



DIFFICULT ISSUES IN THE MANAGEMENT OF VHD

Aortic stenosis in cancer patients

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Universitair
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European
Reference
Network
for rare or low prevalence
complex diseases
Network
Heart Diseases
(ERN GUARD-HEART)

EuroValve October 28- 29 2021

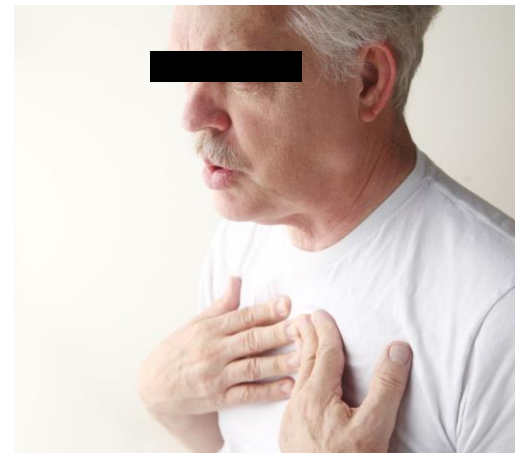
HOTEL LIEGE CONGRES, BELGIUM
WWW.EUROVALVECONGRESS.COM

No disclosure



●●● CASE

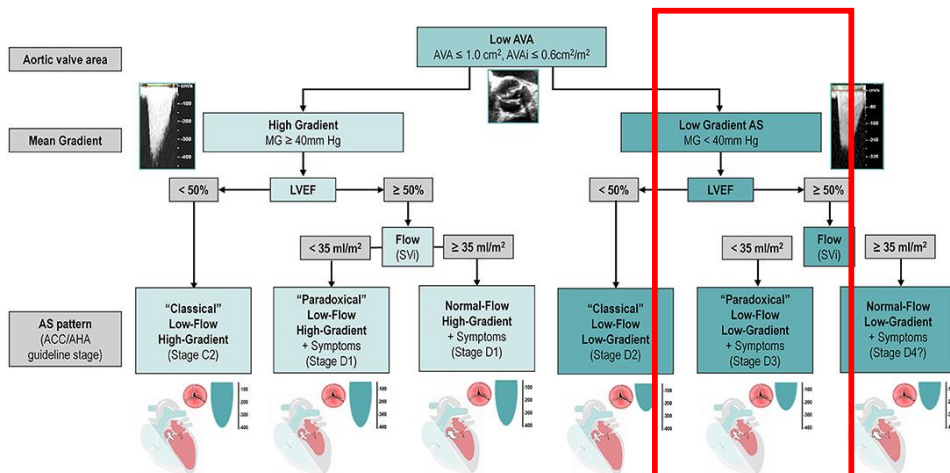
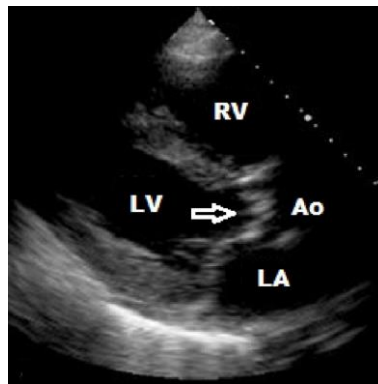
- 79 year old man
- History of high blood pressure
- Known CKD: 30mL/min/1.73 m2 (MDRD)
- Anemia (11.2 Hb) normoc.
- Fatigue
- Dyspnea IIB increasing since several months
- Diffuse arthralgia especially in the left arm
- Systolic murmur 3/6 Aortic





ECHOCARDIOGRAPHY

- AVA 0.75 cm²
- Mean Grad 29 mm Hg
- Max Grad 40 mm Hg
- LVEF 56 % Svi 32 mL/m²

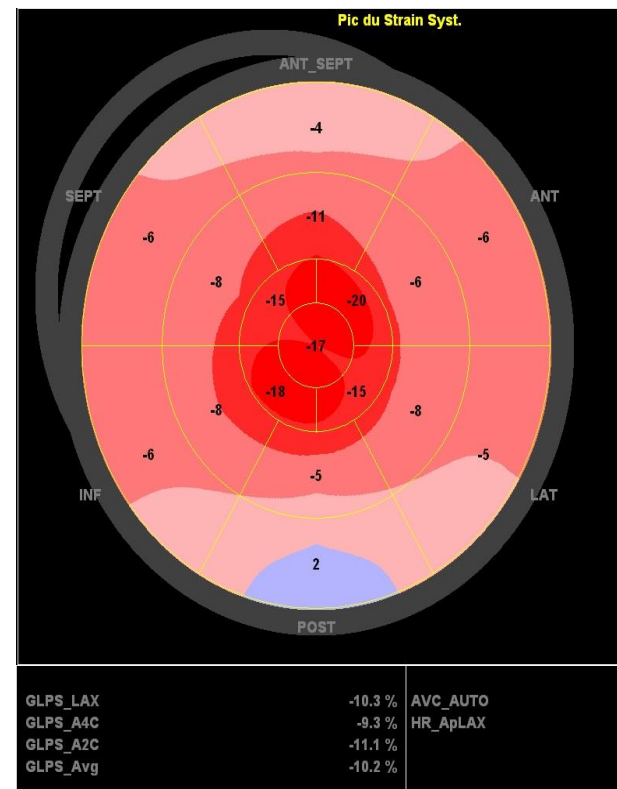
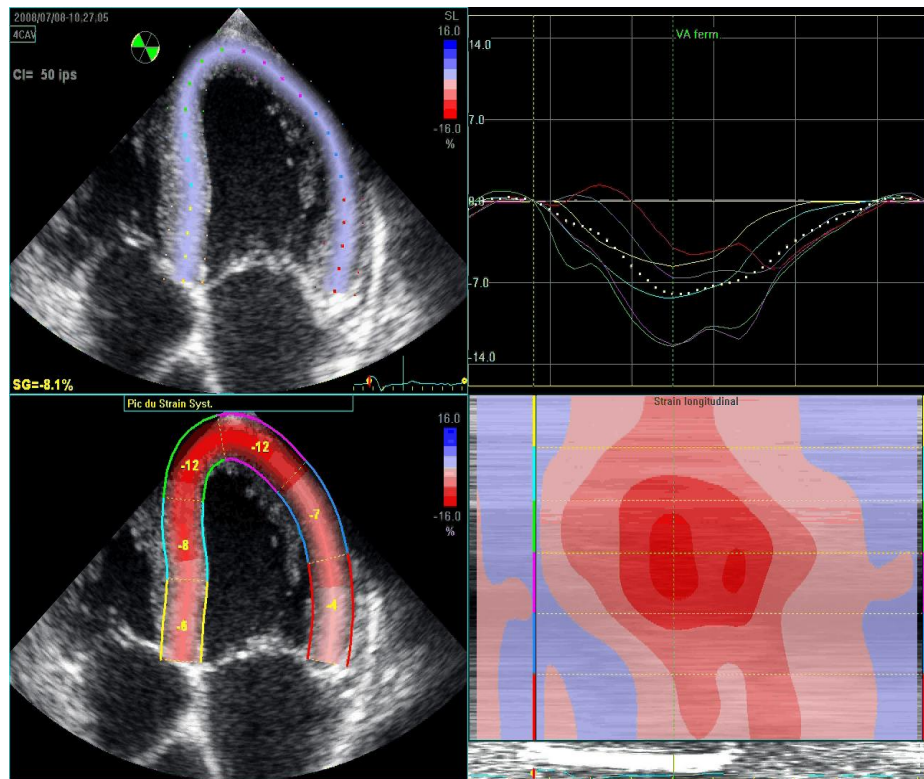


Extra VHD damage

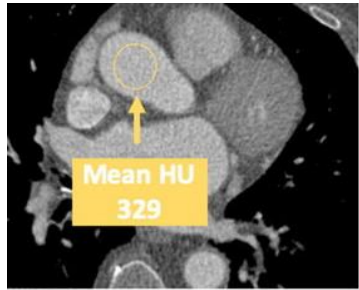


Stages/Criteria	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4
	No Cardiac Damage	LV Damage	LA or Mitral Damage	Pulmonary Vasculature or Tricuspid Damage	RV Damage
Echocardiogram		Increased LV Mass Index >115 g/m ² (Male) >95 g/m ² (Female)	Indexed left atrial volume >34 mL/m ²	Systemic Pulmonary hypertension ≥80 mmHg	Moderate-Severe right ventricular dysfunction
		Ei/v = 14	Moderate-Severe mitral regurgitation	Moderate-Severe tricuspid regurgitation	
		LV Ejection Fraction <50%	Atrial Fibrillation		

- LV mass i 128 g/m²
- RWT 0.43
- LAVi 36mL/m²
- PAPS 35 mm Hg
- TAPSE 18



●●● CALCIUM SCORE

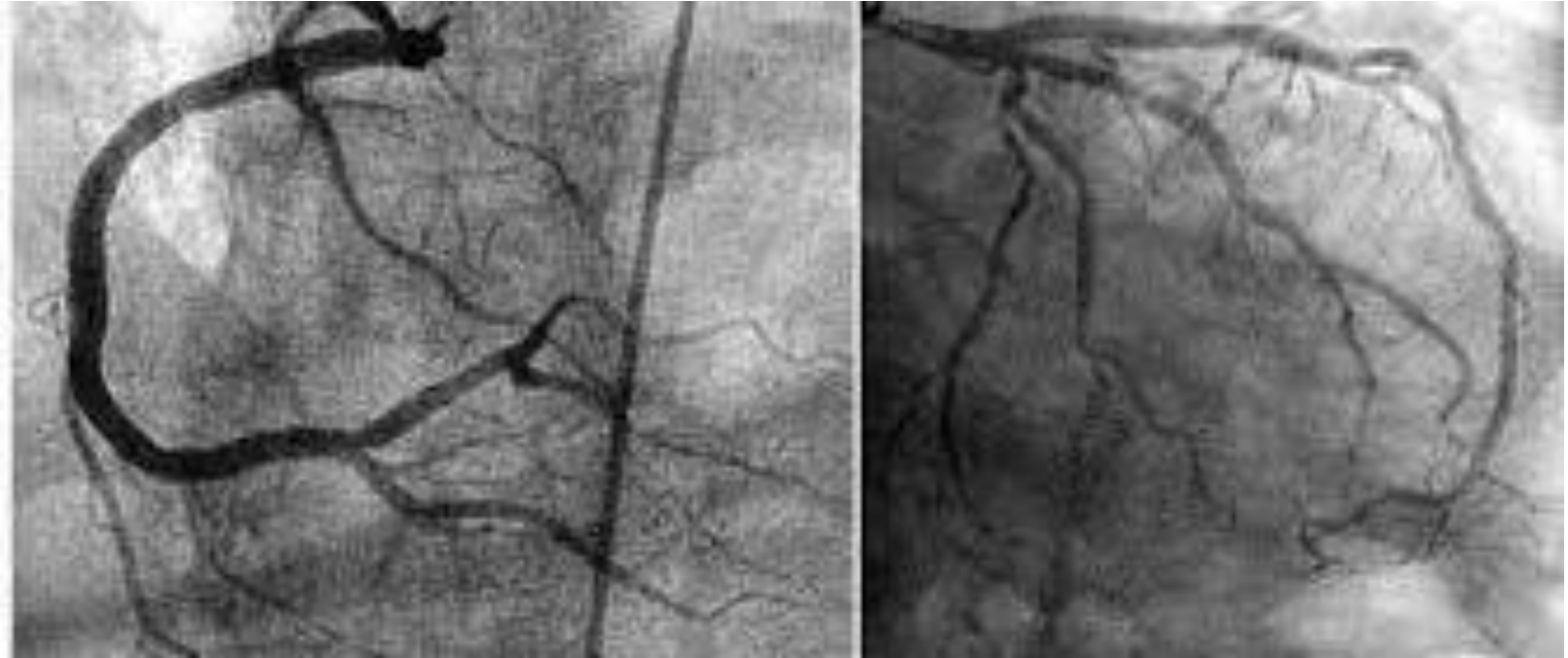


DES low dose

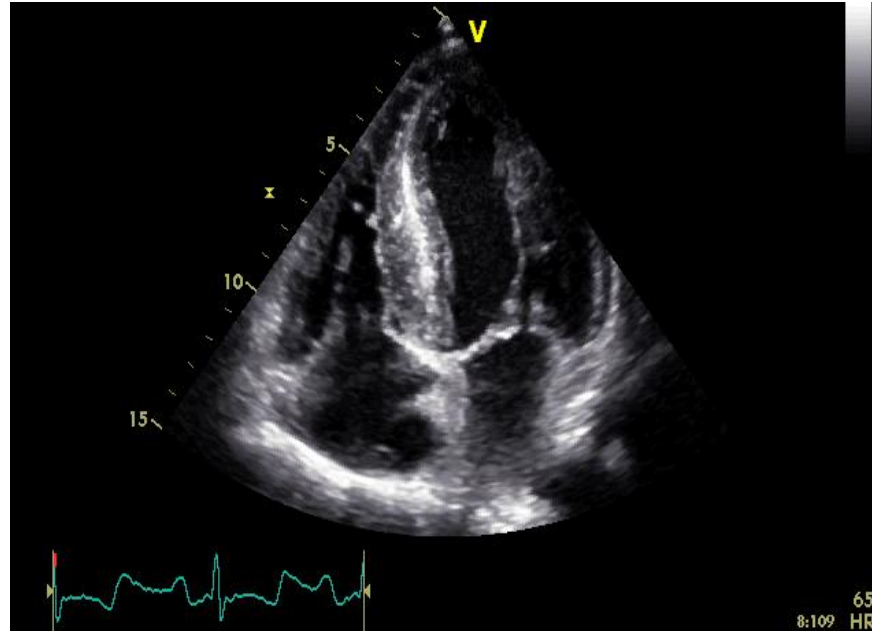
AVA : 0.77 cm²

CA score 439

●●● CORONARY ANGIOGRAPHY

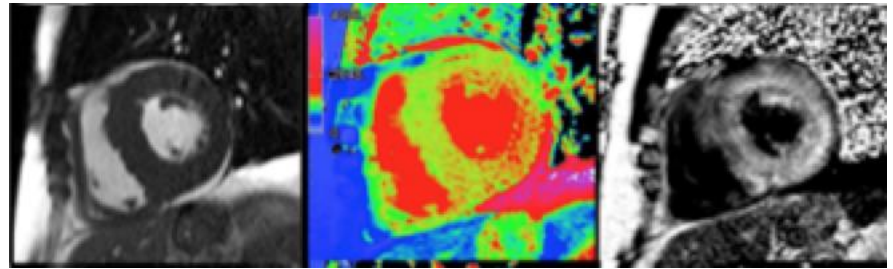
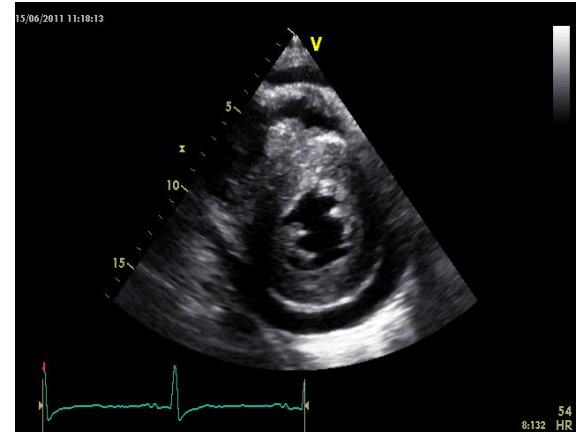


●●● ECHO POST AVR (CE 25) PRE DISCHARGE

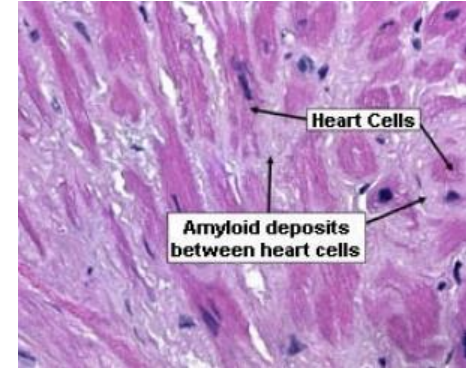
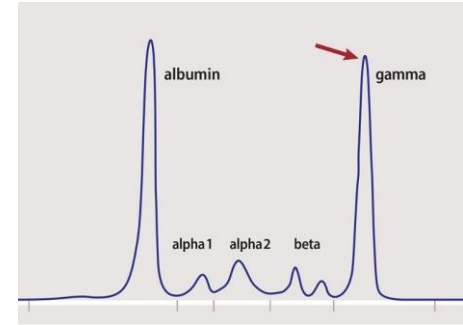
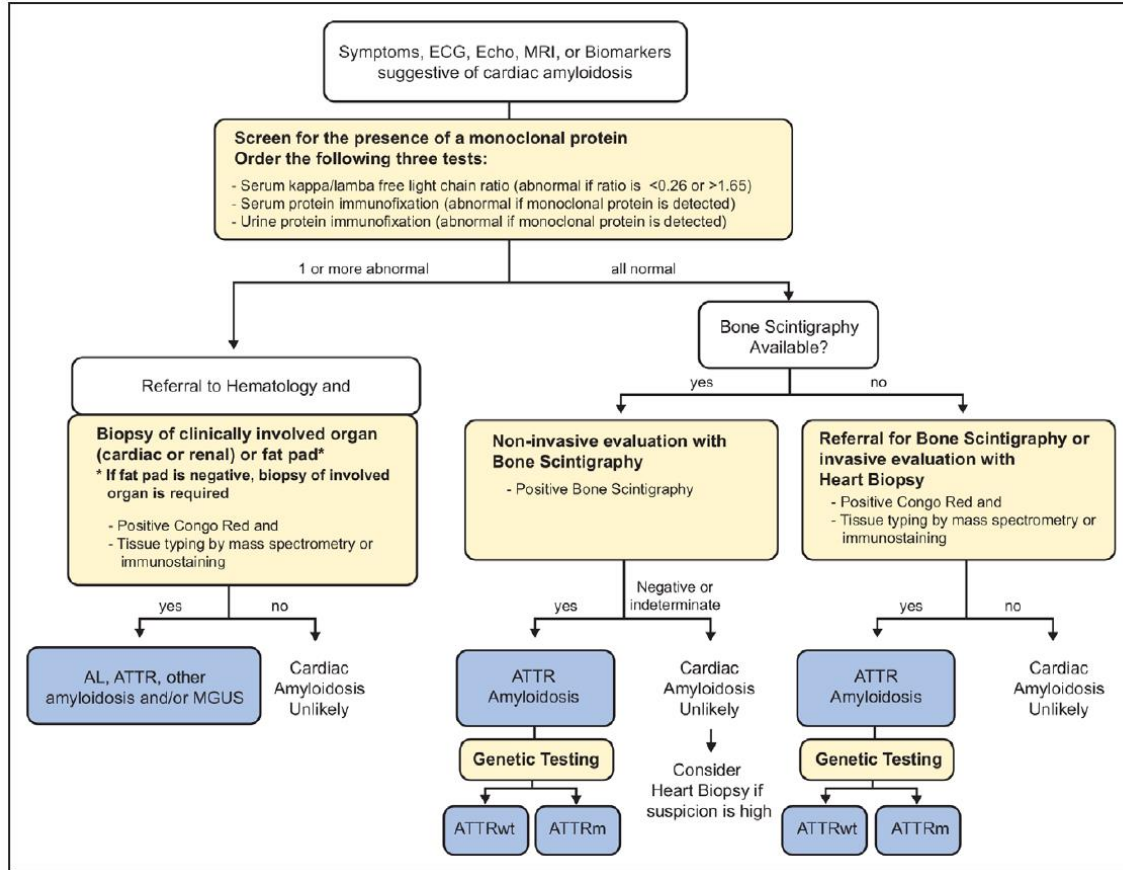


6 MONTHS LATER – FOLLOW UP

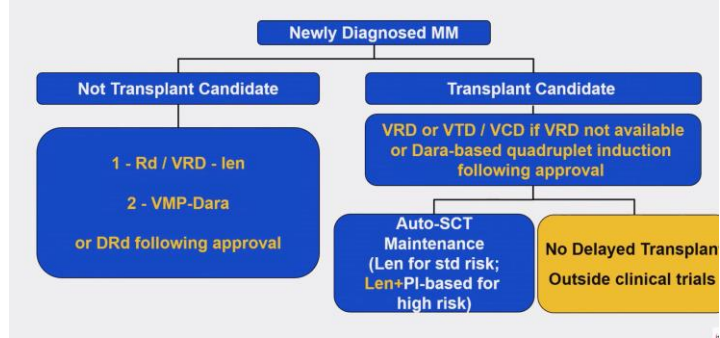
- Still fatigue and Dyspnea IIB
- Still arhtralgia mainly in the left arm
- AV NI grad
- No PPM
- LVH + PE



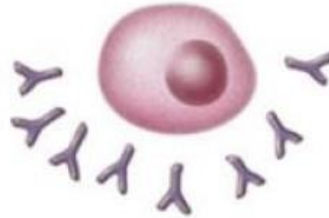
LAB / EM BIOPSY: AL-AMYLOIDOSIS



AL-AMYLOIDOSIS



A Monoclonal plasma cells, producing amyloidogenic light chains



Fibrillary aggregates (amyloid)

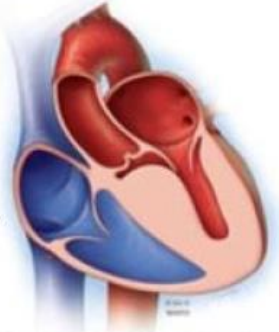


Amyloid breakdown

- Monoclonal antibodies (anti-SAP, NEOD001, 11-1F4)
- Doxycycline

LCs synthesis suppression

- ASCT
- Conventional chemotherapy
- Anti-plasma cell monoclonal antibodies
- Novel therapies (e.g. venetoclax)

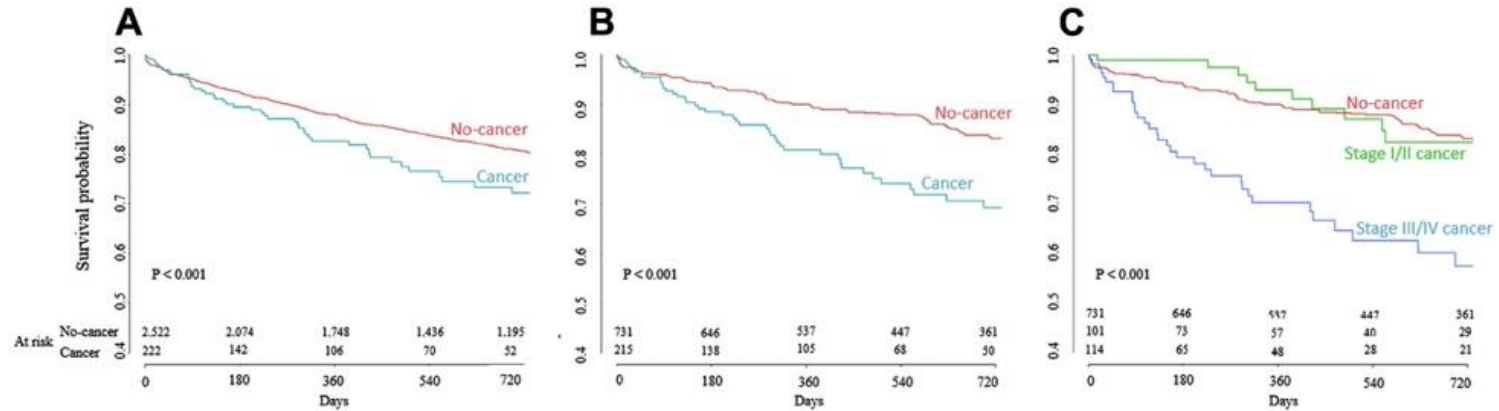


Heart transplantation for irreversible heart failure

●●● CANCER AND AS

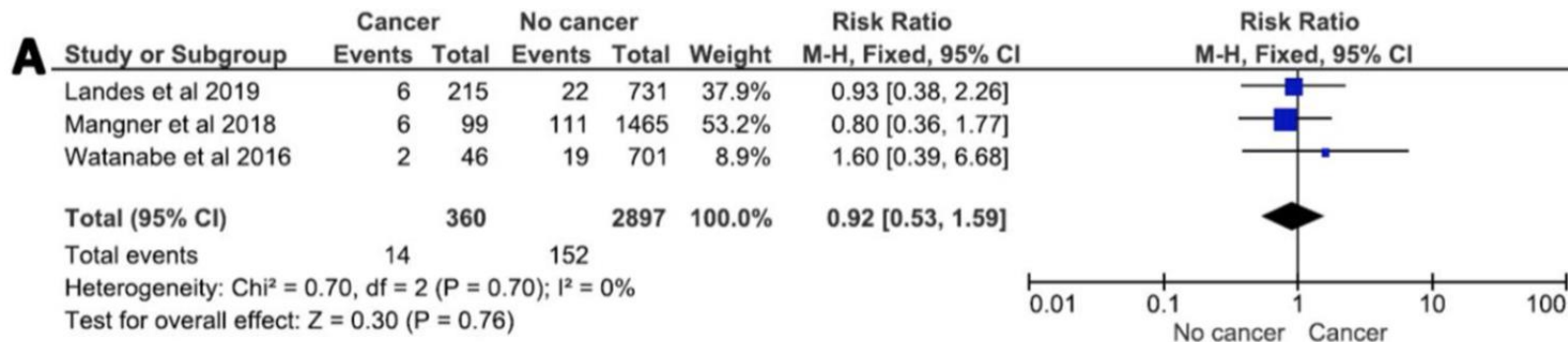
- Cancer complications and AS can coexist
 - Be aware of red flags
 - LVH in AS can be adaptative but also maladaptative
 - Absence of LVH regression conveys a poor prognosis
 - A more systematic evaluation of LVH by CMR in AS ?
 - Amyloidosis can infiltrate valves and produce Non-Ca aortic stenosis
-
- Cancer and CAD but also degenerative AS are sharing the same risk factors and can coexist
 - Which implications?

000 CANCER, AS, AND TAVR



1. Mortality is largely driven by cancer, and progressive malignancy is a strong mortality predictor
2. Importantly, 85% of the patients were alive at 1 year, one-third were in remission/cured from cancer

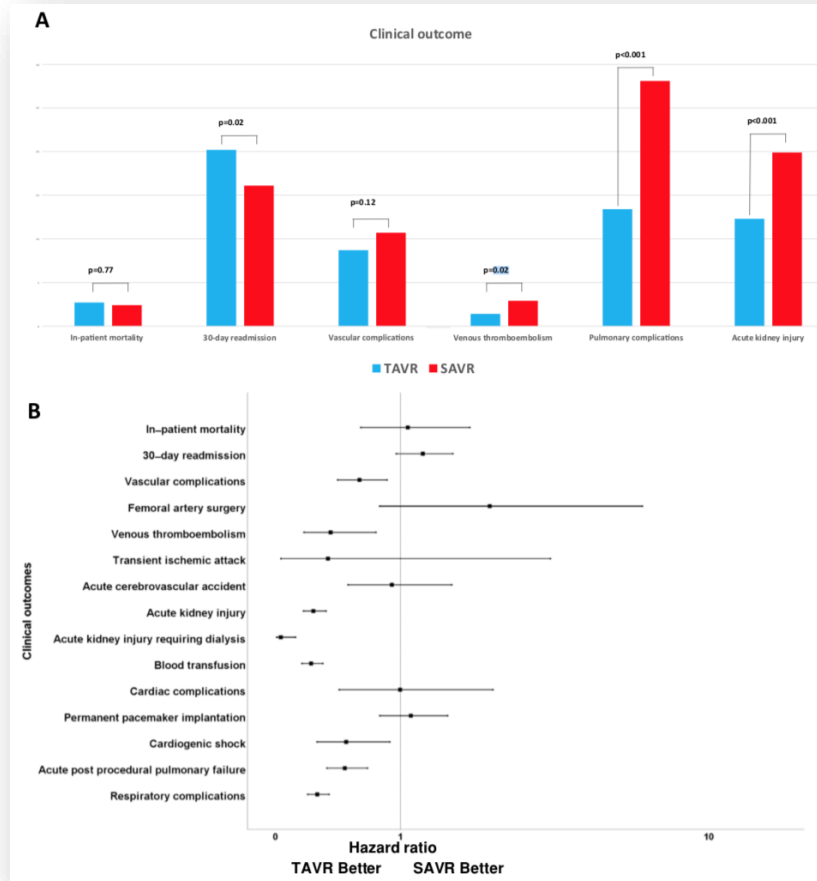
000 CANCER, AS, AND TAVR



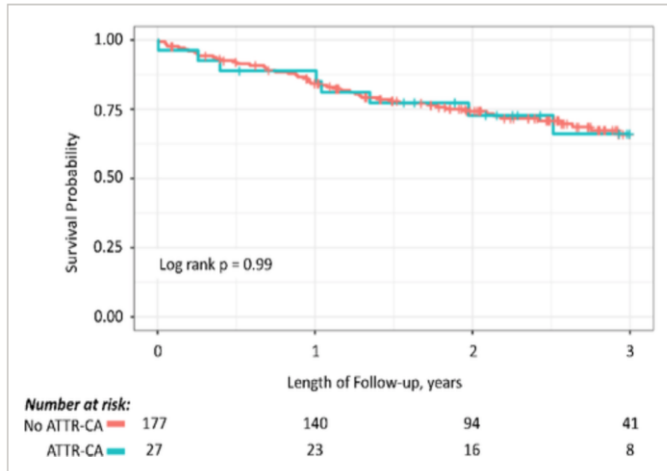
000 CANCER, AS, AND SAVR/TAVR

TAVR preferred option

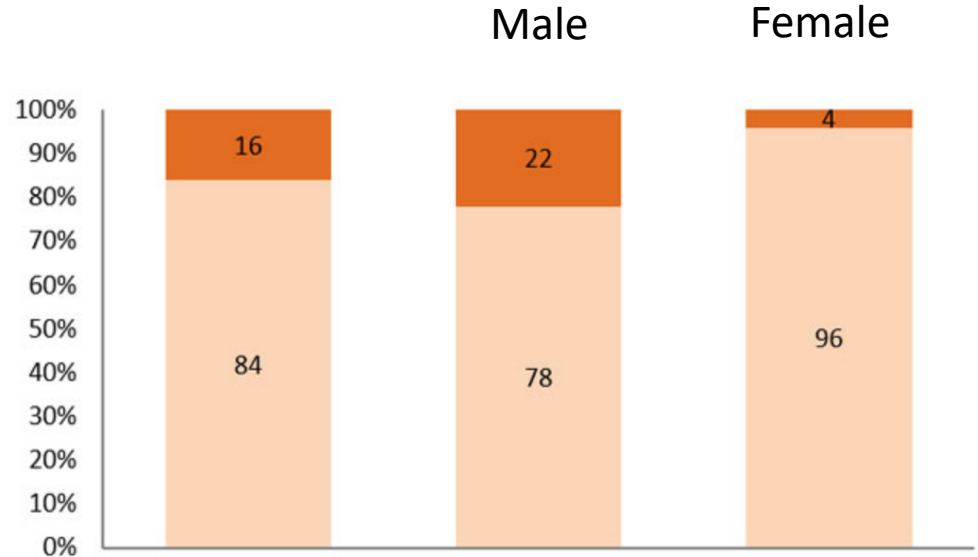
TAVR less TE



●●● CARDIAC AMYLOIDOSIS TTR/TAVR



Rosenblum et al EHJ HF 2021



Castano et al EHJ 2016

CONCLUSIONS

- One train can hide another
- Amyloidosis can be a confounding factor
 - LVH (increased T1)
 - Low gradient
 - Non calcified AS (Valve infiltration)
 - Secondary/ primary, both can be treated
 - Management/Prognostic implication
- Cancer and AS represent a relevant entity
 - AVR always a better pronostic than no AVR
 - Staging of Cancer matters
 - TAVR is the best option
 - Progression of AS is rare



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from Berlin

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