EUROVALVE

VAN DER VALK SELYS HOTEL LIÈGE

SAVE THE DATE

SEPTEMBER 25&26 2025

COURSE DIRECTORS
Patrizio Lancellotti, Belgium
Khalil Fattouch, Italy
Gilbert Habib, France
José Luis Zamorano, Spain
Philippe Pibarot, Canada
Mani Vannan, USA
Bernard Cosyns, Belgium
Augustin Coisne, France

LOCAL HOSTS
Patrizio Lancellotti, Belgium
Vincent Tchana-Sato, Belgium

The best approach for “at risk” moderate aortic stenosis
Conservative management: a prudent approach?

Augustin Coisne, MD, PhD, FESC
Professor in Cardiology
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Société Française de Cardiologie
Valvulopathies

FILIALE IMAGERIE CARDIOVASCULAIRE SFC

CHU LILLE

VALVES CENTER
Lille University Hospital

ufr3s Sciences de Santé et du Sport

Clinical Case

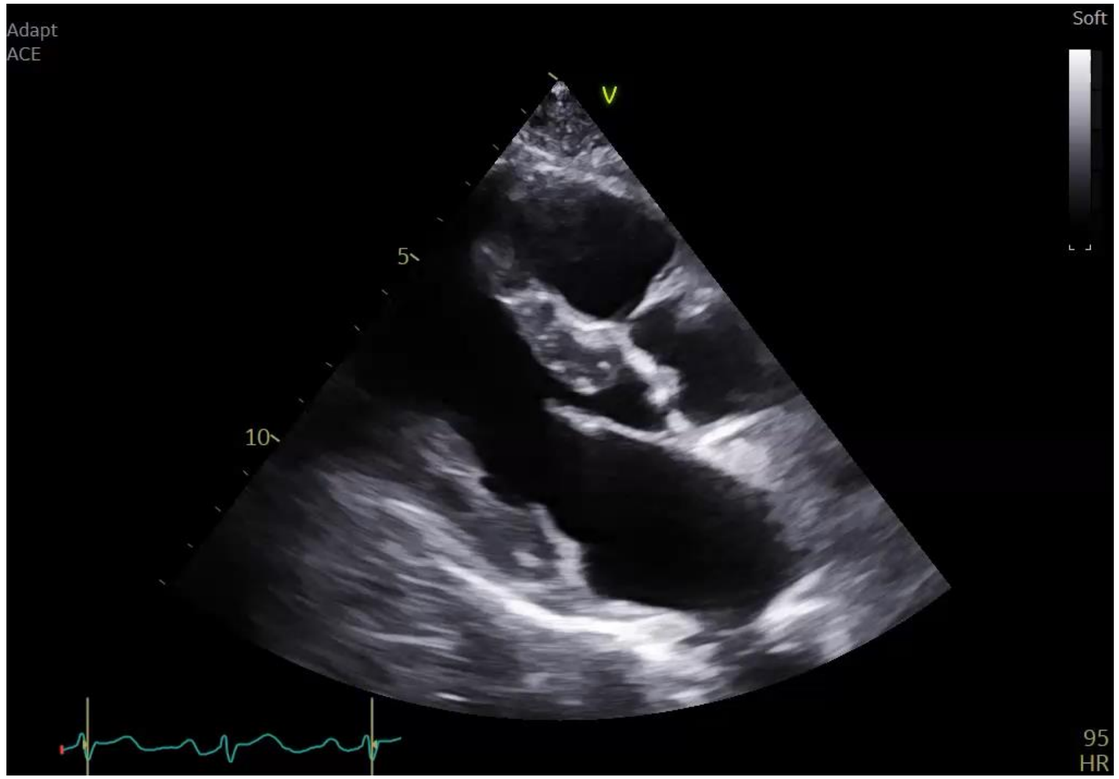
61yo, 63kg, 1m68, BSA 1,7cm^2

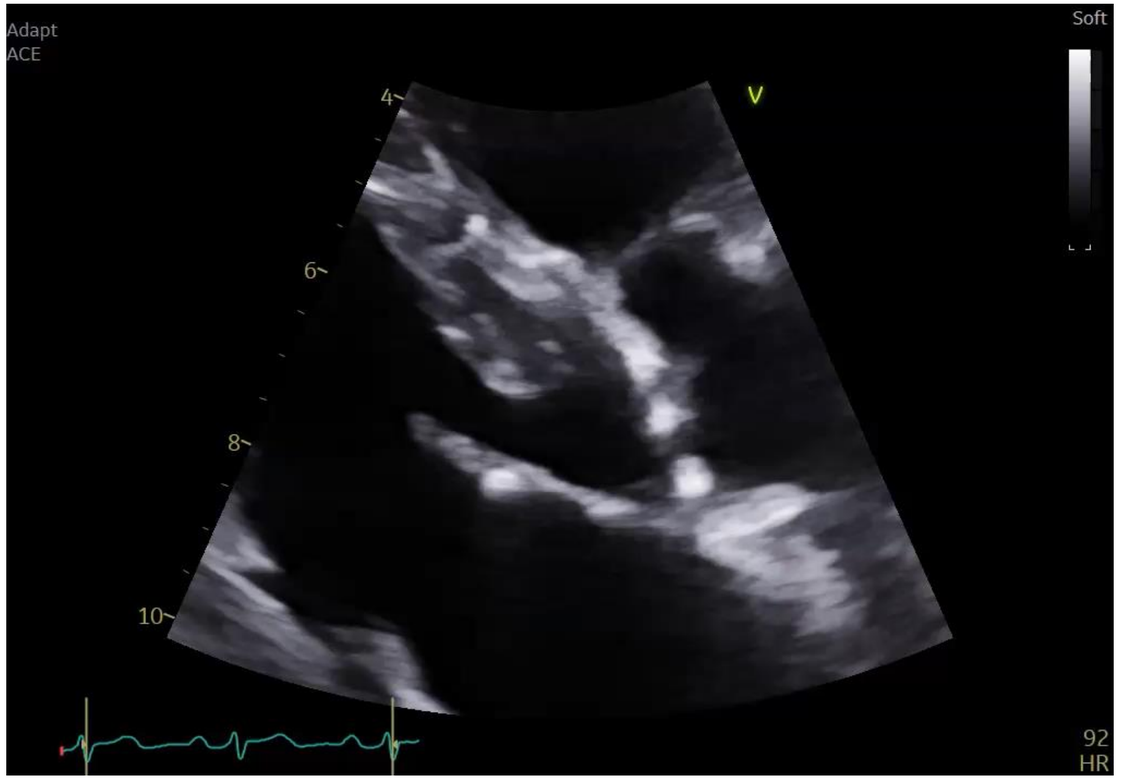
Hypertension

No hospitalization. Murmur

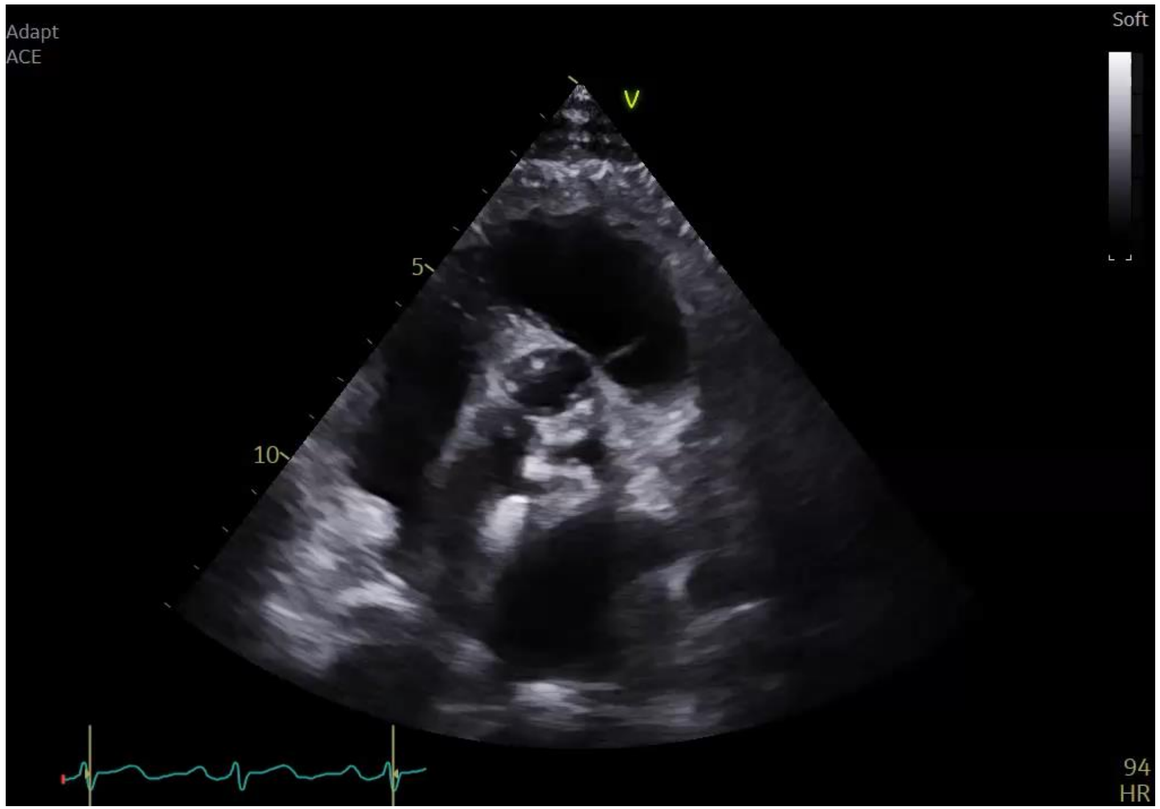
NYHA I. Very good shape. Past Plumber

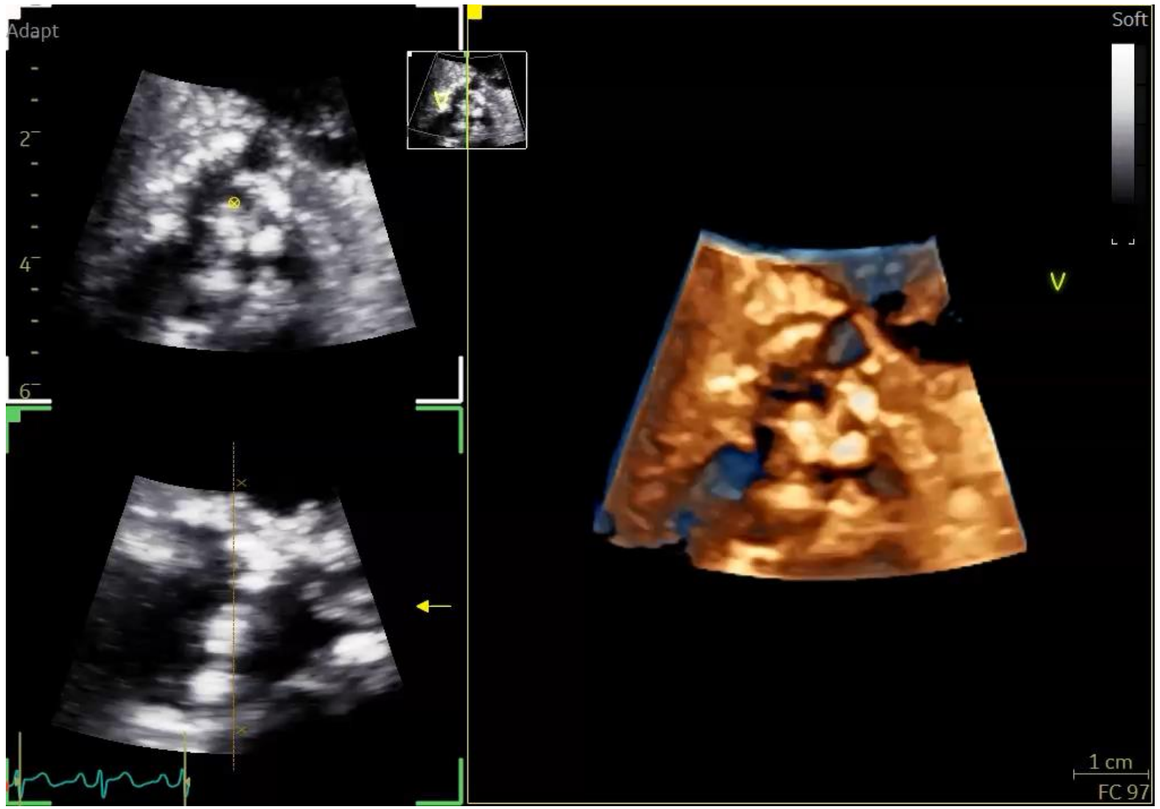
Clinical Case



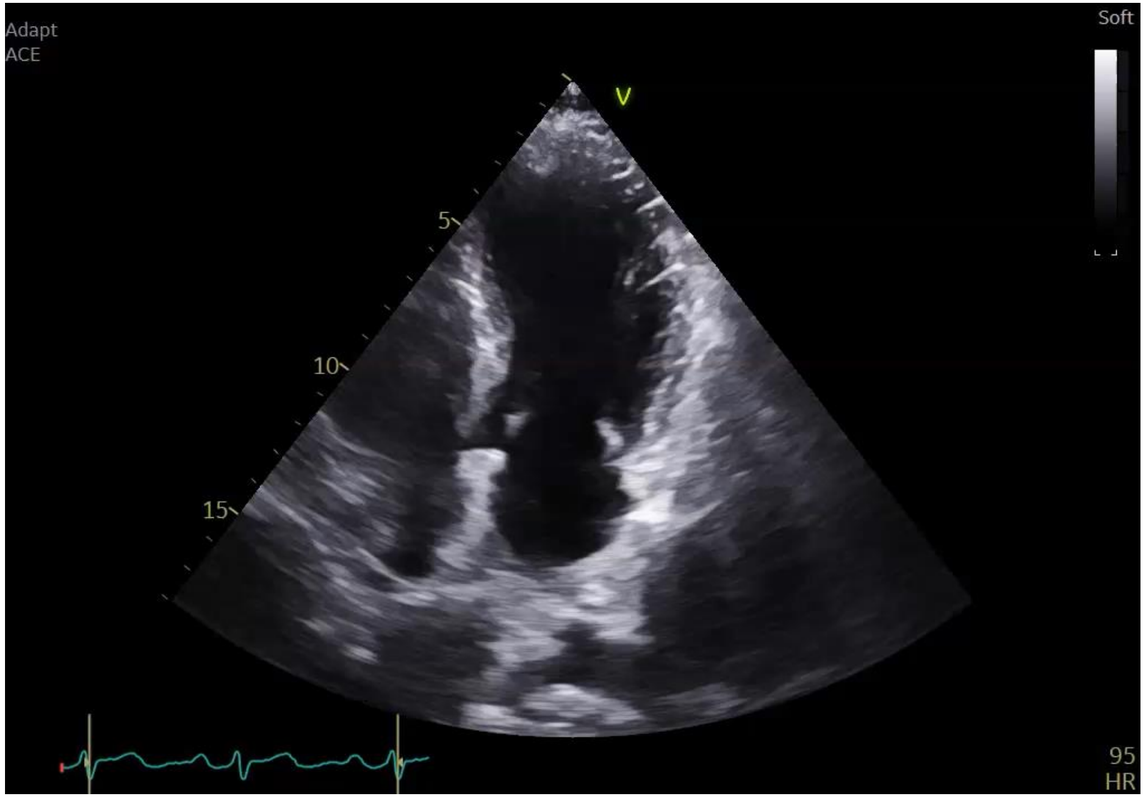


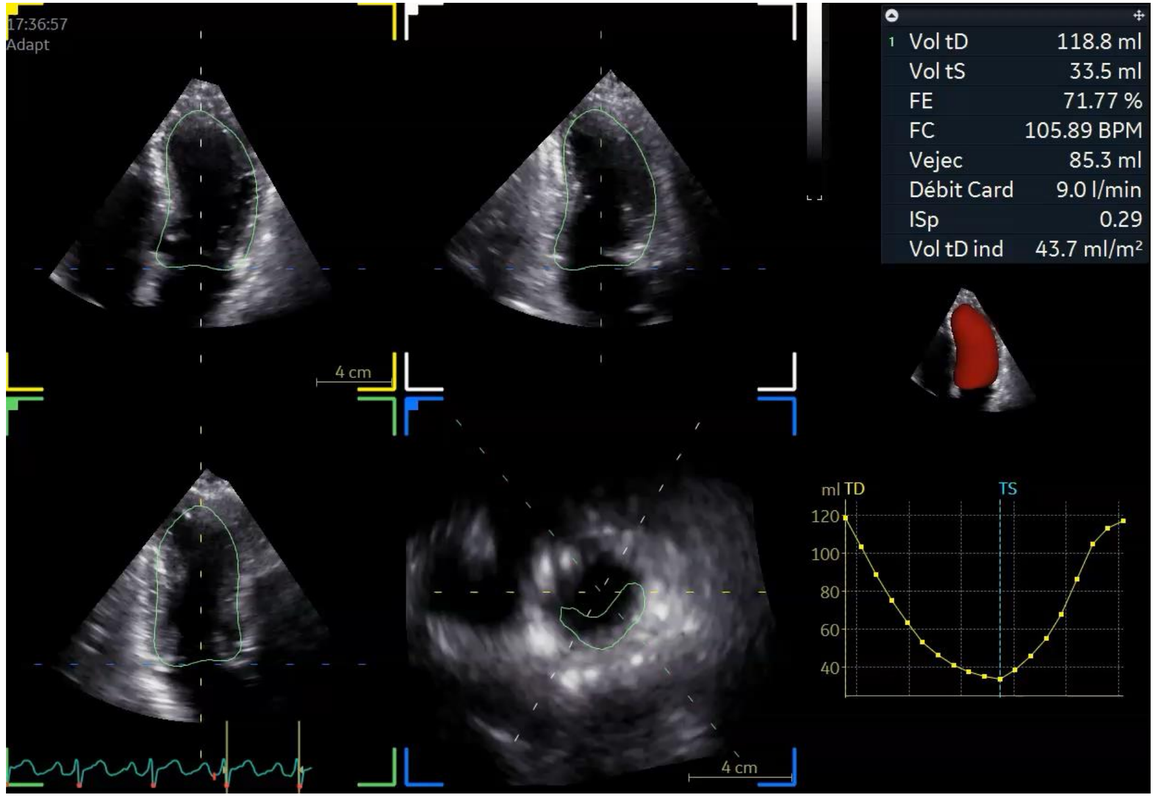
Clinical Case





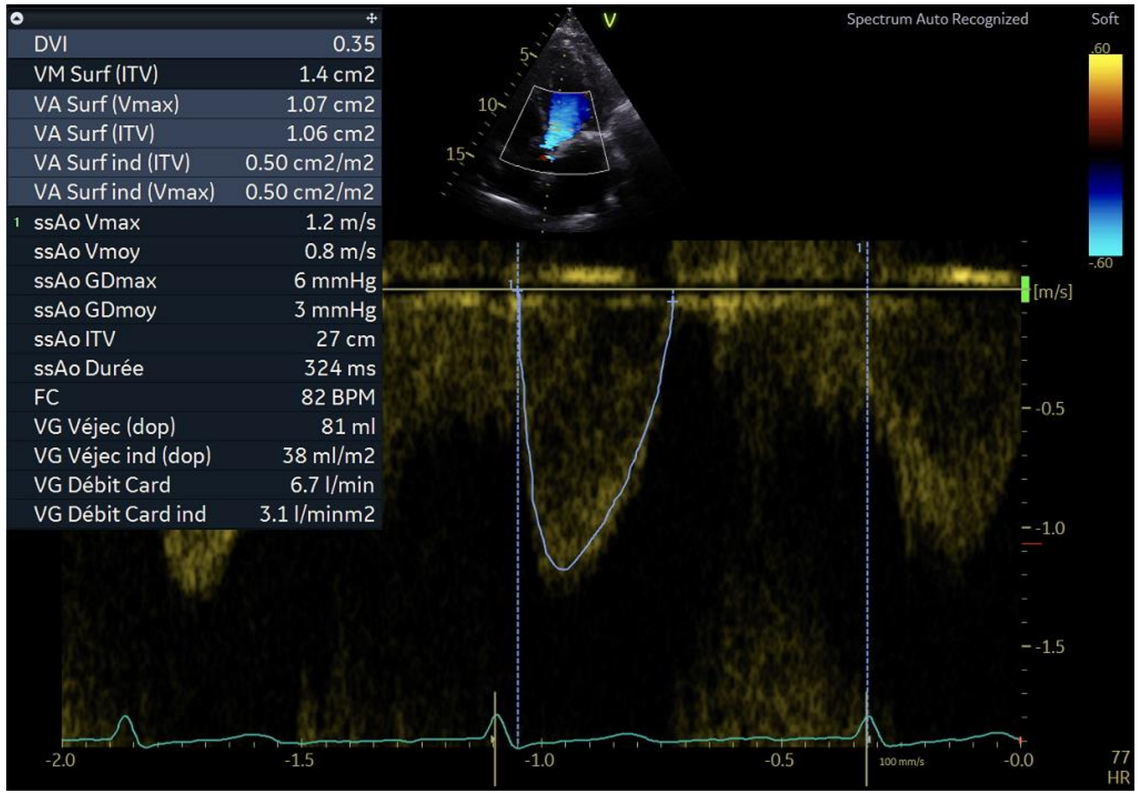
Clinical Case

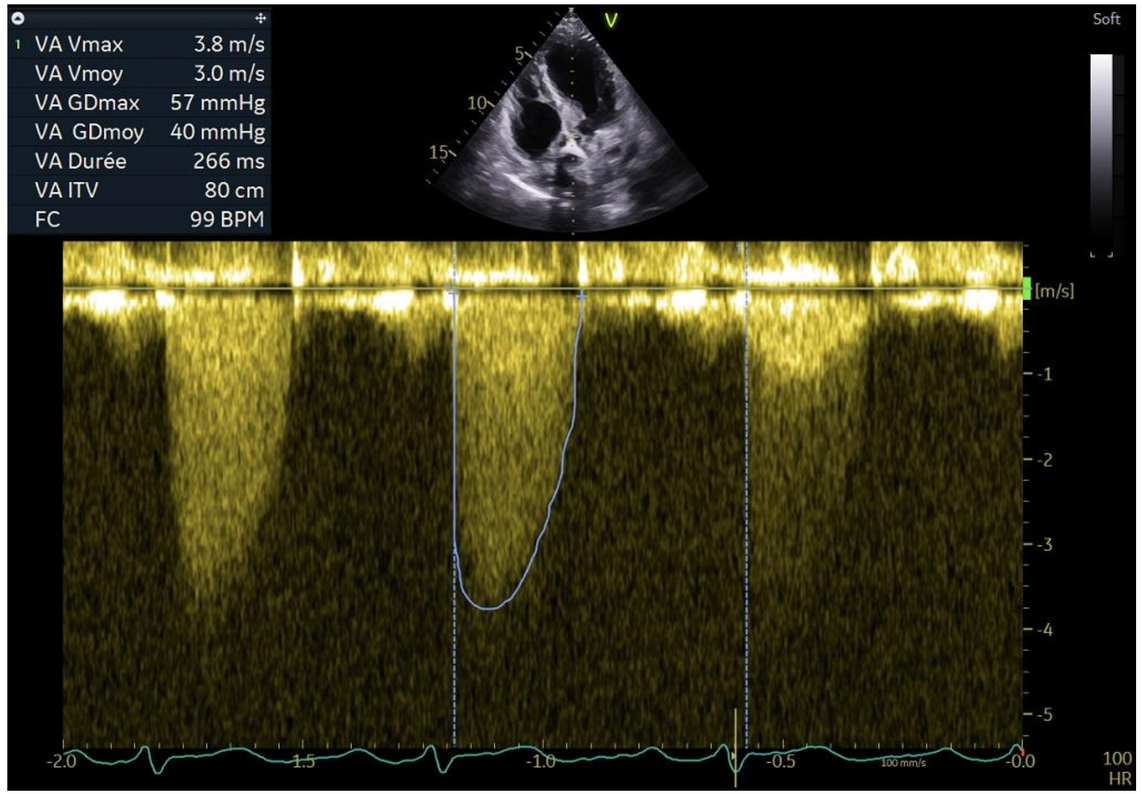




LVEF = 71%, SV = 85mL = 50mL/m²

Clinical Case



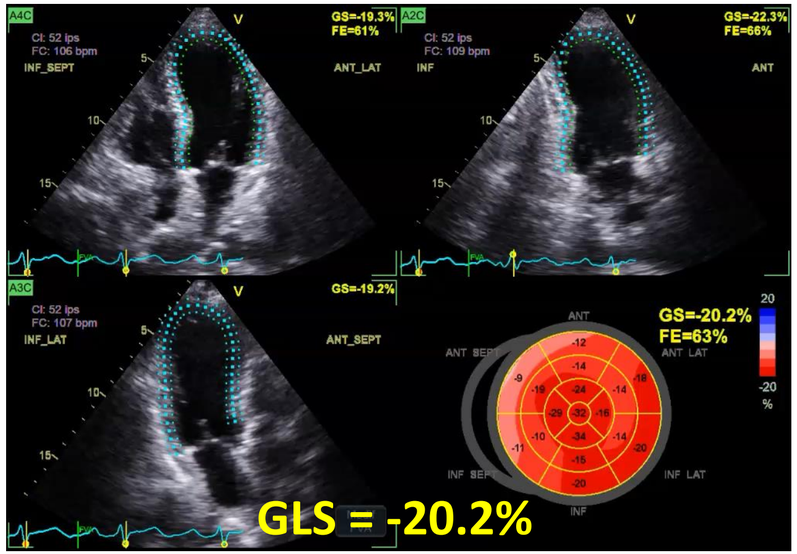


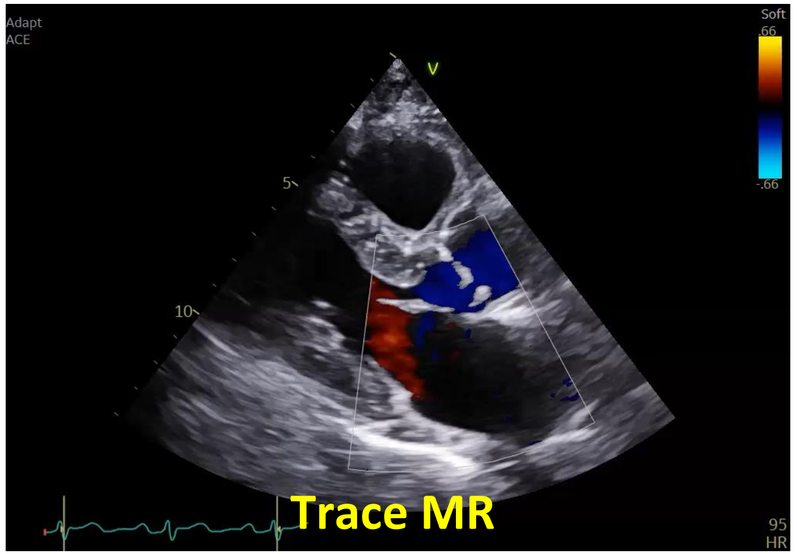
SV = 81mL = 47.6mL/m²

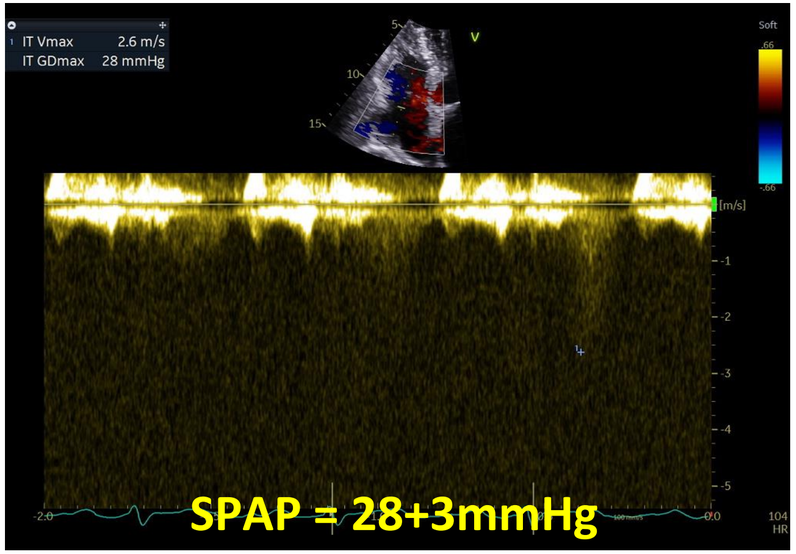
Vmax = 3.8m/s, Mean Gd = 40mmHg
DVI = 0.35, AVA = 1.1cm²

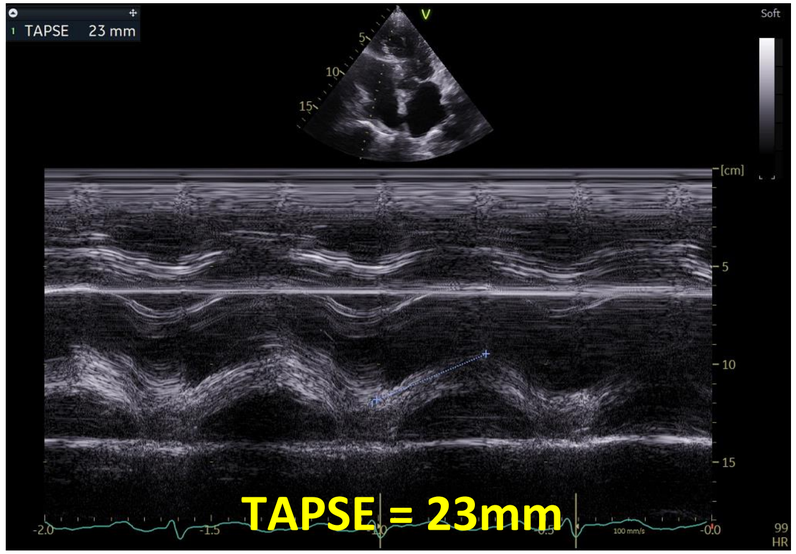
MODERATE AS

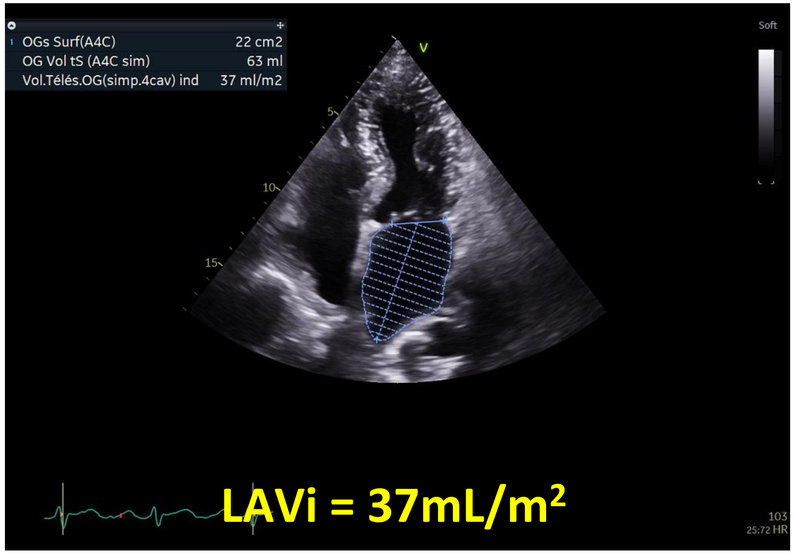
Clinical Case











Question 1

What do you propose for the case?

A. CT-scan
B. Early AVR
C. Close follow-up
D. Exercise echocardiography
E. Refer the patient to Pr Lancellotti

Question 1

What do you propose for the case?

A. CT-scan
B. Early AVR
C. Close follow-up
D. Exercise echocardiography
E. Refer the patient to Pr Lancellotti

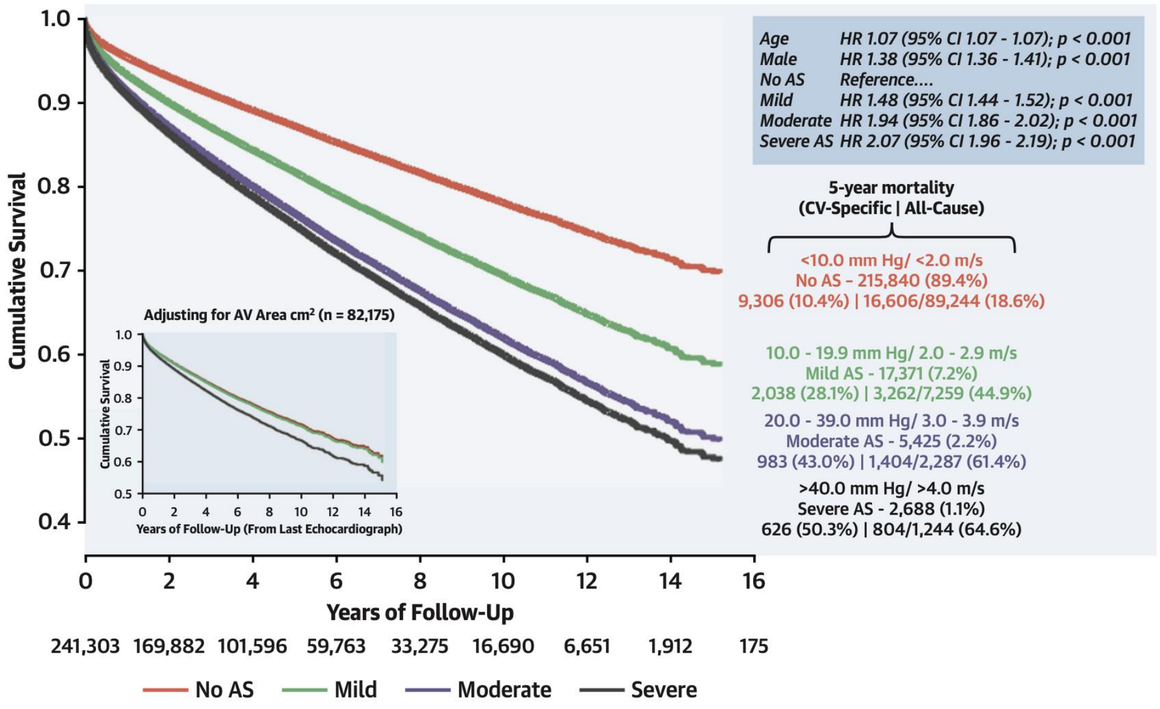
Should we propose an AVR to this patient?

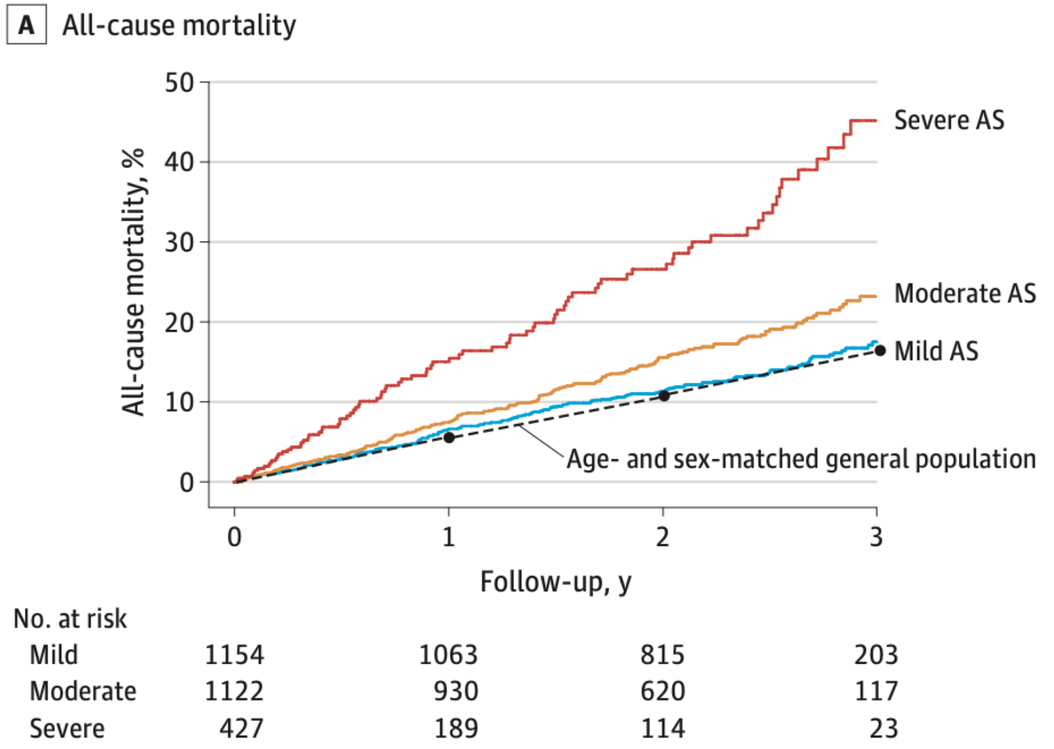
TABLE 1 Selected Recommendations on Management of Aortic Stenosis

Recommendation	American	European
Symptoms and:		
High-gradient	I-A	I-B
LFLG, LVEF <50% and flow reserve	I-B	I-B
LFLG, LVEF <50% and no flow reserve	I-B	IIa-C
LFLG, LVEF ≥50%	I-B	IIa-C
No symptoms and:		
LVEF <50%	I-B	I-B
LVEF <55%		IIa-B
LVEF <60%	IIb-B (3 serial imaging)	
Symptoms on exercise test	I-B	I-B
Fall in SBP on exercise test	IIa-B (10 mm Hg)	IIa-B (20 mm Hg)
Very severe AS (Vmax ≥5 m/s) and low risk	IIa-B	IIa-B
Vmax progression ≥0.3 m/s per y	IIa-B (high gradient)	IIa-B (severe calcification and low risk)
3-fold increase in BNP/N-terminal proBNP	IIa-B (low risk)	IIa-B (only BNP)
Severe AS undergoing other cardiac surgery	I-C	I-B
Moderate AS undergoing other cardiac surgery	IIb-C	IIa-C
Percutaneous BAV in severe AS		
In bridge to SAVR/TAVR	IIb-C	IIb-C
Before noncardiac surgery		IIb-C
Severe comorbidities with survival <1 y		III-C

Coisne A et al. J Am Coll Cardiol 2023;82:721–734

Impact of moderate AS is real but still debated

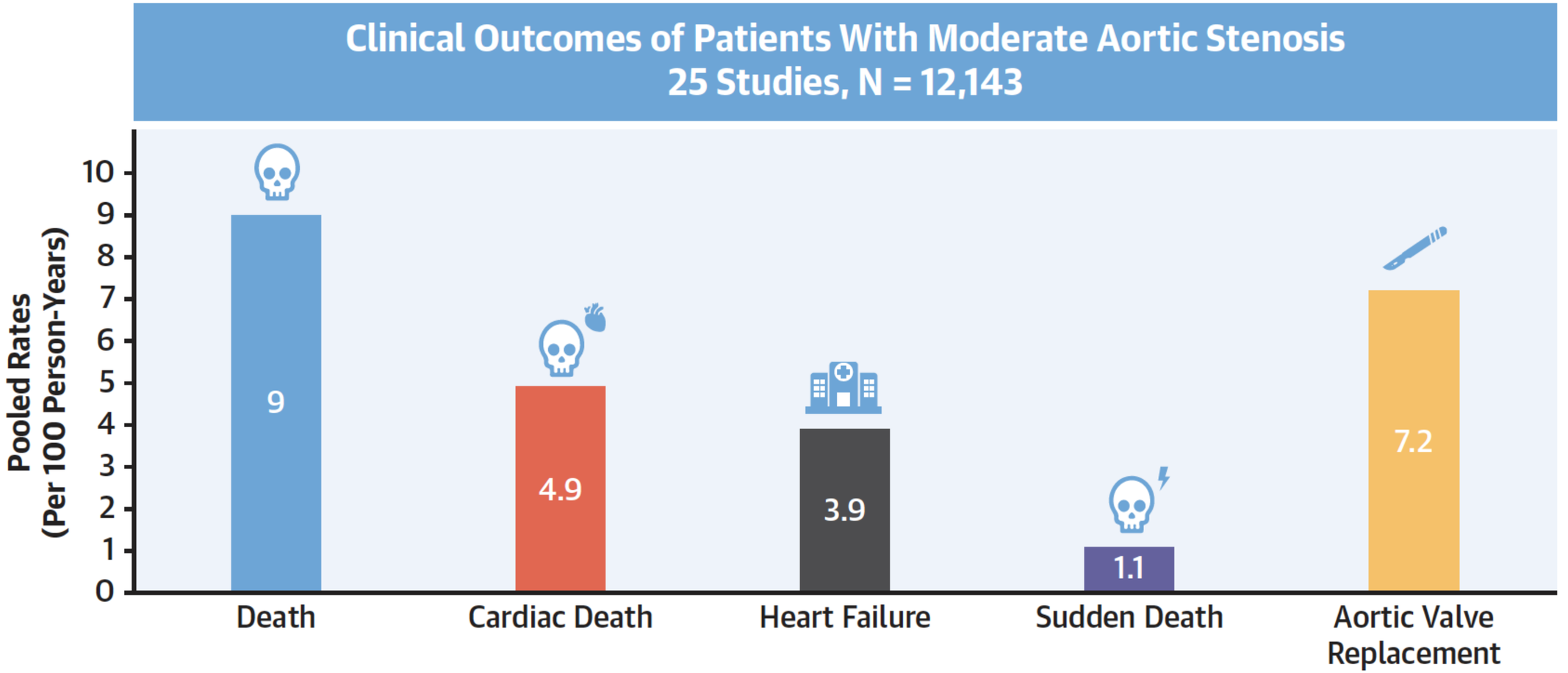




Strange et al. J Am Coll Cardiol. 2019 Oct 15;74(15):1851-1863.

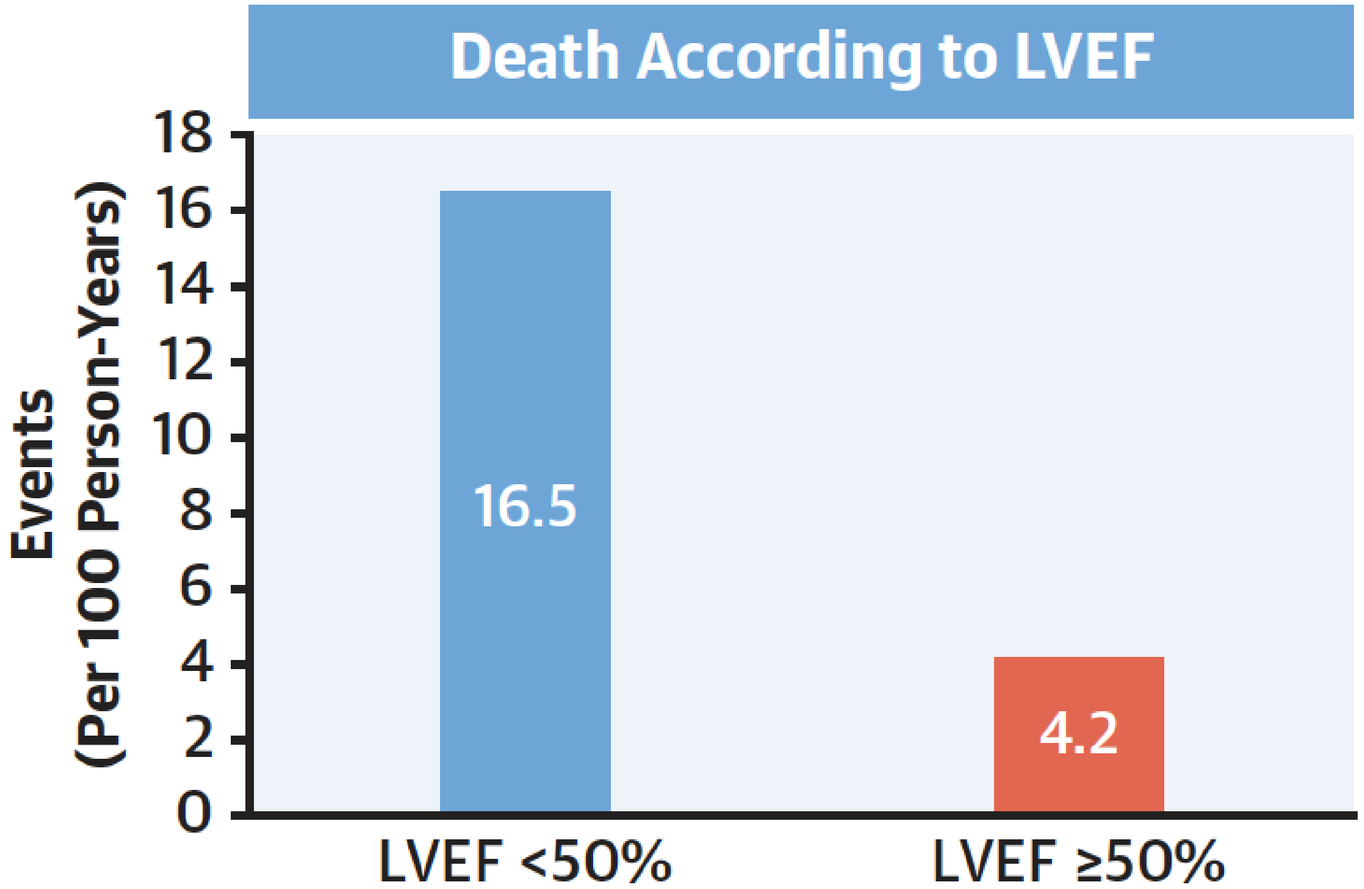
Coisne A et al. JAMA Cardiol. 2021 Dec 1;6(12):1424-1431.

What are the outcomes in patients with moderate AS?



Coisne A et al. J Am Coll Cardiol Intv. 2022;15(16):1664–1674.

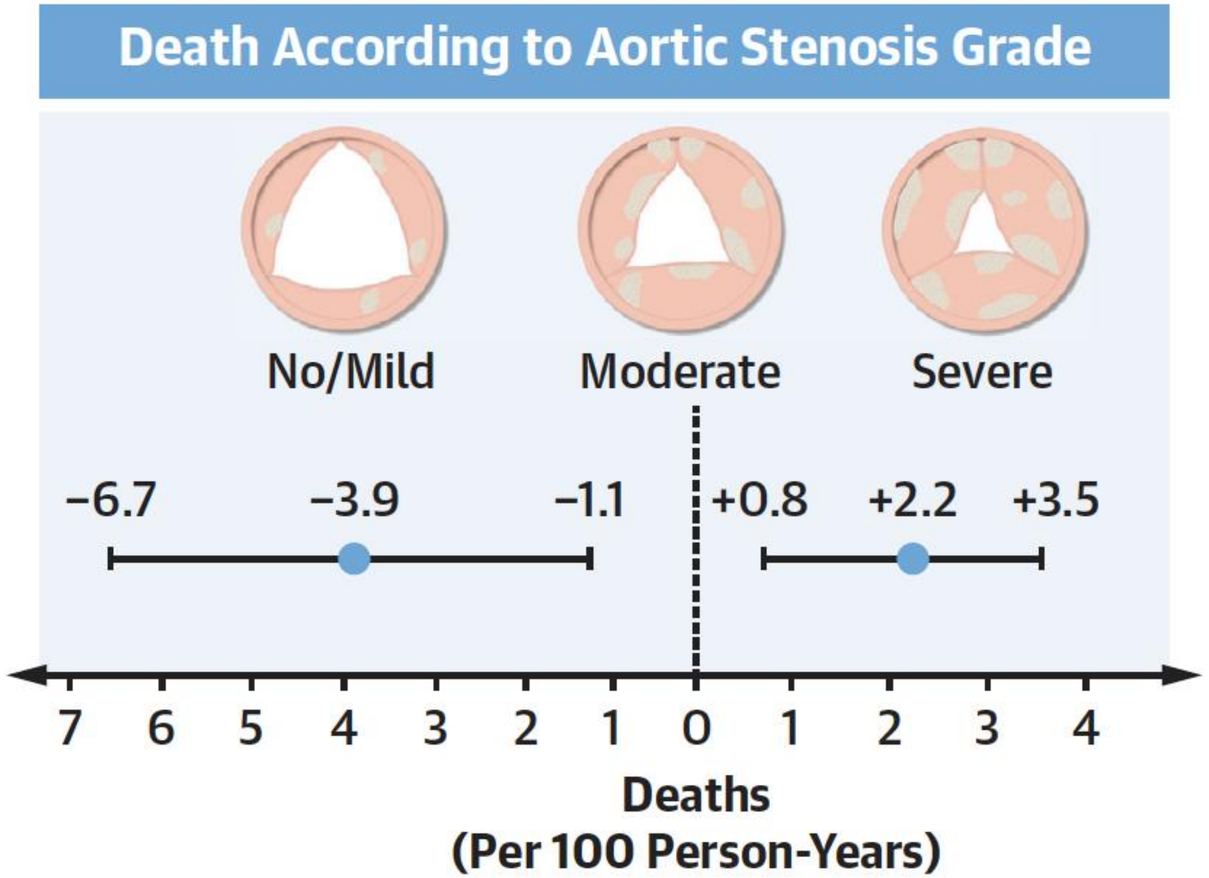
What are the outcomes in patients with moderate AS?



All-cause mortality was higher in patients with reduced LVEF (<50%) than with normal LVEF, respectively **16.5** (95%CI: 5.2-52.3) and **4.2** (95%CI: 1.4-12.8) per 100 patients/year.

Coisne A et al. J Am Coll Cardiol Intv. 2022;15(16):1664–1674.

What are the outcomes in patients with moderate AS?



Compared to patients with moderate AS, the incidence rate difference of all-cause mortality was :

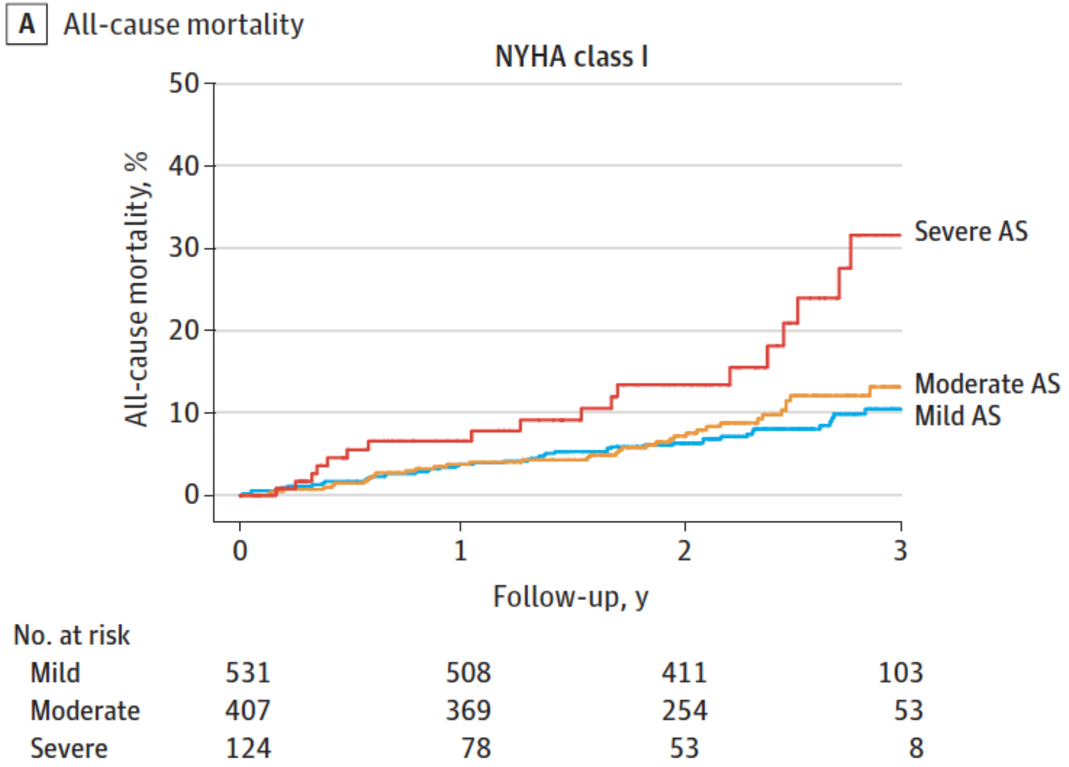
-3.9 per 100 patients/year for patients with no/mild AS

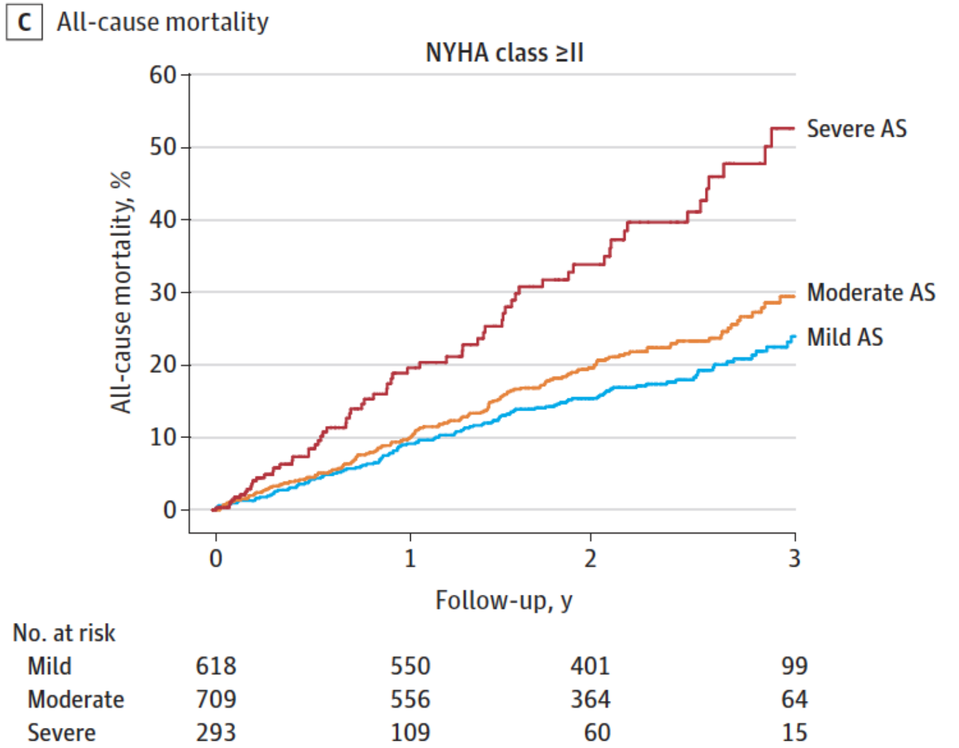
+**2.2** per 100 patients/year for patients with severe AS

Coisne A et al. J Am Coll Cardiol Intv. 2022;15(16):1664–1674.

What is « at risk » moderate AS?

1. Symptoms

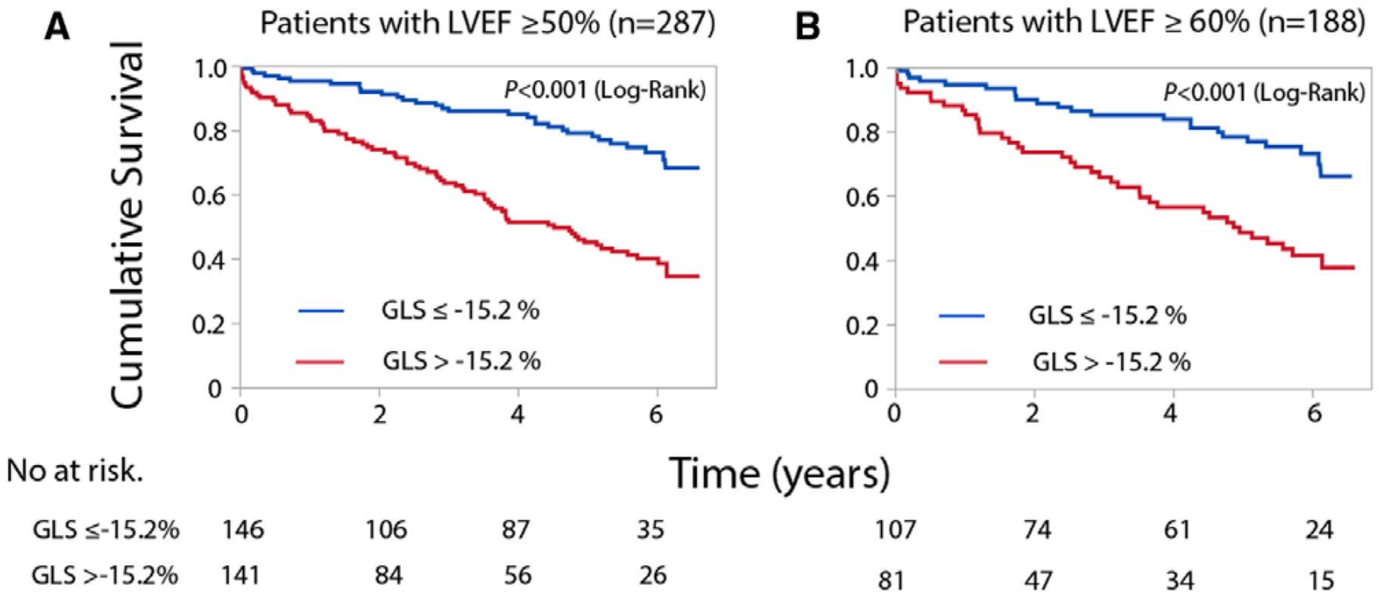




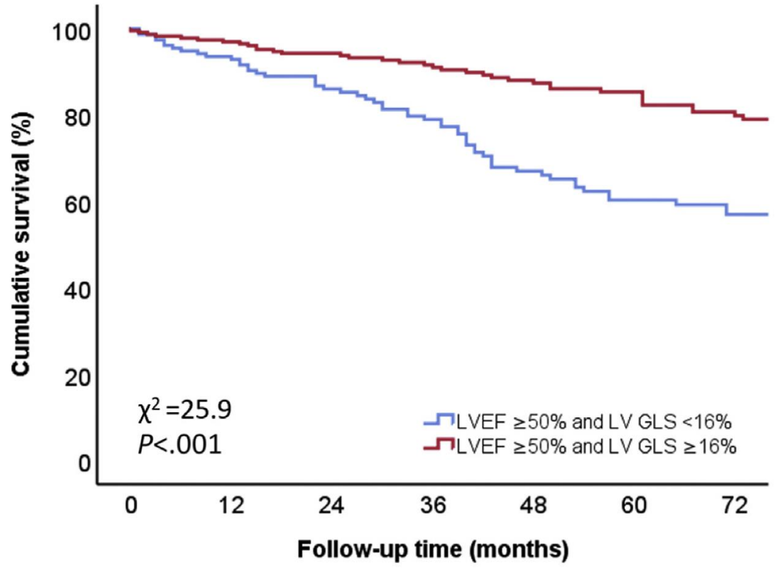
Coisne A et al. JAMA Cardiol. 2021 Dec 1;6(12):1424-1431.

What is « at risk » moderate AS?

2. GLS



Zhu et al. Circ Cardiovasc Imaging. 2020 Apr;13(4):e009958.



Stassen et al. J Am Soc Echocardiogr 2022;35:791-800

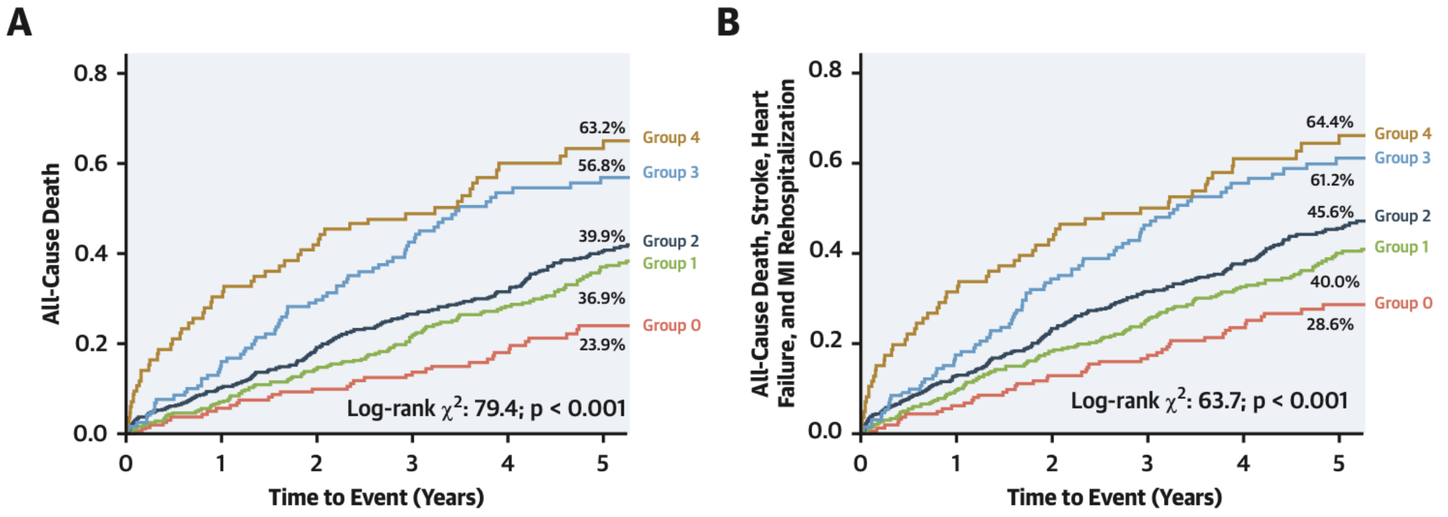
What is « at risk » moderate AS?

3. Extra valvular cardiac abnormalities

Extra-Aortic Valvular Cardiac Abnormalities

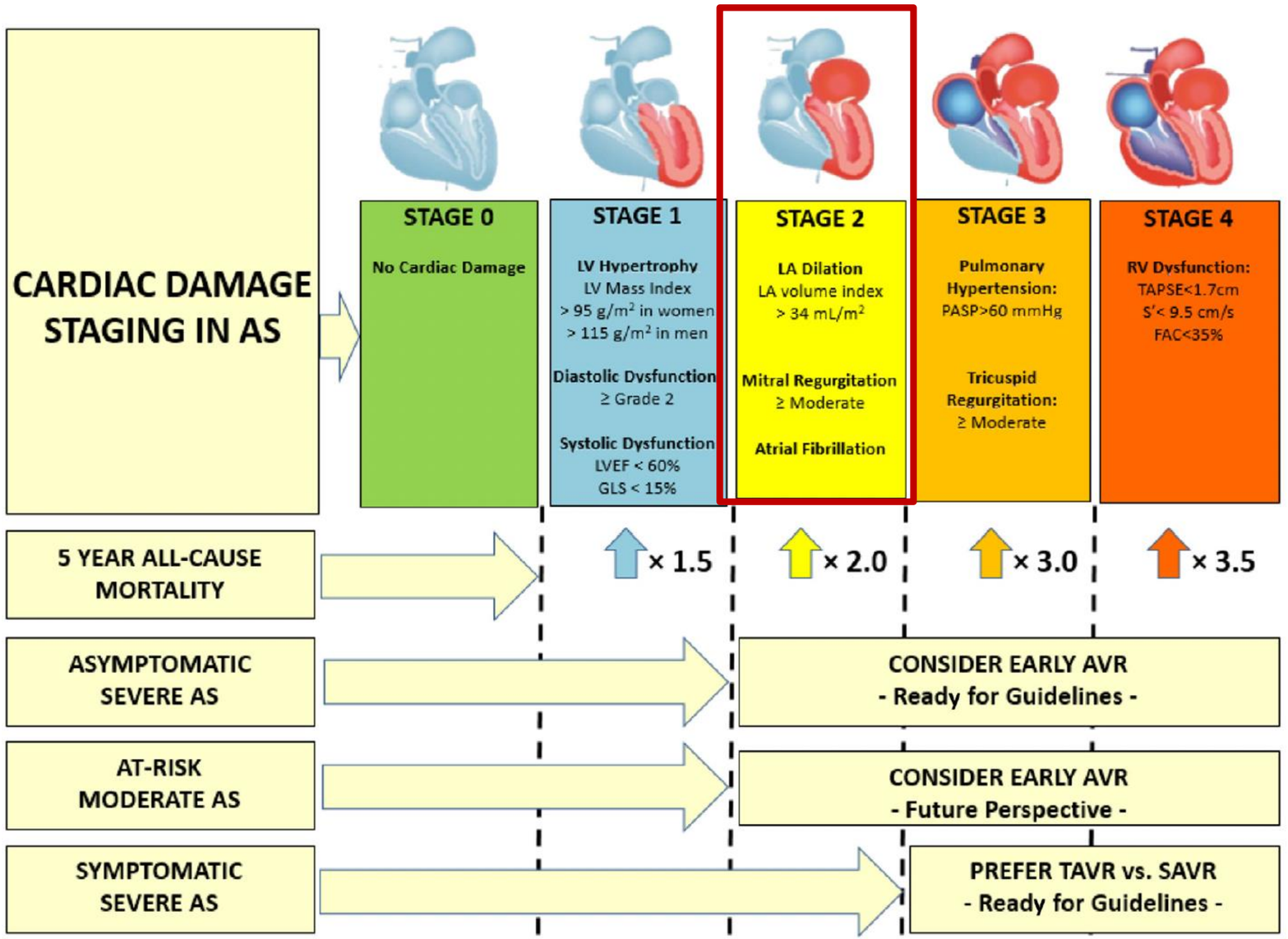
	Group 0	Group 1	Group 2	Group 3	Group 4
Involvement	No Extra-Valvular	Left Ventricular	Left Atrial or Mitral	Pulmonary or Tricuspid	Right Ventricular
Prevalence	13.1%	26.8%	42.6%	10.6%	6.9%
Echo-cardiographic criteria		LV mass index ♂ >115 g/m^2 ♀ >95 g/m^2 LV ejection fraction <50% E/e' ratio >14	Left atrial volume index >34 ml/m^2 Atrial fibrillation Moderate or severe mitral regurgitation	Systolic pulmonary arterial pressure >60 mm Hg Moderate or severe tricuspid regurgitation	TAPSE <16 mm

Outcomes According to Extent of Cardiac Involvement



Amanullah, M.R. et al. J Am Coll Cardiol Img. 2021;14(9):1724–1737.

What is « at risk » moderate AS?



Pibarot P. JACC Cardiovasc Interv. 2024 Apr 22;17(8):1004-1006

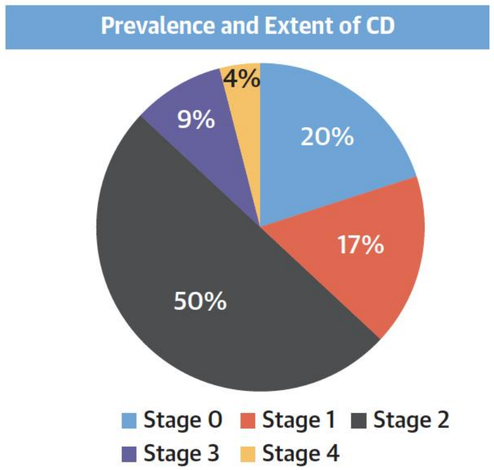
What is « at risk » moderate AS?

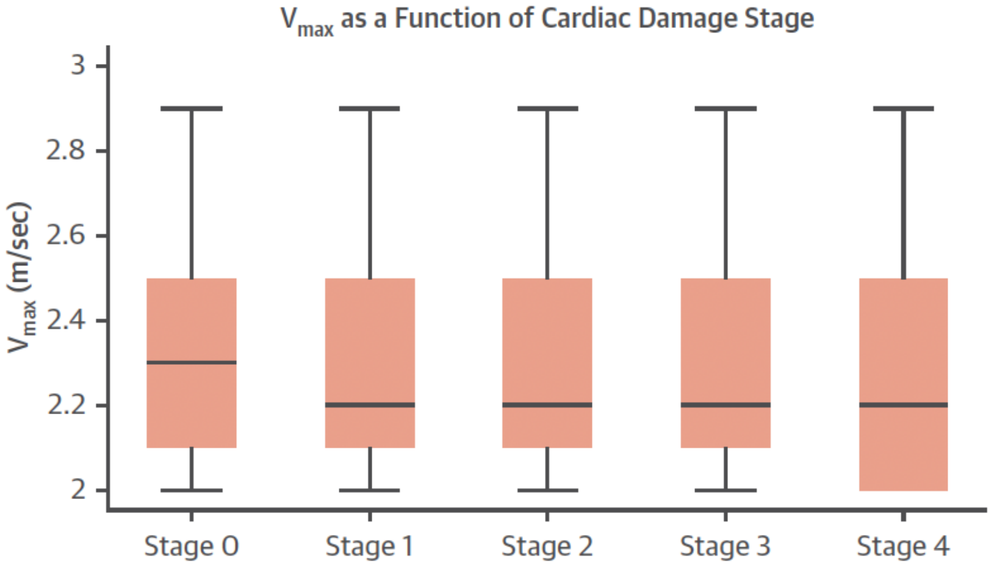
ORIGINAL RESEARCH

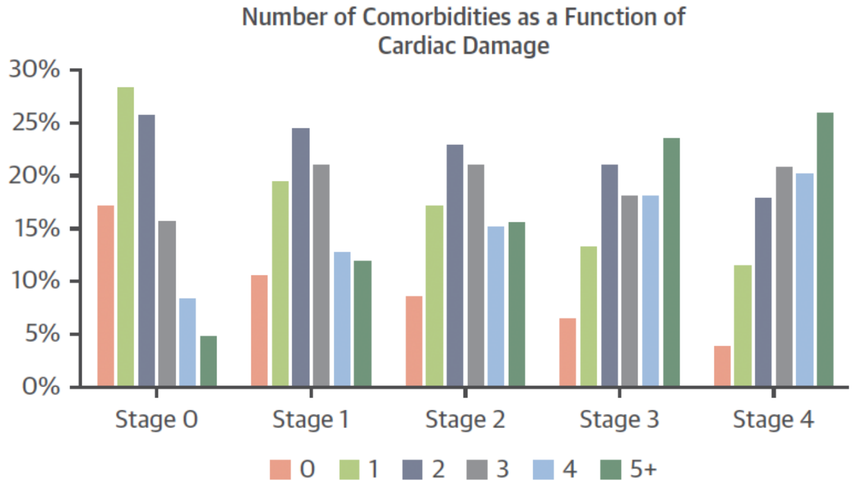
Cardiac Damage in Early Aortic Stenosis

Is the Valve to Blame?

Jordi S. Dahl, MD, PhD,[a] Raghav Julakanti, MD,[a] Mulham Ali, MD,[a] Christopher G. Scott, MS,[b] Ratnasari Padang, MBBS, PhD,[a] Patricia A. Pellikka, MD[a]



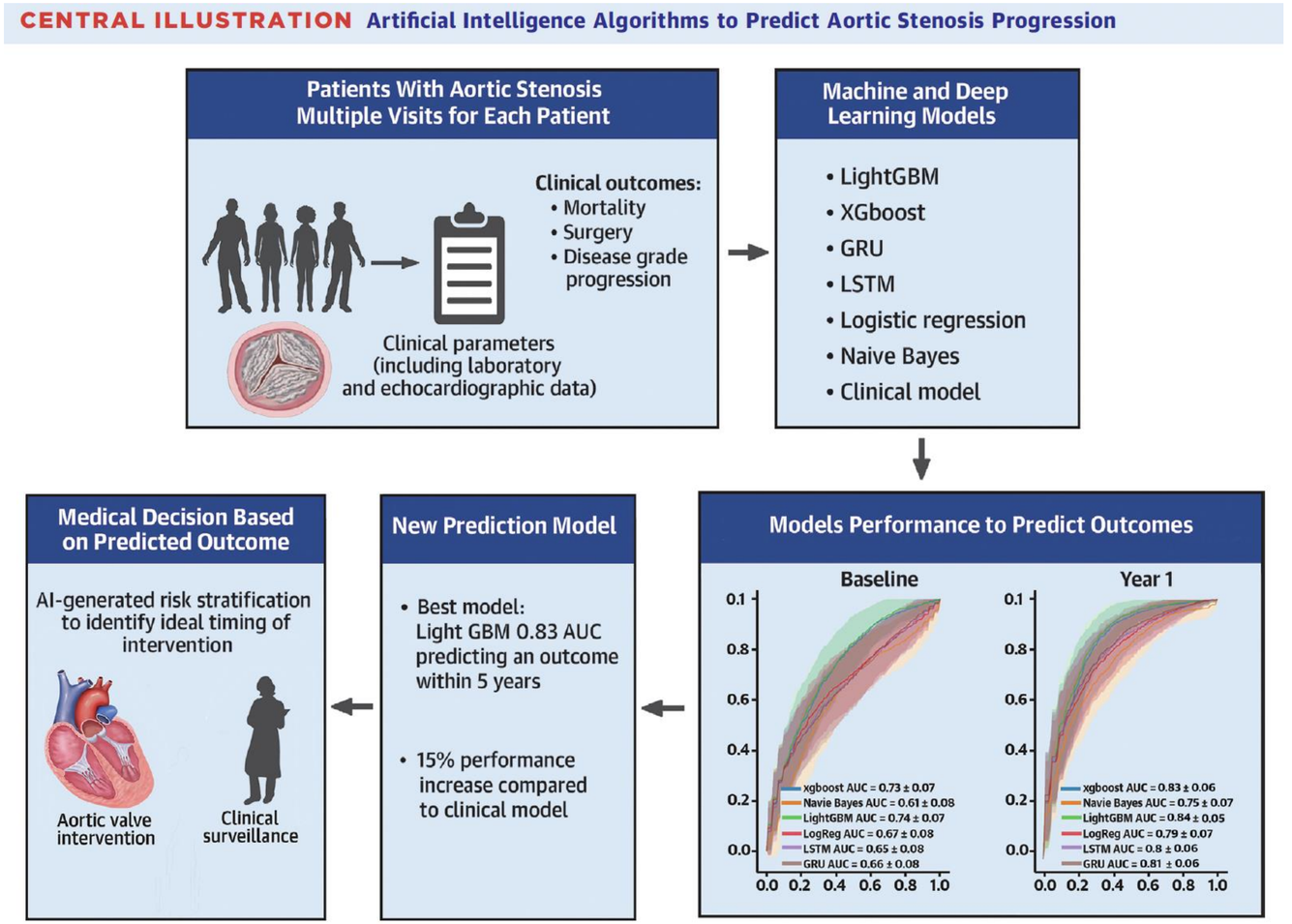




Dahl J et al. JACC Cardiovasc Imaging. 2024;17:1031–1040)

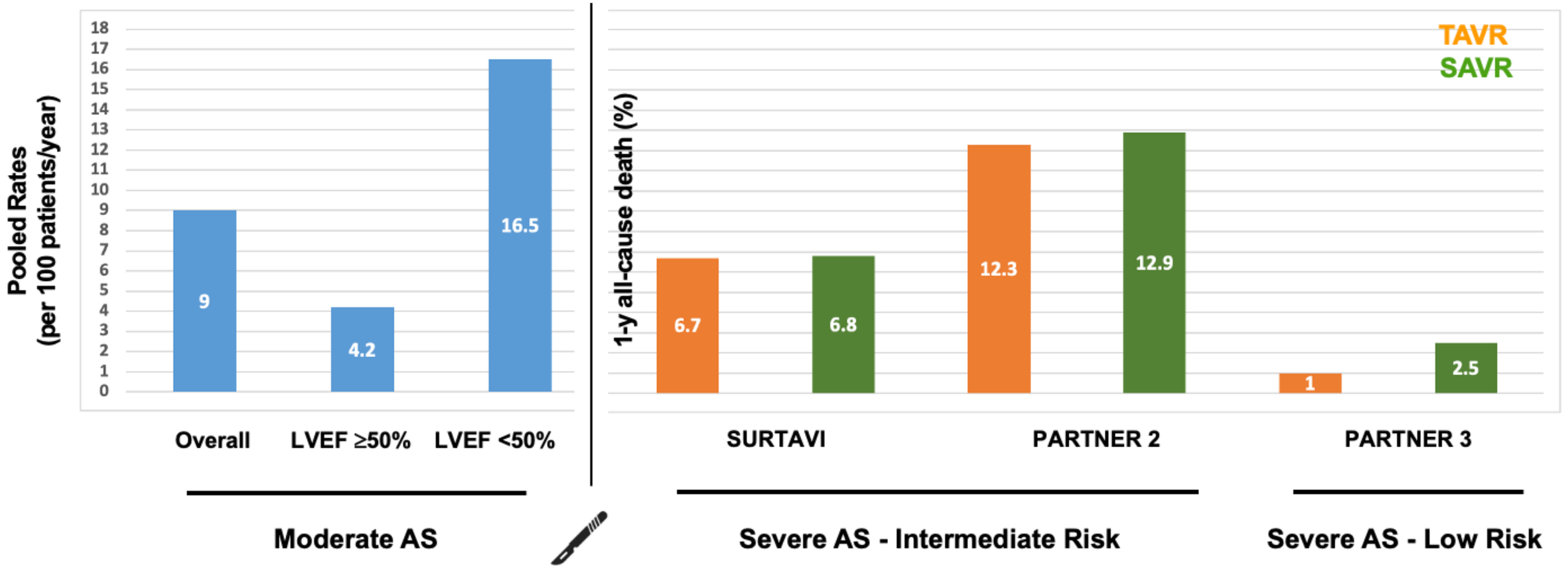
What is « at risk » moderate AS?

4. Progression

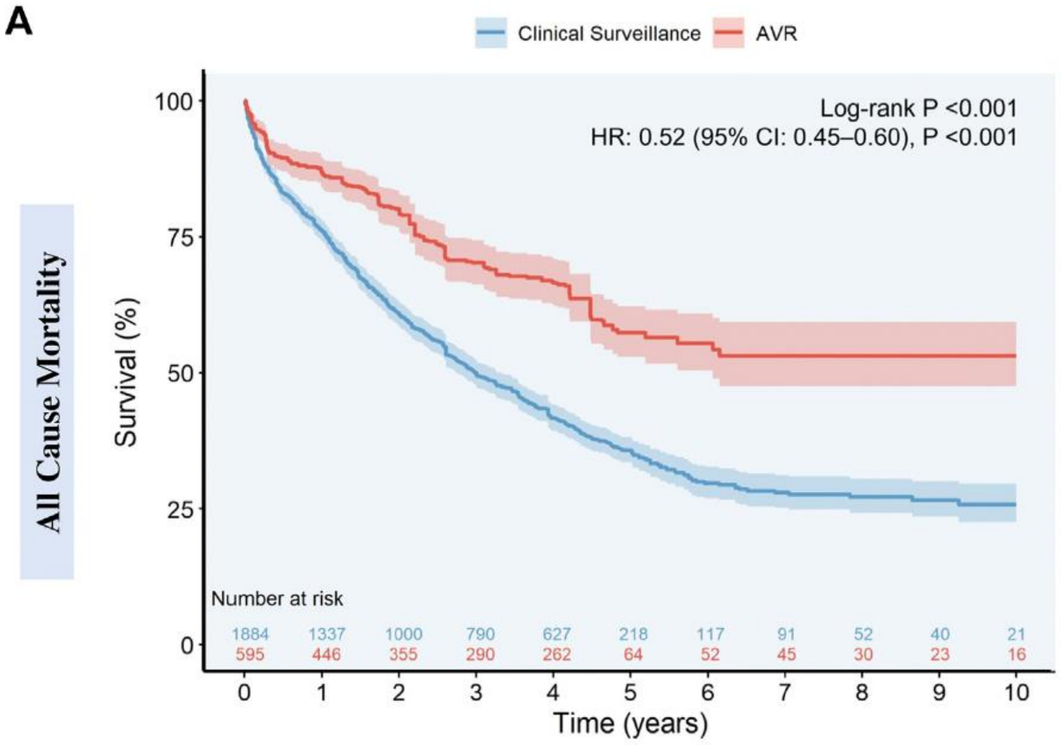


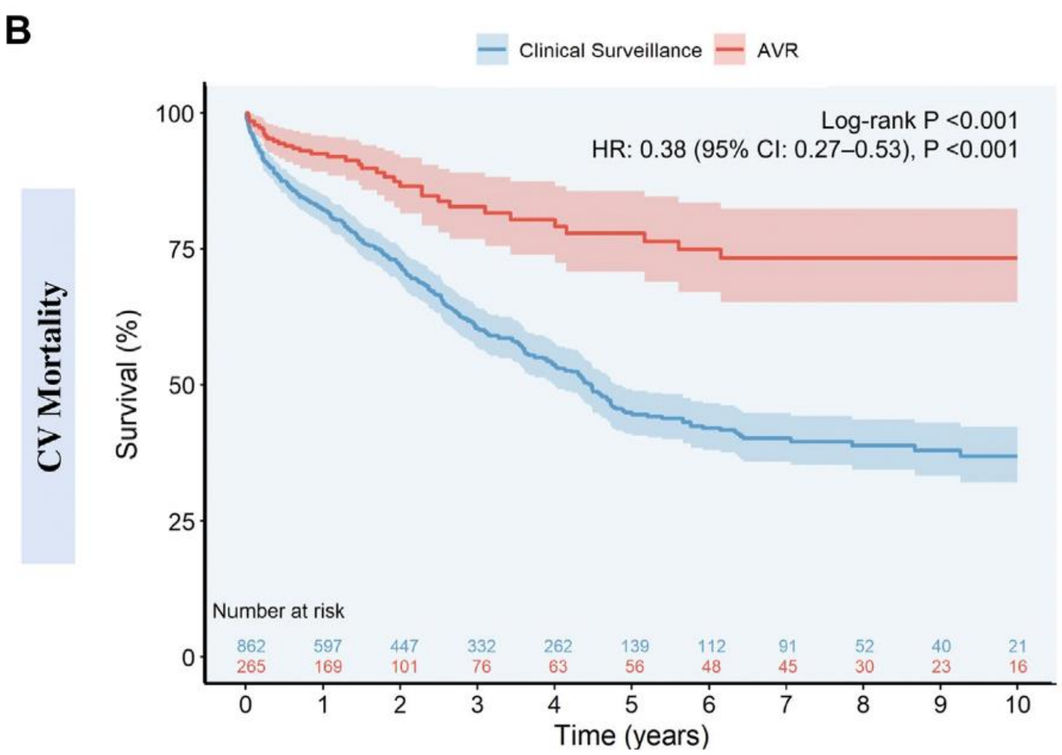
Sanabria M, et al. JACC Adv. 2024;3(10):101234.

Perspectives



Early AVR in moderate AS and reduced EF



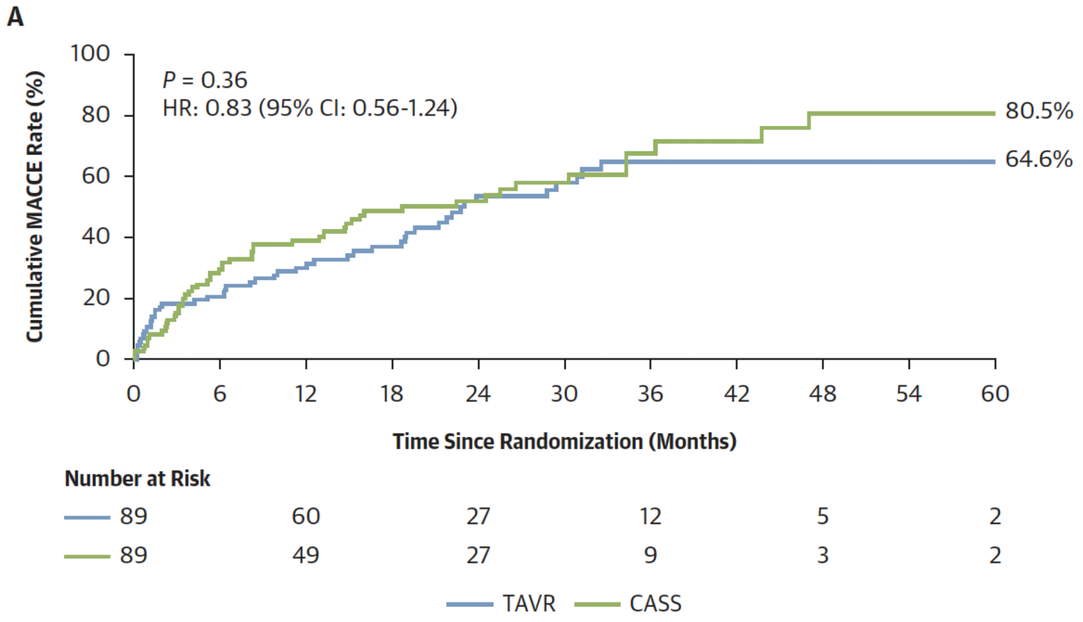


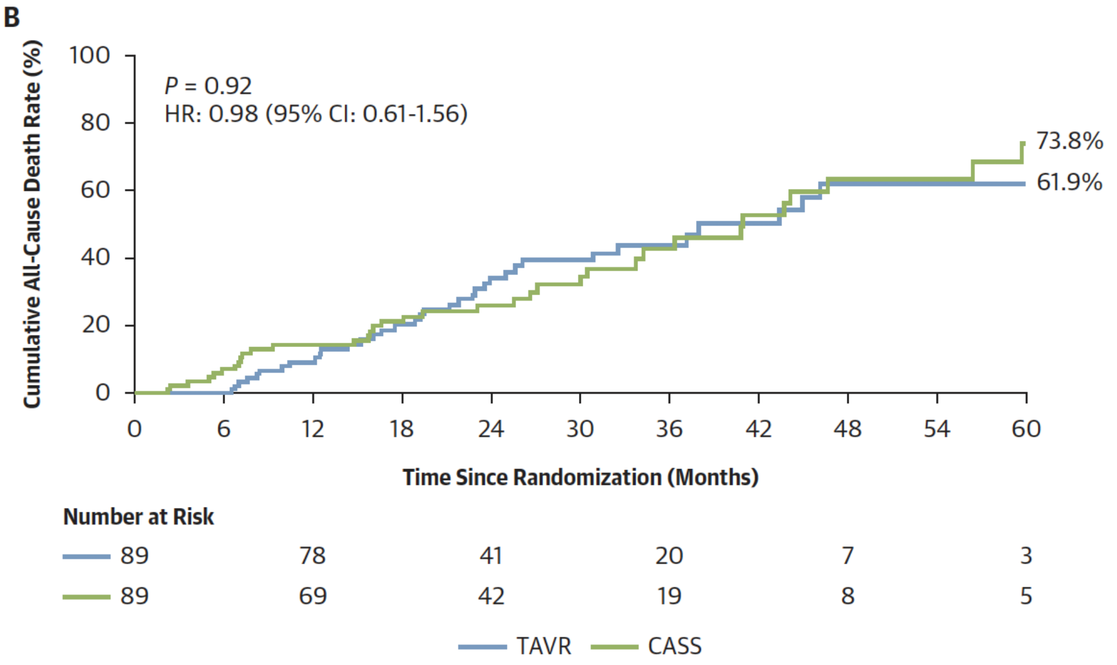
Abdelfattah OM. et al. JACC Adv. 2024 Aug 16;3(9):101190

Early AVR in moderate AS and reduced EF

Transcatheter Aortic Valve Replacement in Patients With Systolic Heart Failure and Moderate Aortic Stenosis

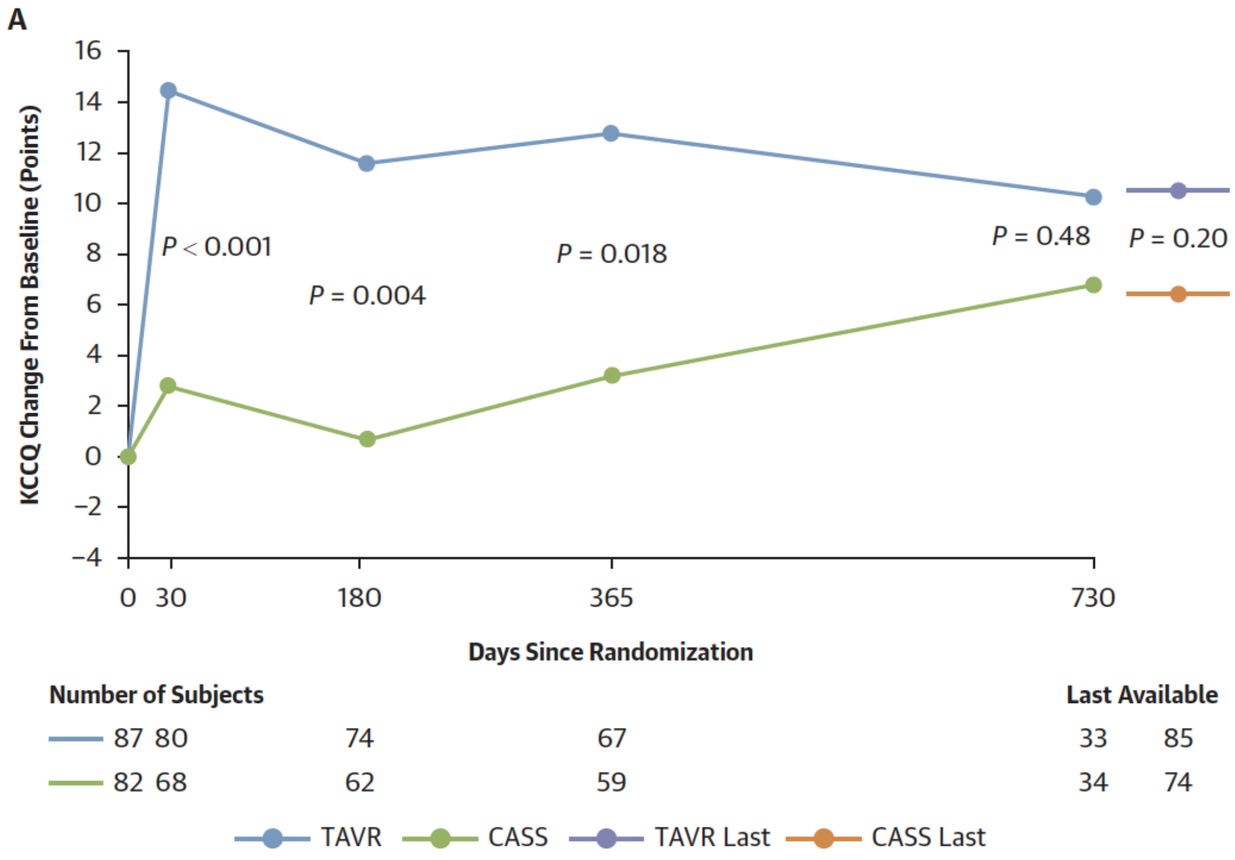
TAVR UNLOAD





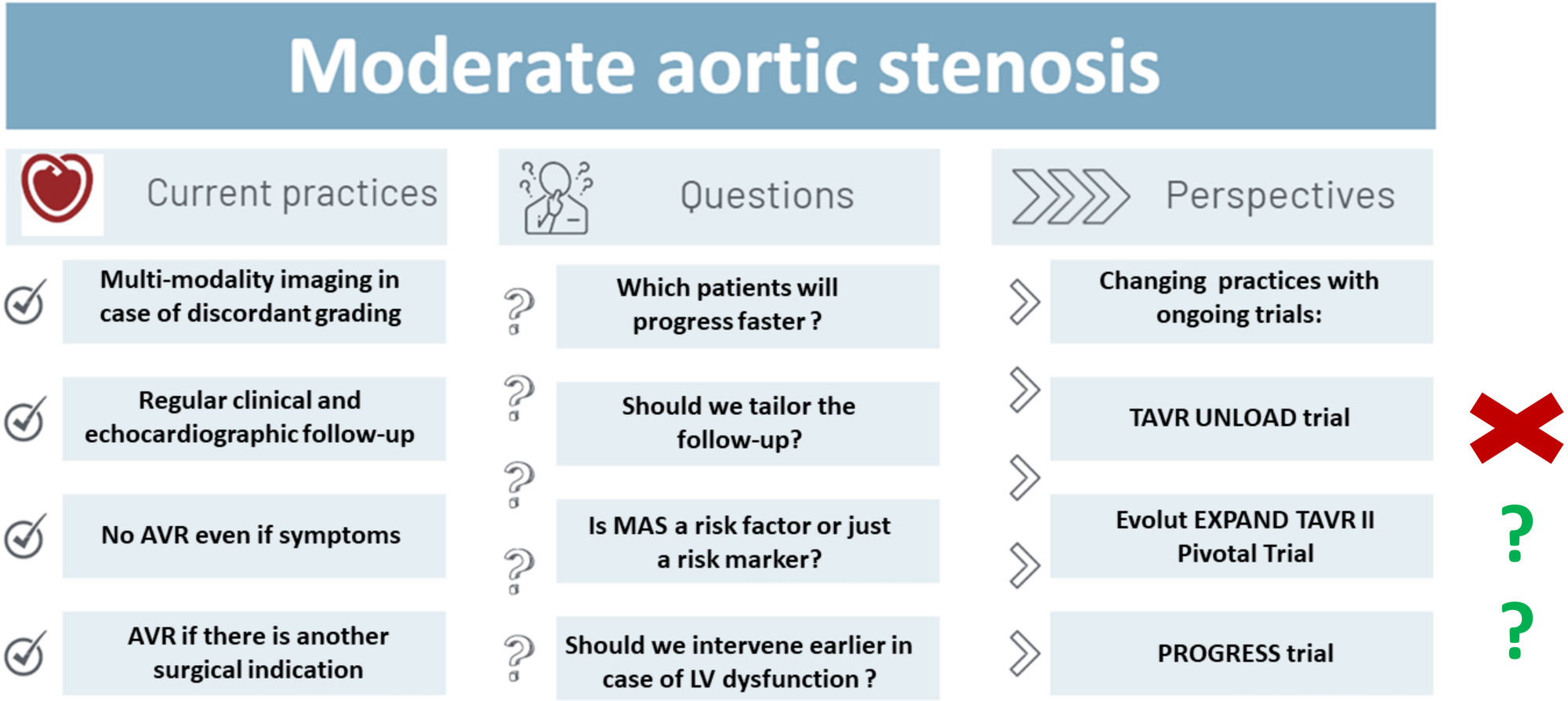
Van Mieghem N et al. J Am Coll Cardiol. 2025 Mar 11;85(9):878-890.

Early AVR in moderate AS and reduced EF



Van Mieghem N et al. J Am Coll Cardiol. 2025 Mar 11;85(9):878-890.

Is moderate AS still the right name?

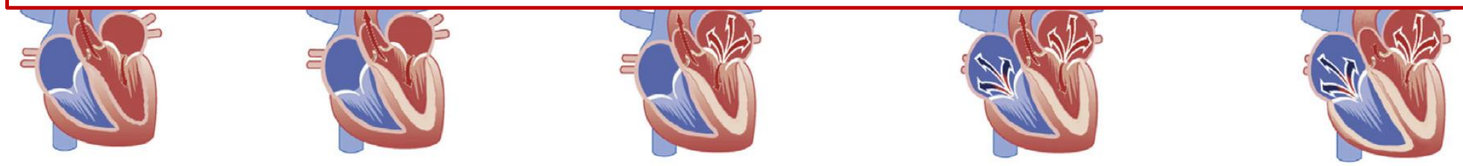


Bohbot Y, Coisne A… Tribouilloy C et al. Arch Cardiovasc Dis. 2023

Severe vs. significant AS

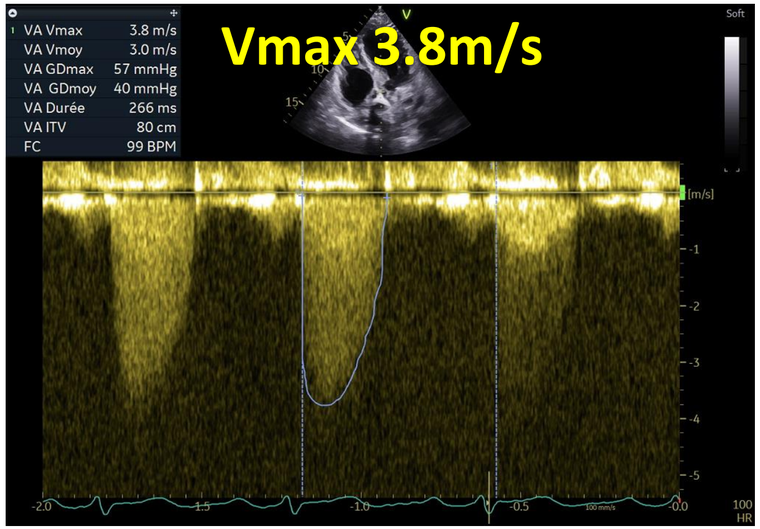
REPLY: Severe vs Significant Aortic Stenosis

The Road Toward Patients' Tailored Recommendations

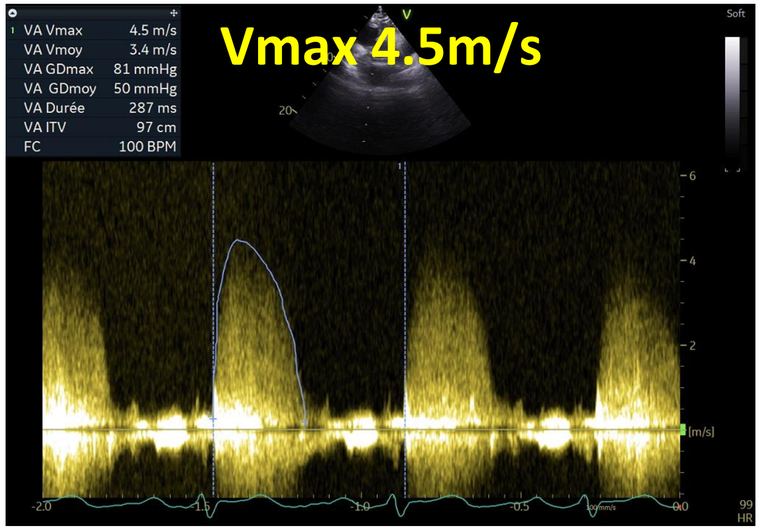


Coisne A, et al. J Am Coll Cardiol Intv. 2022;15(16):1664–1674.

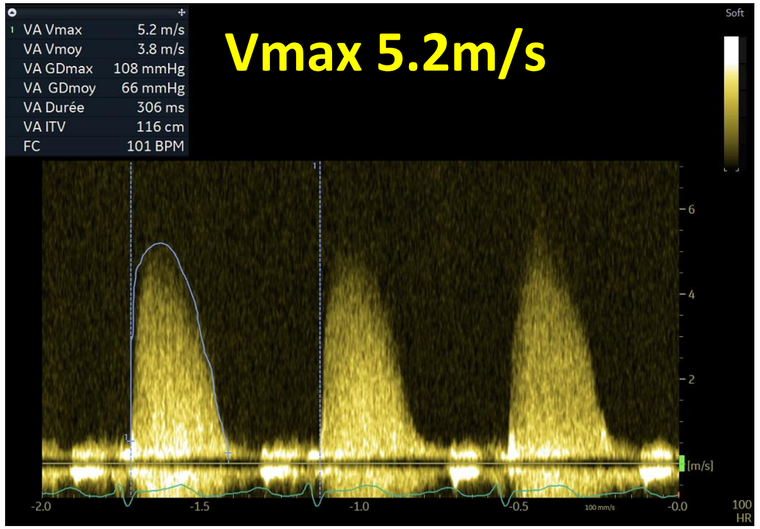
Decision for the case



Moderate AS



Severe AS



Very Severe AS

Scheduled for AVR

Conclusions

- Growing evidence that moderate AS is associated with **worse outcomes**
- Patients with presence of **symptoms**, and **reduced LVEF** at higher risk of death.
- But so far, we have **NO DATA** to support early AVR in moderate AS patients
- Randomized clinical trials are eagerly **awaited** to investigate whether moderate AS patients might benefit from an early intervention with a reasonable risk-benefit ratio in specific population subsets
- **Carefull evaluation** (ideally by Pr Lancellotti) to avoid misinterpration of AS severity

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