



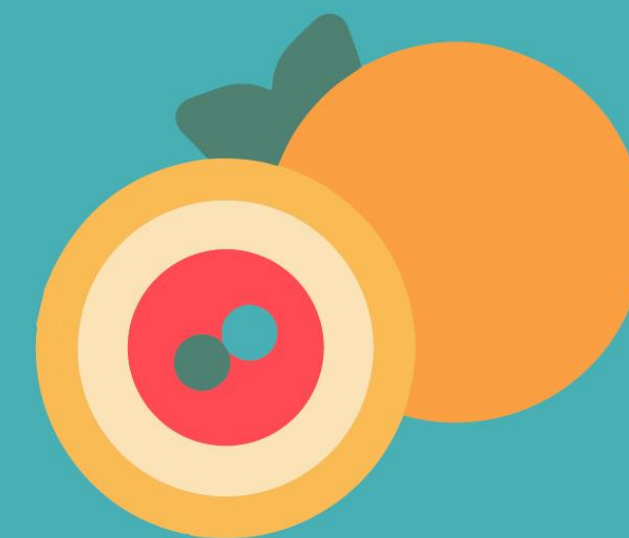
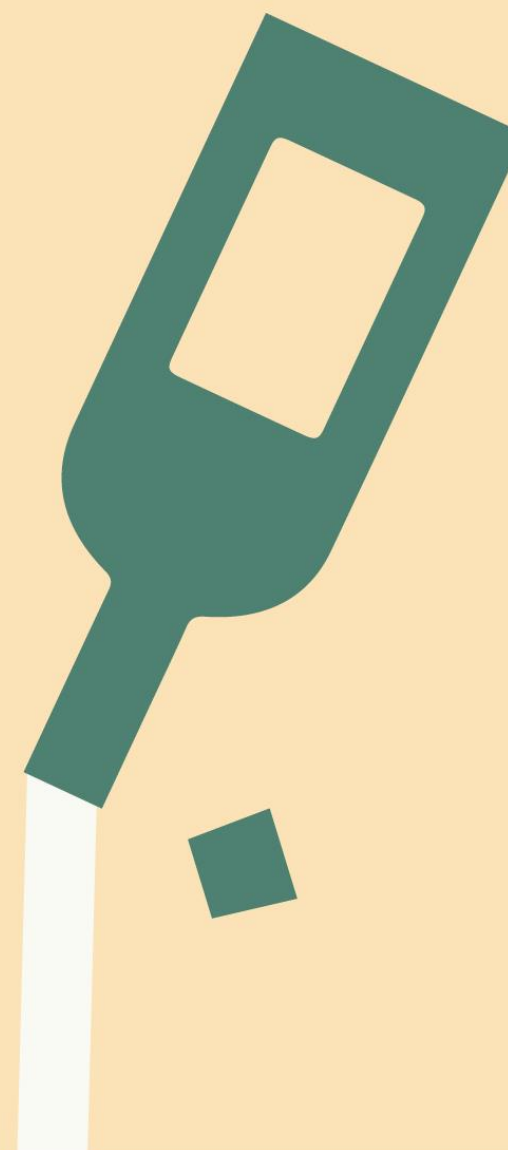
EUROVALVE

& STRUCTURAL CARDIOMYOPATHIES

NH PALERMO



**SAVE
THE DATE**
**OCTOBER
24&25, 2024**



COURSE DIRECTORS

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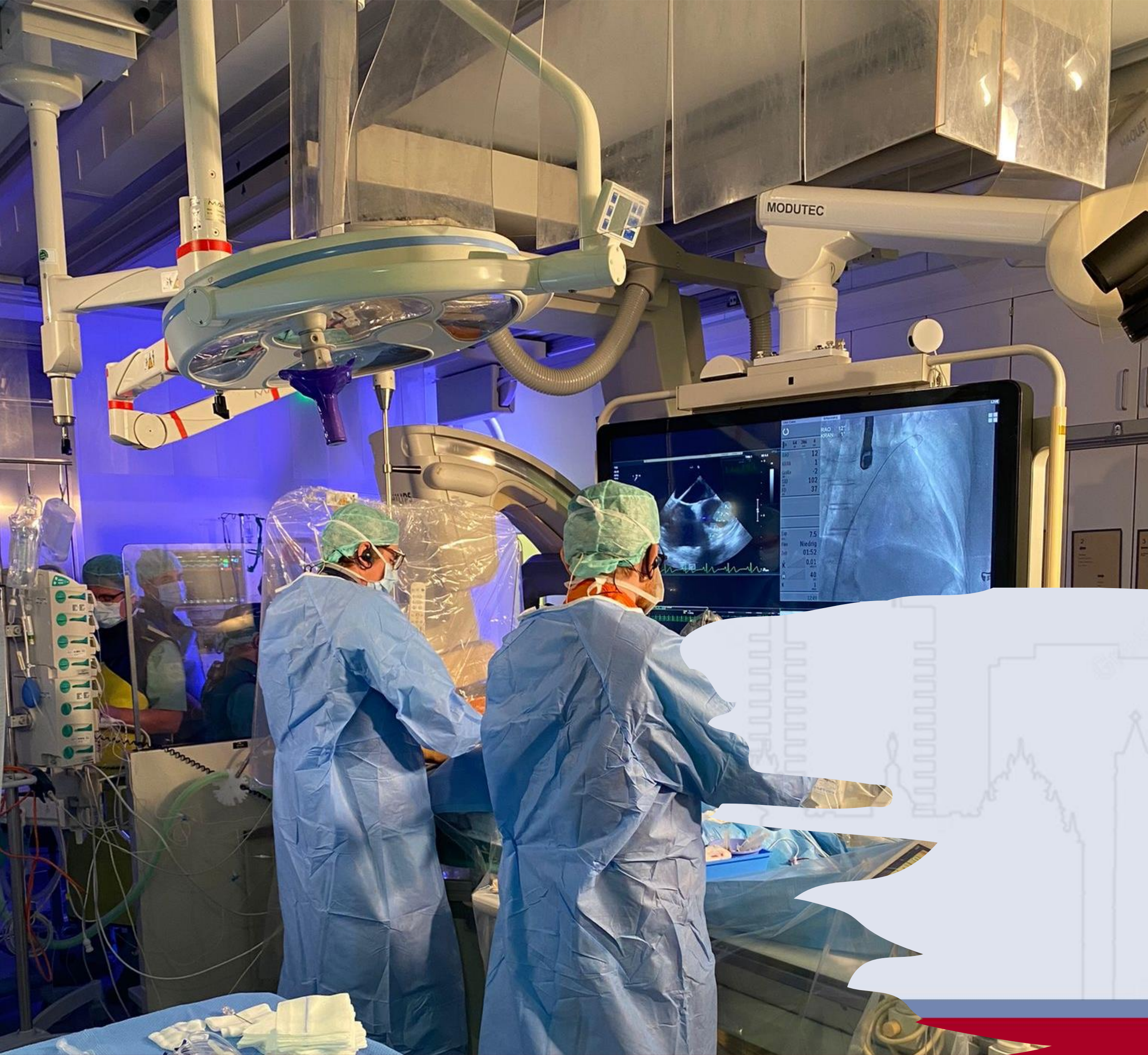
LOCAL HOST

Khalil Fattouch, Italy

Recurrent Mitral Regurgitation After TEER: Surgery

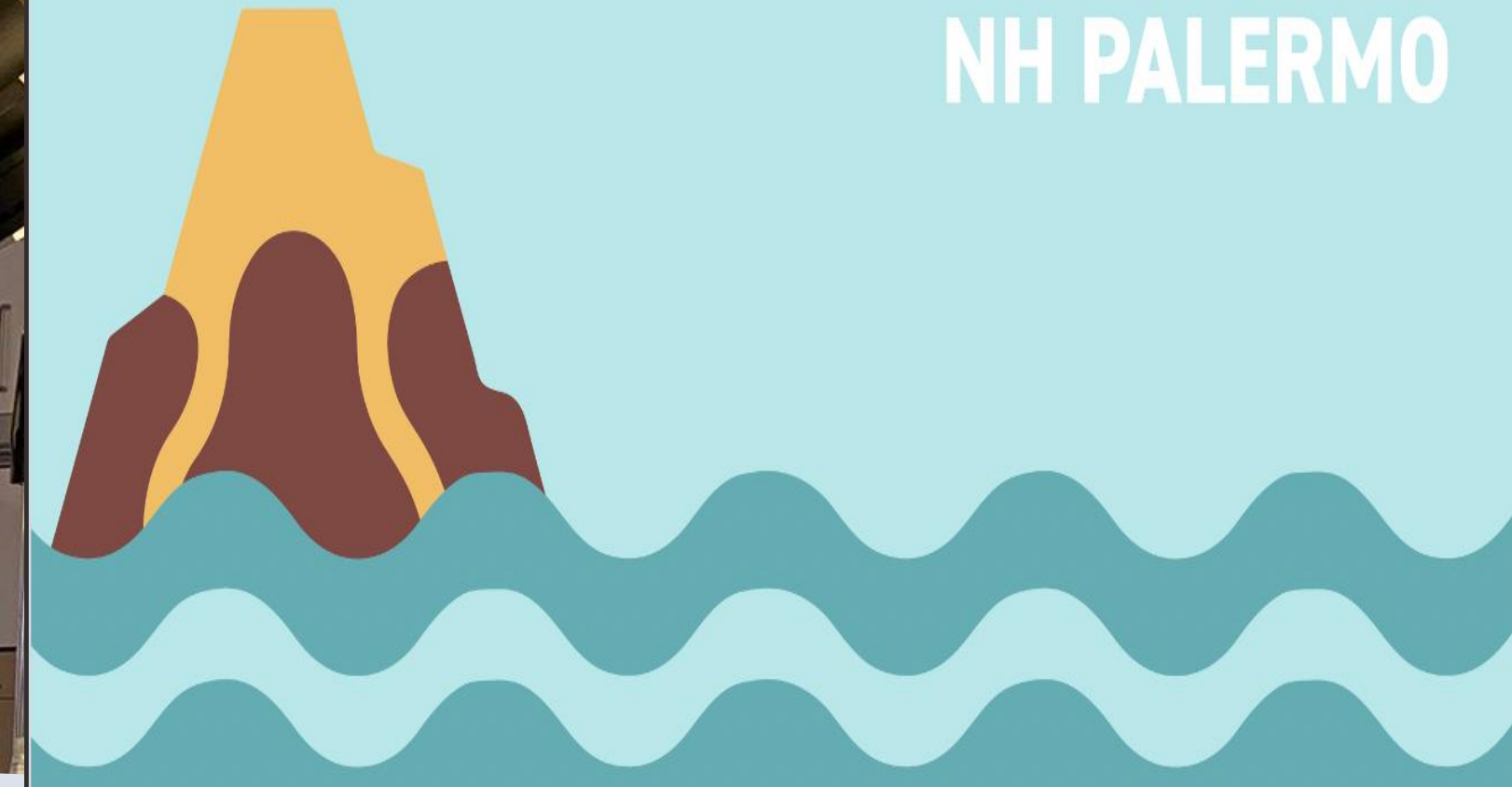
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Disclosure

None maybe

Treatment Options after M-TEER Failure

• GDMT

- Patients at high risk for surgery
- Inoperable patients
- Reduced life expectancy



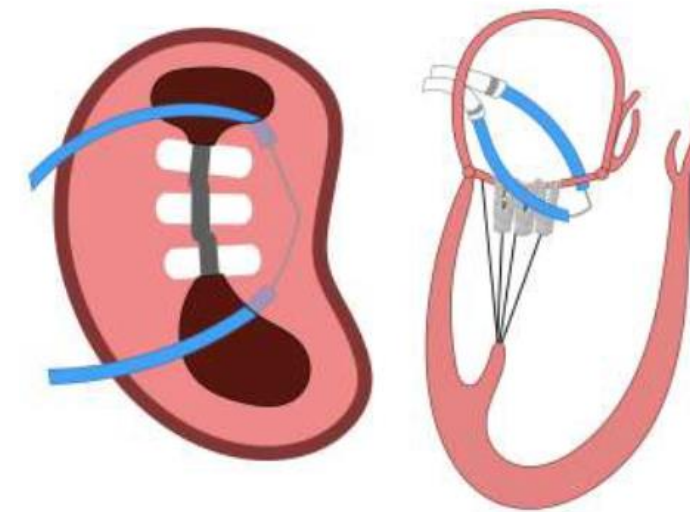
• Re M-TEER

- Patients with suitable valve anatomy
- Low risk for valve stenosis



• TMVR

- Patients with SLD
- Patients with suitable anatomy (low risk LVOTO) and electrosurgical laceration of the AML (**ELASTA**)

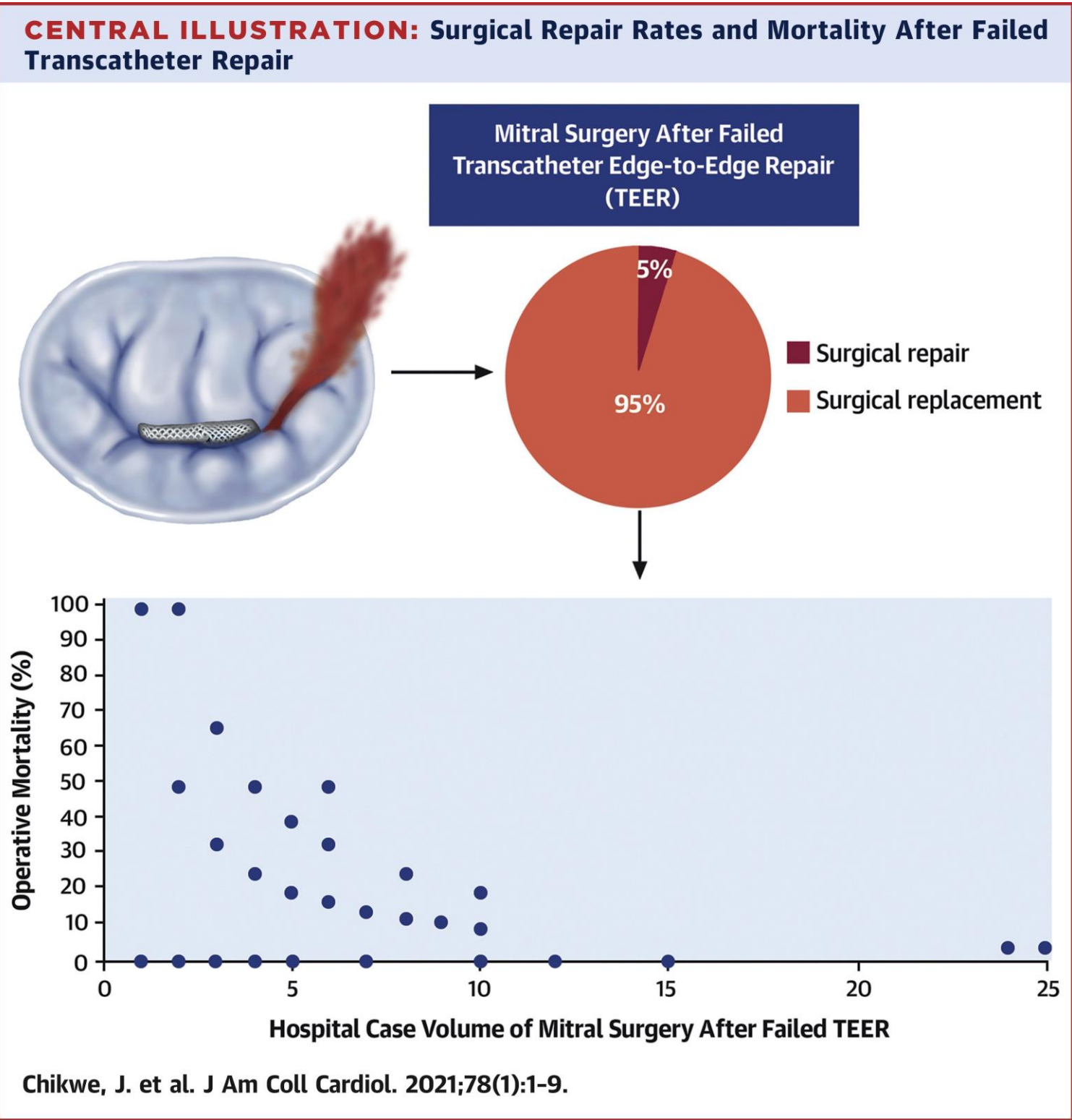


• Surgical MVR

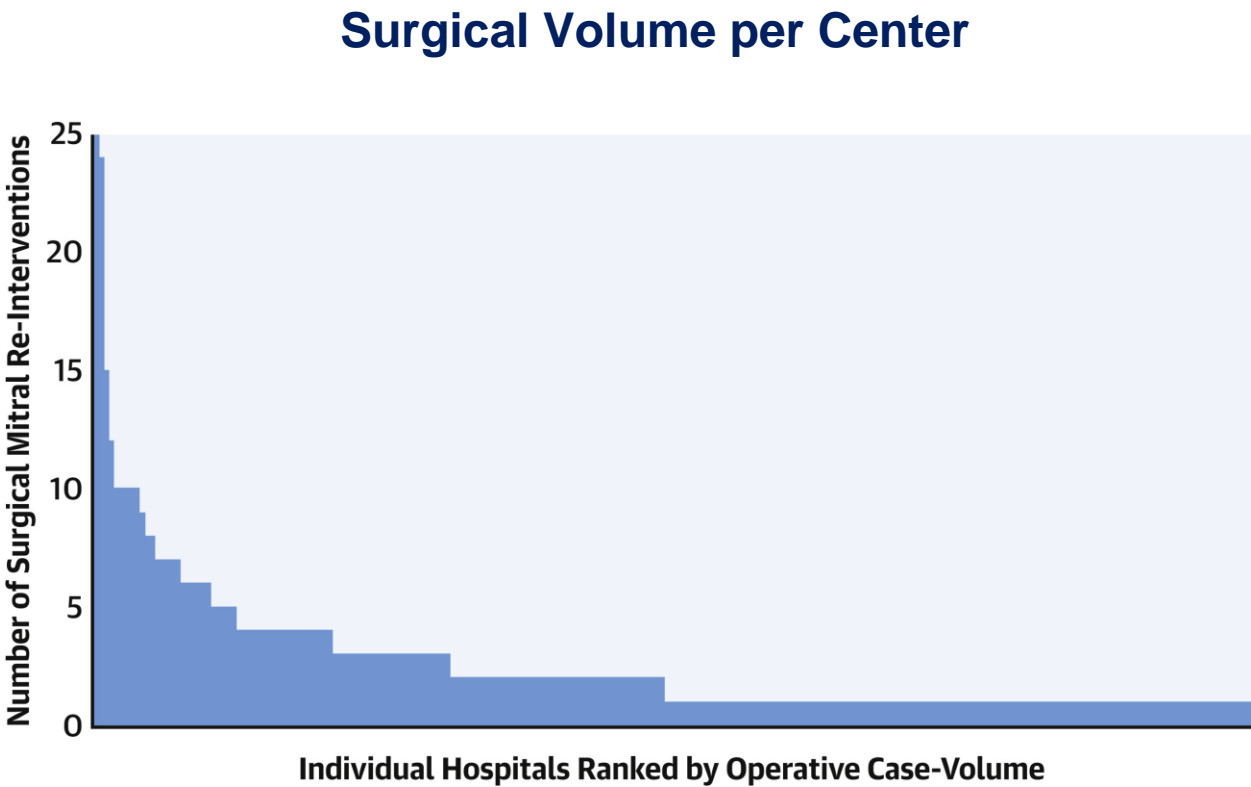
- Patients at low or moderate risk
- Patients with longer life expectancy
- Repair /Replacement



STS Database - MV Surgery after M-TEER



- STS Database
- 463 patients
- mean age 76
- Median LVEF 57%
- 38% DMR
- **STS PROM for isolated MV surgery: 6.5%**
- **Observed mortality 10.2%**
- **4.8% surgical repair rate (6.8% in DMR)**



- **Operative mortality 2.6% in centers with >10 cases**
- **Operative mortality 12.4% in centers with <10 cases**

Mayo Clinic Experience with MV Surgery after M-TEER Failure



41 Patients with Failed TEER

STS-PROM 9.4%

51% Previous Cardiac Surgery



8 months after TEER

100% Mitral Valve Replacement

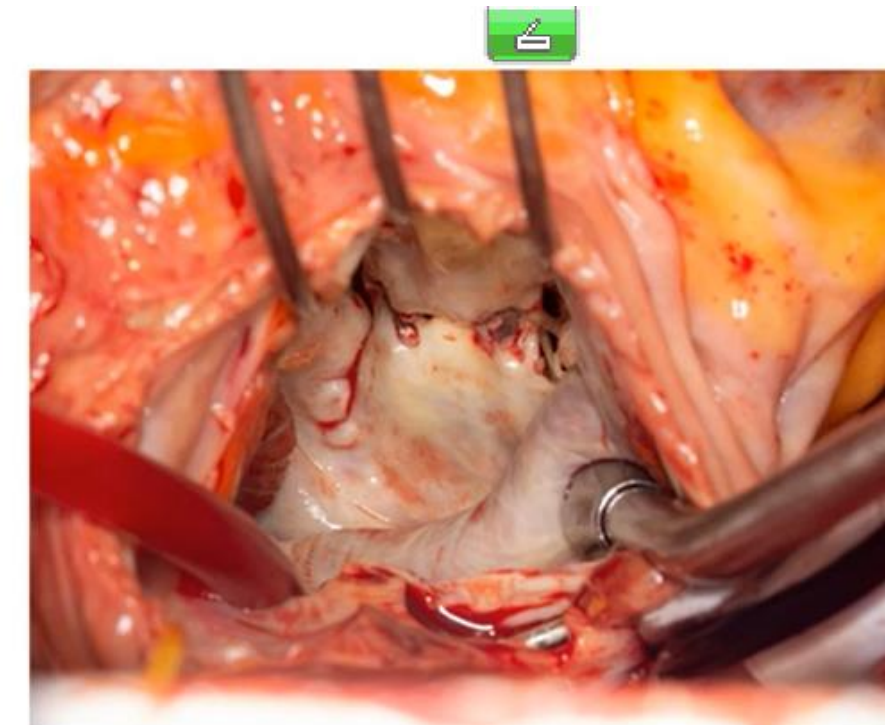


Operative mortality 5% (Observed:Expected Ratio 0.53)

One year survival 79%

Outcomes similar in primary and reoperative cases

Mitral valve replacement can be performed safely after failed TEER with operative mortality lower than expected even in high-risk patients.



Minimally Invasive Robotic MV Surgery after M-TEER Failure

> [Ann Thorac Surg.](#) 2022 Mar;113(3):e223-e225. doi: 10.1016/j.athoracsur.2021.05.083.
Epub 2021 Jun 29.

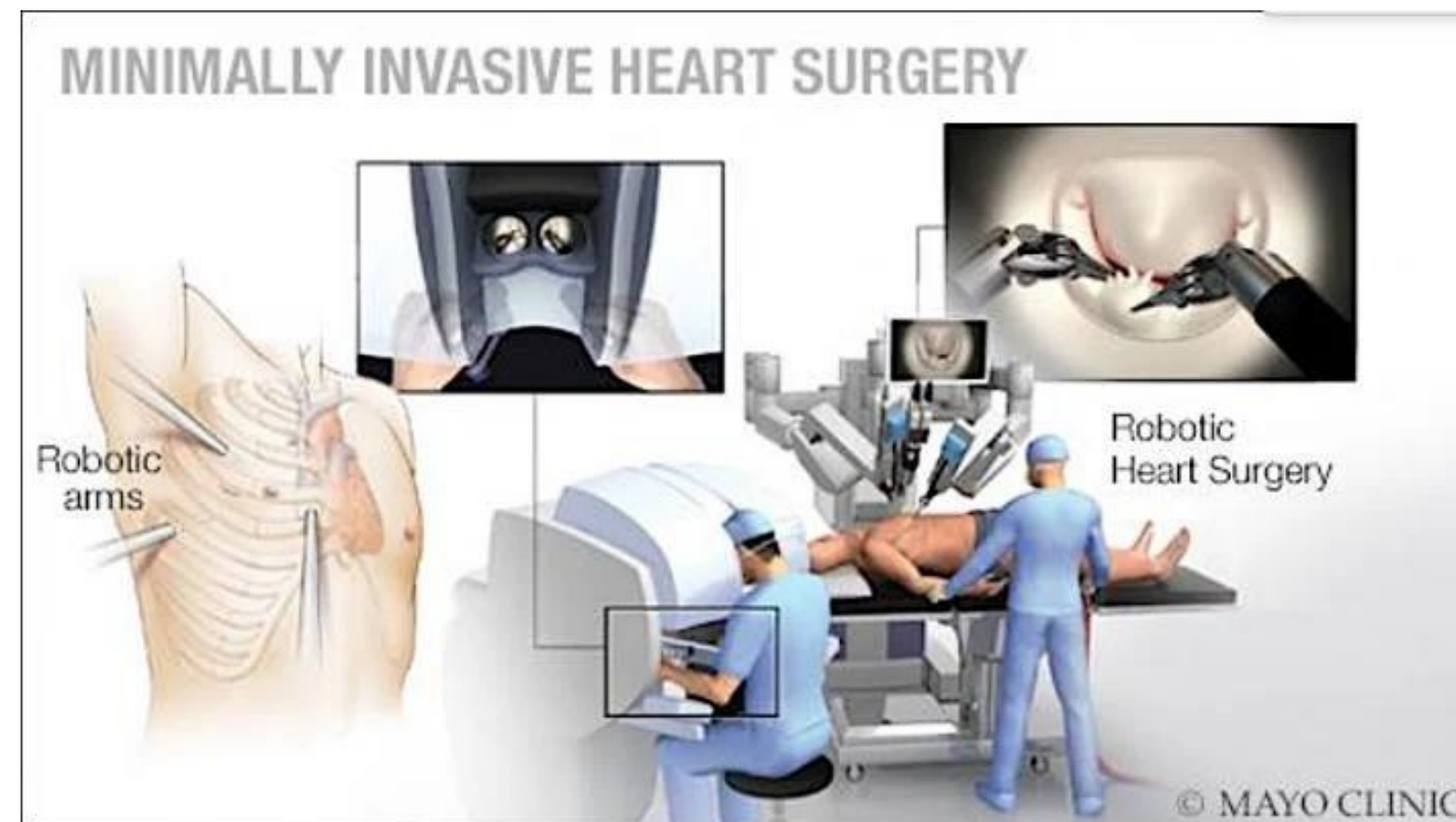
Robotic Mitral Valve Repair After Failed Transcatheter Edge-to-Edge Repair

Georgina Rowe¹, George Gill¹, Alfredo Trento¹, Dominic Emerson¹, Amy Roach¹,
Danny Ramzy¹, Joanna Chikwe²

Affiliations [+ expand](#)

PMID: 34197828 DOI: [10.1016/j.athoracsur.2021.05.083](#)

- Single Center Experience
- Robotic MVR after TEER failure
- 9 patients
- **Repair rate 88.9% (8/9)**
- **Freedom from MR>2+ 87.5%**
- Median FU 1.9 years



Minimally Invasive Surgical MVR

Fully Endoscopic with 3D Visualisation



Sta

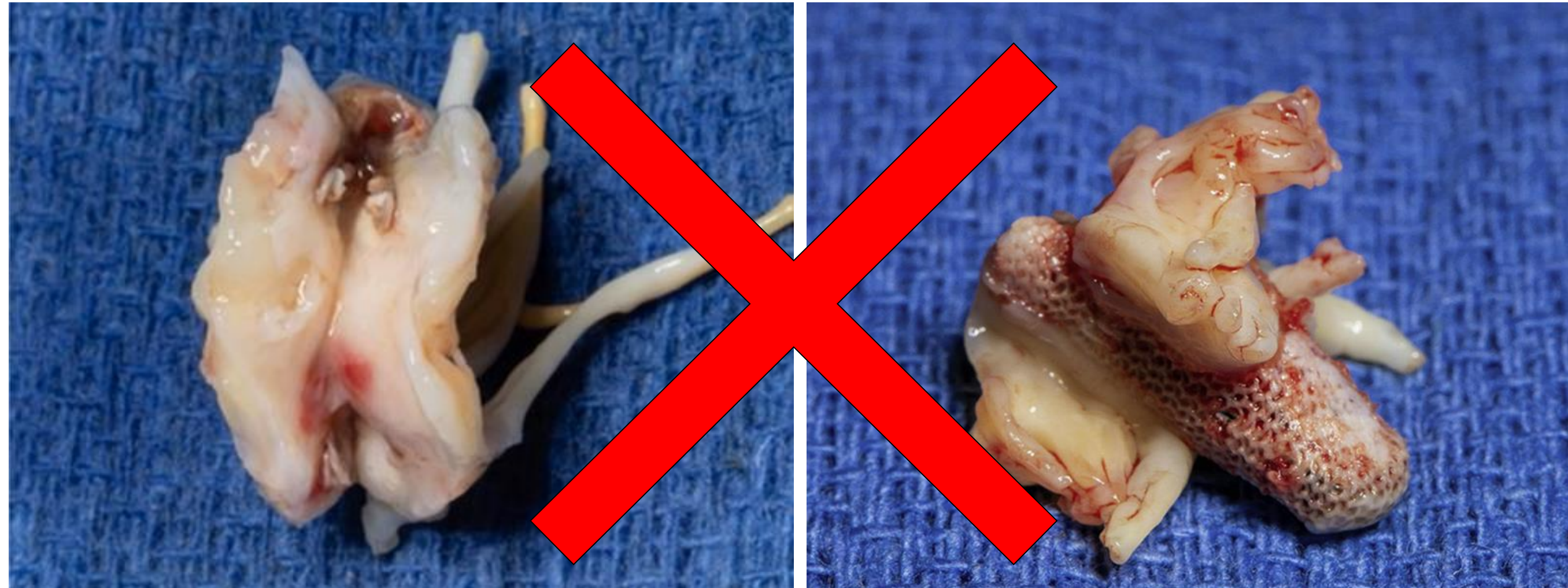
and

Vascular Center Mainz

How to Retrieve Clips without Leaflet Damage

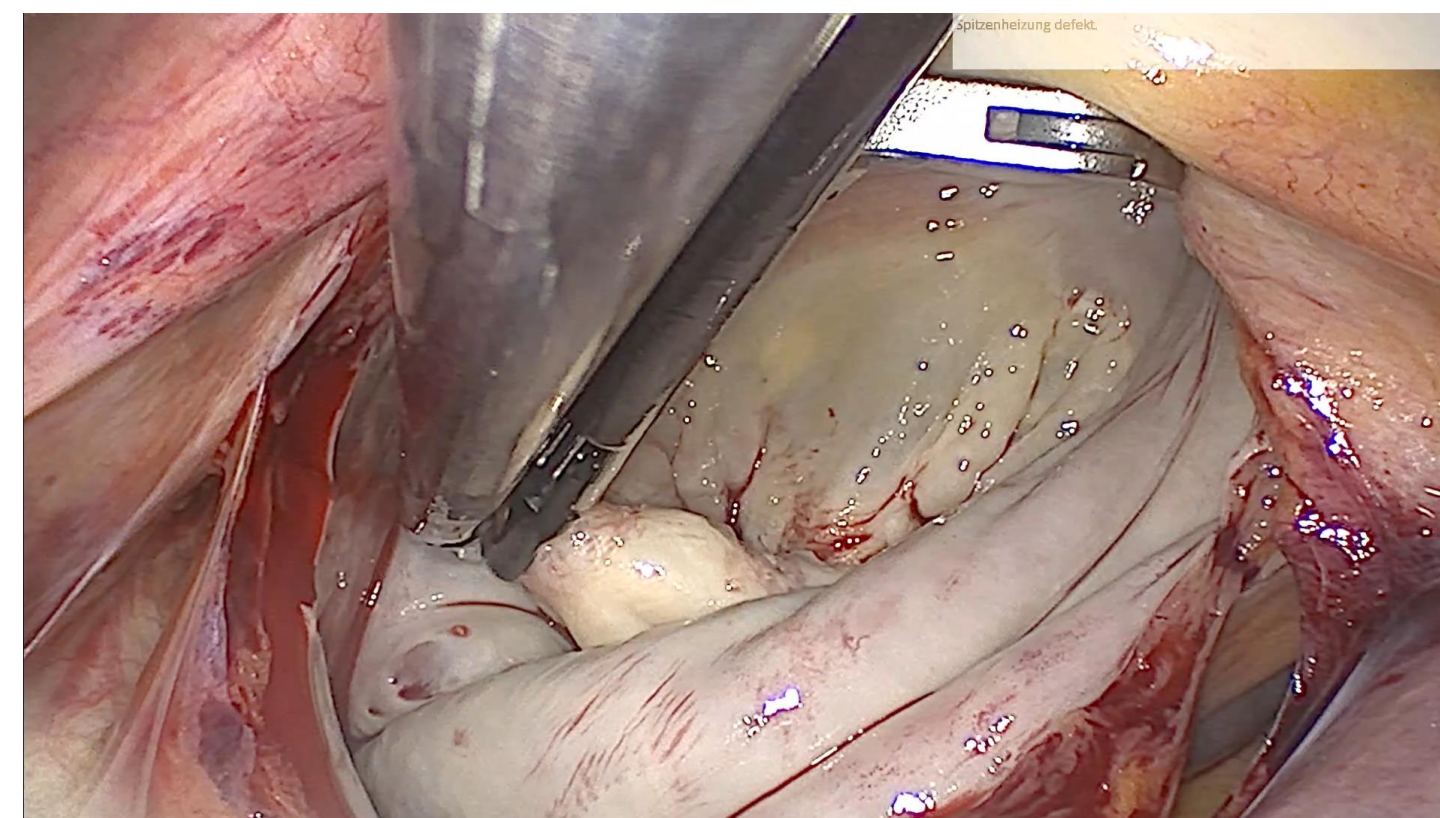
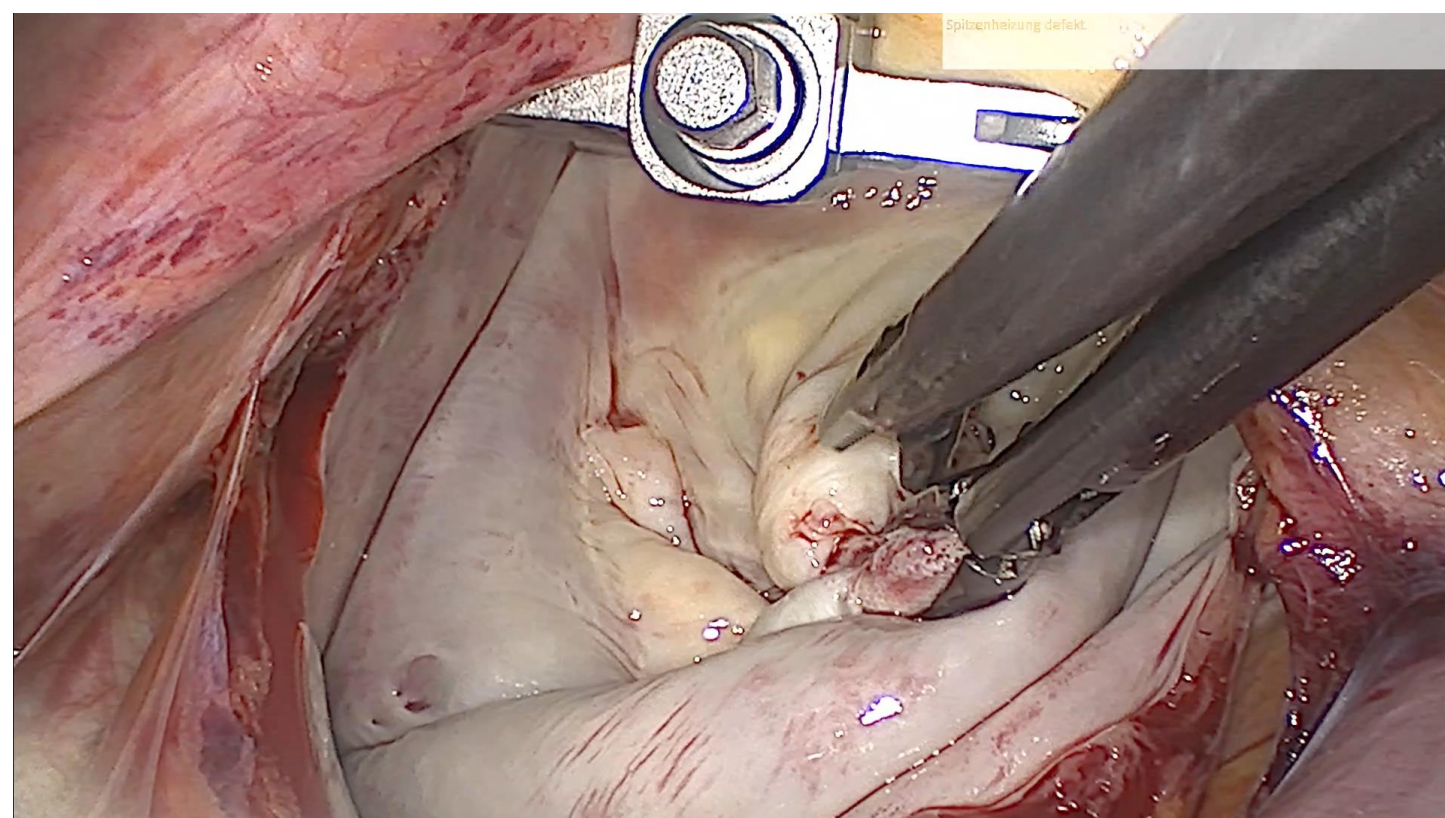
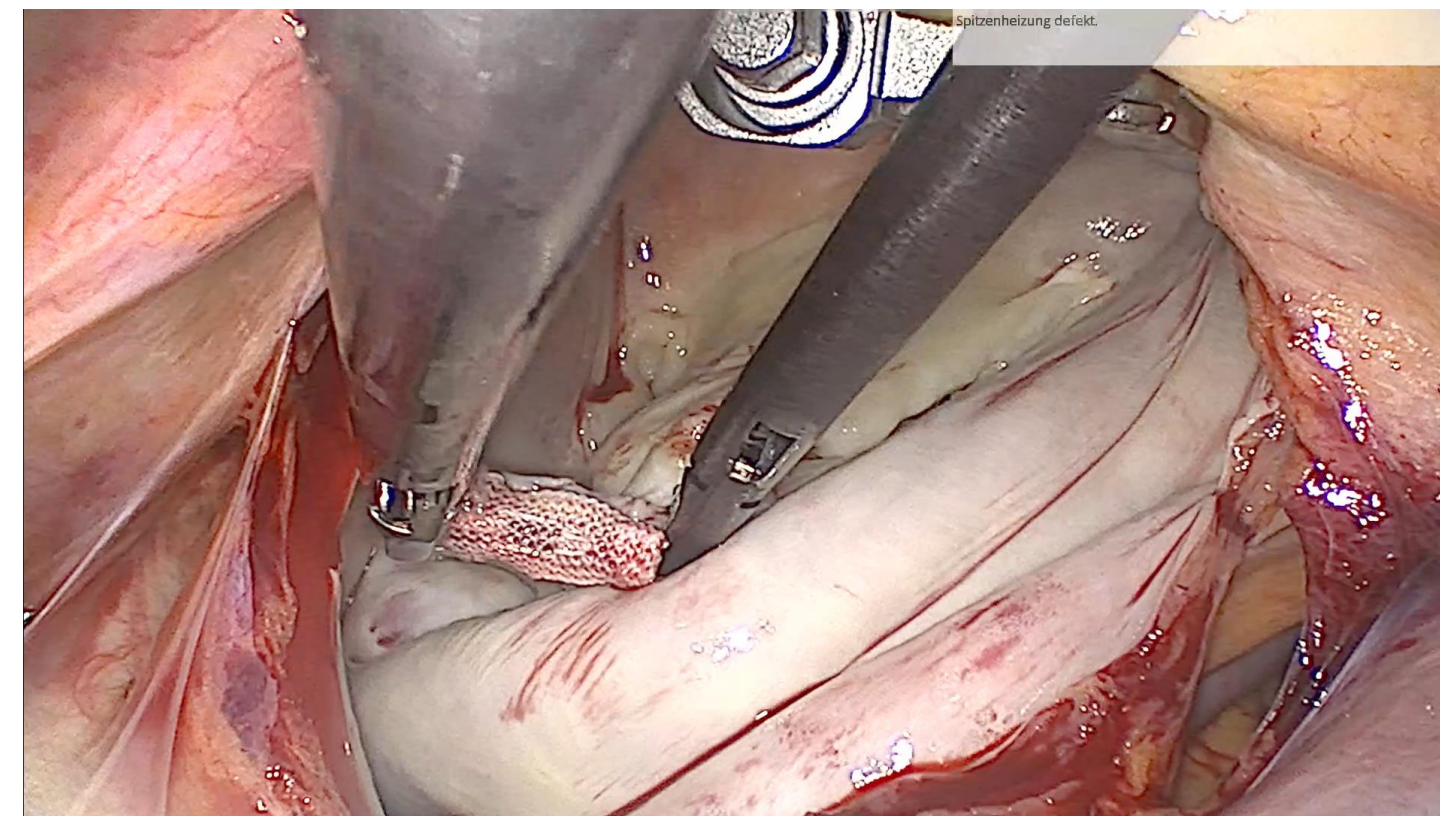
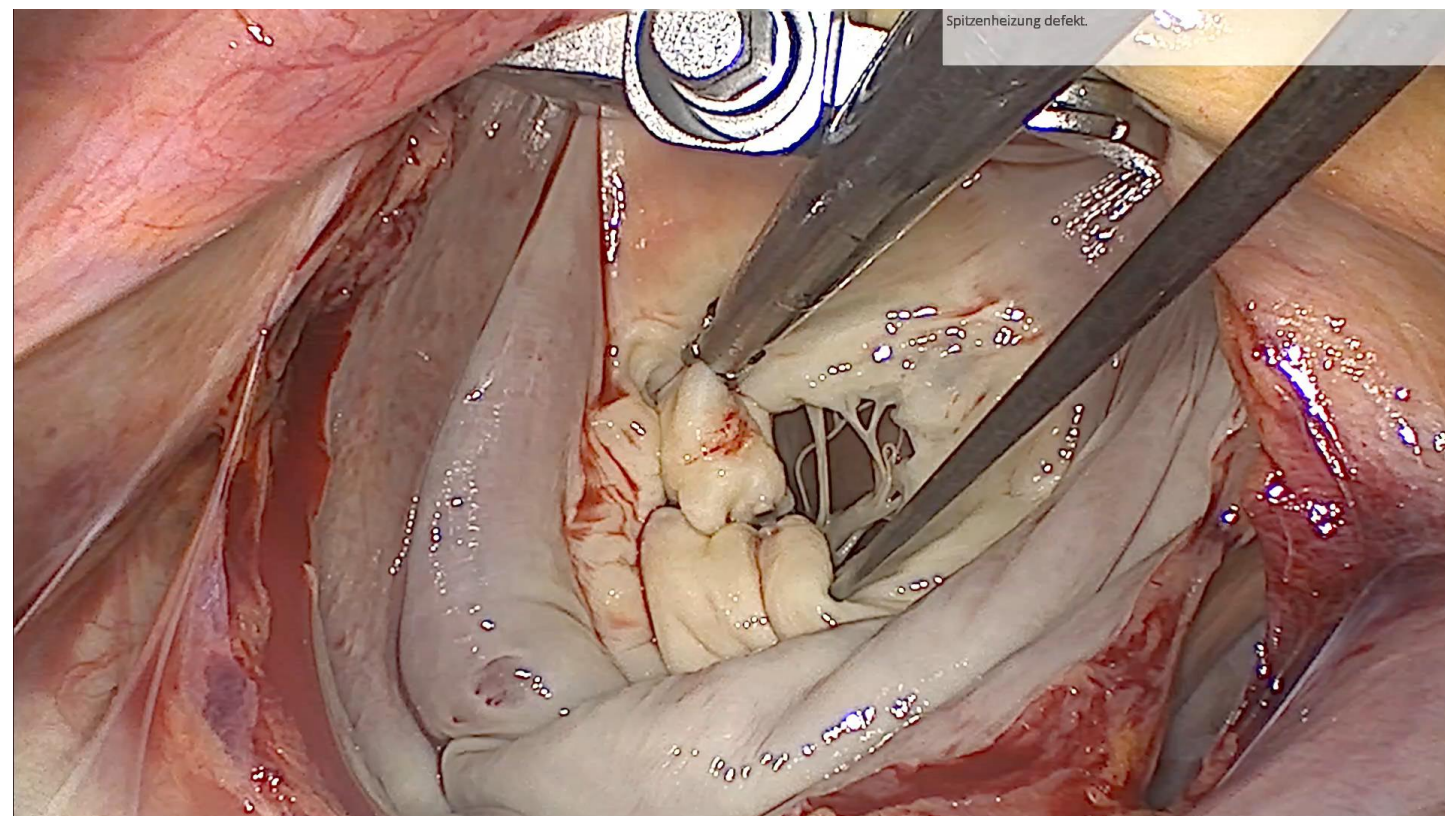


Single Leaflet
Detachment

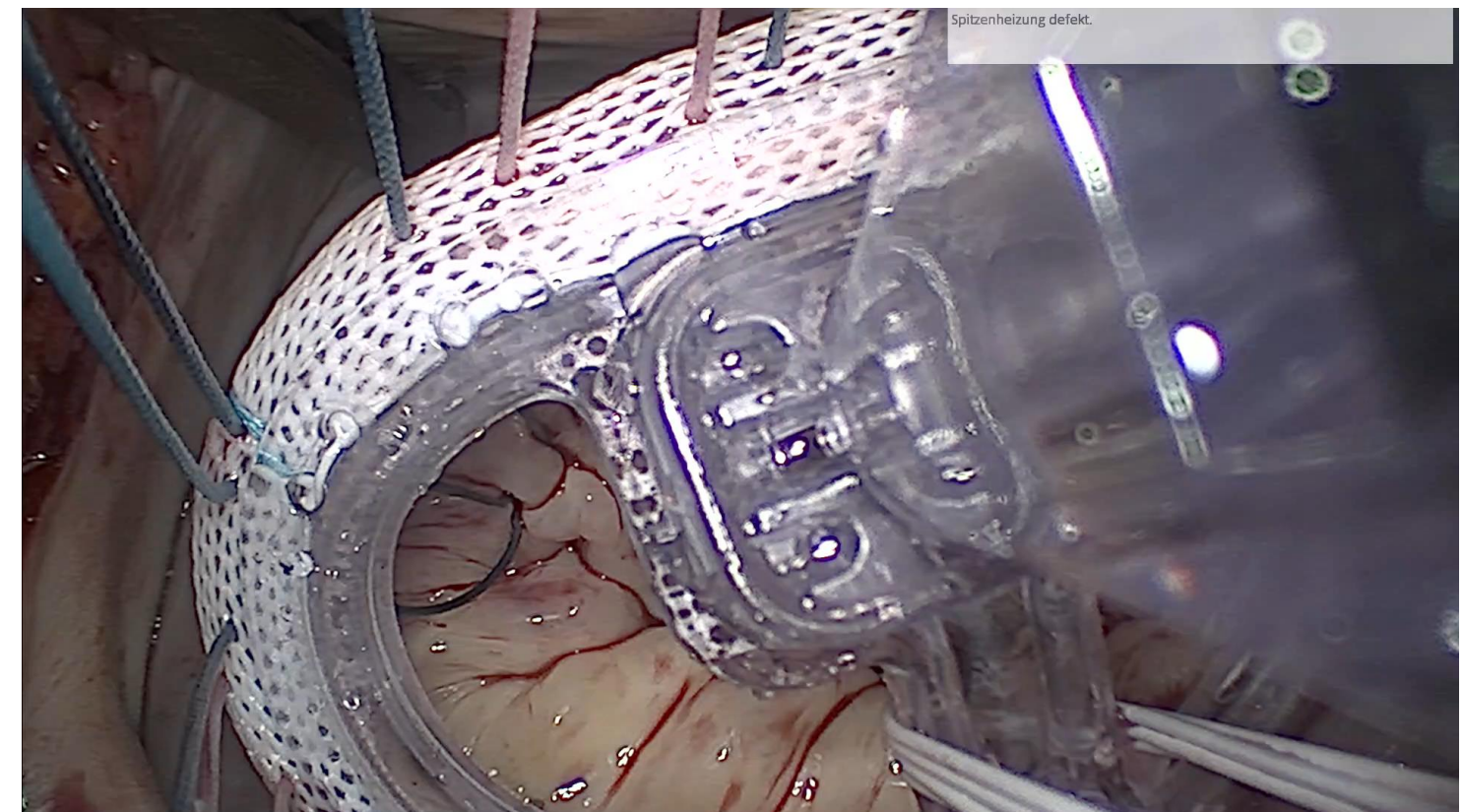
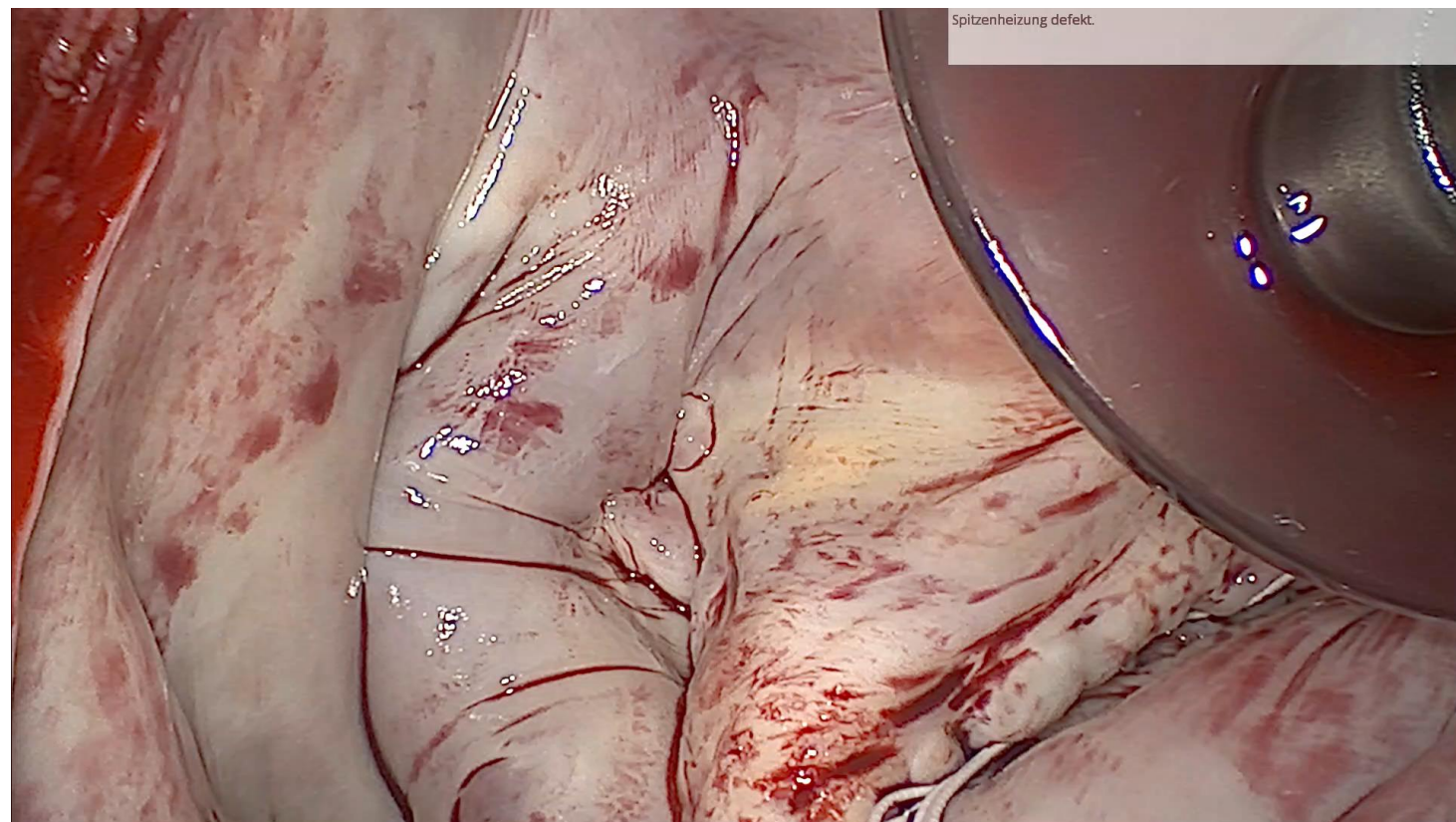
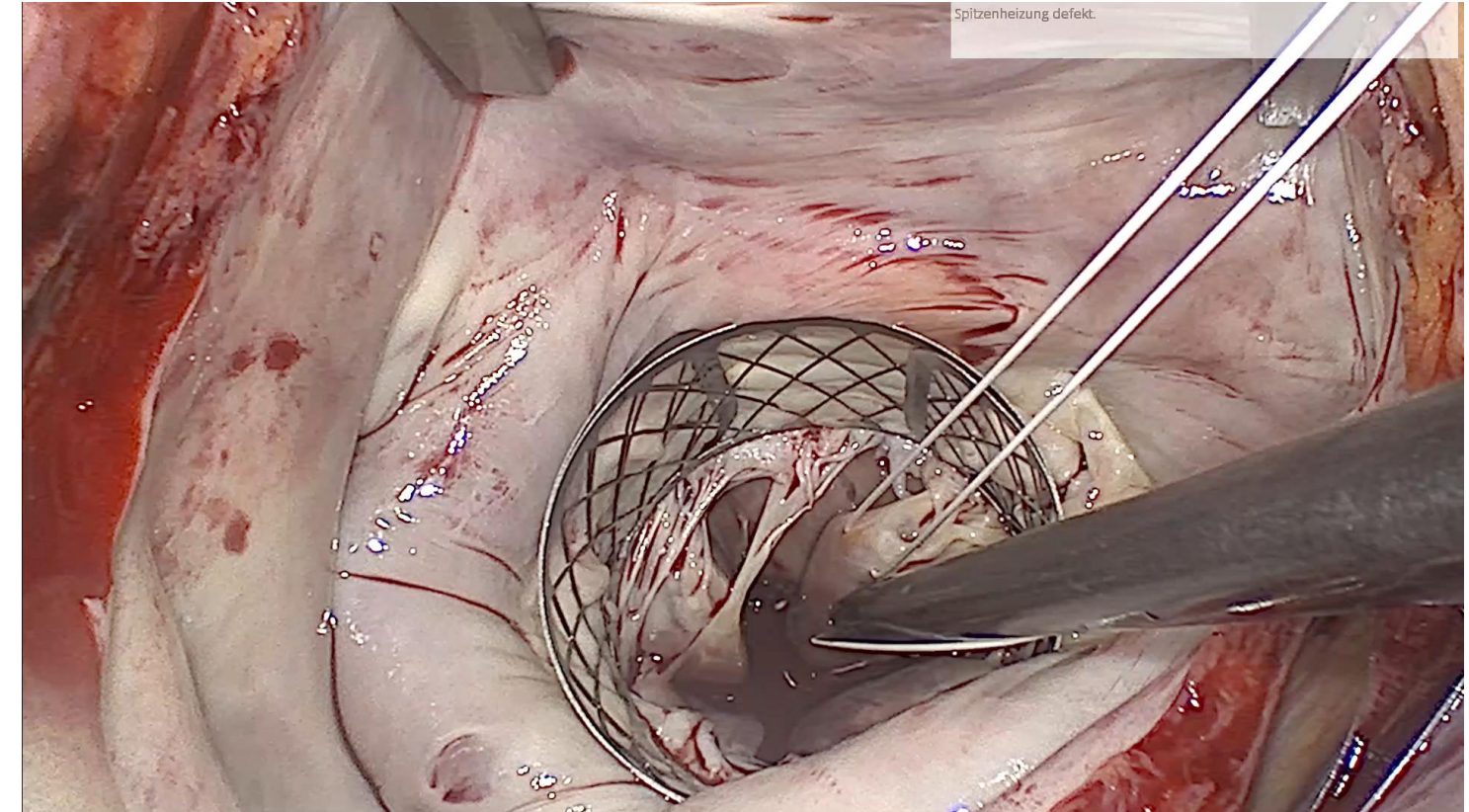
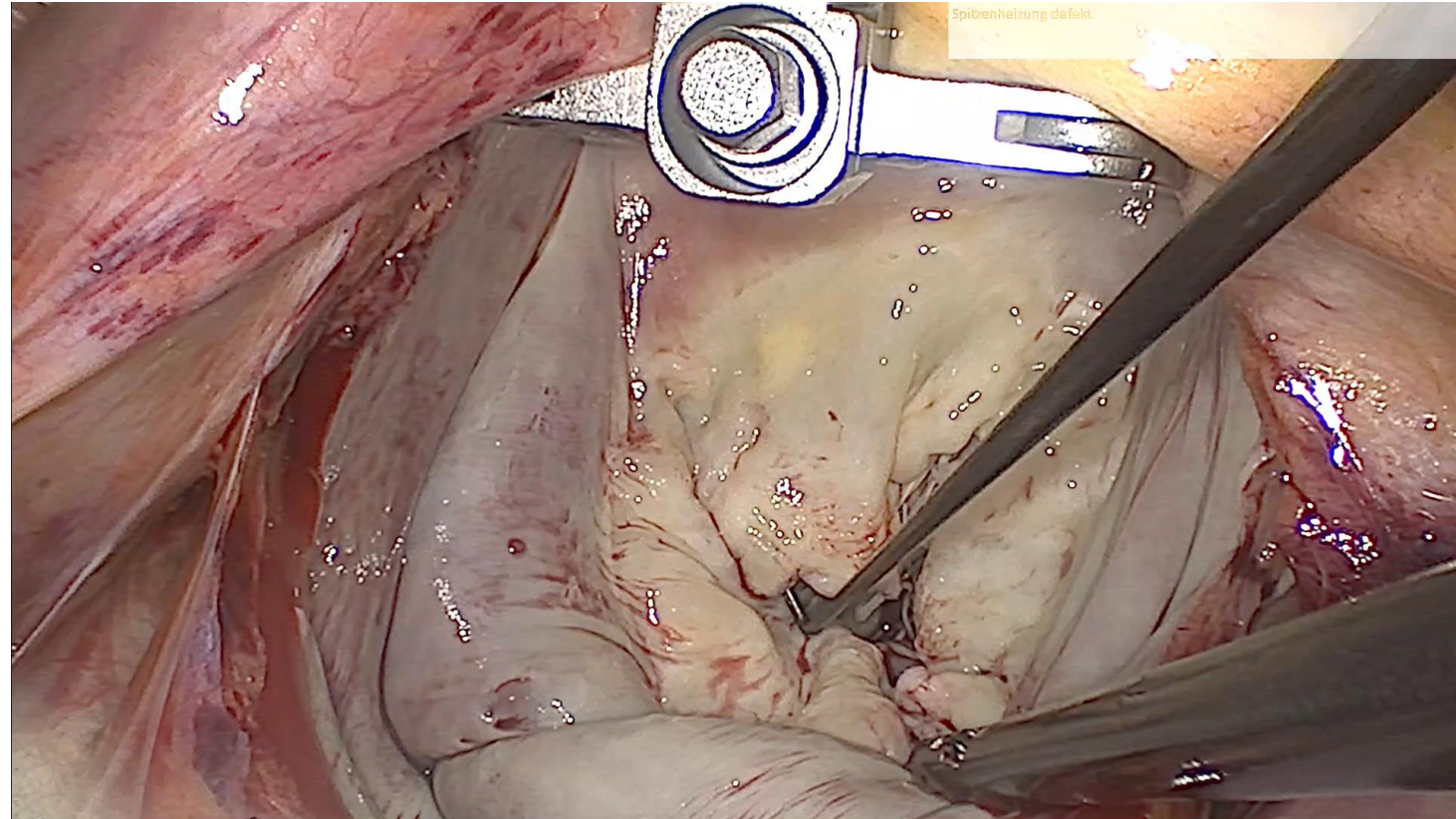


- Do not cut out clips
- Peel clips off

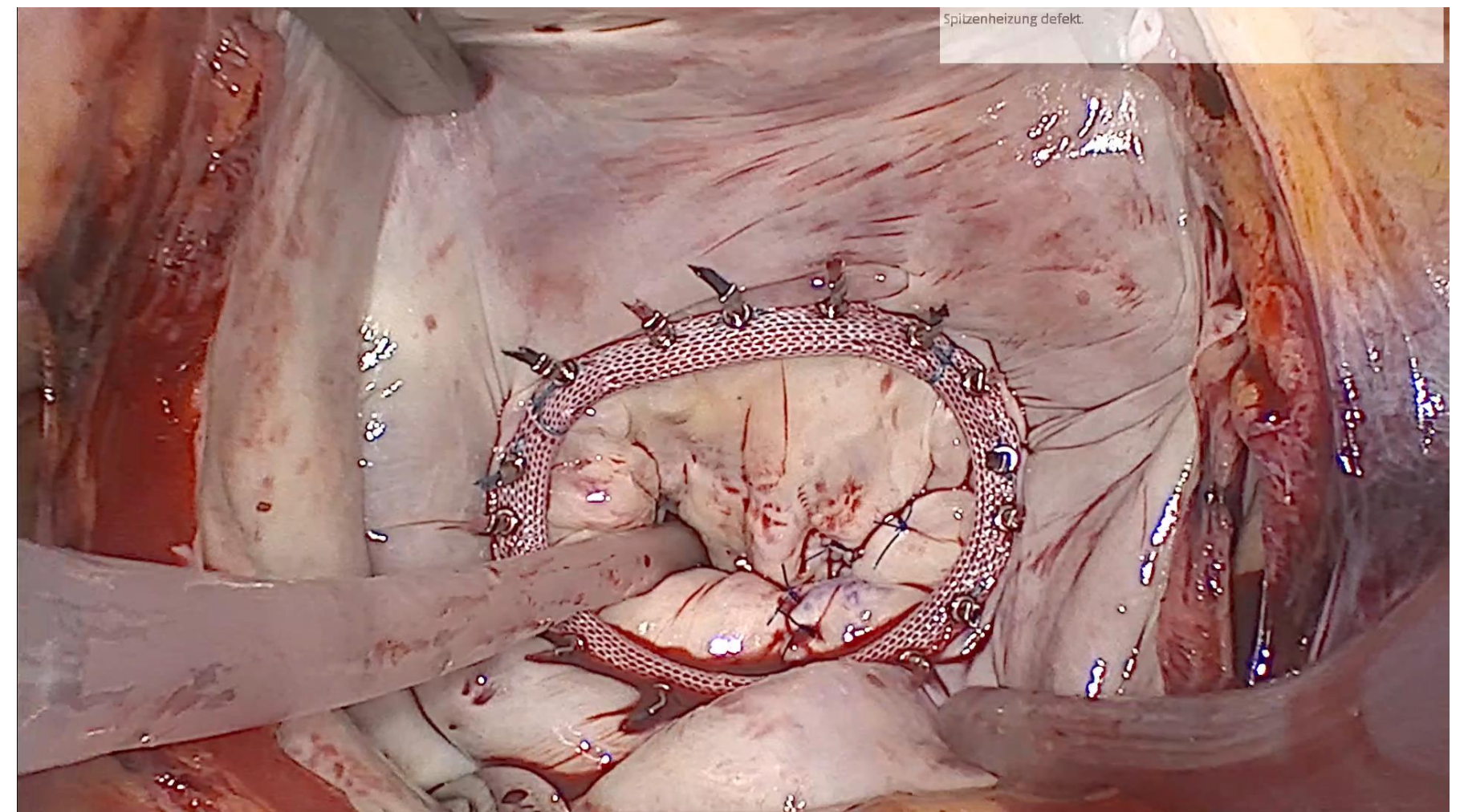
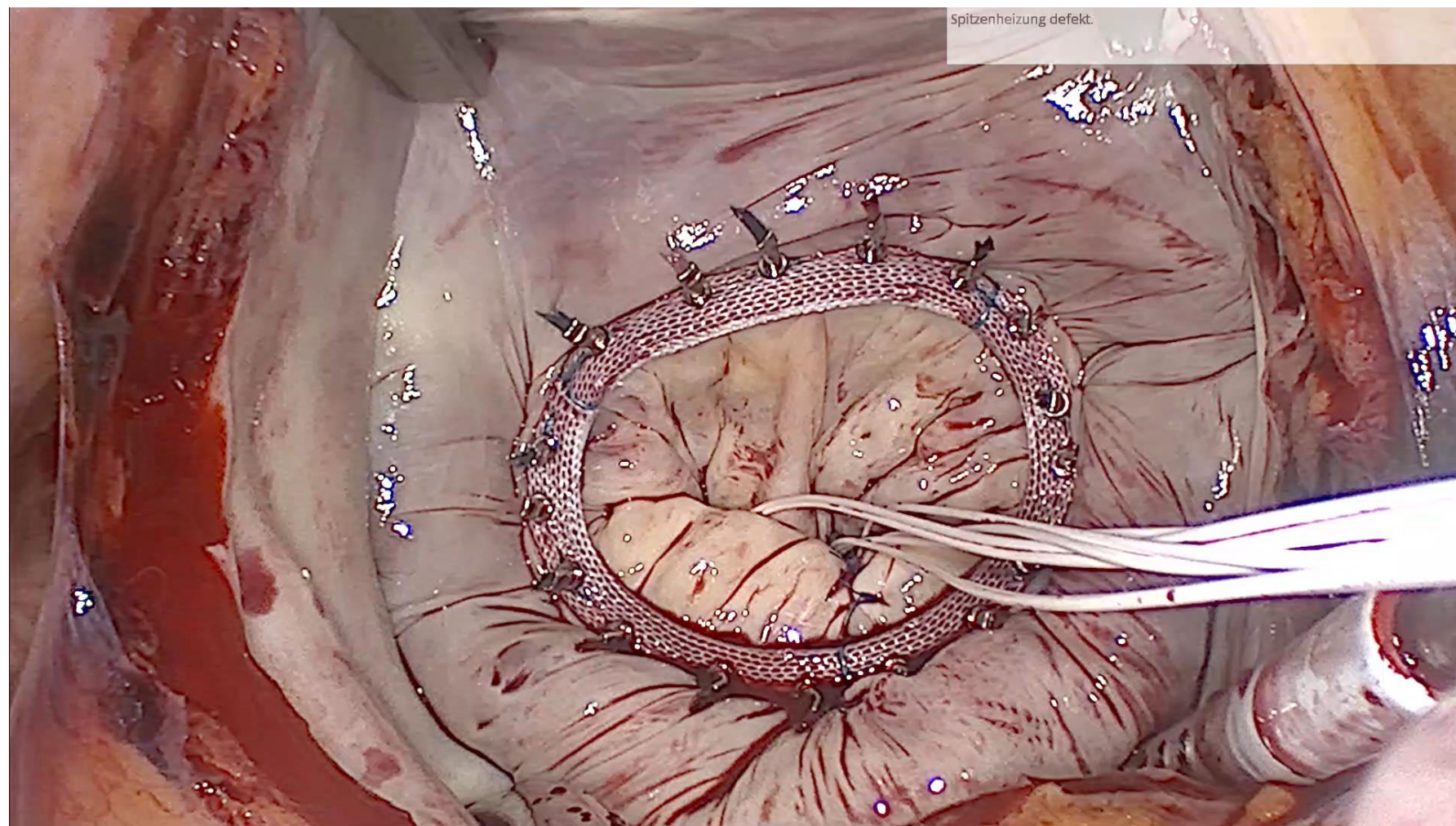
Surgical MV Repair after M-TEER



Surgical MV Repair after M-TEER



Surgical MV Repair after M-TEER



Surgical MV Repair after M-TEER

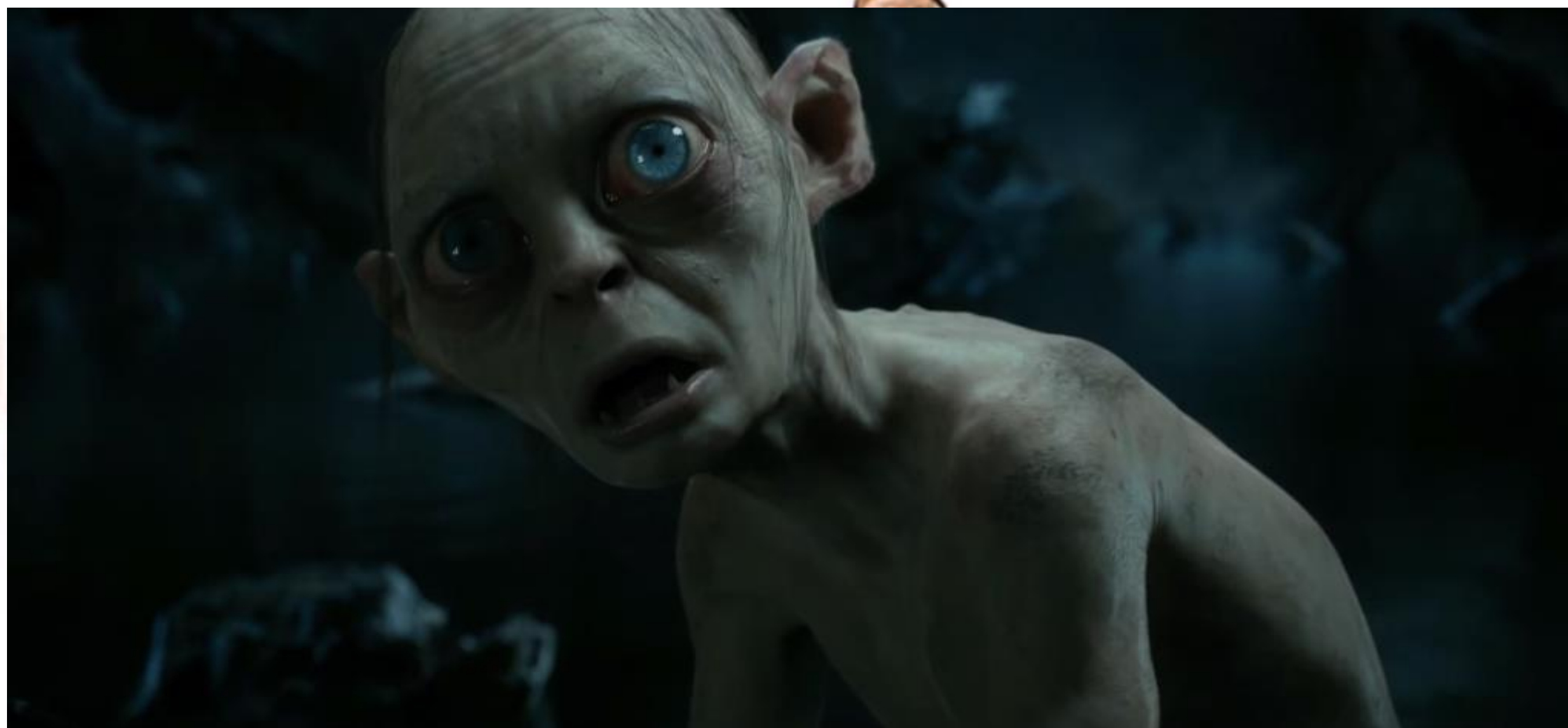
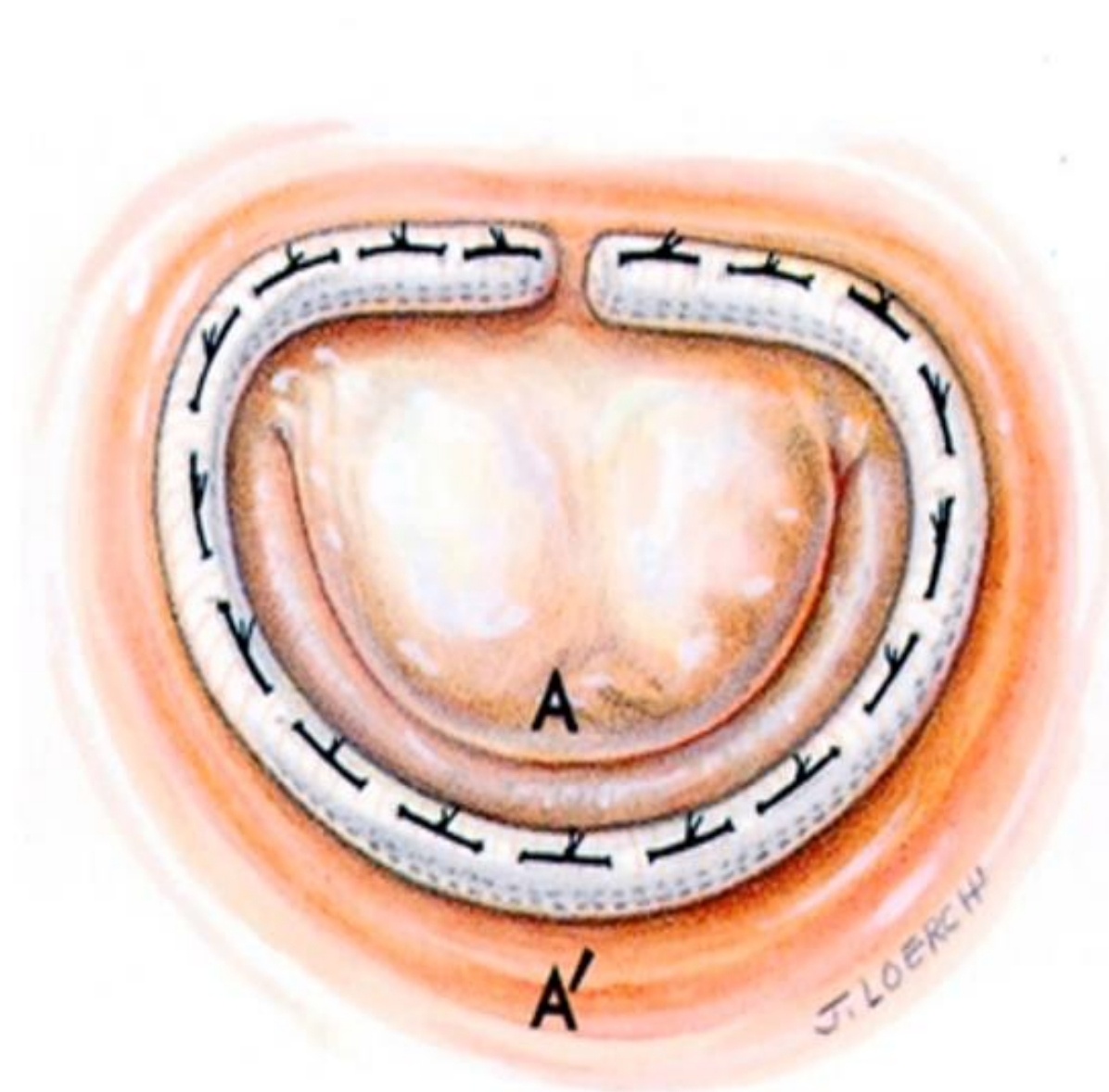
Single Operator (Personal) Experience

Personal Experience

2012-2024	Repair	Replacement
N=48	39 (81.3%)	9 (18.7%)
DMR/FMR	33/6	1/8
+TVR	5	2
MIS MVR	89.7%	77.8%
30 d Mortality	0 (0%)	1 (2.1%)

Surgical Mitral Valve Repair in FMR

Undersized Annuloplasty ?



Prognostic Factors for Failure after Surgical and Interventional MVR

Tethering	asymetric	symetric
Posterior leaflet angle (°)	<45	>45
Systolic sphericity index	<0,7	>0,7
LVEED (mm)	<65	>65
Tenting height (mm)	<1cm	>1cm
Interpapillary muscle distance (mm)	< 2cm	>2cm
Likelihood of durable repair	high	low

- (Symetric) Tenting height >10mm
- LVEDD > 65mm



Volume Outcome Relations in Mitral Valve Surgery

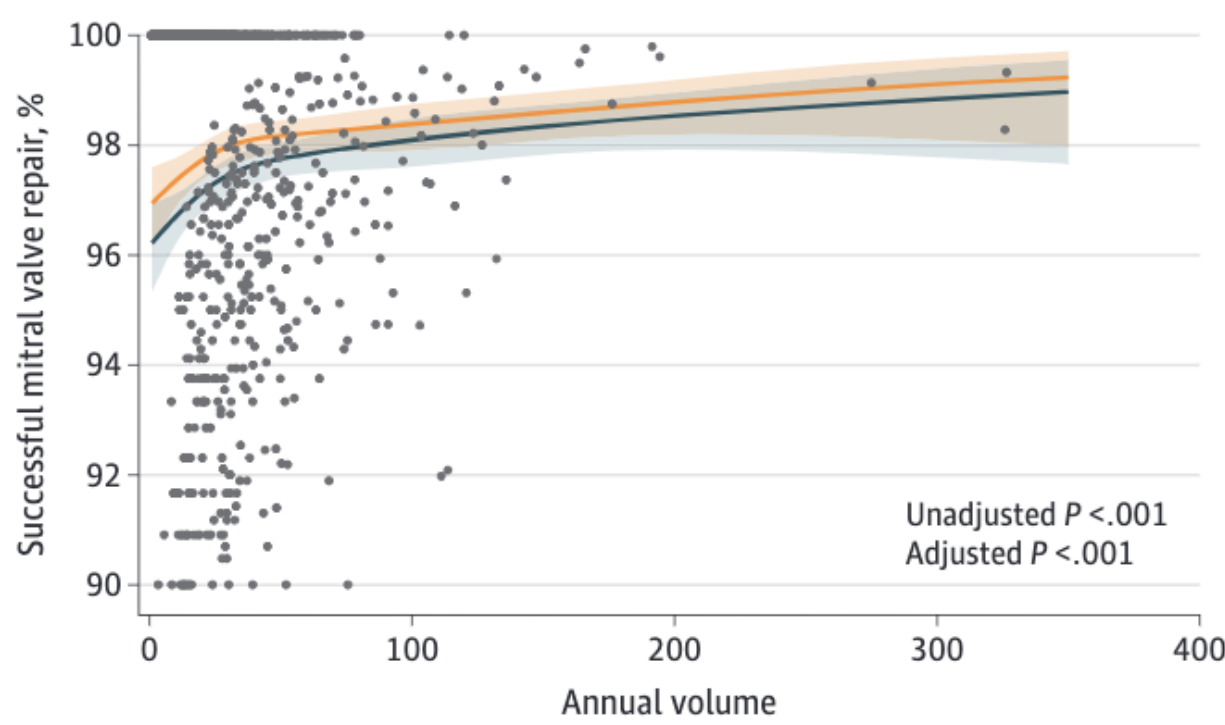
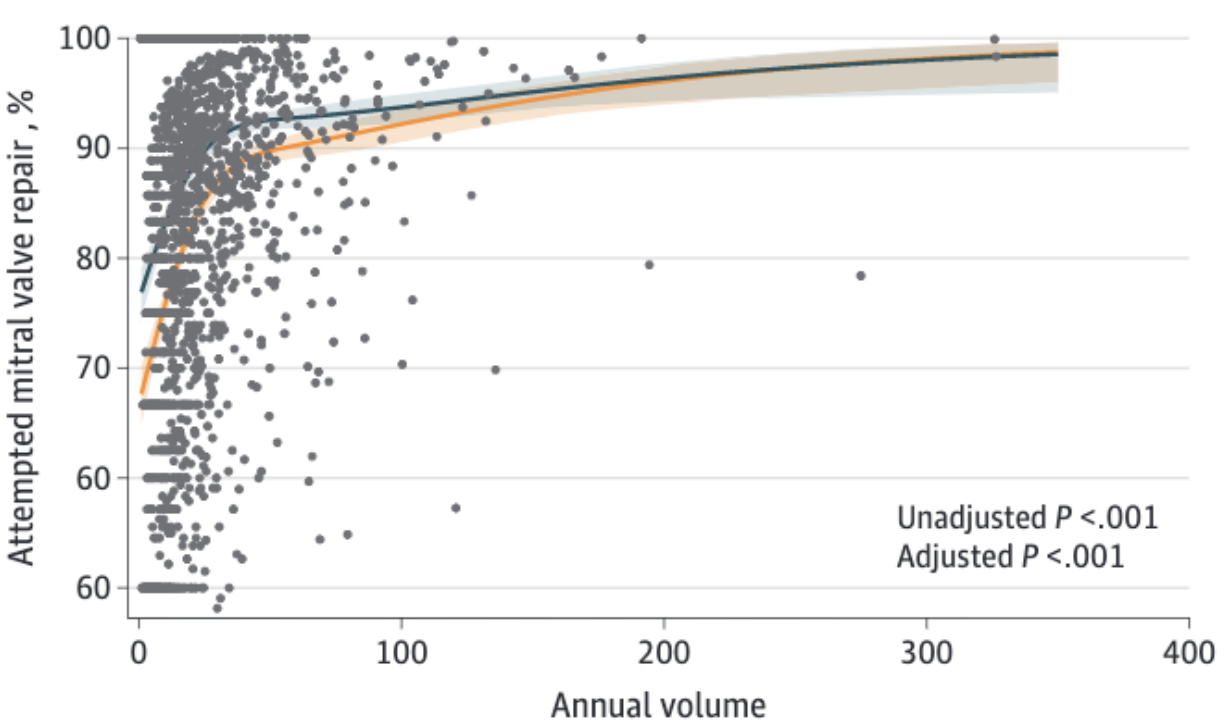
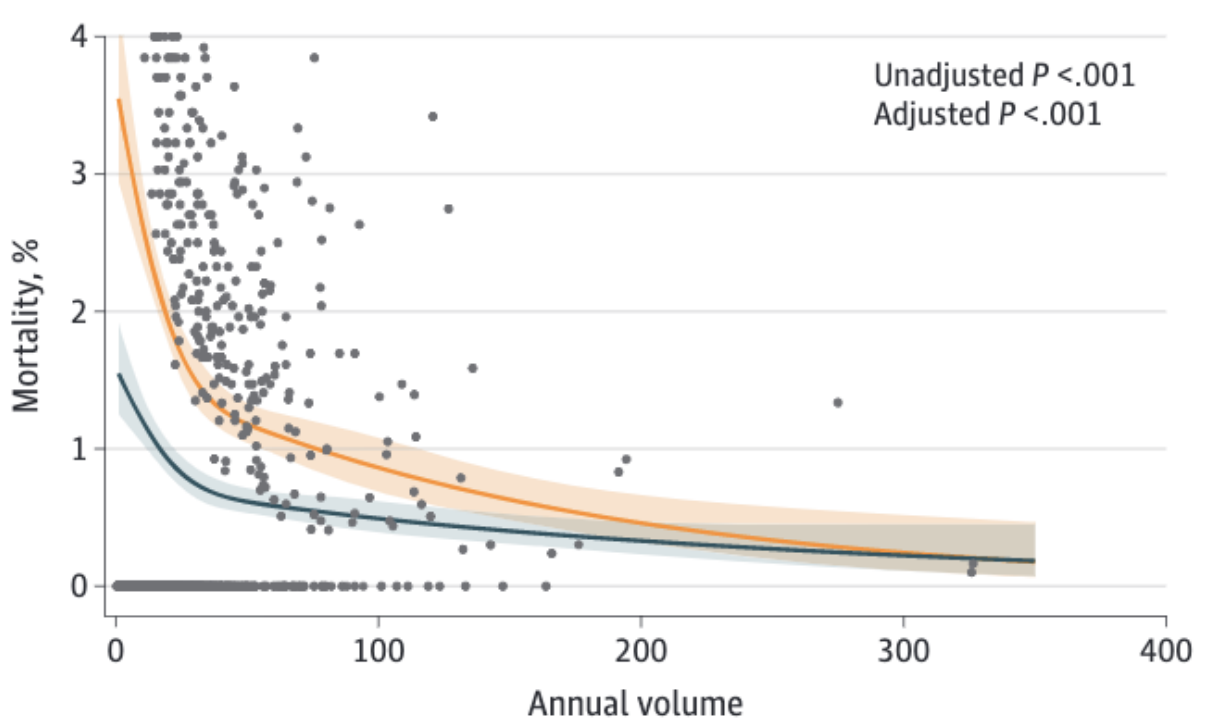
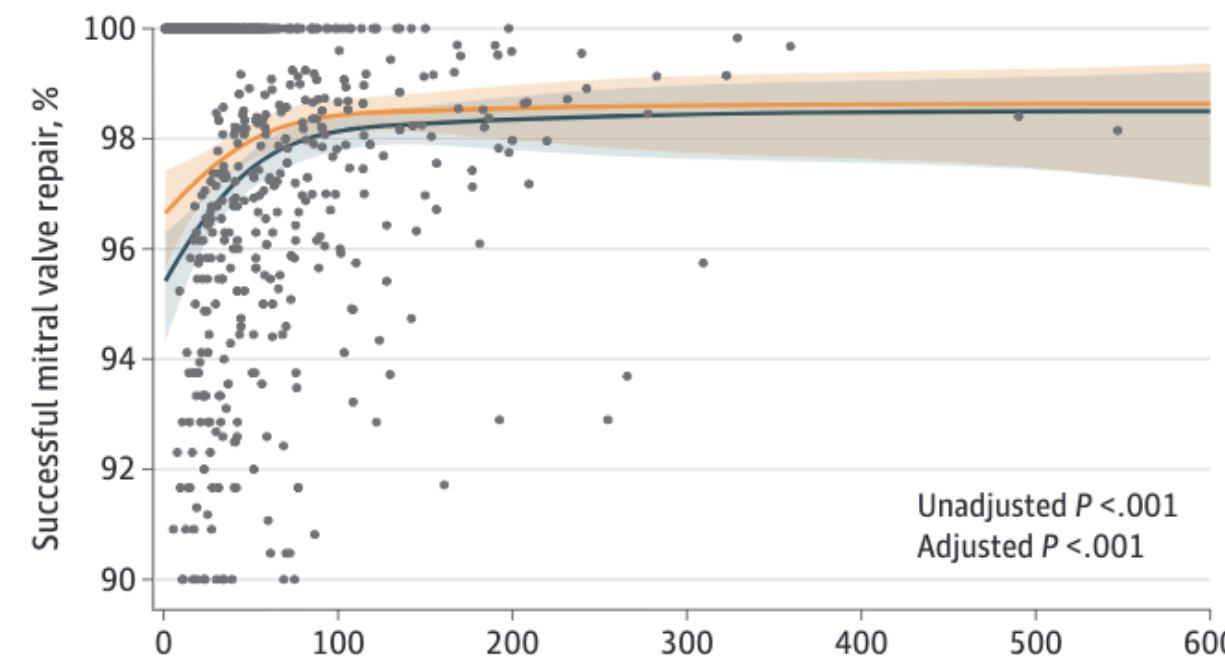
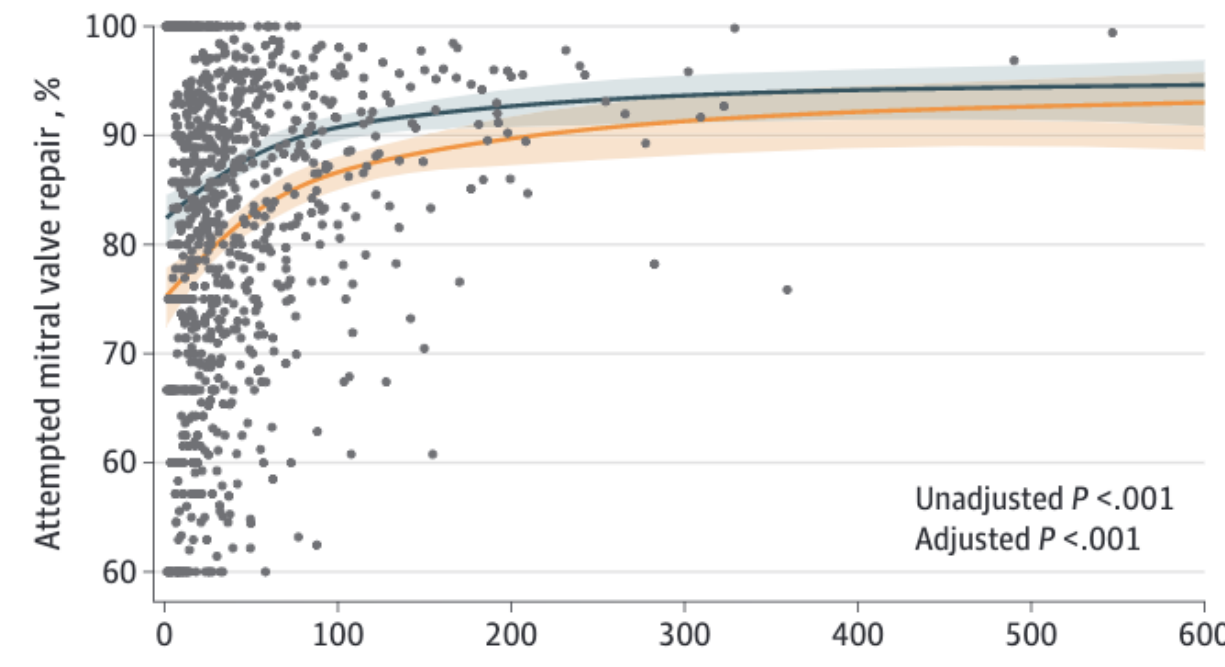
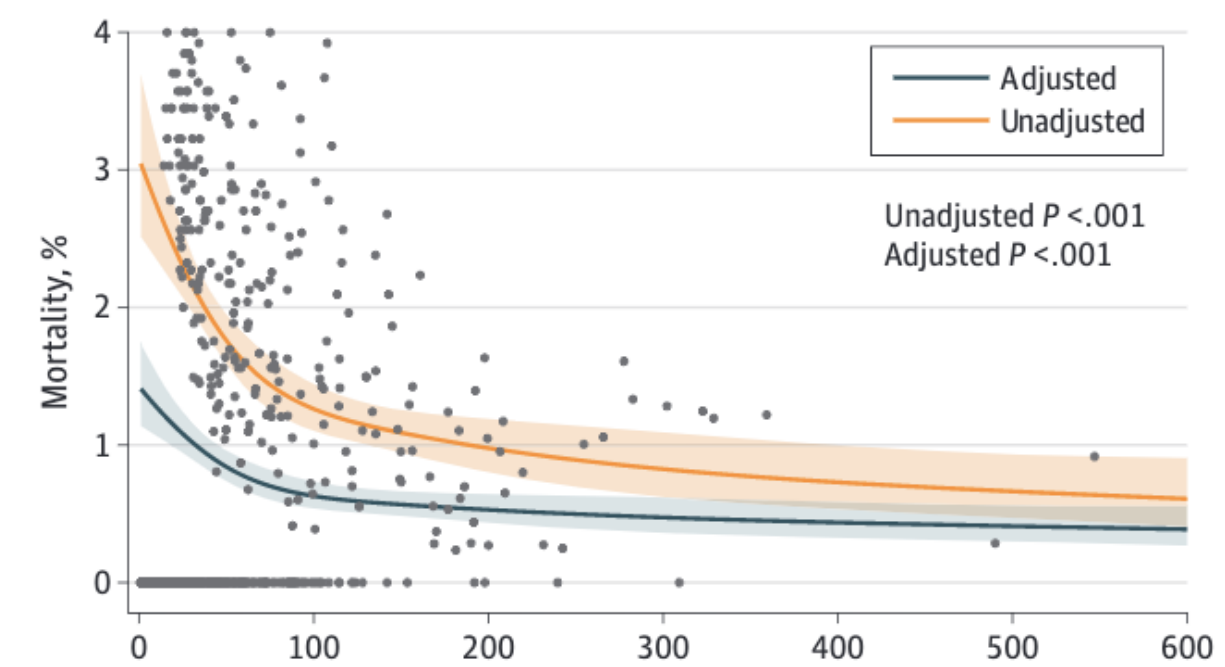
Hospital

Surgeon

30-d Mortality

Attempted MV Repair

Successful MV Repair



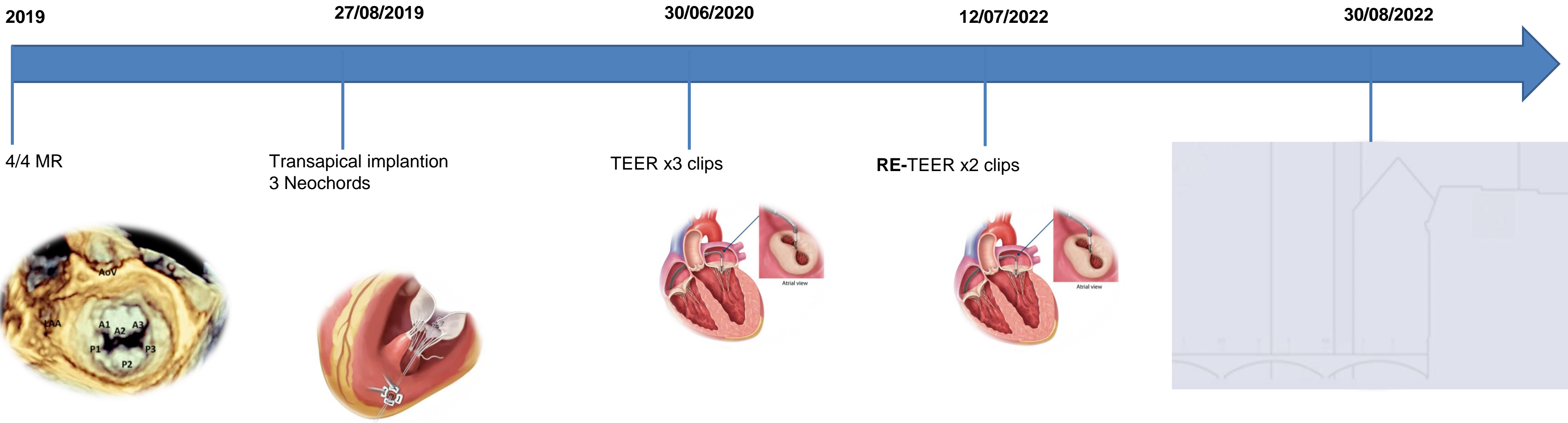
Treatment Options after M-TEER Failure

- **Surgical M** failure in low
- **Minimally** morbidity and mortality
- **Repair** is limited to regaining valve tissue
- **Volume / Out** concentration of such procedures in



2 Tricuspid regurgitation + Mitral PreOP findings

- 73 y, Male
- Dyspnea
- NYHA III
- Recurrent HF
- ES II 7,4 %,
- TRI-SCORE 6/12
- BNP 2029 pg/ml

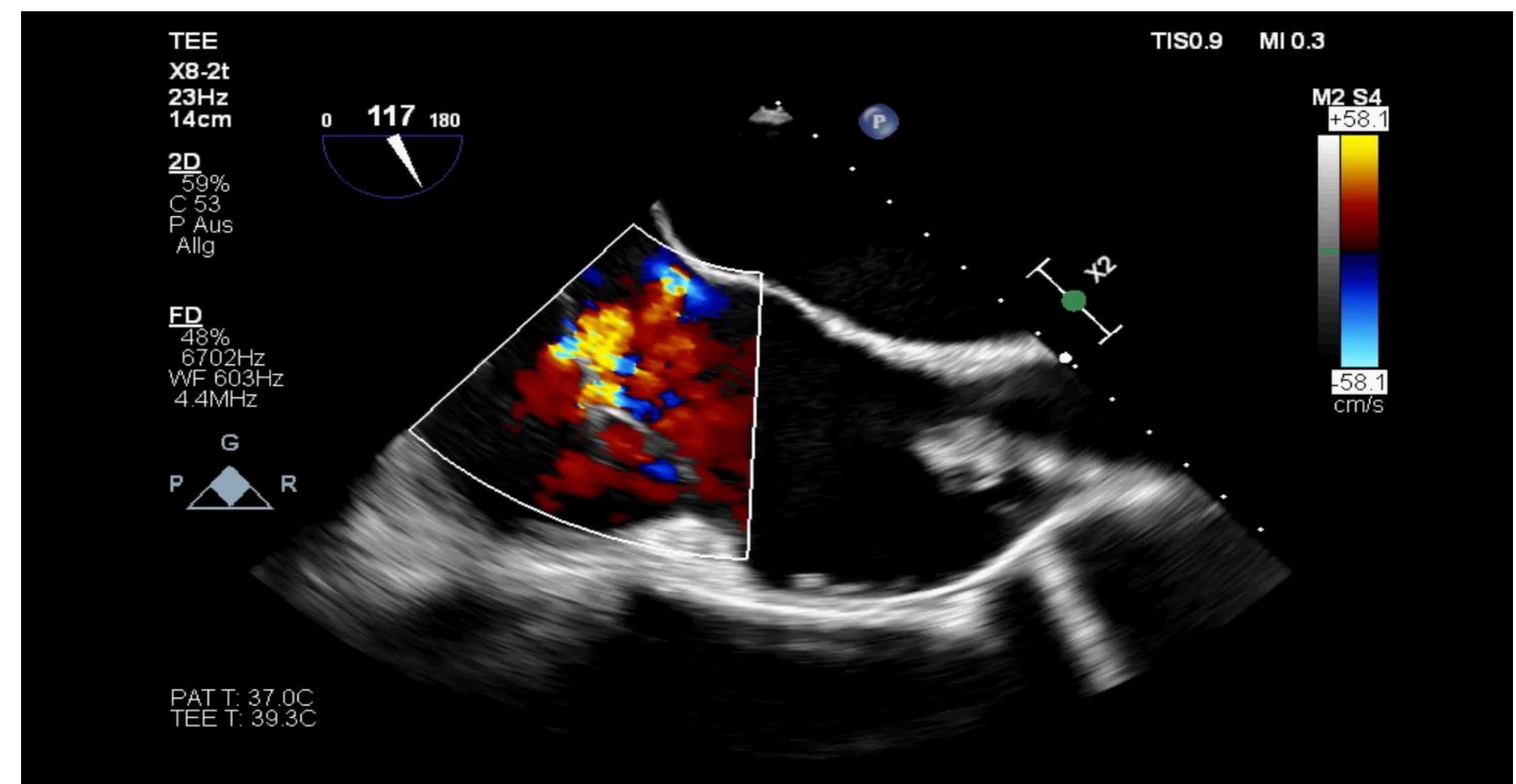
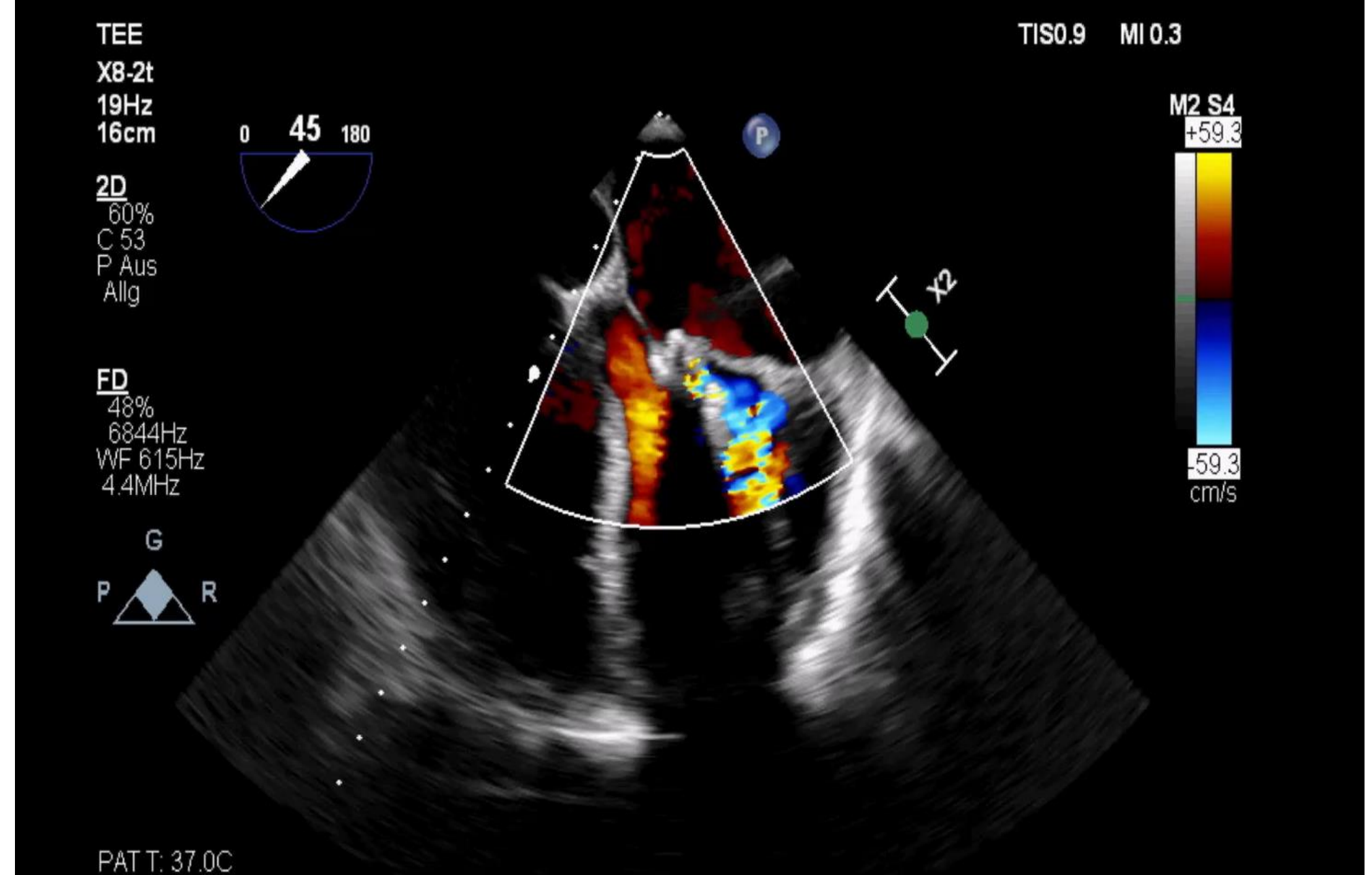


Pre-Operative TEE

Echo Imaging:

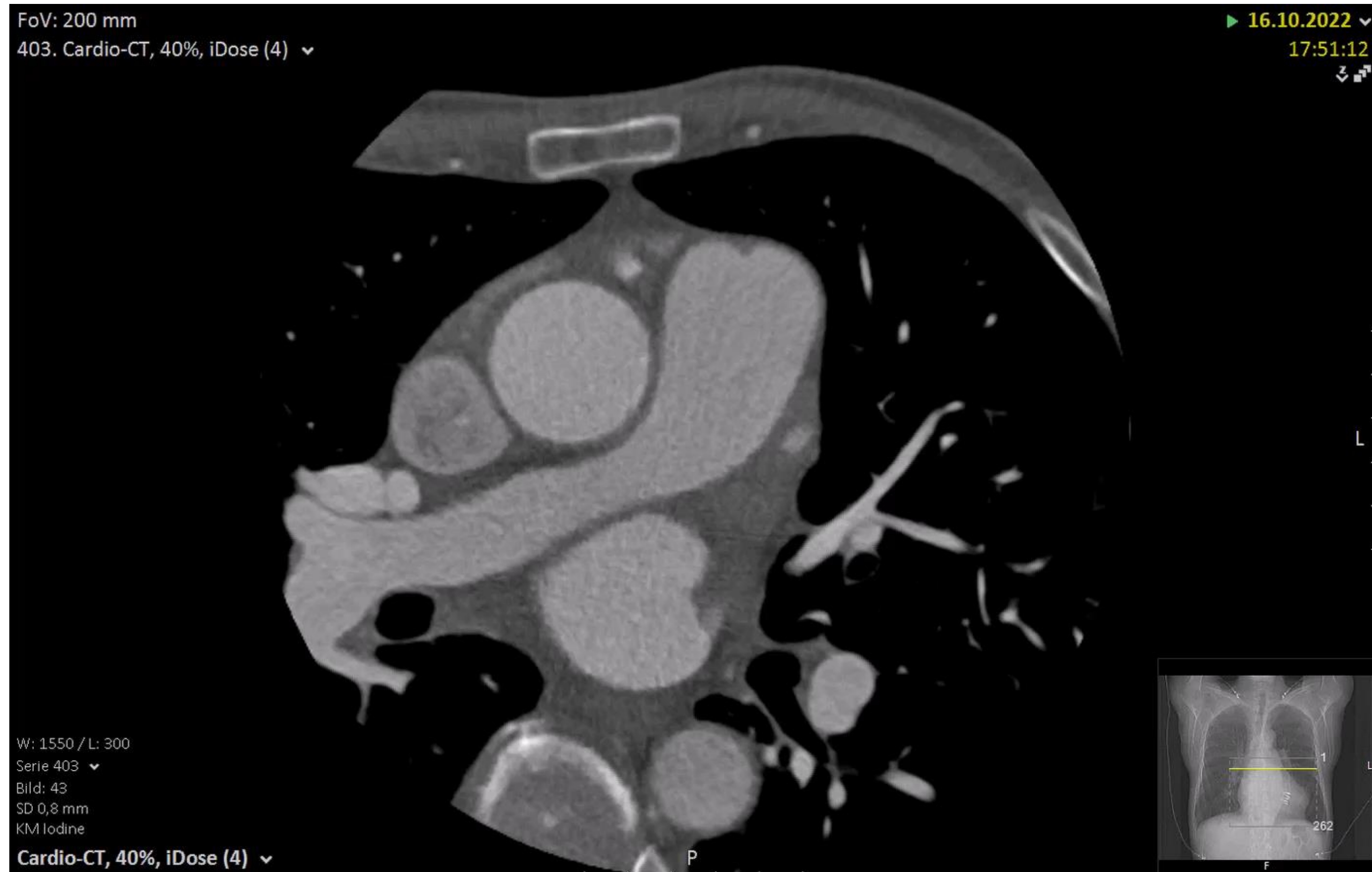
TEE

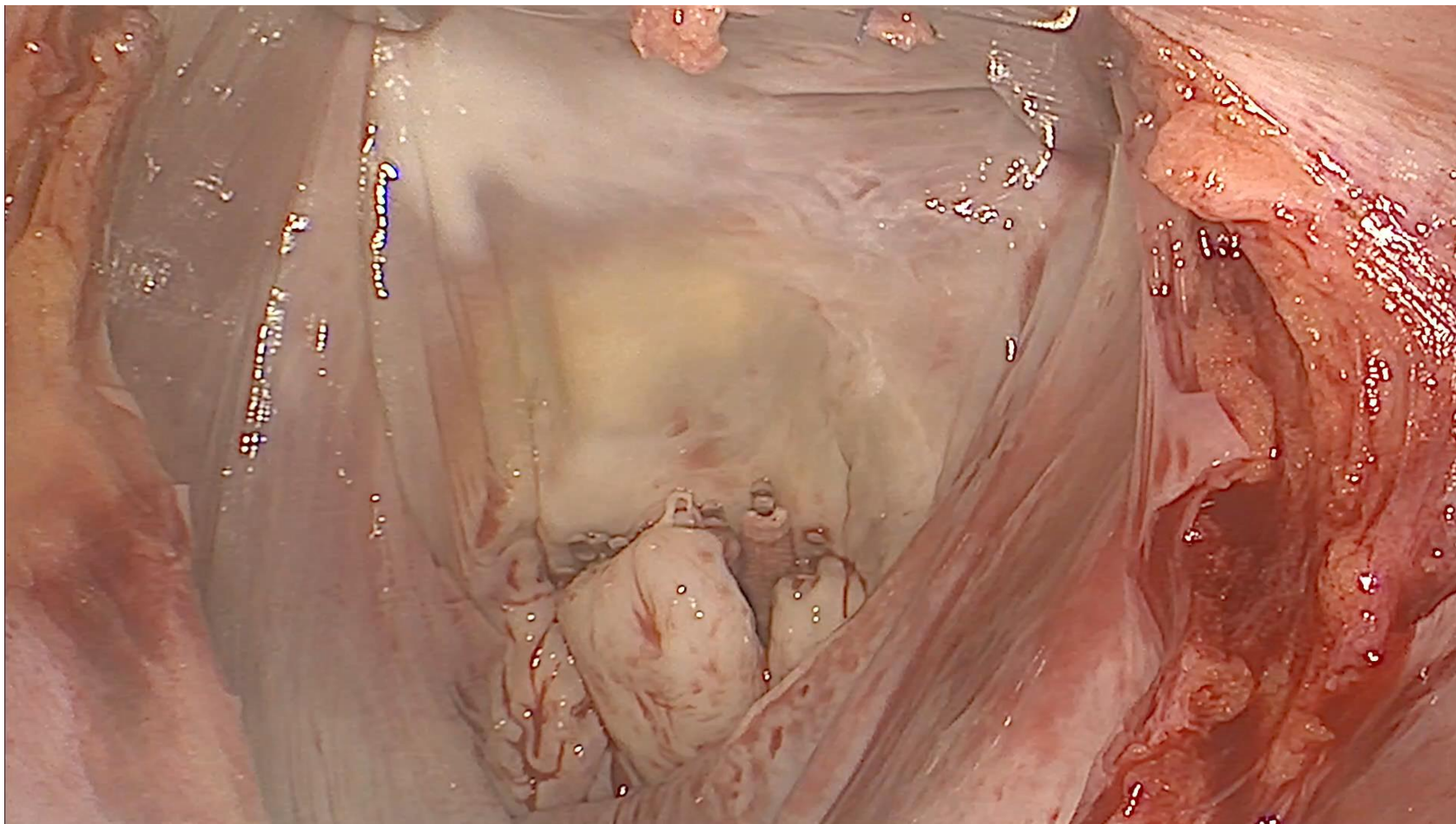
- Reduced systolic function (EF 51 %)
- Diastolic dysfunction (E/A 0.6)
- **MV:**
 - **Severe Mitral valve regurge**
 - **Moderate Mitral valve stenosis (Pmean 4-6 mmHg)**
- **TV:**
 - **Severe Tricuspid Valve Regurgitation (ERO 0,51 cm²)**



Pre-Operative CT

CT Scan:

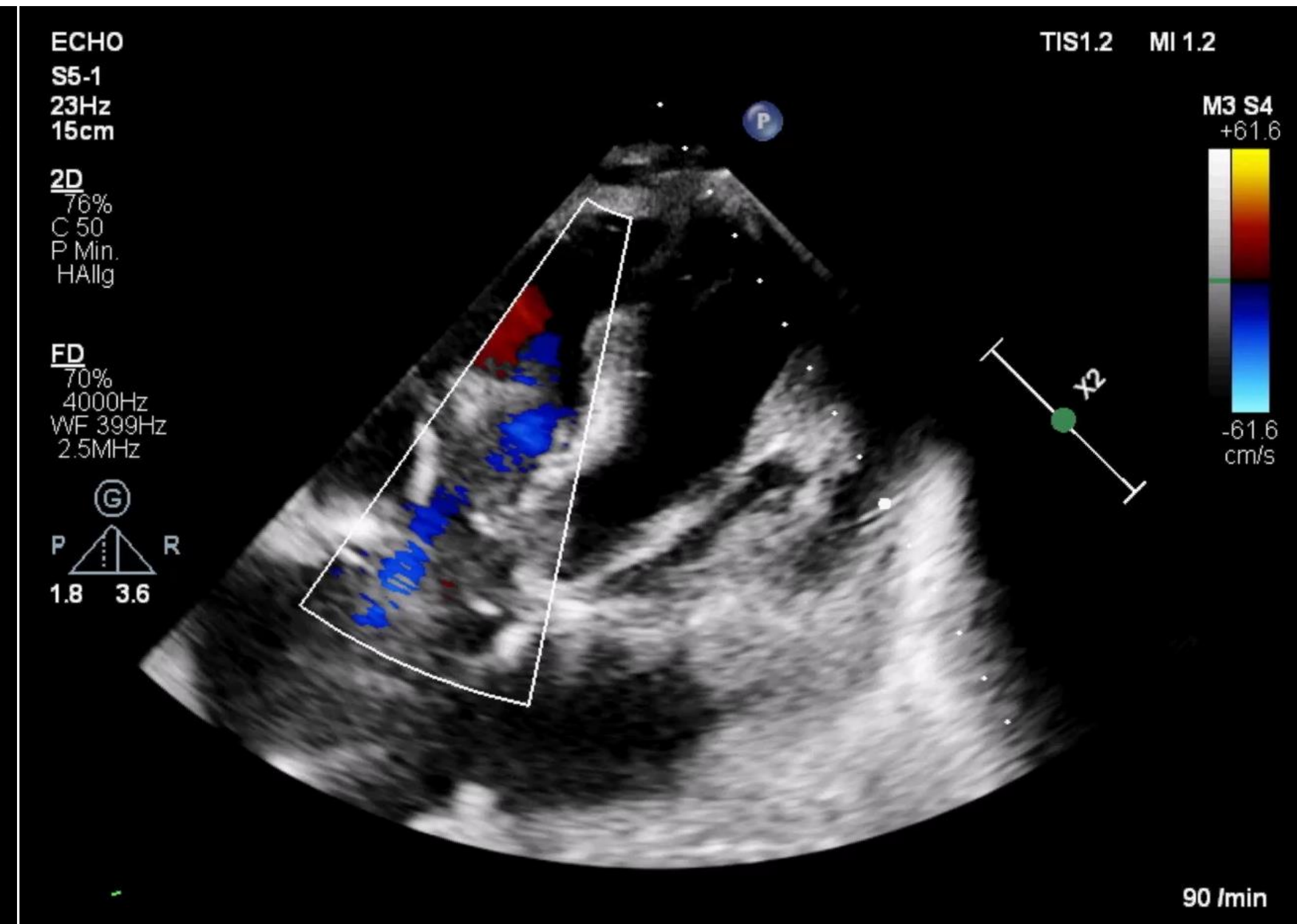
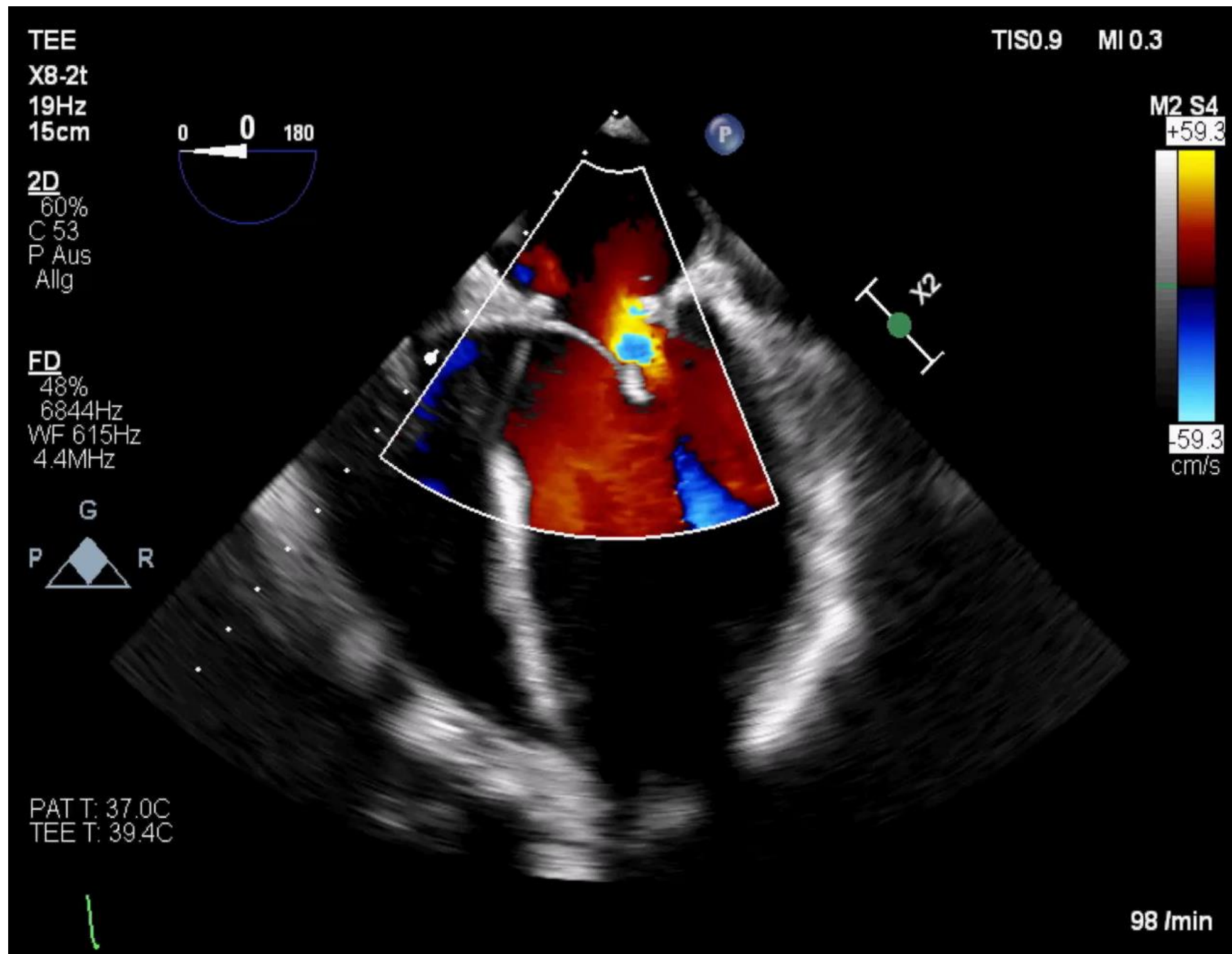




Post-Operative Echo

Mild residual MR

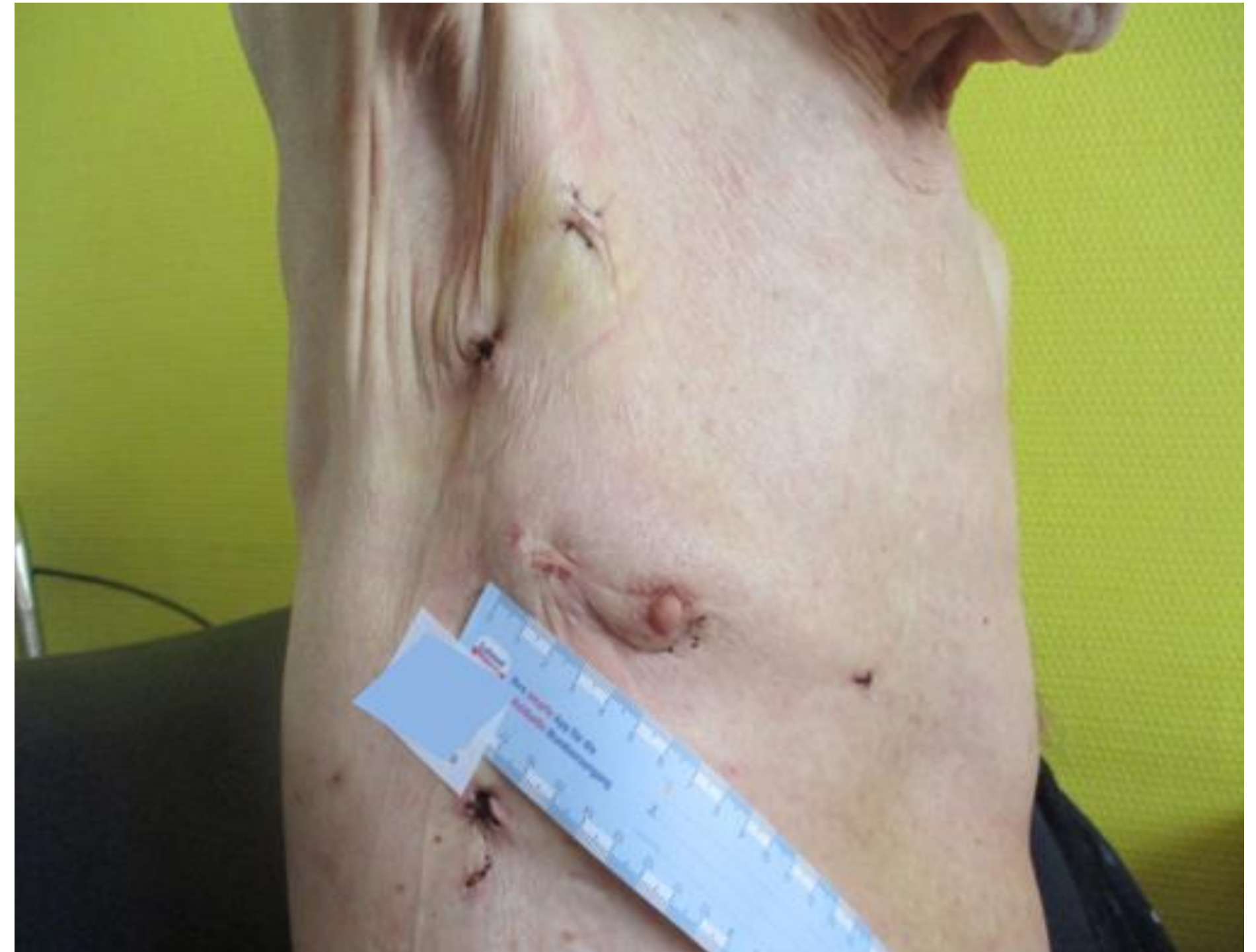
No TR



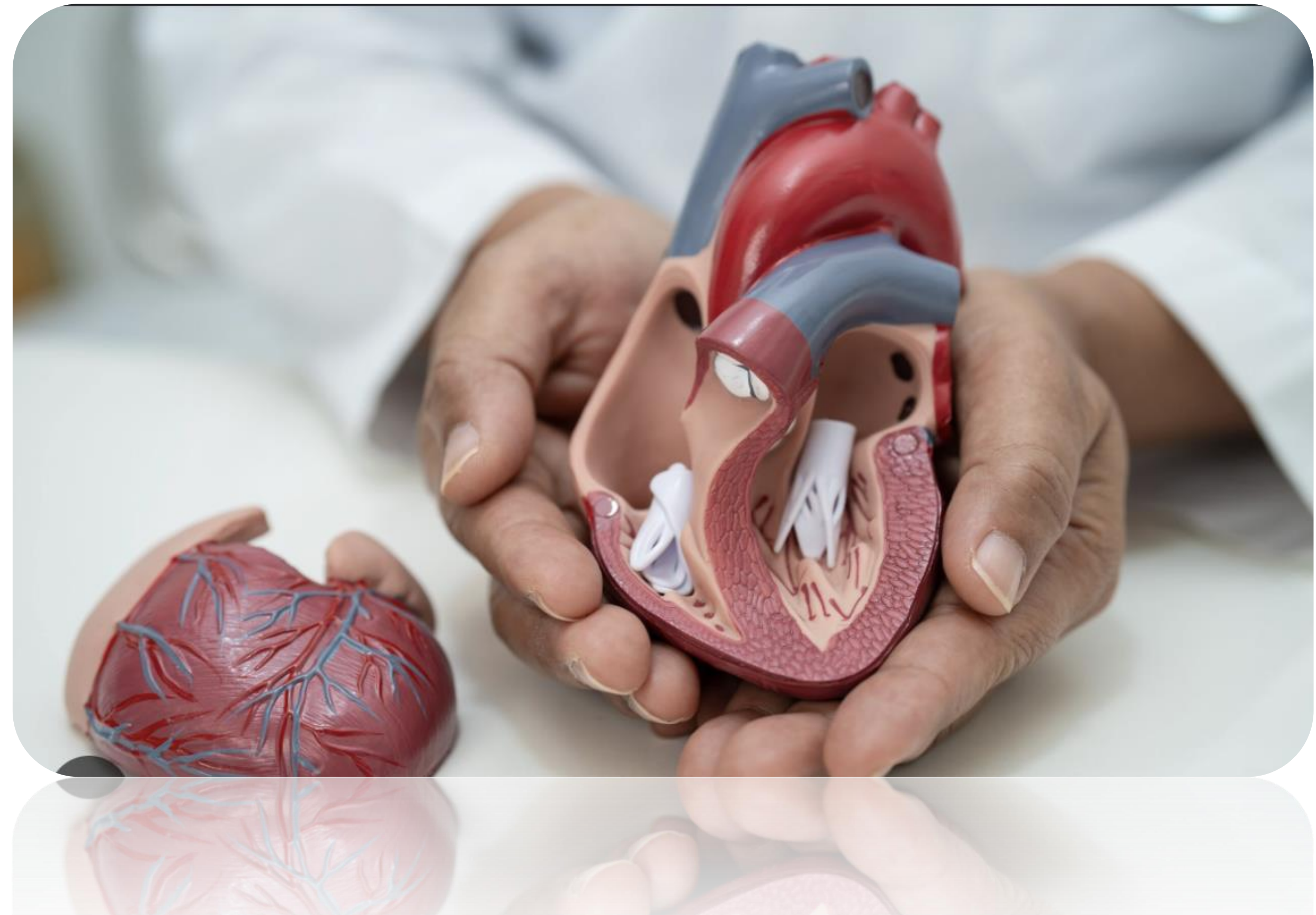
Minimal Invasive Mitral valve Repair: After 5x Mitraclip and 3 Neochords

Postoperative Course:

- 1 Day in ICU
- Discharged after 12 Days
- NYHA I
- No Rehospitalization



**...Friendly Heart
Team Centers
make a difference...**



Individualized Cardiac Medicine

Heart Team
is THE Key

