

# Procedural Imaging: Transseptal, Steering and Grasping

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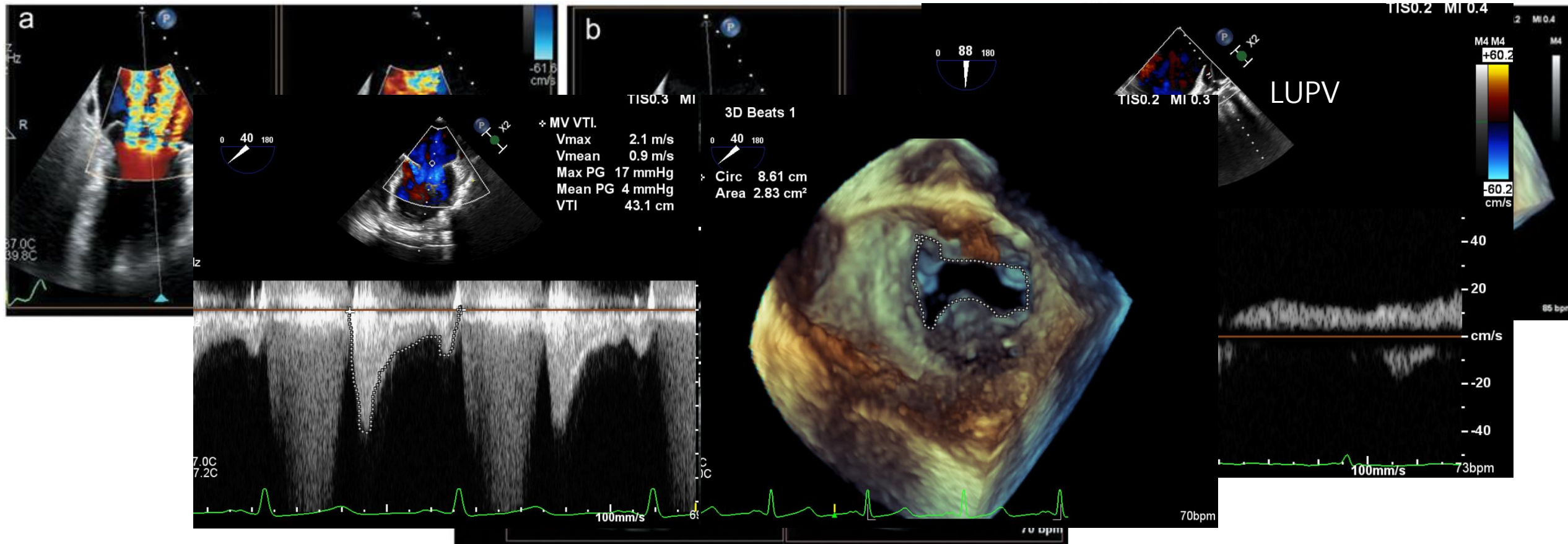
순환기내과

홍지연

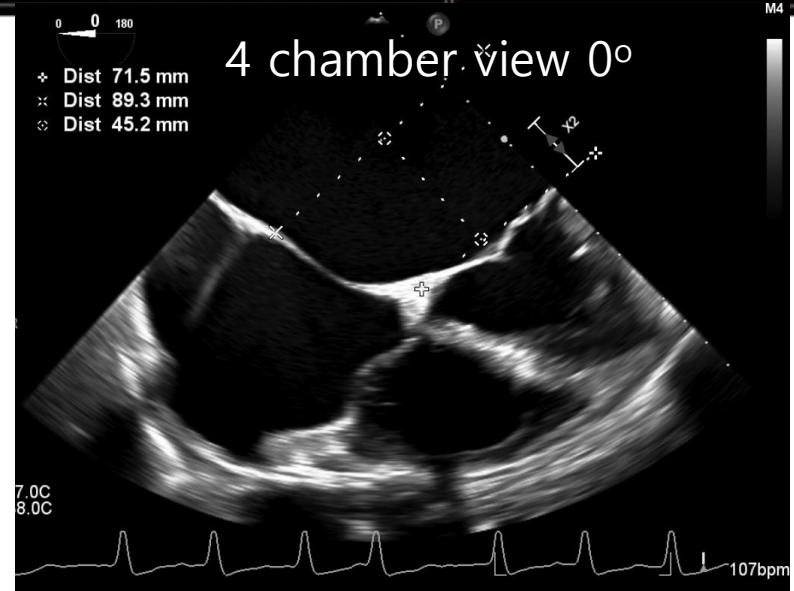
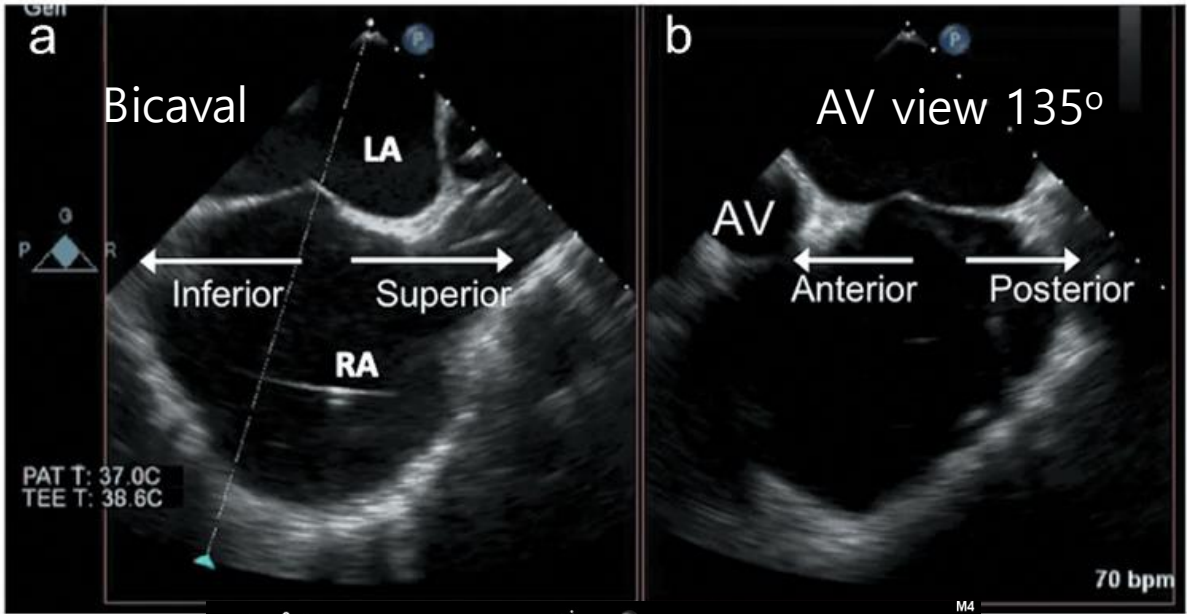
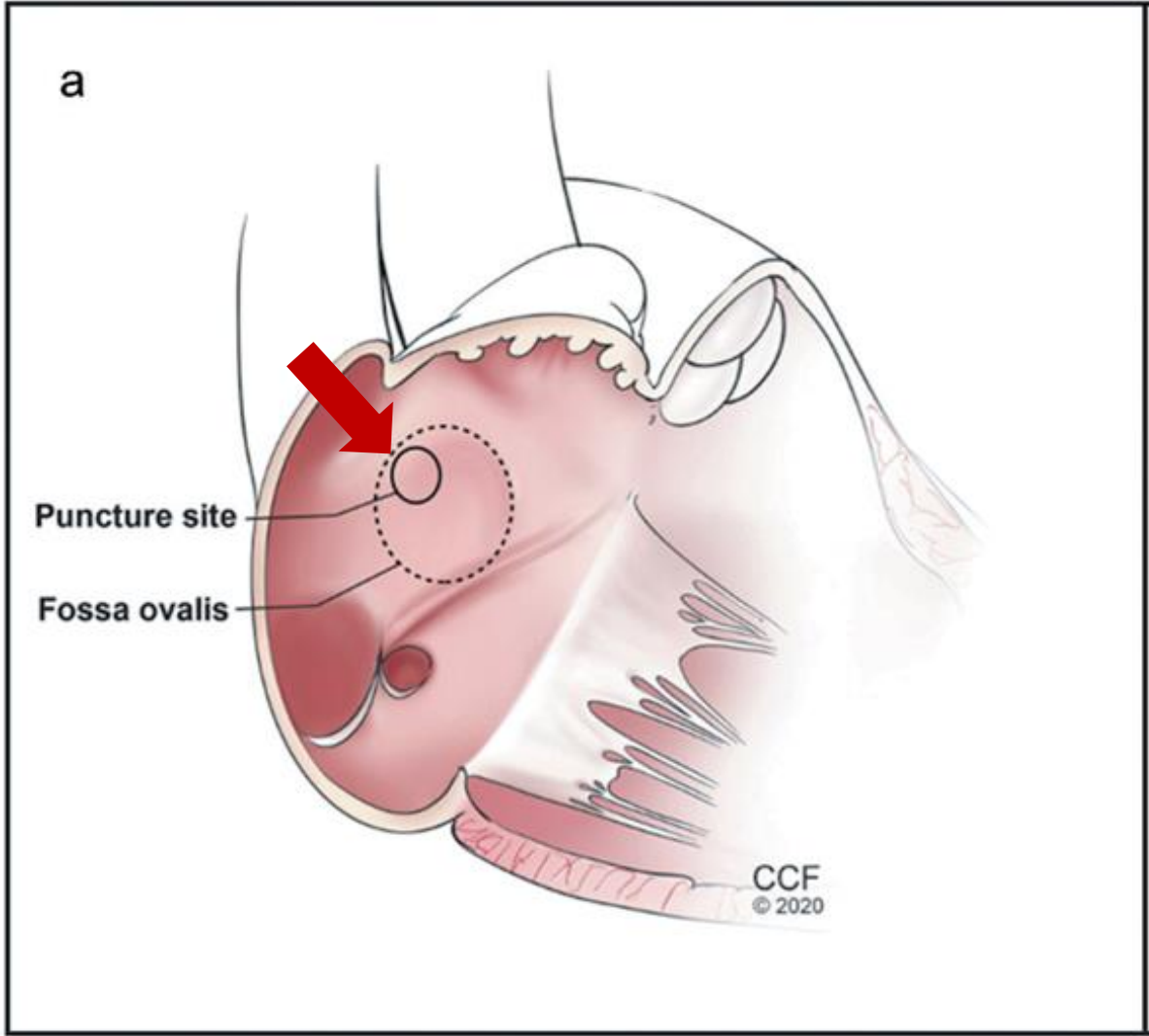
# Step 1: Immediate pre-procedure evaluation

## Immediate preprocedural checklist

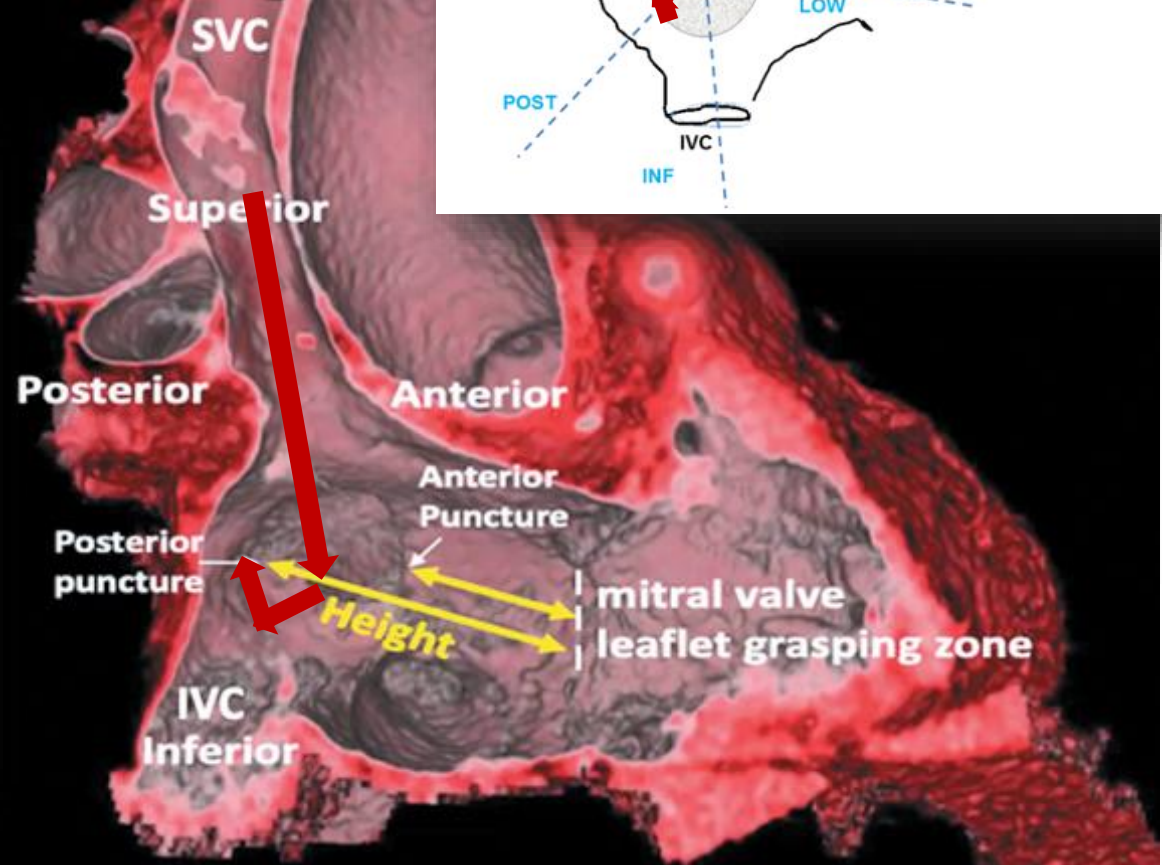
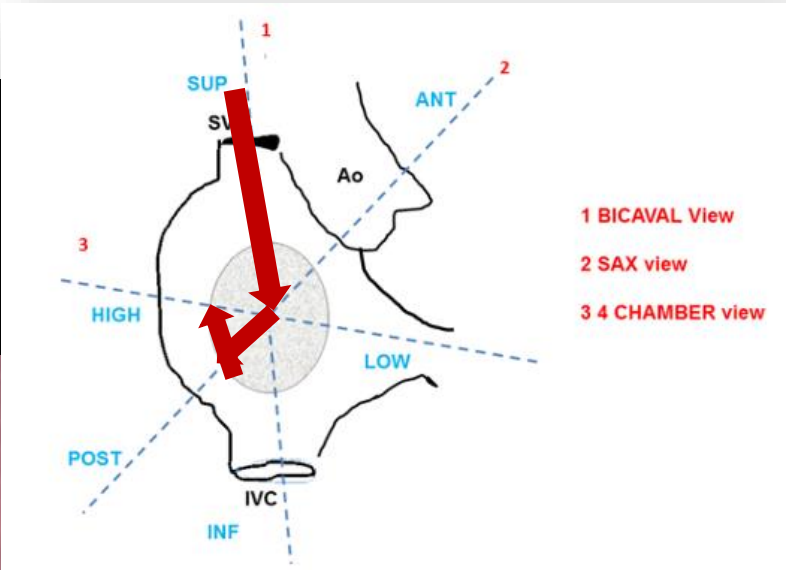
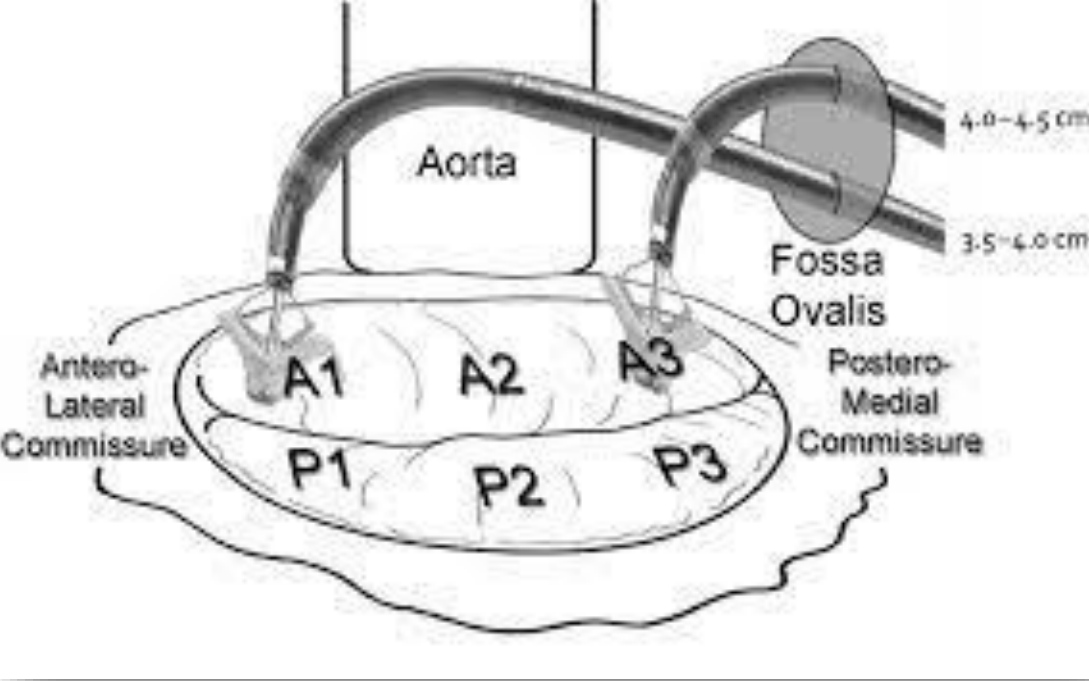
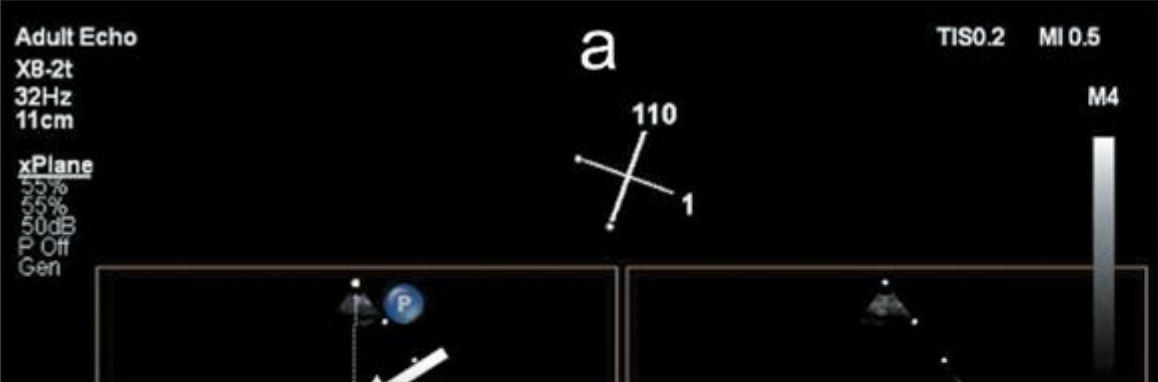
- 1 Confirm MR severity, mechanism, and origin. Become familiar with key TEE guidance views: bicommissural, long-axis, 3D en face, MPR, bicaval, AV short axis



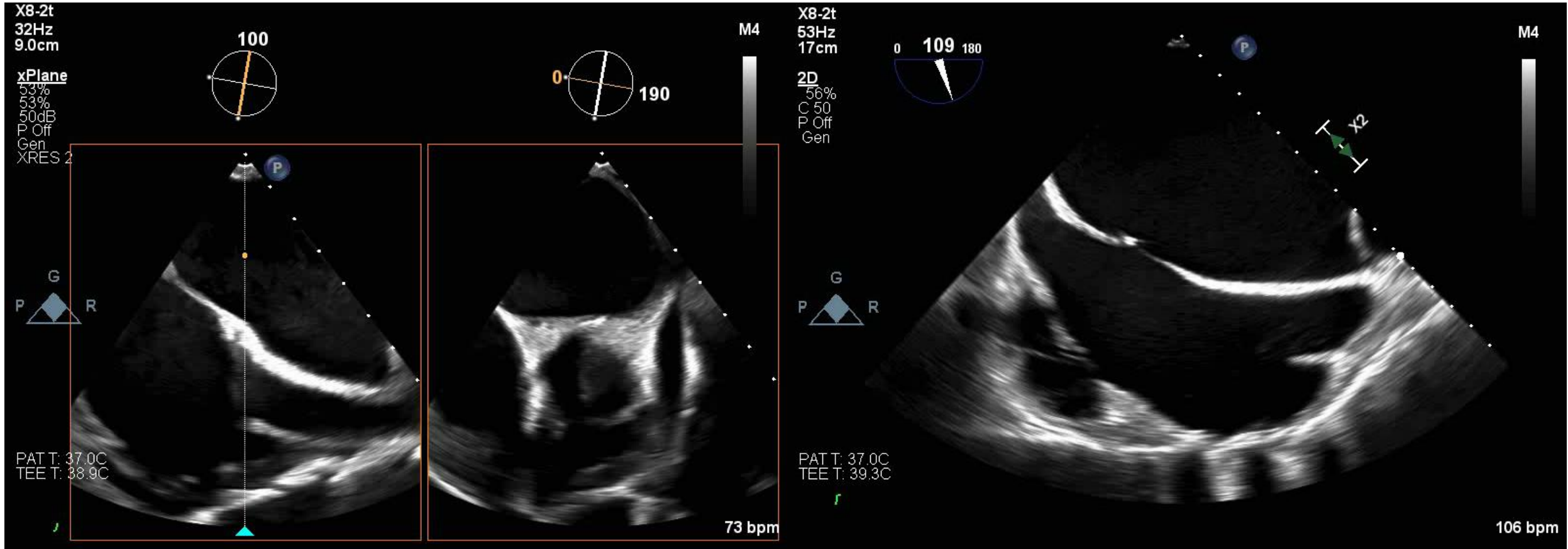
# Step 2: Trans-septal puncture



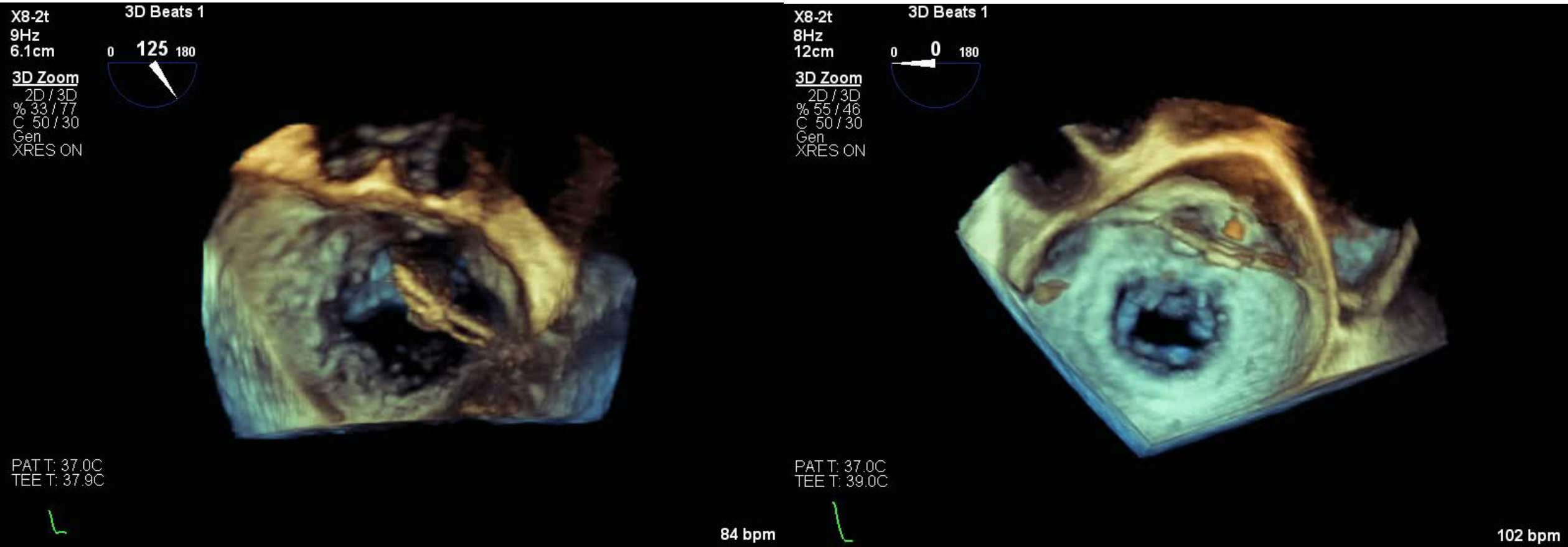
# Step 2: Trans-septal puncture



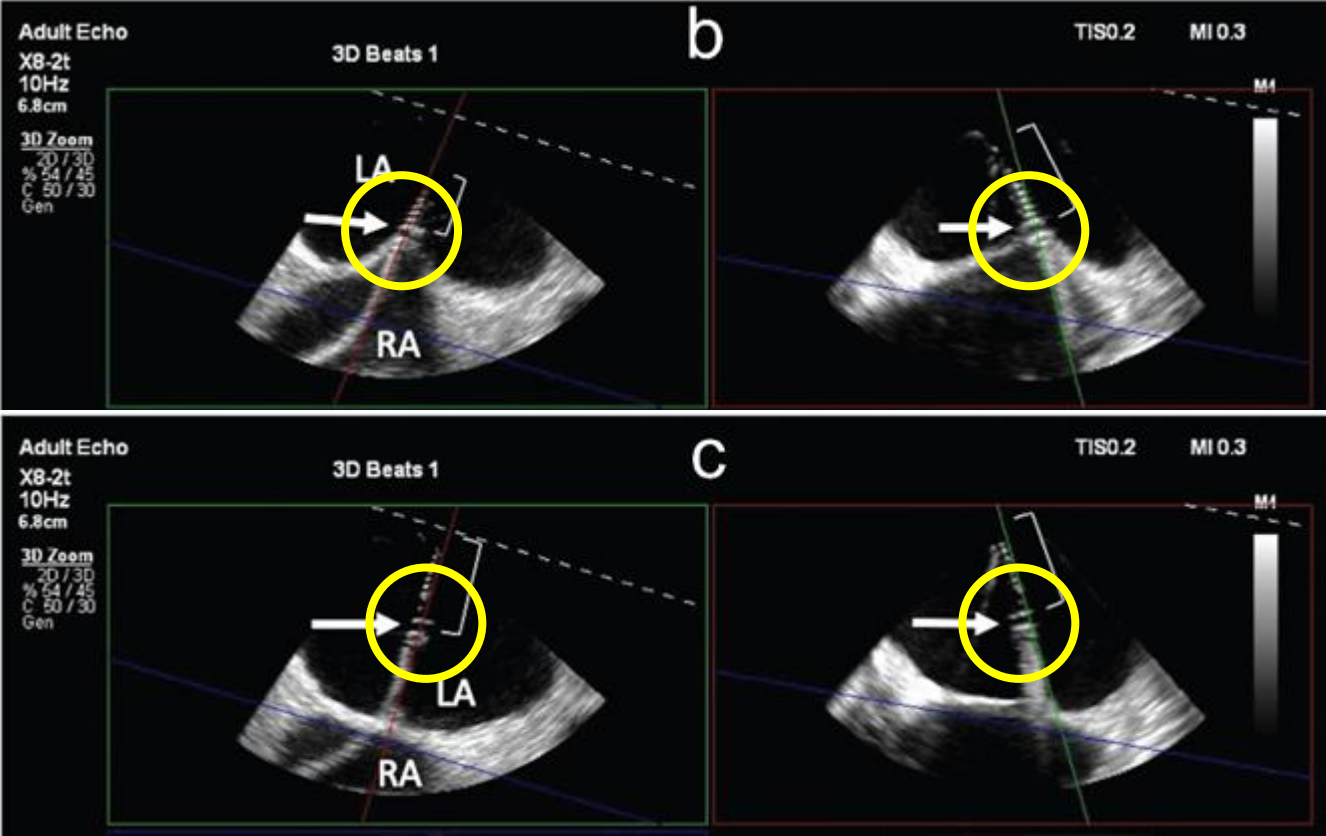
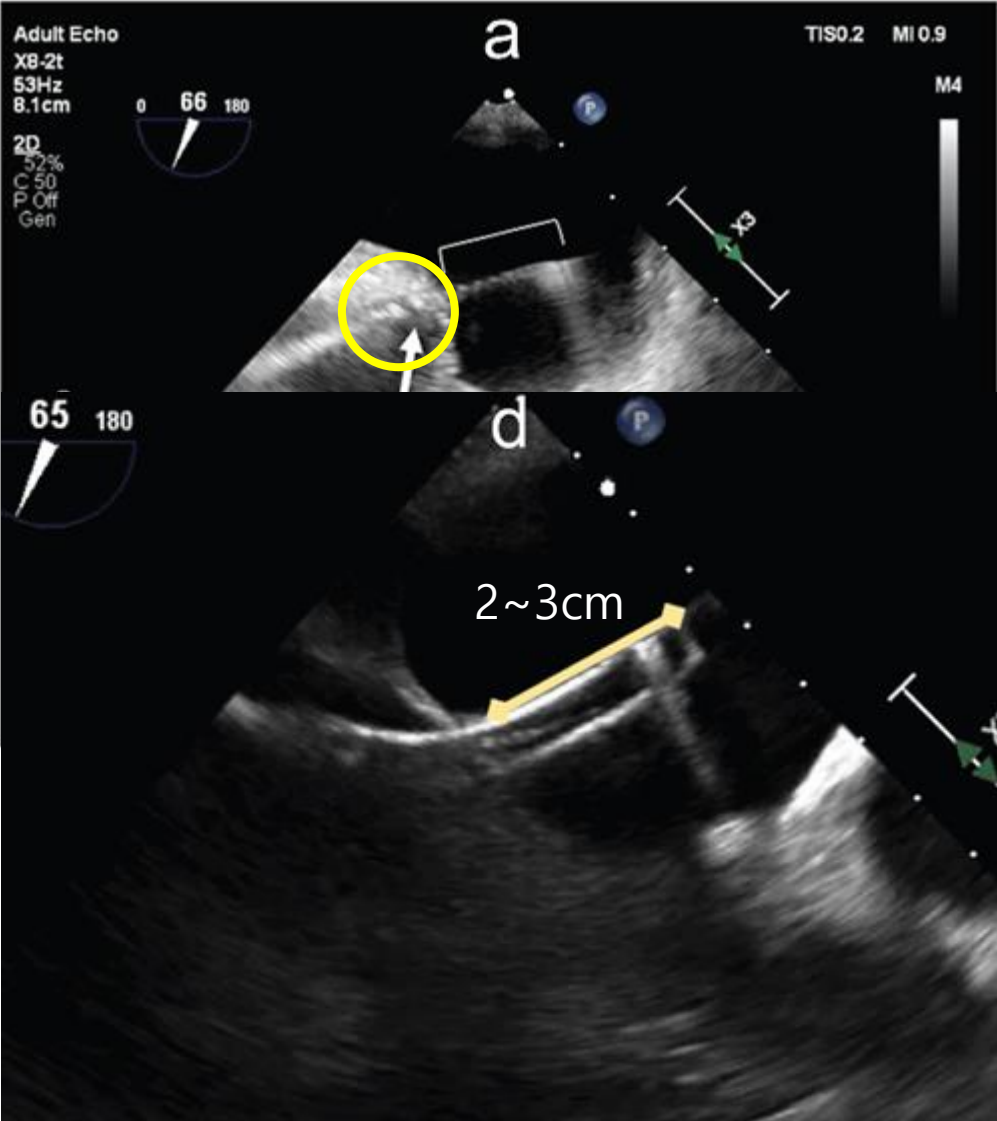
# Step 2: Trans-septal puncture



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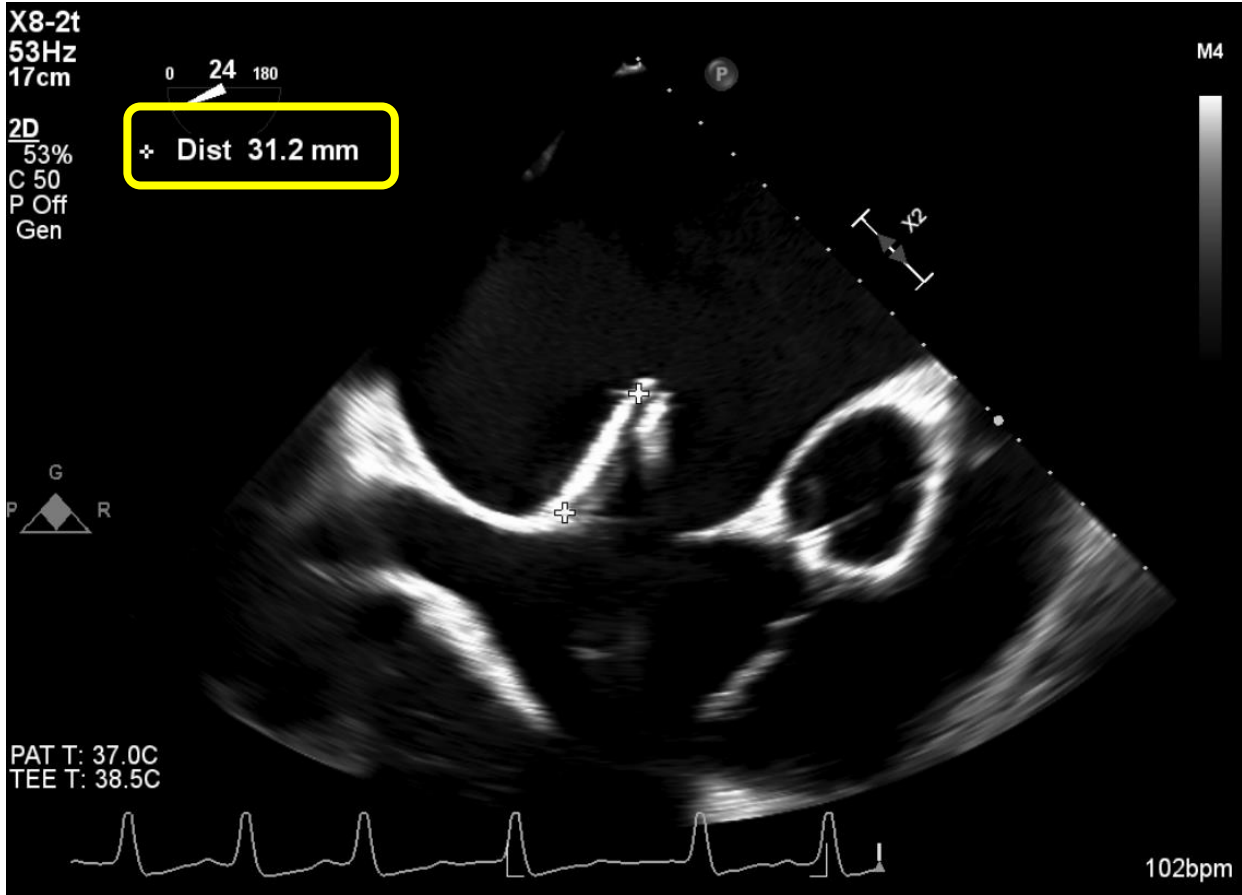
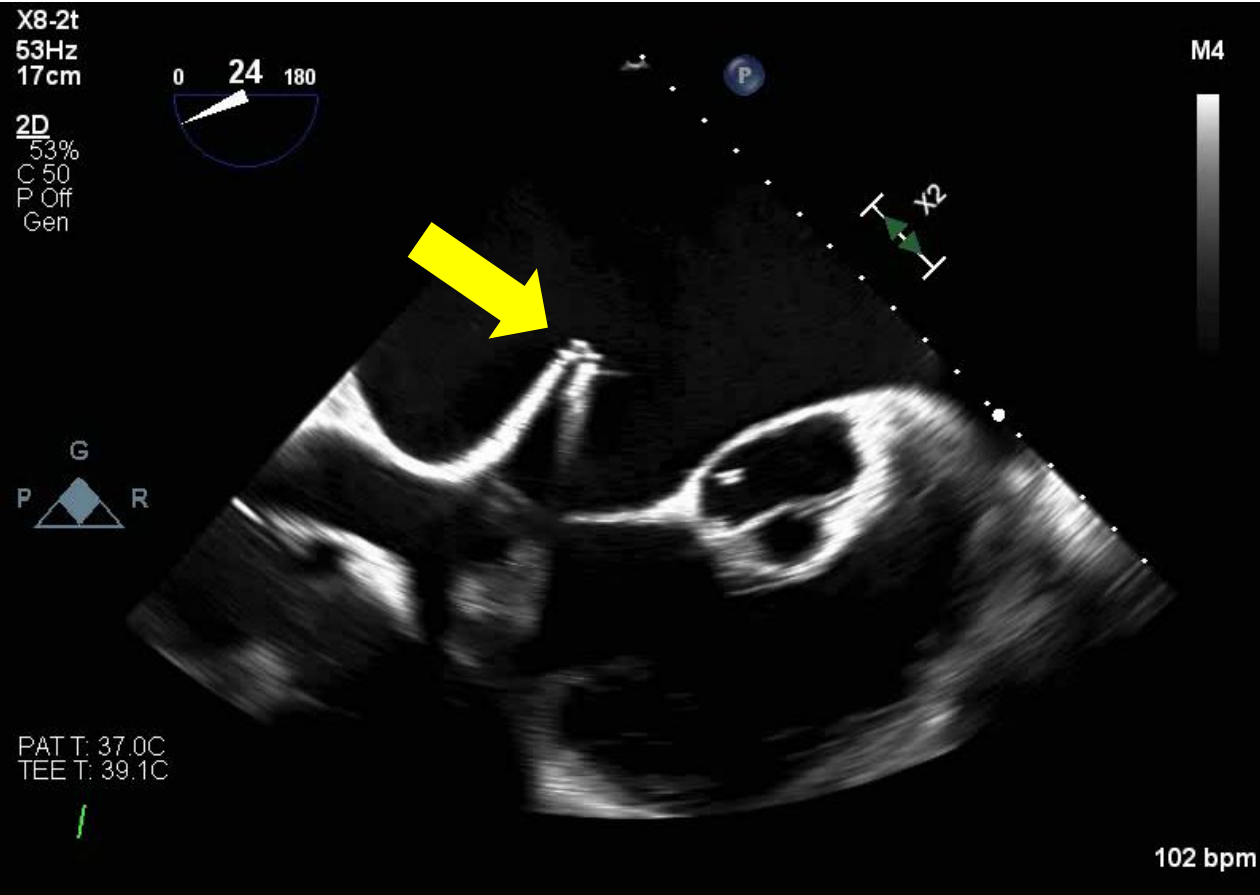


# Step 3: Steering to the mitral valve



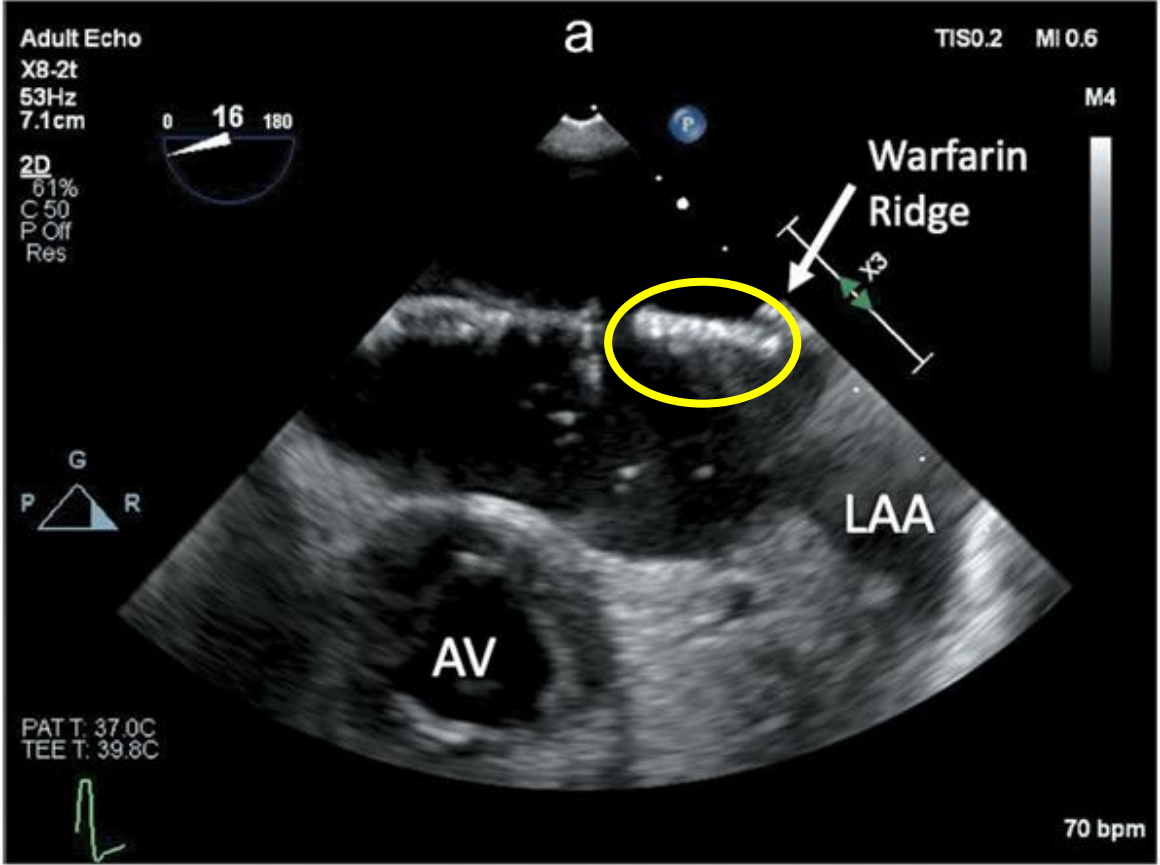
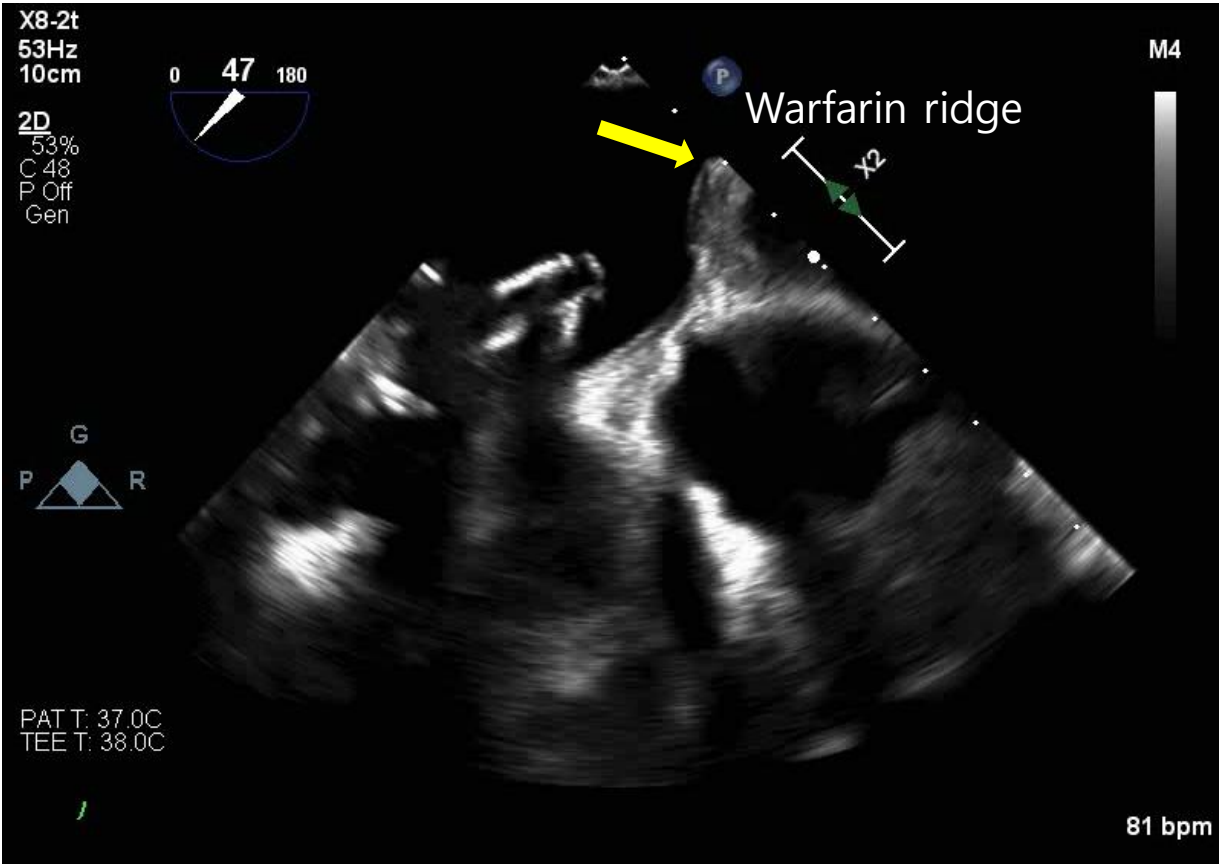
double-density sign

# Step 3: Steering to the mitral valve





# Step 3: Steering to the mitral valve



# Step 4: adjusting probe position and orientation

**Top Left Panel:**  
X8-2t  
32Hz  
18cm  
xPlane  
50%  
56%  
50dB  
P Off  
Gen  
XRES 2  
60°  
15°  
PAT T: 37.0C  
TEE T: 39.1C

**Top Middle Panel:**  
3D Zoom  
2D / 3D  
% 51 / 32  
C 50 / 30  
Gen  
XRES ON  
3D Beats 1  
0 90 180

**Top Right Panel:**  
M4M4  
+63.9  
-63.9  
cm/s  
160  
68 bpm  
76 bpm

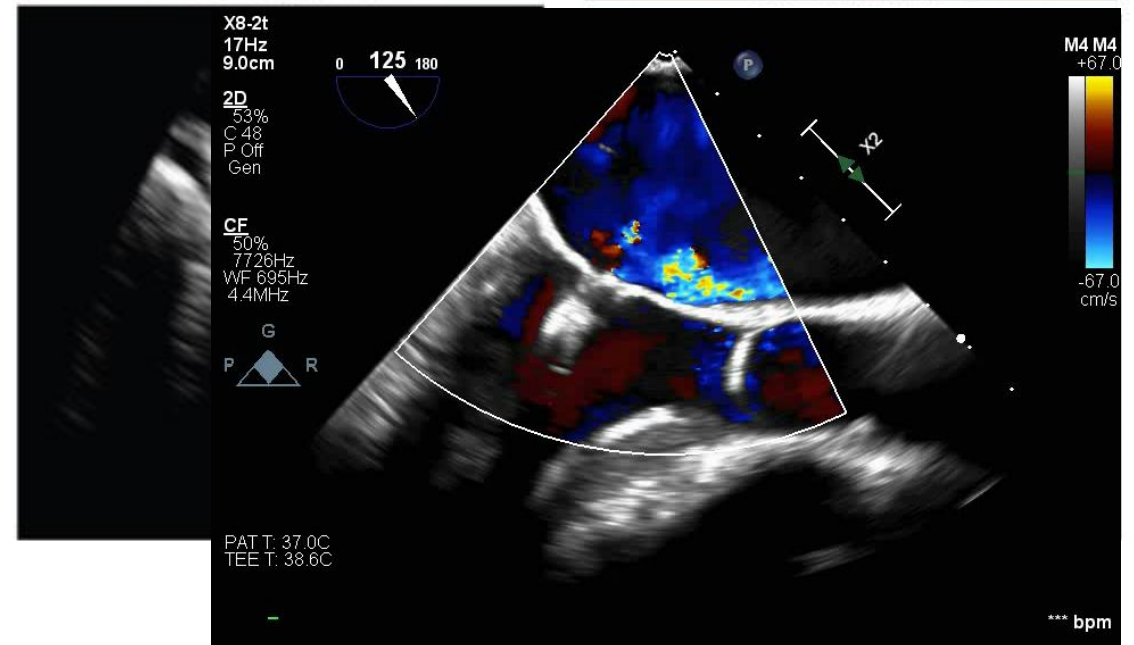
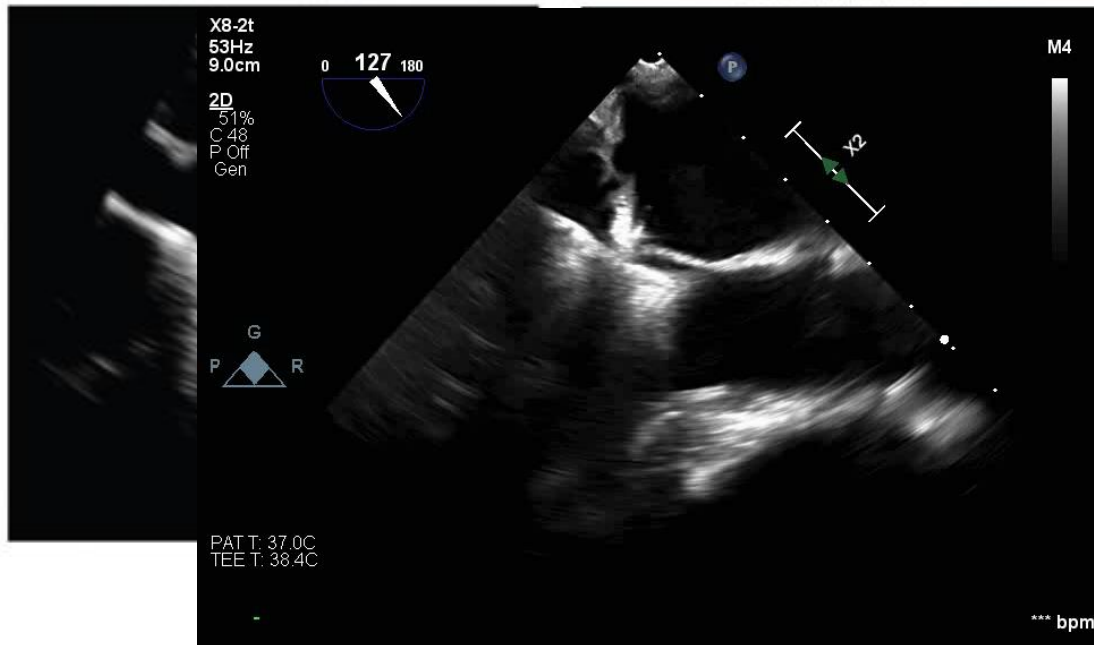
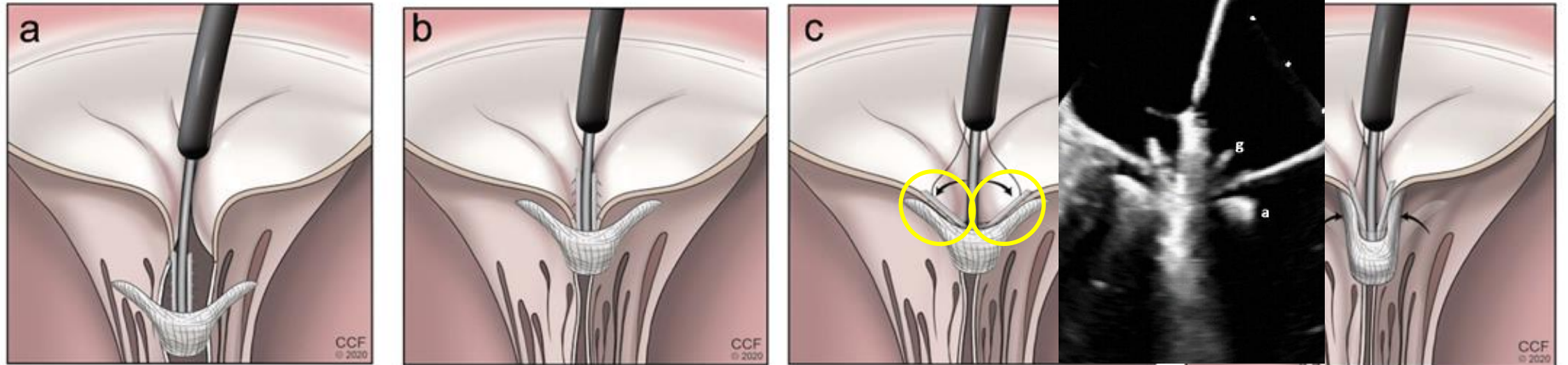
**Bottom Left Panel:**  
120°  
Anterior  
PAT T: 37.0C  
TEE T: 39.0C

**Bottom Middle Panel:**  
X8-2t  
11Hz  
5.8cm  
3D Zoom  
2D / 3D  
% 52 / 18  
C 50 / 30  
Gen  
XRES ON  
3D Beats 1  
0 90 180  
68 bpm

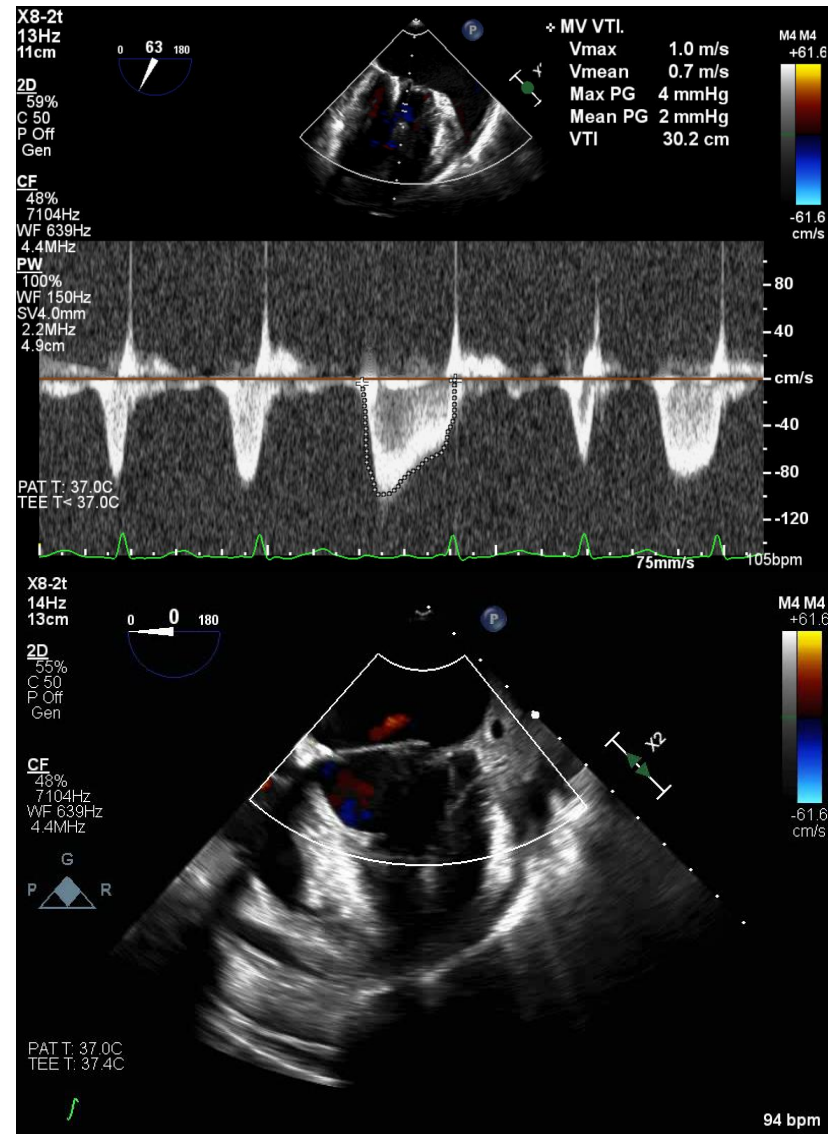
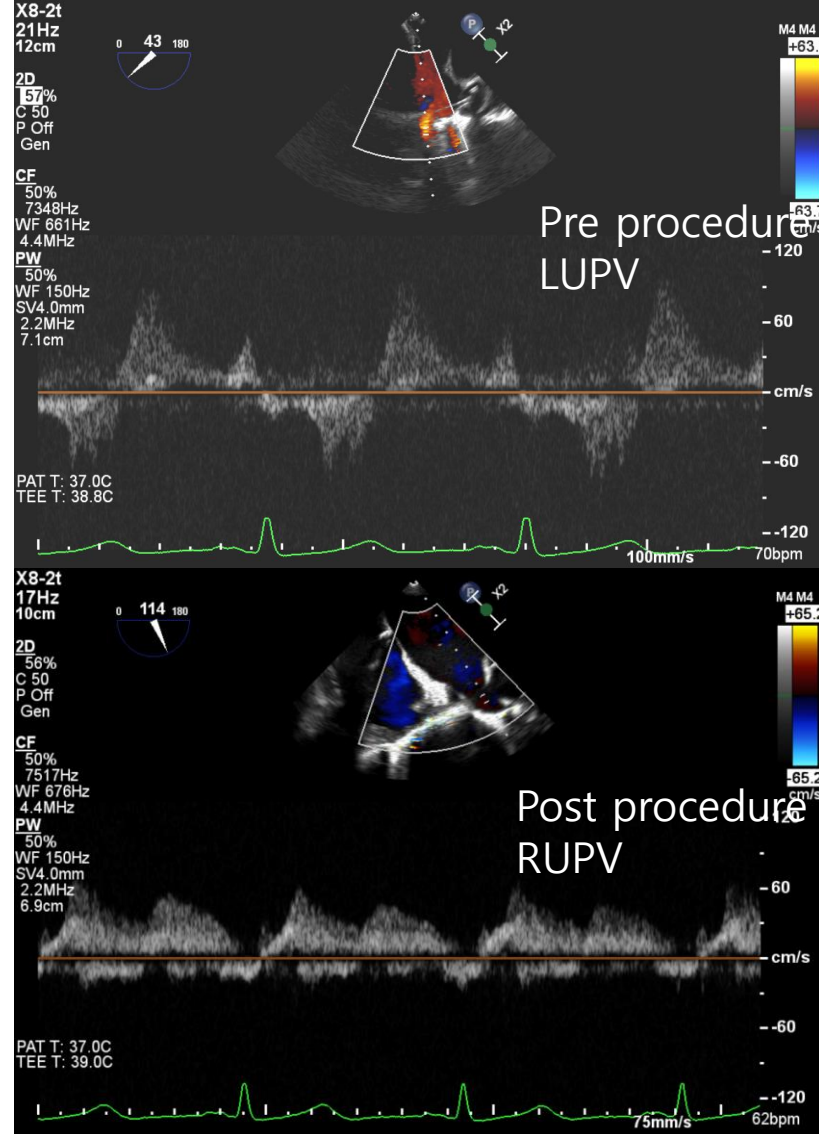
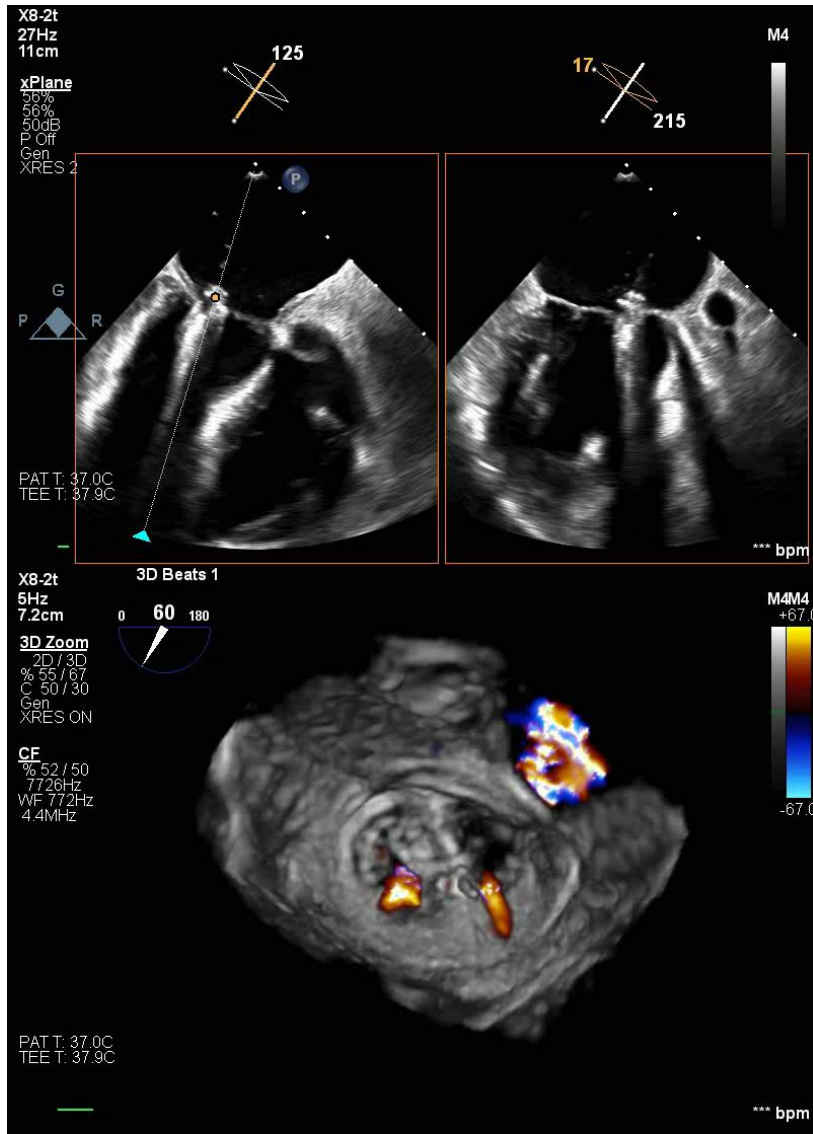
**Bottom Right Panel:**  
En face view  
CCF  
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The image displays a series of echocardiographic views used for adjusting probe position and orientation. It includes 2D and 3D views of the heart, Doppler flow measurements, and color flow maps. Technical parameters such as frequency (11Hz, 32Hz), depth (5.8cm, 18cm), and zoom levels are shown. Anatomical diagrams illustrate the probe's position relative to the heart, with labels like 'Anterior' and 'En face view'. A heart rate of 68 bpm is indicated in several panels.

# Step 4: Grasping clip



# Step 5: Assessment of leaflet capture and residual MR



# Take home message

1. Transseptal puncture is the best important thing!!!
  - ✓ Bicaval view (**sup.** Vs. inf.) → AV view (post. Vs. ant.)  
→ 4C view (height ~4cm)
2. Keep your eye on the tip of catheter and the clip to avoid injury to LA structure
3. Bicommisural view and long axis view are important to check good trajectory, location and grasping of clip
4. After procedure, check motion of clip, residual MR, pulmonary vein systolic reversal, MS and pericardial effusion
5. You should always be able to say “ **Please wait for a good view**”

