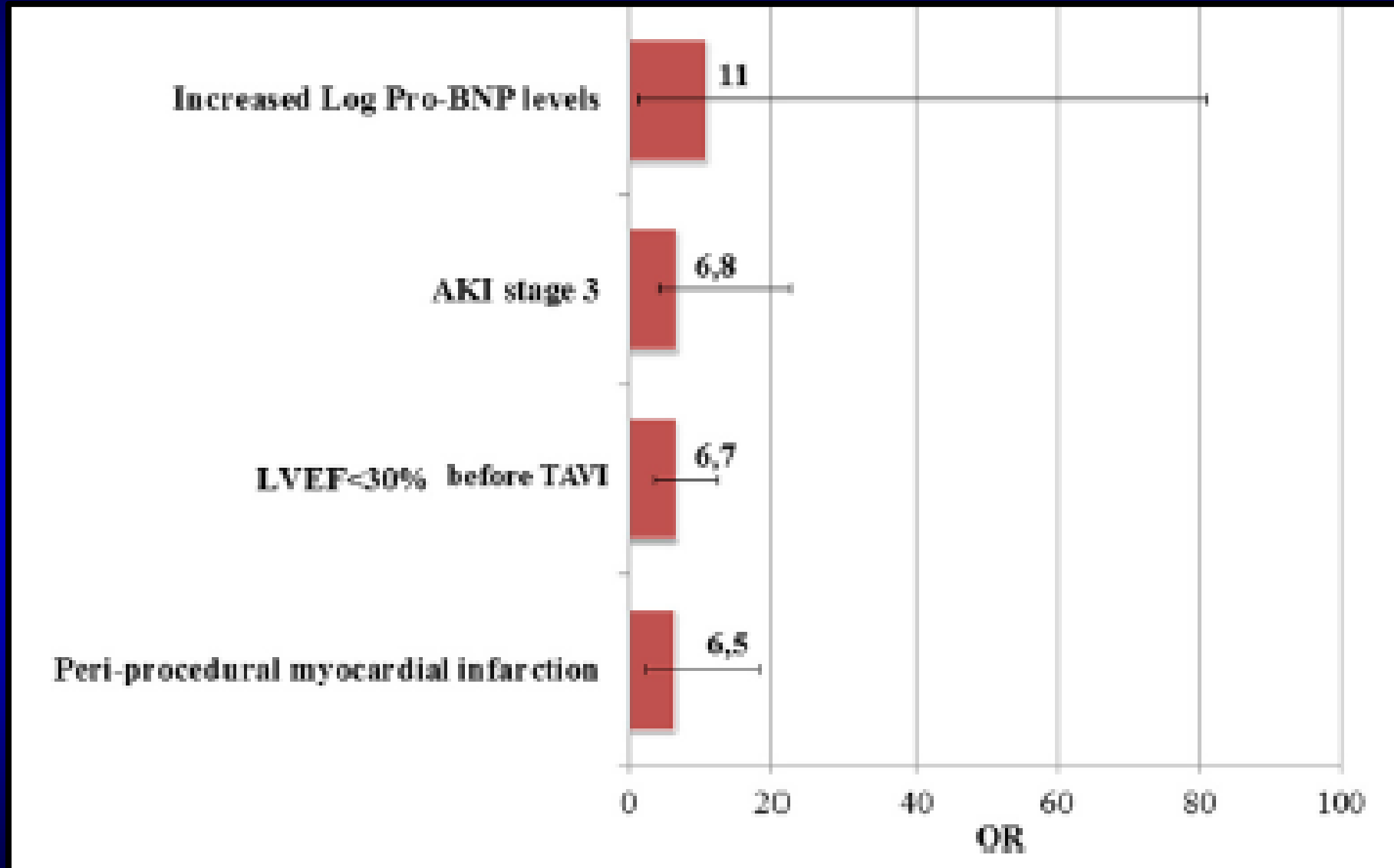


Figure 2. Independent predictors of 30-day mortality at 1 year with OR >5.

Predictors of 1 year mortality



Usefulness and Validation of the Survival postT TAVI Score for Survival After Transcatheter Aortic Valve Implantation for Aortic Stenosis

Fabrizio D'Ascenzo, MD^{a,*}, Davide Capodanno, MD^b, Giuseppe Tarantini, MD, PhD^c, Freek Nijhoff, MD^d, Cristina Ciuca, MD^e, Marco Luciano Rossi, MD^f, Nedy Brambilla, MD^g, Marco Barbanti, MD^b, Massimo Napodano, MD^c, Pieter Stella, MD, PhD^{d,h}, Francesco Saia, MD^c, Giuseppe Ferrante, MDⁱ, Corrado Tamburino, MD, PhD^b, Valeria Gasparetto, MD^c, Pierfrancesco Agostoni, MD, PhD^d, Antonio Marzocchi, MD^e, Patrizia Presbitero, MD^f, Francesco Bedogni, MD^g, Enrico Cerrato, MD^a, Pierluigi Omedè, MD^a, Federico Conrotto, MD^h, Stefano Salizzoni, MDⁱ, Giuseppe Biondi Zoccai, MD^k, Sebastiano Marra, MD^h, Mauro Rinaldi, MD^j, Fiorenzo Gaita, MD^a, Maurizio D'Amico, MD^h, and Claudio Moretti, MD, PhD^{a,h}

Am J Cardiol 2014;114:1867e1874

1,064 patients from 6 institution
Period: January 2007- December 2012

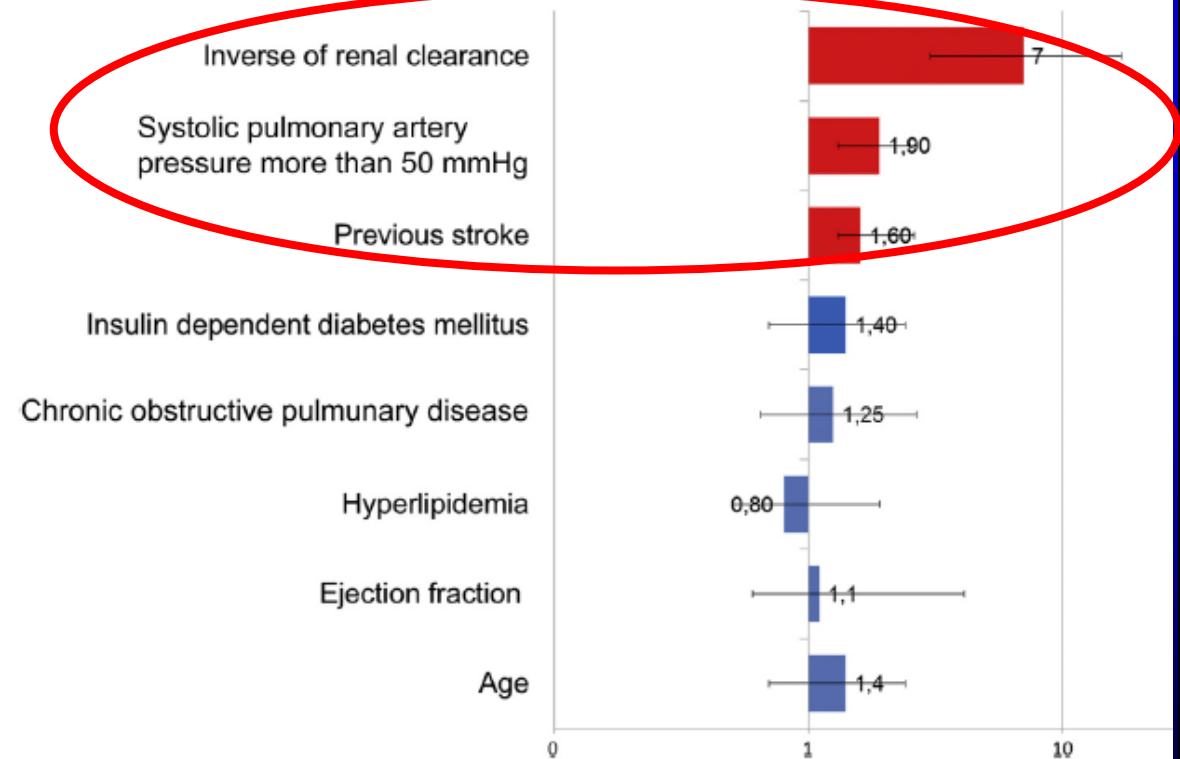


Figure 2. Predictors of all-cause death at 1 year at multivariate logistic regression.

Risk score

CardioGroup.org

TAVI STT SCORE: INSERT DATA TO COMPUTE SCORE

PAPs > 50mmHg (estim ▼

Previous TIA or STROk ▼

Clereance value estimated with MDRD...

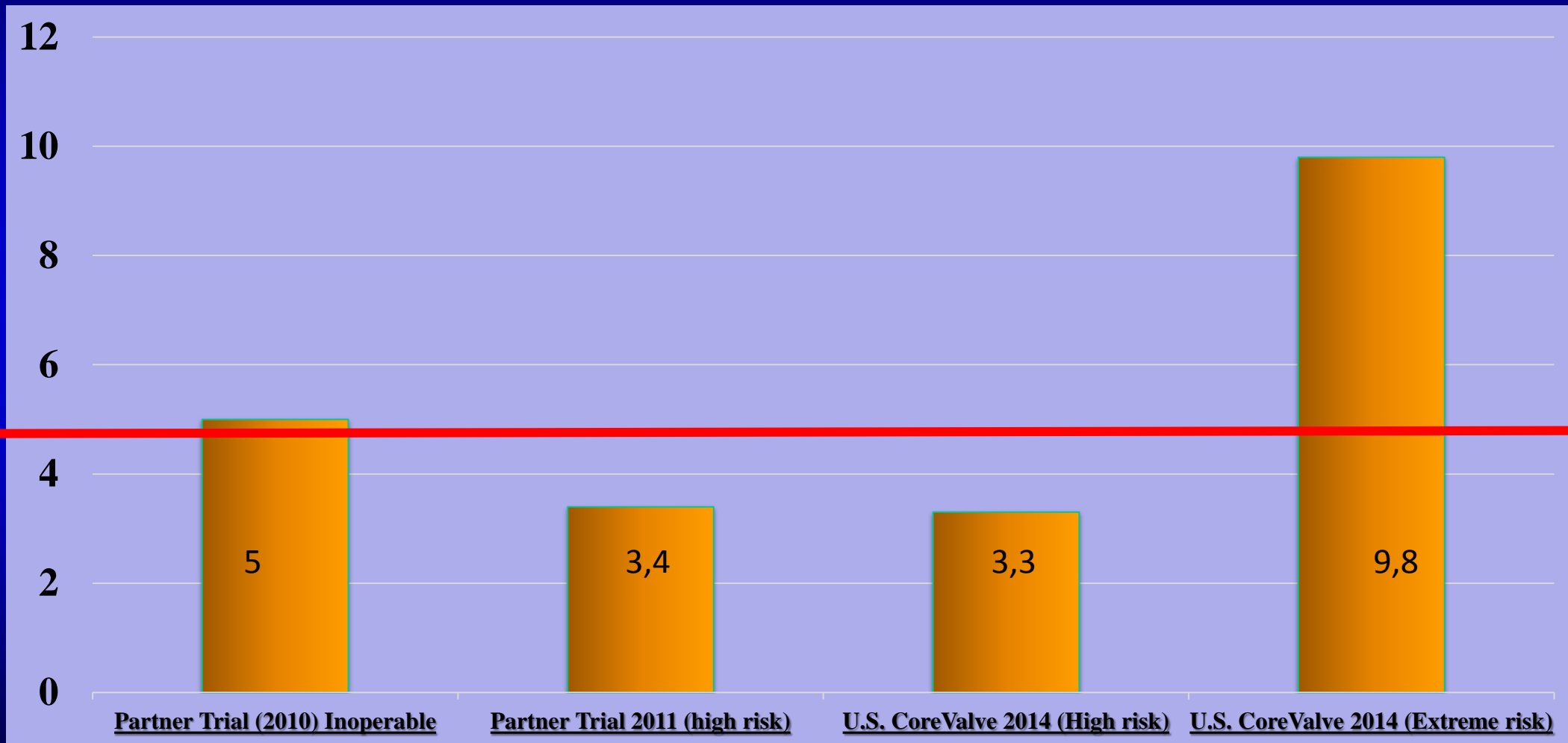
Internal ID or patient s name (optional)...

CENTRE or City (optional)...

Reference: Am J Cardiol. 2014 Sep 28;114(12):1867-1874

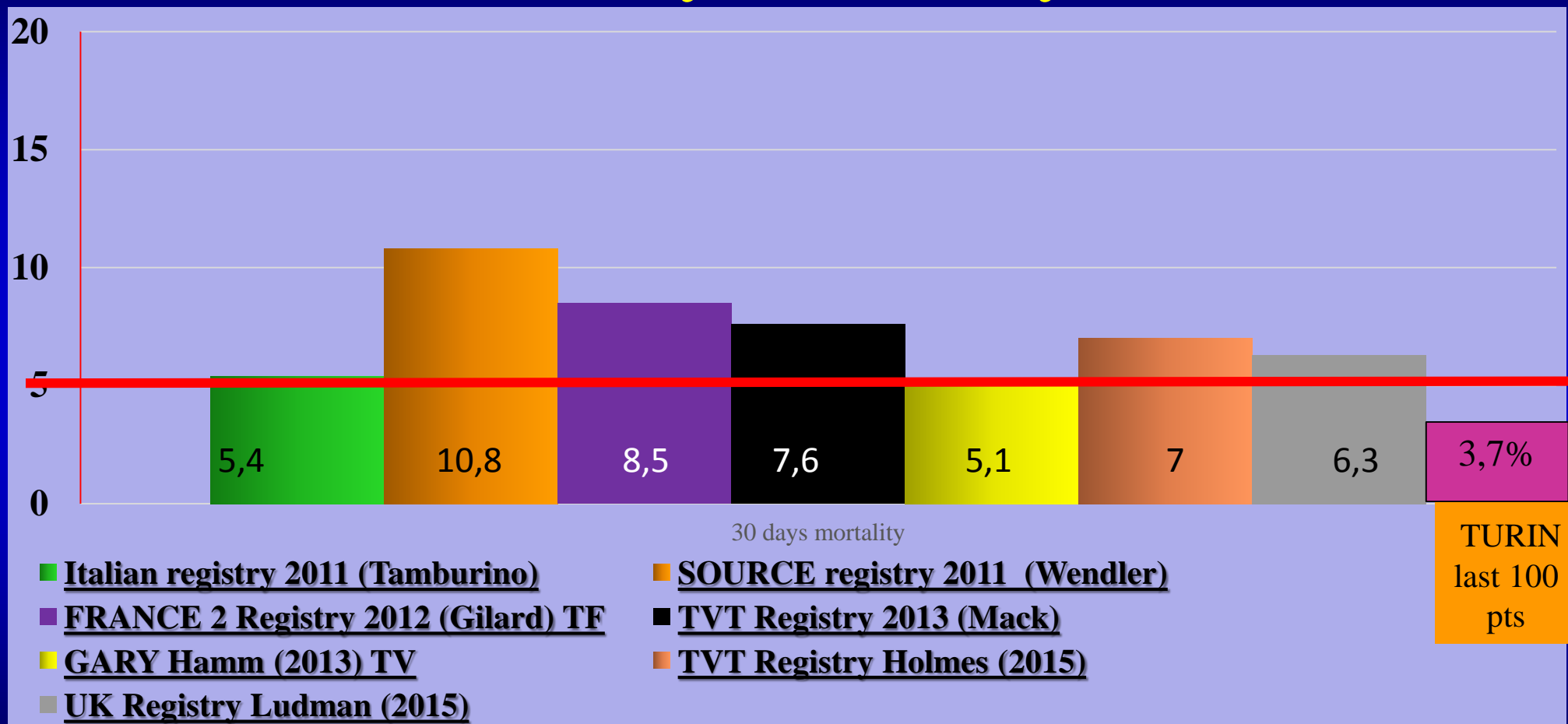
CALCULATE

Main outcome of trials 30 days mortality



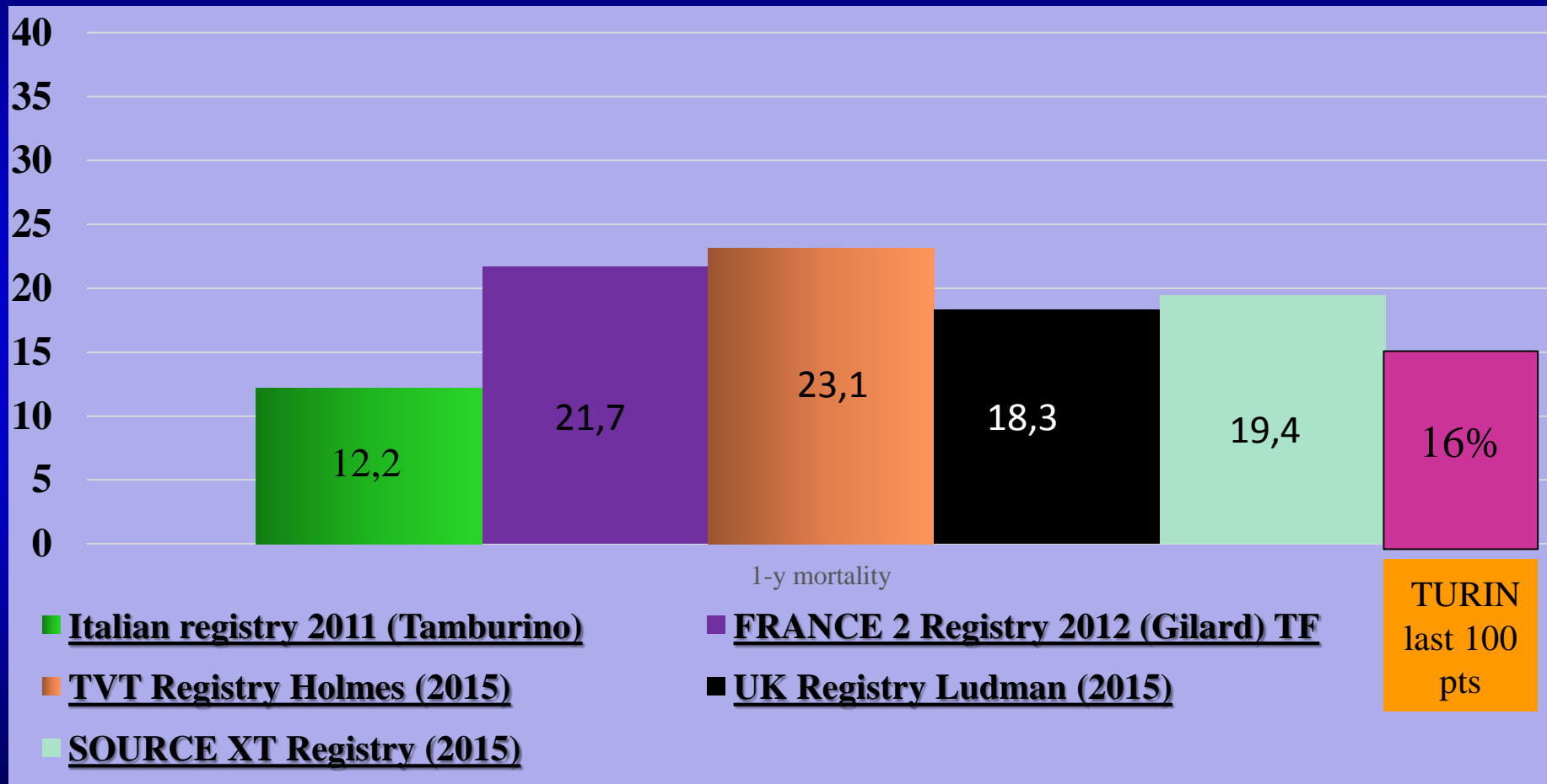
Main outcomes of principal registries

30 days mortality



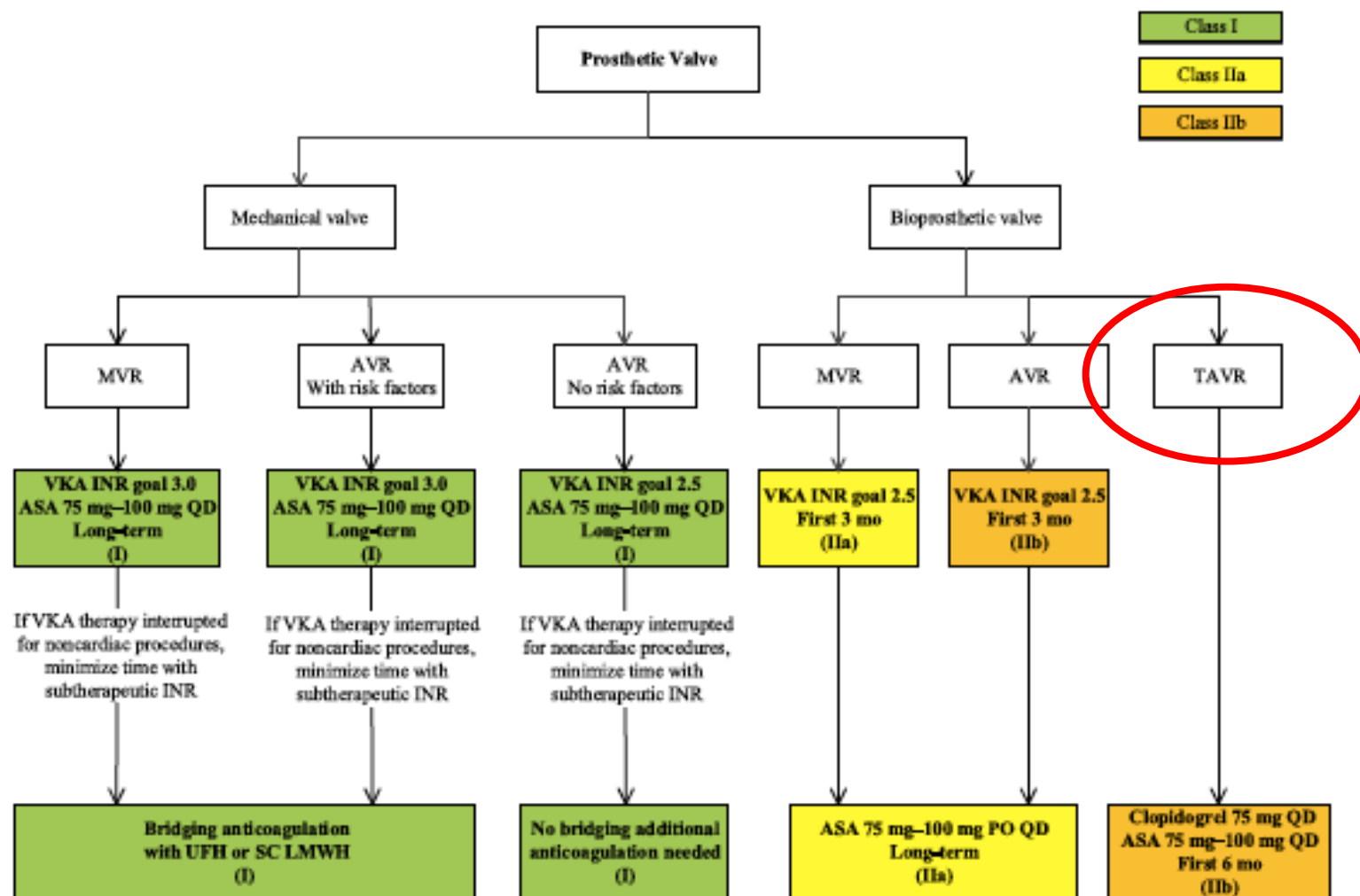
Main outcomes of principal registries

1 year mortality



ANTI-PLATELETS THERAPY





PARTNER Trial (17,18)	
Pre-procedural	Aspirin 80 mg Clopidogrel 300 mg
Procedural	Unfractionated heparin Goal ACT: 250 s Reversal with protamine optional Bivalirudin— not allowed?
Post-procedural (first 30 days)	Aspirin 81 mg/day indefinitely + Clopidogrel 75 mg/day × 90 days

ACC/STS Recommendations (58)
—
Unfractionated heparin Goal ACT: 300 s Reversal with protamine recommended Bivalirudin— not mentioned
Aspirin 81 mg/day indefinitely + Clopidogrel 75 mg/day × 3–6 months If warfarin indicated (AF), then no clopidogrel

CCS Statement (59)
—
—
Indefinite low-dose aspirin generally recommended + Thienopyridine × 1–3 months If oral anticoagulant indicated (AF), avoid triple therapy unless definite indication exists



Canadian Journal of Cardiology 31 (2015) 775–784

Systematic Review/Meta-analysis

Comparison of Dual-antiplatelet Therapy to Mono-antiplatelet Therapy After Transcatheter Aortic Valve Implantation: Systematic Review and Meta-analysis

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Conclusions: DAPT in patients who have undergone TAVI demonstrated no benefit over MAPT in reduction of ischemic events, with a trend toward increased harm because of bleeding. Future considerations should be given to MAPT with clopidogrel alone, as well as the omission of clopidogrel loading before the procedure.

CONCLUSIONS

- According to Guidelines only high risk patients should be treated
- Surgical risk scores fail to accurately predict mortality after transcatheter aortic valve implantation: dedicated scores are needed
- Heart Team still remain fundamental in patient's selection
- Promising performance of second generation devices

Thanks for attention

