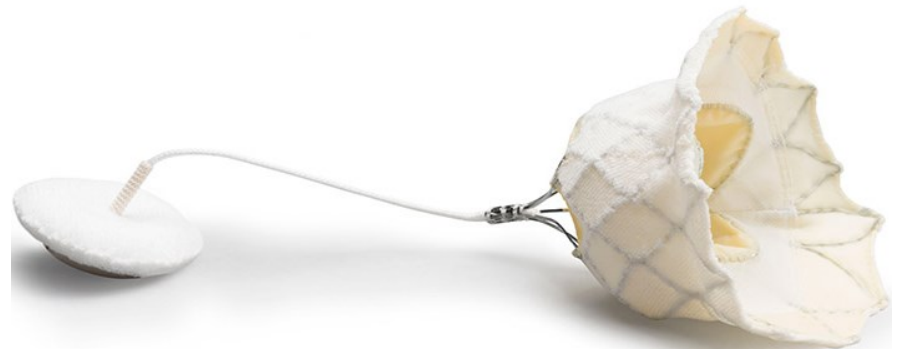
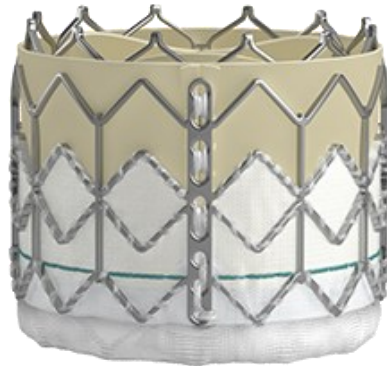


Simultaneous Trans Apical TAVI and Tendyne™ TMVI



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The Heart Institute

Hadassah University Medical Center



Background

- 47 y/o male
- Premature cardiovascular aging caused by APS (atypical progeroid syndrome)- **LMNA:c.898G>A, p.Asp300Asn**
- IHD since 2012-
CABG - RIMA to LAD, LIMA to M1 (2016)
PCI - mid LCX (2016), LM (2021), distal LAD (2021), RIMA (2022)
- DM, DLP, PVD
- Ischemic + non ischemic cardiomyopathy
- HFrEF- EF-30-35%, sev MR, mild MS, mod-sev AS, mod AR, sev TR, mod-sev pHTN RVSP 58mmHg



The Laminopathies

- Mutations in *LMNA* gene, encoding Lamin A/C, cause a diverse array of phenotypes, collectively referred to as laminopathies
- Clinical features range from the rare and fatal **Hutchinson–Gilford progeria syndrome** to other syndromic or non syndromic organ involvement
 - Including muscular dystrophies, peripheral neuropathy, lipodystrophy syndromes, and accelerated aging disorders
- **Cardiac manifestations** include DCM, conduction defects, arrhythmia, valvular and coronary disease
- **LMNA:c.898G>A, p.Asp300Asn**- non syndromic cardiac progeria
 - Premature cardiovascular aging, coronary and peripheral artery disease and premature valvular degeneration

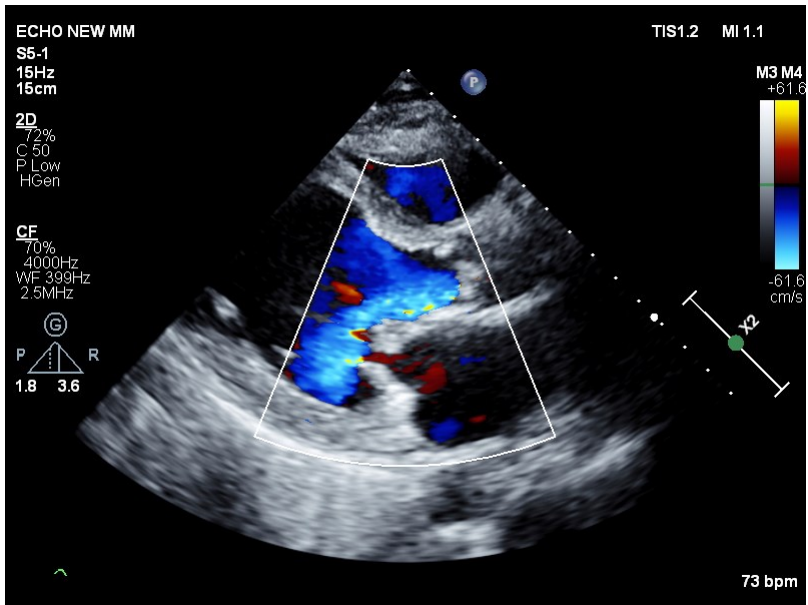
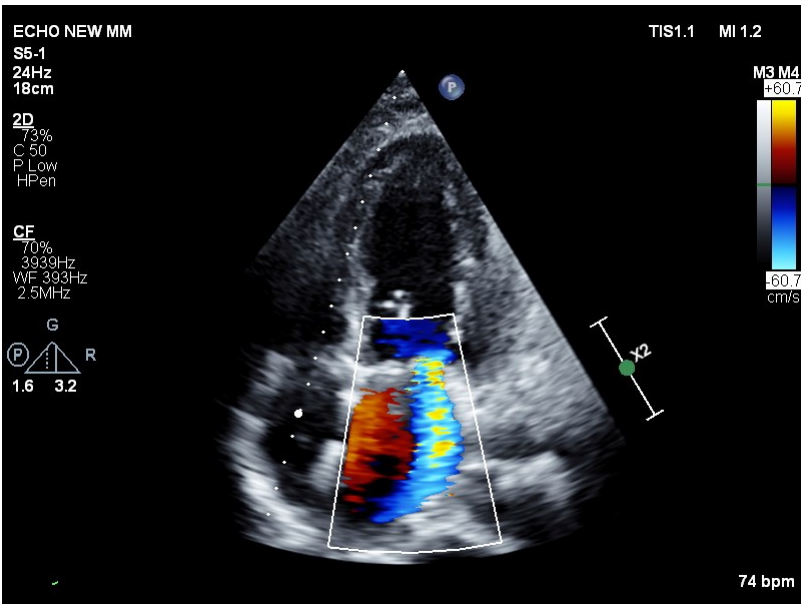
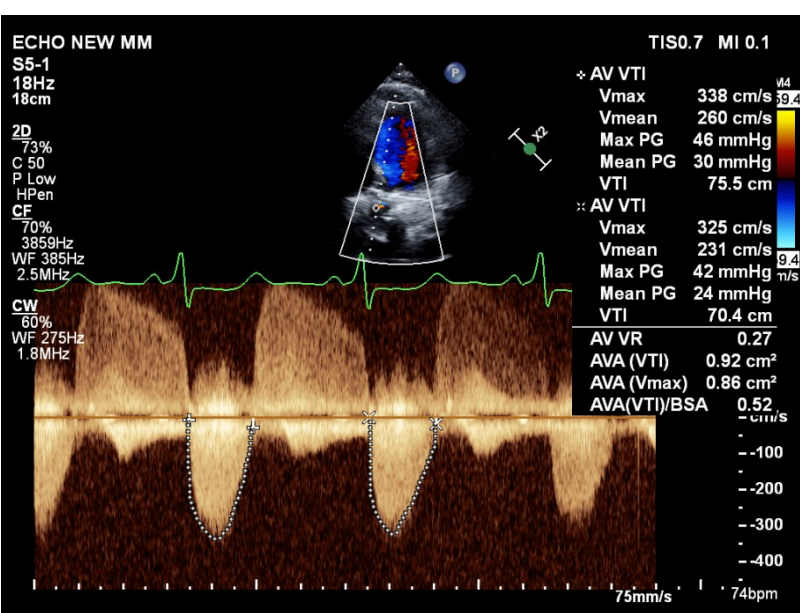
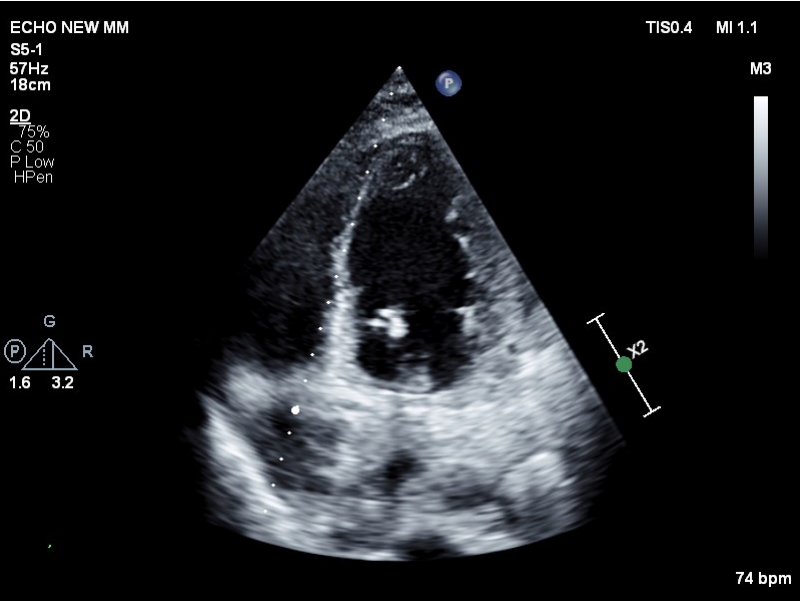
Marian, A.J. et al. Non-syndromic cardiac progeria in a patient with the rare pathogenic p.Asp300Asn variant in the *LMNA* gene. *BMC Med Genet* 2017

Merideth MA et al. Phenotype and course of Hutchinson-Gilford progeria syndrome. *N Engl J Med*. 2008

Howard J. Worman et al. "Laminopathies": A wide spectrum of human diseases, *Experimental Cell Research*, 2007



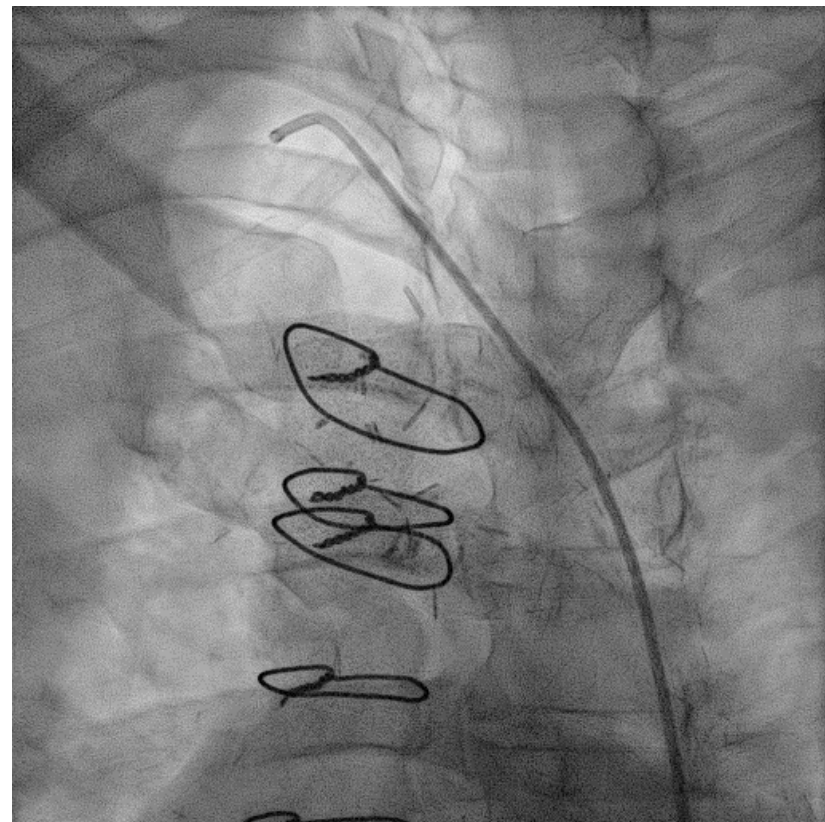
Baseline TTE





Background

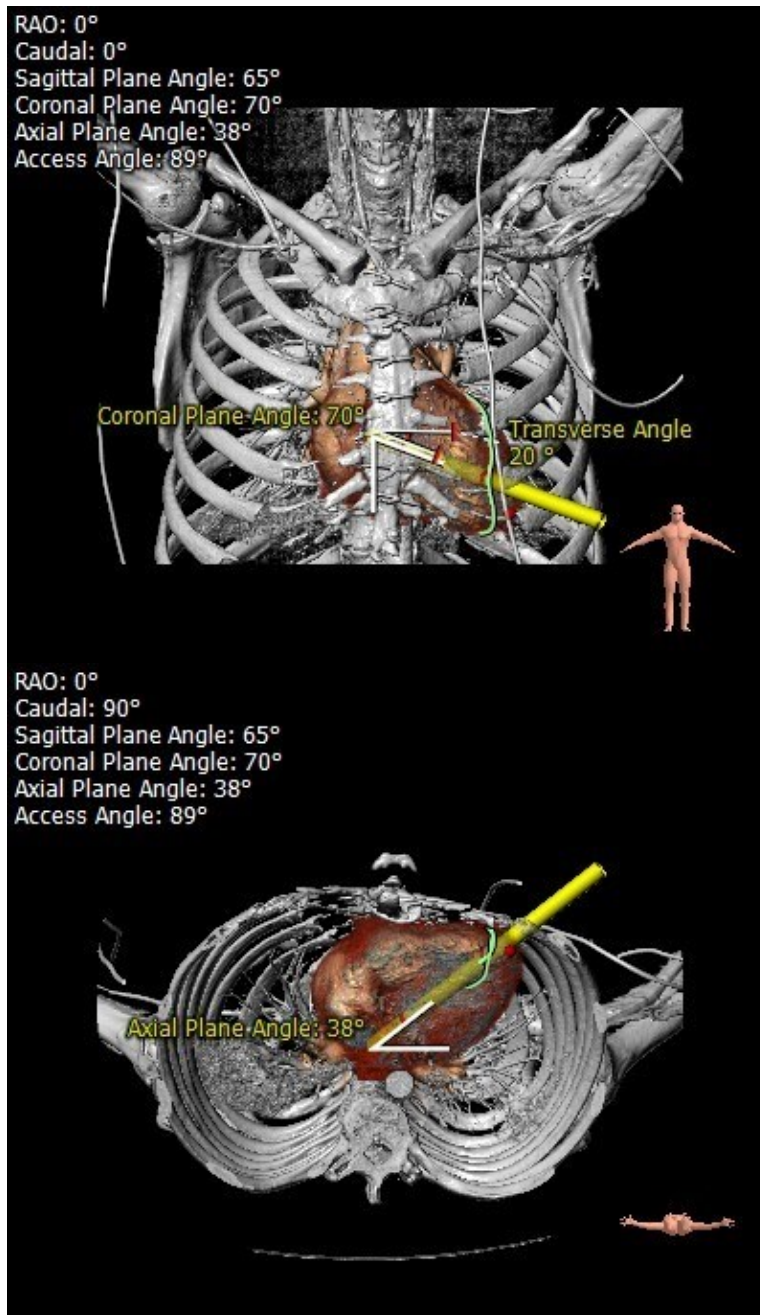
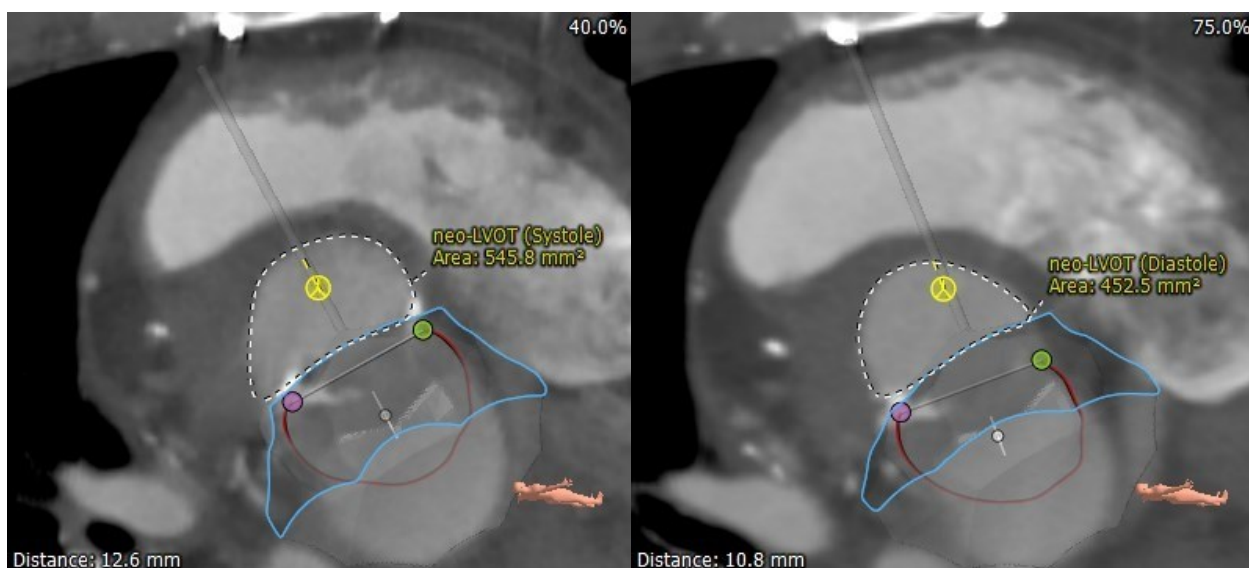
- Several hospitalizations for symptomatic HF during the past year
- Indication for mitral + aortic intervention
- High surgical and vascular risk
- Simultaneous trans apical procedure



RIMA to LAD

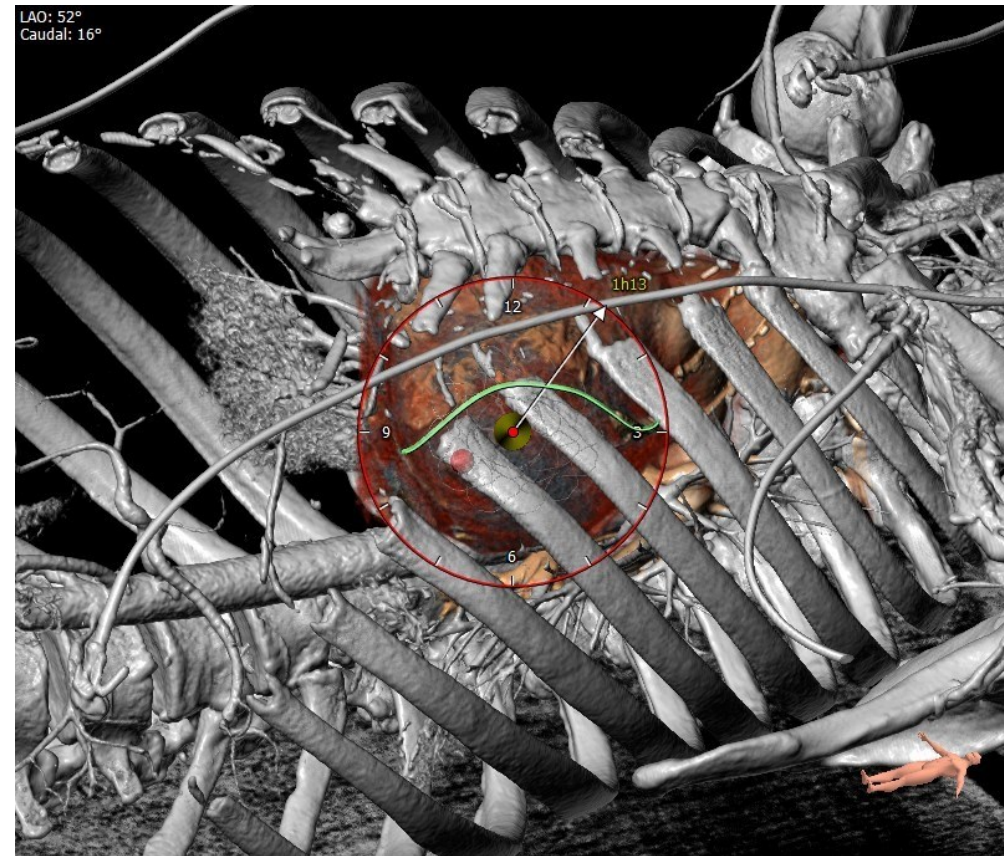
Pre procedure

- NeoLVOT assessment
- Access planning

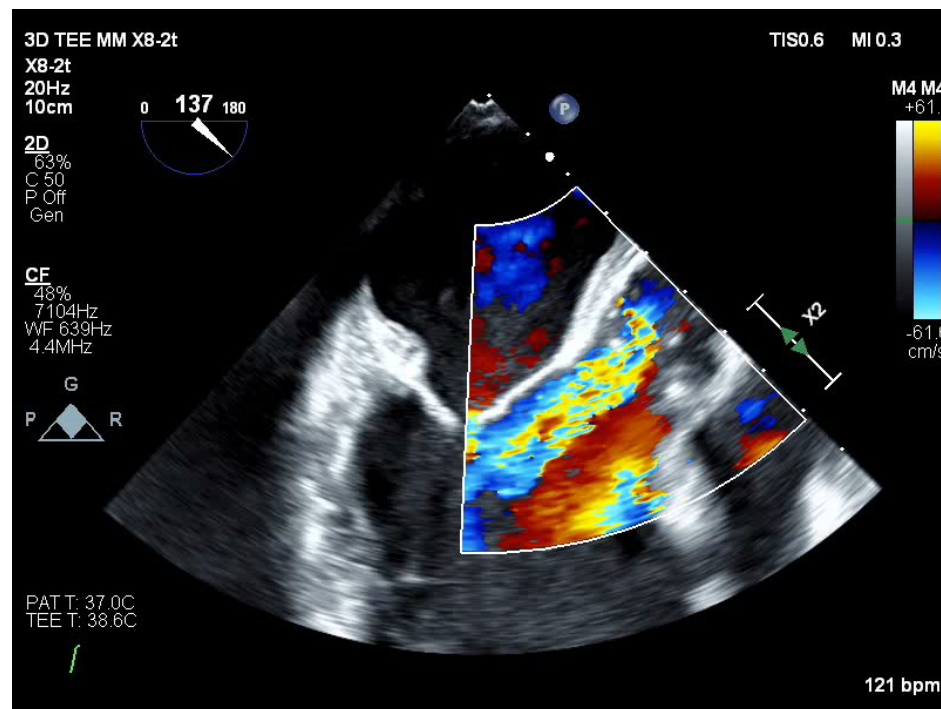
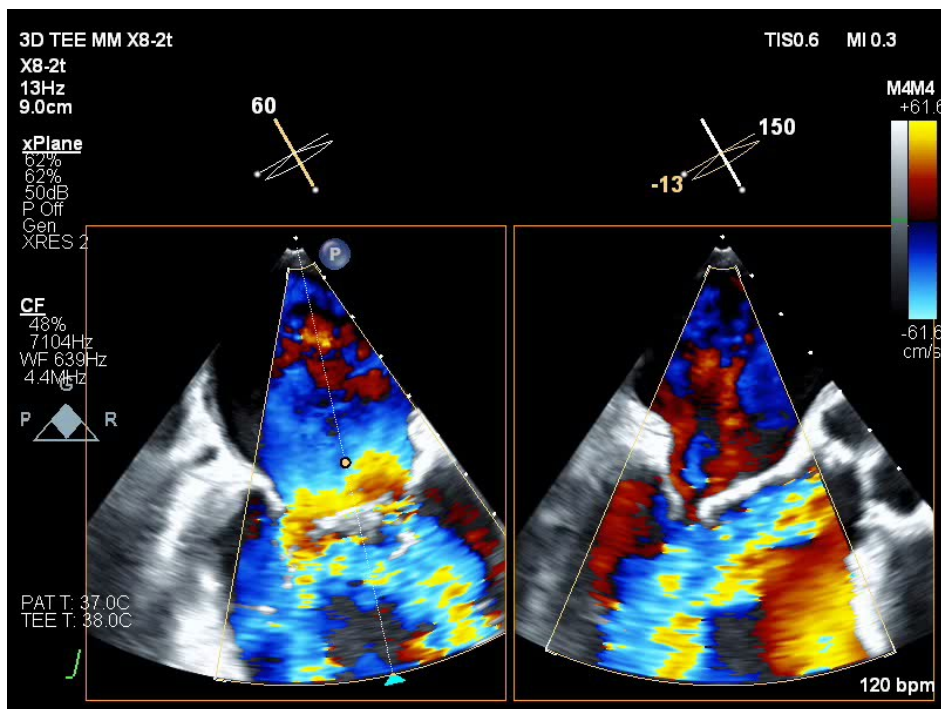


Procedure

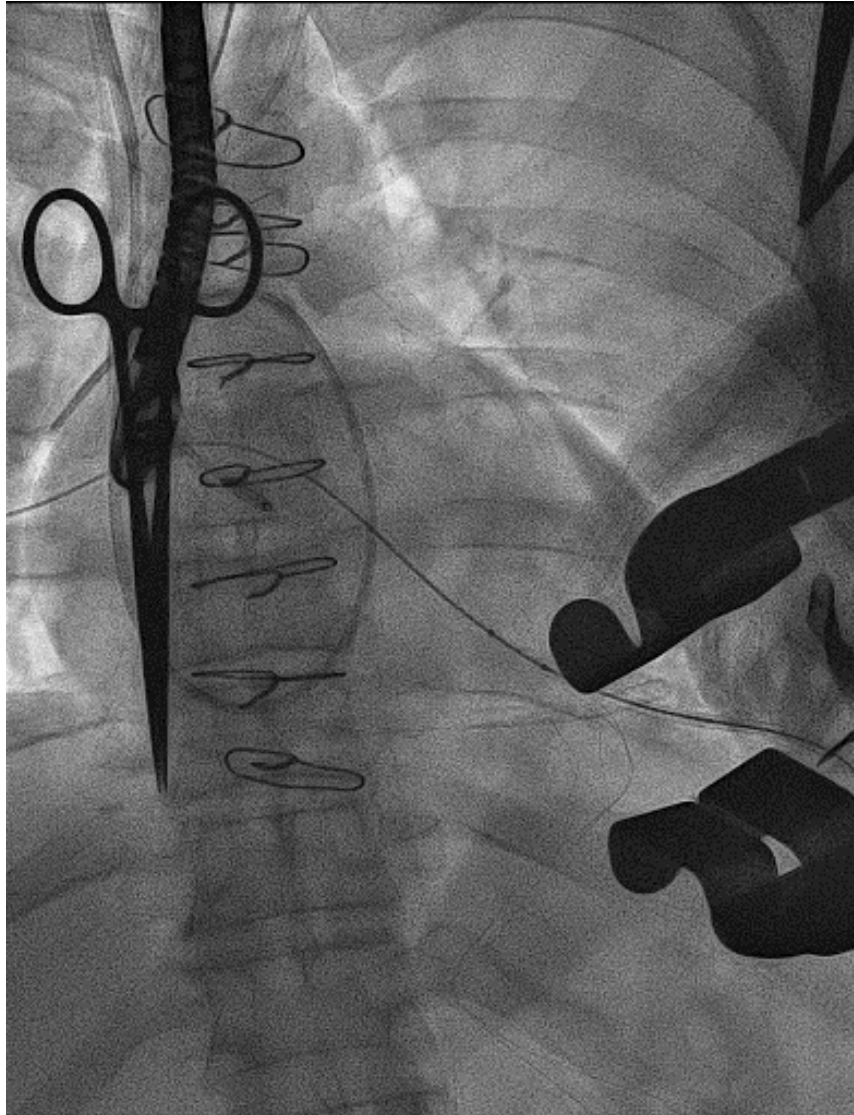
- Cath lab
- Transesophageal echo
- Fluoroscopy
- Interventional cardiology
- Cardiothoracic surgery



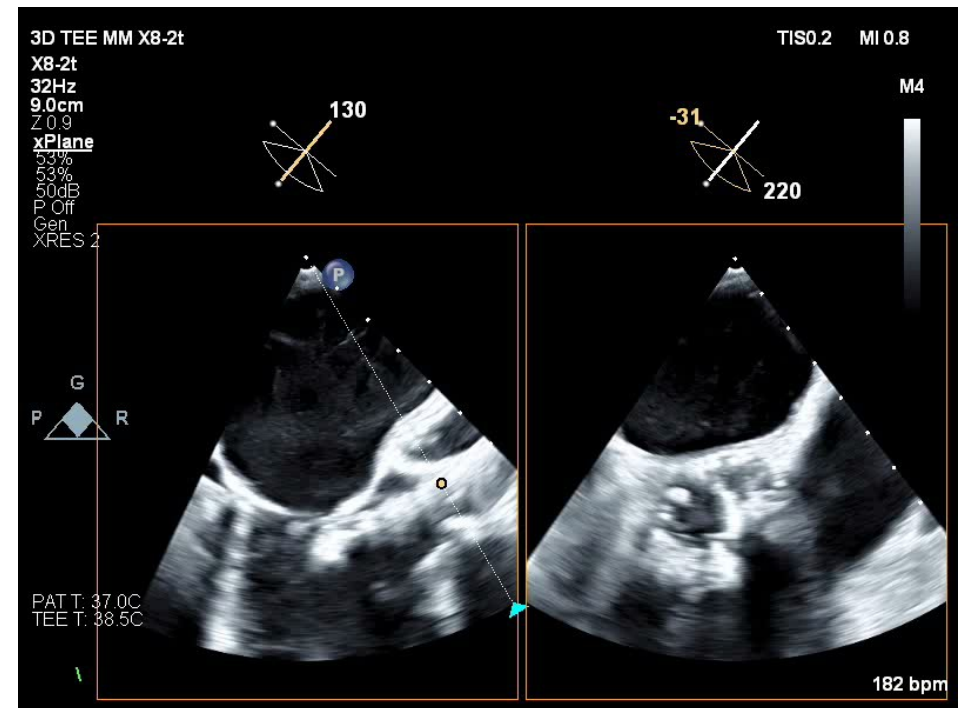
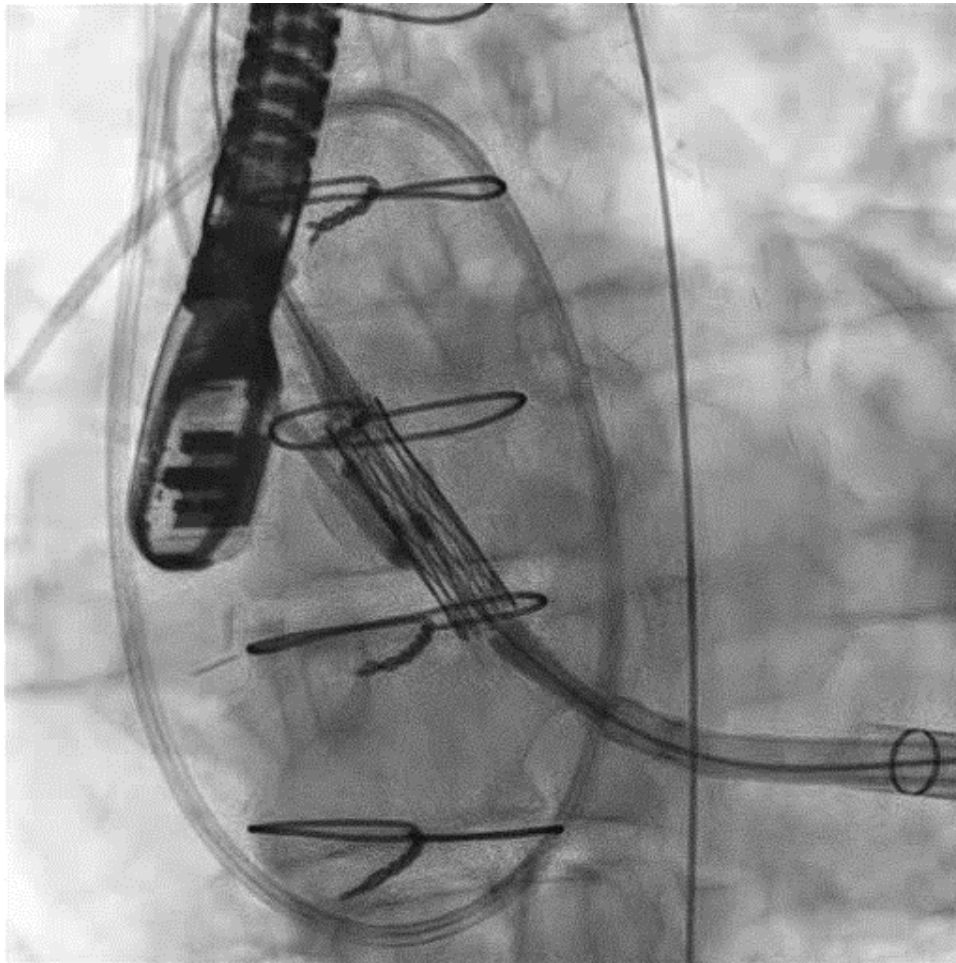
Baseline TEE



Mitral Balloon Valvuloplasty

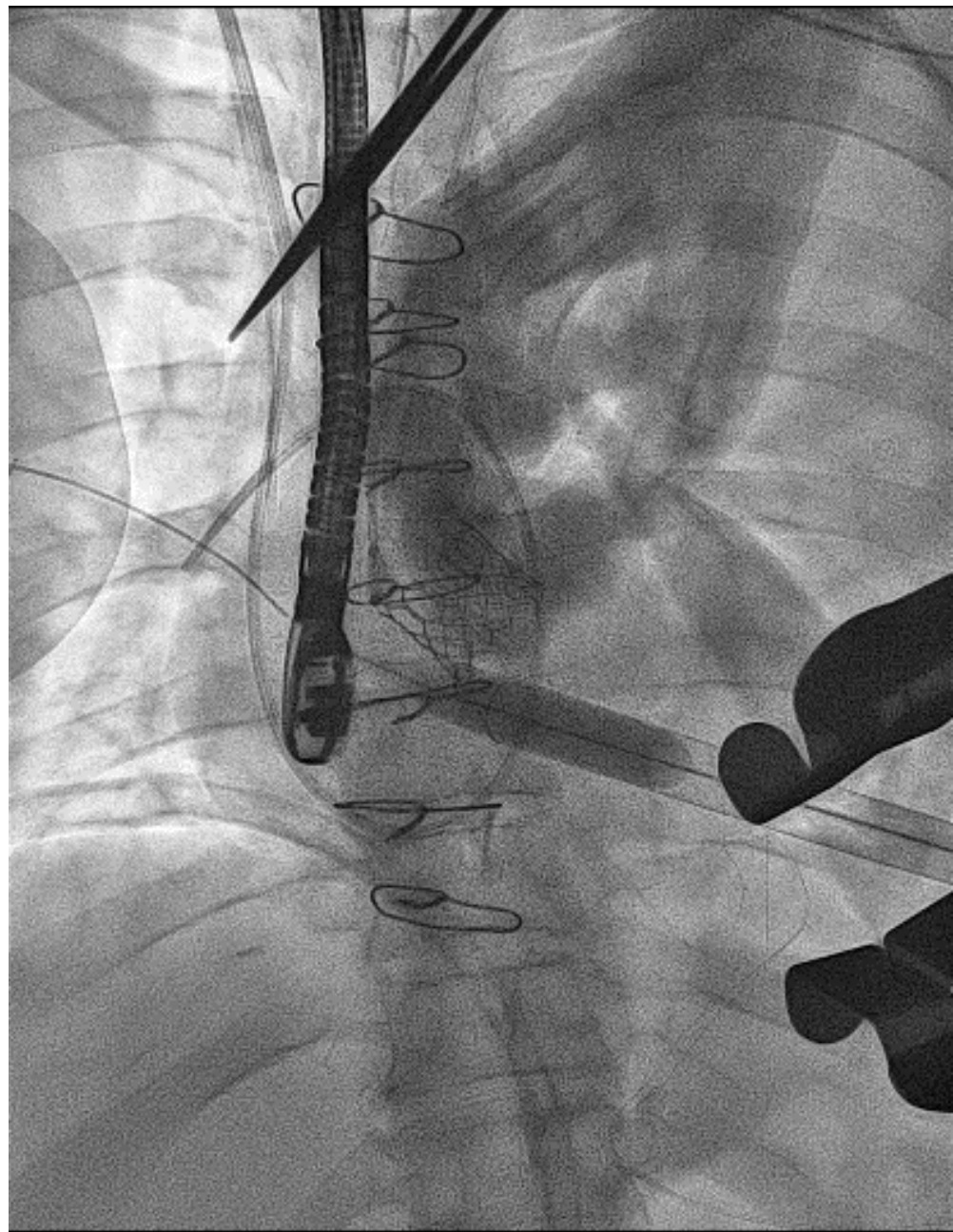


TAVI Deployment



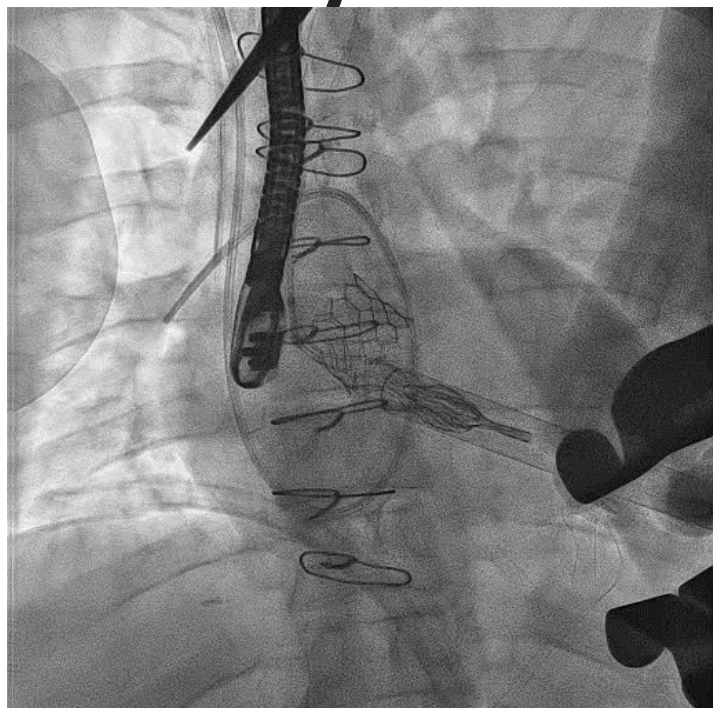


Tendyne™ Delivery



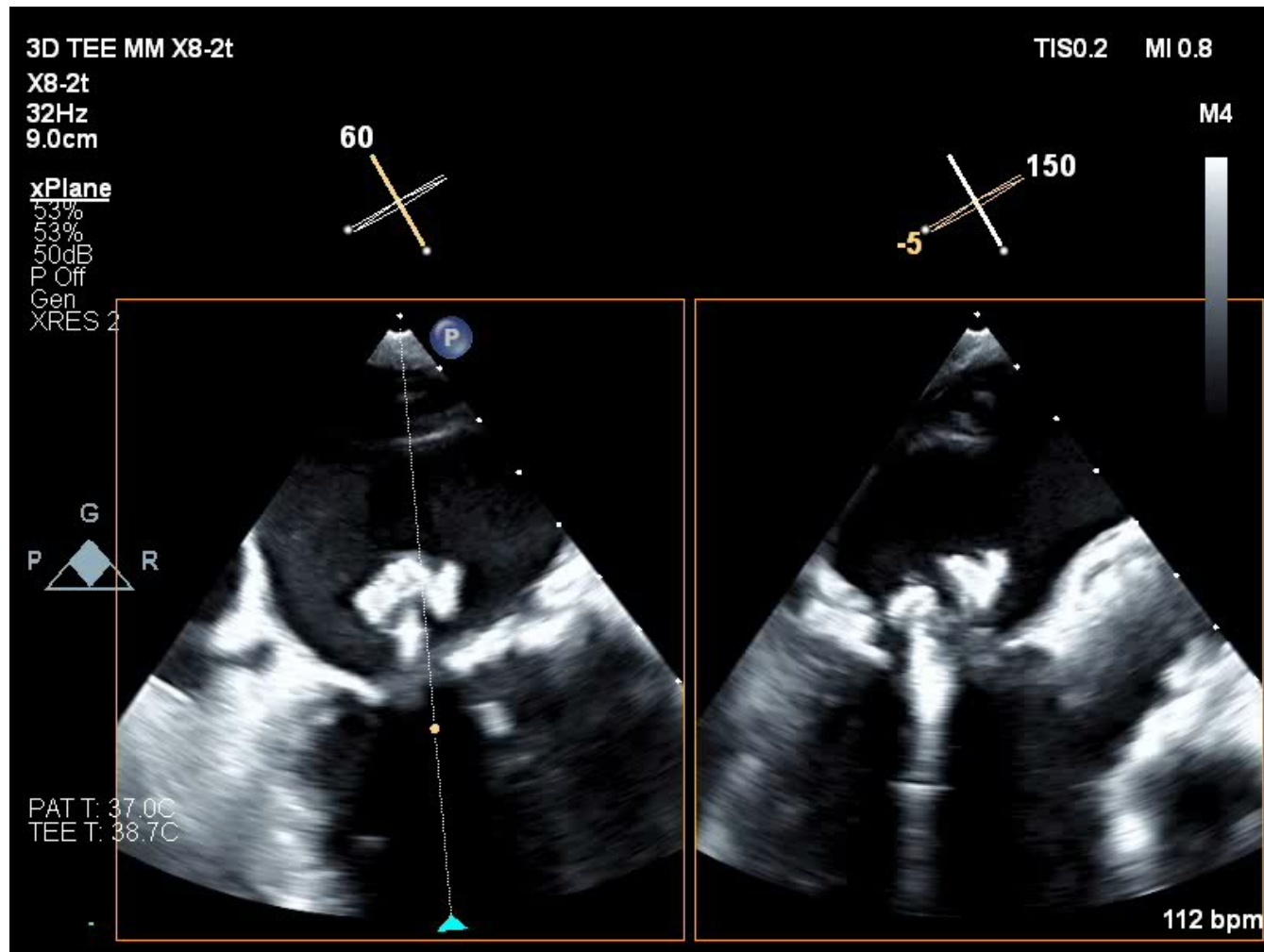
Flossing

Tendyne™ Delivery



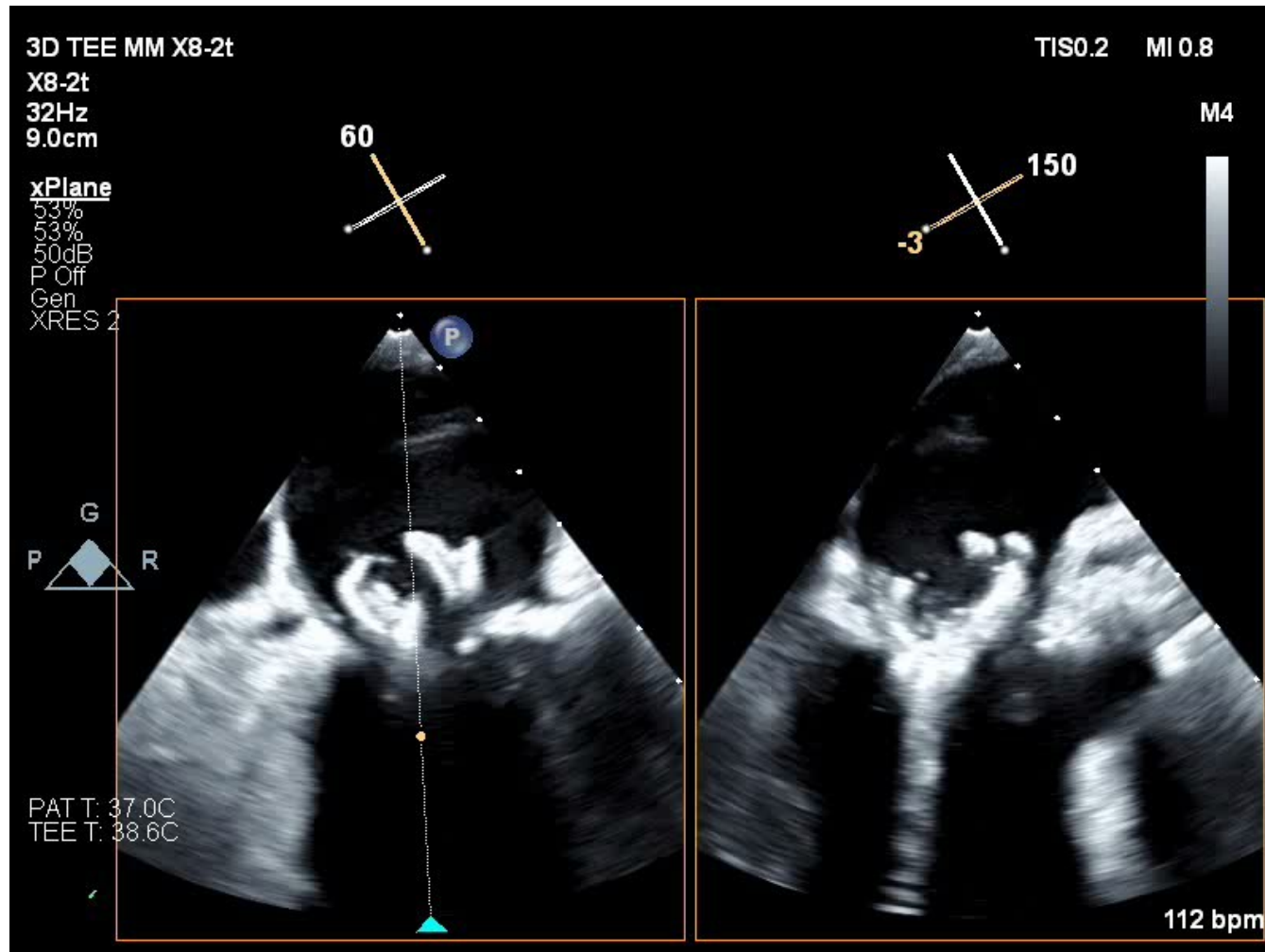


Tendyne™ Deployment



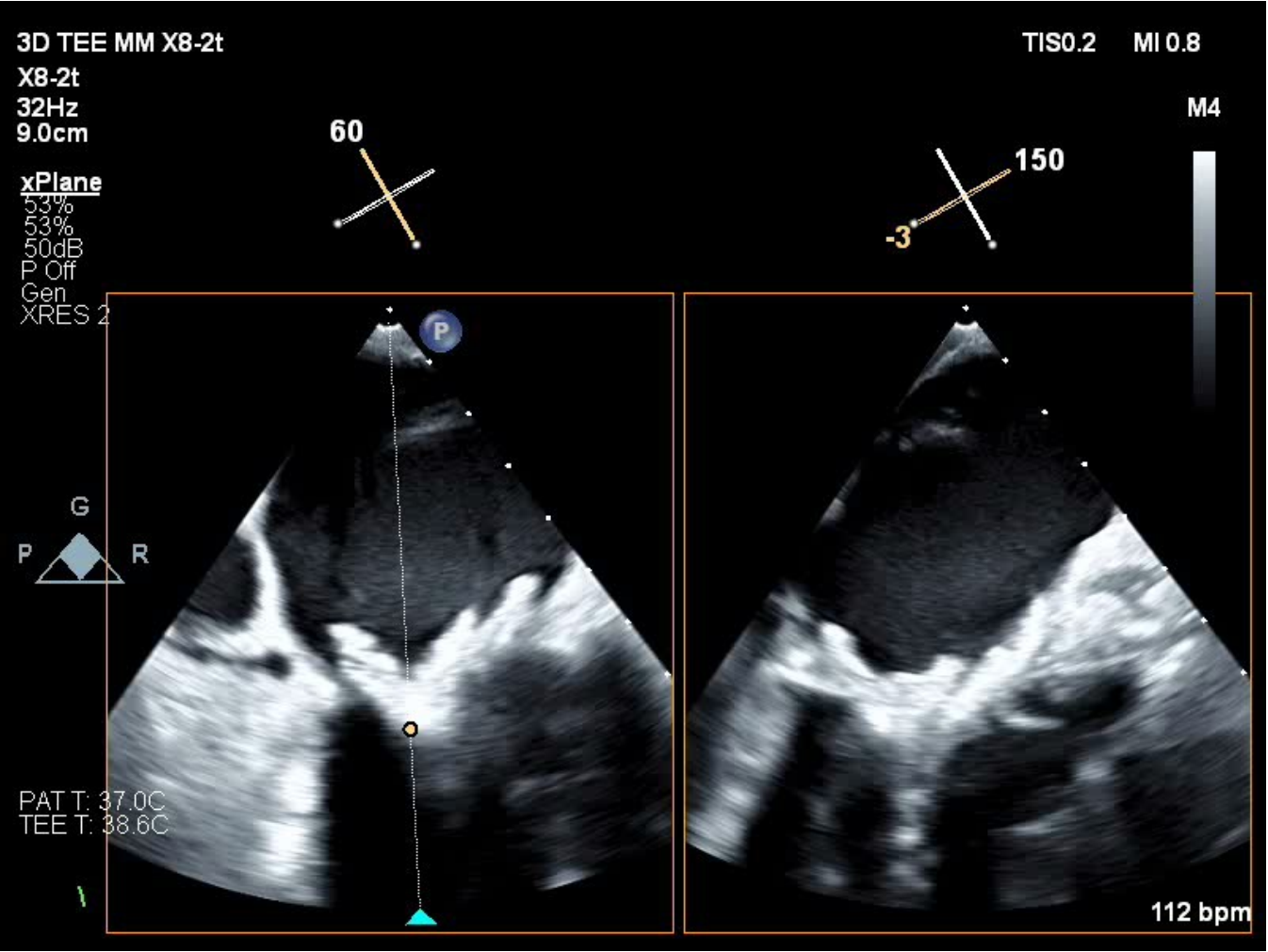


Tendyne™ Deployment





Tendyne™ Deployment

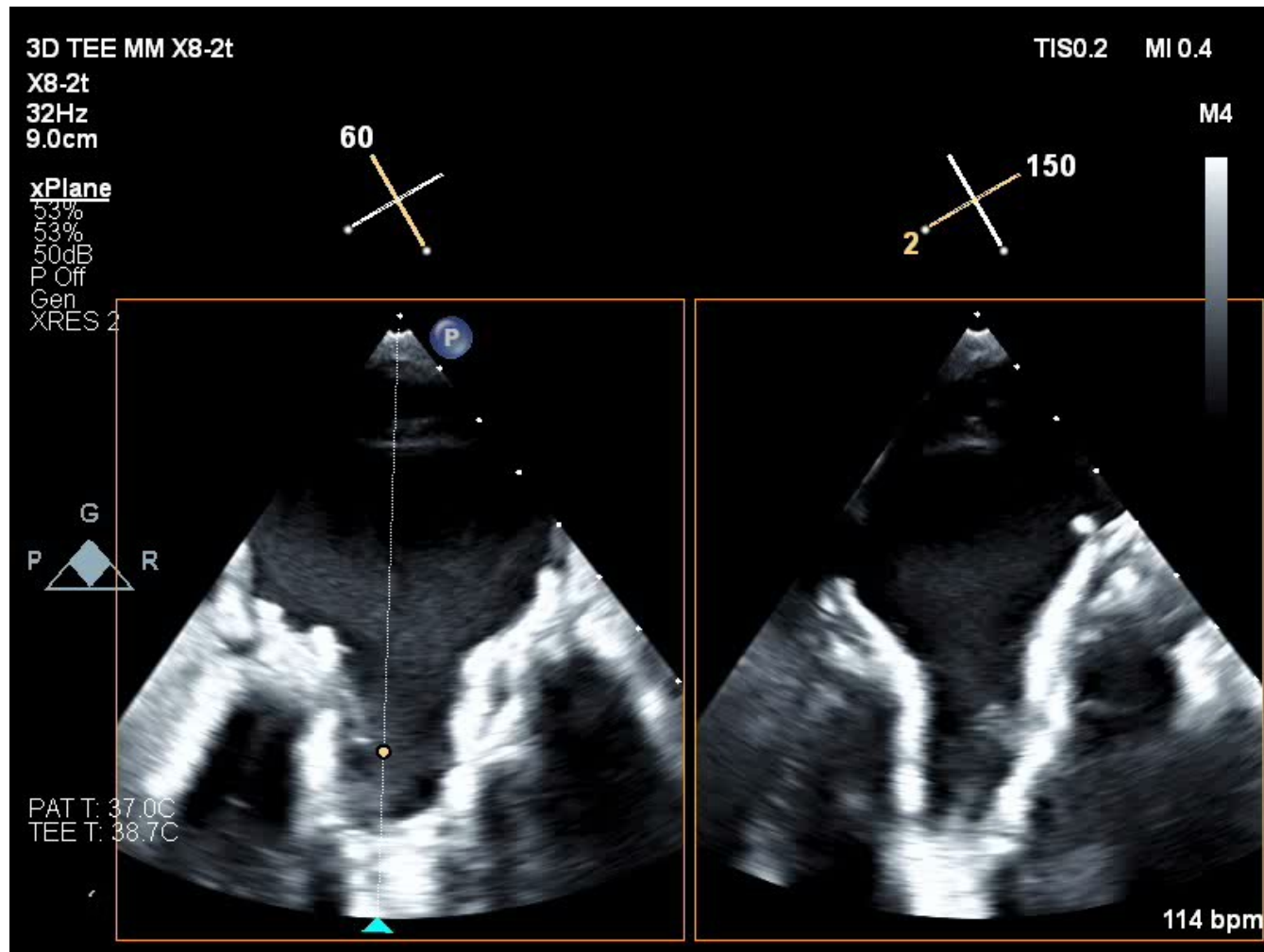


Short Short

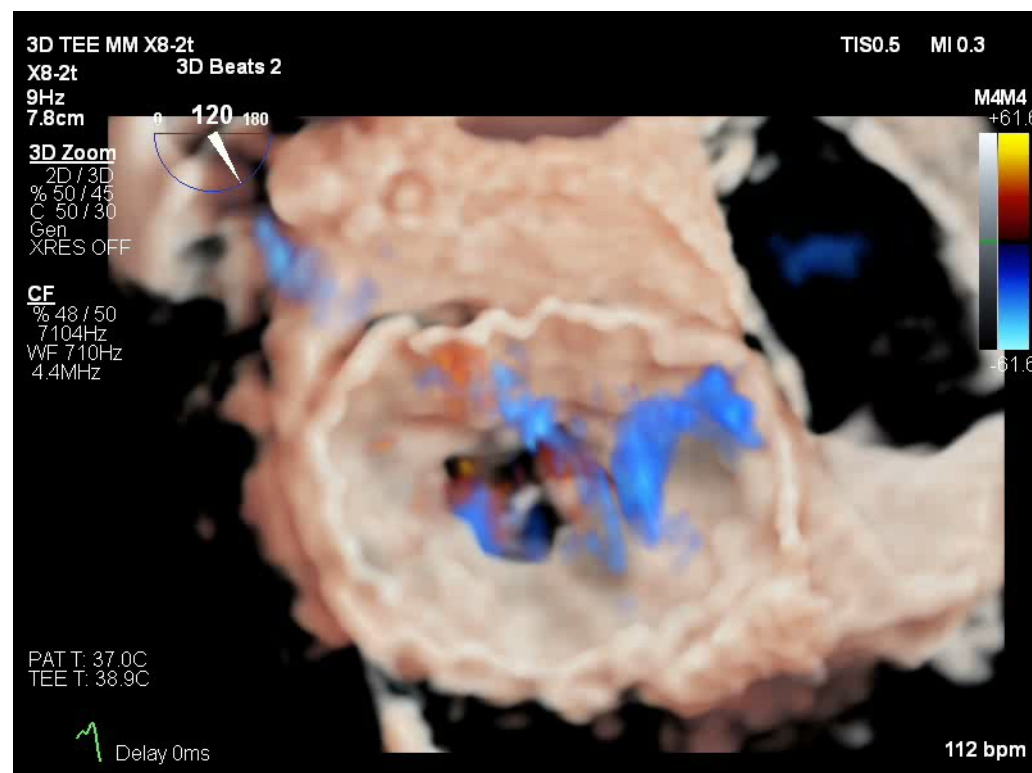
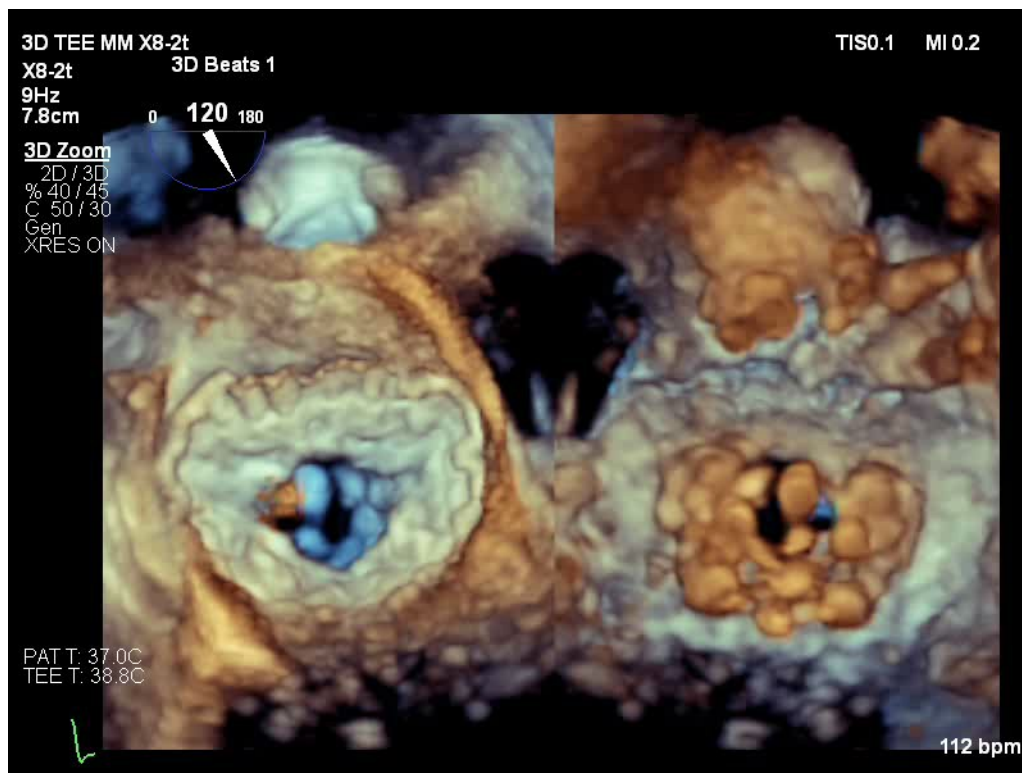
Short Long



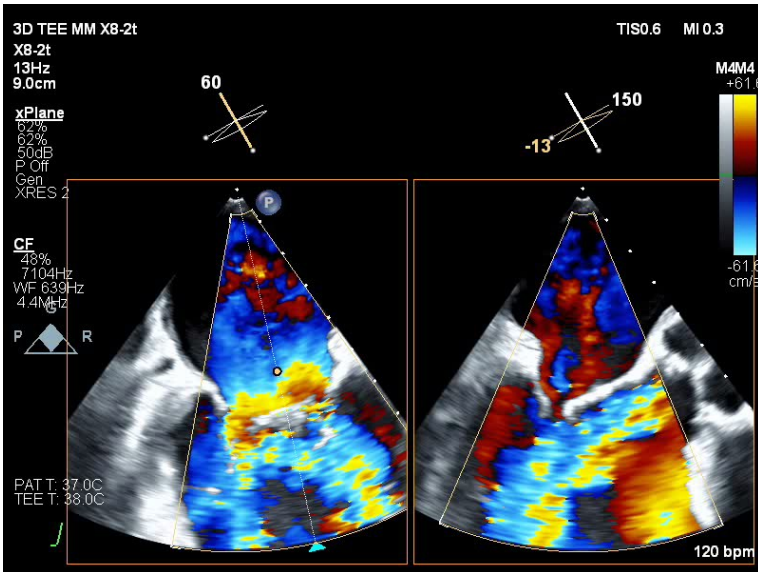
Tendyne™ Deployment



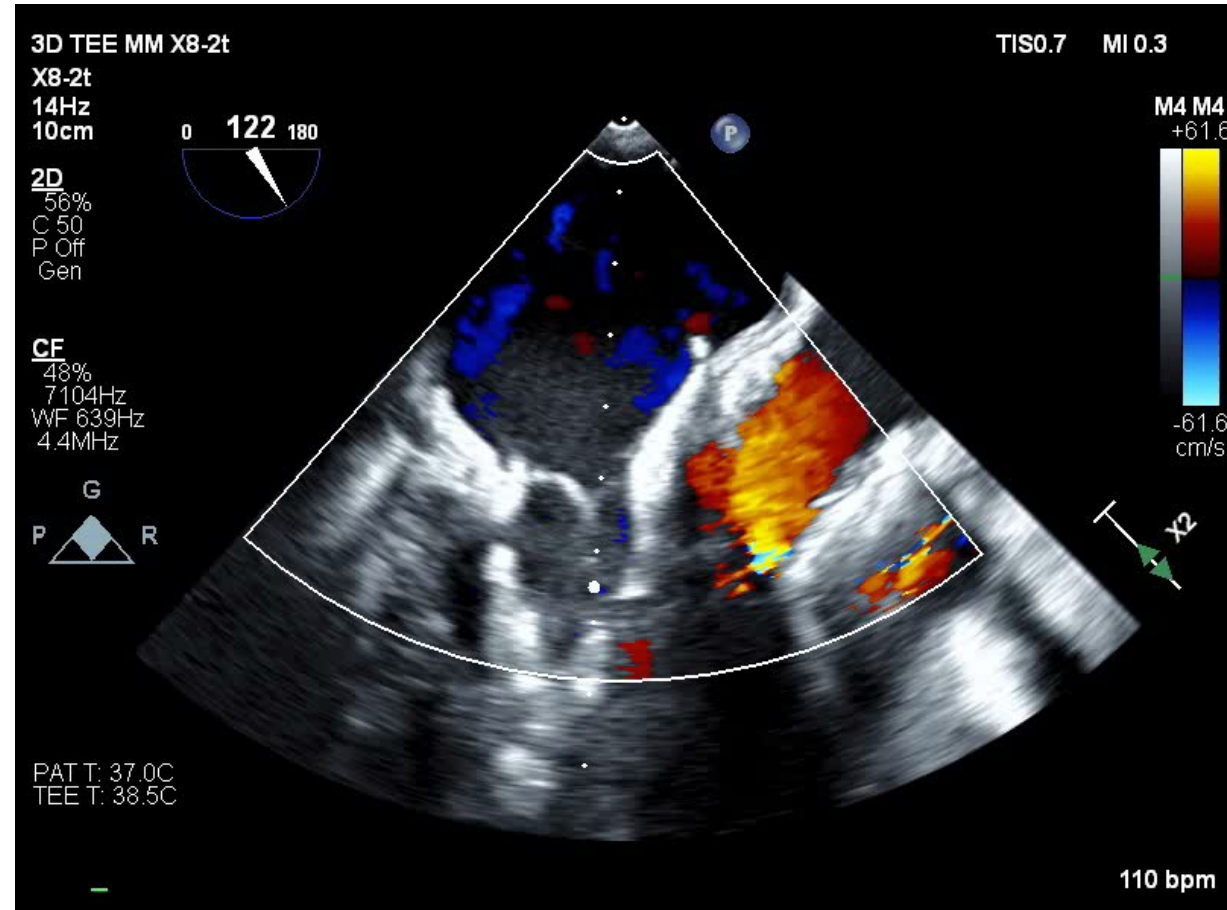
Tendyne™ Deployment



End Result

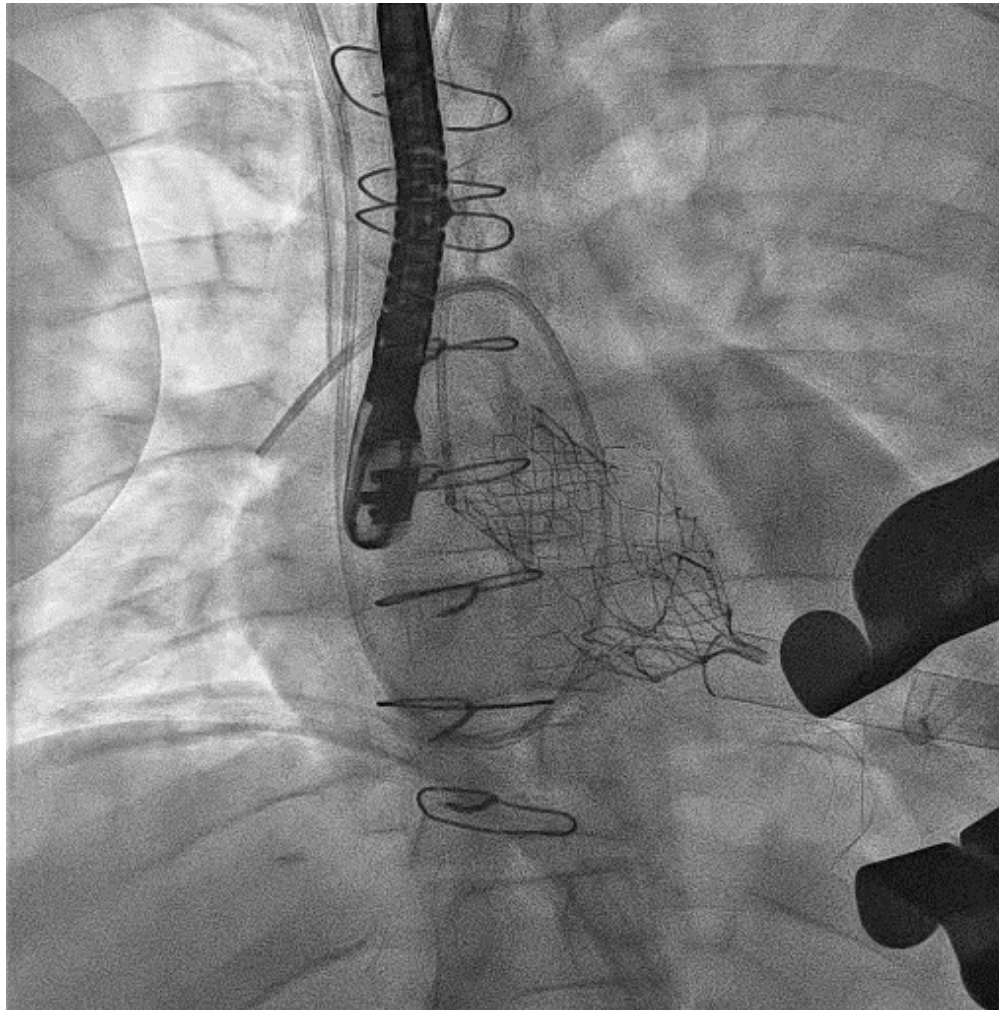


PRE



POST

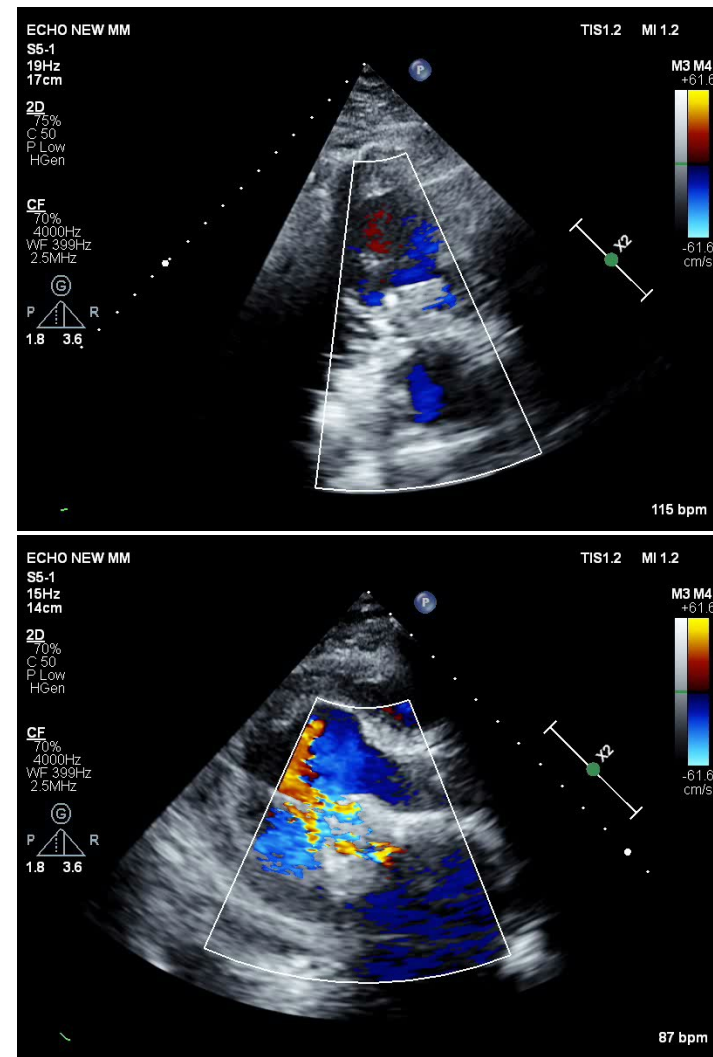
The Tango of Two Valves





Follow Up

- Extubated and awake in the cath lab
- POD 1 out of bed
- POD 6 CRTD attempt →
ICD implantation for primary prevention
- POD 7 developed shock and subsequently died



No valvular leak, Mild MS (Mean 7 mmHg)



Thank you!

מראה עיניים, אוספי ביתמונה