



MitraClip™

Percutaneous Mitral Valve repair

Transthoracic Echo Acquisition Guide



Settings and General Comments

- Digital archived images should include three (3) or more cardiac cycles—unless patient has atrial fibrillation, then five (5) cardiac cycles are recommended
- Ensure colour Doppler Nyquist limits range from 0.5–0.7 m/sec unless specified for PISA
- Adjust gain and depth to enhance and maximize the image for measurements
- Perform all spectral Doppler and M-mode recordings at a sweep speed of 100 mm/sec Use of colour compare setting is strongly recommended
- Ensure that peak spectral velocities are fully visible on screen
- Confirm that ECG signal is clearly visible on all frames
- All calibration lines should be clearly visible
- Use of a customized echocardiography bed is strongly recommended
- Use 3D images to supplement and confirm initial diagnosis
- Ensure that all cardiac structures are analysed per institution guidelines
- The following views represent key considerations for the MitraClip Therapy



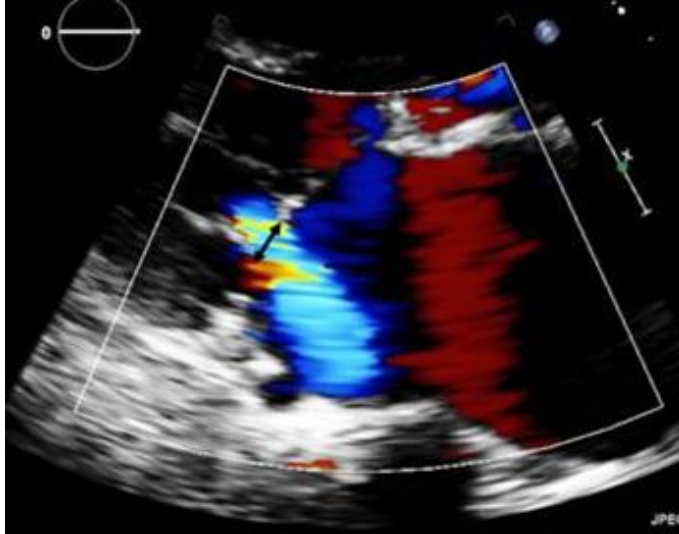
Parasternal Long Axis Views to Obtain



Parasternal Long Axis

IN THIS VIEW, ASSESS:

- LV size and function
- LA size
- MR etiology
- Calcification in mitral valve area (if any/severity)
- A2/P2 pathology



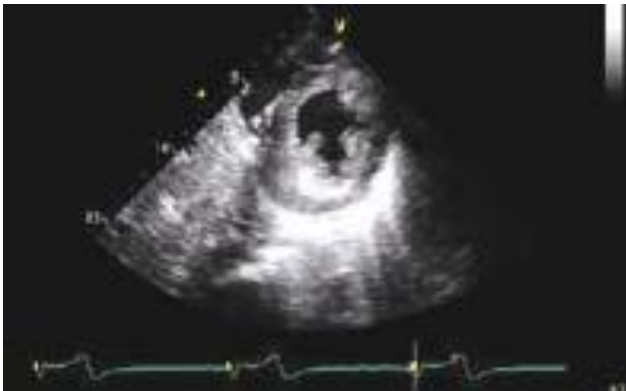
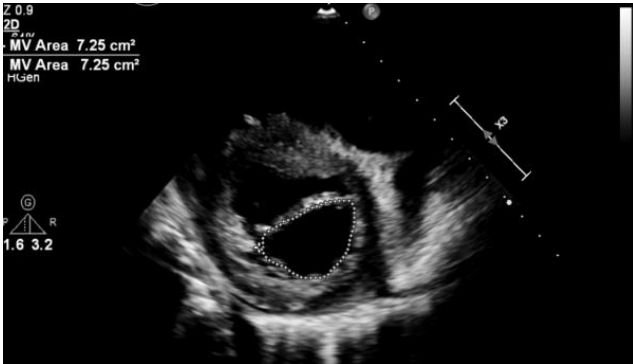
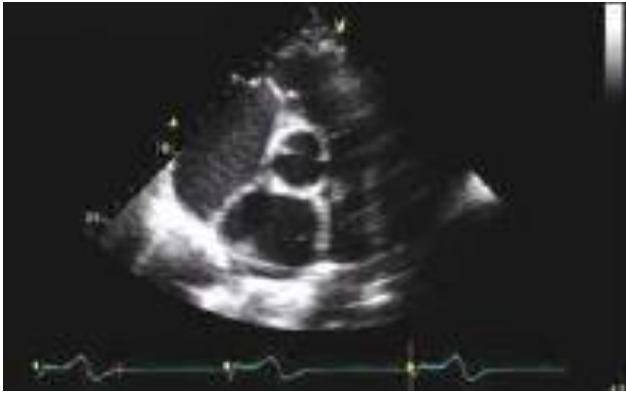
Parasternal Long Axis : Vena Contracta

IN THIS VIEW, ASSESS:

- Vena contracta width
- Choose a scan plane that shows proximal flow convergence, vena contracta (magnify specifically at mitral valve), and jet



Parasternal Short Axis Views to Obtain



Parasternal Short Axis : Aortic Valve Level

IN THIS VIEW, ASSESS:

- For ASDs, VSDs, and shunts by interrogating the intra-atrial septum

Parasternal Short Axis : Mitral Valve Level

IN THIS VIEW, ASSESS:

- Calcification in mitral valve area (if any/severity)
- Jet origin with colour Doppler applied
- Size of mitral valve area by planimetry at leaflet tips

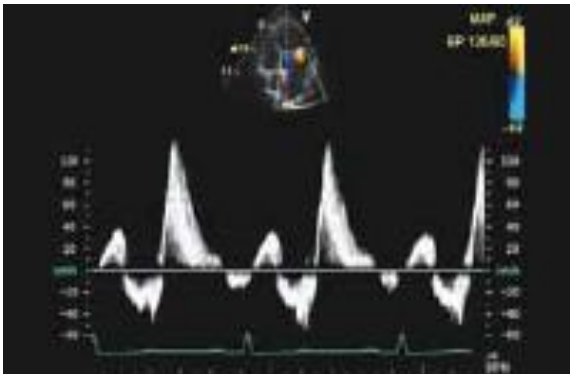
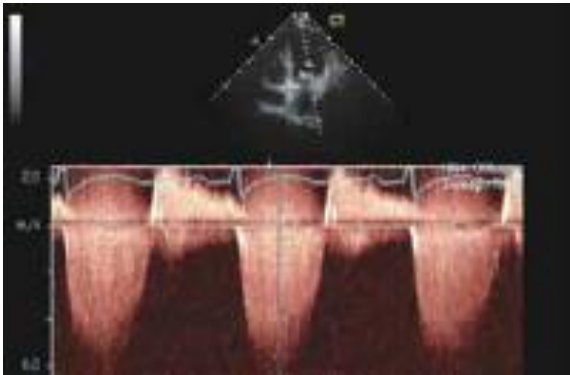
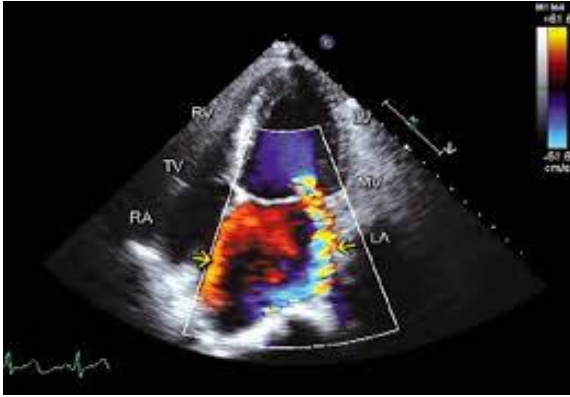
Parasternal Short Axis : Mid-papillary Muscle Level

IN THIS VIEW, ASSESS:

- Papillary muscles



Apical 4-chamber Views to Obtain



Apical : 4-chamber

IN THIS VIEW, ASSESS:

- LV size and function
- LA size
- MR etiology
- MR severity
- Pulmonary vein flow
- Calcification in valve area (if any/severity)

Apical : Spectral Doppler

IN THIS VIEW, ASSESS:

- CW Doppler of MR jet
- CW Doppler of mitral inflow
- PW Doppler of mitral inflow at MV leaflet tips

Apical : Pulmonary Vein Flow

IN THIS VIEW, ASSESS:

- PW Doppler at right upper pulmonary vein



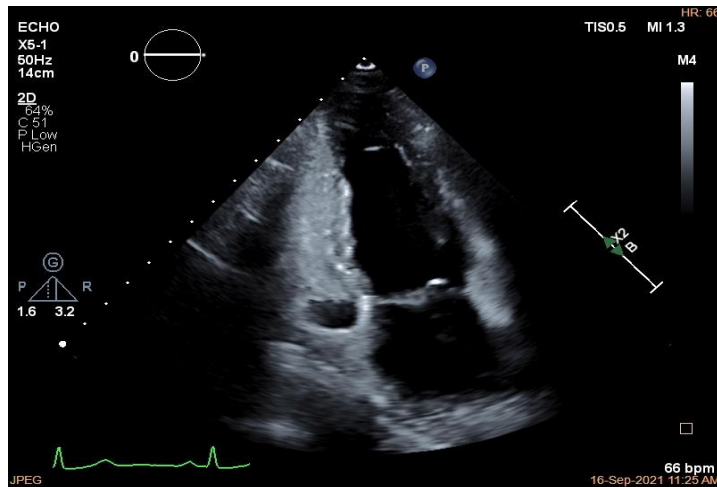
Apical Views to Obtain



Apical : 5-chamber

IN THIS VIEW, ASSESS:

- LA size
- MR etiology
- MR severity
- Pulmonary vein flow
- Interrogate aortic valve using standard technique



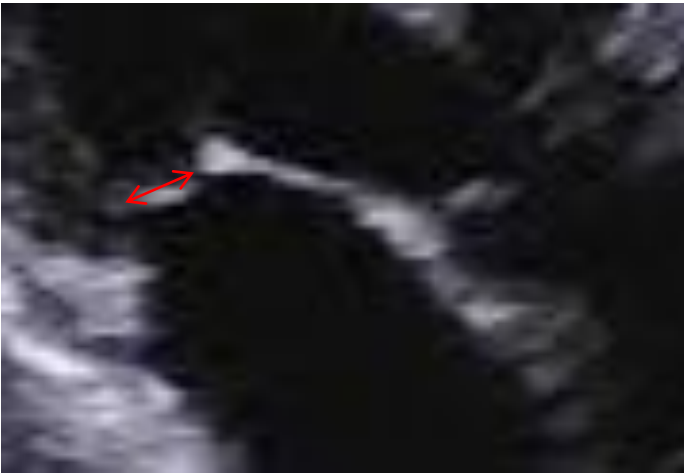
Apical : 2-chamber

IN THIS VIEW, ASSESS:

- LV size and function
- LA size
- MR etiology
- MR severity
- Pulmonary vein flow
- Calcification in mitral valve area (if any/severity)
- Jet origin with colour Doppler applied



Apical Views to Obtain



Apical : 3-chamber

IN THIS VIEW, ASSESS:

- LV size and function
- LA size
- MR etiology
- Calcification in mitral valve area (if any/severity)

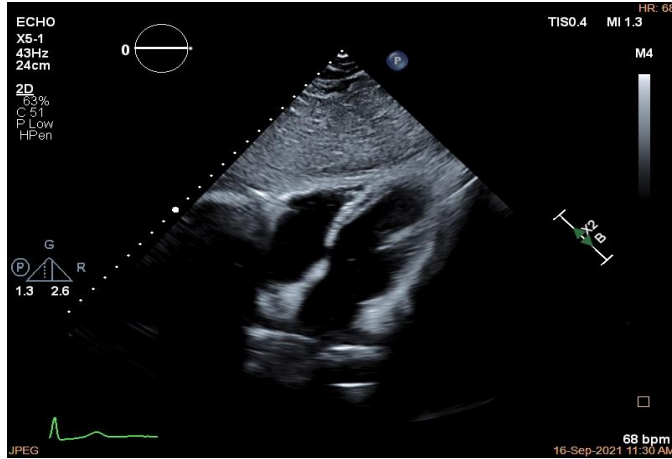
Apical : 3-chamber (Zoomed MV)

IN THIS VIEW, ASSESS:

- Length of the shortest leaflet in the region of interest



Subcostal Views to Obtain



Subcostal : Long Axis

IN THIS VIEW, ASSESS:

- Colour Doppler of atrial septum to interrogate for the presence of ASD



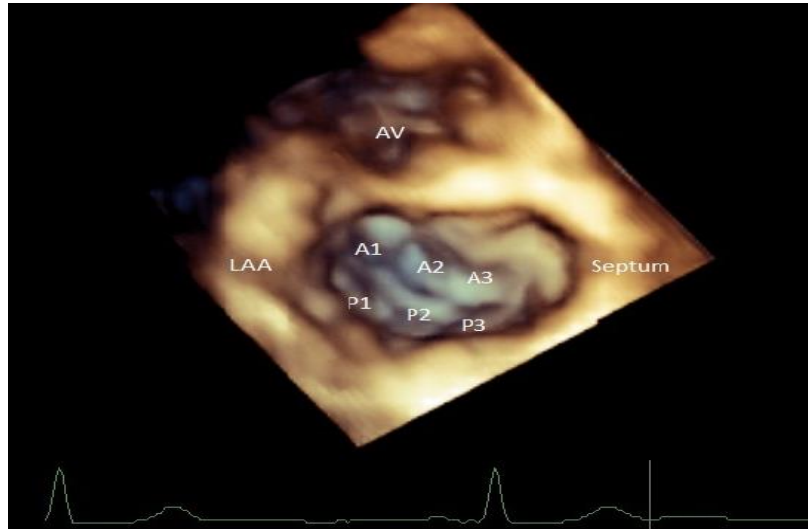
Subcostal : Short Axis

IN THIS VIEW, ASSESS:

- 2D of inferior vena cava collapsing (sniff test)
- IVC measurement



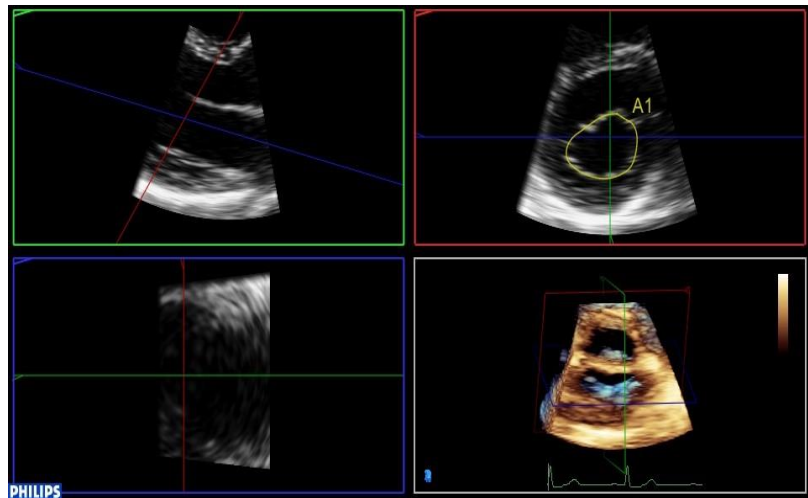
Adjunctive imaging modalities



3D : En-Face view

IN THIS VIEW, ASSESS:

- The mitral valve and include surrounding structures
- Orientate the aortic valve to 12 O'clock



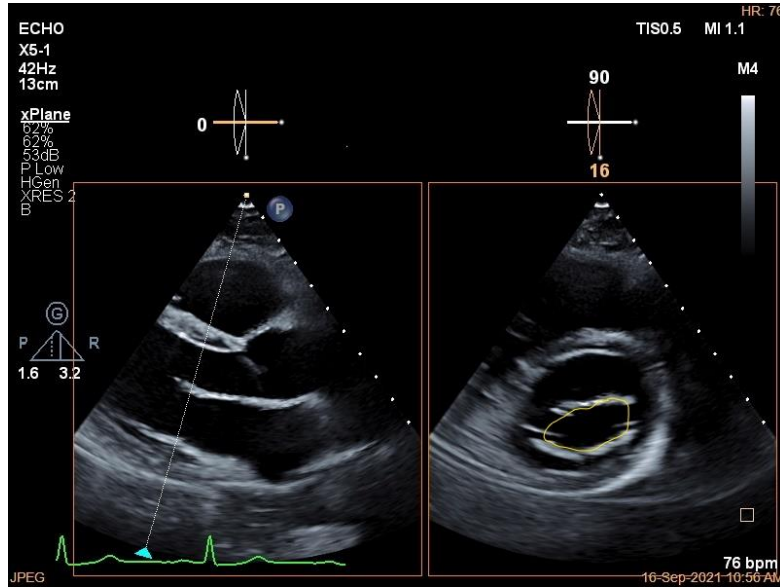
3D : En-Face view with MPR

IN THIS VIEW, ASSESS:

- The mitral valve area by planimetry



Adjunctive imaging modalities



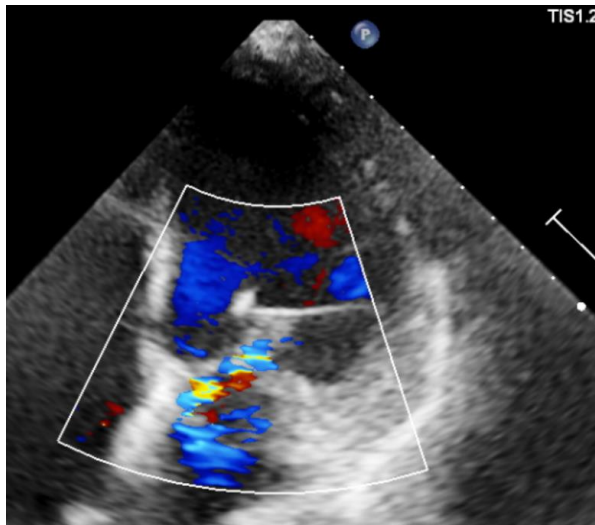
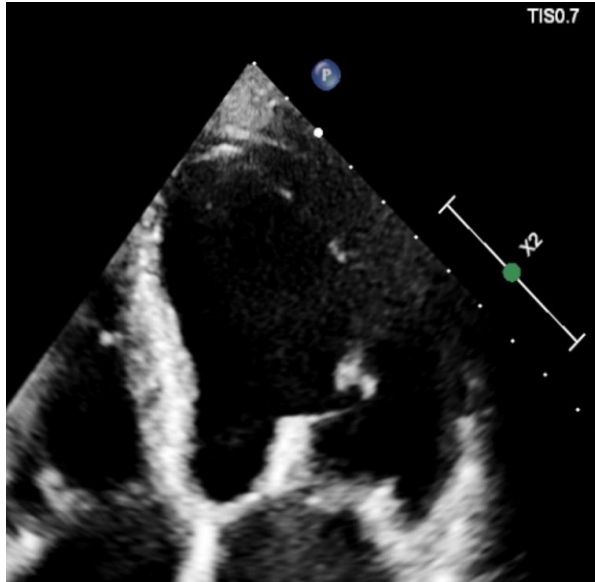
Parasternal Long Axis :xPlane or Bi-plane imaging

IN THIS VIEW, ASSESS:

- xPlane or Bi-plane of the mitral valve leaflet tips
- Planimetry of the mitral valve area



Post Procedural Imaging Considerations



Post Procedural Imaging Consideration

ASSESS:

- Clip position and stability in multiple views
- MR severity (pulmonary vein flow pattern, size of PISA / vena contracta)
- Measure mean mitral valve inflow gradient
- Mitral annular dimensions
- Left ventricular EF% and dimensions



Key Considerations and Measurements

COLOR FLOW JET

- None
- Mild
- Moderate
- Moderate-to-severe
- Severe

PULMONARY VEIN FLOW

- Normal pulmonary vein flow
- Codominant pulmonary vein flow
- Diastolic dominant pulmonary vein flow
- Systolic pulmonary vein flow reversal

MITRAL VALVE AREA (cm²)

LV EJECTION FRACTION (%)

LV END SYSTOLIC DIMENSION (LVIDS)

MITRAL ANNULAR CALCIFICATIONS

- None
- Mild/moderate
- Severe

ORIGIN OF PRIMARY REGURGITANT JET

PRESENCE OF A SECOND CLINICALLY SIGNIFICANT JET

MR ETIOLOGY

- Secondary
- Primary
- Mixed

OPTIONAL MR MEASUREMENTS

- Vena Contracta Width (cm)
- Regurgitant Volume (ml/beat)
- Regurgitant Fraction (%)
- Regurgitant Orifice Area (cm²)



MitraClip is not recommended for patients with the following conditions:

- Cannot tolerate procedural anticoagulation or post procedural anti-platelet regimen
- Active endocarditis of the mitral valve
- Rheumatic mitral valve disease
- Evidence of intracardiac, inferior vena cava (IVC) or femoral venous thrombus

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 or at medical.abbott/manuals for more detailed information on Indications, Contraindications, Warnings, Precautions and Adverse Events.

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