

TAVI

Dr Edgar Tay

National University Heart Centre Singapore

AP Valves 2018

History

- Octagenarian
- Good functional status
- Presented with increasing dyspnoea for 3 months
- Past history diabetes mellitus, hypertension, hyperlipidemia, chronic kidney disease (creatinine of 130umol/L), osteoporosis, atrial fibrillation, ovarian mass

Echocardiogram

- Mean gradient 30mmHg (SV 31ml/m2)
- Mild AR
- Mild to mod MR and TR
- Pulmonary hypertension
- Concentric LVH
- LVEF 65%



Coronary angiogram

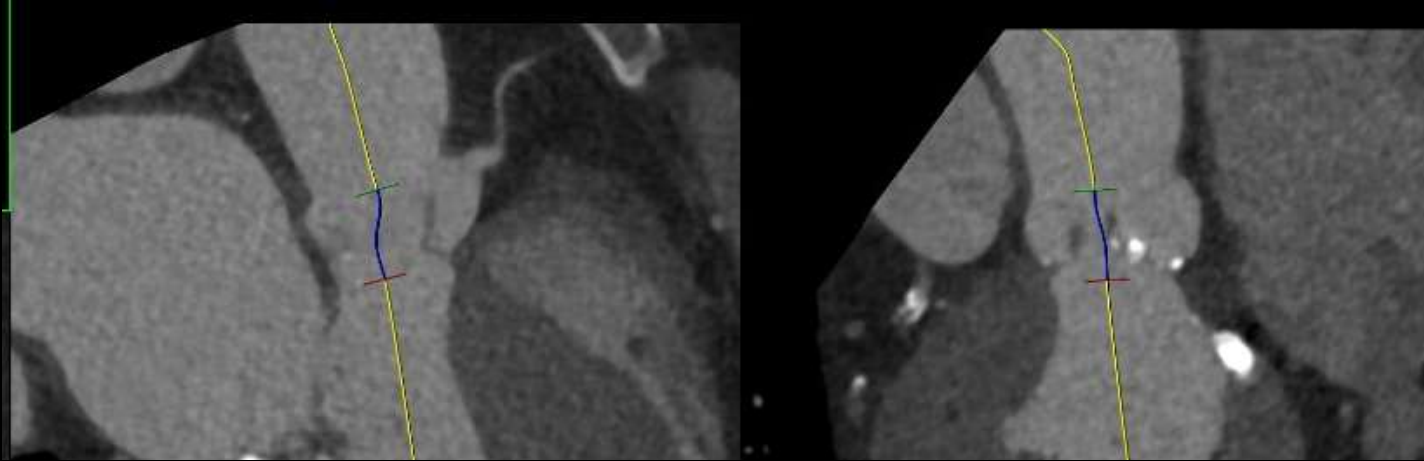
- Mid RCA 80% discrete lesion treated with PCI successfully
- No significant disease in LCA



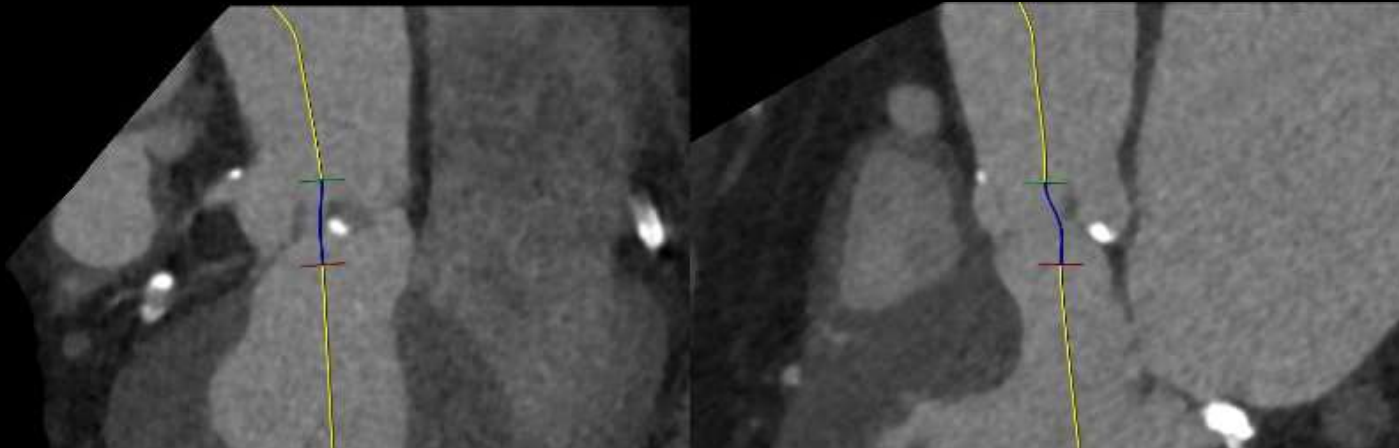
CT TAVI

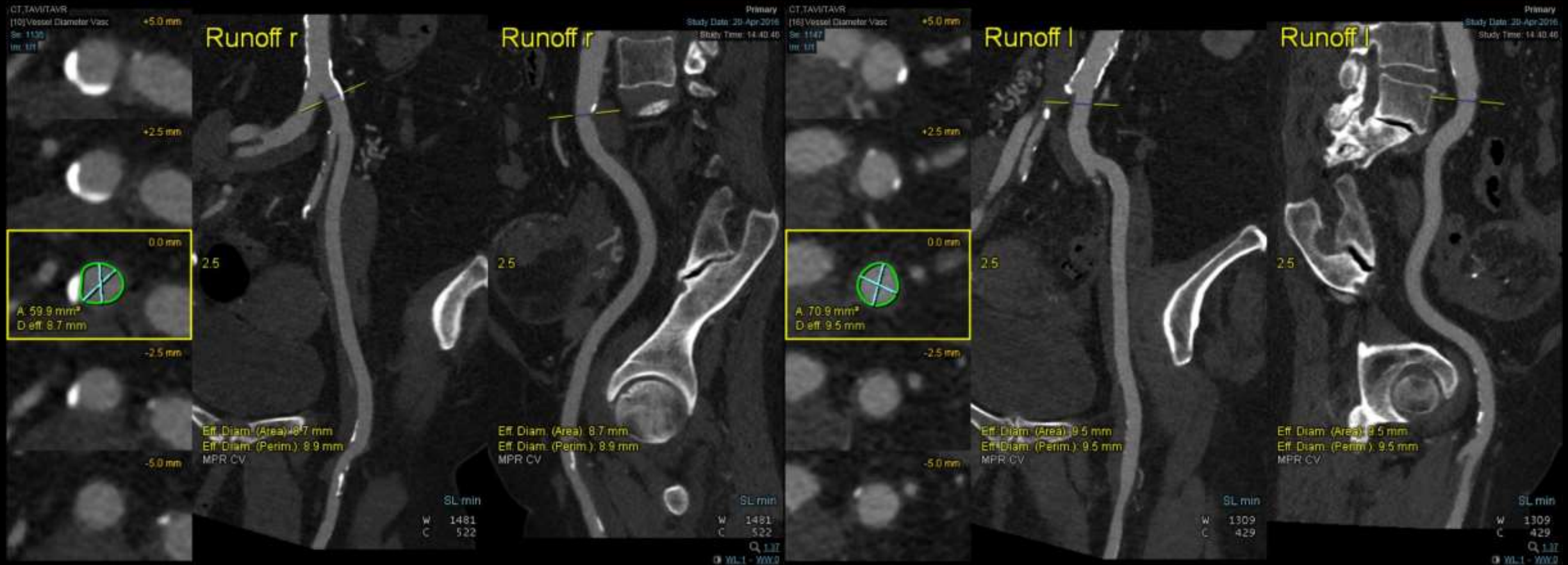


Annulus: 17 x 12 mm; Perimeter: 64.3 mm; mean diameter: 20 mm; area 309.5 mm sq
Sinuses of Valsalva: 24 x 29 mm
Sinotubular junction: 21 x 24 mm



annulus to RCA ostium: 13.4 mm
annulus to LM ostium: 9.6 mm





Right common iliac artery (CIA) (proximal): 8.2 x 9.3 mm (mean 8.7 mm)

Left CIA (proximal): 9.3 x 10 mm (mean 9.5 mm)

Right external iliac artery (EIA) (mid): 6.7 x 7.8 mm (mean 7.3 mm)

Left EIA (mid): 7.5 x 8.5 mm (mean 7.9 mm)

Right common femoral artery (CFA) (level of mid femoral heads): 6.9 x 8.4 mm (mean 7.5 mm)

Left CFA (level of mid femoral heads): 7.2 x 9.2 mm (mean 8 mm)

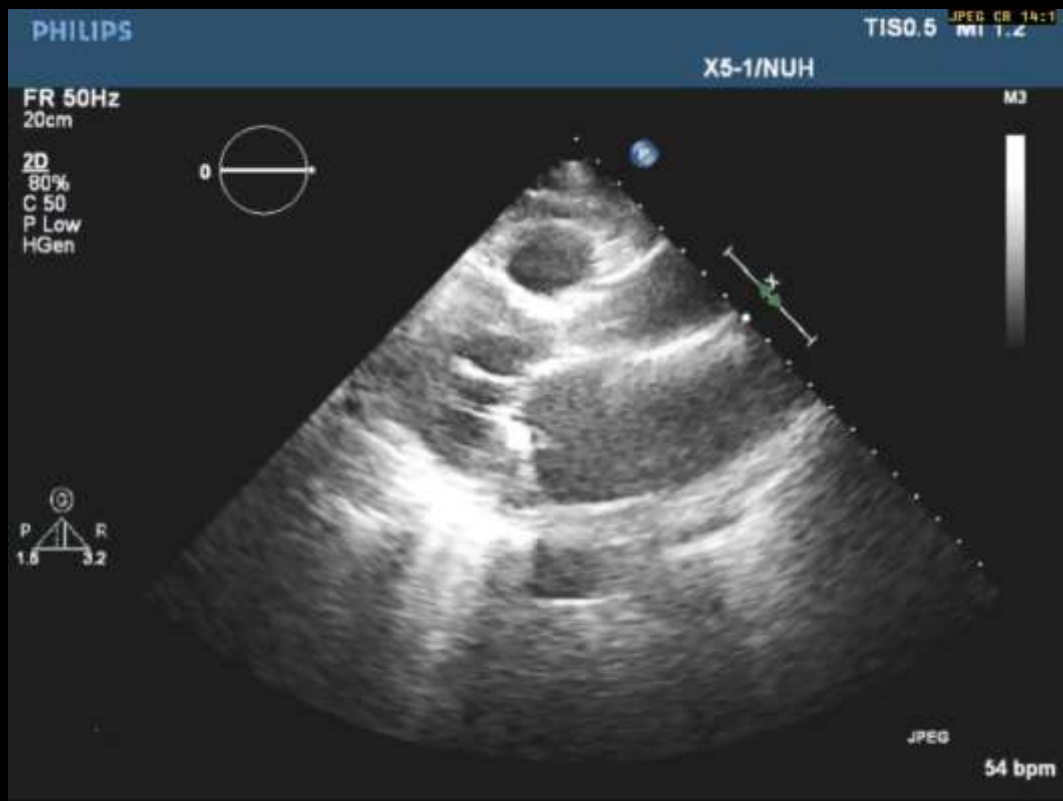
Choice of device

- The only completely recapturable device (there is some risks of coronary occlusion here)
- Femorals suitable

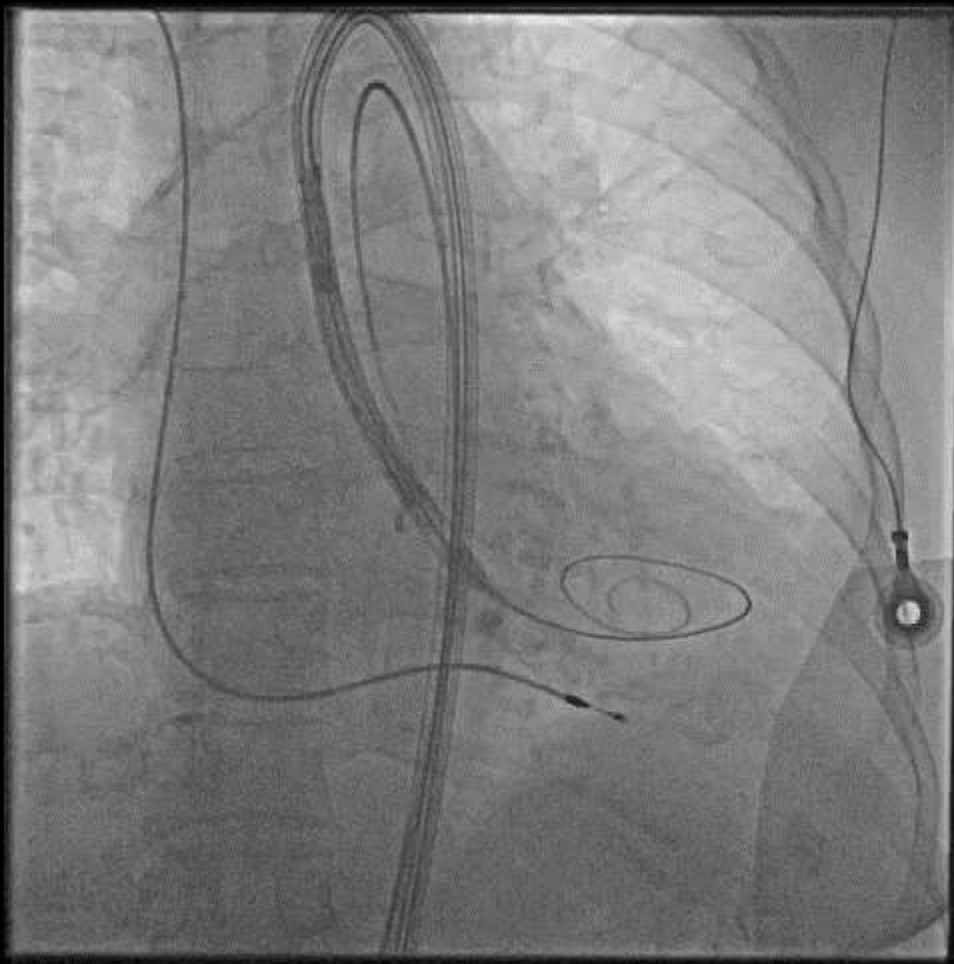


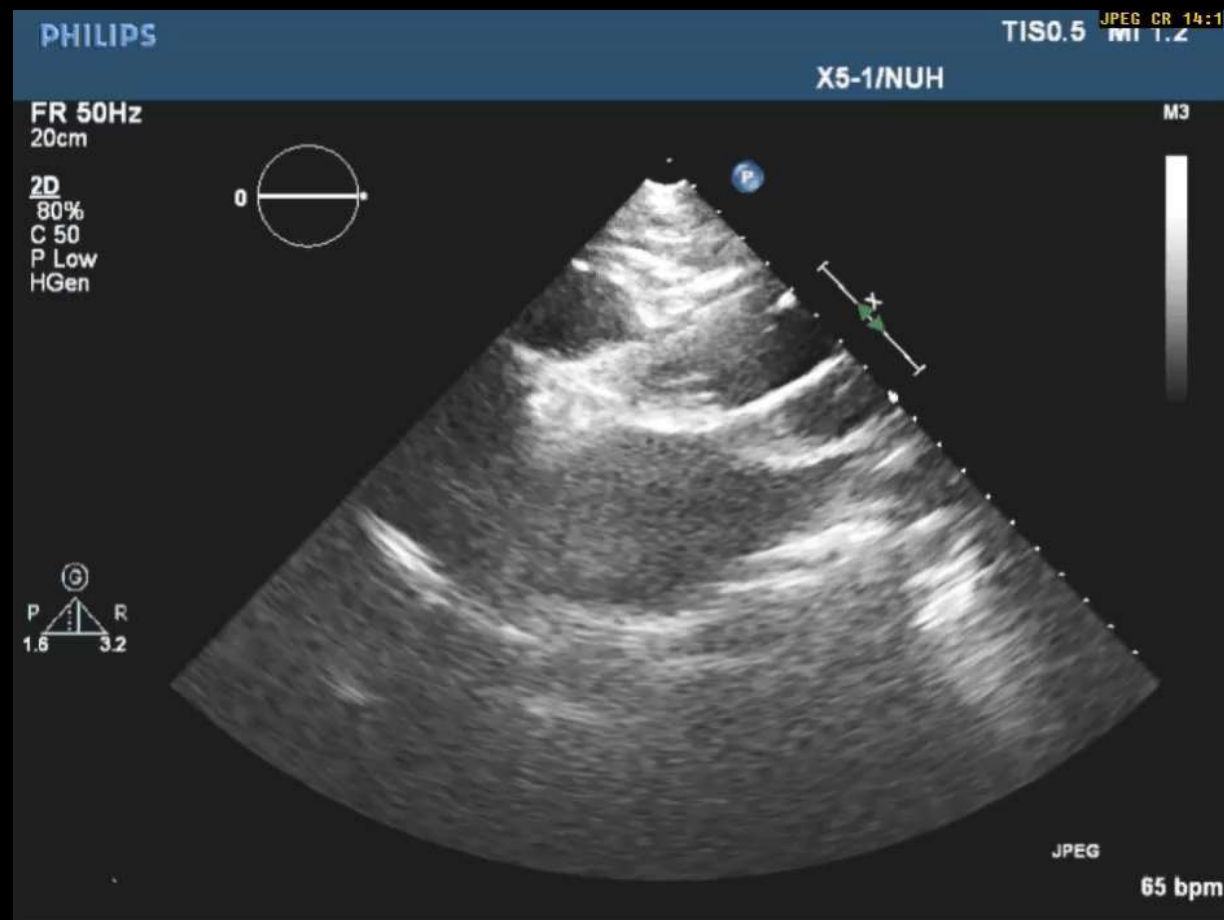
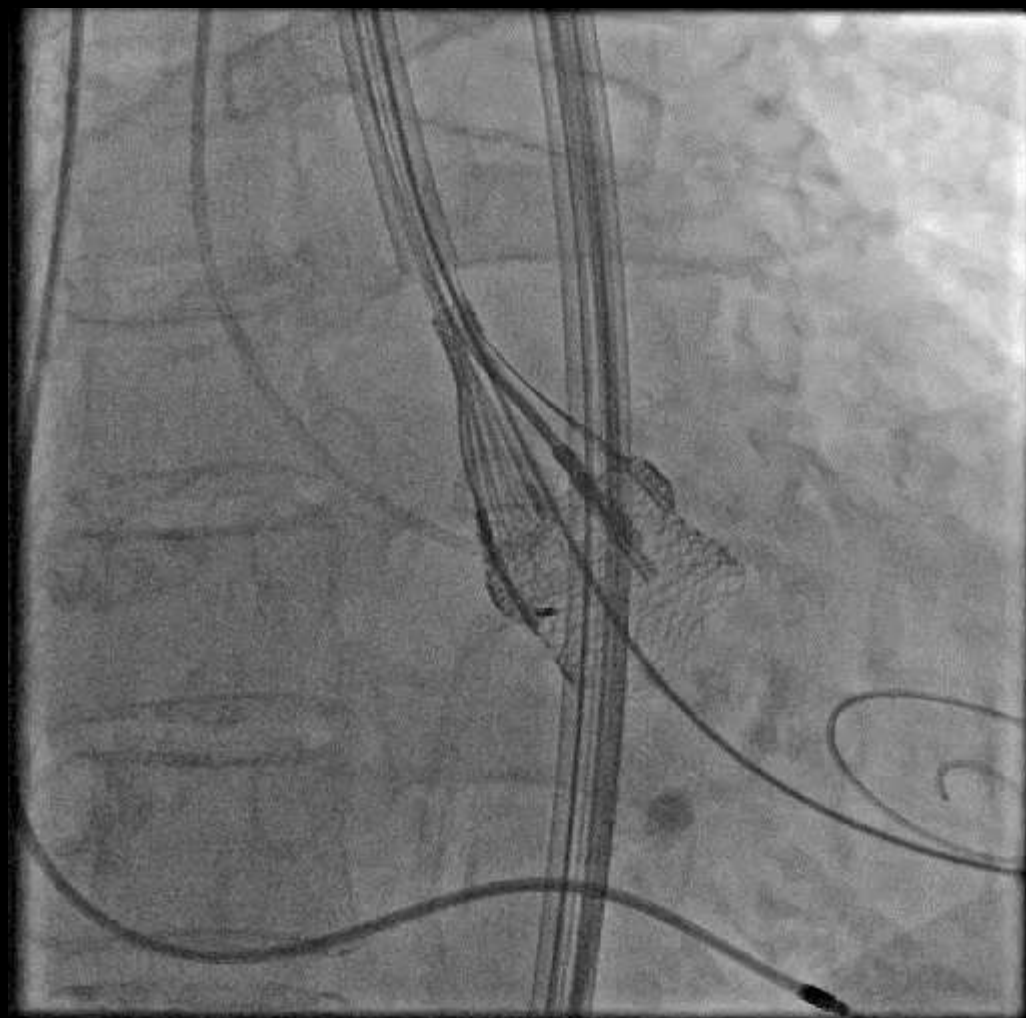
Procedure

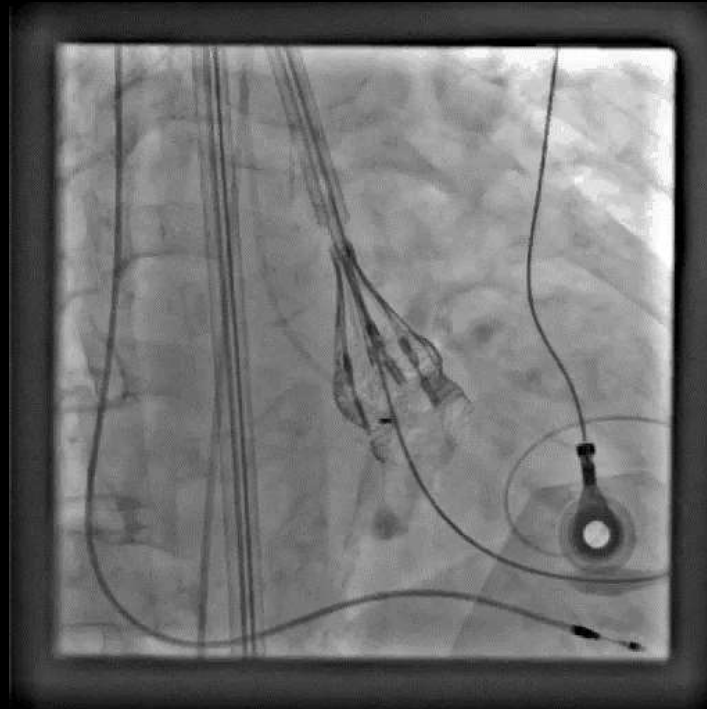
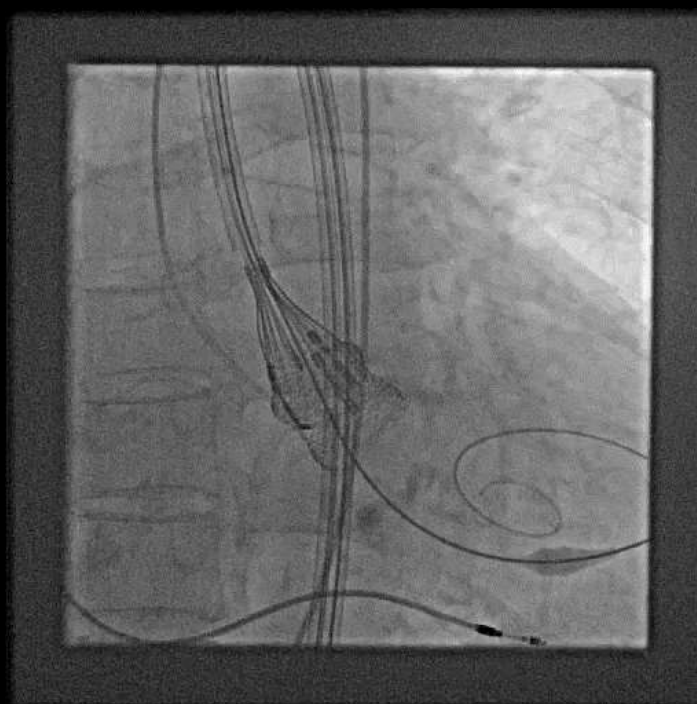
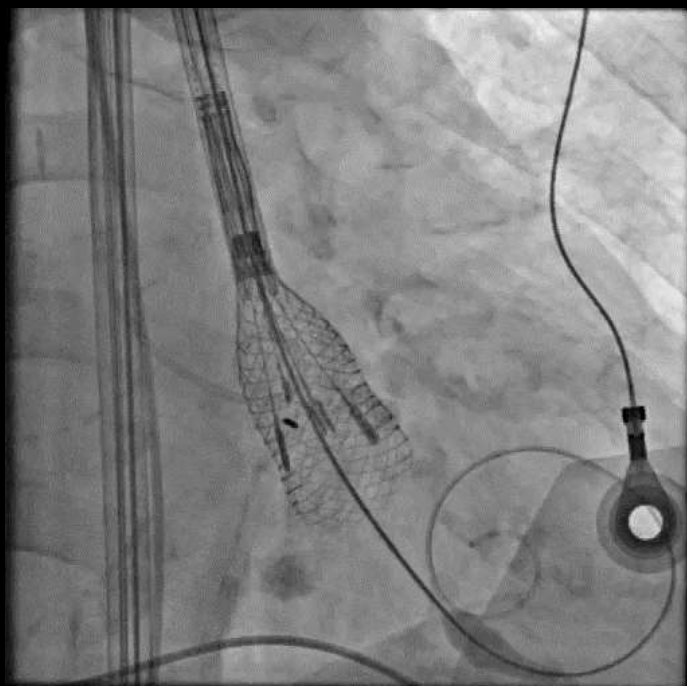
- Local anesthesia and sedation
- TTE
- Micropuncture technique
- Right femoral artery access 7Fr
- Left FA 6Fr, Left FV 5Fr
- Temp pacing wire via right IJV
- 0.018 safety wire (contralateral)
- Proglides x2

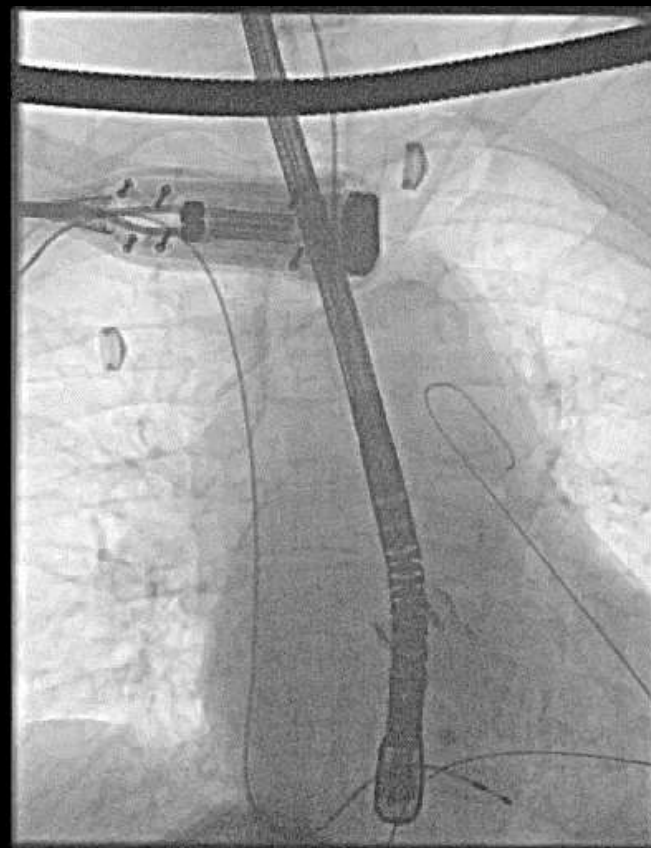
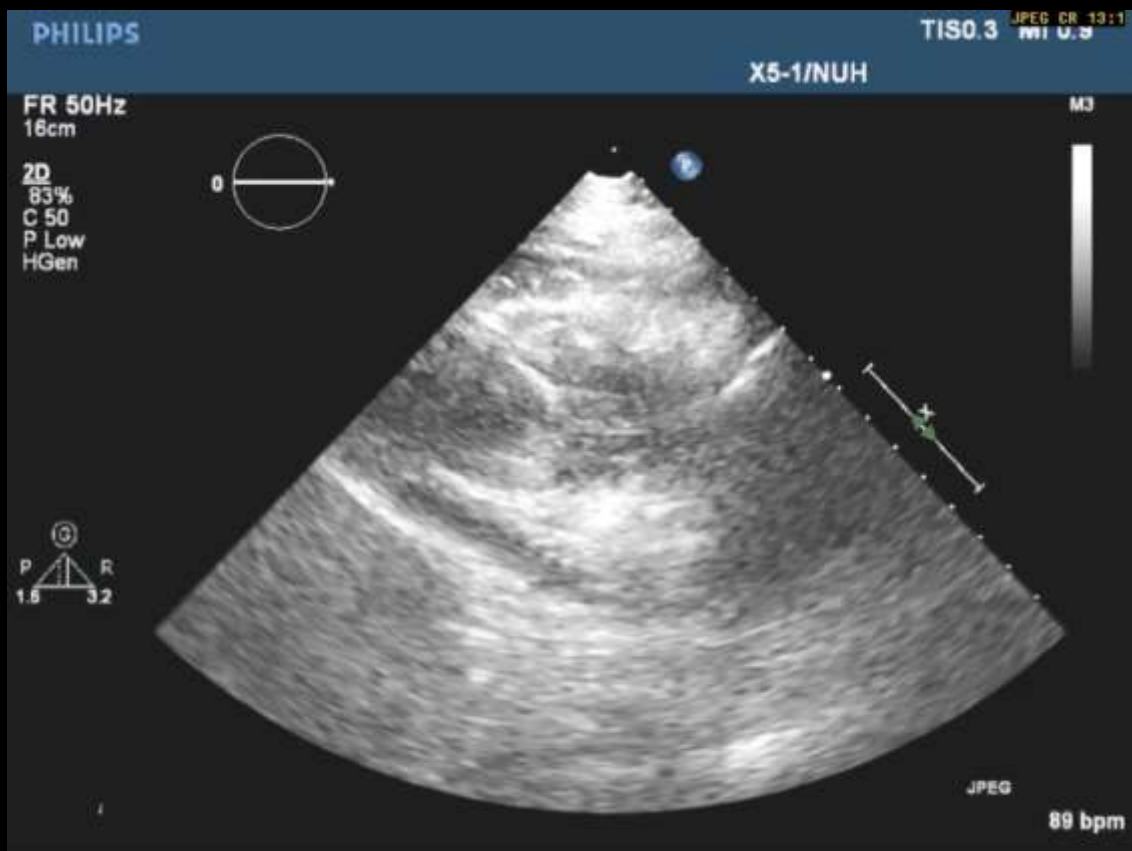












Progress of condition

- Cardiopulmonary bypass
- Emergency aortic ascending aorta repair was performed with a gelweave graft under hypothermia
- Position of aortic valve well position with no compression on the coronary ostium
- Intimal tear from above the STJ to lesser curve of proximal arch. Tissue was extremely friable and fragile
- Pericardial bleed from posterior ascending aorta with tamponade
- Passed away POD 2 from bleeding and multiorgan failure