Moderate aortic stenosis

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Presenter Disclosure Information

Antonio Colombo

Nothing to disclose

Asymptomatic pts

Low EF less than 50%: SAVR or TAVI

EF higher check for one of the followings:

High gradient AS, Vmax progression more than 0.3/m/s/yr, elevated BNP,NT or proBNP, EF less than 55%, exercise test with fall BP

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: • Very severe AS (mean gradient ≥60 mmHg or Vmax >5.0 m/s). • Severe valve calcification (ideally assessed by CCT) and Vmax progression ≥.3 m/s/year. • Markedly elevated BNP/NT-proBNP levels (more than three times age- and sex-corrected normal range, confirmed on repeated measurement without other explanation). • LVEF <55% without another cause.	IIa	B

Values of >2000 Agatston units (AU) in men and >1200 AU in women indicate severe AS with high sensitivity and specificity (~85%)

TAVI vs SAVR

TAVI is recommended in patients ≥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
Non-transfemoral TAVI should be considered in patients who are unsuitable for surgery and transfemoral access.	IIa	B

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Transcatheter Aortic-Valve Replacement for Asymptomatic Severe Aortic Stenosis

Authors: Philippe Généreux, M.D., Allan Schwartz, M.D., J. Bradley Oldemeyer, M.D., Philippe Pibarot, D.V.M., Ph.D., David J. Cohen, M.D., Philipp Blanke, M.D., Brian R. Lindman, M.D. , +22 , for the EARLY TAVR Trial Investigators* Author Info & Affiliations

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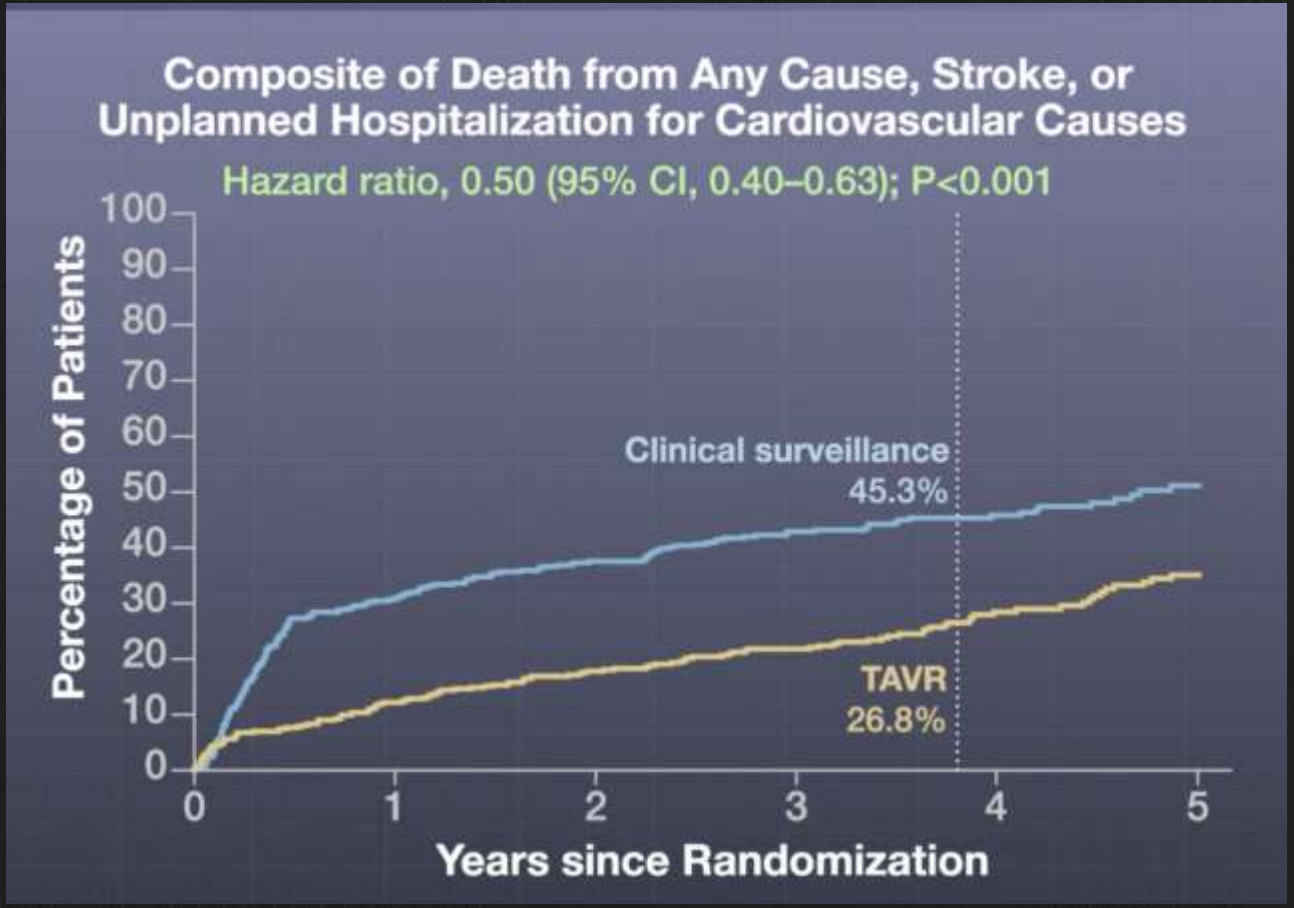
Early TAVR

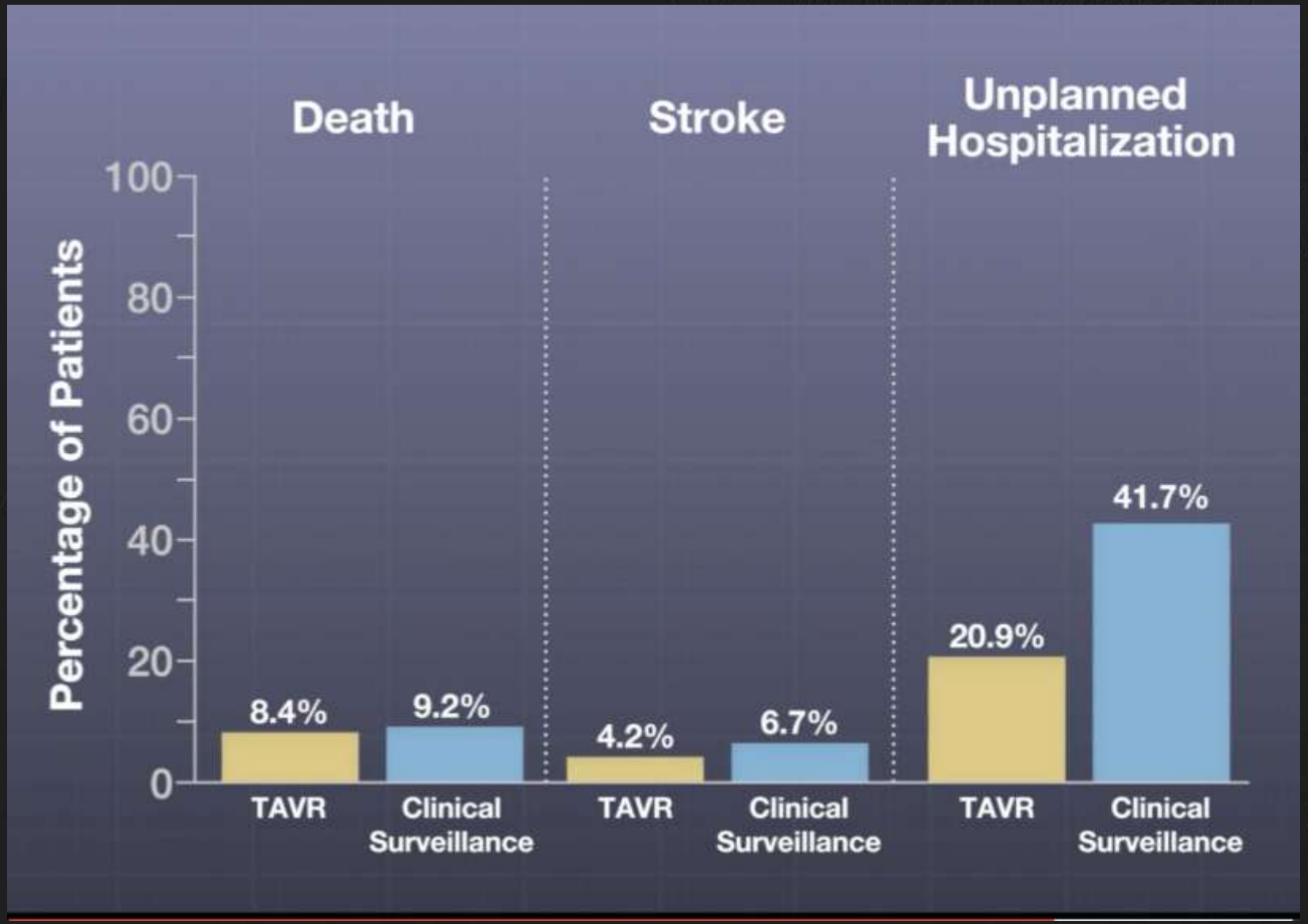
Aortic valve area ≤0.6 cm^2/m^2

and

Peak vel≥ 4m/s
or Mean gradient ≥ 40 mmHg

EF over 50%




Death
Stroke
Unplanned Hospitalization
Percentage of Patients
100
80
60
40
20
0
8.4%
9.2%
4.2%
6.7%
20.9%
41.7%
TAVR
Clinical Surveillance
TAVR
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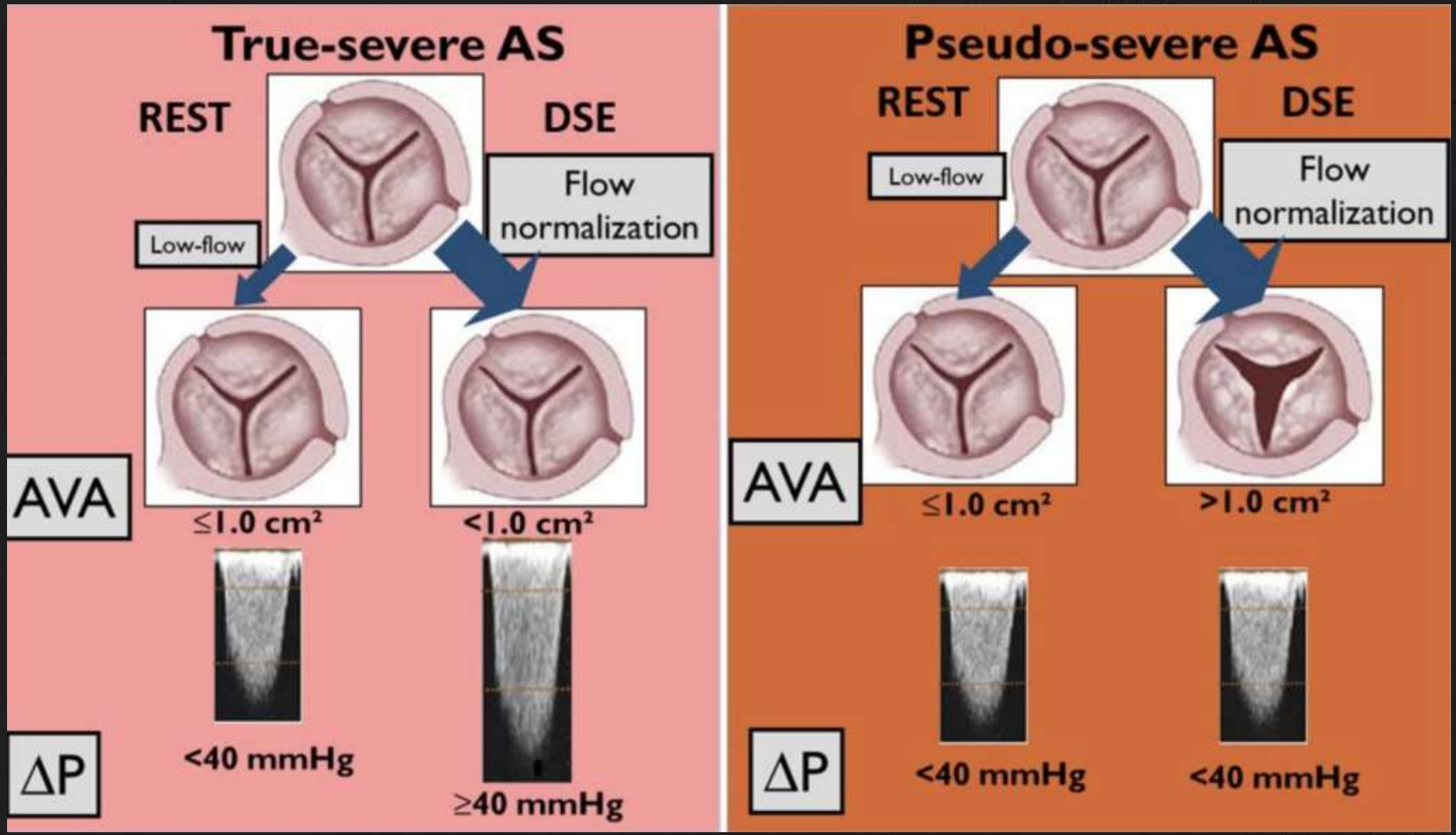
Moderate AS: AV area>1cm^2 mean gradient 20.0 to 39.9 mm Hg and/or peak velocity 3.0-3.9 m/s



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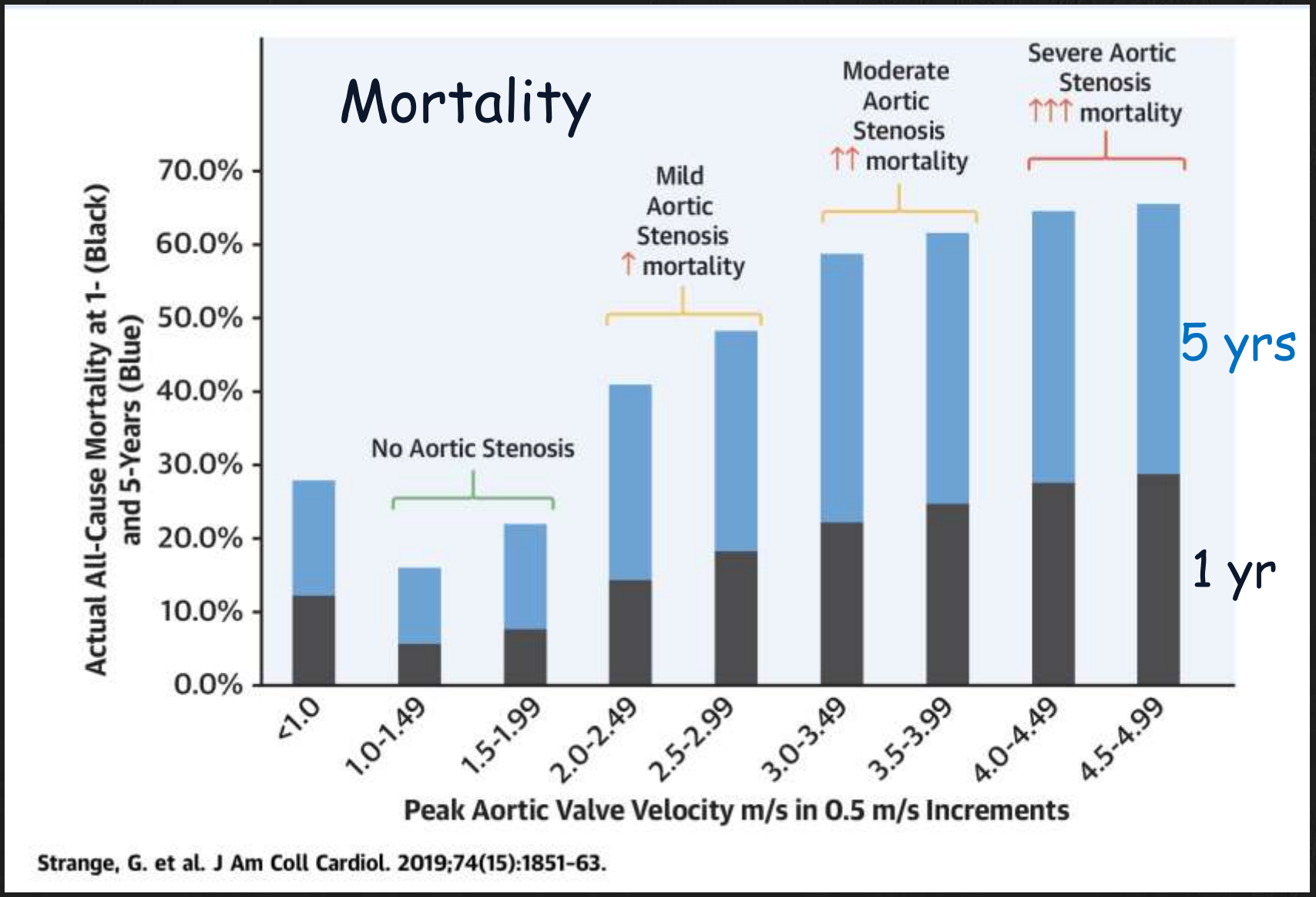
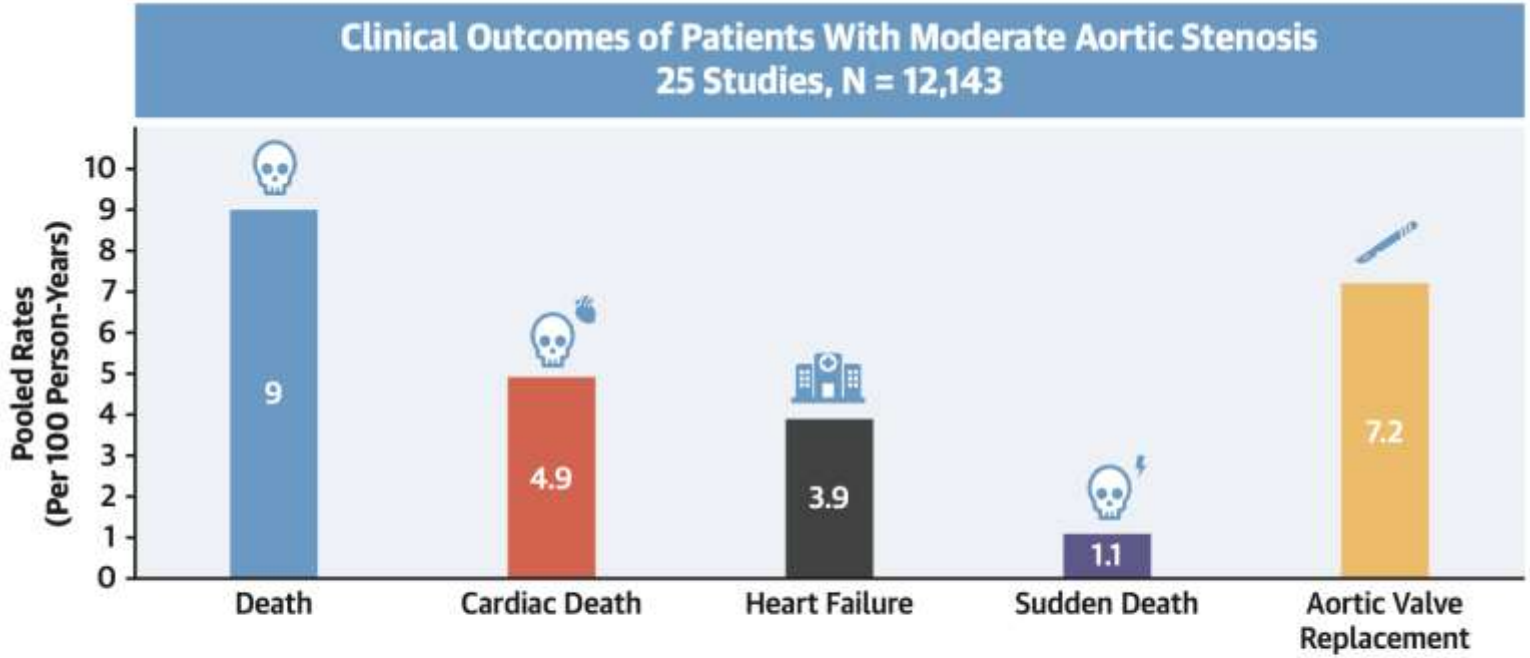


Strange, G. et al. J Am Coll Cardiol. 2019;74(15):1851-63.



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

Patients with reduced EF (heart failure) and moderate AS

Under the current guidelines,
unless patients meet strict criteria for severe AS or have confirmed low-flow low-gradient (LFLG) AS on dobutamine stress echo, they must simply wait for aortic valves to worsen to receive treatment

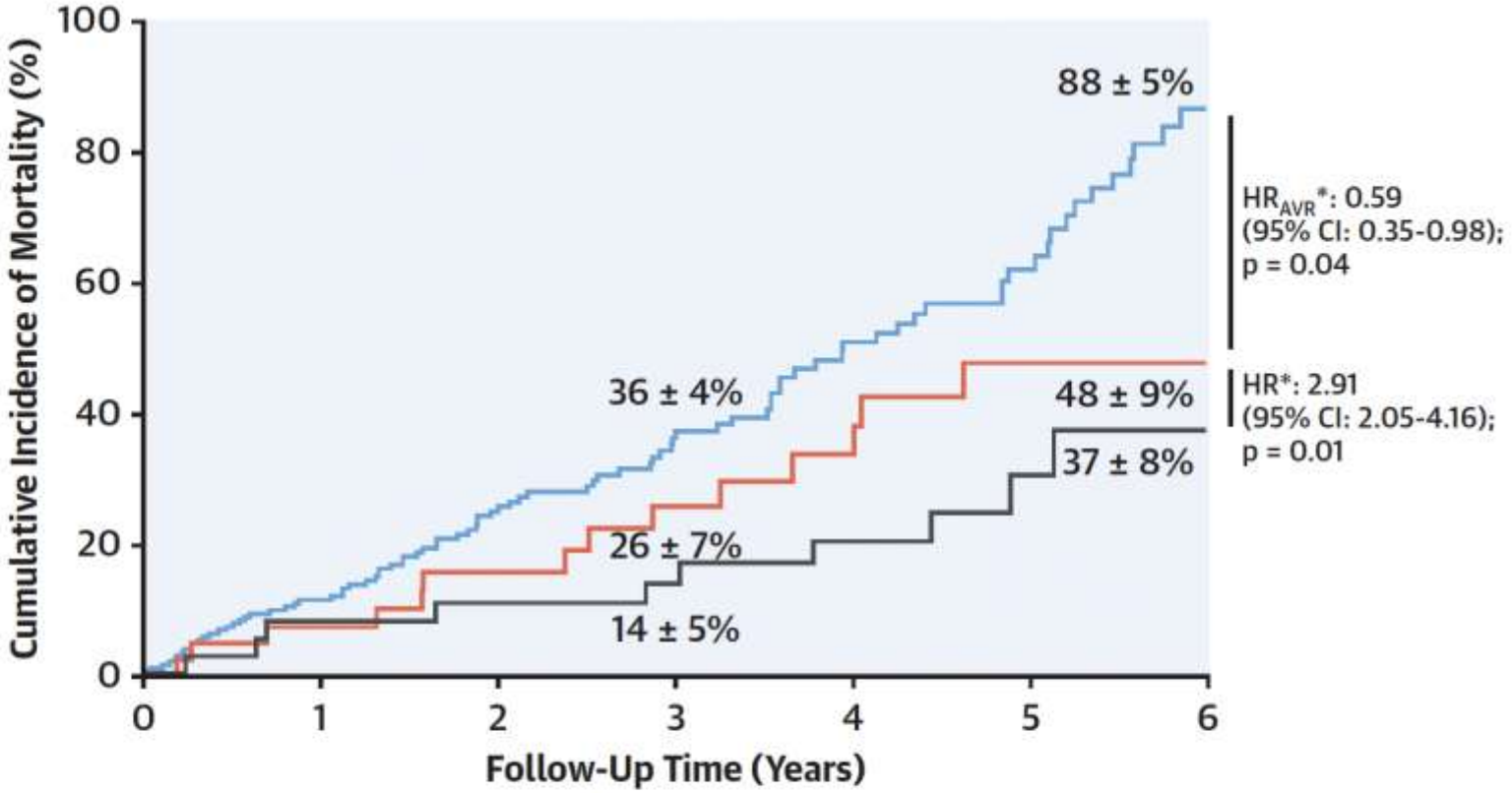
Transcatheter Aortic Valve Replacement in Patients With Reduced Ejection Fraction and Nonsevere Aortic Stenosis

Sebastian Ludwig, MD*; Niklas Schofer, MD*; Mohamed Abdel-Wahab, MD; Marina Urena, MD; Guillaume Jean, MD; Matthias Renker, MD; Christian W. Hamm, MD; Holger Thiele, MD; Bernard Iung, MD; Joris F. Ooms, MD; Maya Wiessman, MD; Nils S.B. Mogensen, MD; Benjamin Longère, MD; Nils Perrin, MD; Walid Ben Ali, MD, PhD; Augustin Coisne, MD, PhD; Jordi S. Dahl, MD, PhD; Nicolas M. Van Mieghem, MD; Ran Kornowski, MD; Won-Keun Kim, MD; Marie-Annick Clavel, DVM, PhD

Circ Card Interv 2023

TAVR was a strong independent predictor of overall and cardiovascular survival among patients with reduced LVEF and non severe AS (ie, moderate or pseudo-severe AS).

In patients with reduced LVEF and non severe AS, those undergoing TAVR showed significantly lower 2-year all-cause and cardiovascular mortality rates compared with a propensity score-matched cohort of patients on medical management.

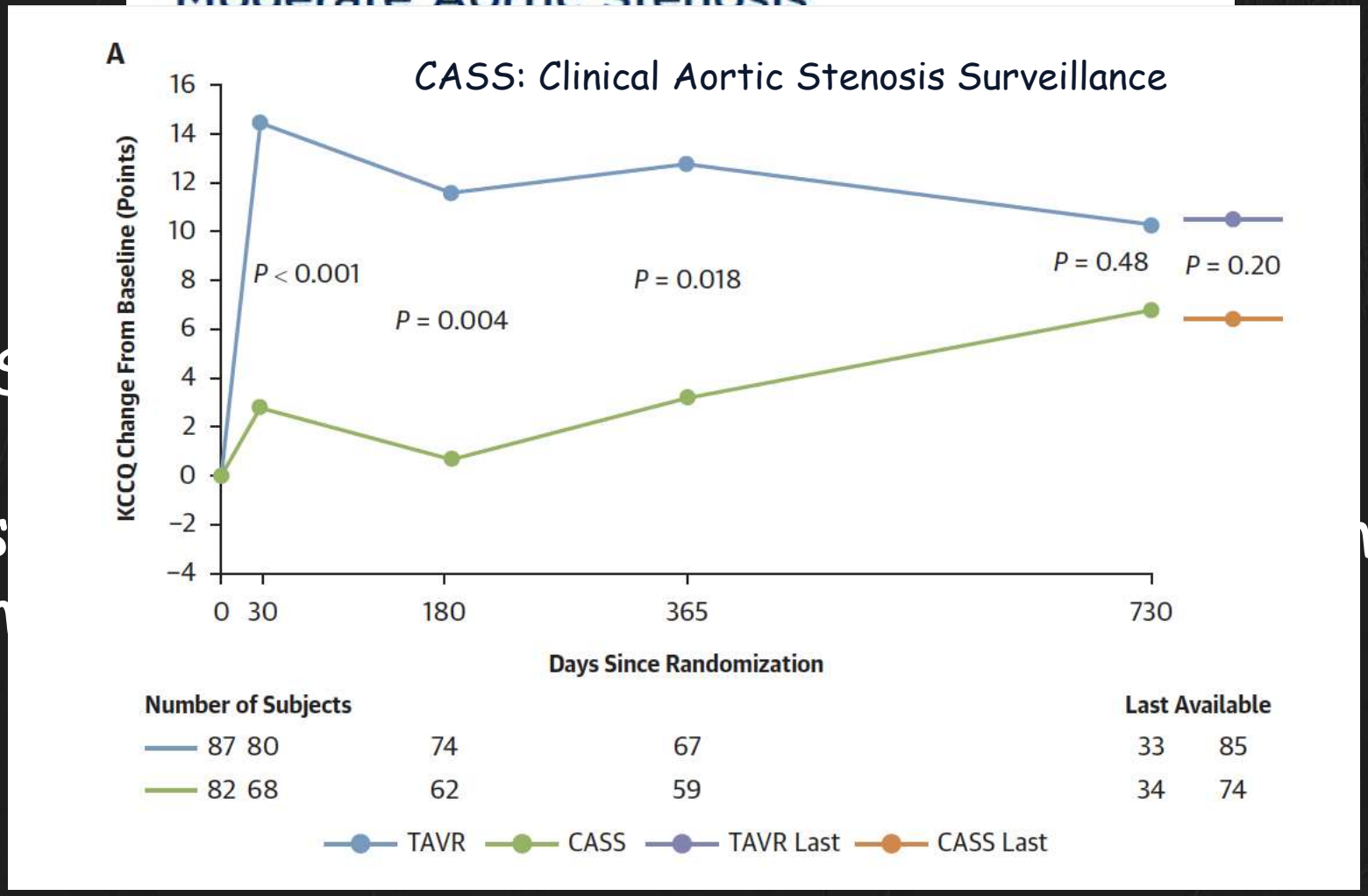


Patients at risk:				
HFrEF + Moderate AS without Intervention	219	103	36	5
HFrEF + Moderate AS with Intervention	43	26	15	4
HFrEF	43	32	22	7

Matched Patients

Jean, G. et al. J Am Coll Cardiol. 2021;77(22):2796-803.

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



89 pts

ed in

43% m

No difference in hard endpoints at a median FU of 23 m

During the TAVR UNLOAD trial, GDMT changed with the introduction of neprilysin/valsartan and sodium-glucose cotransporter 2 inhibitors. Adoption of these newer HF drugs was limited in the TAVR UNLOAD trial. Whether greater use of these newer drugs would have impacted our findings is unknown, but we believe that any impact on the between group comparisons would be modest owing to the distinct mechanism of benefit of TAVR.

EXPAND trial 650 pts

Symptoms
AND one of the following:
HF hospitalization within 1 calendar year
NT-proBNP≥600 pg/mL (or BNP 80 pg/mL)
LVEF<60%
GL ≤-15%
E/e'≥14 or≥Grade 2 diastolic dysfunction
Stroke volume index <35 mL/m^2

PROGRESS 750 pts

Symptoms
OR one of:
LVEF<60%
Stroke volume index <35 mL/m^2
≥Grade 2 diastolic dysfunction
Atrial fibrillation
NT-proBNP>3x normal
Elevated calcium score

CoreValve

Sapien 3

Presently

Careful surveillance is the way to go: in general

Individual patient decision is the way to go: in practice