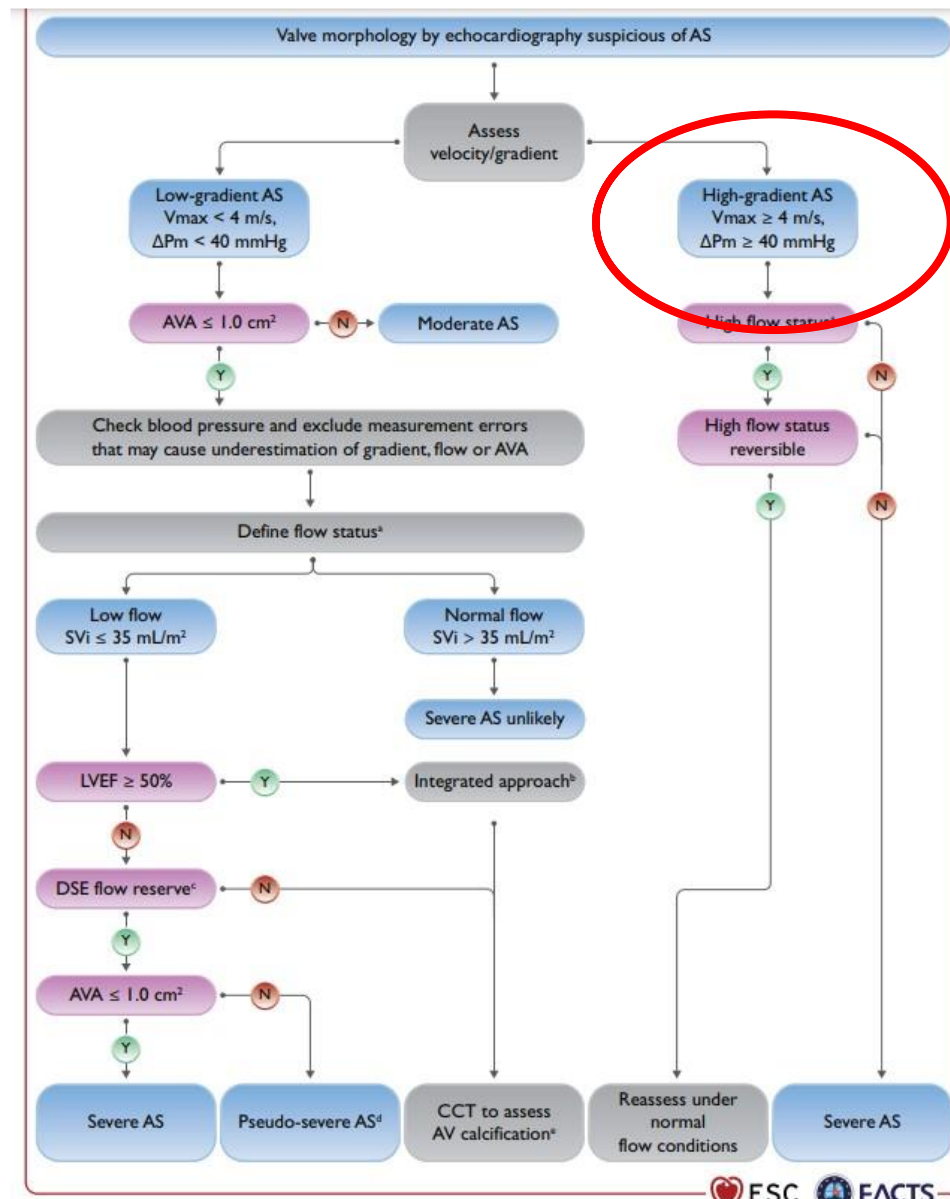
SIMPOSIO YES
SVALVOLARE IN GERIATRIA: UNA QUESTIONE aTAVIca

A qualcuno piace fragile - TAVI o non TAVI?

Luigi Spadafora, MD
Cardiology Fellow, Sapienza University of Rome-Latina



Nel caso del nostro paziente, stenosi aortica severa High-Gradient

2021 ESC/EACTS Guidelines for the management of valvular heart disease. *European Heart Journal*, Volume 43, Issue 7, 14 February 2022

A) Symptomatic aortic stenosis	Class[b]	Level[c]
Intervention is recommended in symptomatic patients with severe, high-gradient aortic stenosis [mean gradient ≥40 mmHg, peak velocity ≥4.0 m/s, and valve area ≤1.0 cm^2 (or ≤0.6 cm^2/m^2)].[235,236]	I	B
Intervention is recommended in symptomatic patients with severe, low-flow (SVi ≤35 mL/m^2), low-gradient (<40 mmHg) aortic stenosis with reduced ejection fraction (<50%), and evidence of flow (contractile) reserve.[32,237]	I	B
Intervention should be considered in symptomatic patients with low-flow, low-gradient (<40 mmHg) aortic stenosis with normal ejection fraction after careful confirmation that the aortic stenosis is severe[d] (*Figure 3*).	IIa	C
Intervention should be considered in symptomatic patients with low-flow, low-gradient severe aortic stenosis and reduced ejection fraction without flow (contractile) reserve, particularly when CCT calcium scoring confirms severe aortic stenosis.	IIa	C

Nel nostro caso:

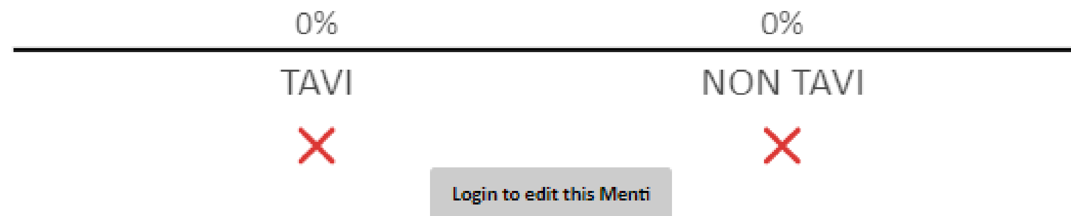
Stenosi aortica High gradient + Sintomi + AVA <1 cm2 ->

Indicazione a trattamento invasivo in classe I B

2021 ESC/EACTS Guidelines for the management of valvular heart disease: Developed by the Task Force for the management of valvular heart disease of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS), *European Heart Journal*, Volume 43, Issue 7, 14 February 2022

Come procedere?

None of the options are correct!



Login to edit this Menti

TERAPIA MEDICA DELLA STENOSI AORTICA

- Per la Stenosi aortica non esistono terapie disease-modifying

- La terapia medica è sovrapponibile a quella dell'insufficienza cardiaca

- Particolare attenzione va prestata ai vasodilatatori periferici e alla terapia antiipertensiva (titolazione graduale)

- Particolare attenzione va prestata allo stato volemico

	Favours SAVR		Favours TAVI
Age	65	75	85
Surgical risk	Low	Intermediate	High - Prohibitive
Frailty	Low	Moderate	Severe
Valve morphology	Unfavourable	Intermediate	Favourable
Femoral access	Unfavourable	Intermediate	Favourable
Concomitant valve disease	• Severe AR • Severe primary MR • Severe TR	• Severe secondary MR • Moderate/severe MS • Moderate AR/MR/TR	Mild AR/MR/MS/TR
Coronary artery disease	• 3-vessel disease and SYNTAX>22 • LM disease and SYNTAX>32	• 3-vessel disease and SYNTAX≤22 • LM disease and SYNTAX≤32	• 1 or 2-vessel disease • LM disease and SYNTAX≤22
Other factors	• Aortic disease requiring surgery • Septal hypertrophy requiring surgery • Active endocarditis		• Porcelain aorta • Previous cardiac surgery • Previous chest irradiation • Chest malformation • Multiple comorbidities

Eur Heart J, Volume 43, Issue 29, 1 August 2022, Pages 2729–2750, https://doi.org/10.1093/eurheartj/ehac105

The content of this slide may be subject to copyright: please see the slide notes for details.

Categories
Favourable
Intermediate
Unfavourable

Leaflet calcification
Symmetrically calcified leaflets
Asymmetrically/heavily calcified leaflets
Calcified raphe & Excess leaflet calcification

LVOT calcification
None
Mild-Moderate
Severe

Risk of conduction disturbance
Low contact pressure
Long membranous septum
High contact pressure
Short membranous septum
+
Pre-exsting RBBB

Others
Horizontal aorta
>70°
Narrow SOV low coronary ostia
<8mm
Noncalcified aortic valve
Extreme annular dimension
Area: 704.5mm2
Perimeter: 96.7mm
Diameter: 30.8mm

Figure 2 Anatomical risk stratification of native aortic valve morphology. The category (favourable, intermediate, unfavourable) indicates the suitability for transcatheter aortic valve implantation. RBBB, right bundle branch block; LVOT, left ventricular outflow tract; SOV, sinus of Valsalva.

Which patients with aortic stenosis should be referred to surgery rather than transcatheter aortic valve implantation?, European Heart Journal, Volume 43, Issue 29, 1 August 2022

ASSESSMENT-PRE TAVI

TC cuore, aorta e vasi periferici:

- Anatomia dell'asse iliaco-femorale favorevole per TAVI

- Buona distanza tra osti coronarici e anulus valvolare

- Dimensioni dell'anulus compatibili con TAVI

Coronarografia:

- Non evidenza angiografica stenosi coronariche

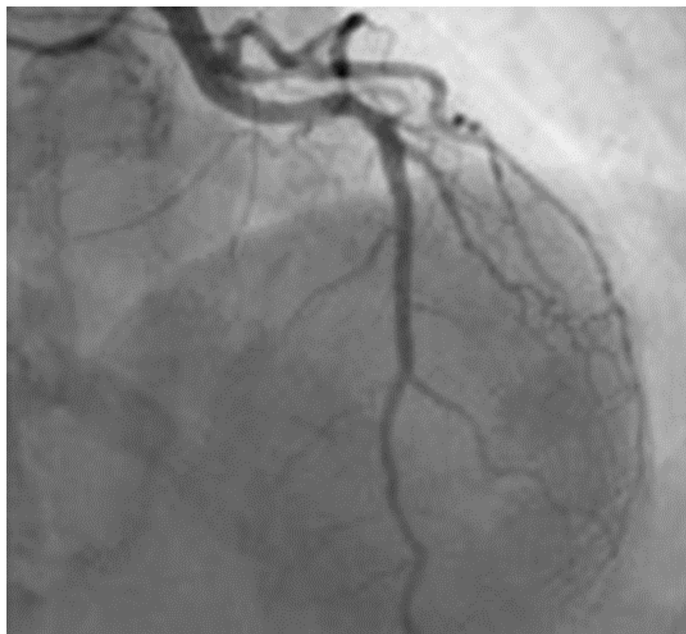
Rischio operatorio:
- STS PROM 3%

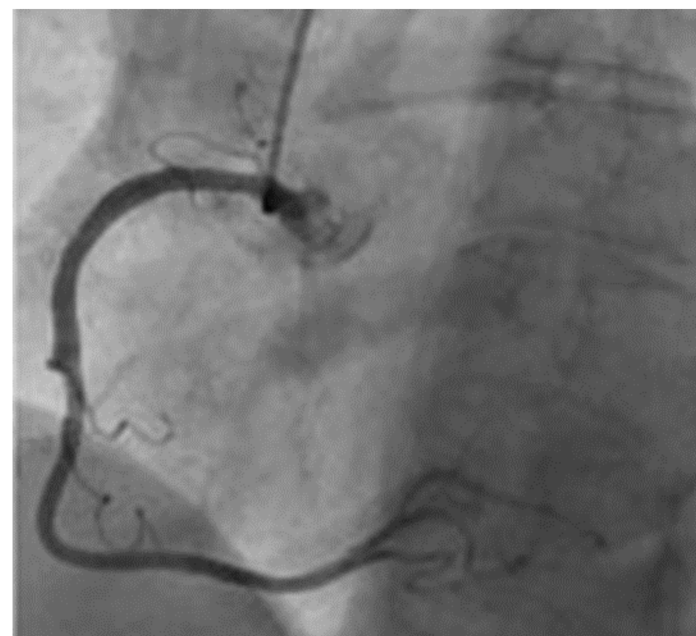
Presenza di fragilità

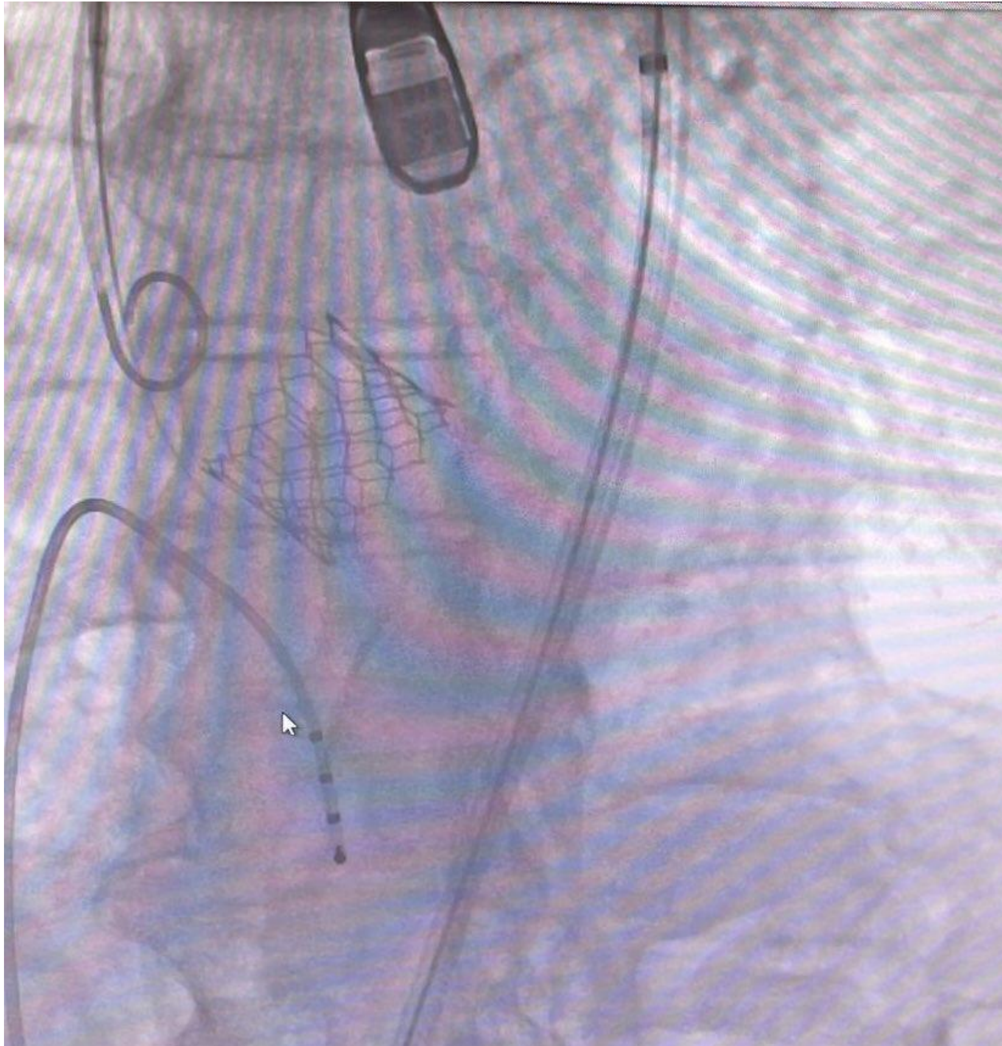
Età > 75 aa

INVIO DEL PAZIENTE A TAVI

CVG PRE-TAVI







Impianto con successo di valvola Edwards Sapien 3 29 mm

Nessuna complicanza intra-procedurale

MONITORAGGIO POST-OPERATORIO

Durante la degenza in UTIC e successivamente in reparto:

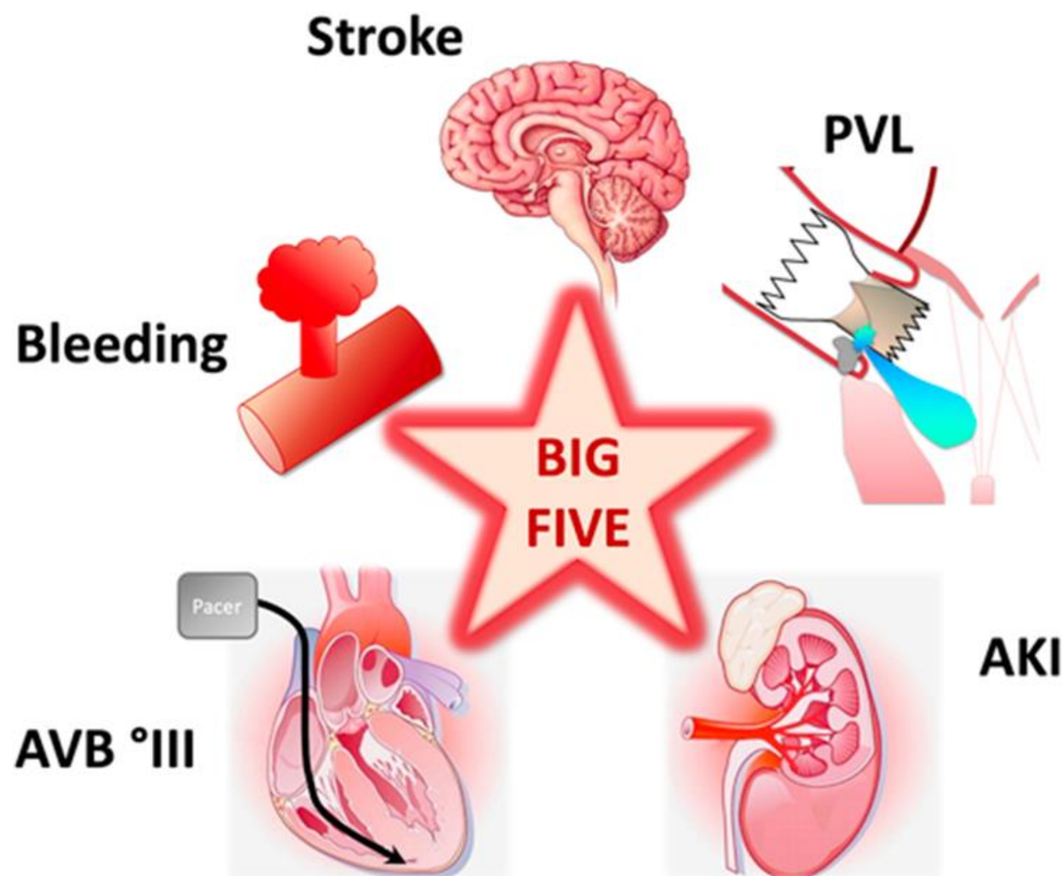
- Valori di emoglobina stabili, accesso femorale in ordine

- Non segni di deficit neurologici focali

- Non alterazioni della conduzione intra-ventricolare, persistenza del ritmo da FA normofrequente

- Valori di creatinina stabili nel decorso post-operatorio

TAVI: PRINCIPALI COMPLICANZE



Grube, E, Sinning, J. The "Big Five" Complications After Transcatheter Aortic Valve Replacement: Do We Still Have to Be Afraid of Them?*. *J Am Coll Cardiol Intv.* 2019 Feb, 12 (4) 370–372.

TAVI: PRINCIPALI COMPLICANZE

Management of conduction abnormalities in patients after TAVI

- Persistent[a] high degree AVB → Permanent PM (Class I)
- New onset alternating BBB → Permanent PM (Class I)
- Pre-existing RBBB with new post-procedure conduction disturbance[b] → Permanent PM (Class IIa)
- Persistent new LBBB with QRS > 150 ms or PR > 240 ms with no further prolongation during > 48h after procedure[c] → Ambulatory ECG monitoring[d] (Class IIa) OR EPS[e] (Class IIa)
- Pre-existing conduction abnormality with prolongation of QRS (> 20 ms) or PR (> 20 ms)[f] → Ambulatory ECG monitoring[d] (Class IIb) OR EPS[e] (Class IIb)

ESC

TAVI: PRINCIPALI COMPLICANZE

JACC: CARDIOVASCULAR INTERVENTIONS VOL. 12, NO. 4, 2019
© 2019 BY THE AMERICAN COLLEGE OF CARDIOLOGY FOUNDATION
PUBLISHED BY ELSEVIER

STRUCTURAL

Impact of Short-Term Complications on Mortality and Quality of Life After Transcatheter Aortic Valve Replacement

Suzanne V. Arnold, MD, MHA,[a] Yiran Zhang, MS,[b] Suzanne J. Baron, MD, MSc,[a] Thomas C. McAndrew, PhD,[b] Maria C. Alu, MS,[b] Susheel K. Kodali, MD,[b] Samir Kapadia, MD,[c] Vinod H. Thourani, MD,[d] D. Craig Miller, MD,[e] Michael J. Mack, MD,[f] Martin B. Leon, MD,[b] David J. Cohen, MD, MSc[a]

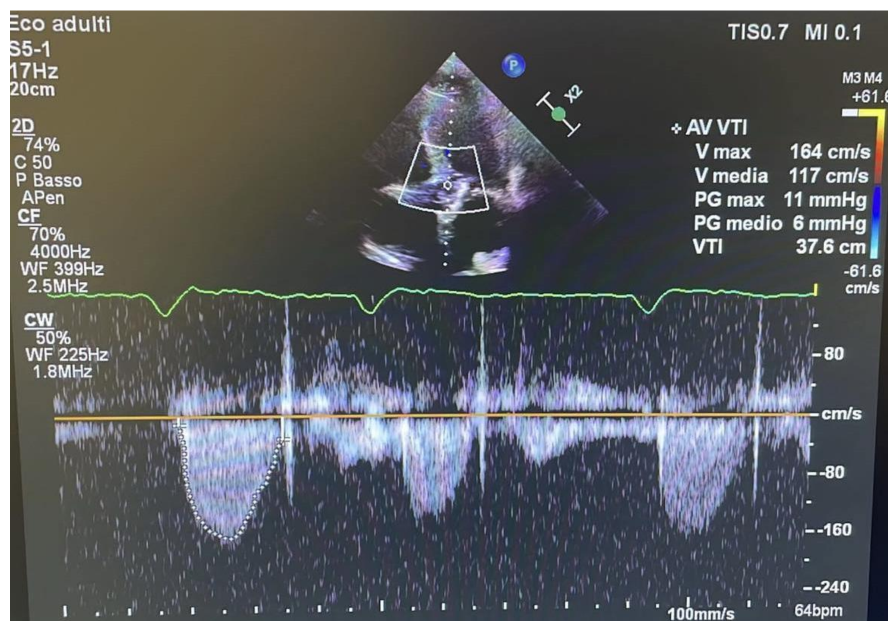
RIVALUTAZIONE ECOCARDIOGRAFICA POST-OPERATORIA

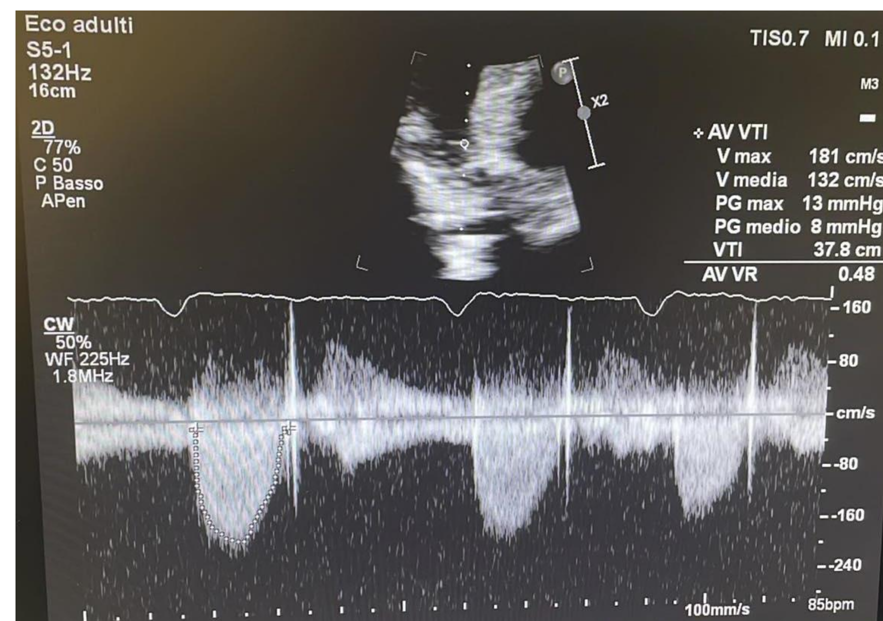
Gpmed 6-8 mmHg

V max 1.6-1.8 m/s

VTI 37.6 cm

NETTO MIGLIORAMENTO DEL QUADRO EMODINAMICO





TERAPIA ANTITROMBOTICA

Transcatheter aortic valve implantation		
OAC is recommended lifelong for TAVI patients who have other indications for OAC.[501] [f]	I	B
Lifelong SAPT is recommended after TAVI in patients with no baseline indication for OAC.[495,496,521]	I	A
Routine use OAC is not recommended after TAVI in patients with no baseline indication for OAC.[497]	III	B

© ESC/EACTS 2021

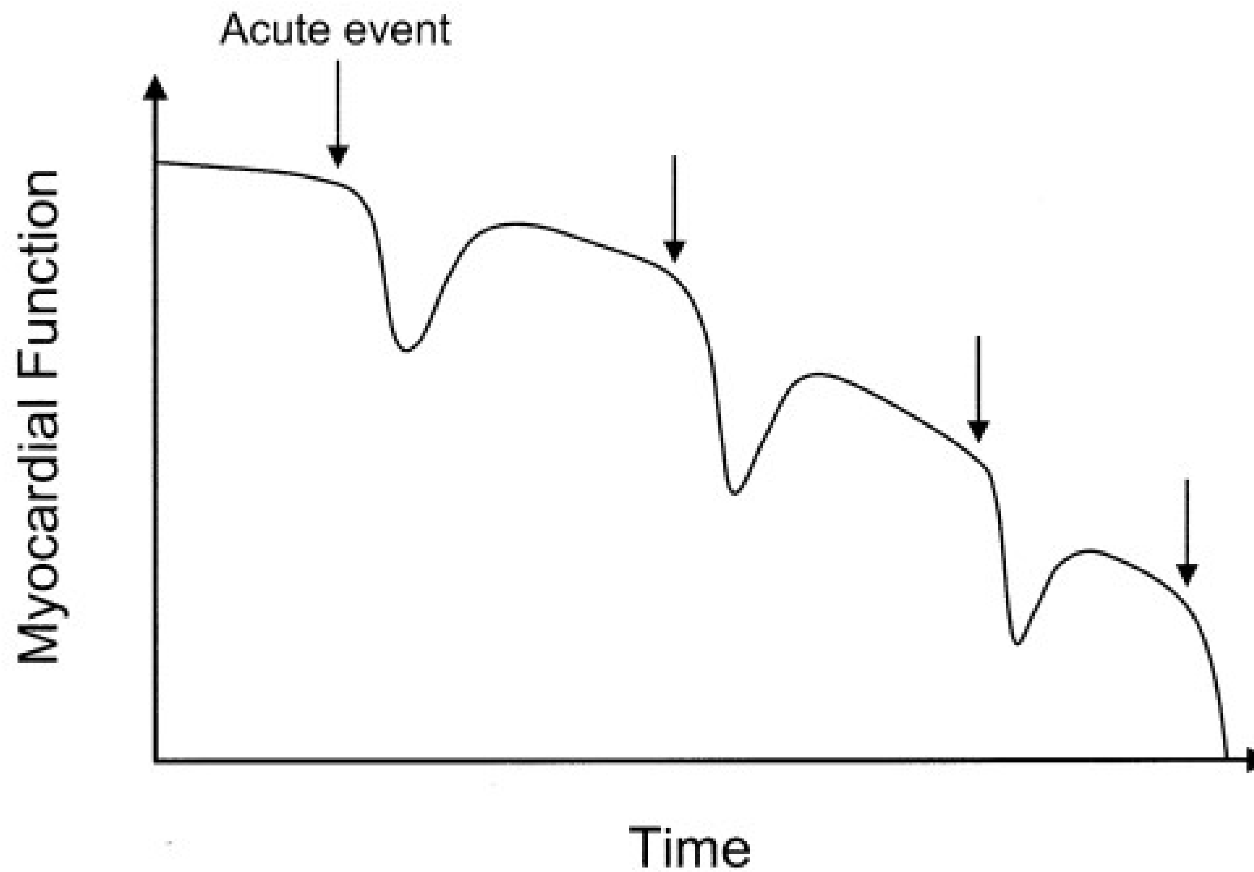
Si optava per terapia anticoagulante con Edoxaban 30 mg/die per:

- **Monosomministrazione (a differenza di Apixaban e Dabigatran)**
- **Non necessità di assunzione concomitante con cibo (a differenza di Rivaroxaban)-> paziente inappetente**
- **eGFR secondo CDK-EPI < 50 ml/min**

OTTIMIZZAZIONE DELLA TERAPIA MEDICA

- Bisoprololo 2.5 mg/die

- Empaglifozin 10 mg/die



Gheorghiade M et al. Pathophysiologic targets in the early phase of acute heart failure syndromes. Am J Cardiol. 2005

Onset of severe symptoms

Latent period

Angina
Synoope
Failure
0 2 4 6
Average survival (yr)

Survival (%)
100
80
60
40
20
0

Average age at death

40 50 60 70 80
Age (yr)

Ross JJR, Braunwald. 1968.

TAVI VS TERAPIA MEDICA: IMPATTO ECONOMICO

Valvular heart disease

openheart **Severe symptomatic aortic stenosis: medical therapy and transcatheter aortic valve implantation (TAVI)—a real-world retrospective cohort analysis of outcomes and cost-effectiveness using national data**

Phillip M Freeman,[1,2] Majd B Protty,[1] Omar Aldalati,[3] Richard A Anderson,[5] Dave Smith[3,4]

Main outcome measures: Survival, hospital admission frequency and length of stay, primary care visits, and cost-effectiveness.

Results: TAVI patients were significantly older (81.8 vs 79.2), more likely to be male (59.1% vs 49.3%), baseline comorbidities were balanced. Mortality in TAVI versus STD was 28% vs 70% at 1000 days follow-up. There were significantly more hospital admissions per year in the TAVI group prior to TAVI/STD (1.5 (IQR 1.0–2.4) vs 1.0 IQR (0.5–1.5)). Post TAVI/STD, the TAVI group had significantly lower hospital admissions (0.3 (IQR 0.0–1.0) vs 1.2 (IQR 0.7–3.0)) and lengths of stay (0.4 (IQR 0.0–13.8) vs 11.0 (IQR 2.5–28.5), p<0.05). The incremental cost-effectiveness ratio (ICER) for TAVI was £10 533 per quality-adjusted life year (QALY).

Conclusions: TAVI patients were more likely to survive and avoid hospital admissions compared with the medically managed STD group. The ICER for TAVI was £10 533 per QALY, making it a cost-effective procedure.

sents an important step in real-world long-term outcomes of either medical therapy or TAVI in a high-risk population with severe symptomatic aortic stenosis. It also supports clinical trial findings of improved outcomes in patients managed with TAVI and for the first time reveals that TAVI is a cost-effective procedure in real-world practice.

Support us →

The Guardian
News website of the year

News | Opinion | Sport | Culture | Lifestyle

Mick Jagger

Mick Jagger says he is on the mend following heart valve procedure

Rolling Stones frontman underwent procedure in New York earlier this week, according to report in Billboard magazine

Reuters

Fri 5 Apr 2019 18.54 CEST

2019

Forbes

Mick Jagger 'On The Mend' After Reportedly Getting A New Aortic Valve

The lead singer for the Rolling Stones reportedly just underwent a successful transcatheter aortic valve replacement (TAVR).

5 apr 2019

US World Politics Business Opinion Health Entertainment Style Travel Sports Video

The Rolling Stones are hitting the road next year on a tour sponsored by AARP

By Dan Heching, CNN

1 minute read · Updated 3:29 PM EST Wed November 22, 2023