

# *How New Guidelines Will Impact Clinical Practice?*

## *Aortic Valve Guidelines*

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# Disclosure of Relevant Financial Relationships

Within the prior 24 months, I have had a financial relationship with a company producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients:

## Nature of Financial Relationship

Grant/Research Support

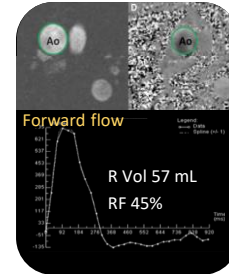
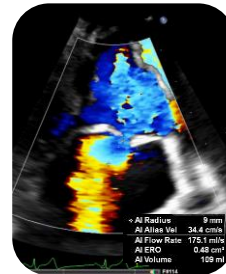
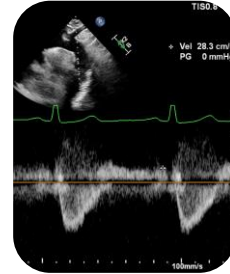
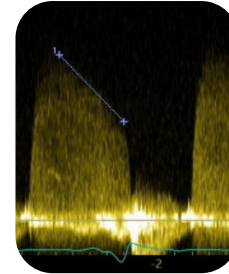
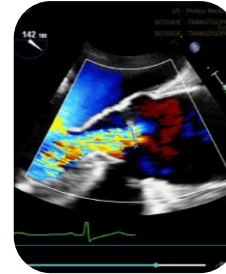
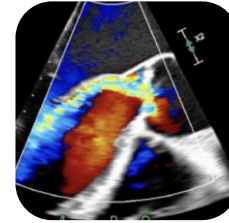
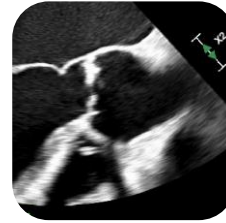
Travel expenses

## Ineligible Company

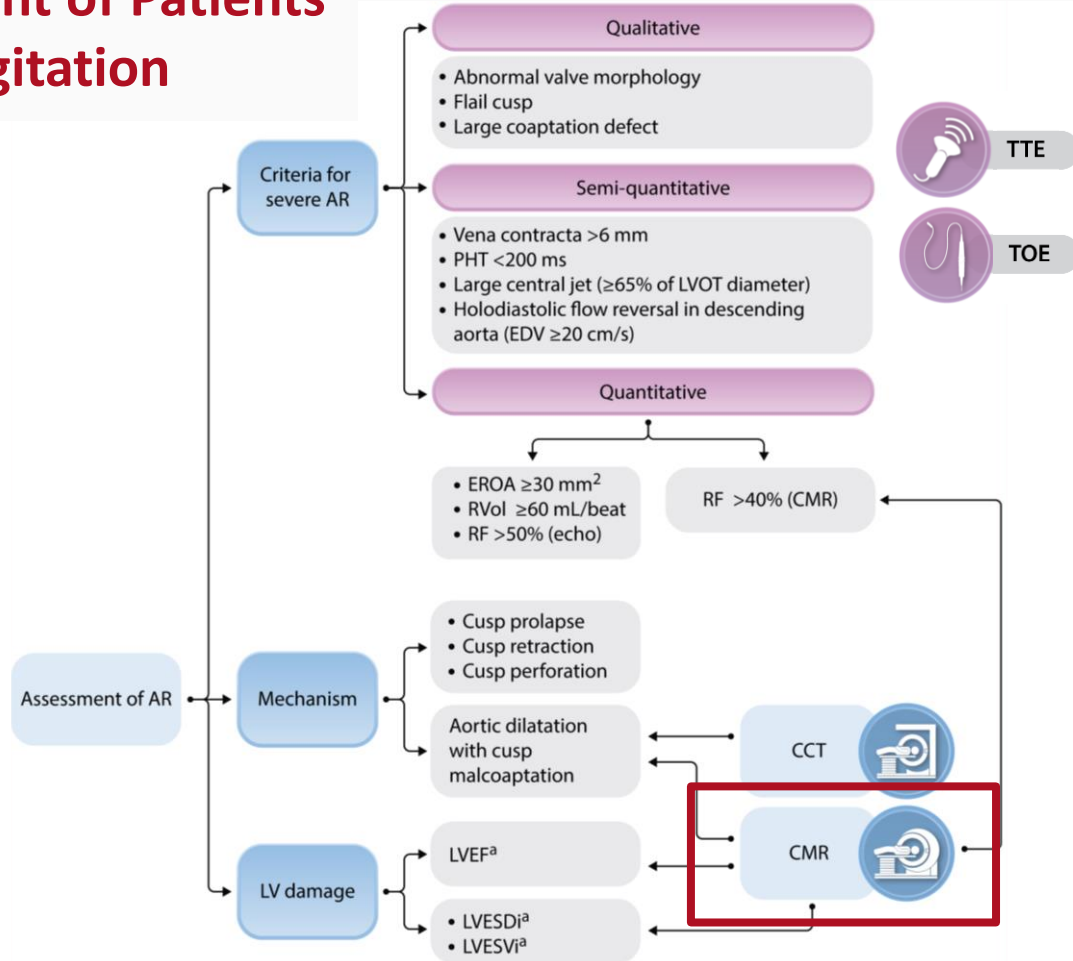
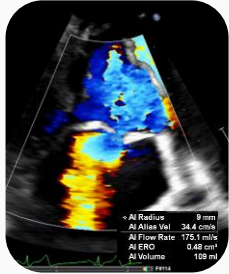
Abbott Vascular

Edwards Lifesciences, Abbott  
Vascular, Medira, Siemens  
Healthineers and InQB8 Medical  
Technologies

# Aortic Regurgitation

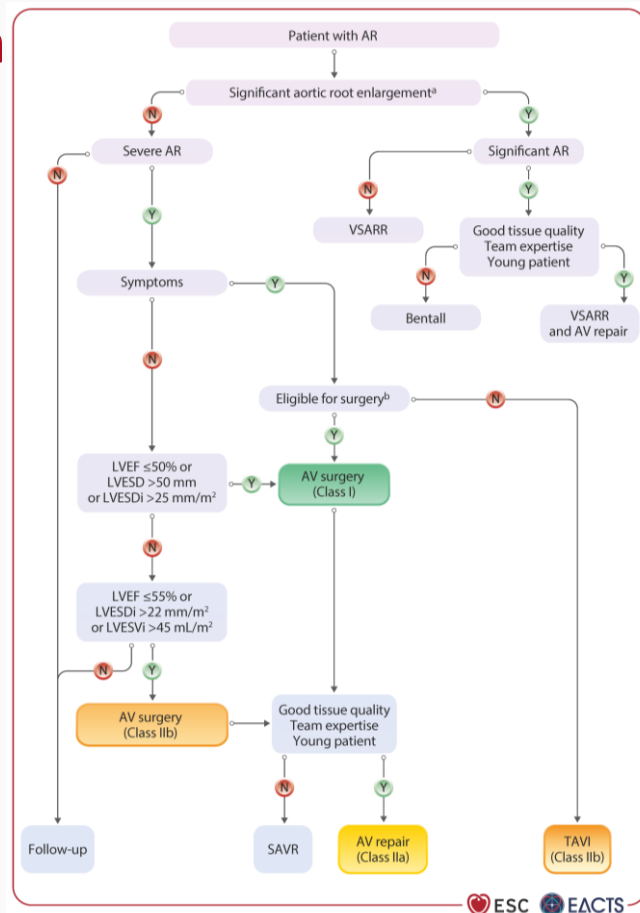


# Imaging Assessment of Patients with Aortic Regurgitation



# Management of Aortic Regurgitation

Recommendations	Class	Level
AV surgery is recommended in symptomatic patients with severe AR regardless of LV function.	I	B
AV surgery is recommended in asymptomatic patients with severe AR and LVESD >50 mm or LVESDi >25 mm/m <sup>2</sup> [especially in patients with small body size (BSA <1.68 m <sup>2</sup> )] or resting LVEF ≤50%.	I	B
AV surgery may be considered in asymptomatic patients with severe AR and LVESDi >22 mm/m <sup>2</sup> , LVESVi >45 mL/m <sup>2</sup> [especially in patients with small body size (BSA <1.68 m <sup>2</sup> )], or resting LVEF ≤55%, if the surgical risk is low.	IIb	<b>REV.</b>

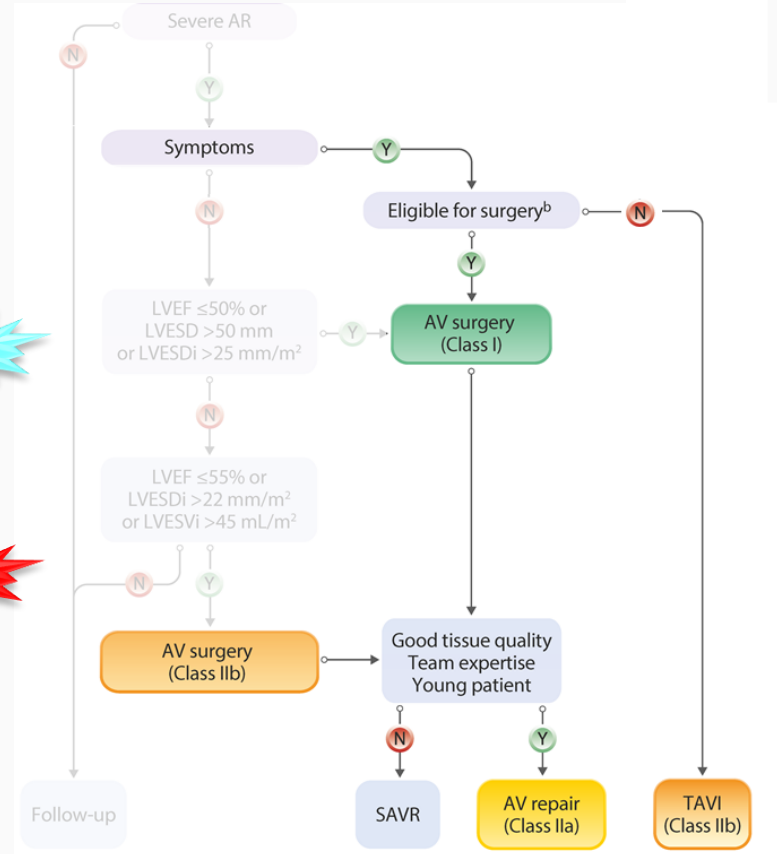
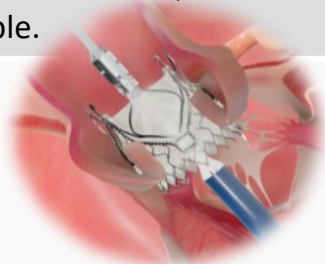


# Mode of Intervention for Severe Aortic Regurgitation

Recommendations	Class	Level
AV repair should be considered in selected patients with severe AR at experienced centres, when durable results are expected.	<b>IIa</b>	<b>B</b>
TAVI may be considered for the treatment of severe AR in symptomatic patients ineligible for surgery according to the Heart Team, if the anatomy is suitable.	<b>IIb</b>	<b>B</b>

**REV.**

**NEW**



# **Aortic Stenosis - Expansion of TAVR indication**

# Mode of Intervention in Patients with Severe AS

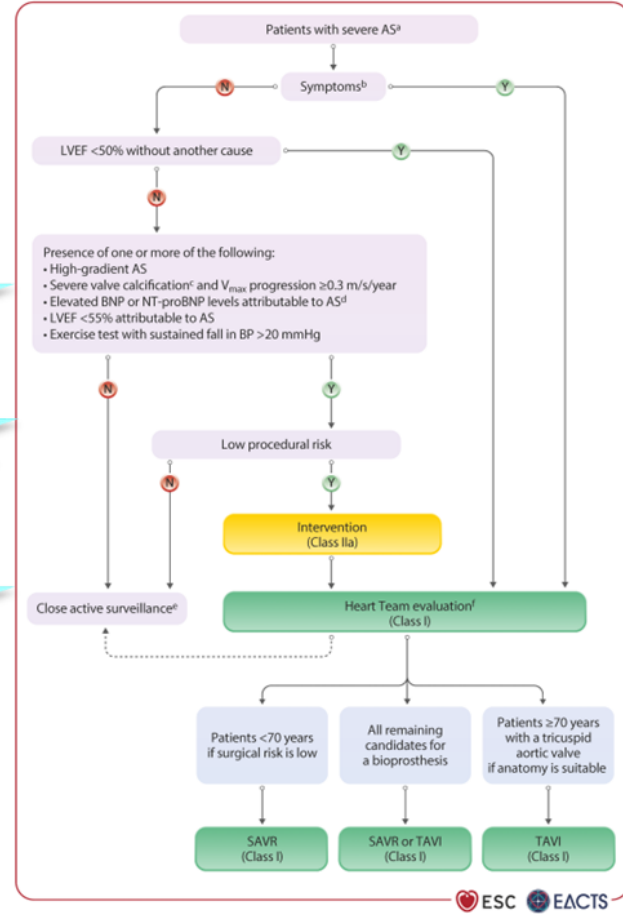
irrespective of the surgical risk score

Recommendations	Class	Level
TAVI is recommended in patients $\geq 70$ years of age with tricuspid AV stenosis, if the anatomy is suitable.	I	A
SAVR is recommended in patients $< 70$ years of age, if the surgical risk is low.	I	B
SAVR or TAVI are recommended for all remaining candidates for an aortic BHV according to Heart Team assessment.	I	B

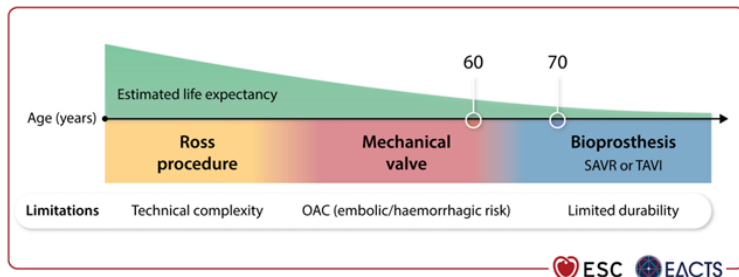
REV.

REV.

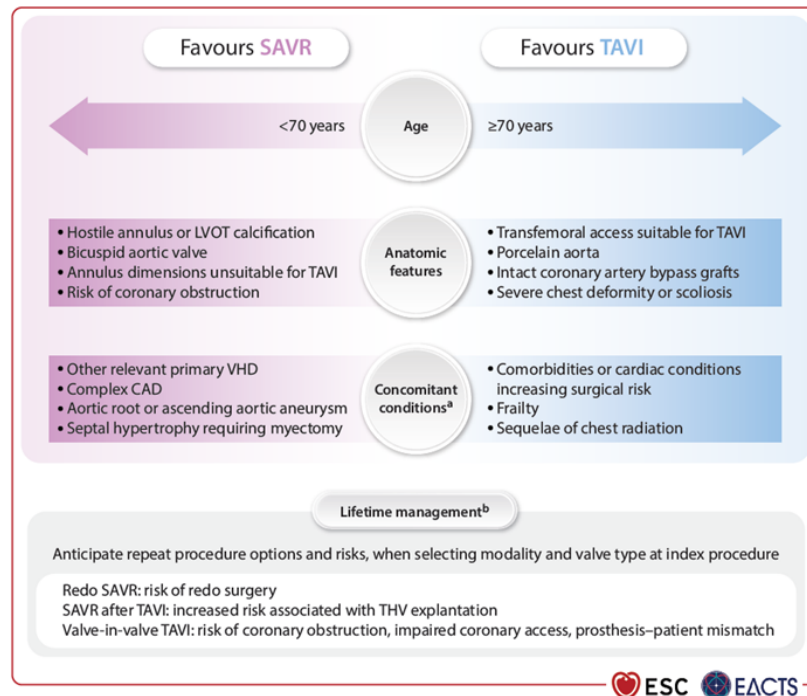
REV.



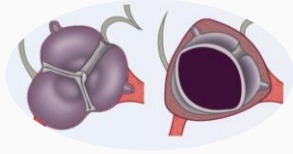
# Mode of Intervention in Patients with Severe AS



Recommendations	Class	Level
It is recommended that AV interventions are performed in Heart Valve Centres that report their local expertise and outcome data, have on-site interventional cardiology and cardiac surgical programmes, and a structured collaborative Heart Team.	I	C
It is recommended that the mode of intervention is based on Heart Team assessment of individual clinical, anatomical, and procedural characteristics, <b>incorporating lifetime management considerations and estimated life expectancy.</b>	I	C



# Mode of Intervention in Patients with Severe Aortic Stenosis



## Recommendations

TAVI may be considered for the treatment of severe BAV stenosis in patients at increased surgical risk, if the anatomy is suitable.

Class

IIb

Level

B

NEW



## Recommendations

Non-transfemoral TAVI should be considered in patients who are unsuitable for surgery and transfemoral access.

Class

IIa

Level

B

REV.

# Earlier Treatment of Asymptomatic AS Patients

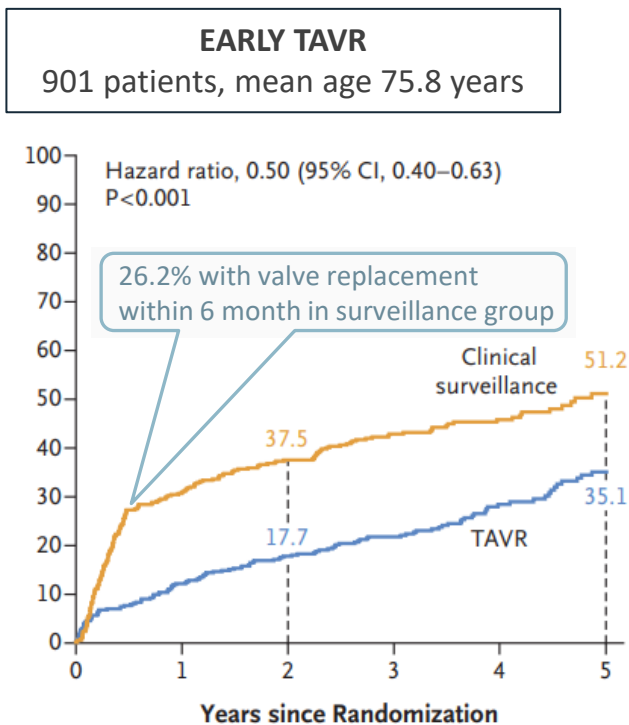
# Intervention for Asymptomatic AS

Recommendations	Class	Level
Intervention is recommended in asymptomatic patients with severe AS and LVEF <50% without another cause.	I	B
Intervention should be considered in asymptomatic patients (confirmed by a normal exercise test, if feasible) with severe, high-gradient AS and LVEF ≥50% as an alternative to close active surveillance, if the procedural risk is low.	IIa	A
<p>Intervention should be considered in asymptomatic patients with severe AS and LVEF ≥50% if the procedural risk is low and one of the following parameters is present:</p> <ul style="list-style-type: none"> <li>• Very severe AS (mean gradient ≥60 mmHg or <math>V_{\max} &gt;5.0</math> m/s)</li> <li>• Severe valve calcification (ideally assessed by CCT) and <math>V_{\max}</math> progression ≥0.3 m/s/year.</li> <li>• Markedly elevated BNP/NT-proBNP levels (more than three times age- and sex-corrected normal range, confirmed on repeated measurement without other explanation).</li> <li>• LVEF &lt;55% without another cause.</li> </ul>	IIa	B
Intervention should be considered in asymptomatic patients with severe AS and a sustained fall in BP (>20 mmHg) during exercise testing.	IIa	C

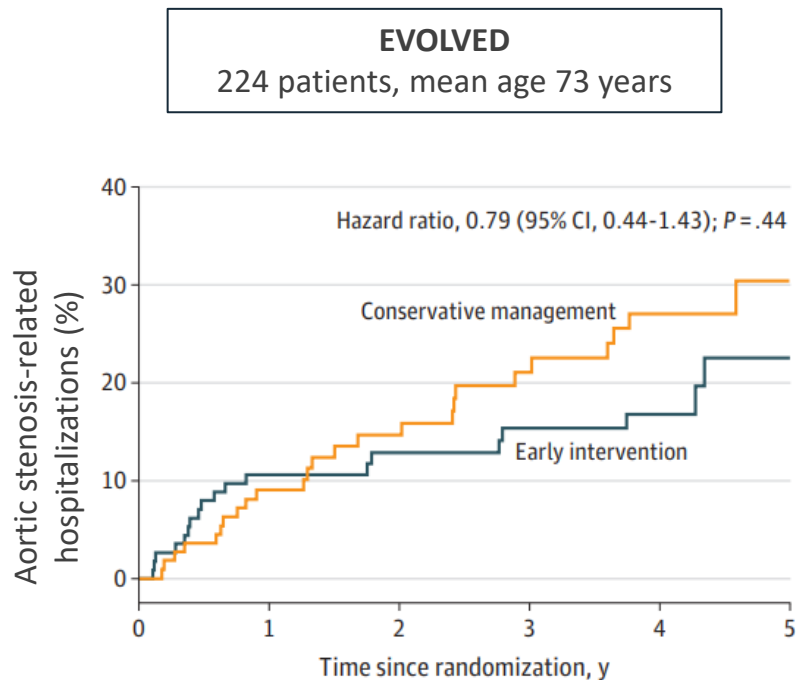


# RCTs in Patients With Asymptomatic Severe Aortic Stenosis

Death, Stroke, or Unplanned Hospitalization  
for Cardiovascular Causes (%)



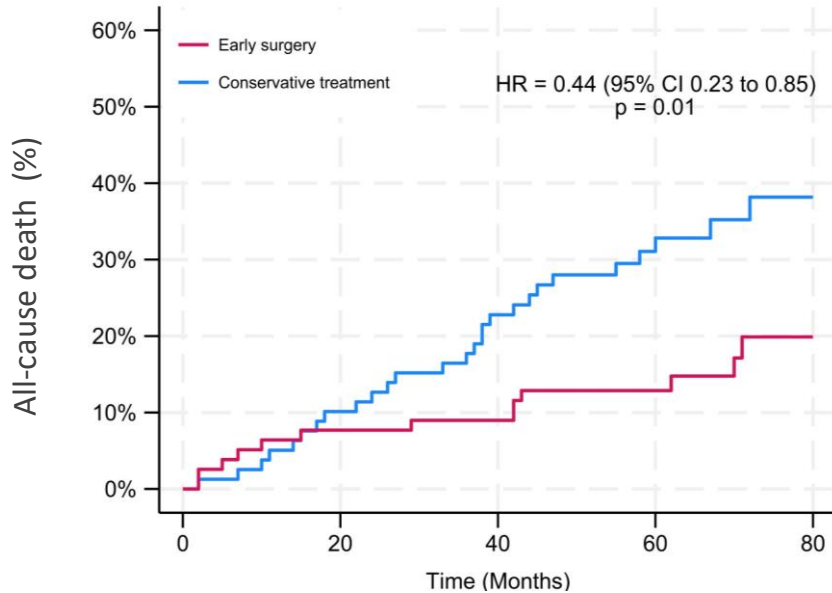
Généreux et al. *N Engl J Med* 2025;392:217-27



Loganathan et al. *JAMA* 2025;333(3):213-221

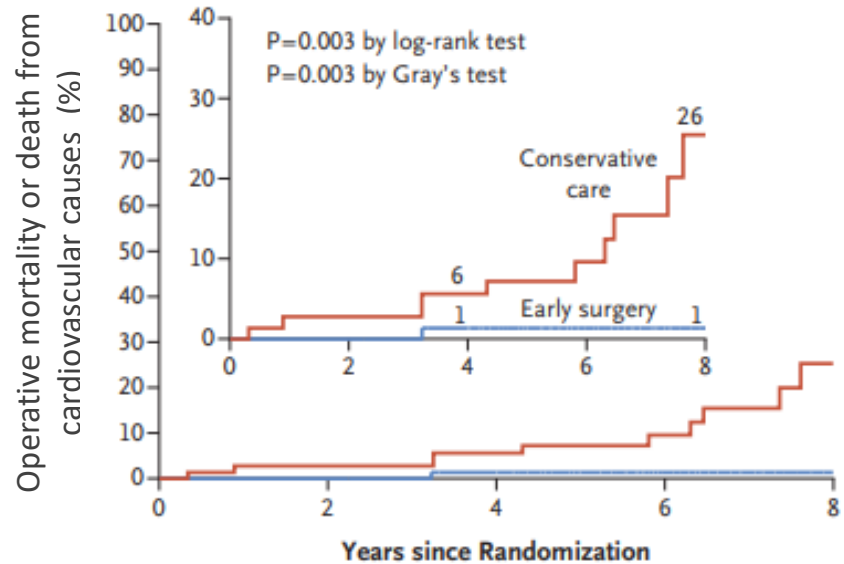
# RCTs in Patients With Asymptomatic Severe Aortic Stenosis

**AVATAR** long-term follow-up  
157 patients, mean age 67 years



Banovic et al. *Circulation*. 2022;145:648–658.

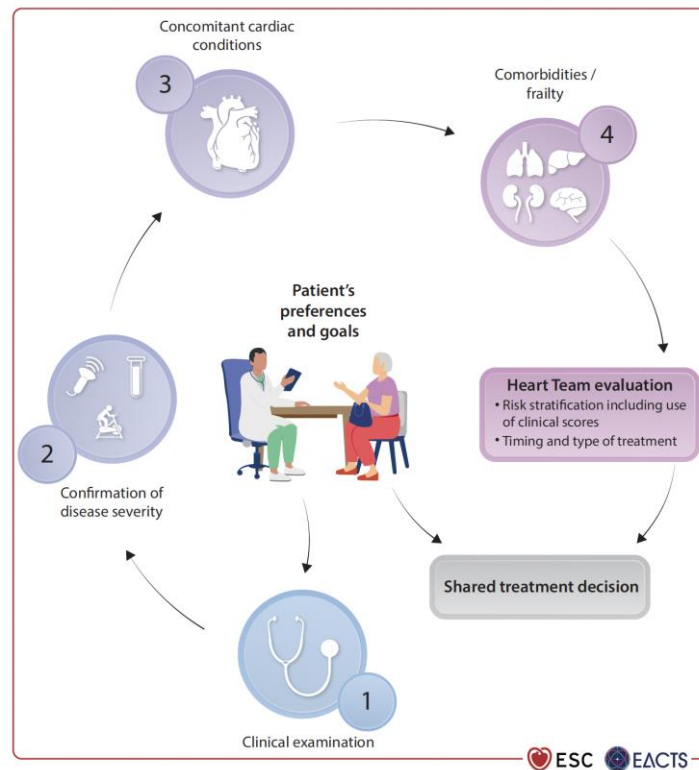
**RECOVERY**  
145 patients, mean age 64 years



Kang et al. *N Engl J Med* 2020;382:111-9.

# Limitations of RCTs in Asymptomatic Aortic Stenosis

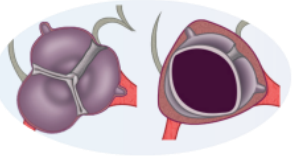
- ✓ For some of them **small and underpowered**
- ✓ Inclusion of a **selected population of young low risk patients** with **very severe aortic stenosis**
- ✓ Quality of close surveillance in the conservative arm?
- ✓ Inclusion of TAVR implantation as an event in EARLY-TAVR



**Shared decision-making!**

# Bicuspid Aortic Stenosis

# Bicuspid Aortic Stenosis



## Recommendations

TAVI may be considered for the treatment of severe BAV stenosis in patients at increased surgical risk, if the anatomy is suitable.

Class

Level

**IIb**

**B**

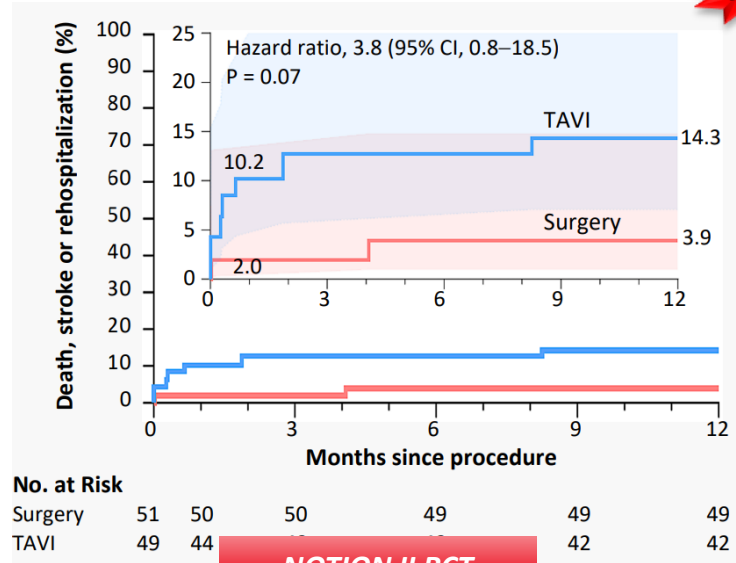
**NEW**

## Potential risks of TAVR

↑ **Stroke**

↑ **Annular rupture**

↑ **Pravalvular leak**



**NOTION II RCT**

# Take-home Messages

- Consider **volume** (*ideally by CMR*) and **modality of treatment** for **aortic regurgitation** (*Surgery vs. TAVR*)
- General trend of **expansion of TAVR indication** (*be reasonable and consider the evidence!*)
- Wide open door for **earlier intervention in patients with asymptomatic AS** (*as a shared decision with the informed patient!*)
- Specific recommendation for **bicuspid aortic stenosis** (*additional randomized evidence is needed*)