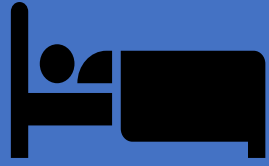


**Calcific coronary stenosis in
patient with supra-annular
transcatheter heart valve**



Male, 93-y.o.

- DM, hypertension, dyslipidemia

Past medical history



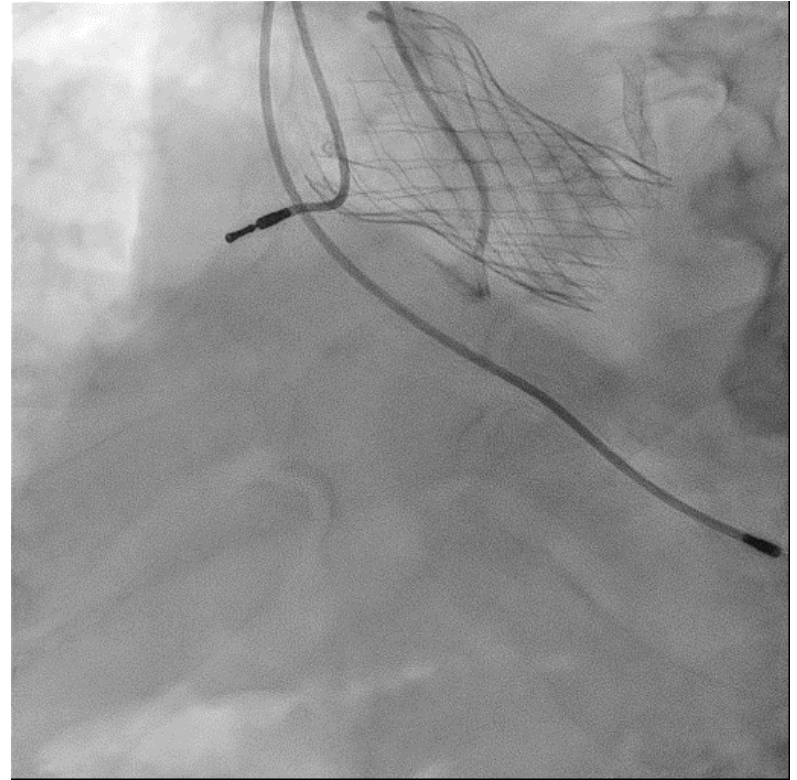
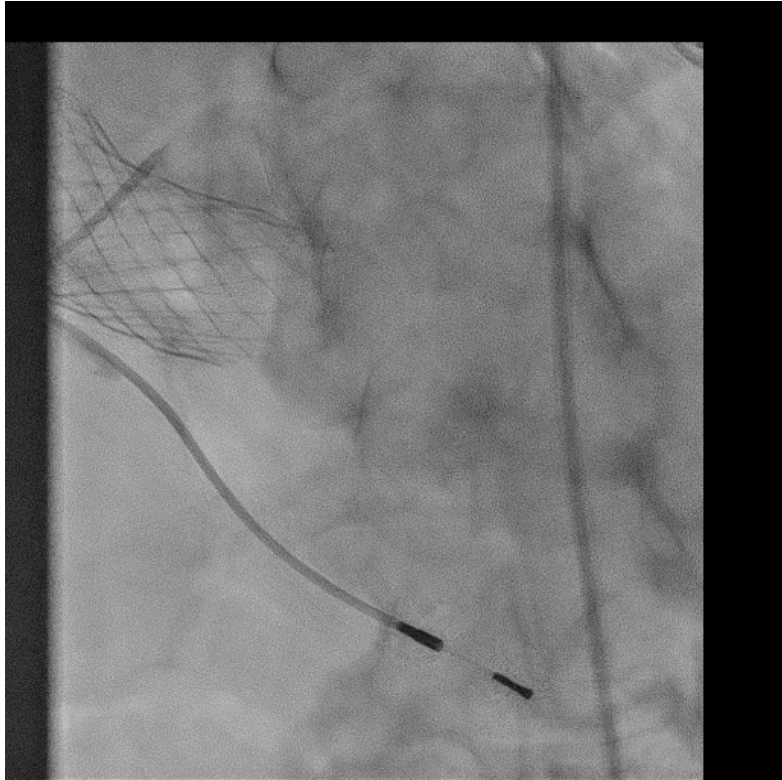
- 1990 total prostatectomy
- Claudicatio intermittens Leriche-Fontain IIa
- 2016 Acute coronary syndrome (ACS-NSTEMI) treated by medical therapy
- 11/2021 Traumatic syncope → severe aortic stenosis
- 12/2021 permanent pacemaker implantation
- Early 12/2022 - Cardiogenic shock → Three vessels coronary disease, severe aortic stenosis (Mean Gradient 60 mmHg) → TAVR with CoreValve Evolut R
- End 12/2022 PCI+3 drug eluting stent (DES) on LM-LAD, residual CTO of non dominant Cx, and severe right coronary (RCA) stenosis

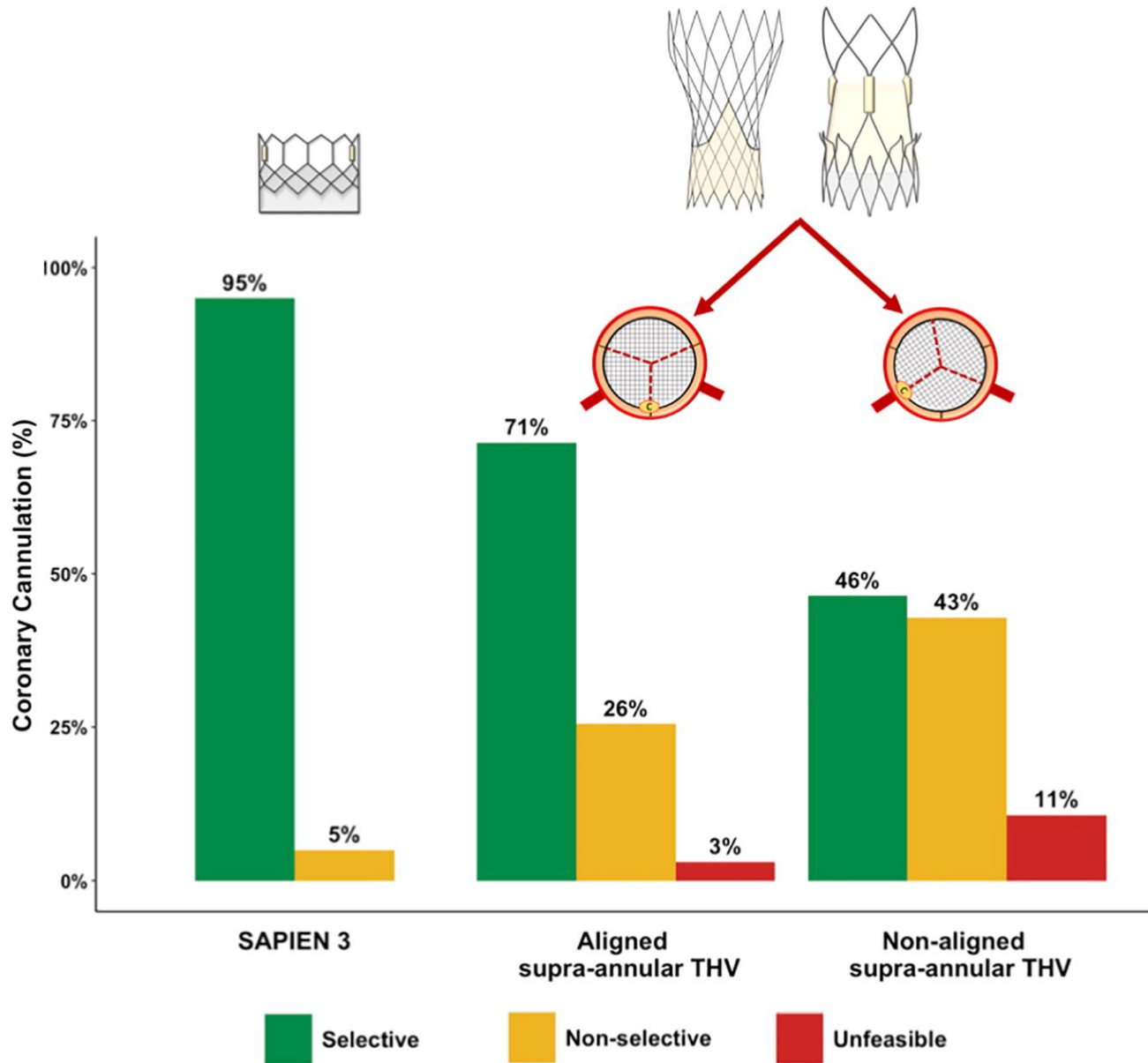
Active medical status



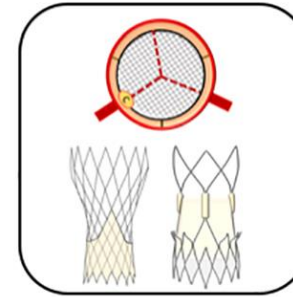
- Admission in ED for acute pulmonary edema and dyspnea
- EKG: ST depression in V2-V5
- Myocardial damage markers (first sample): Tnl 130 ng/L (n.r. <14), CK-MB 11,6 ng/ml (n.r. < 6,2)

Angiography

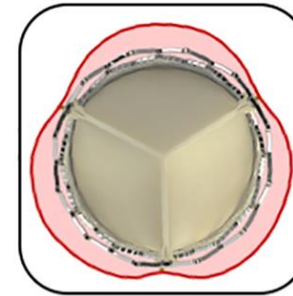




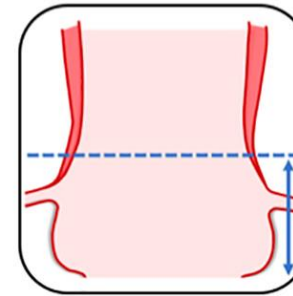
Predictors of impaired CA after TAVR



Non-aligned supra-annular THV
(OR 4.59, 95% CI 1.81-11.61, $p < 0.01$)



THV-Sinus of Valsalva relation
(OR 1.06, 95% CI 1.02-1.1, $p < 0.01$)



Sinus of Valsalva height
(OR 0.83, 95% CI 0.7-0.98, $p = 0.03$)

Invasive treatment

6F 45-cm femoral sheath

GC JR4: ineffective

GC AR1: effective with low-support

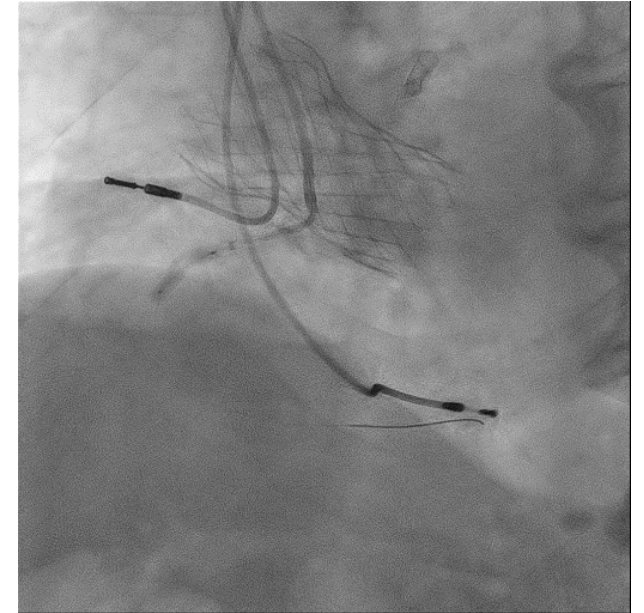
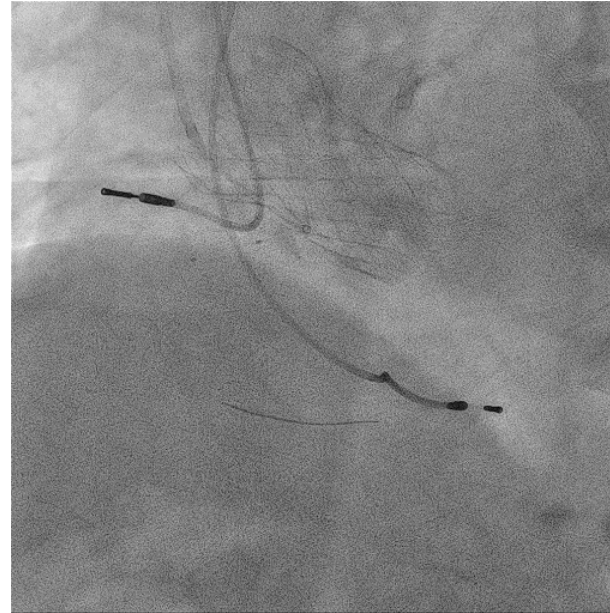
Guidewire: workhorse → extra-support

3,0x15 mm Non-compliant (NC) balloon: uncrossable lesion

GC extension

2,5x10 mm Cutting balloon

3,0x15 mm NC balloon (22 atm): dog-bone



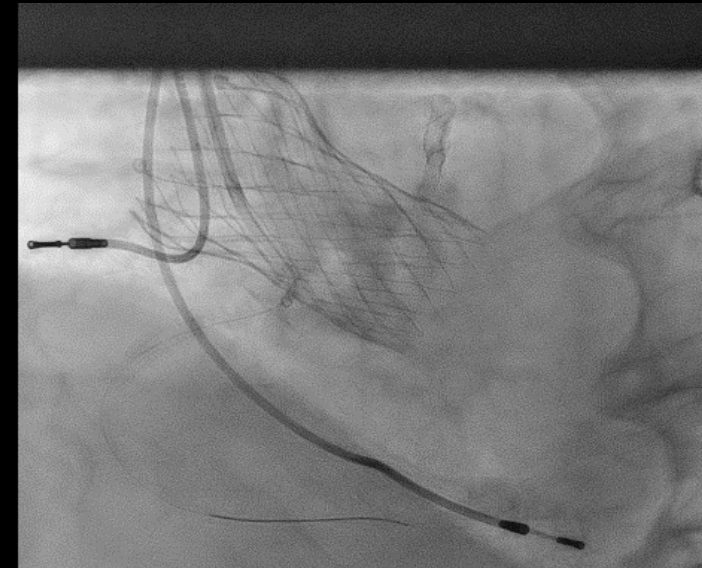
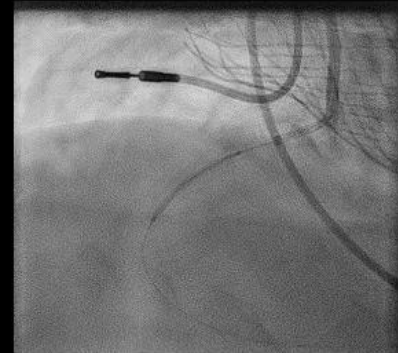
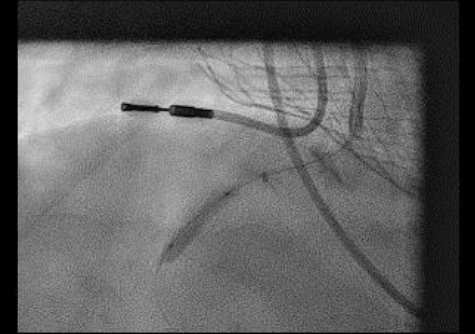
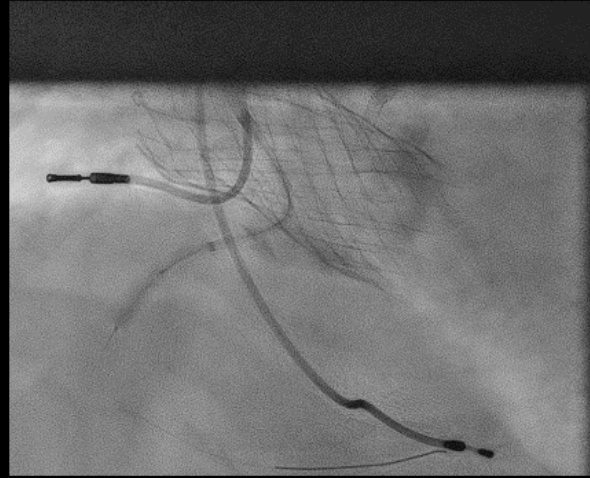
Invasive treatment

3,0x12 mm lithotripsy

3,0x15 mm NC balloon

3,0x18 mm DES

3,0x15 mm Post-dilatation



Conclusions and learning points

- A careful consideration about the completeness of myocardial revascularization should be done in patients with aortic valve stenosis and coronary artery disease, particularly in elderly population with a high risk of bleeding in case of urgent revascularization for acute coronary syndrome.
- A prosthetic aortic valve with supra-annular design has a potential challenging coronary re-access issue that carries longer procedural time and higher contrast administration.

