

# ANATOMIC MEASUREMENTS

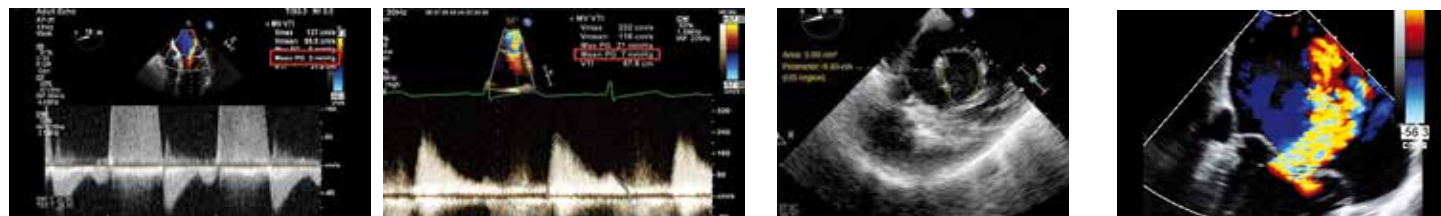
## MEASUREMENTS FOR PROCEDURAL AND CLIP PLANNING



### POSTERIOR LEAFLET LENGTH

The measurements should be taken in LVOT at grasping area.

**NOTE:** G4 NT and G4 NTW need  $\geq 6$  mm of leaflet insertion.  
G4 XT and G4 XTW need  $\geq 9$  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  $\geq 4\text{cm}^2$ ).
- 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)



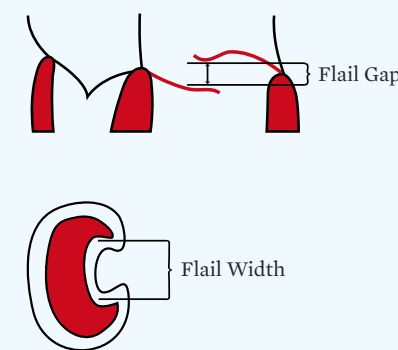
### PMR FLAIL GAP

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

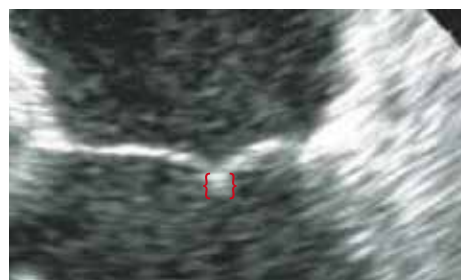


### PMR FLAIL WIDTH

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

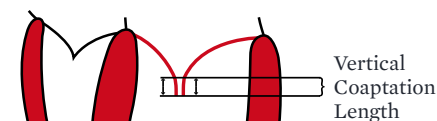


## SECONDARY MITRAL REGURGITATION (SMR)



### SMR VERTICAL COAPTATION LENGTH

The measurement should be taken in the 4-chamber view where the vertical coaptation length is shortest.



**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 [efu.abbottvascular.com](http://efu.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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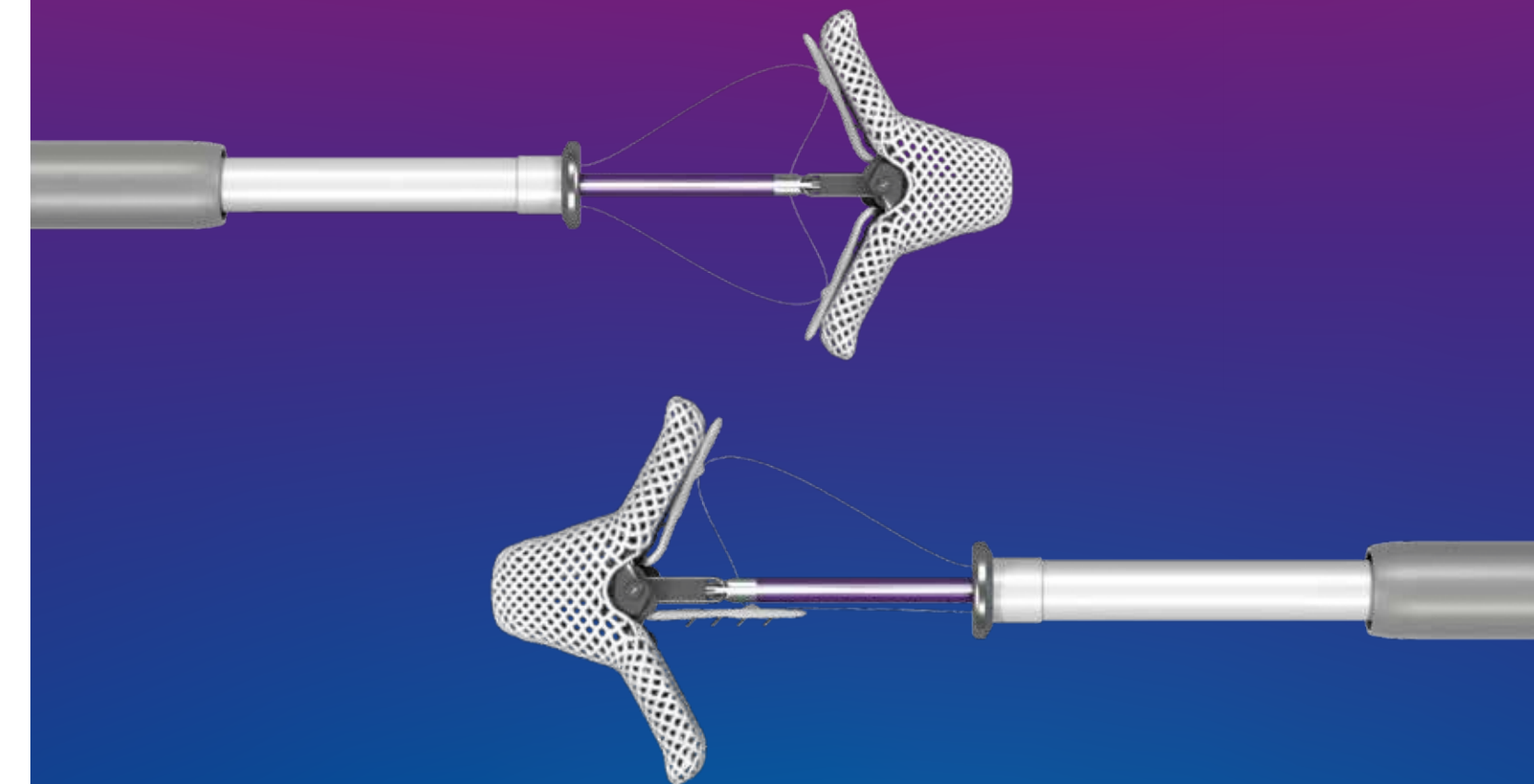


# MitraClip™

Transcatheter Mitral Valve Repair

## TEE SCREENING

## TRANSESOPHAGEAL ECHO ACQUISITION GUIDE



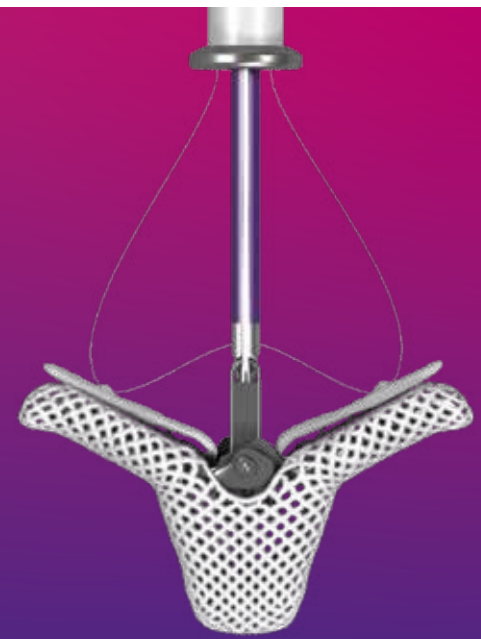
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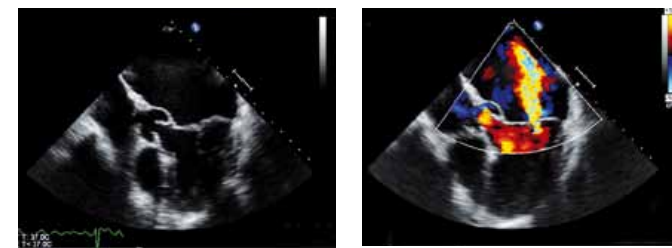




## SUGGESTED SETTINGS

- 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

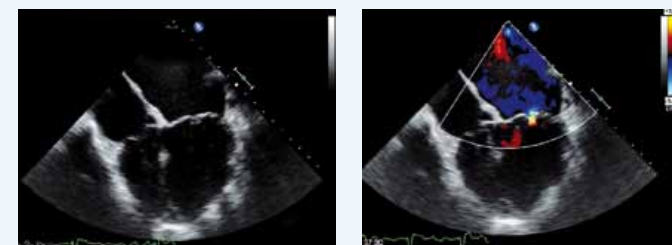
## 0° VIEWS, 5-CHAMBER AND 4-CHAMBER



### SUPERIOR

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

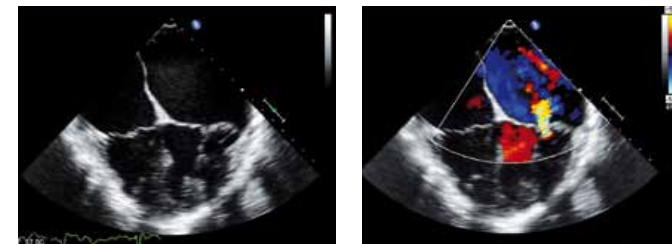
This view is obtained at the mid-esophageal level. The aortic valve and left ventricular outflow tract are clearly visualized. The LV is foreshortened.



### 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.

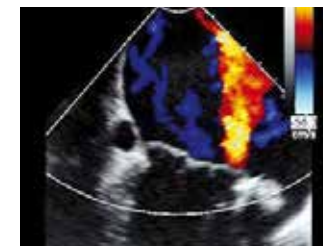


### INFERIOR

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.

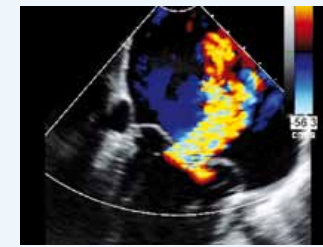
## 60-90°, BICOMMISSURAL



### ANTERIOR

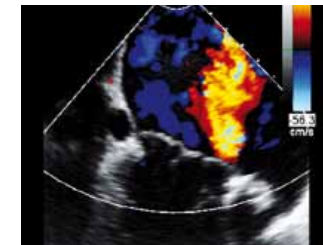
This view is obtained at the anterior side of the valve to visualize A1, A2, and A3 scallops.

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.

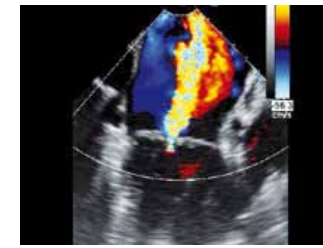
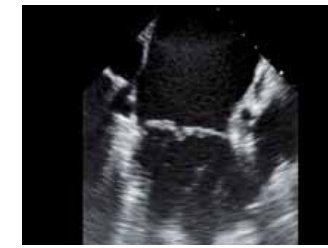


### POSTERIOR

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.

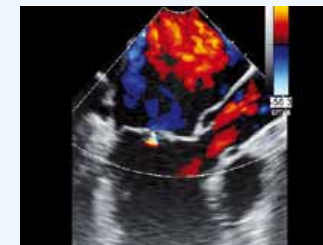
## 110-130° VIEWS TO OBTAIN | LEFT VENTRICULAR OUTFLOW TRACK (LVOT)



### LATERAL

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

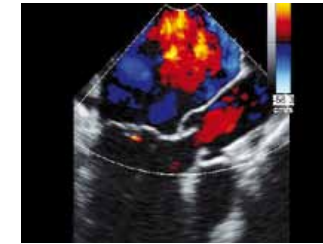
The lateral aspect can be isolated by torquing/rotating the probe counterclockwise from central.



### 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

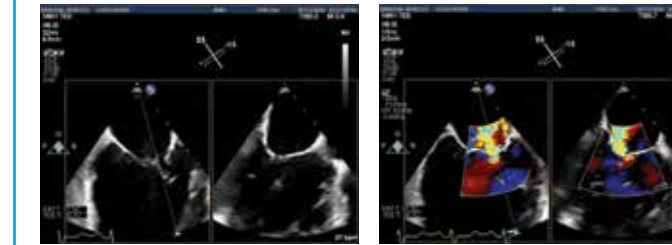
This view is obtained at the medial side of the valve to visualize A3 and P3 scallops.

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

## NEW IMAGING TECHNIQUES: X-PLANE OR MULTIPLANE

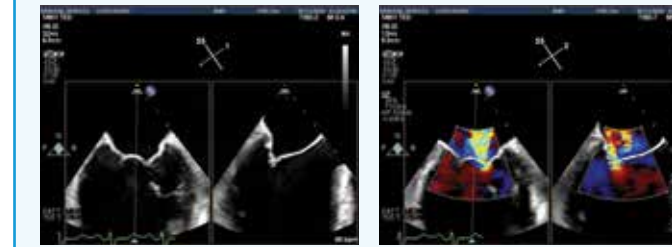
To incorporate the "X-Plane or Multiplane" IC sweep which is performed by moving the track-ball on the ultrasound machine in the IC view, which displays the LVOT view with the corresponding scallops.

### X-PLANE OR MULTIPLANE



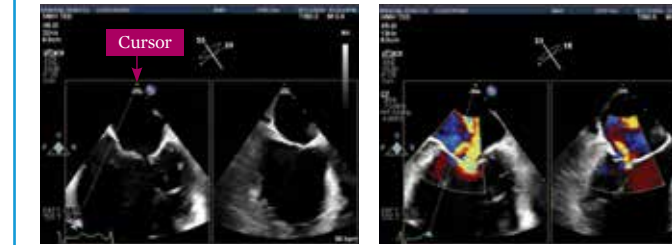
#### A1-P1 EXAMPLE

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.

