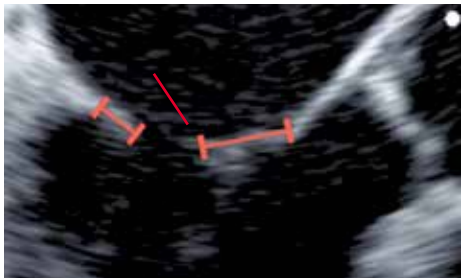
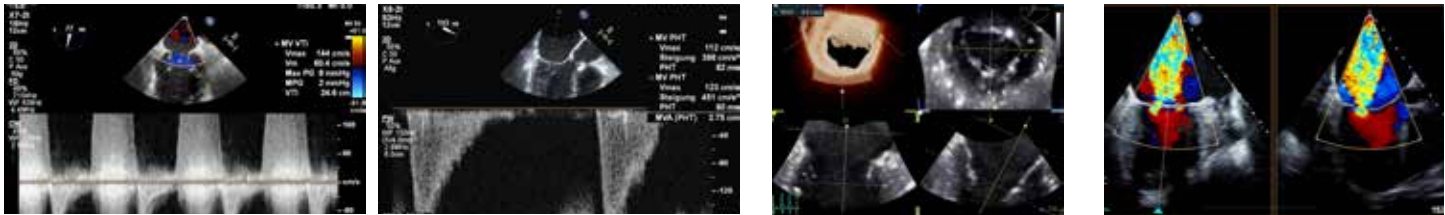


MEASUREMENTS FOR PROCEDURAL AND CLIP PLANNING

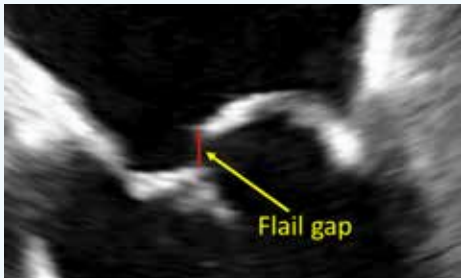


**POSTERIOR LEAFLET LENGTH**  
The measurements should be taken in LVOT at grasping area.  
**NOTE:** G4 NT and G4 NTW need ≥ 6 mm of leaflet insertion.  
G4 XT and G4 XTW need ≥ 9 mm of leaflet insertion.

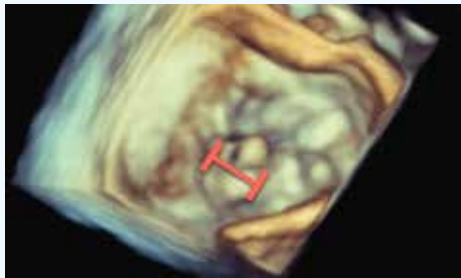


- Measure baseline mean MV gradient using CW Doppler.
- For every subsequent clip, assess the forward flow area during diastole and risk of mitral stenosis (pressure gradient > 5-10mm Hg, diastolic pressure half-time > 150ms).
- Measure MV area by PHT, 3D planimetry and/or 2D transgastric SAX (area ideally ≥ 4cm²).
- Assess the primary jet width at the MR origin (short axis on 3D color, biplane or on a transgastric short axis view) optimizing aliasing velocity settings (50-60 cm/s).

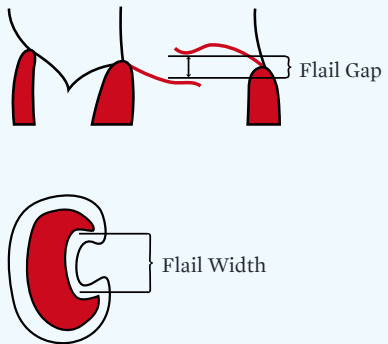
PRIMARY MITRAL REGURGITATION (PMR)



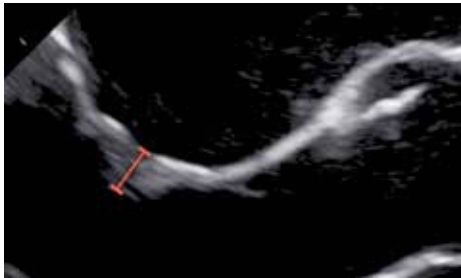
**PMR FLAIL GAP**  
This should be taken in the view (LVOT or 4 chamber) where the flail gap is largest.



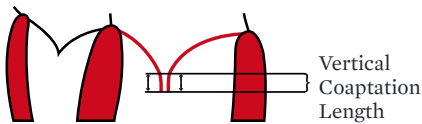
**PMR FLAIL WIDTH**  
This measurement should be taken in the transgastric short axis view where the flail width is largest.



SECONDARY MITRAL REGURGITATION (SMR)



**SMR VERTICAL COAPTATION LENGTH**  
The measurement should be taken in the 4-chamber view where the vertical coaptation length is shortest.



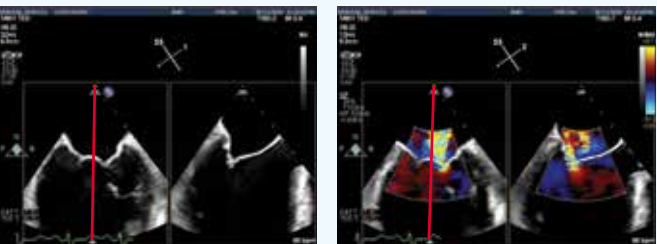
NEW IMAGING TECHNIQUES: X-PLANE OR MULTIPLANE

To incorporate the “X-Plane or Multiplane” IC sweep which is performed by moving the track-ball on the ultrasound machine in the IC view, which displays the LVOT view with the corresponding scallops.

X-PLANE OR MULTIPLANE



**A1-P1 EXAMPLE**  
Once an inter-commissural view is obtained, use the bi-plane cursor to image the long axis/LVOT view to help assess the lateral (A1-P1) part of the valve. Perform this with and without color.



**A2-P2 EXAMPLE**  
Once an inter-commissural view is obtained, use the bi-plane cursor to image the long axis/LVOT view to help assess the central (A2-P2) part of the valve. Perform this with and without color.



**A3-P3 EXAMPLE**  
Once an inter-commissural view is obtained, use the bi-plane cursor to image the long axis/LVOT view to help assess the medial side (A3-P3) of the valve. Perform this with and without color.

CAUTION: These products are intended for use by or under the direction of a physician. Prior to use, reference the Instructions for Use, inside the product carton (when available) or at [eifu.abbottvascular.com](http://eifu.abbottvascular.com) or at [medical.abbott/manuals](http://medical.abbott/manuals) for more detailed information on Indications, Contraindications, Warnings, Precautions and Adverse Events.

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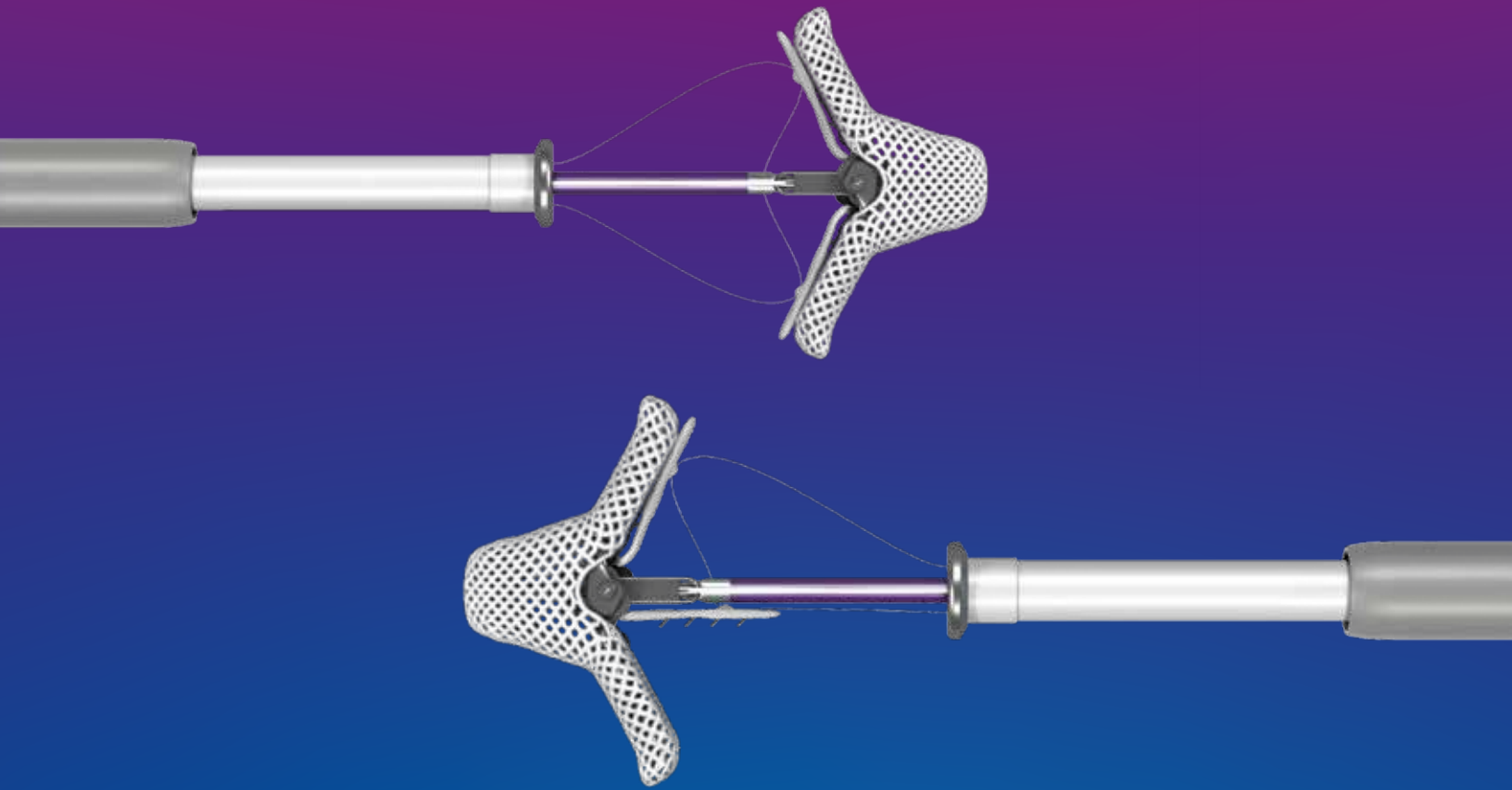
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MitraClip™  
Transcatheter Edge-to-Edge Repair

TEE SCREENING

TRANSESOPHAGEAL ECHO  
ACQUISITION GUIDE

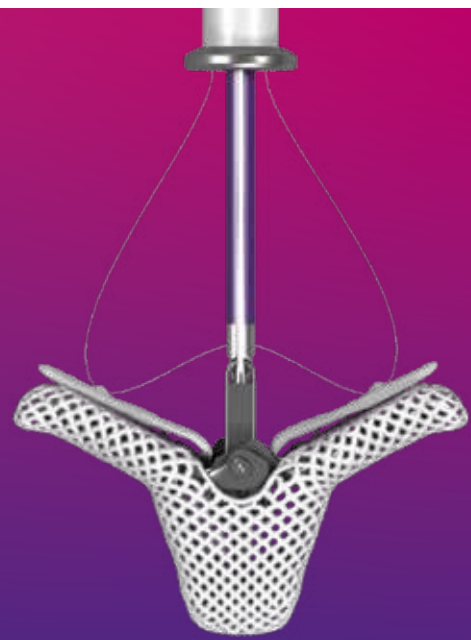


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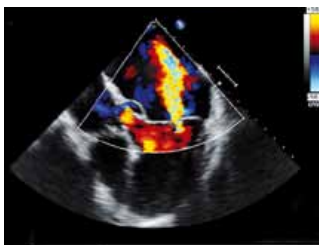
# TRANSESOPHAGEAL ECHO ACQUISITION GUIDE



## SUGGESTED SETTINGS

- Each view should be performed with and without color flow Doppler using color compare when appropriate
  - Ensure capture of the MR jet at the valve
  - Visualize the entire jet within the LA
- Multiple cardiac cycles should be captured
- Color flow Doppler Nyquist limits = Range 0.5-0.7 m/sec
- Implement 3D imaging when appropriate but not to the exclusion of traditional 2D image acquisition

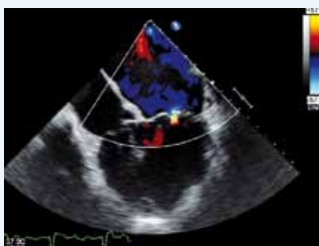
## 0° VIEWS, 5-CHAMBER AND 4-CHAMBER



### SUPERIOR

5-chamber view with A1/P1 of the mitral valve (MV) clearly visualized.

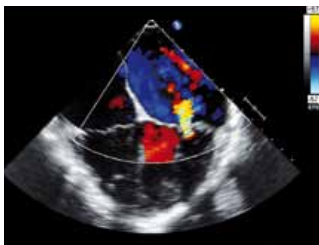
This view is obtained at the mid-esophageal level. The aortic valve and left ventricular outflow tract are clearly visualized. The LV is foreshortened.



### CENTRAL

4-chamber view with A2/P2 clearly visualized.

Advanced probe 1–3 cm. The LV cavity is more completely visualized. For secondary MR, vertical coaptation length should be measured. For primary MR, flail gap should be measured, if present.

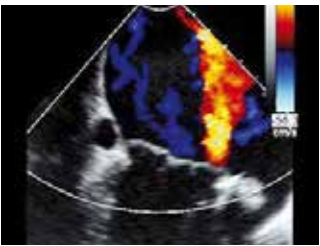


### INFERIOR

4-chamber view with A3/P3 clearly visualized.

The probe is further advanced 1–3 cm. The coronary sinus and tricuspid valve may be seen.

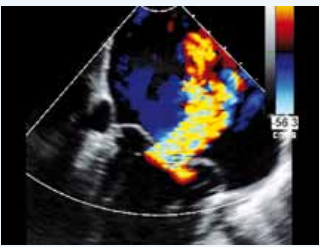
## 60-90°, BICOMMISSURAL



### ANTERIOR

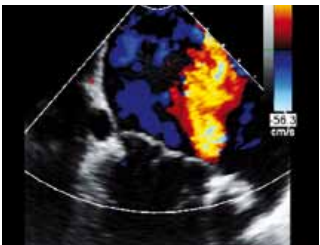
This view is obtained at the anterior side of the valve to visualize A1, A2, and A3 scallops.

The anterior leaflet can be isolated by torquing/rotating the probe clockwise from the midline.



### MIDLINE

This view is obtained at the midline of the valve to visualize P1, A2, and P3 scallops.

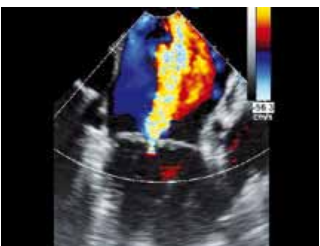


### POSTERIOR

This view is obtained at the posterior side of the valve to visualize P1, P2, and P3 scallops.

The posterior leaflet can be isolated by torquing/rotating the probe counterclockwise from midline.

## 110-130° VIEWS TO OBTAIN | LEFT VENTRICULAR OUTFLOW TRACK (LVOT)



### LATERAL

This view is obtained at the lateral side of the valve to visualize A1 and P1 scallops.

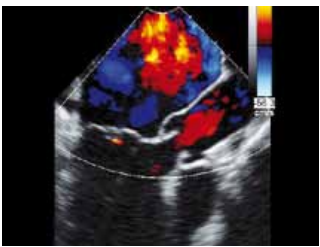
The lateral aspect can be isolated by torquing/rotating the probe counterclockwise from central.



### CENTRAL

This view is of the central aspect of the valve with A2 and P2 scallops clearly visualized.

For primary MR, flail gap should be measured, if present.

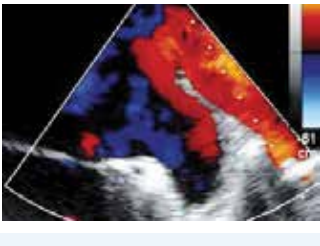


### MEDIAL

This view is obtained at the medial side of the valve to visualize A3 and P3 scallops.

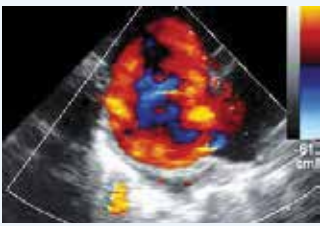
The medial aspect can be isolated by torquing/rotating the probe clockwise from central.

## ADDITIONAL VIEWS TO OBTAIN



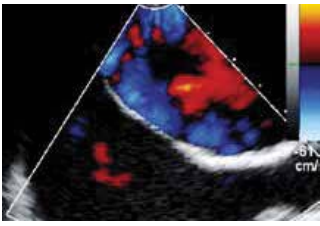
### LEFT UPPER PULMONARY VEIN (0–30°)

Use color flow and PW Doppler. Place PW Doppler sample volume 1–2 cm into PV.



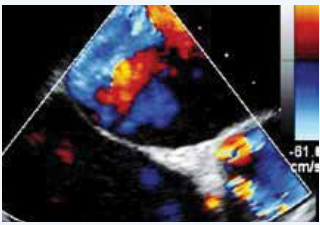
### RIGHT UPPER PULMONARY VEIN (90–120°)

Use color flow and PW Doppler. Place PW Doppler sample volume 1–2 cm into PV.



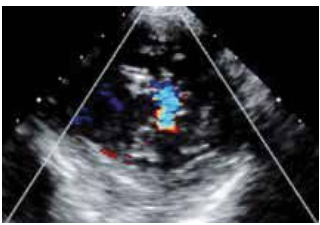
### BICAVAL (80–110°)

SVC and IVC should be visible along with atrial septum.



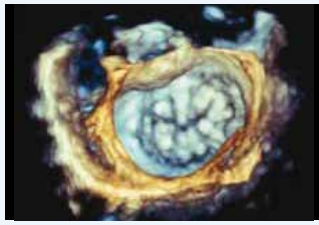
### SHORT AXIS AT BASE (15–45°)

This procedural view demonstrates a cross-section of the aorta, atrial septum, and right and left atria.



### TRANSGASTRIC SHORT AXIS (0–20°)

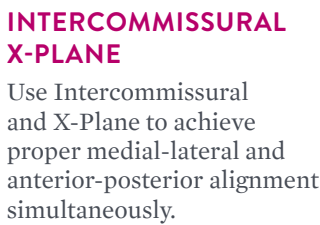
Adjust angle to optimize SAX with both anterior and posterior leaflets clearly visible. Measure flail width if present. Use color flow Doppler to demonstrate jet origin.



### 3D EN FACE

3D images should be used to supplement and confirm the initial diagnosis. 3D data may be useful when available.

Use 3D en face/surgeons view for grasp planning and coaptation assessment (with and without color).



### INTERCOMMISSURAL X-PLANE

Use Intercommissural and X-Plane to achieve proper medial-lateral and anterior-posterior alignment simultaneously.



### 4 CHAMBER (0–20°)

Confirmation of proper height above the annulus for Transseptal puncture (4.0-5.0 cm).