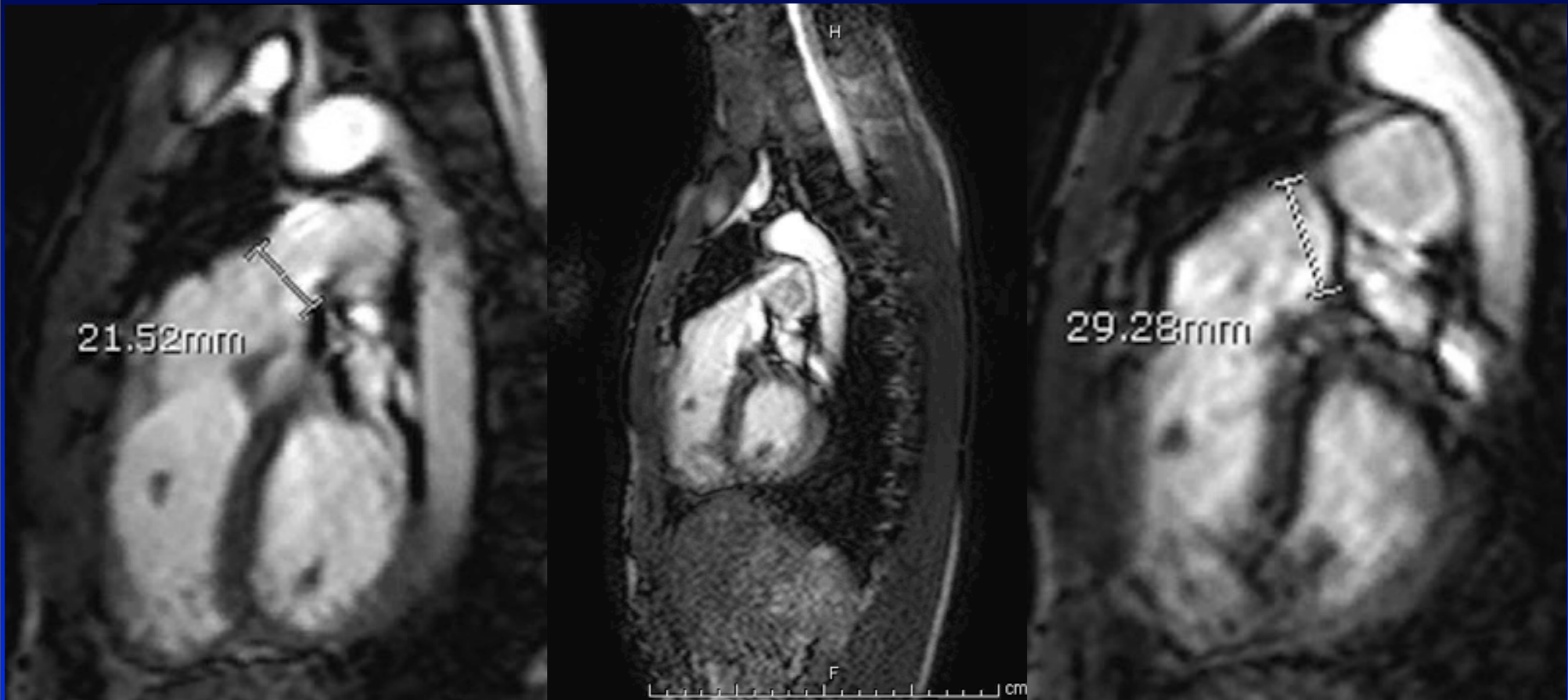


Novel hybrid technique of Melody valve implantation

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- 17 yo TOF s/p transannular patch repair at age 1 mo
- Post-op: cerebral vascular accident (CVA); mild developmental delay
- Now presents with severe pulmonary regurgitation and dilated RV with preserved function
- MRI: RVEDV 194 ml/M₂; RF 50%
- Family prefers to avoid bypass again
- Surgical conference: hybrid approach to repair (off bypass)

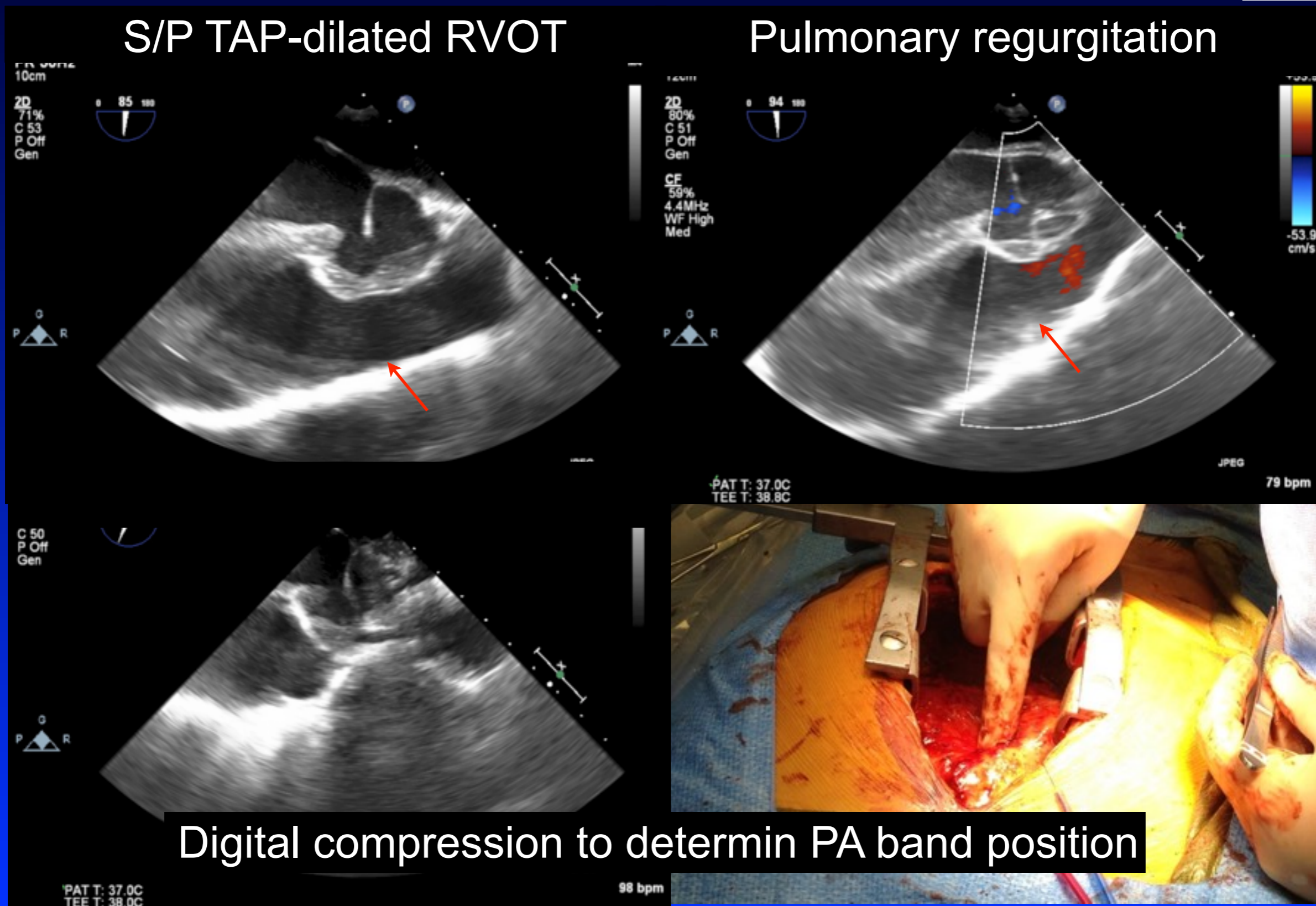
TOF, S/P transannular patch with PI and dilated RVOT



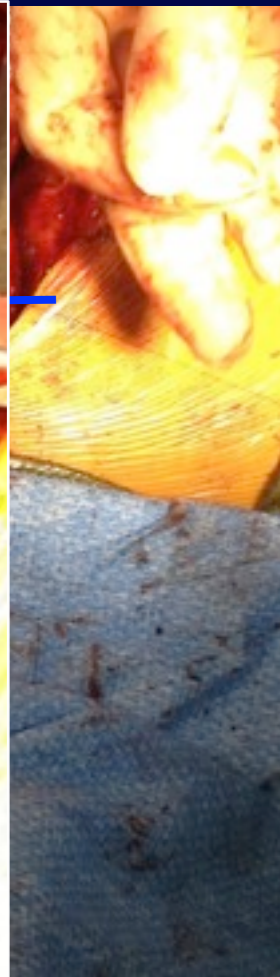
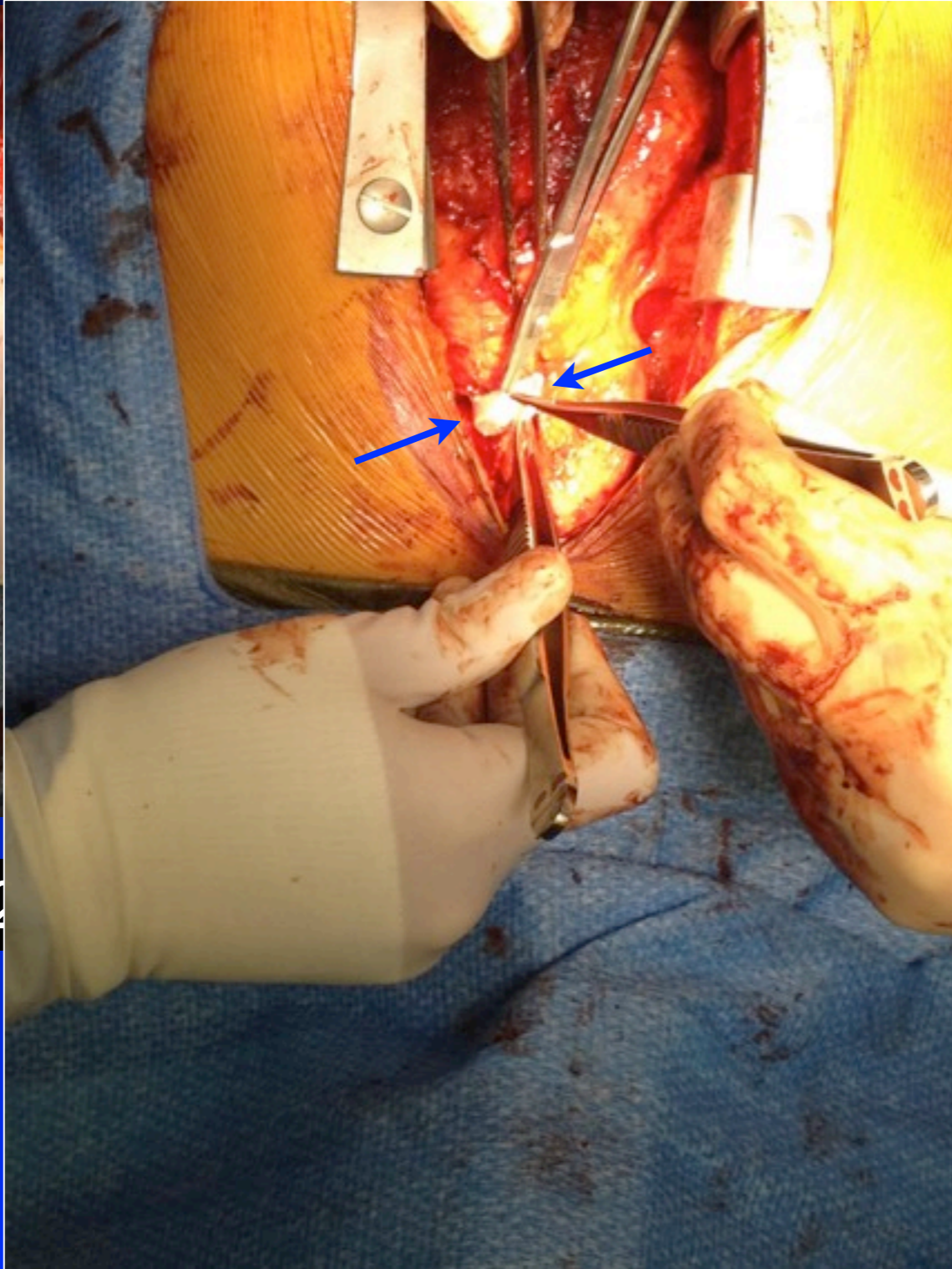
Diastole

Systole

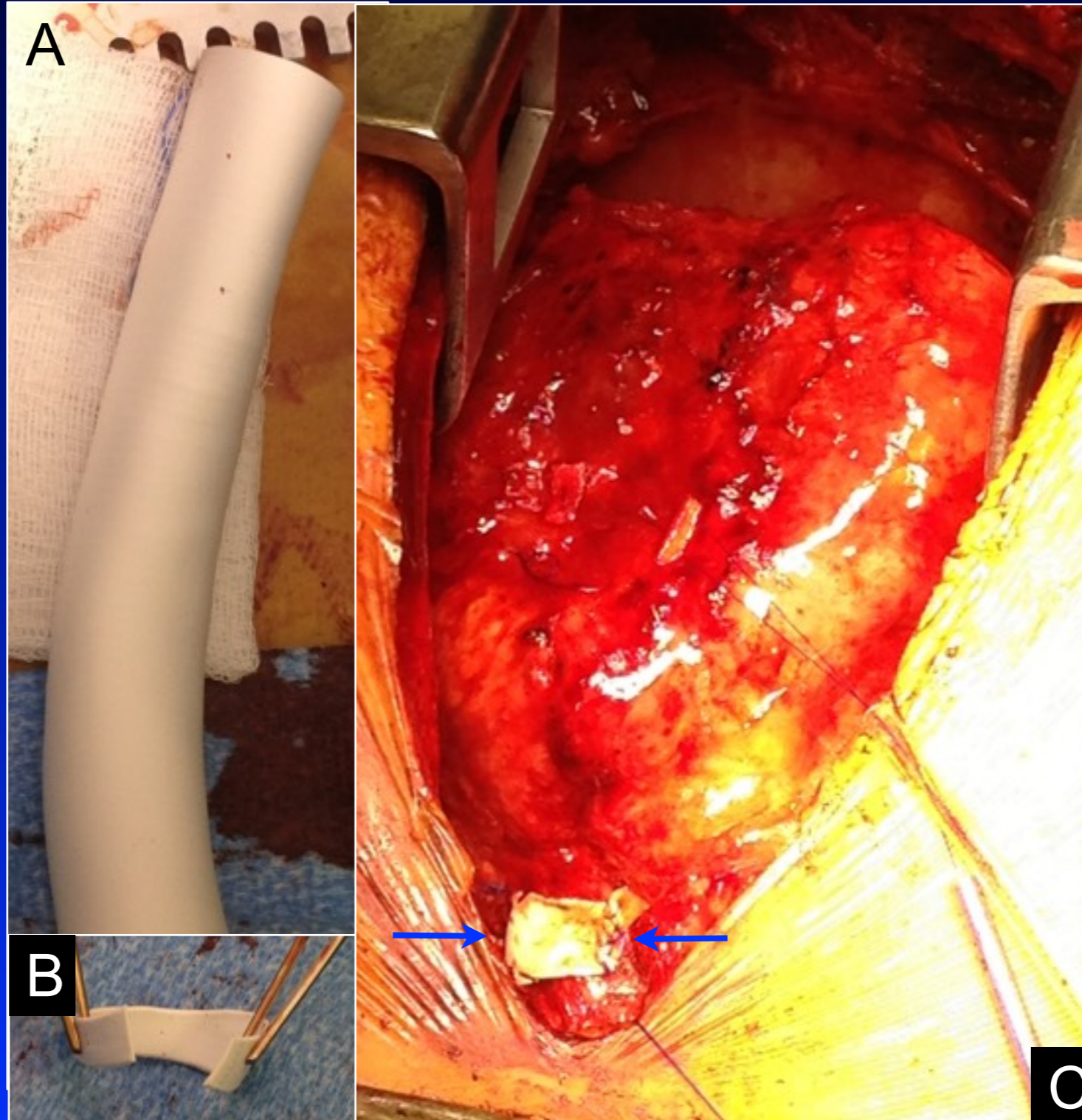
Hybrid Melody implant: PA band to anchor Melody valve



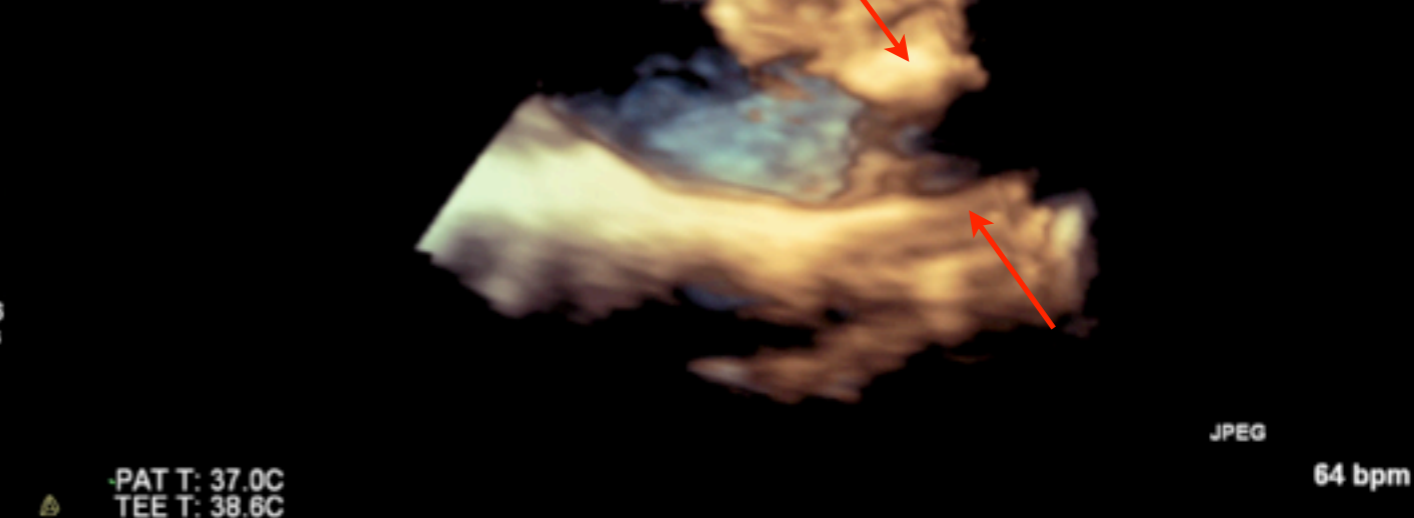
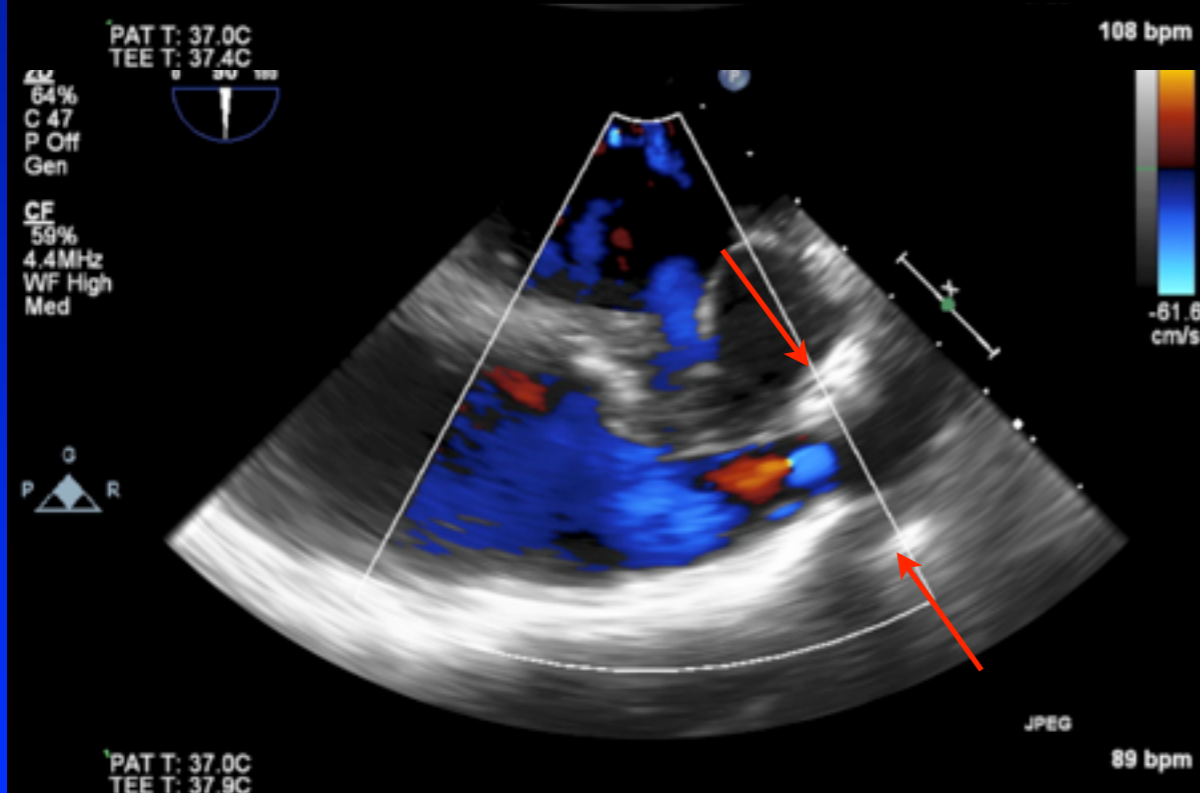
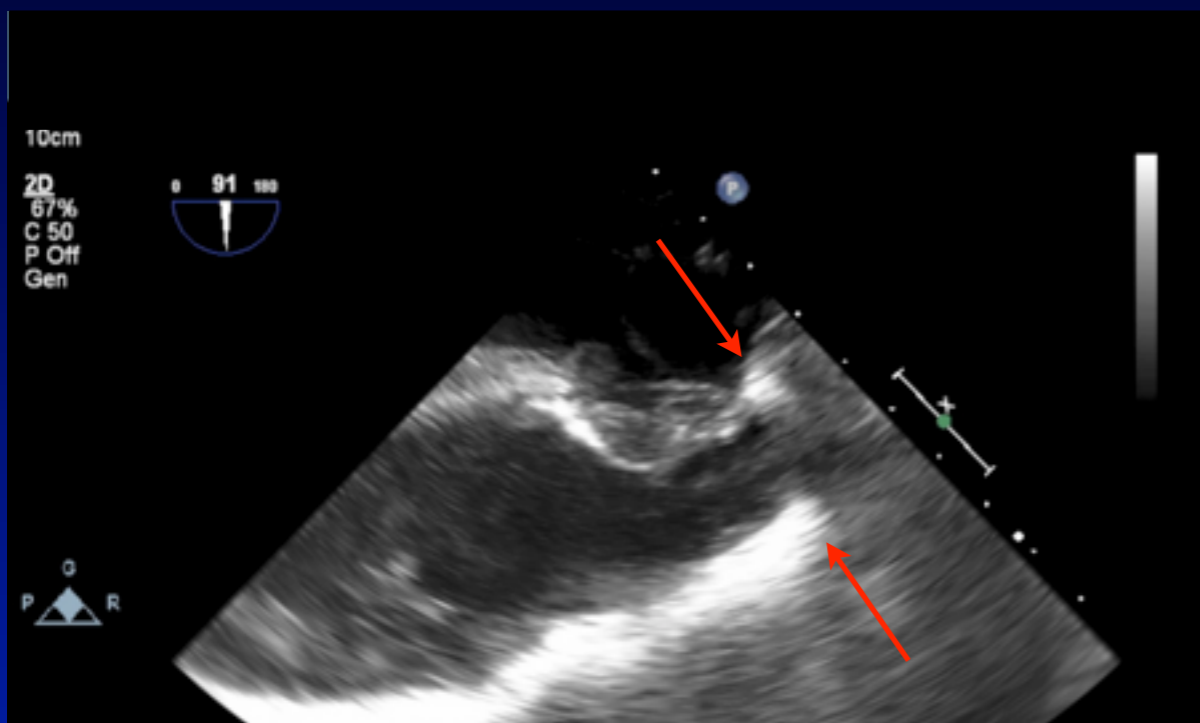
Preparing the MPA band



d MPA
(LCA)



S/P MPA band

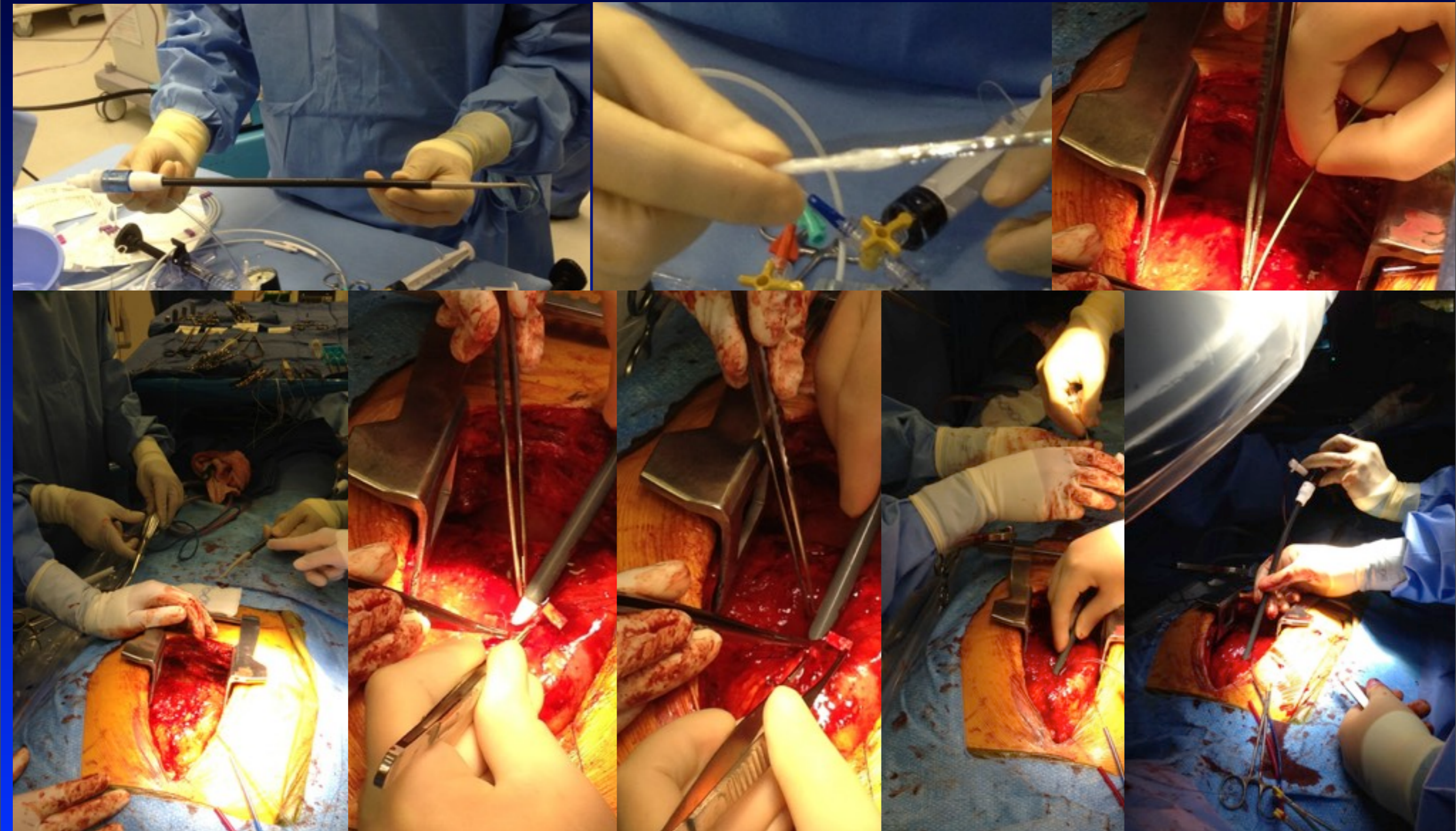


3D echo

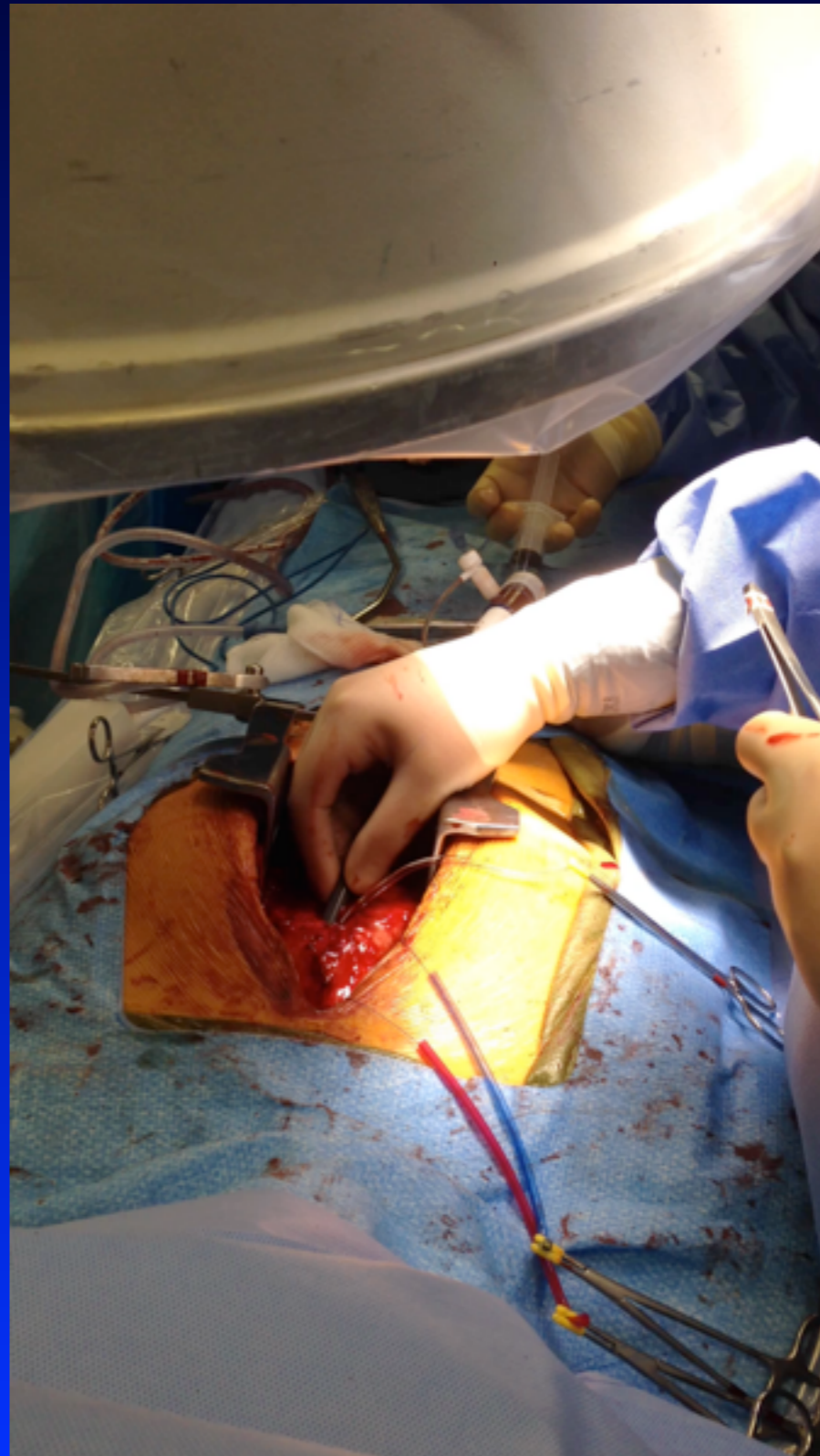
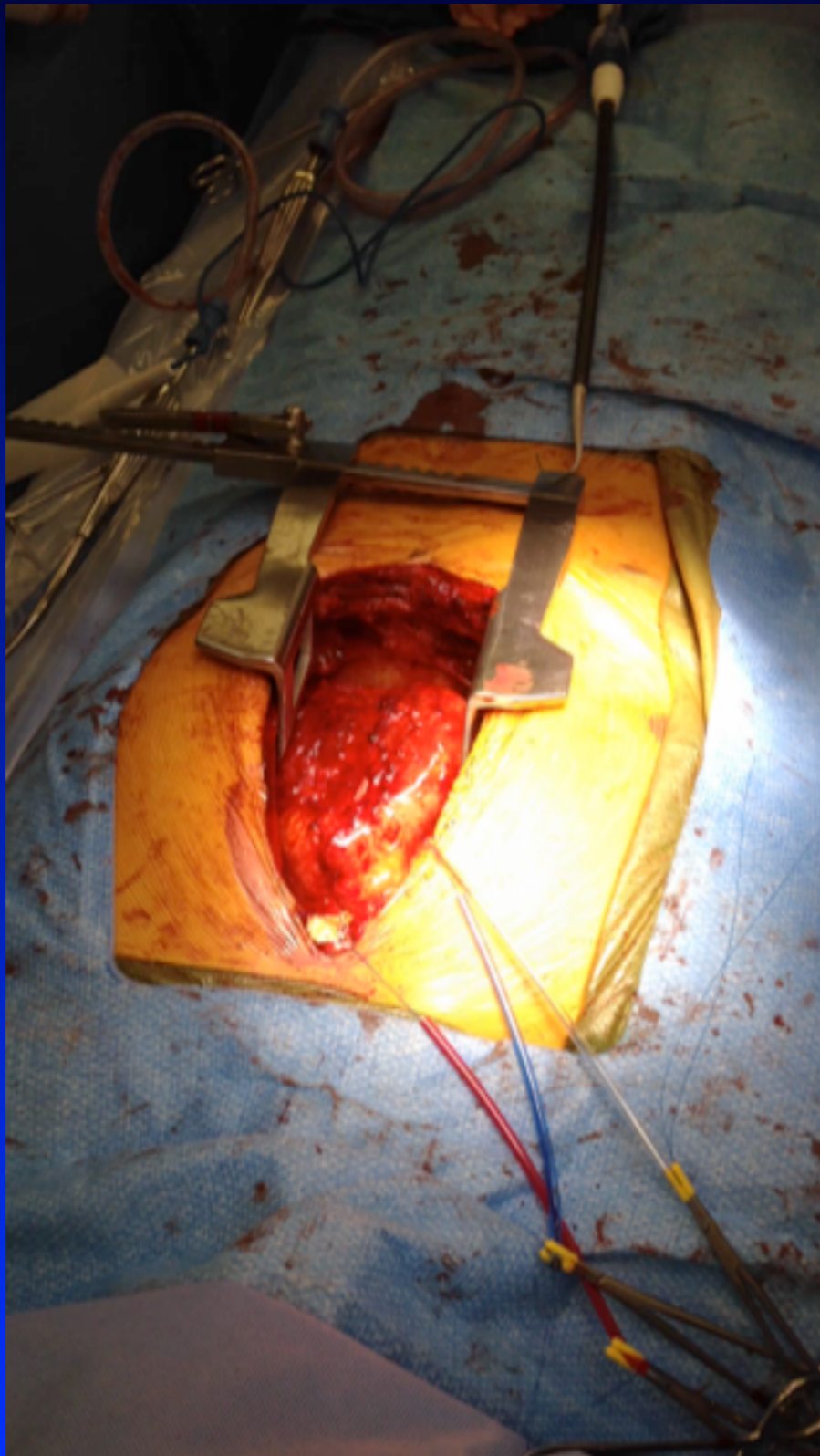
Surgical and interventional teams working side by side



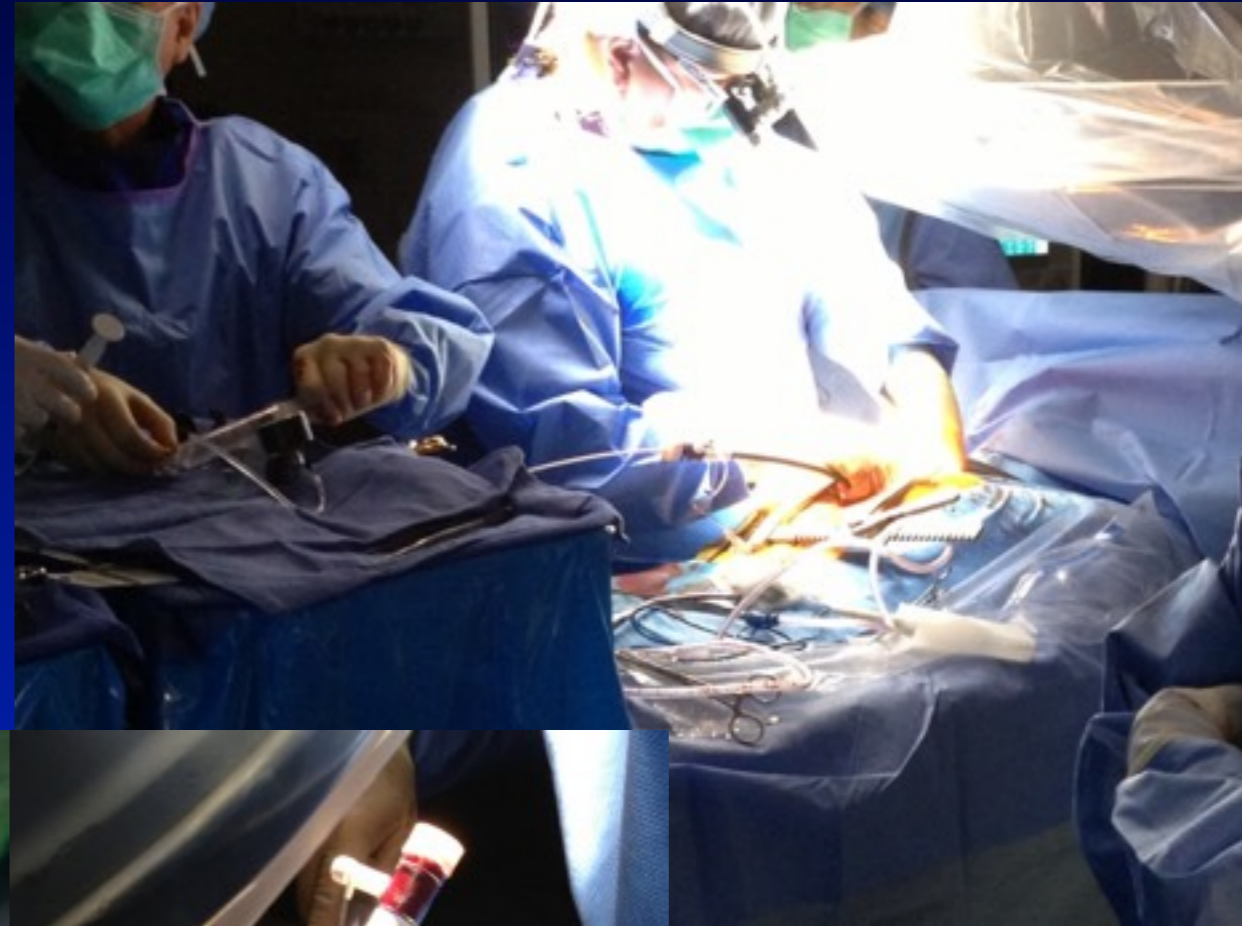
Preparing 22 fr sheath and 4110 Palmaz stent on 24 mm BIB



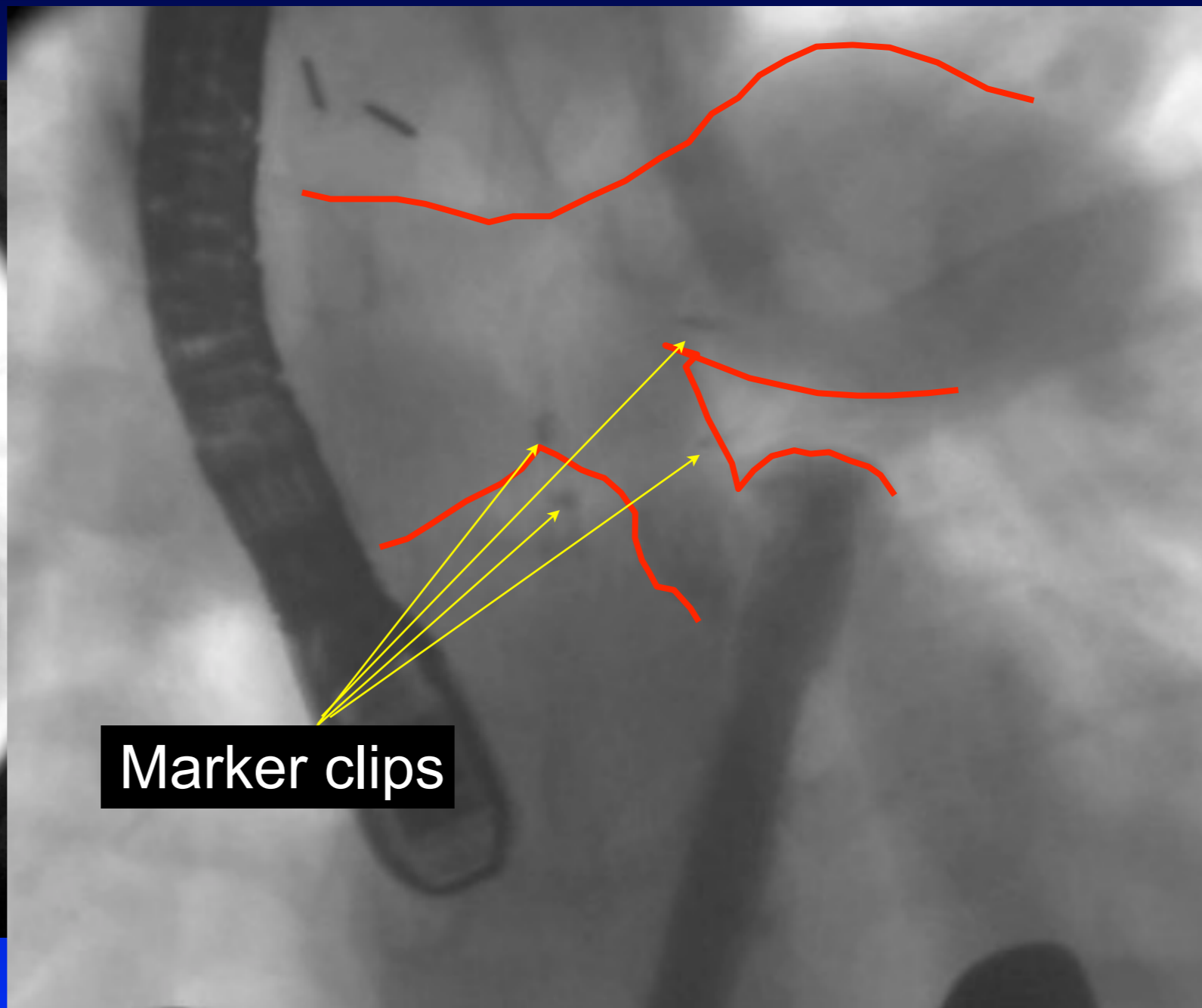
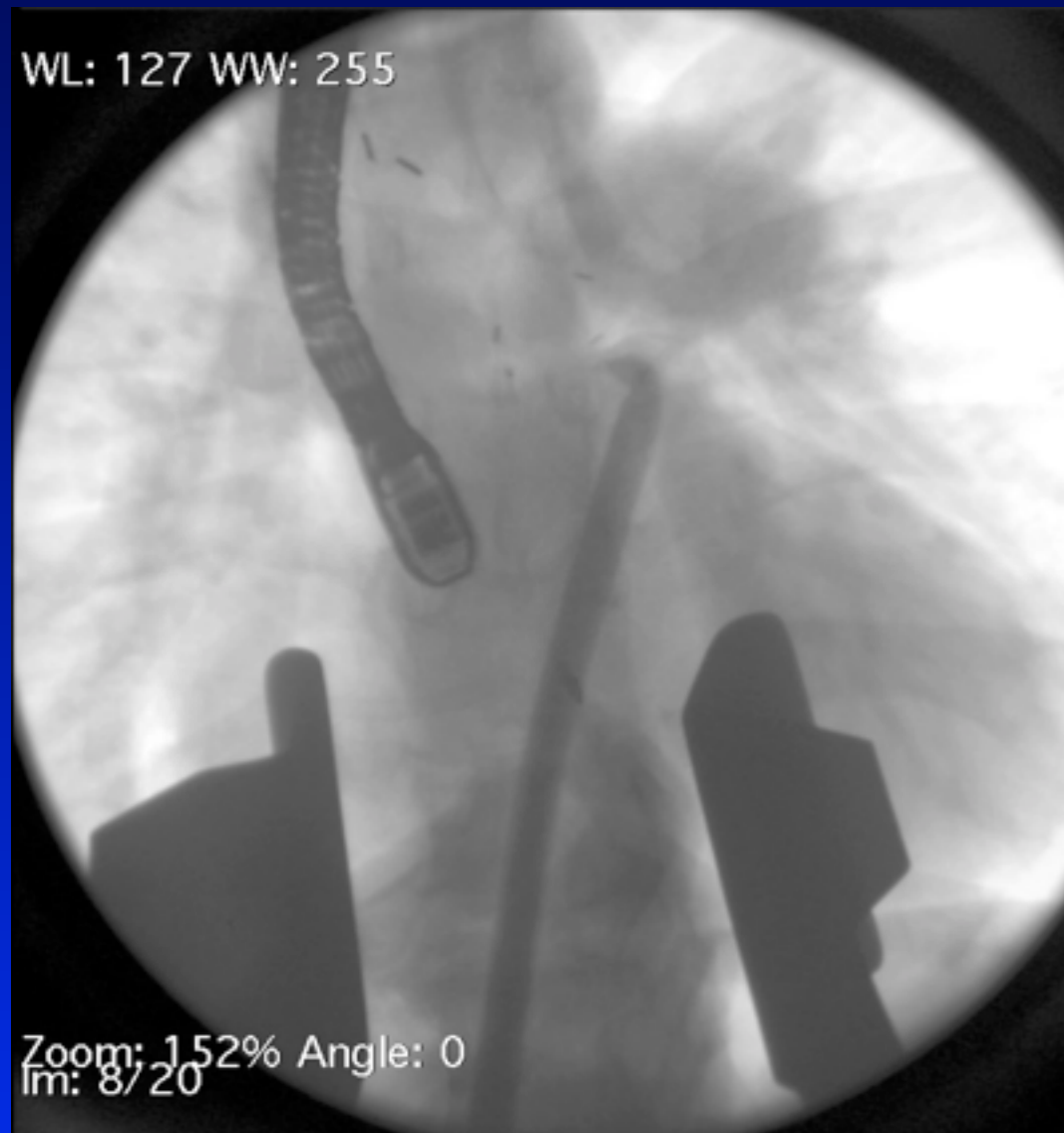
Beating heart / off bypass



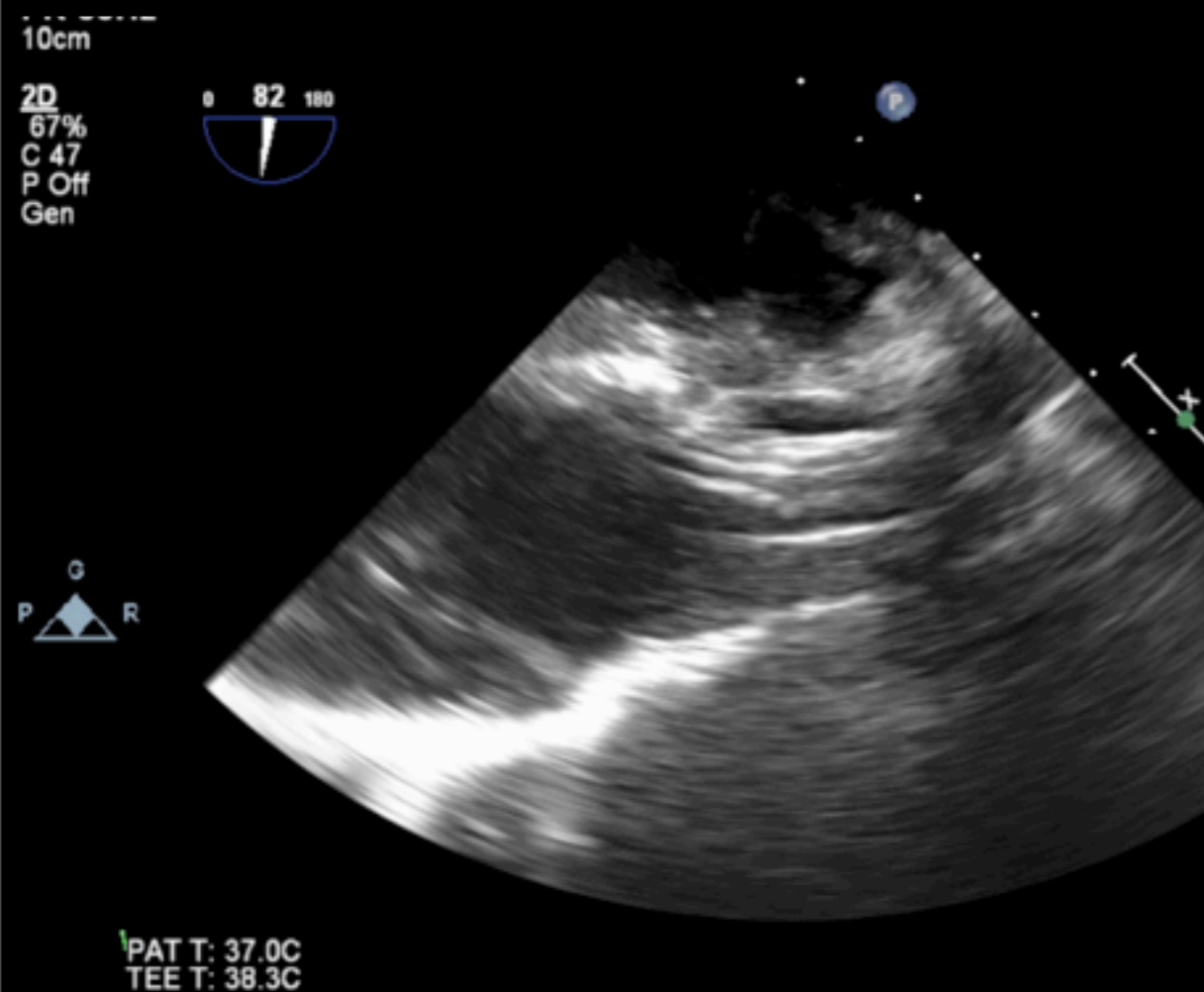
Preparing 22 fr sheath and Palmaz stent on 24 mm BIB



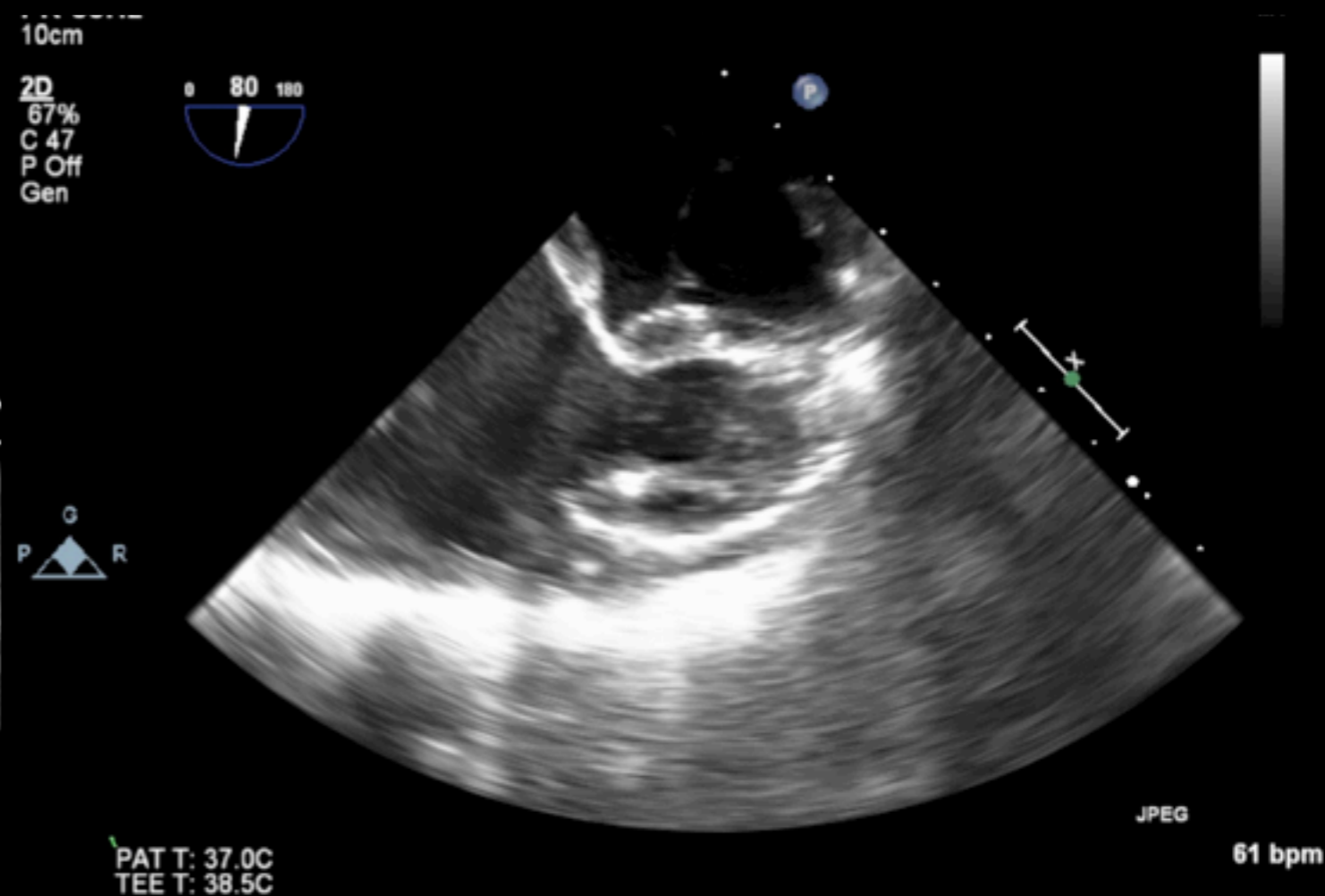
Flouroscopy guidance: 22 Fr sheath in RVOT



Implanting 4010XL stent at banded site

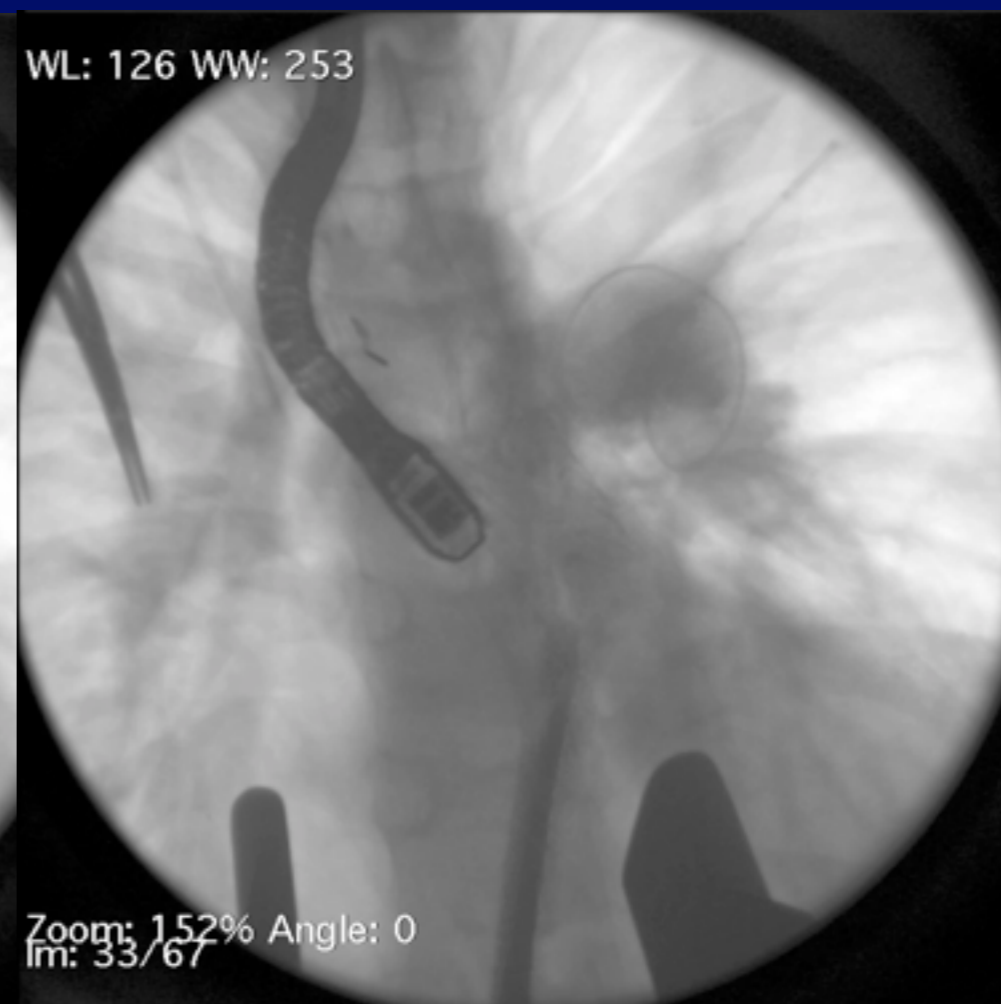
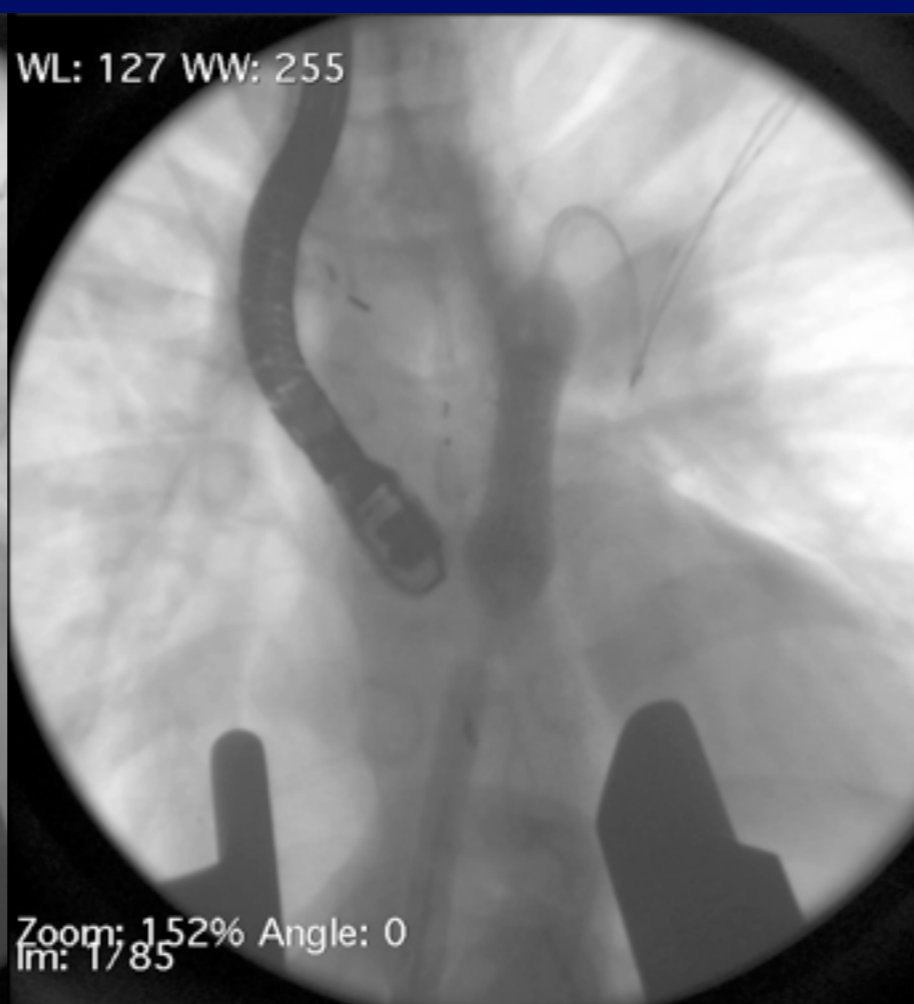
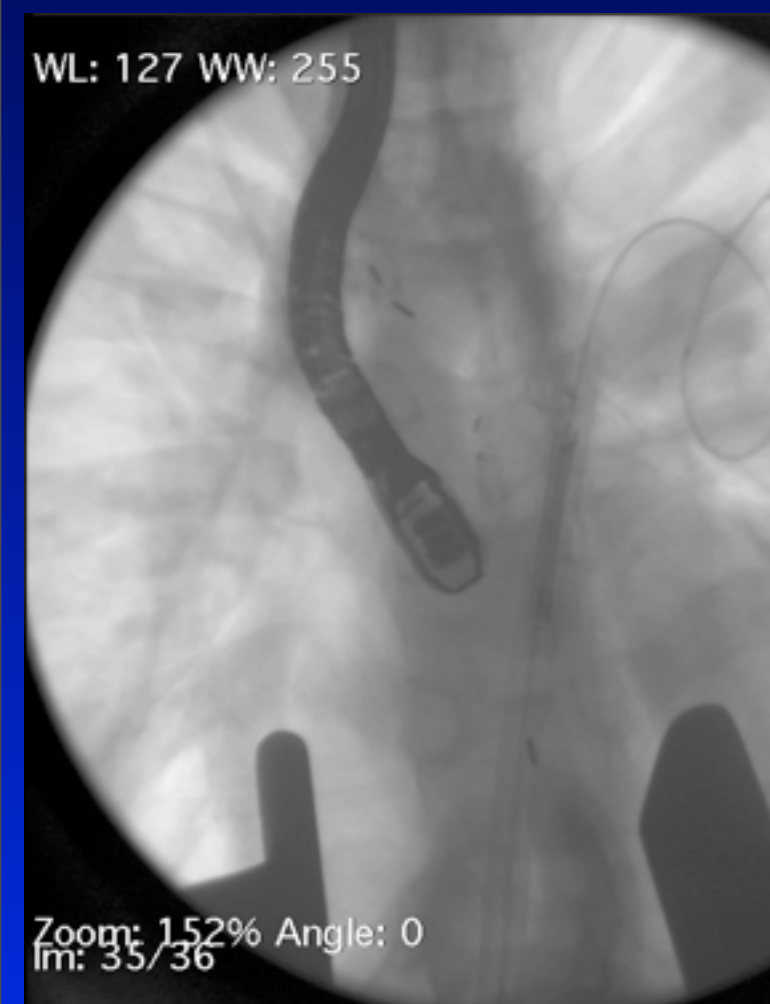


Wire-stent-balloon across PA band



Balloon inflation/stent implantation

Flouroscopy: Implantation of Palmaz 4110 XL stent on 24 mm BIB

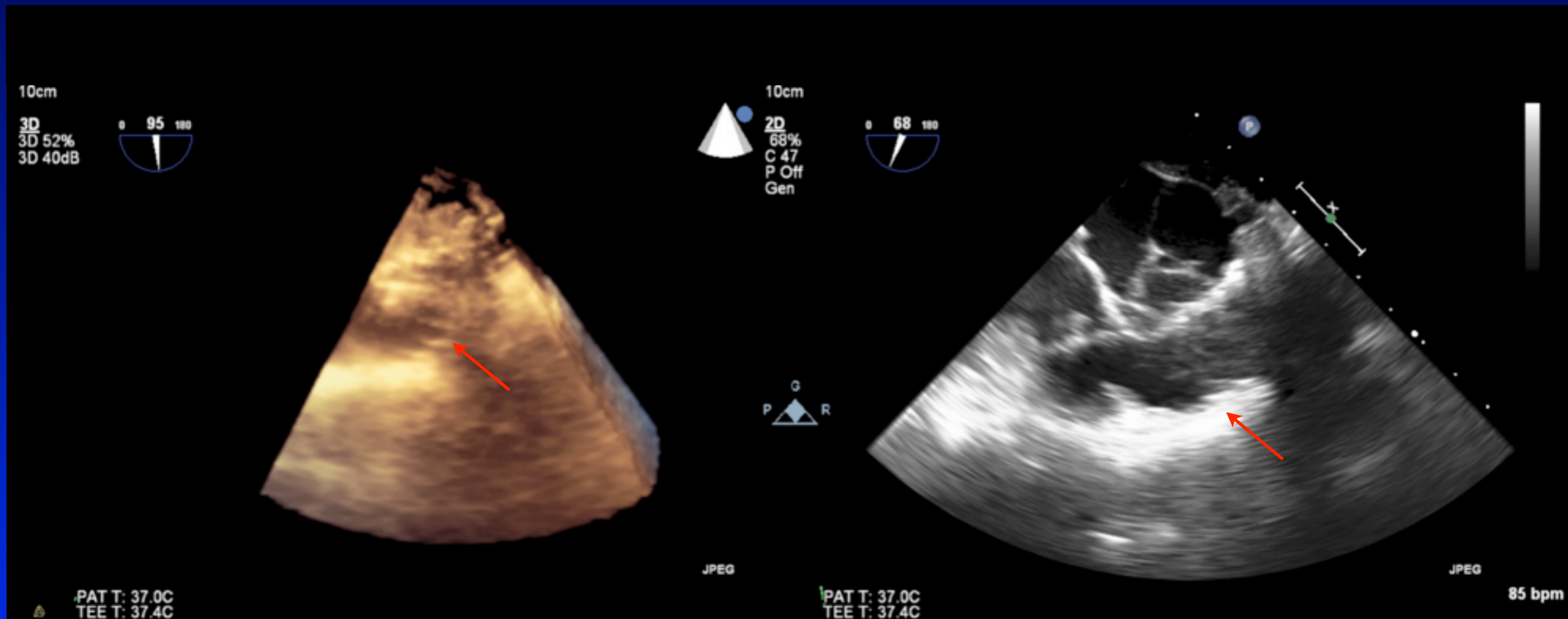


Advancing stent

Implanting stent

Post stent angio

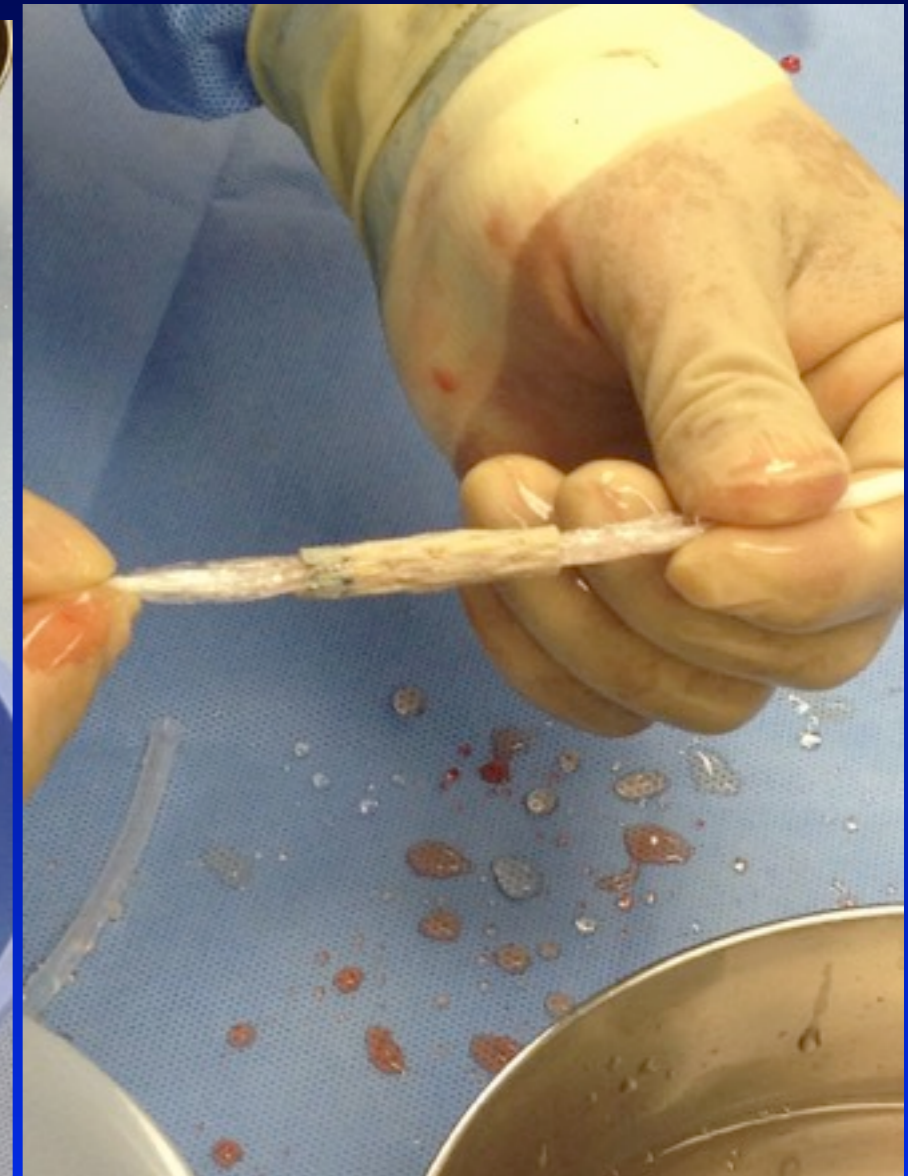
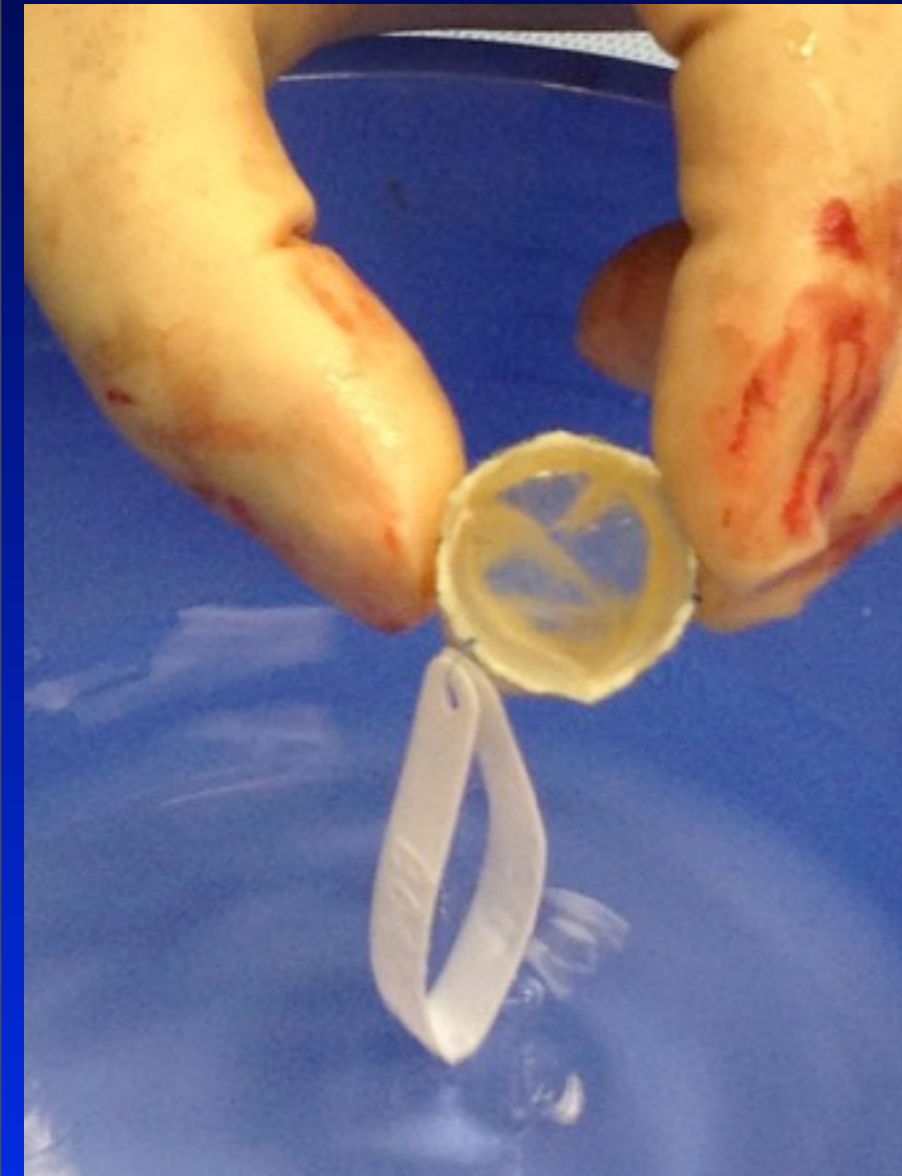
Stent implantation in RVOT



3-D echo

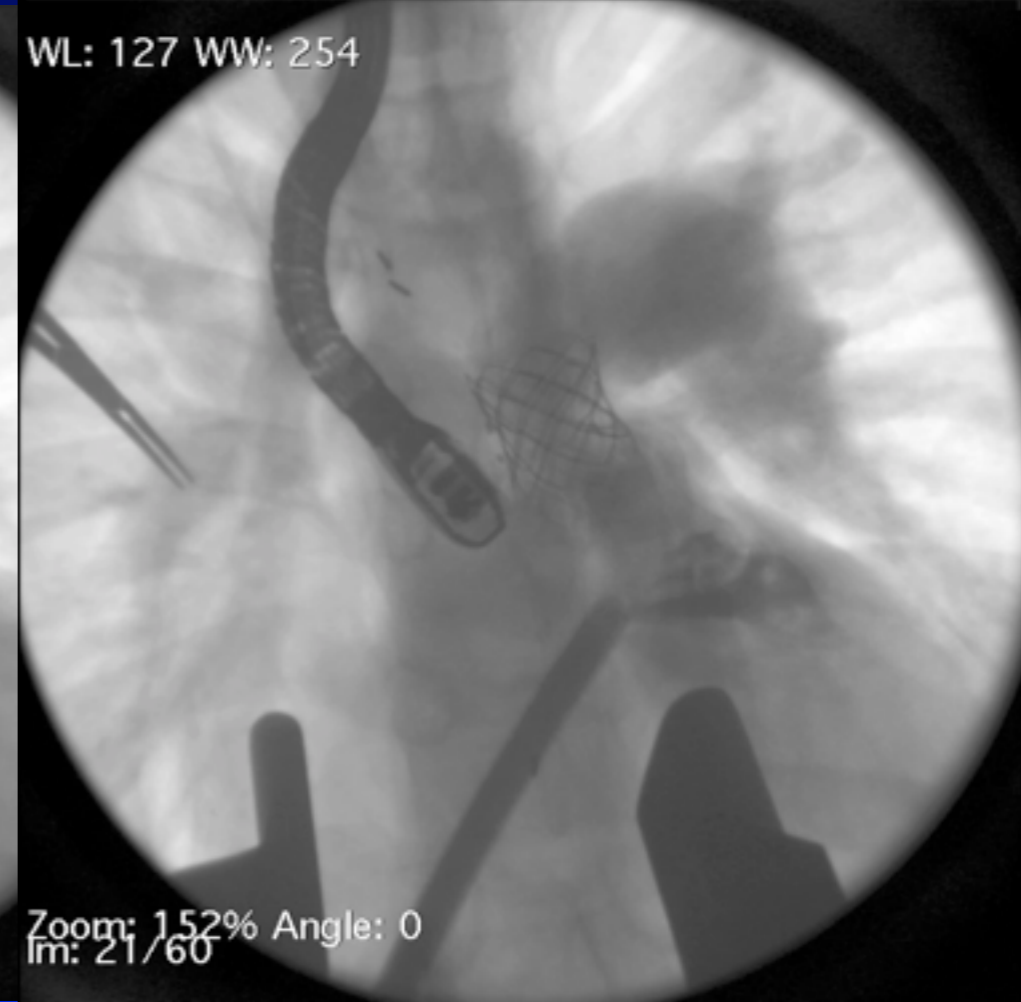
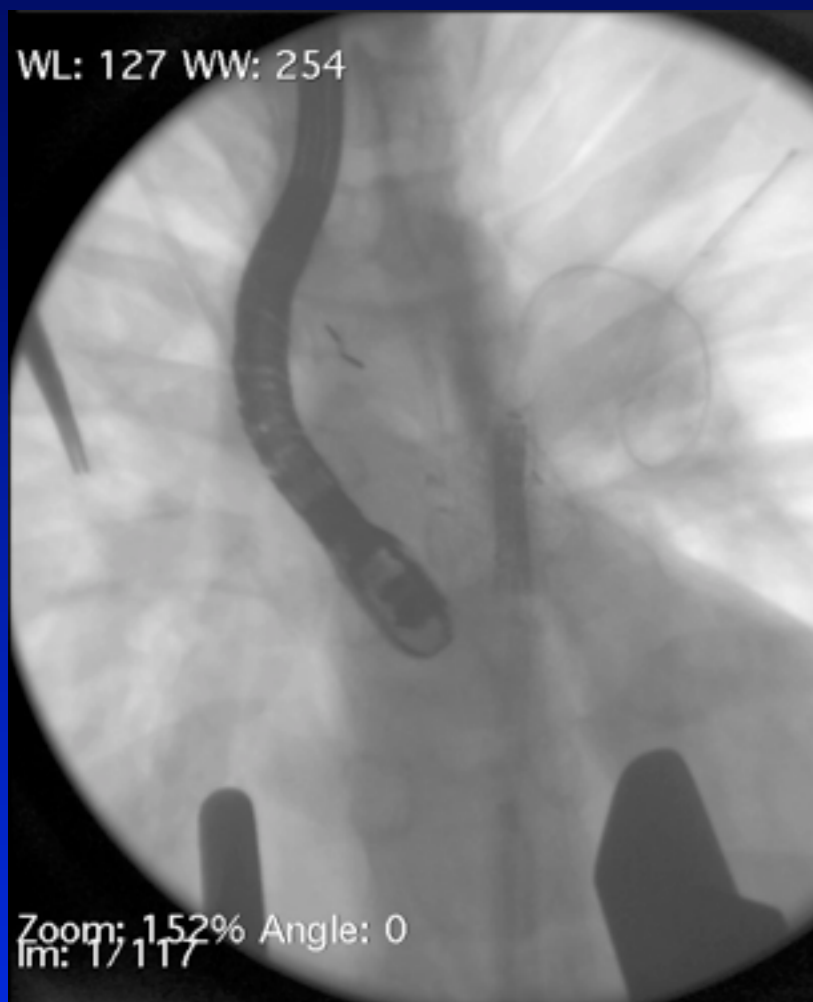
TEE

Melody valve mounted on 24 mm BIB



24 mm BIB

Implantation of Melody valve on 24 mm BIB



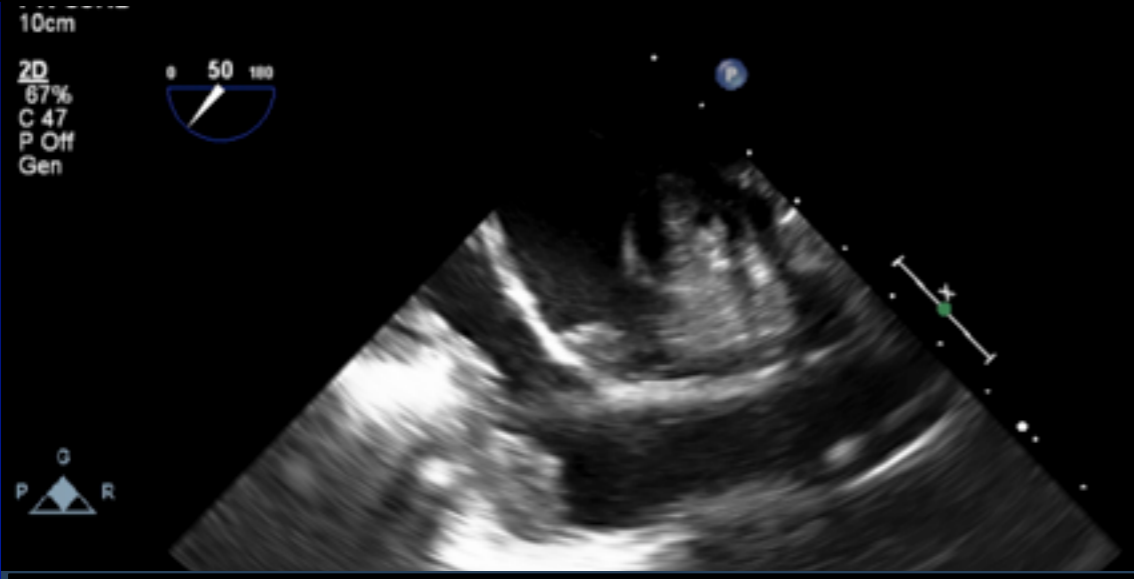
Advancing Melody

Implanting Melody

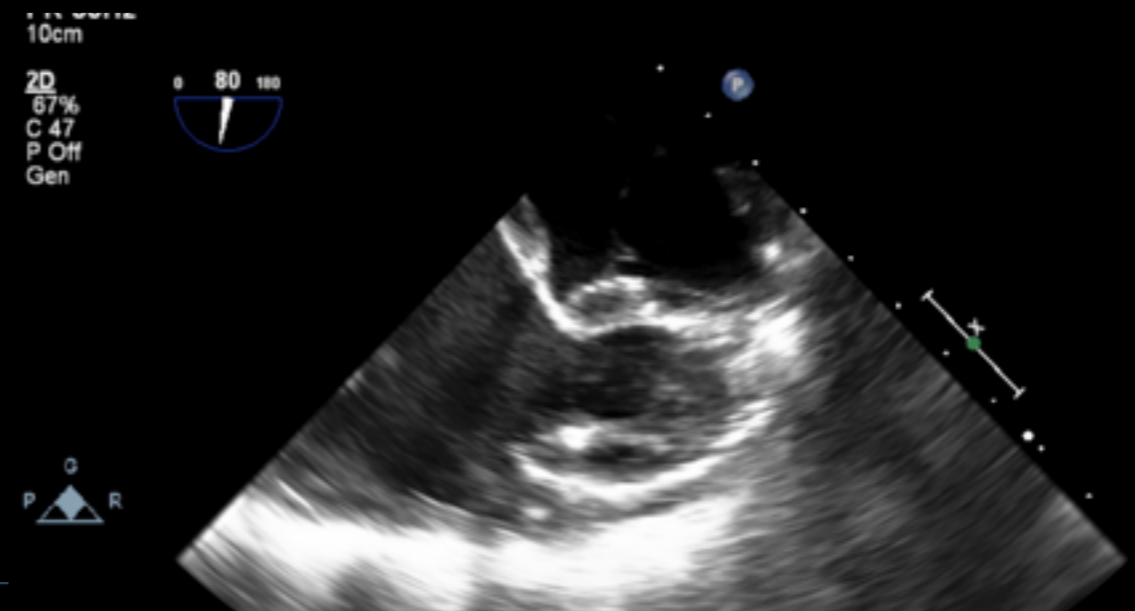
Post Melody angio

Intraop TEE

Balloon and Melody in position



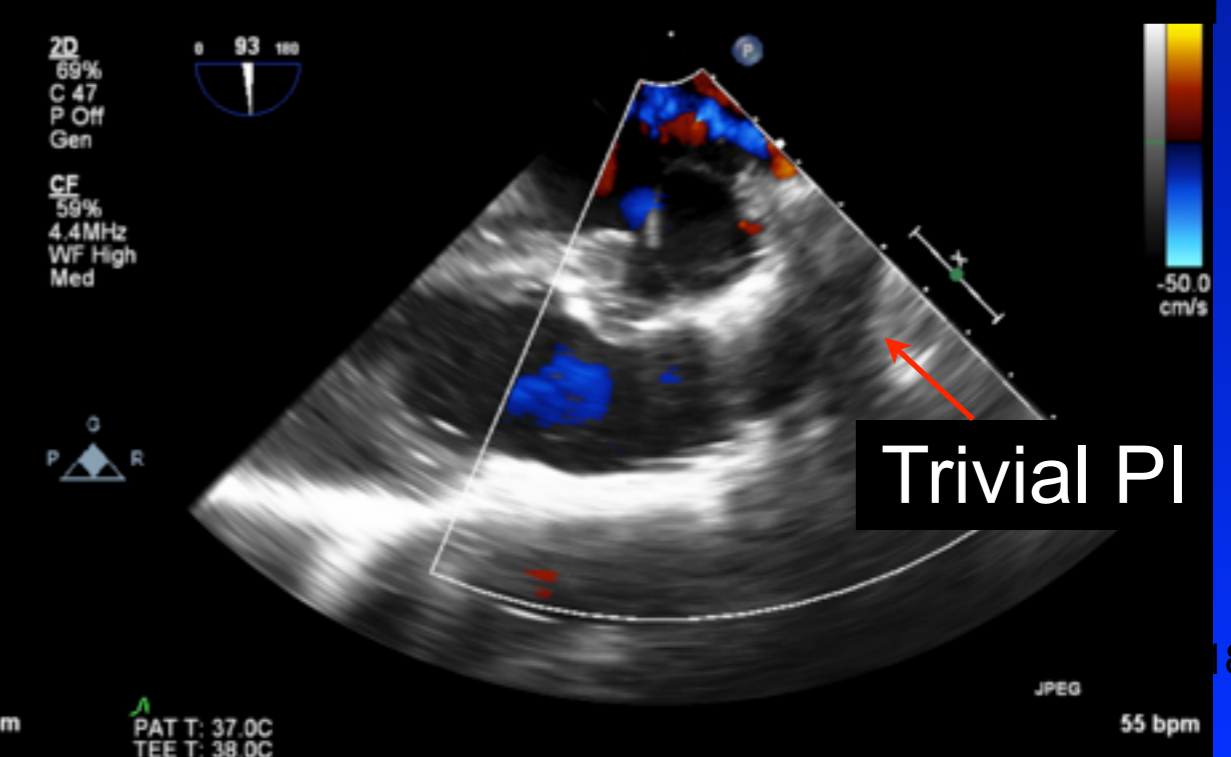
Implanting Melody



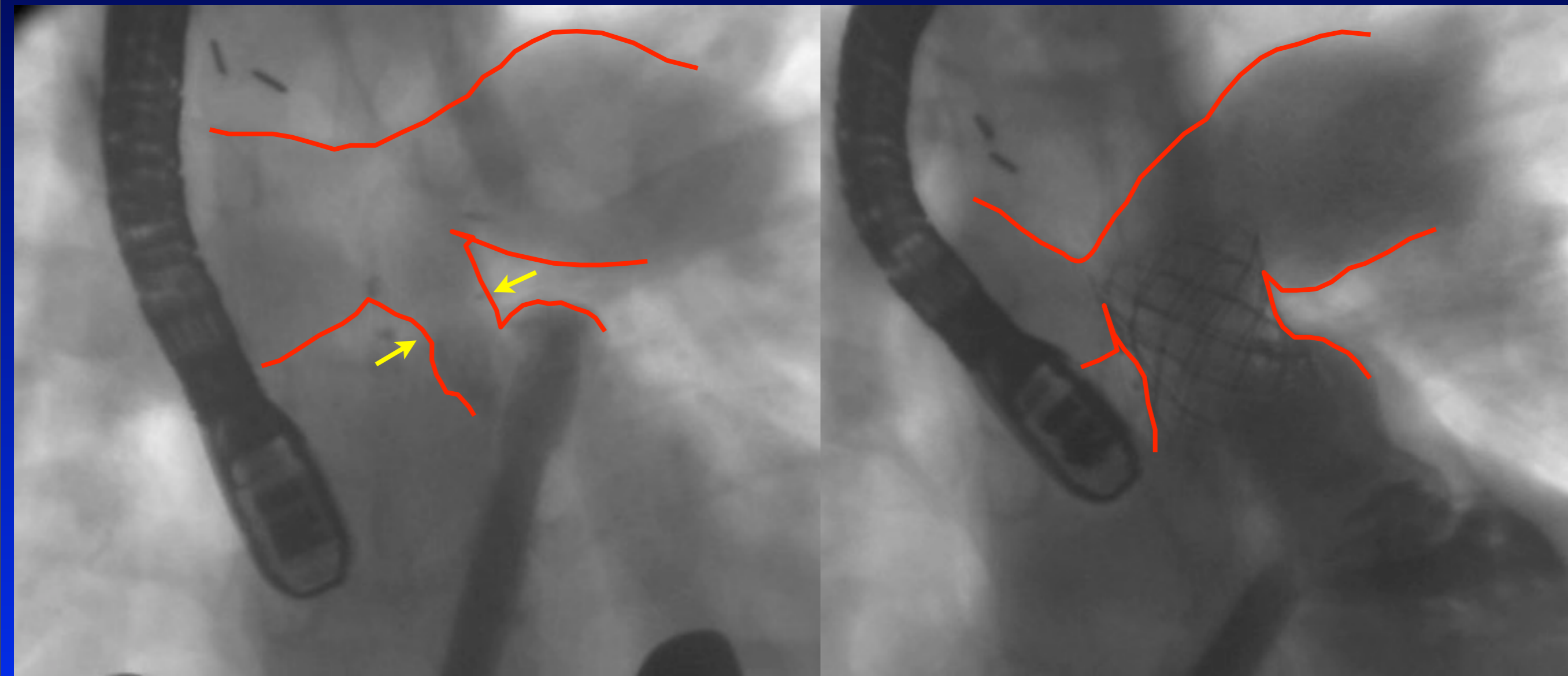
Melody implanted



Post TEE

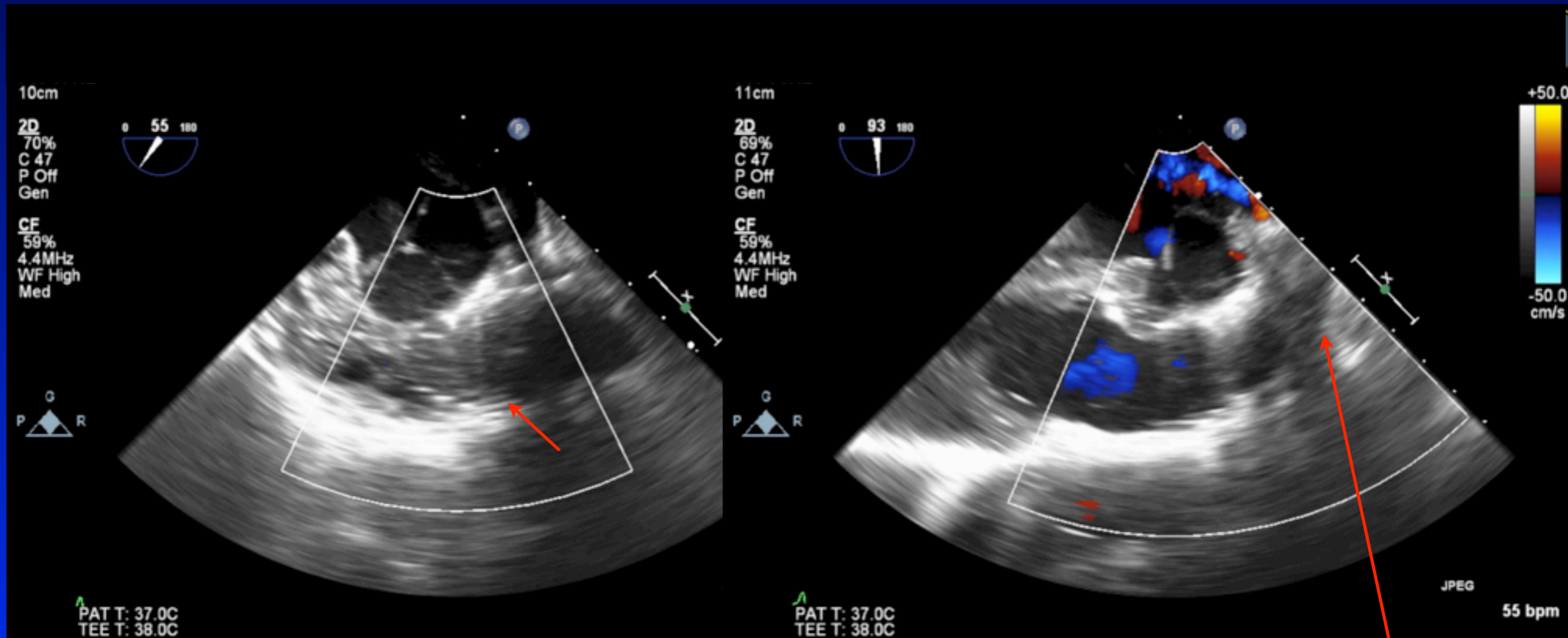


Pre and post angiogram



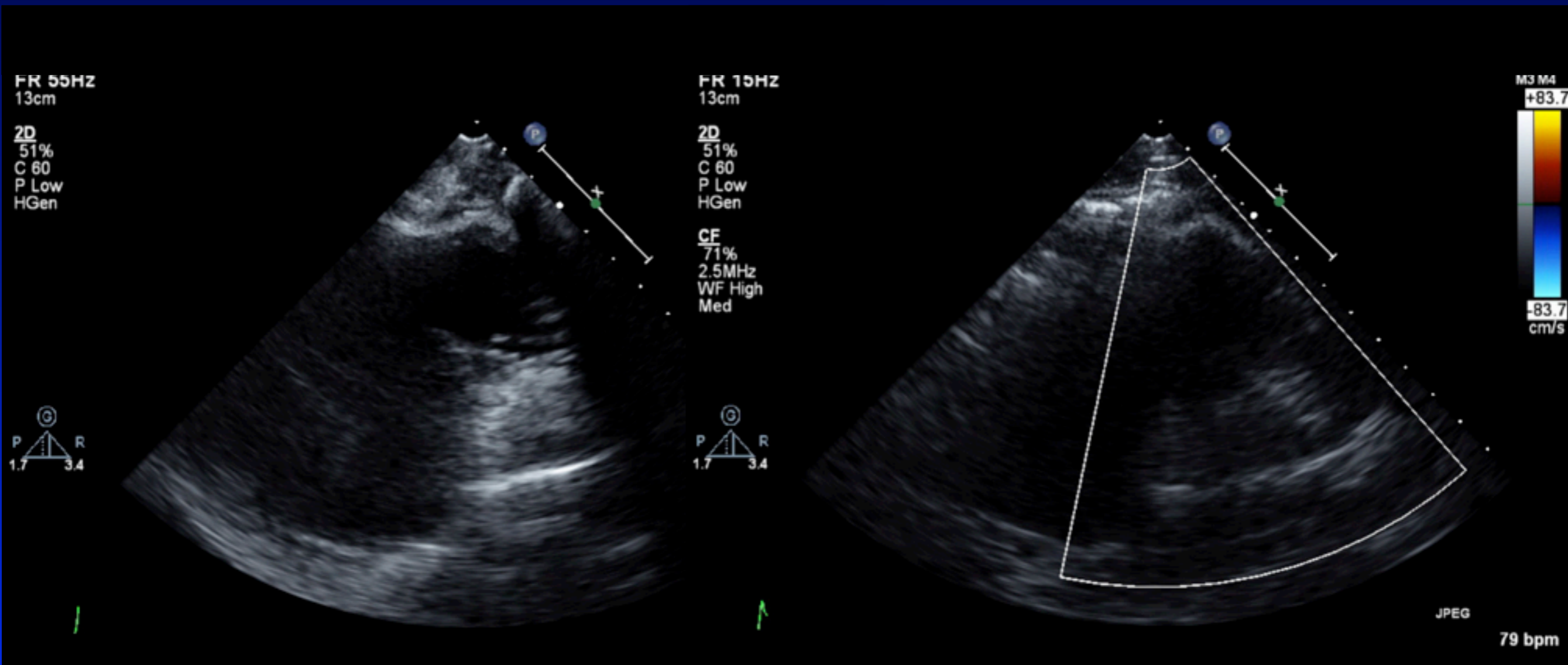
MPA band

Post Melody implant

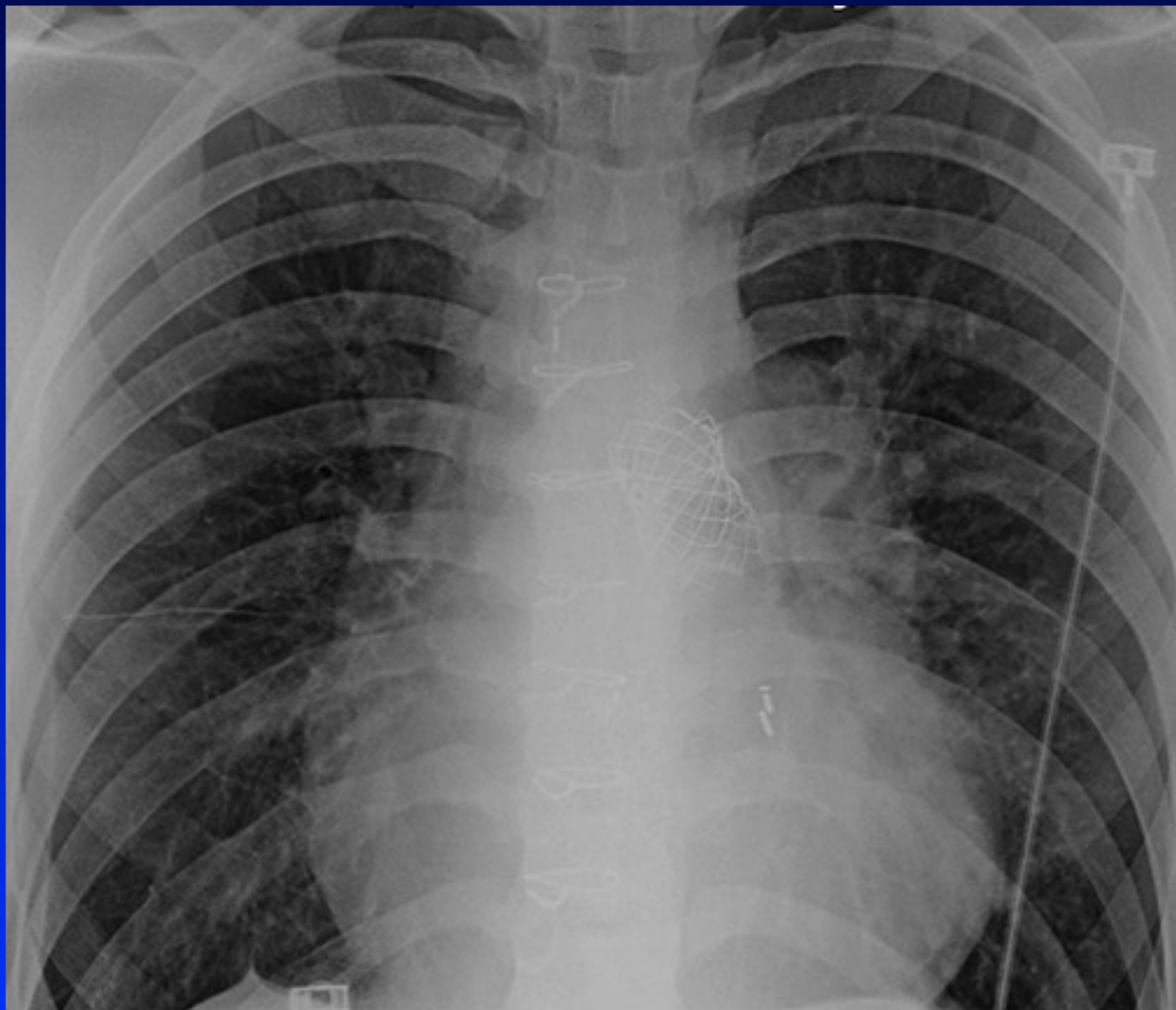


Trivial PI

Discharge echo



Discharge CXR



Post op course

- Extubated day of surgery
- Weaned to RA on POD 1
- Transferred to floor on POD 2
- Discharged home POD 4

A novel hybrid technique for transcatheter pulmonary valve implantation within a dilated native right ventricular outflow tract

Frances C. Travelli, MD,^a Cynthia S. Herrington, MD,^b and Frank F. Ing, MD,^a Los Angeles, Calif

J Thorac Cardiovasc Surg 2014;148:e145-6

Summary

- Hybrid approach and use of an external PA band to act as a landing zone can facilitate implantation of a Melody valve in native outflow tracks safely and effectively
- Avoids bypass and complications of open heart surgery
- This approach can expand to use of the Melody valve beyond the cath lab
- Innovation and creativity made possible only by collaboration with surgical team