

# NY Trans-catheter Valves

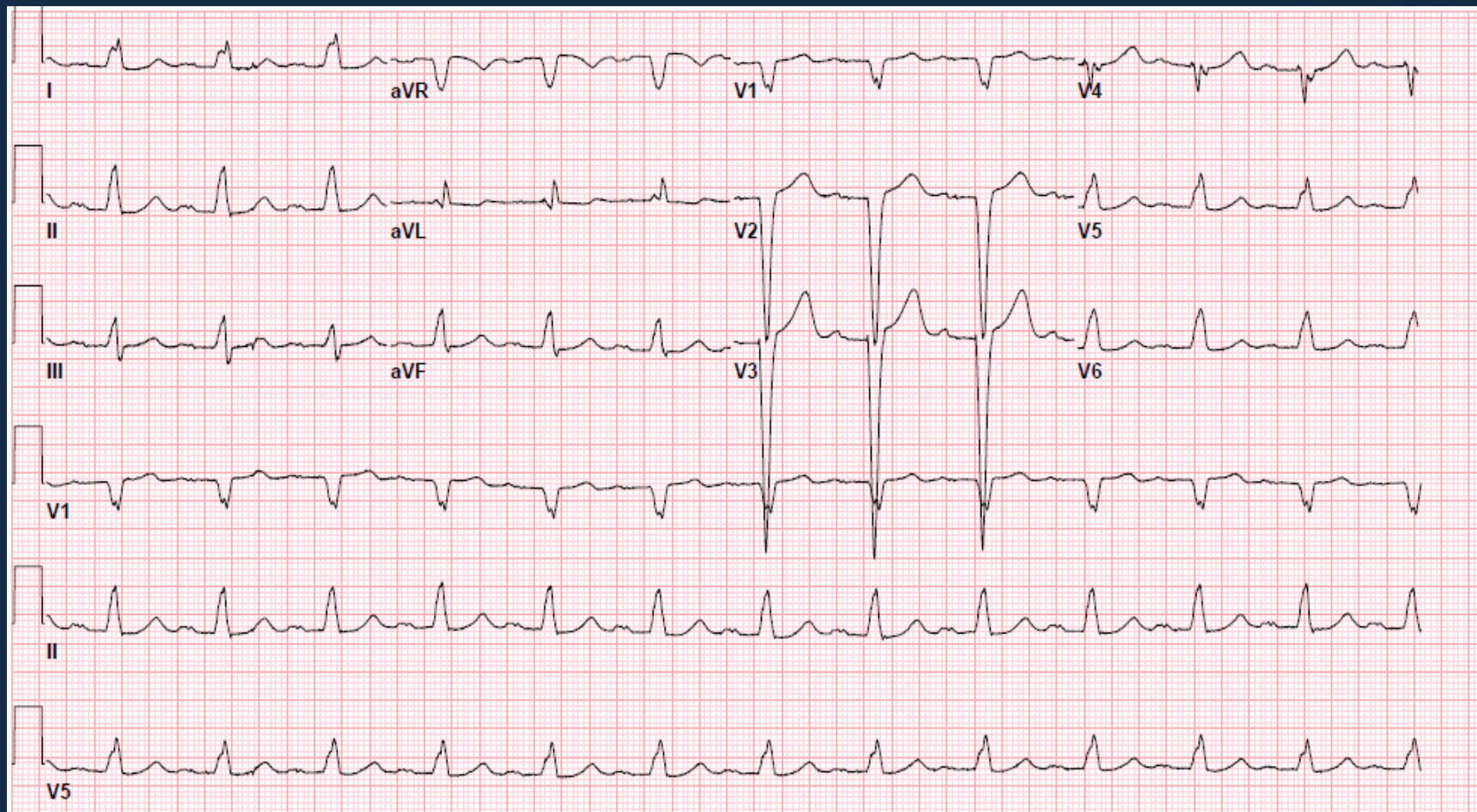
# Brief History

- 71-year-old male; initially seen in outpatient cardiology clinic with worsening dyspnea with minimal work load and leg swelling
- NYHA class III symptoms
- HTN, HIV on antivirals, cirrhosis, prior stroke, frailty
- Abacavir/dolutegravir/lamivudine, furosemide, aspirin, oxybutynin, rosuvastatin, finasteride, tamsulosin, atenolol, diltiazem

# Examination

- BP 100/60, HR 50 BPM, O2 saturation 95% on RA
- Elevated JVP at 8 cm
- Bibasilar crackles
- S4, S1 and split S2. Systolic murmur 3/6 at base and 3/6 at apex
- +2 peripheral edema

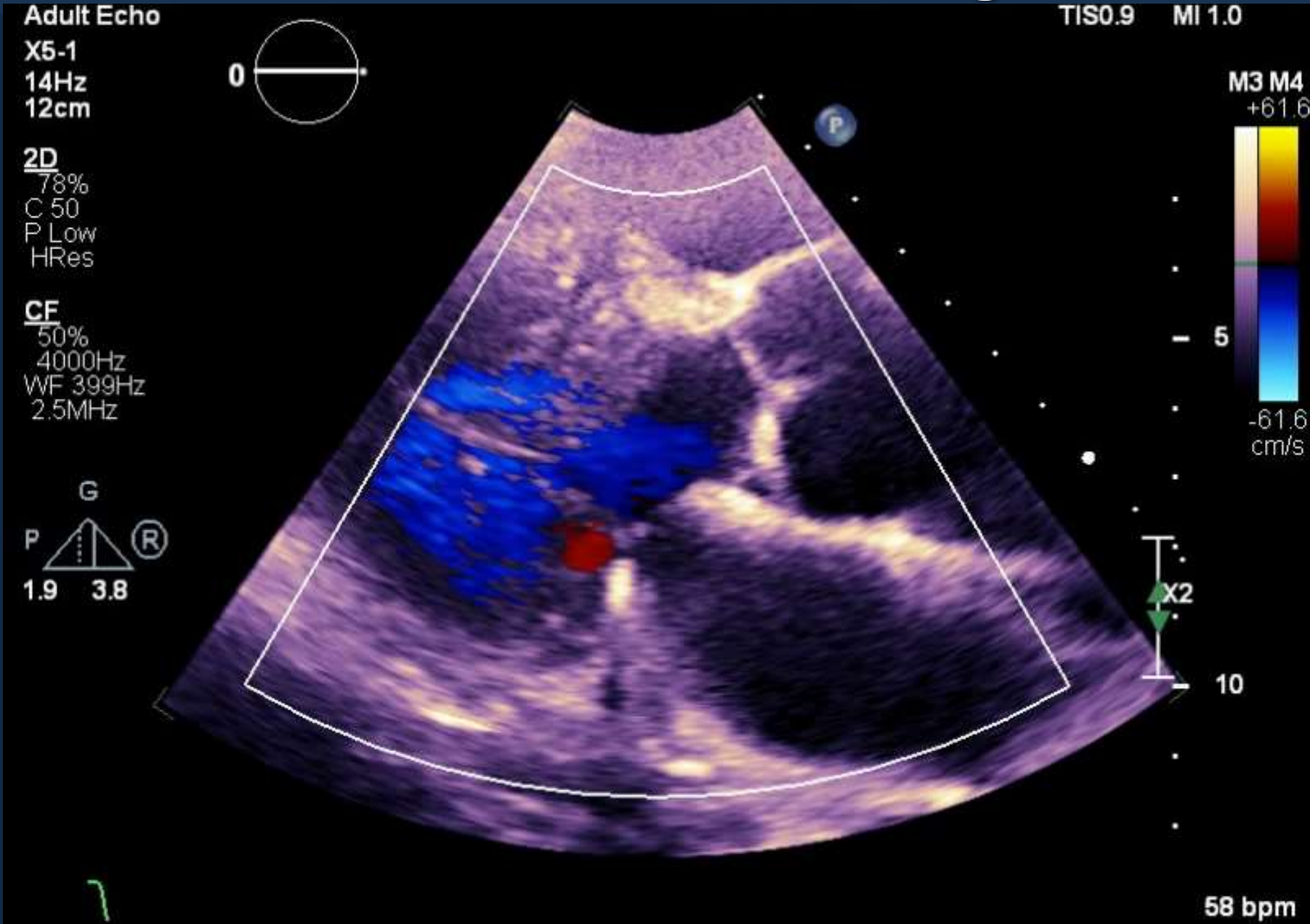
# EKG



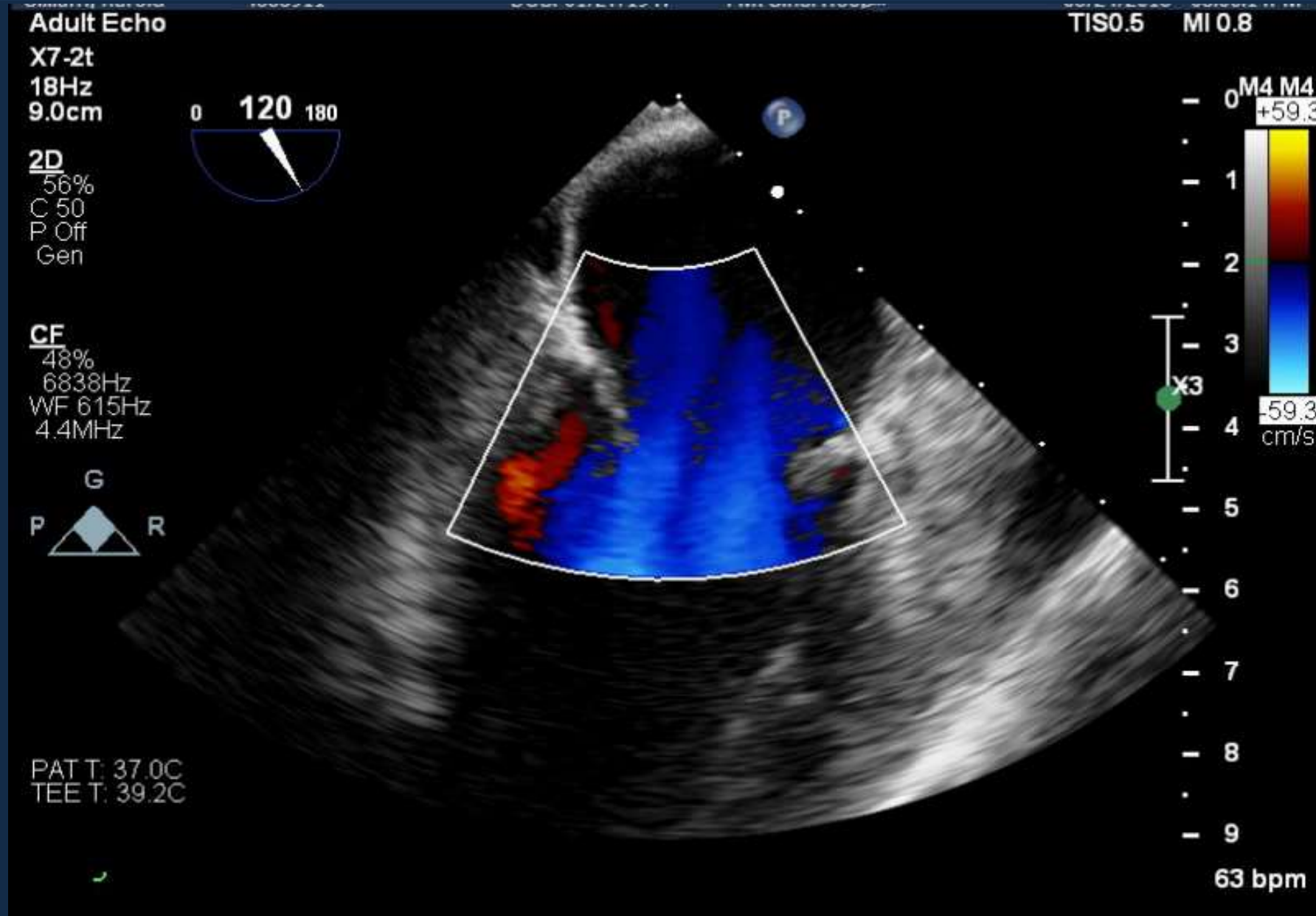
# Trans-thoracic Echocardiogram

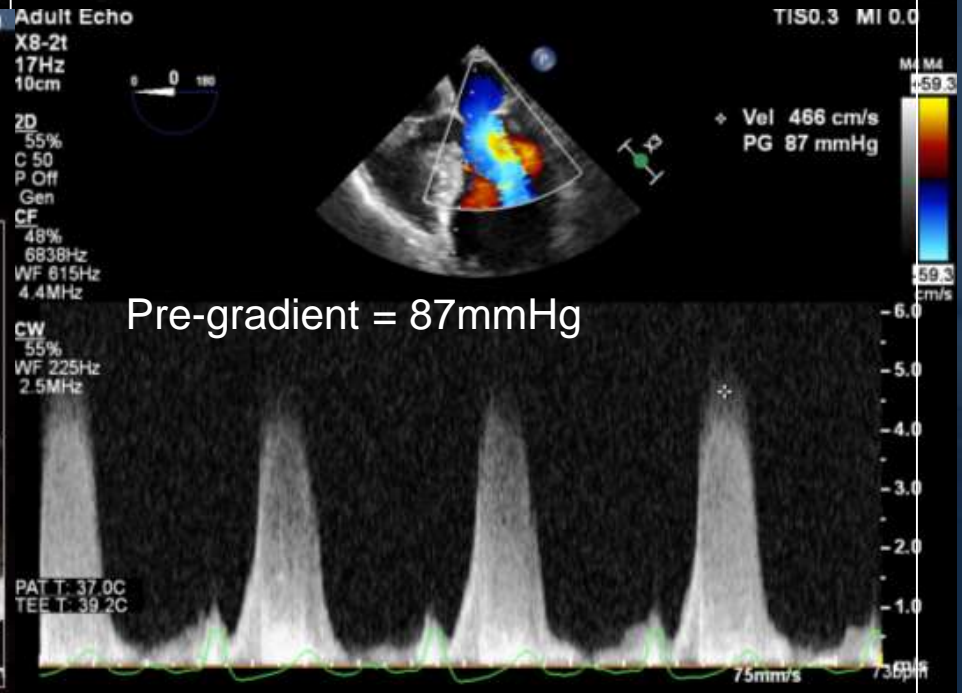
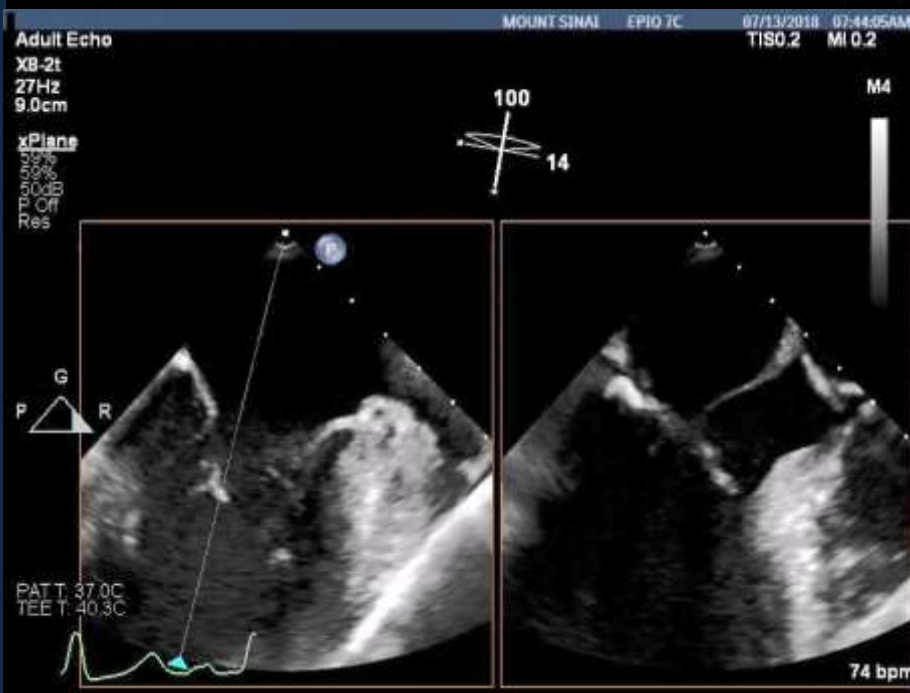
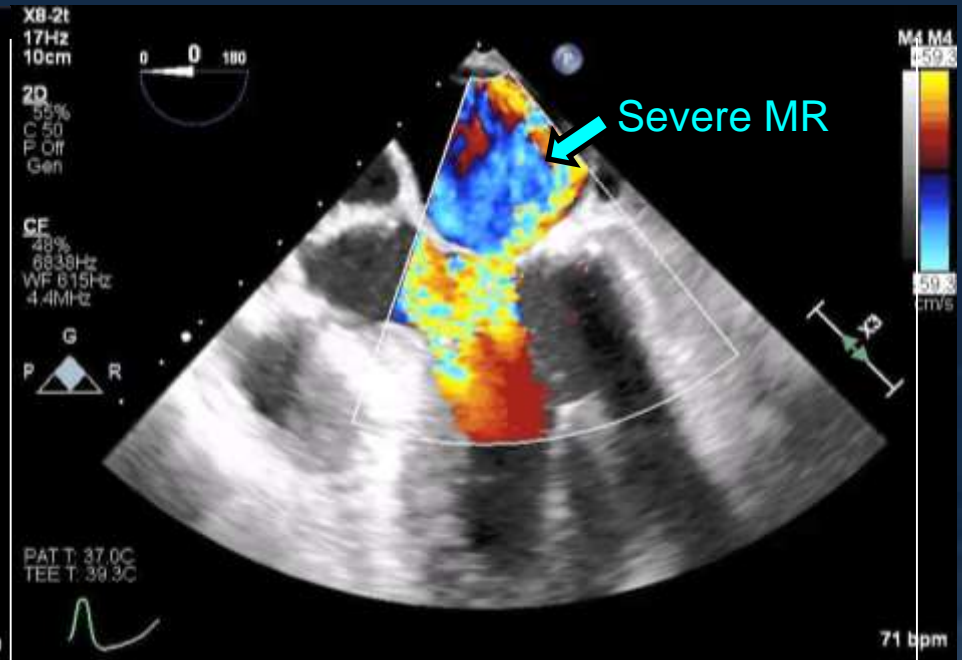
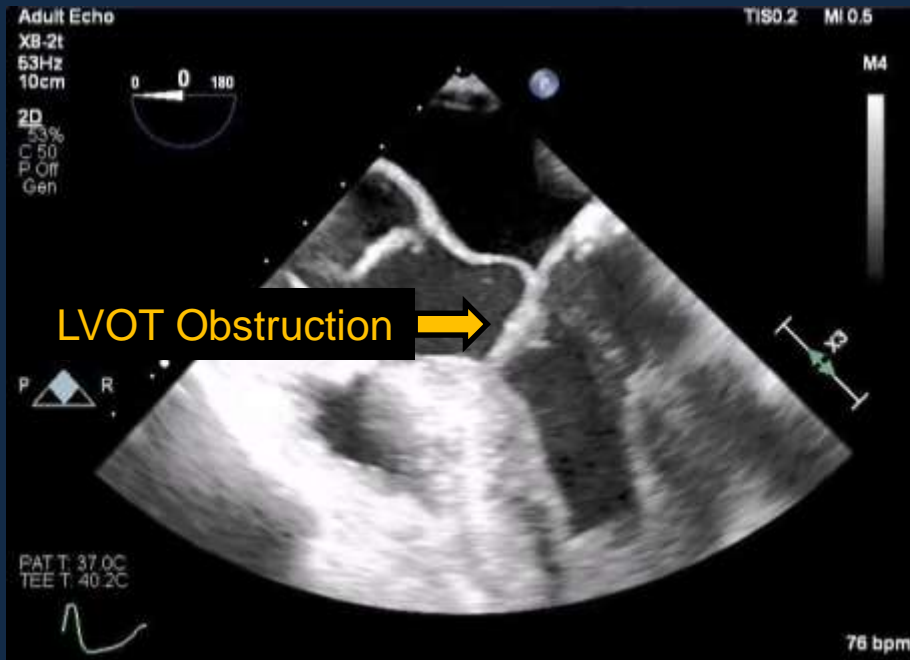


# Trans-thoracic Echocardiogram



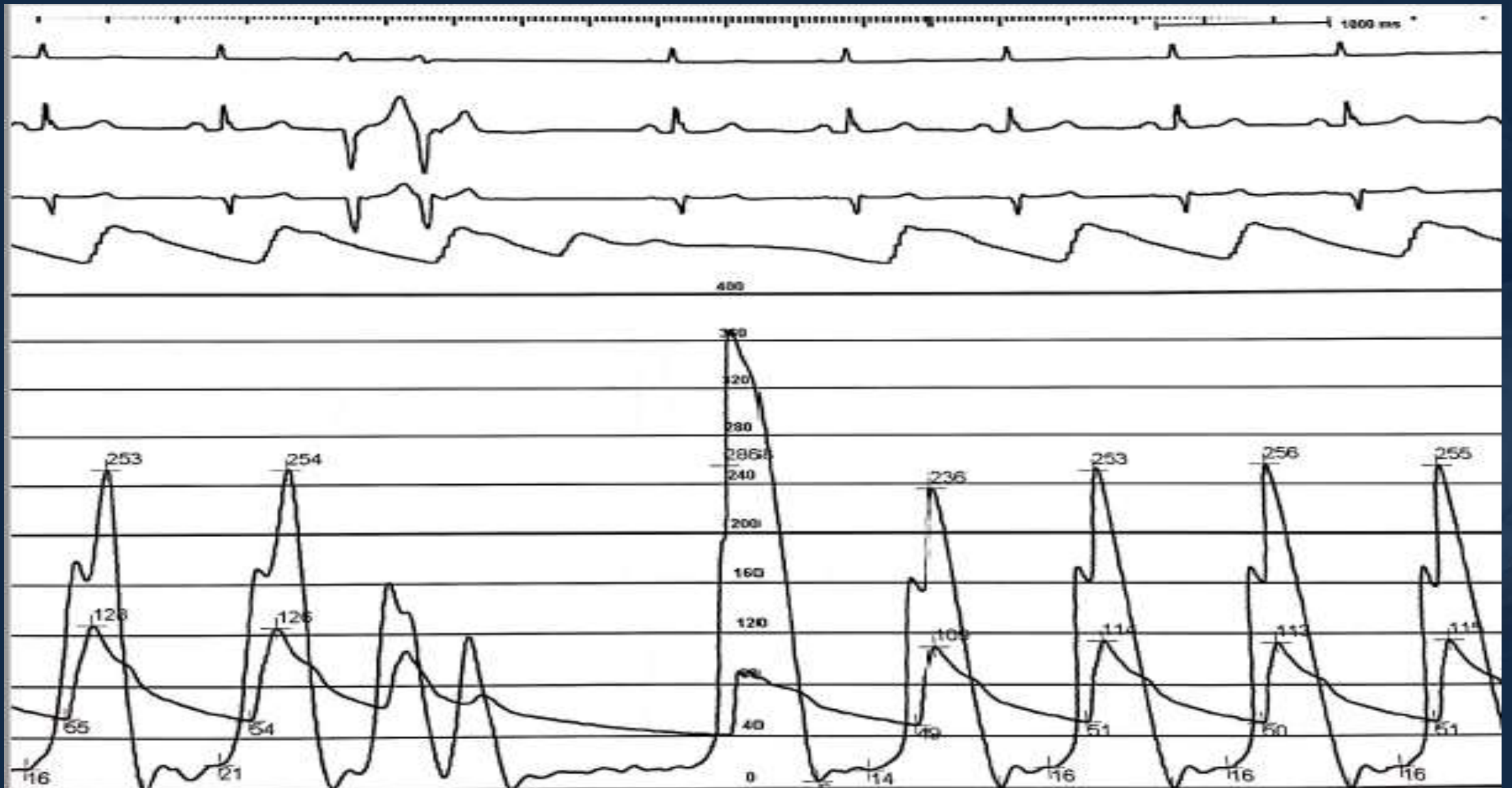
# Trans-esophageal Echocardiogram



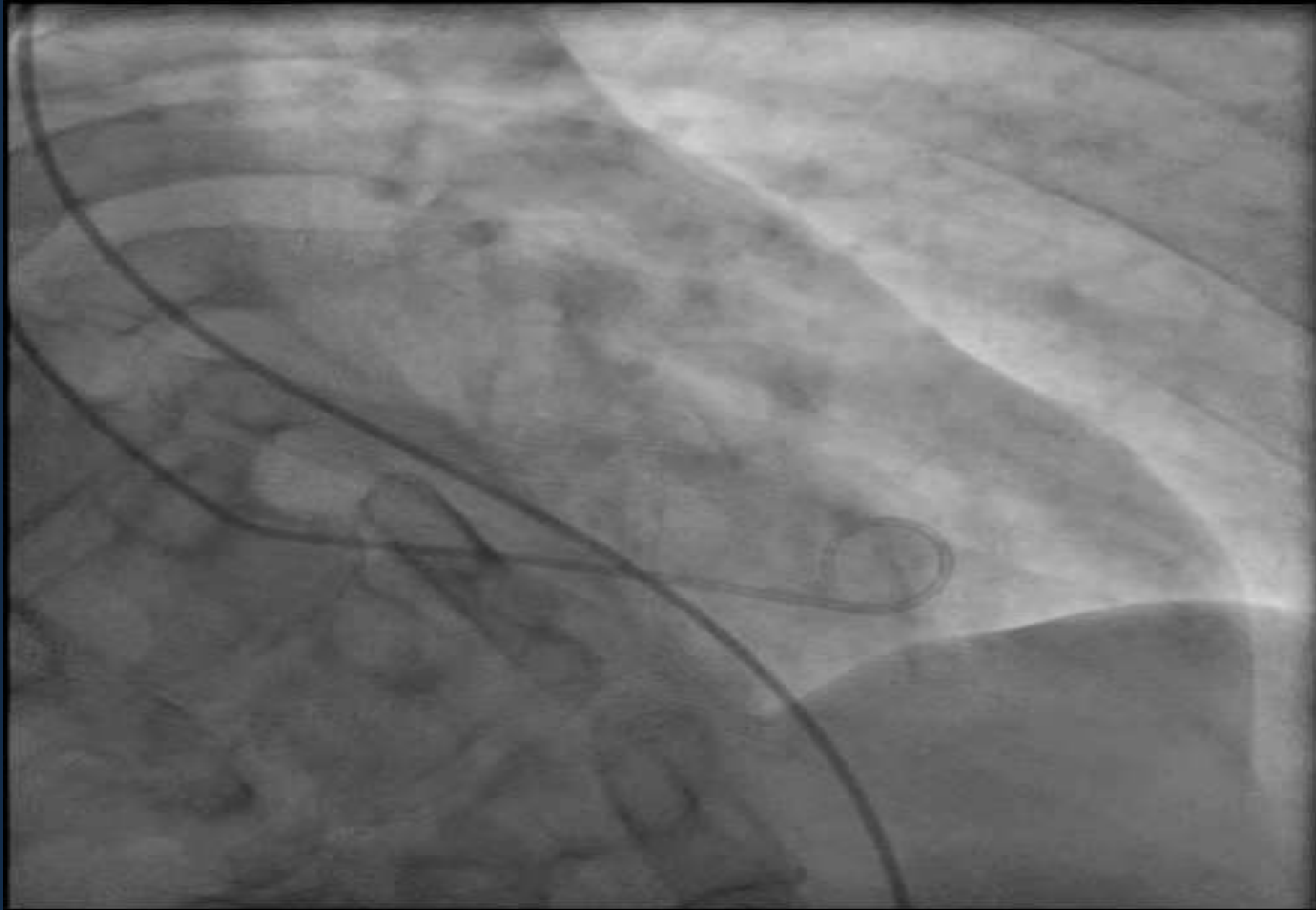




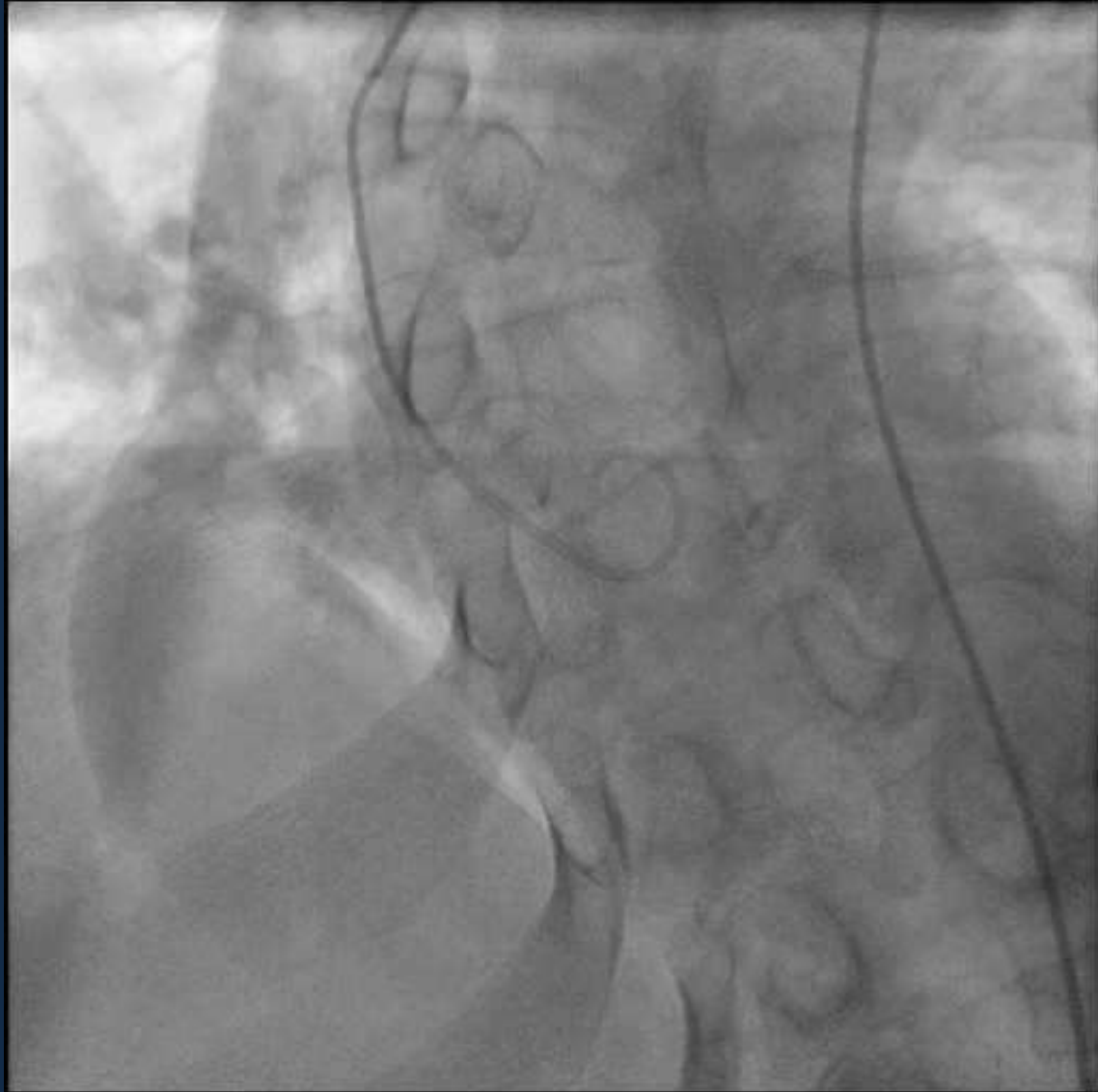
# Invasive Hemodynamics



# LV gram



# Angiogram



# What's the best management approach?

- Surgical myomectomy
- Surgical mitral valve repair or replacement
- Alcohol septal ablation
- Plication of anterior mitral leaflet using Mitra-Clip



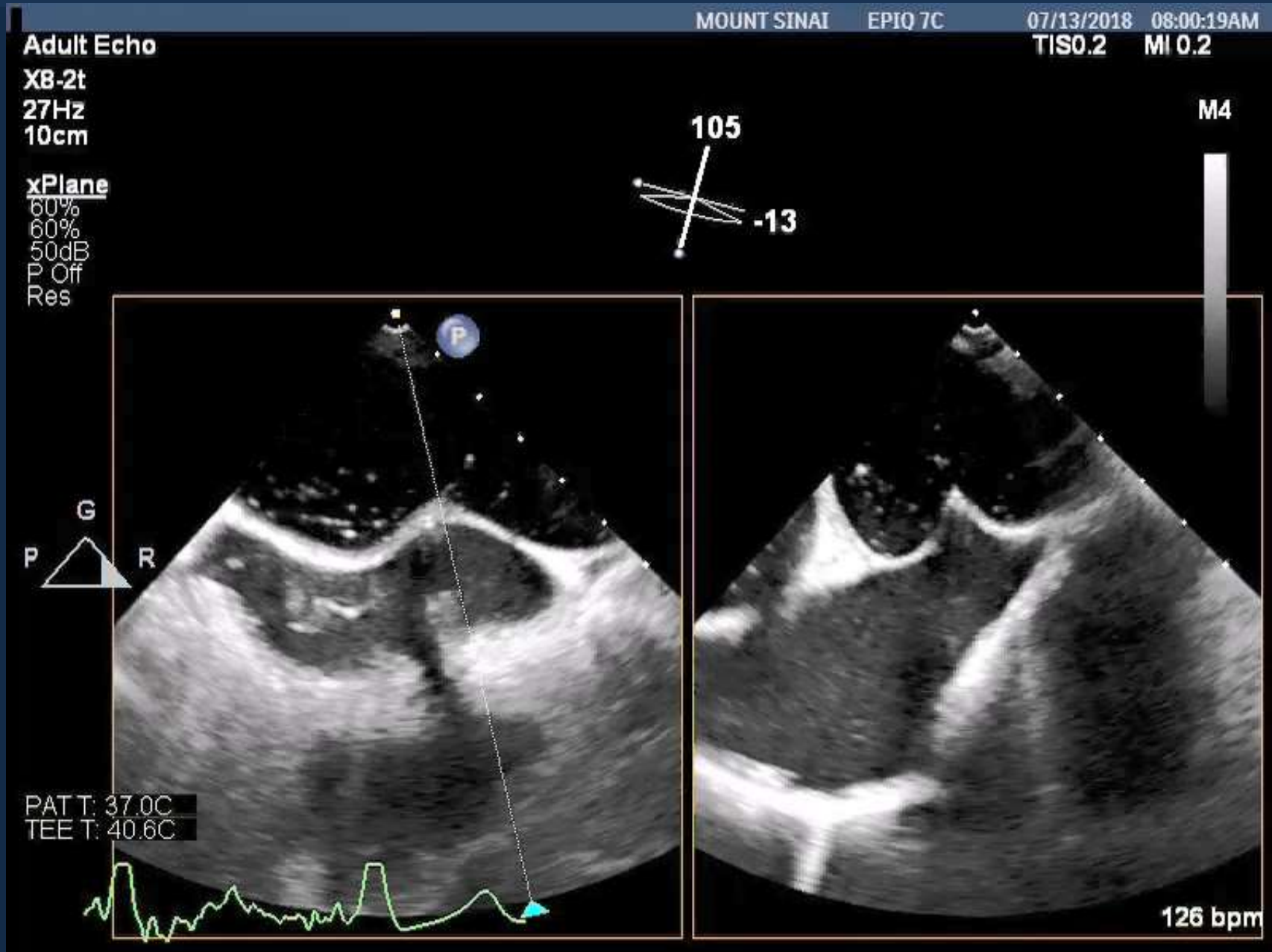
- STS PROM: repair 1.22%, replacement 2.42%
- Deemed prohibitive risk for septal myectomy and mitral surgery due to frailty

# What's the best management approach?

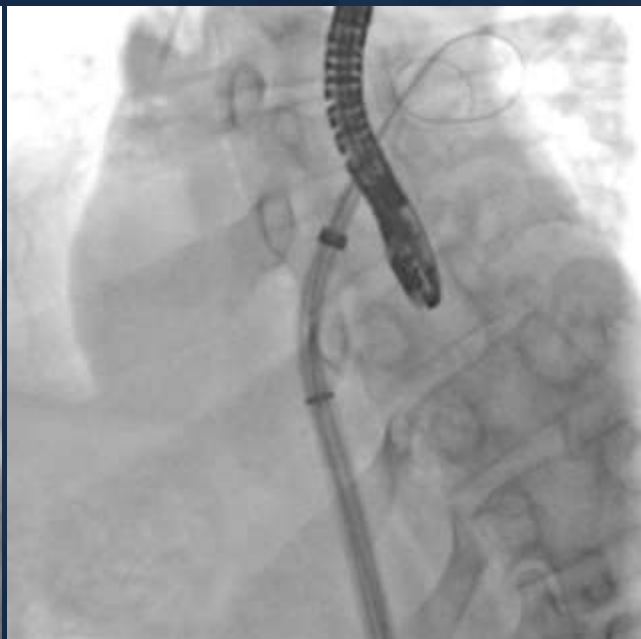
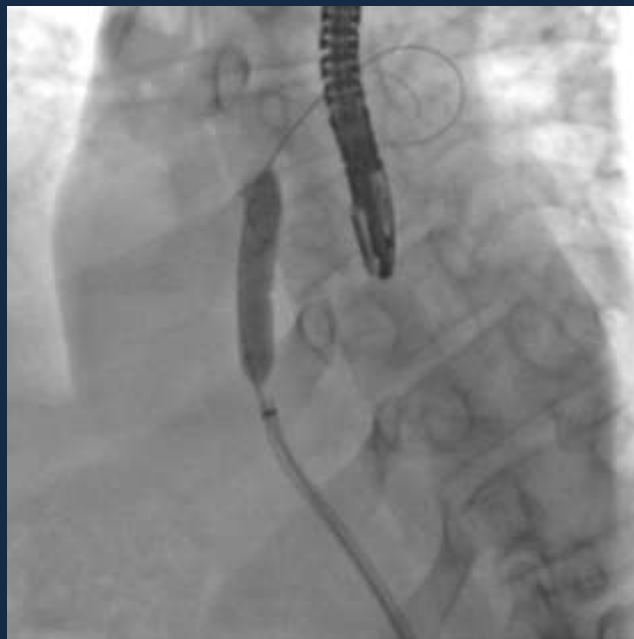
- **Surgical myomectomy**
- **Surgical mitral valve repair or replacement**
- **Alcohol septal ablation**
- **Plication of anterior mitral leaflet using Mitra-Clip**



# Trans-septal Puncture

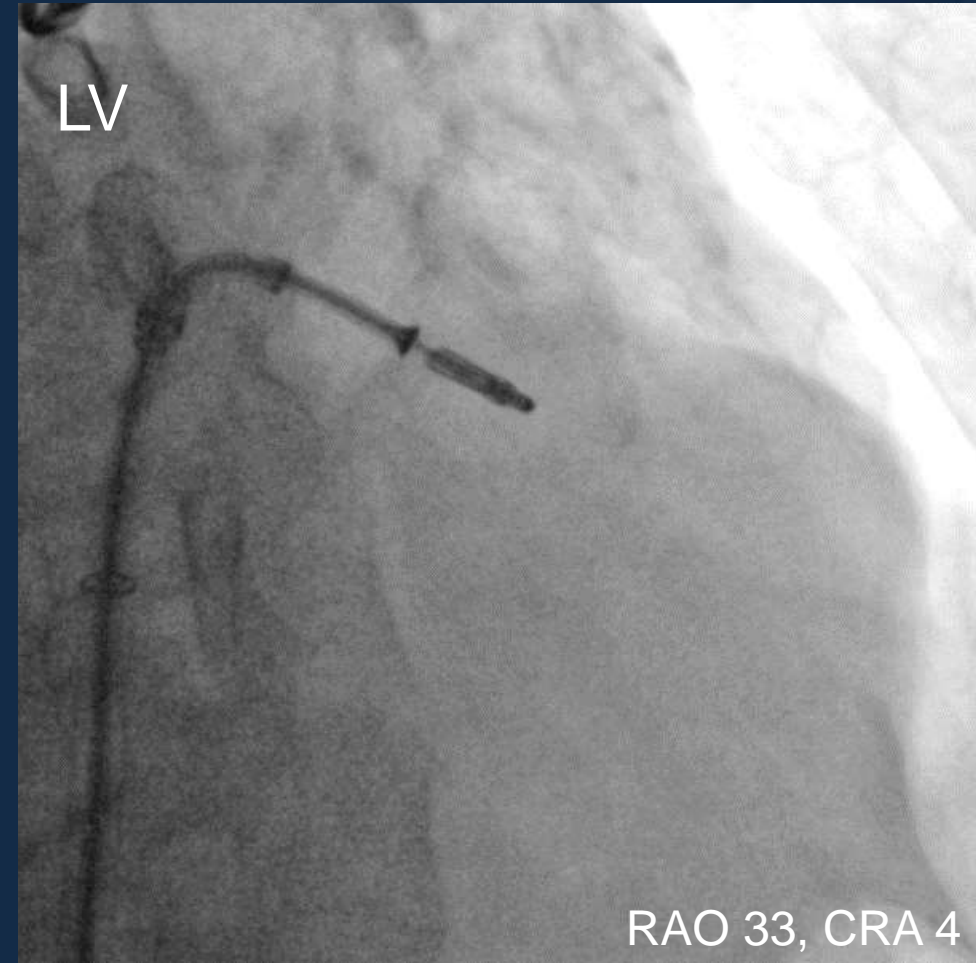
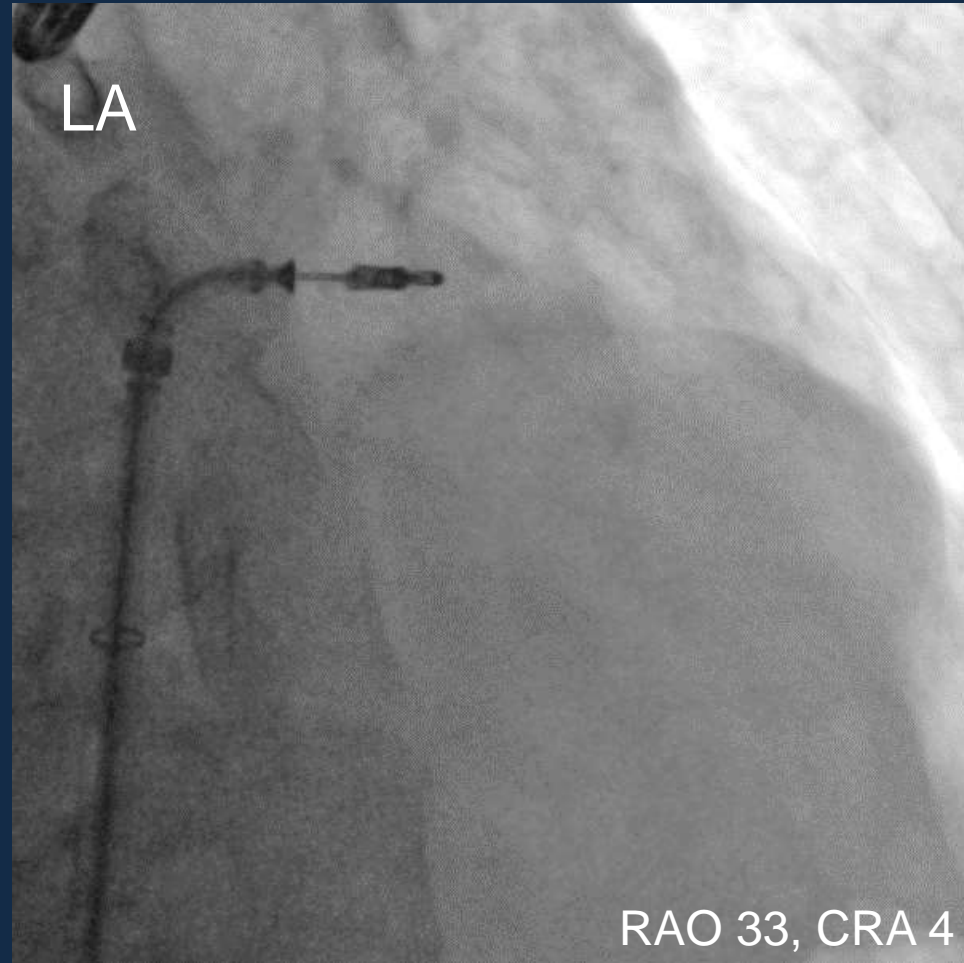


# Scoliosis, Difficult Transseptal





# Fluoroscopic XTR Alignment without Clip Arm Parallax



Adult Echo

X8-2t

27Hz

12cm

Z 1.2

xPlane

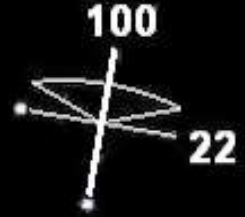
62%

62%

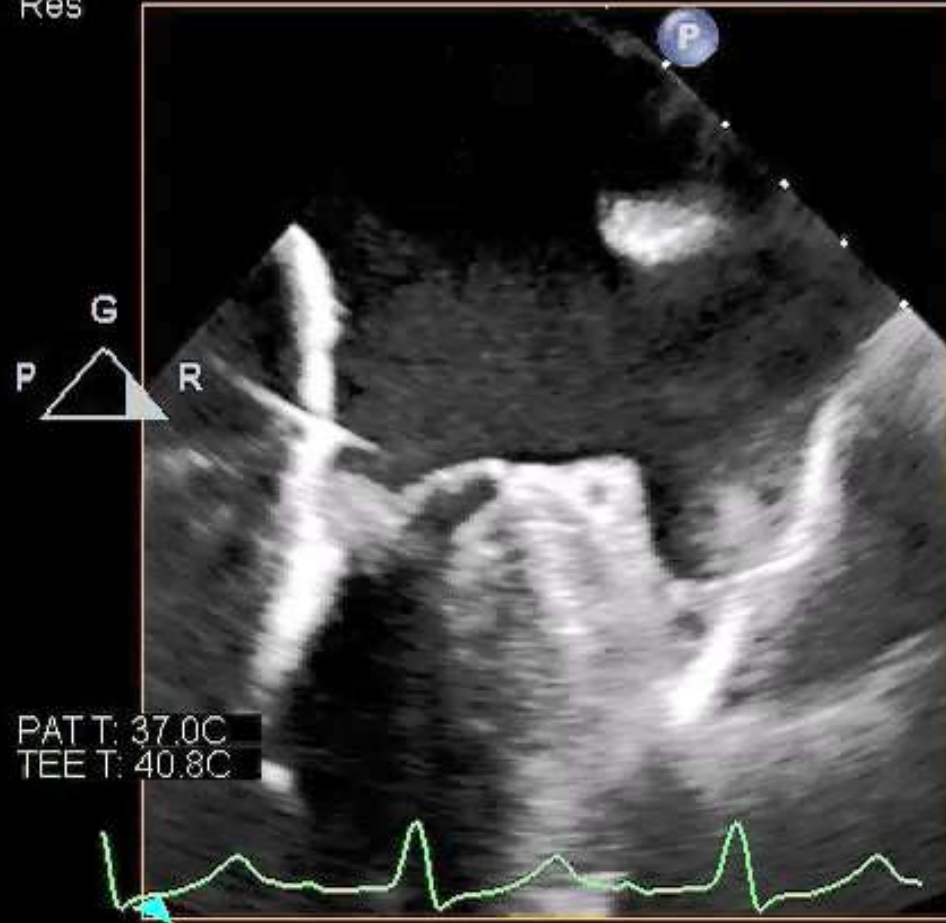
50dB

P Off

Res



M4



PAT T: 37.0C  
TEE T: 40.8C



Adult Echo

XB-2t

27Hz

12cm

Z 1.2

xPlane

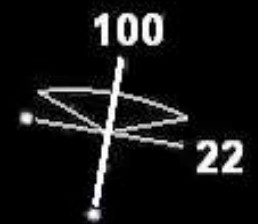
62%

62%

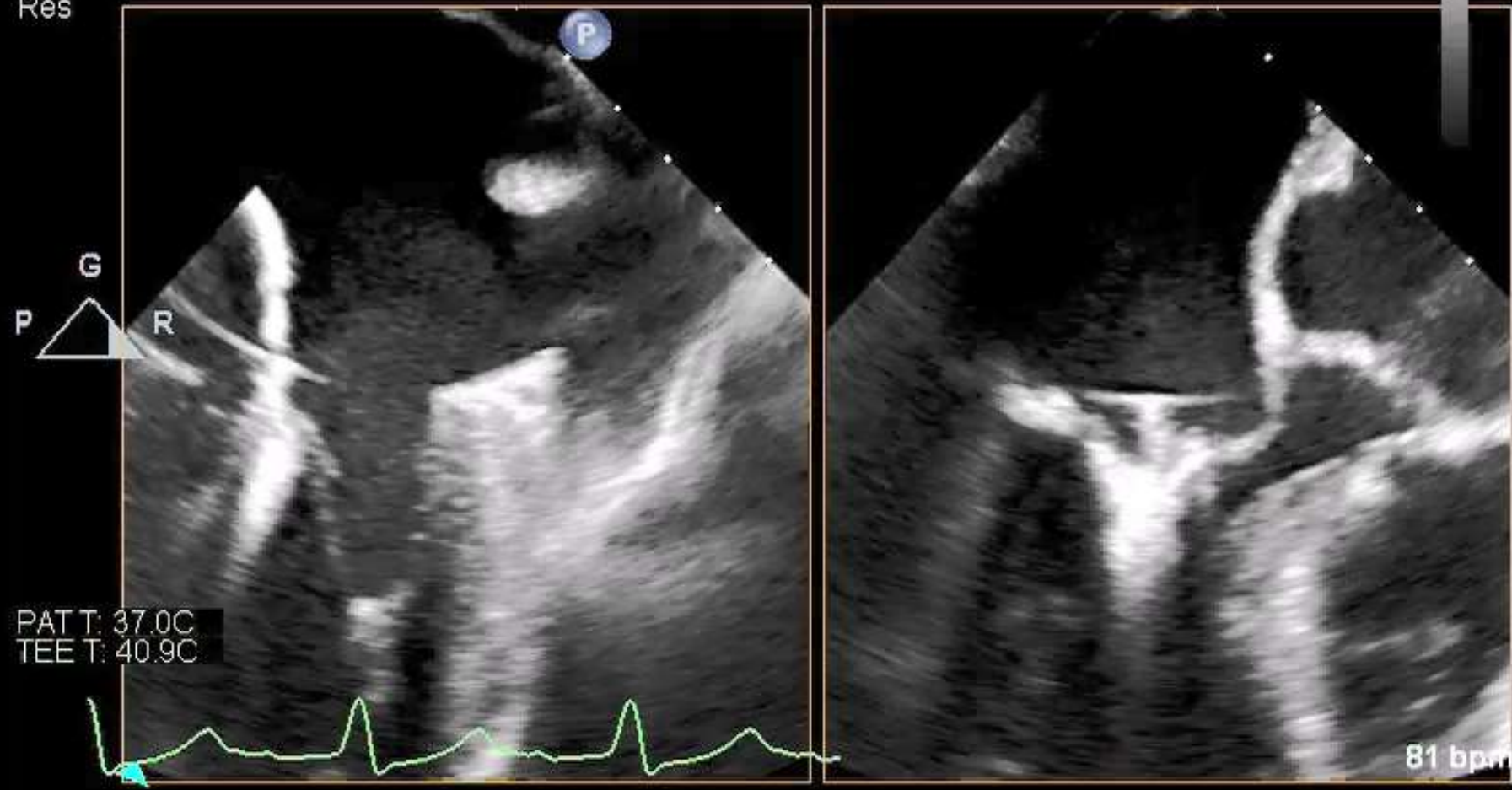
50dB

P Off

Res



M4



PAT T: 37.0C  
TEE T: 40.9C

Adult Echo

X8-2t

13Hz

12cm

xPlane

64%

64%

50dB

P Off

Res

CF

48%

6404Hz

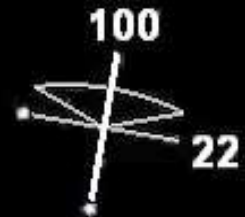
WF 576Hz

4.4MHz



PAT T: 37.0C

TEE T: 40.7C



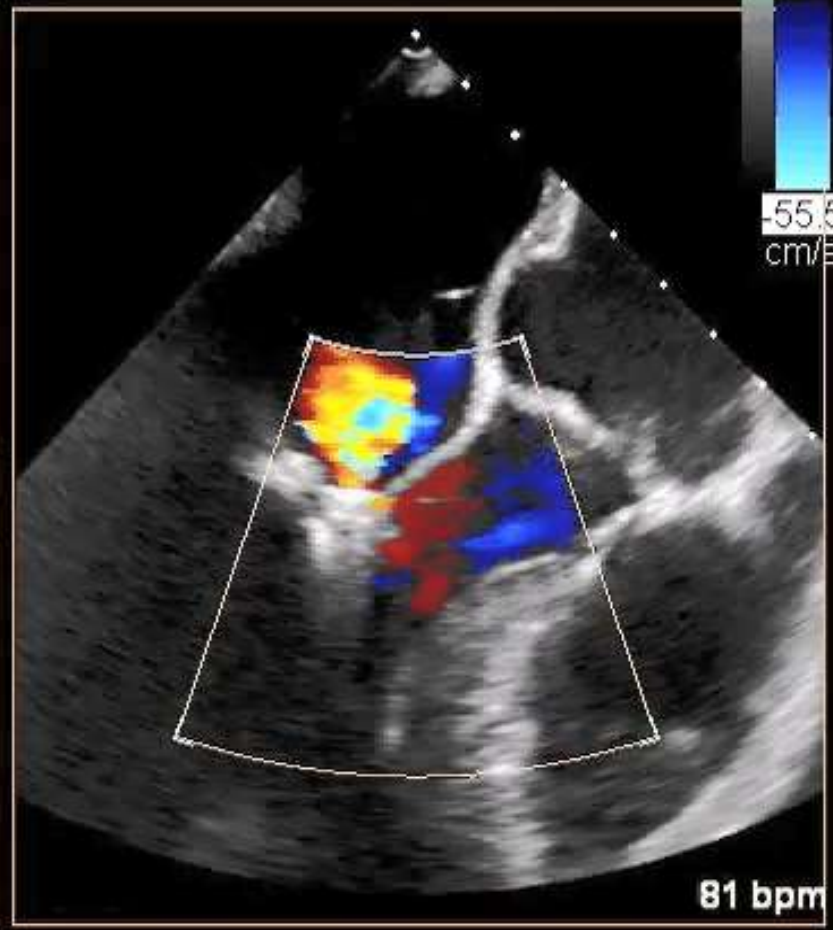
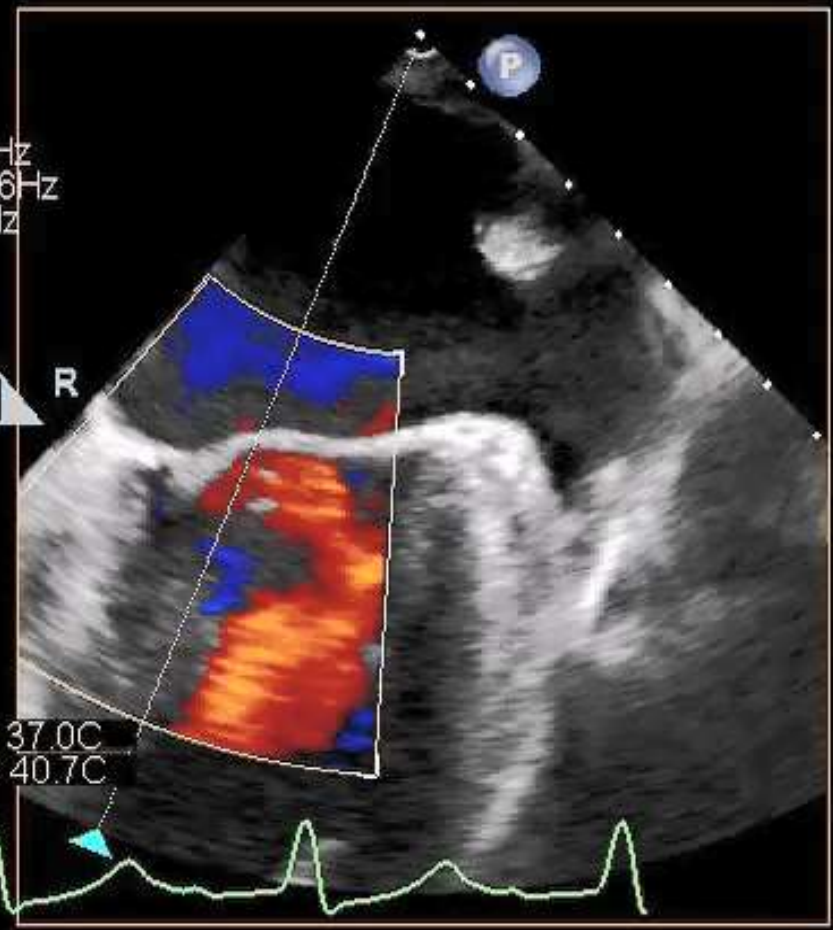
M4M4

+55.5



-55.5

cm/s



Adult Echo

X8-2t

18Hz

13cm



2D

64%

C 50

P Off

Res

CF

48%

6872Hz

WF 618Hz

4.4MHz

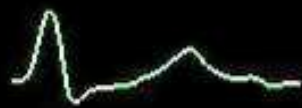


M4 M4

59.6



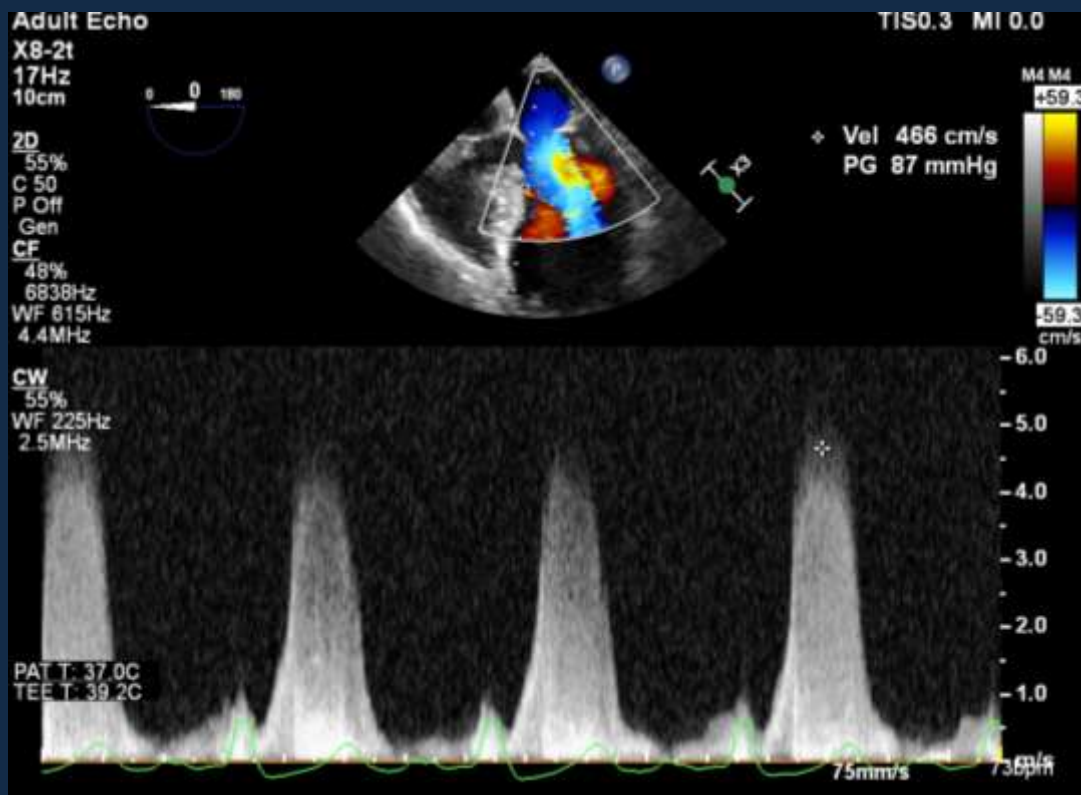
PAT T: 37.0C  
TEE T: 40.5C



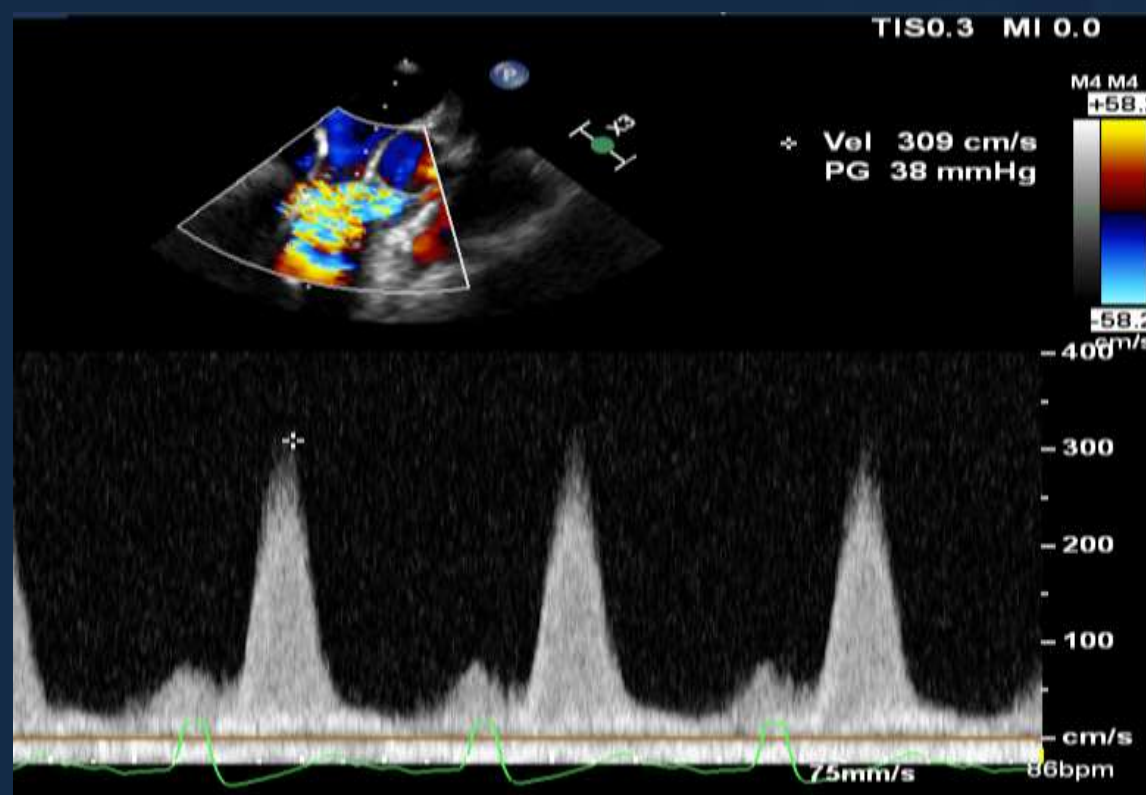
84 bpm

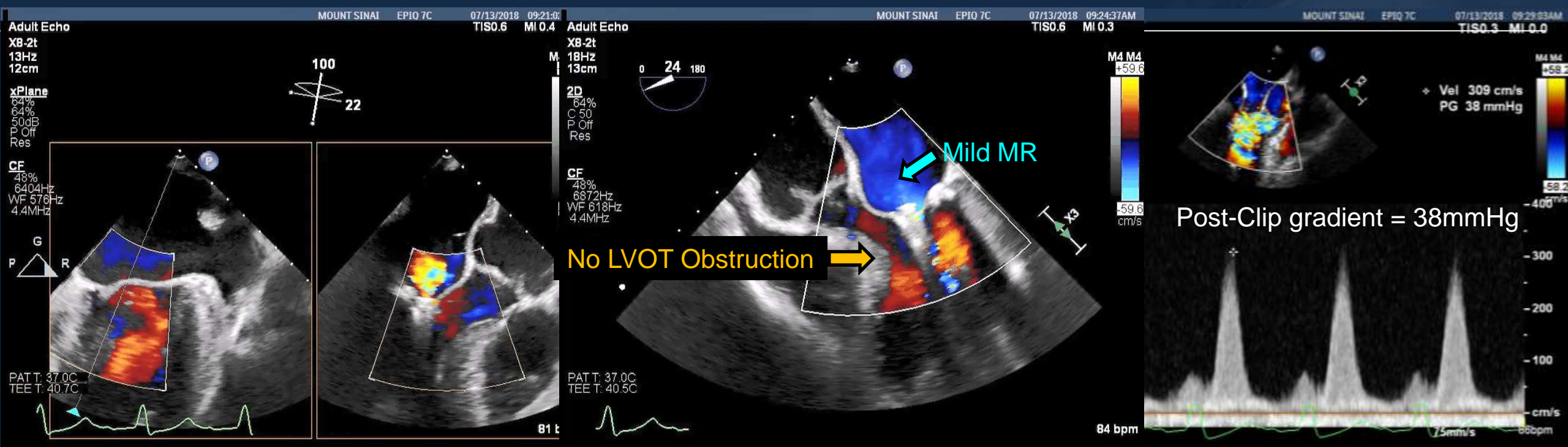
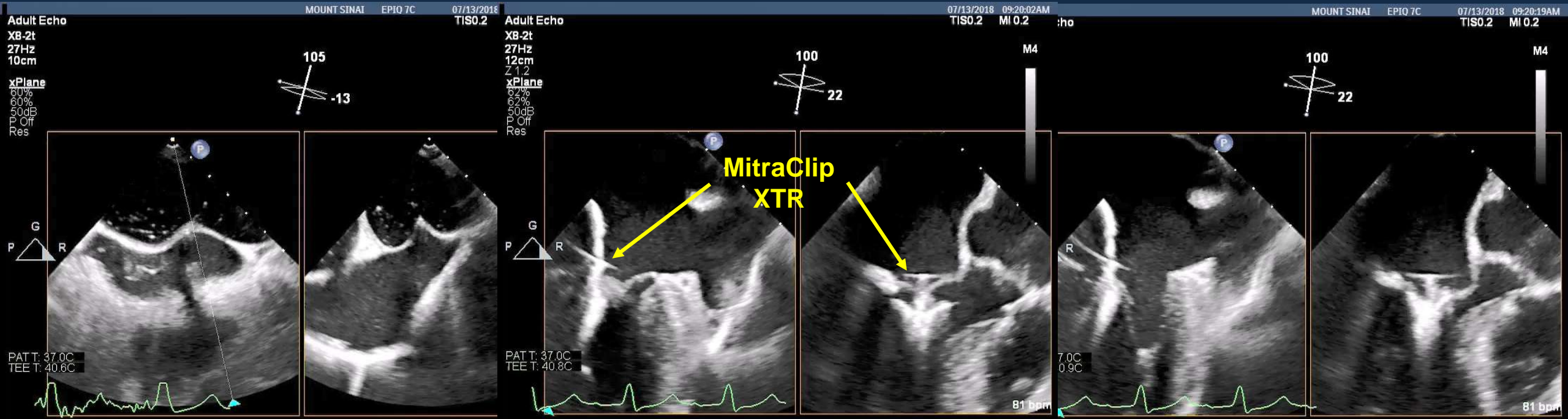


## Pre-gradient

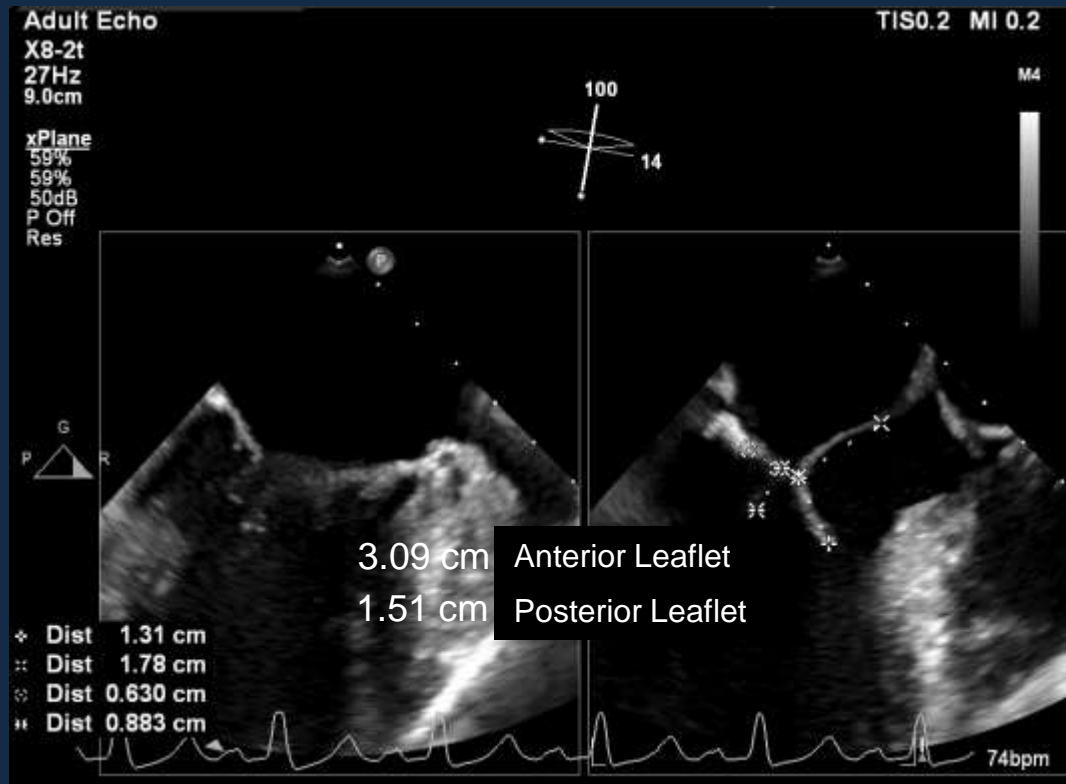


## Post-gradient



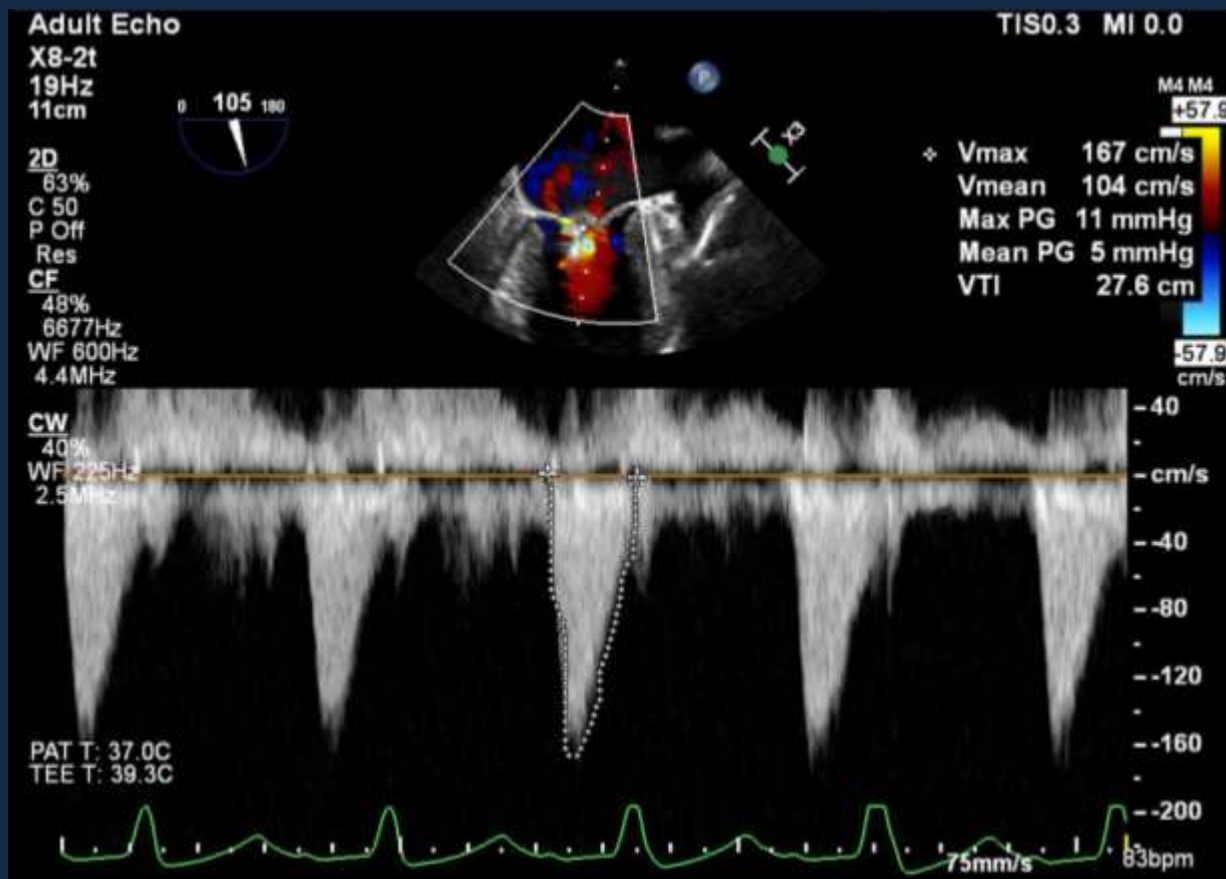


# Confirming Sufficient Leaflet Insertion

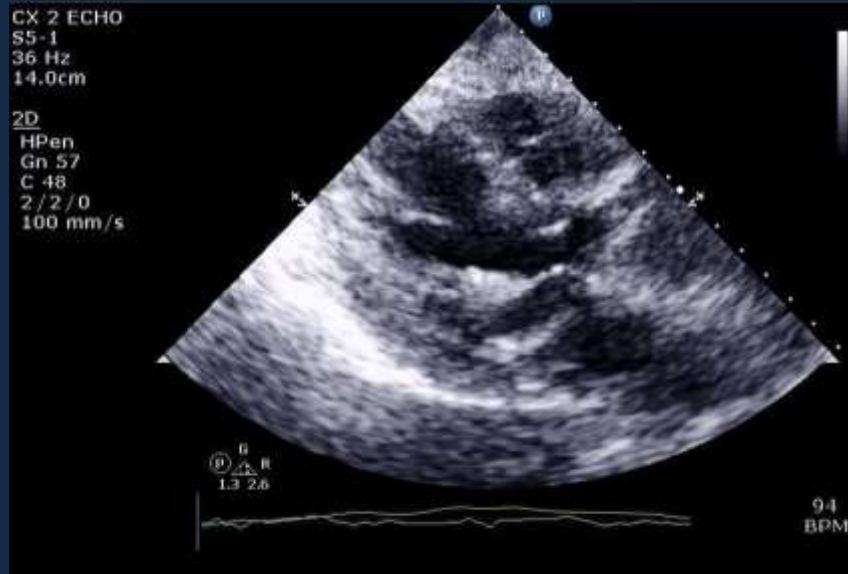




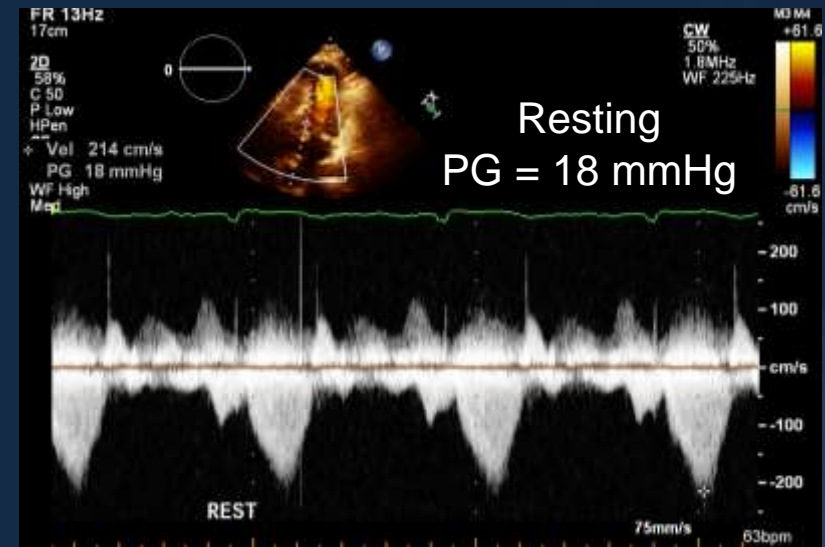
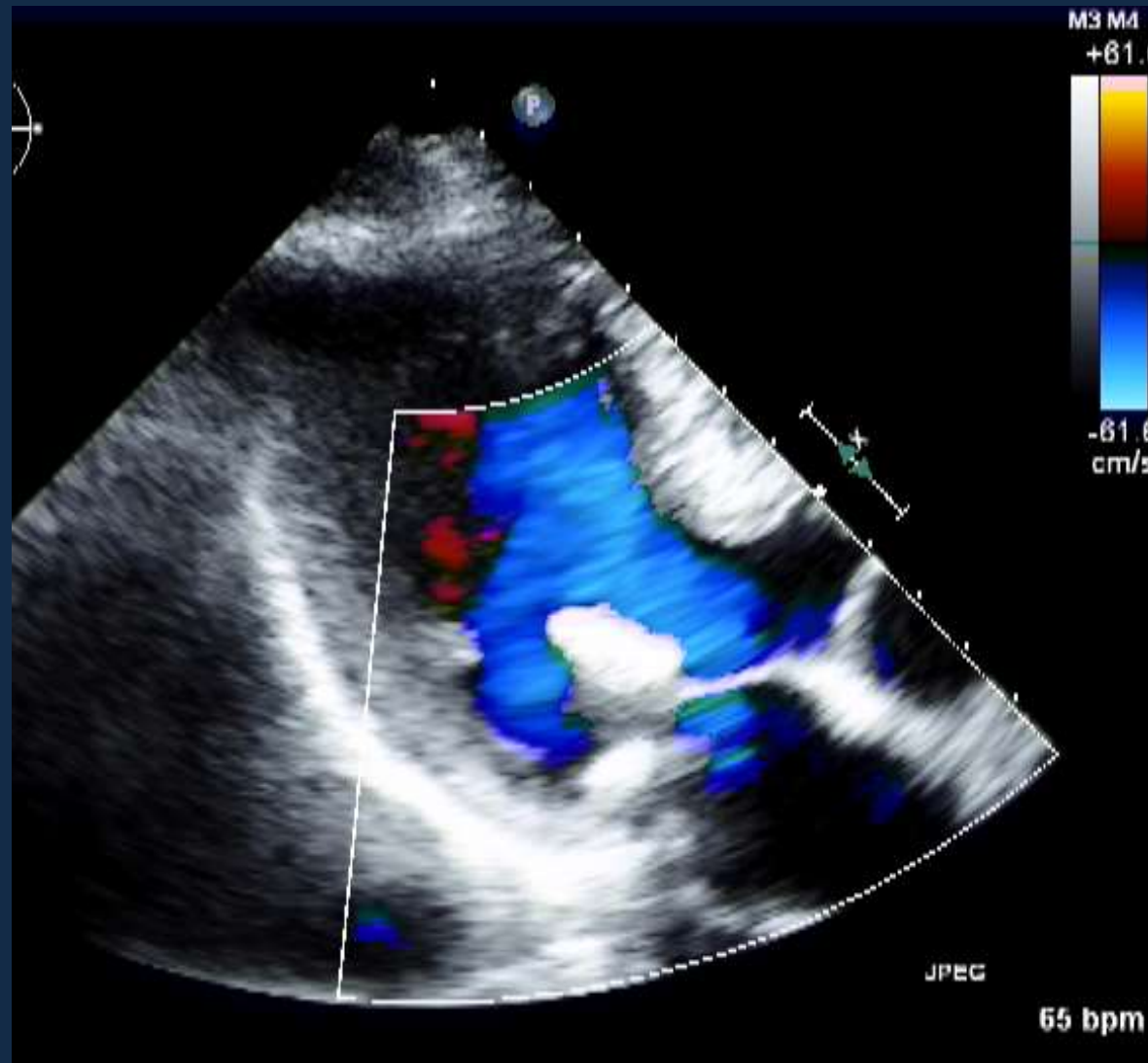
# Residual Mitral In-flow Gradient



# Pre-Discharge



# 30-Day Follow-Up



# Potential Advantages

Directly targets the mitral valve and the mechanism of LVOT obstruction

Less invasive and does not require an iatrogenic septal infarction or ventricular remodeling, avoiding the risk of pacemaker-dependency and arrhythmias

Real time procedure, hemodynamic efficacy can be assessed prior to permanent clip decoupling, with the capability to fully retrieve the device and permit surgery

The procedure is not dependent on coronary anatomy nor on the magnitude of ventricular septal hypertrophy

**Thank you**

