



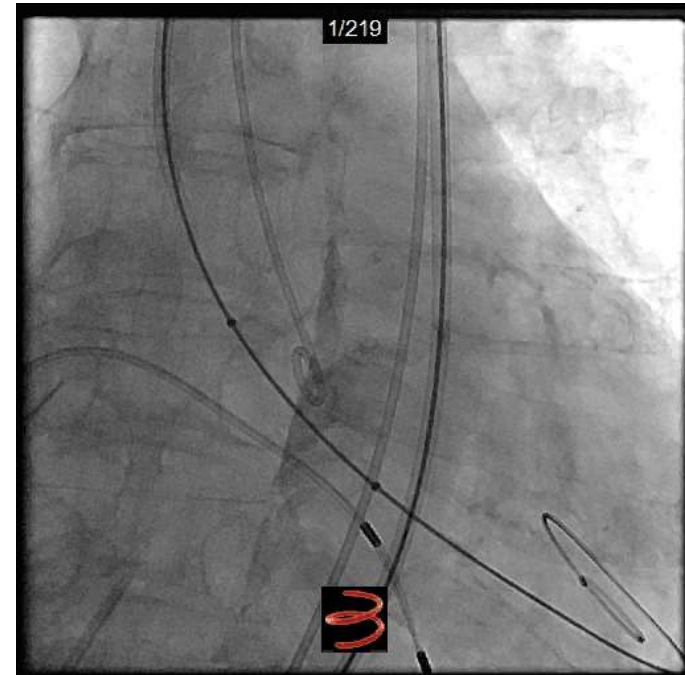
TAVR with or without predilatation

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26th, April 2017, TCTAP, Seoul

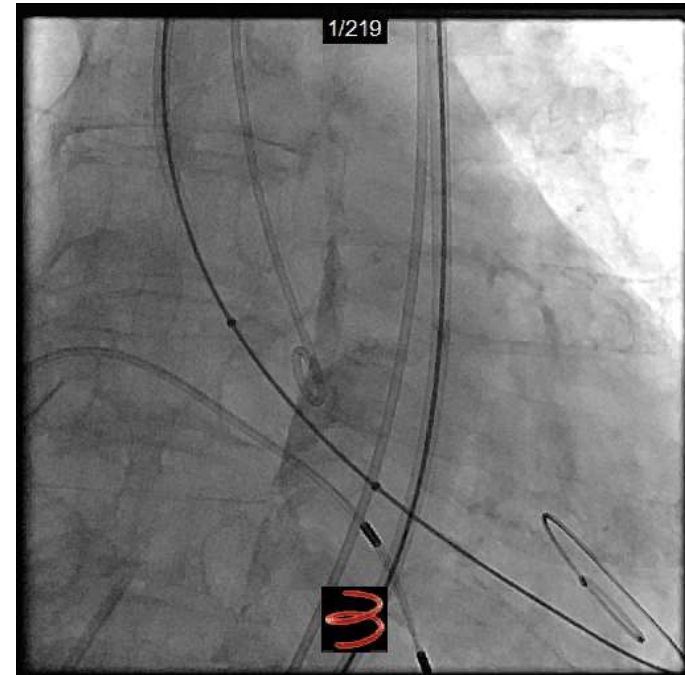
Why do we need pre-dilatation?

- Appreciate the whole picture of aortic valve complex
- Annular sizing
- Predict coronary occlusion
- Predict upward motion by septum hypertrophy
- Open the way to advance a device



What is disadvantage?

- Risk of hemodynamic collapse (especially in case of mitral regurgitation, small LV, high PG...)
- Require time



Inter-commissure calcification



Aortic valve complex

- Annulus

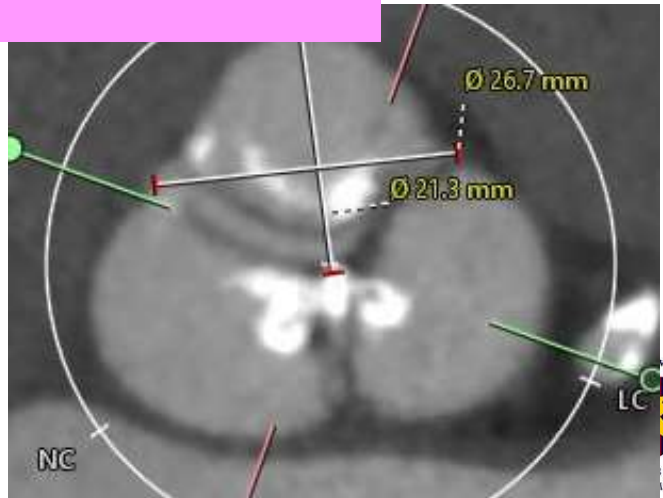
- CAAD: 24.9 mm
- Area: 486.8 mm²
- D_{long} × D_{short} : 30.0 × 30.0
- TTE : 2
- Inter-c

Sapien 3

23 or 26mm??

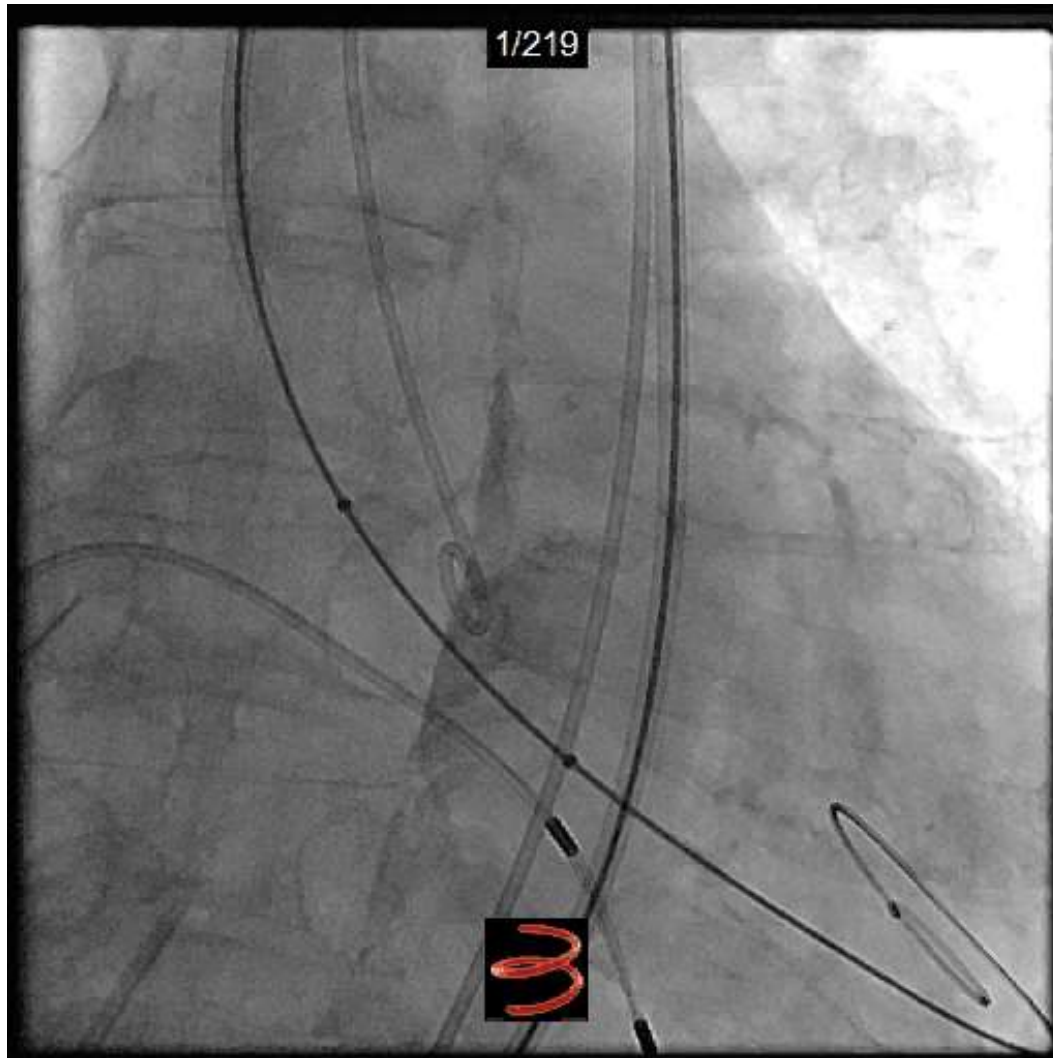
- valve size

- 23/26
- Ratio(23mm): Area 400/area = 0.84
- Ratio(26mm): Area 519/area = 1.07

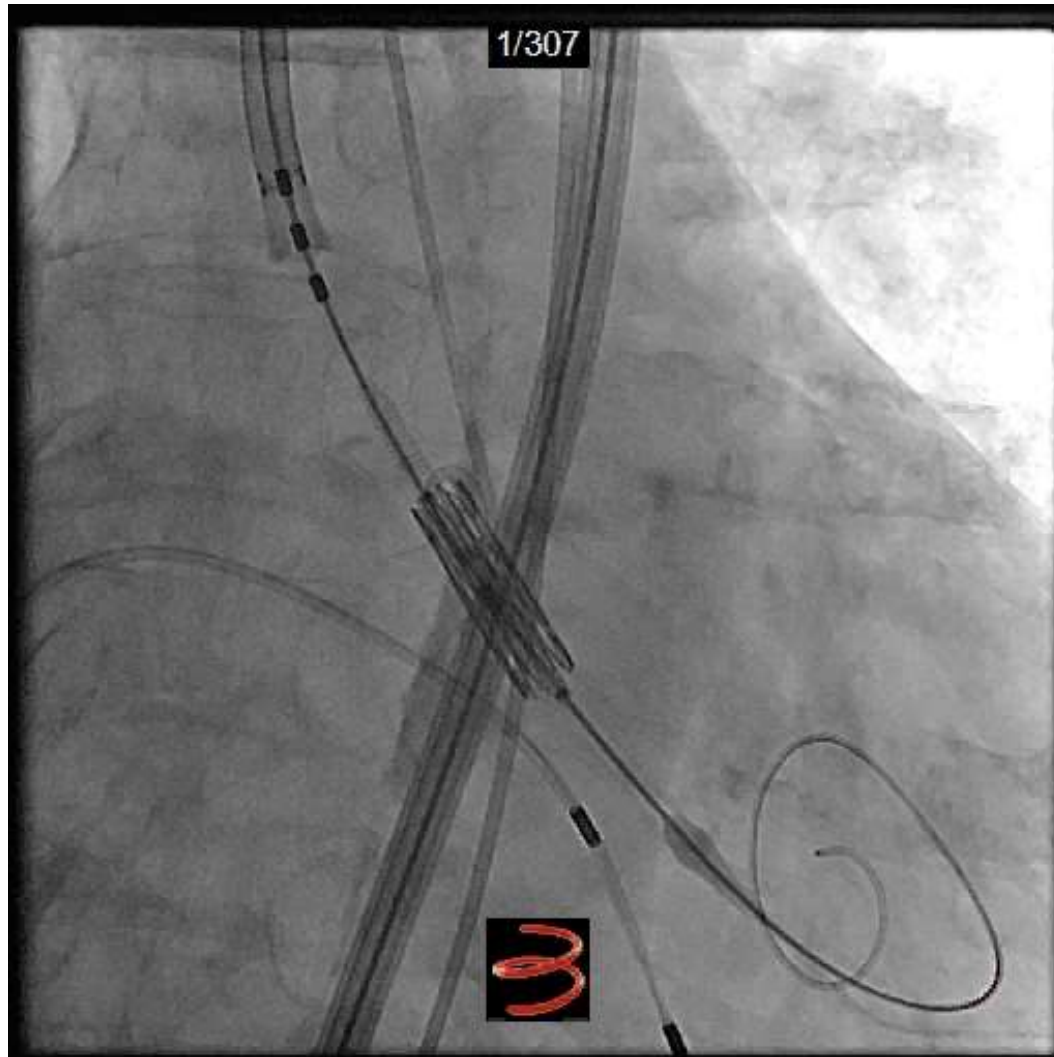


23 mm	26 mm	29 mm
338~430 mm ²	430~546 mm ²	540~683 mm ²

BAV with a 23mm balloon



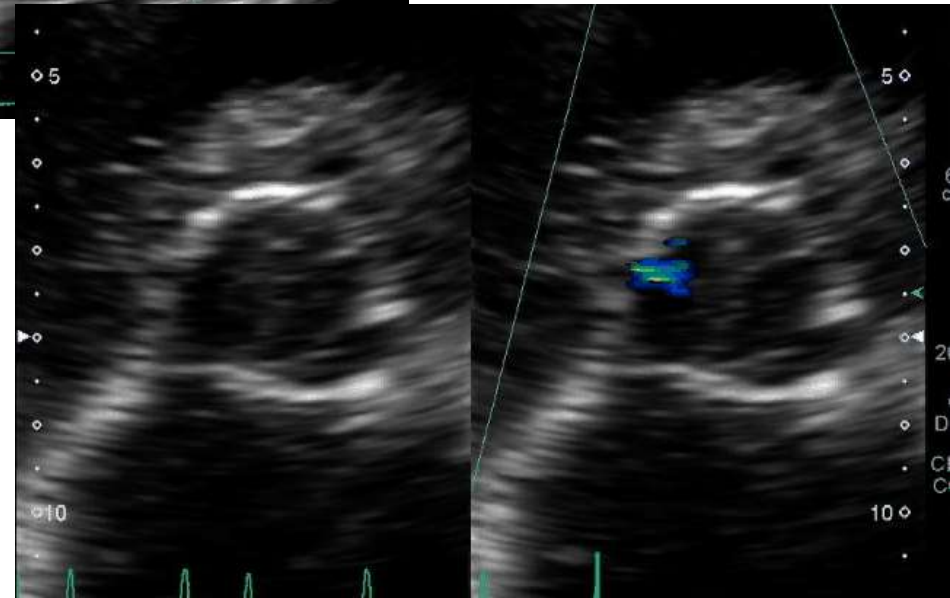
23mm SAPIEN 3



Post-Op TTE

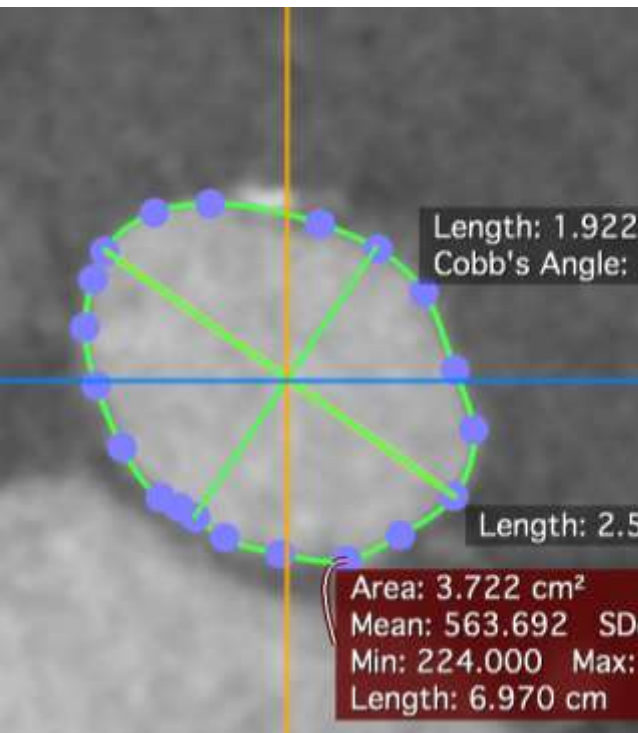


PVL: mild
pVel: 2.1m/s
mPG: 9mmHg

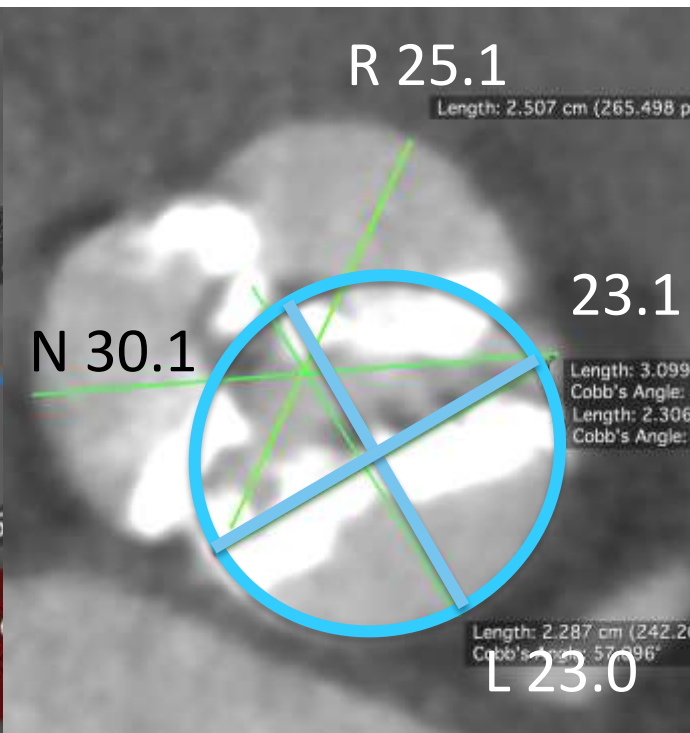


Measurement of BAV

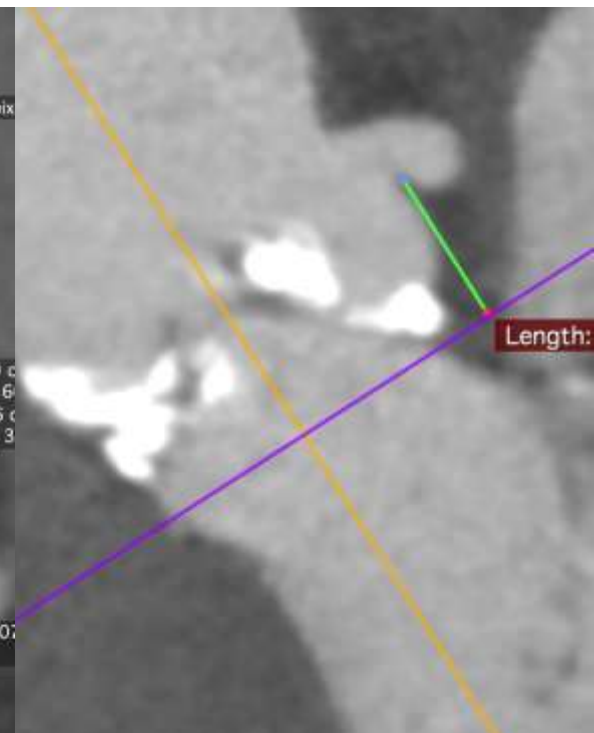
Type 1 R-N



19.2 x 25.5 mm
372 mm²

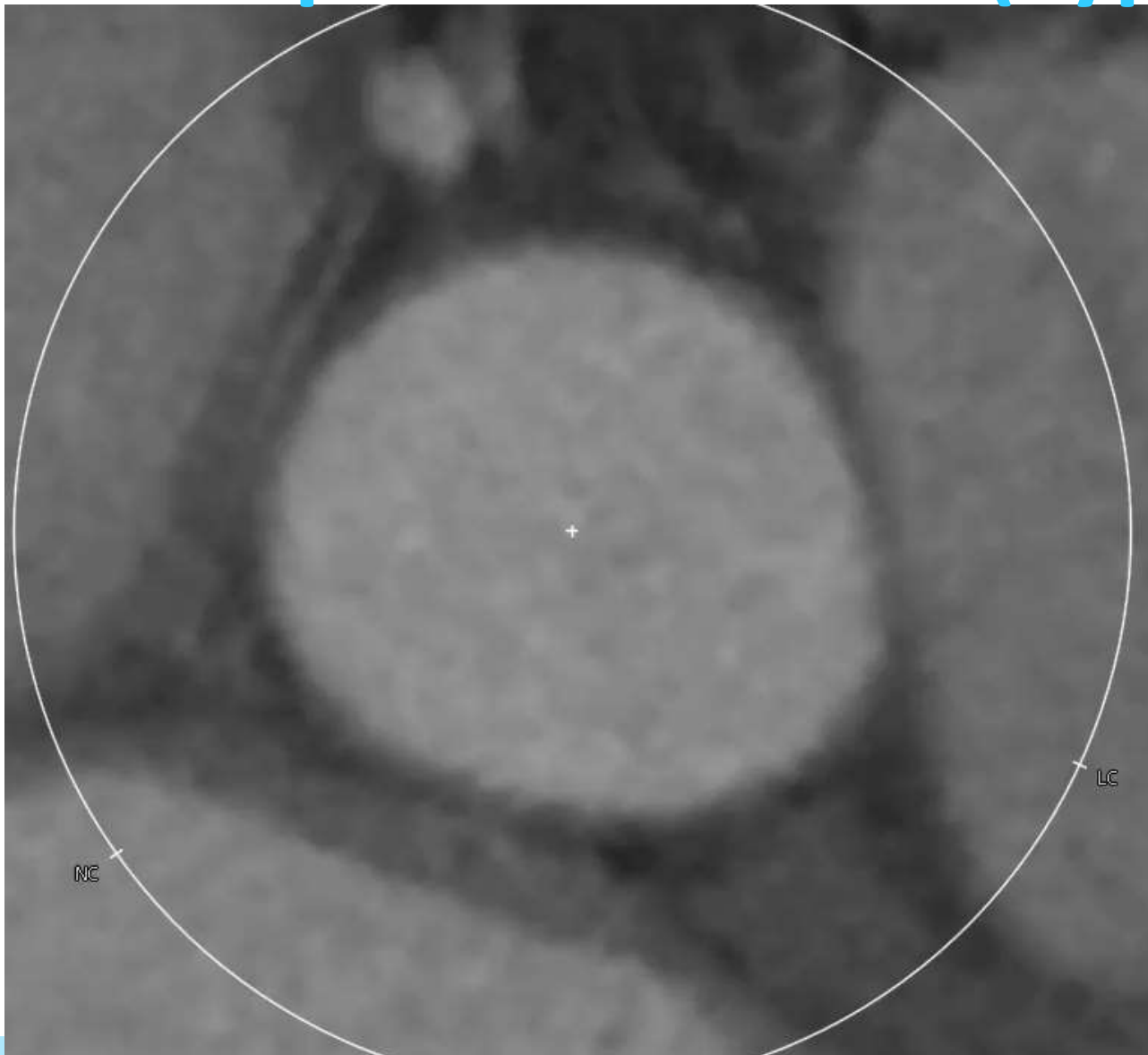


23.0 x 23.1 mm



11.5 mm

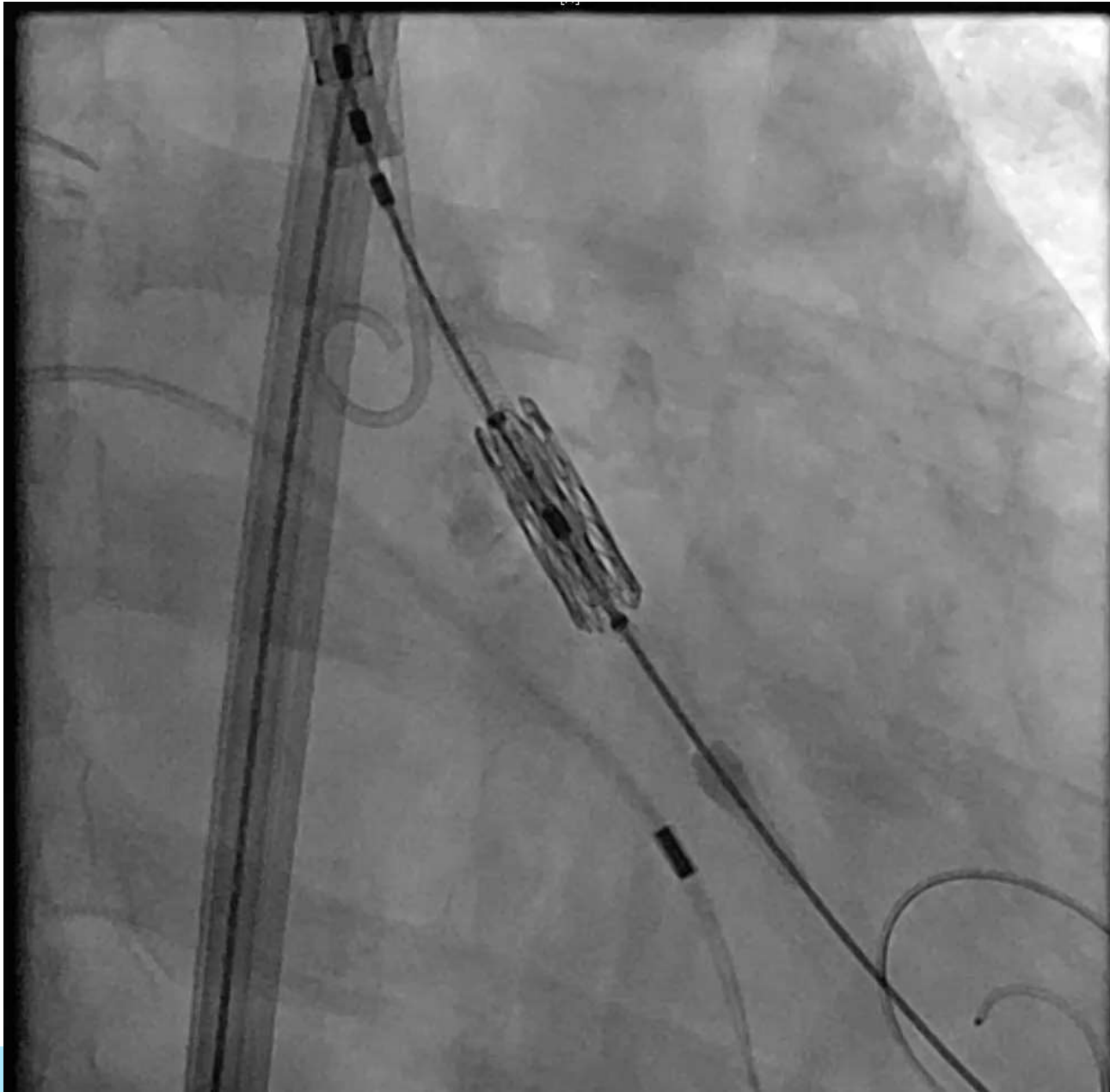
Bicuspid aortic valve (Type 0)



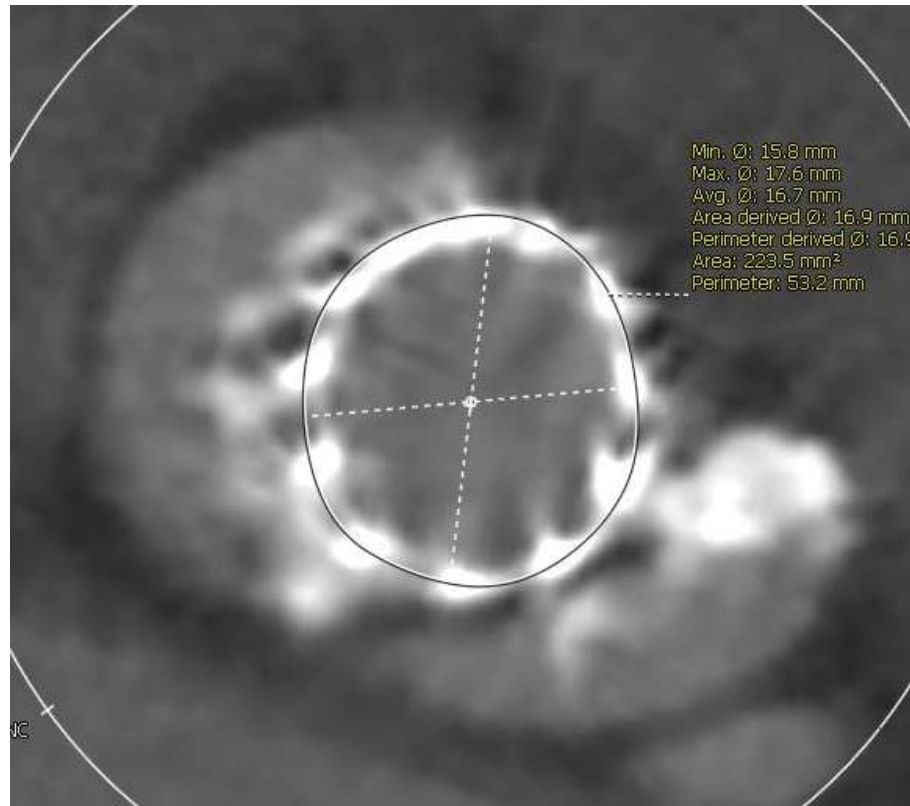
BAV with 20mm balloon



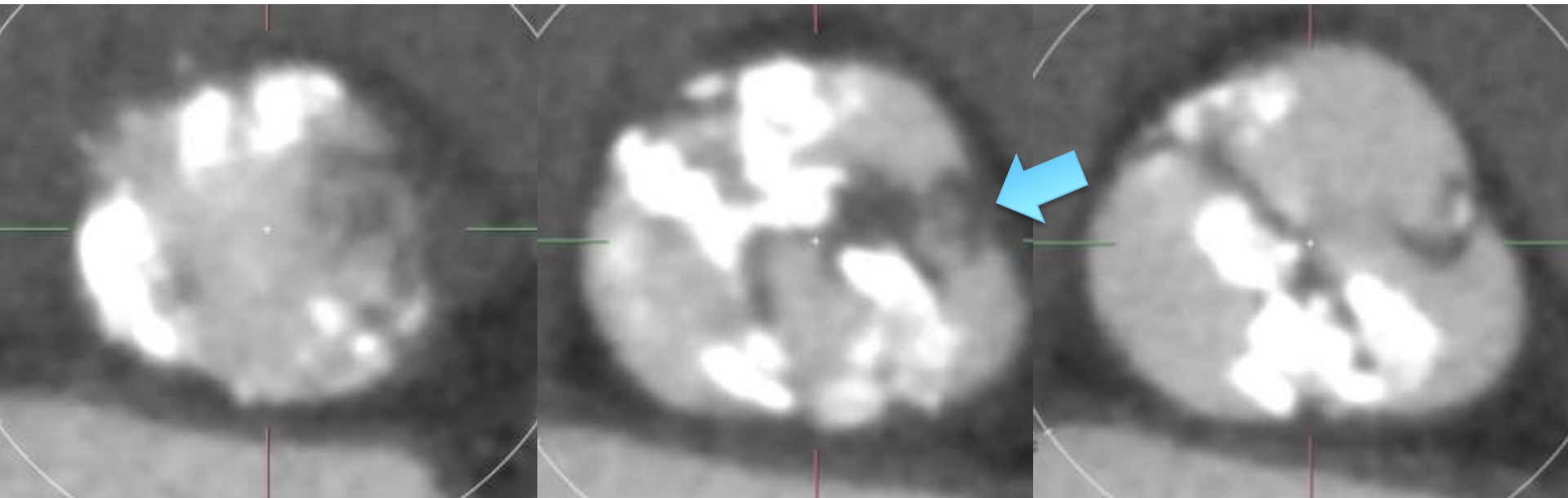
TAVI with SAPIEN3 20mm (nominal volume)



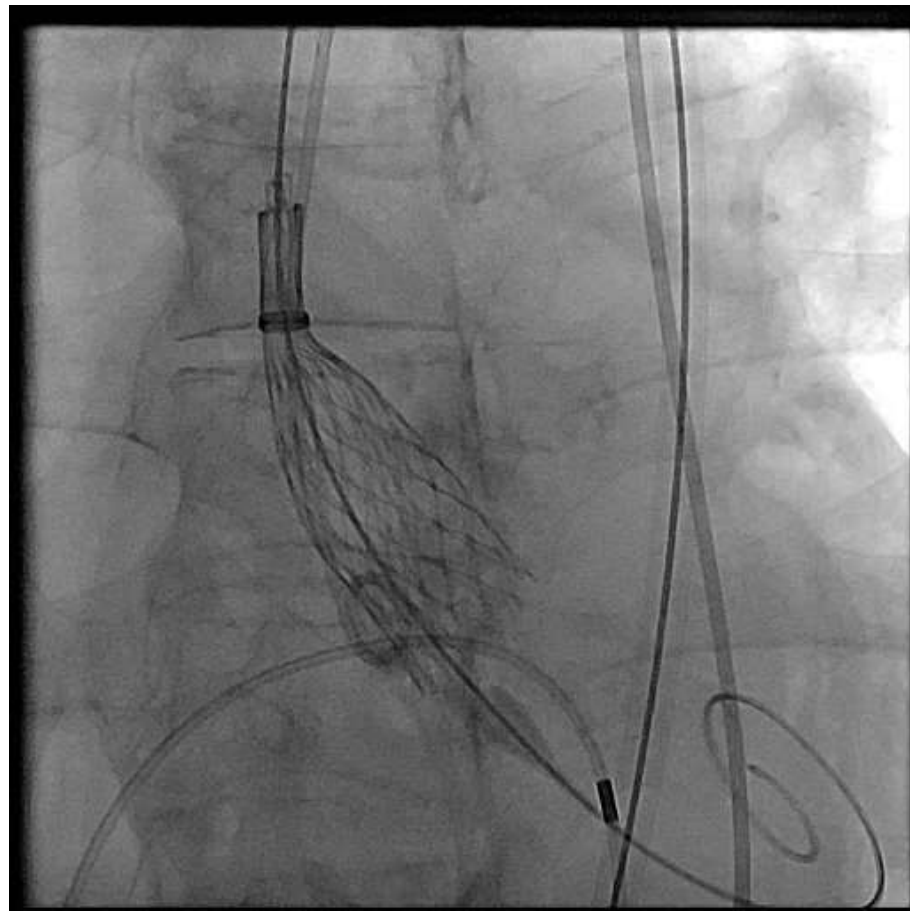
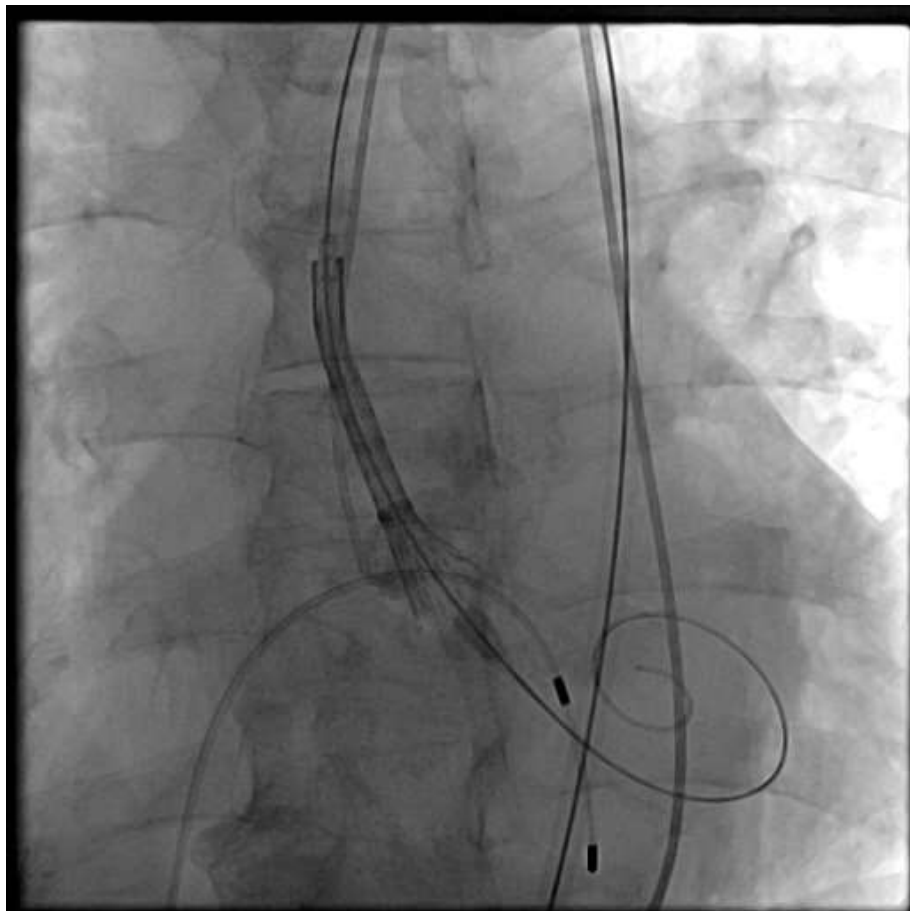
Post-procedural MDCT



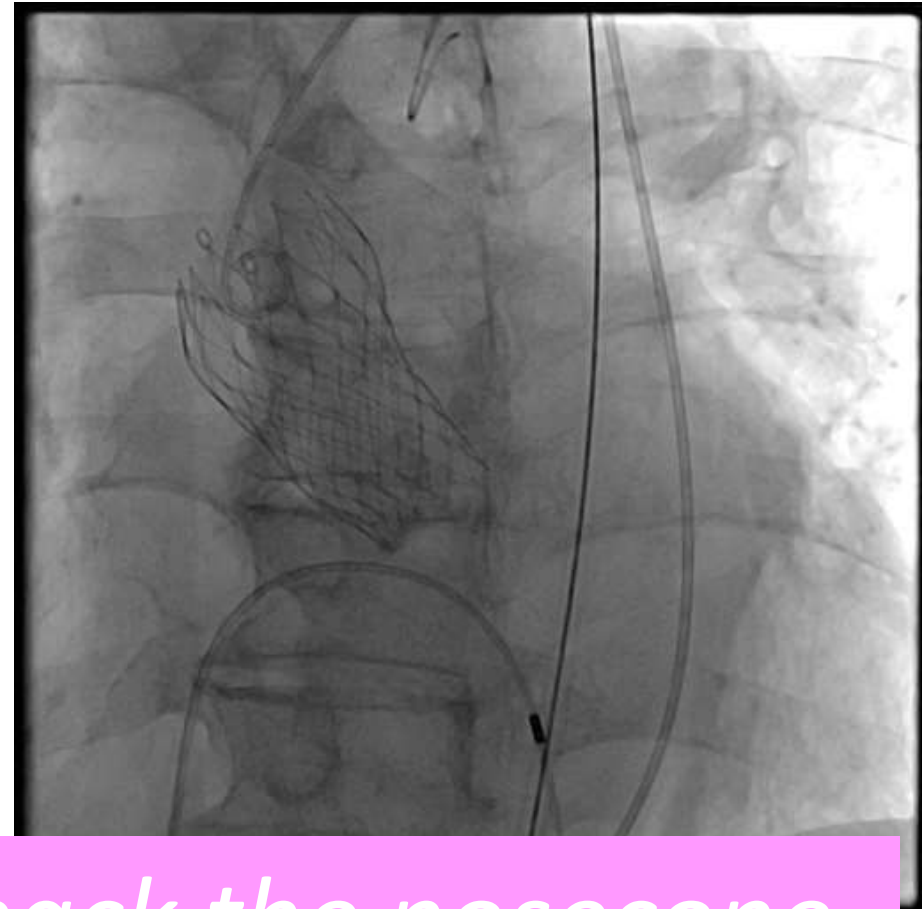
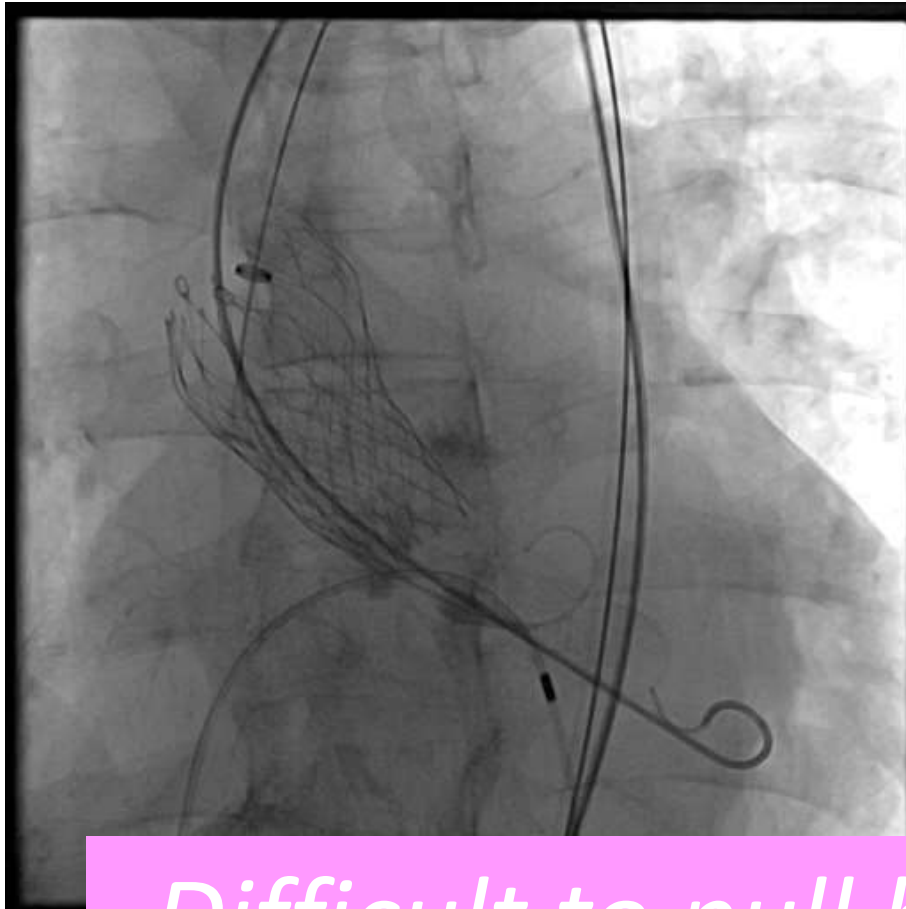
Case 4: bicuspid valve



88yo Male, bicuspid

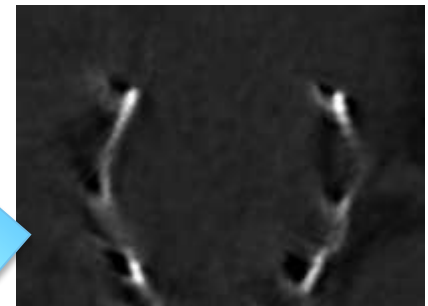
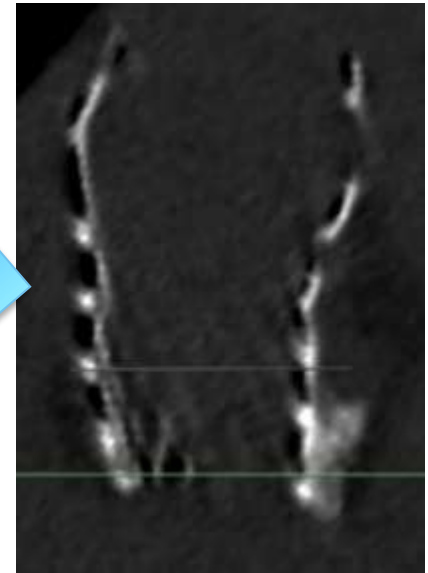
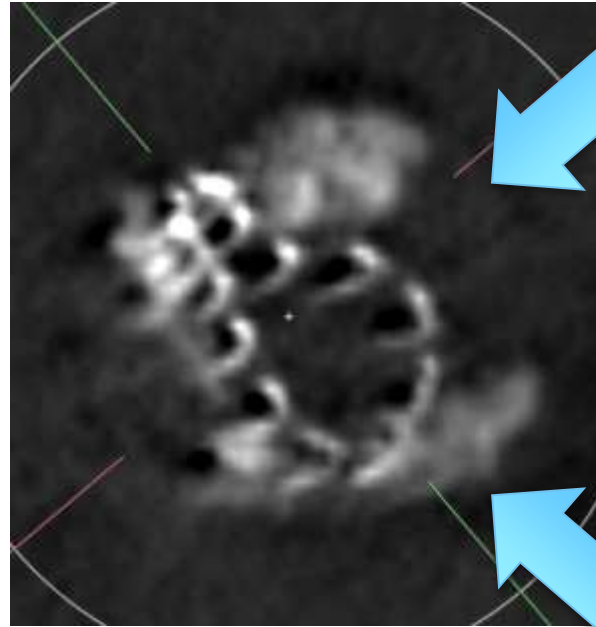
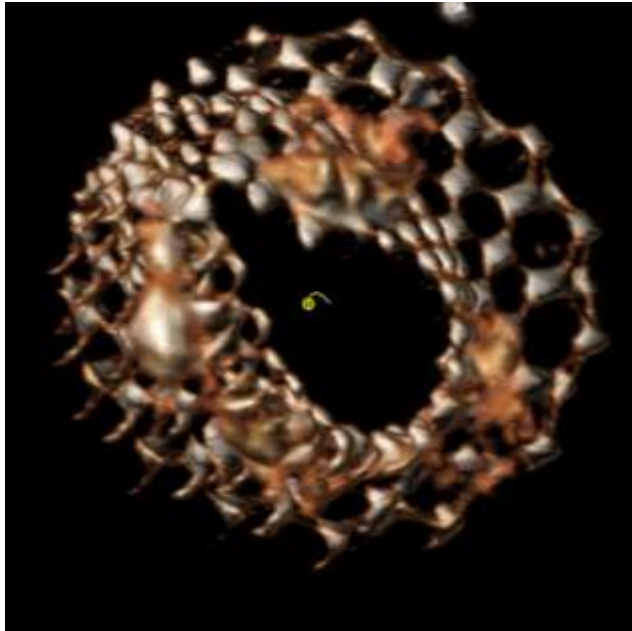


Jailed nose-cone



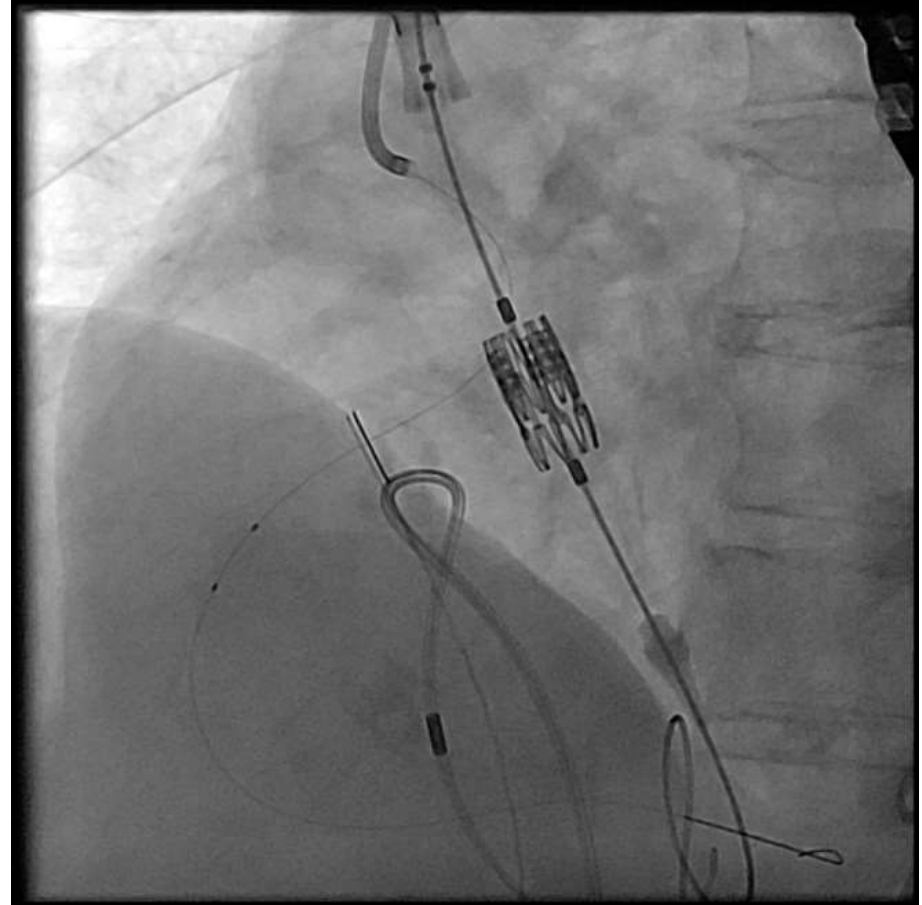
Difficult to pull back the nosecone

Narrowing of inflow of the valve

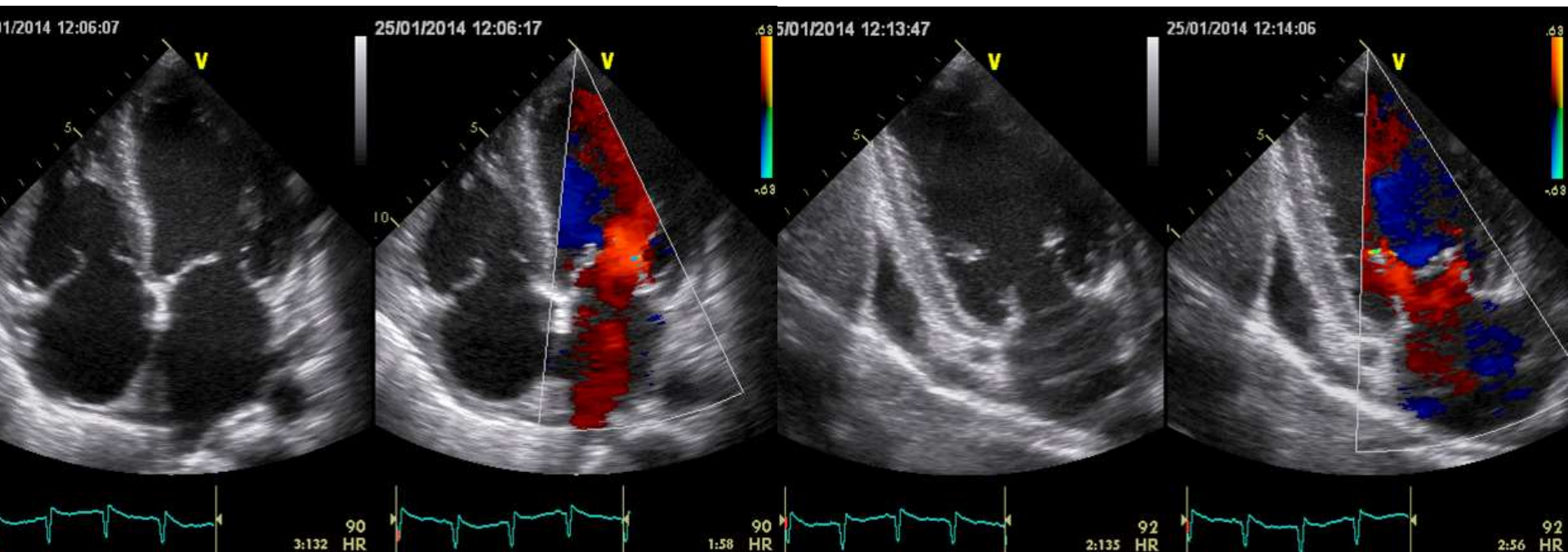


We should have done pre-dilatation

RCA protection



70 yo female, AS + MR



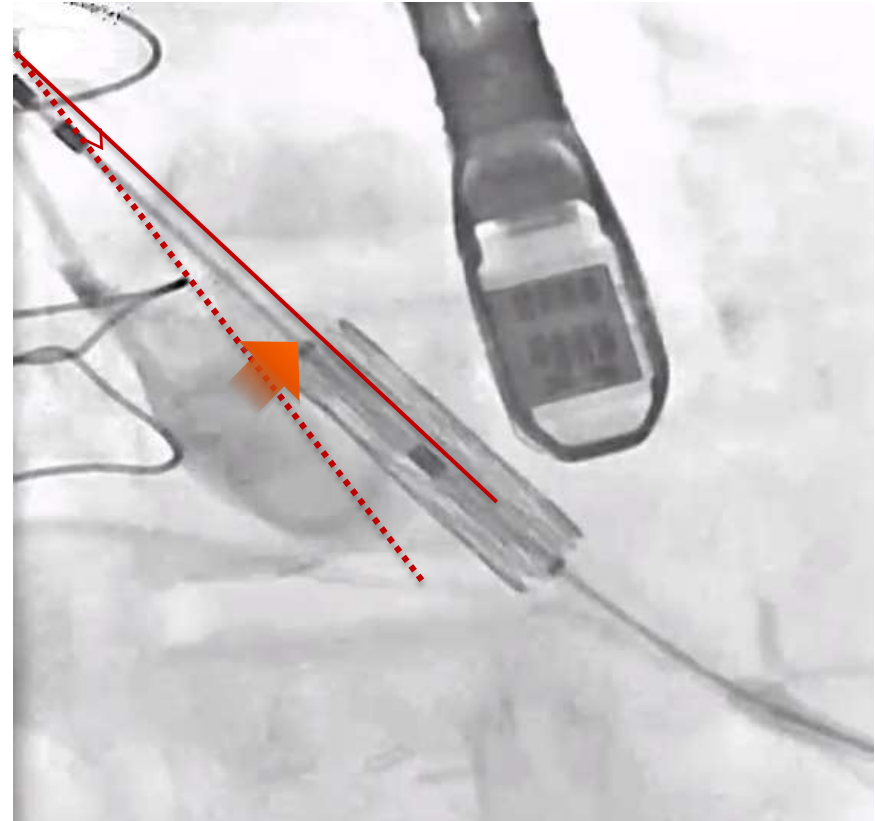
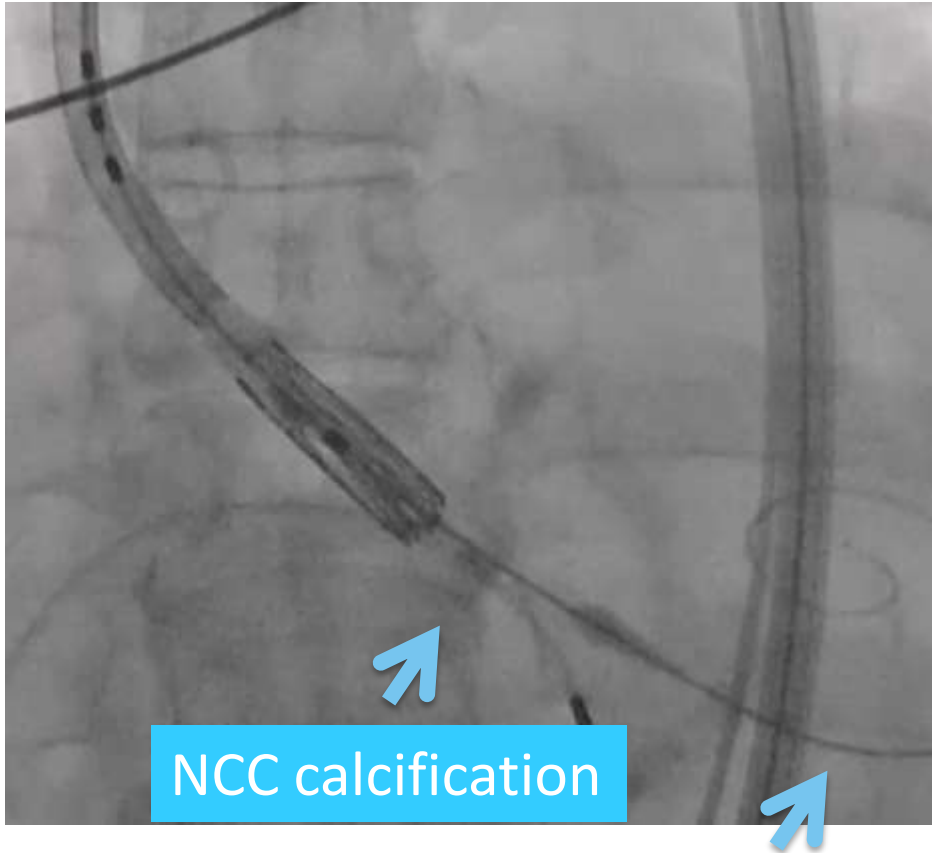
- Severe MR, high PG...

TF-TAVI, 23 mm Sapien XT

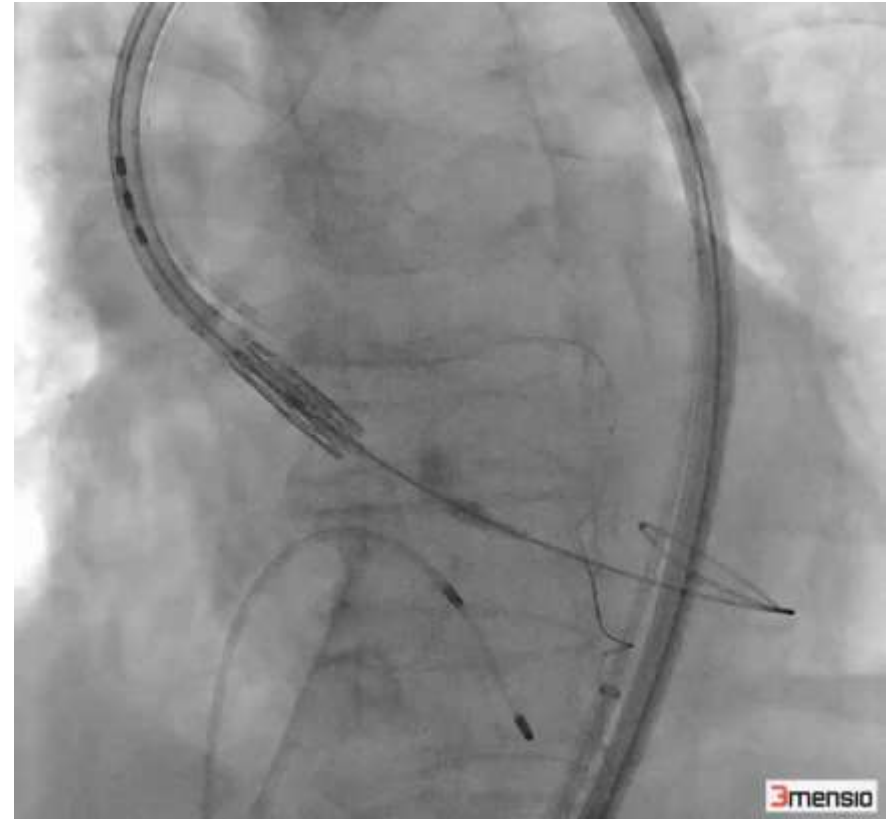
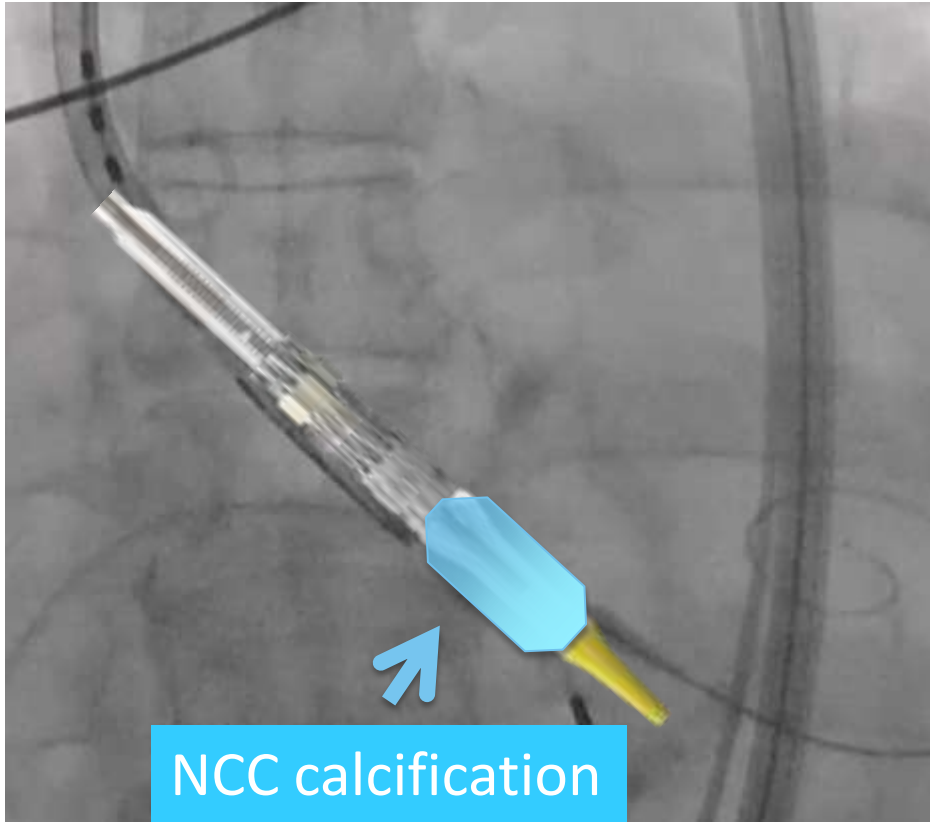
Avoid hemodynamic collapse

(Keio #20)

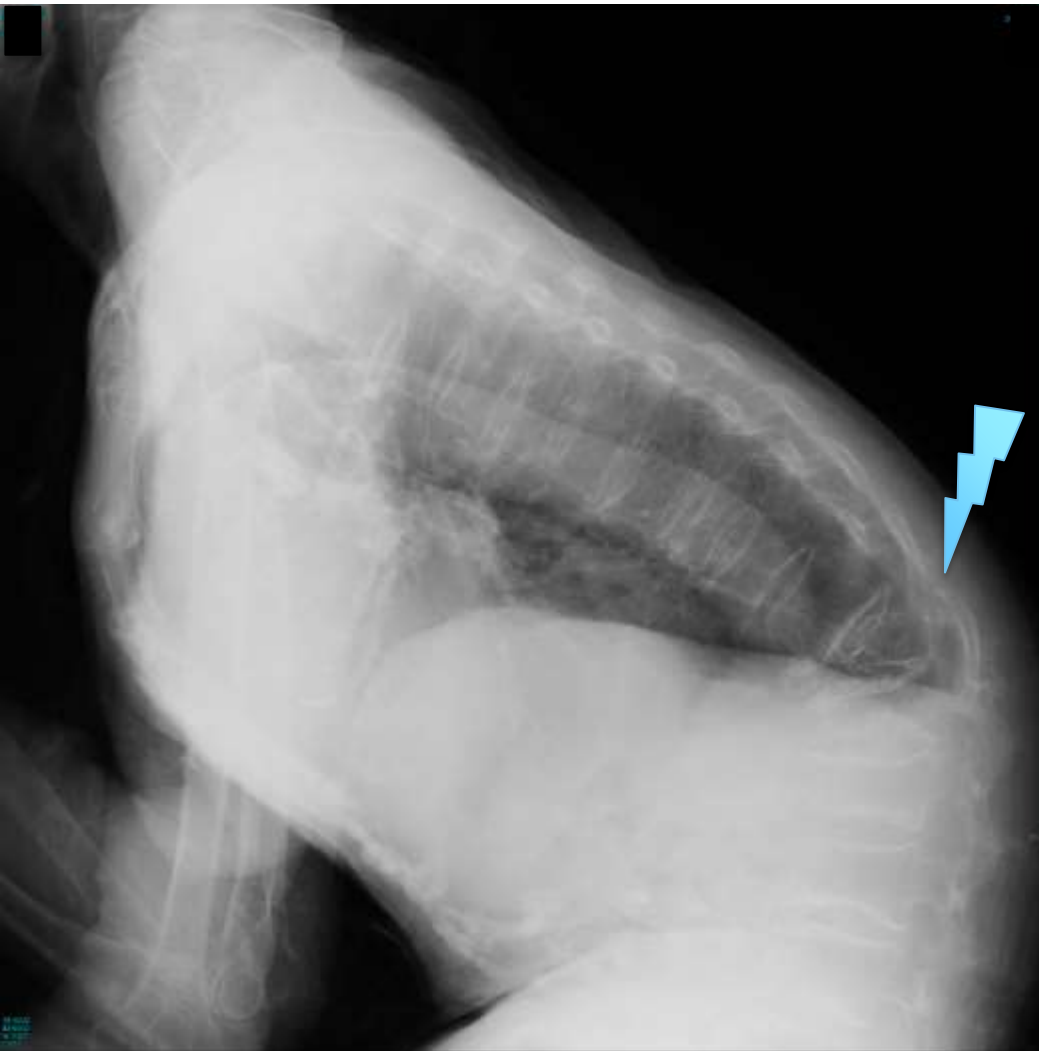
Technical tips and tricks



Technical tips and tricks

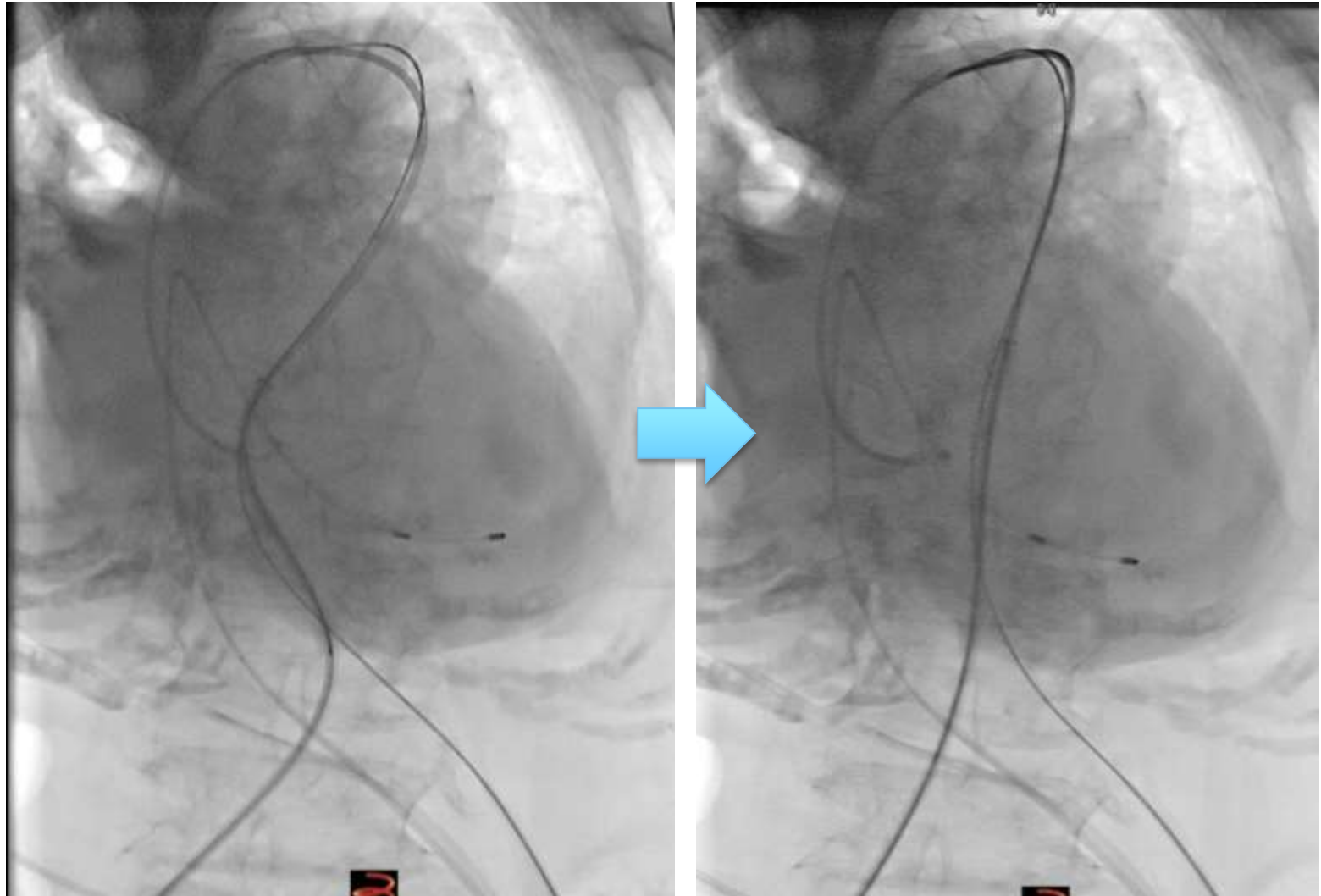


Severe kyphosis



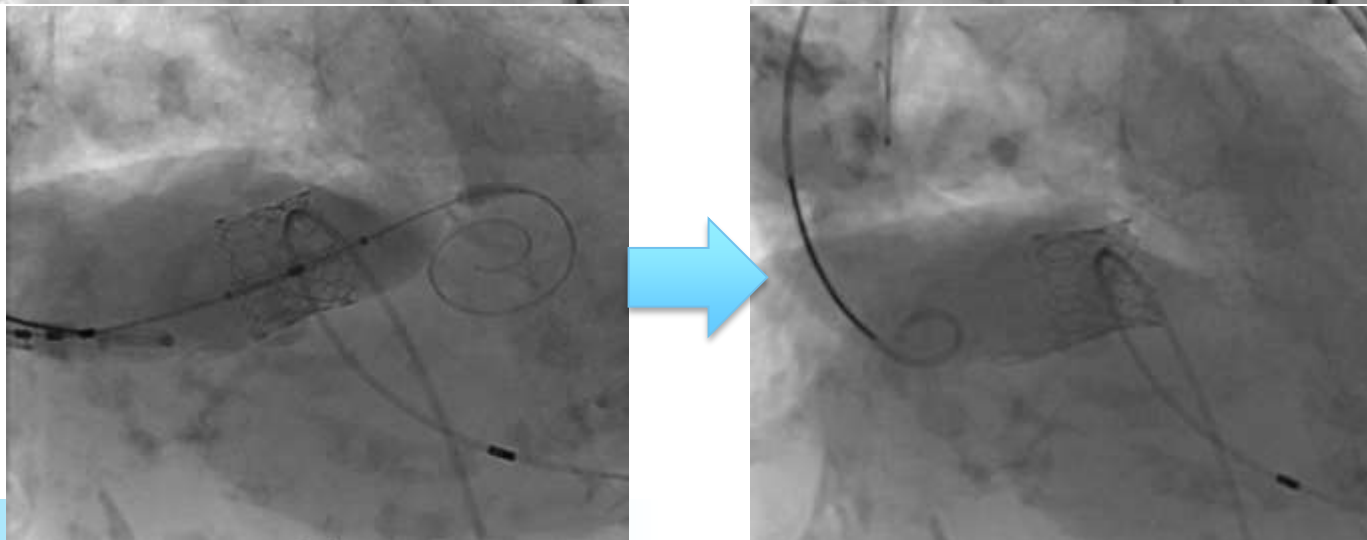
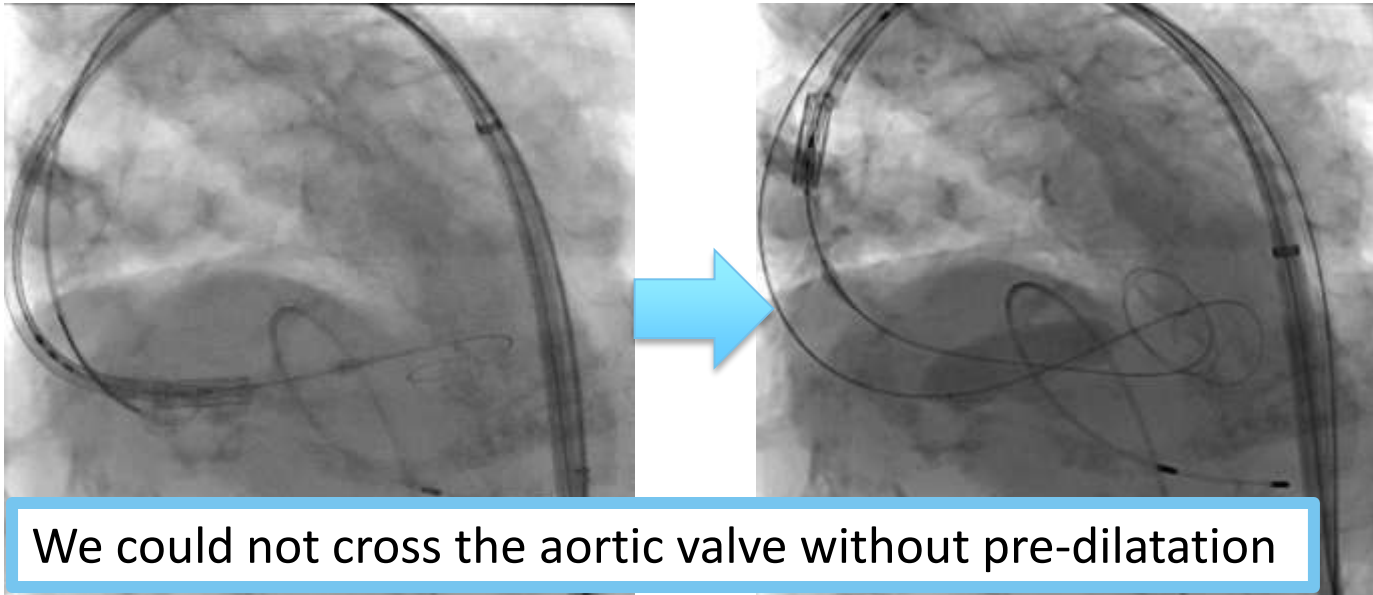
★ Significant bend of the aorta

Straightening the aorta with Lunderquist wire



Totally horizontal aortic root

Balloon dilatation via the contralateral access



Conclusions

- Skipping pre-dilatation can be performed in most cases with Sapien 3, but not with Evolut R
- Pre-dilatation should be performed based on appropriate reason, not as routine to simplify of the procedure.