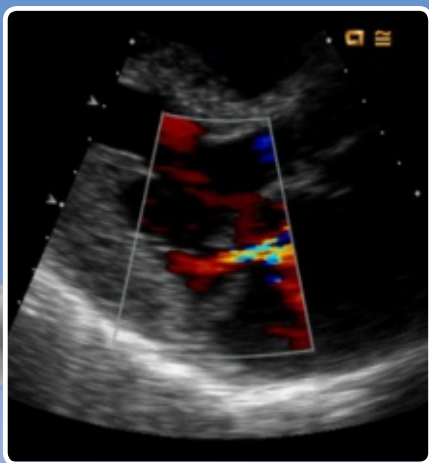




Quick Reference to Transthoracic Echo Screening



Indication: The MitraClip Clip Delivery System is indicated for the percutaneous reduction of significant symptomatic mitral regurgitation (MR \geq 3+) due to primary abnormality of the mitral apparatus [degenerative MR] in patients who have been determined to be at prohibitive risk for mitral valve surgery by a heart team, which includes a cardiac surgeon experienced in mitral valve surgery and a cardiologist experienced in mitral valve disease, and in whom existing comorbidities would not preclude the expected benefit from reduction of the mitral regurgitation.

See Important Safety Information Referenced Within.

The following transthoracic echo (TTE) views represent key considerations for MitraClip Therapy. Adherence to this systematic protocol is recommended to ensure efficient analysis of the mitral valve and to assess anatomic eligibility for the MitraClip Procedure.

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 color 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 color compare setting is strongly recommended
- Ensure that peak spectral velocities are fully visible on screen
- Confirm that EKG 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 analyzed per institution guidelines

TTE Assessment Checklist

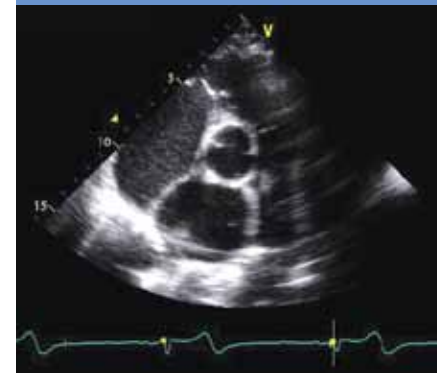
- 1 Color flow jet**
 - None
 - Mild
 - Moderate
 - Moderate-to-severe
 - Severe
- 2 Pulmonary vein flow**
 - Normal pulmonary vein flow
 - Codominant pulmonary vein flow
 - Diastolic dominant pulmonary vein flow
 - Systolic pulmonary vein flow reversal
- 3 Vena contracta width (cm)**
- 4 Regurgitant volume (ml/beat)**
- 5 Regurgitant fraction (%)**
- 6 Regurgitant orifice area (cm²)**
- 7 Mitral valve orifice area (cm²)**
- 8 LV ejection fraction (%)**
- 9 LV end systolic dimension (LVIDs) (cm)**
- 10 Presence of mitral annular calcifications**
 - None
 - Mild/moderate
 - Severe
- 11 Origin of primary regurgitant jet**
- 12 Presence of a second clinically significant jet**
- 13 MR etiology**
 - Functional
 - Degenerative
 - Mixed

Parasternal Long Axis View



- In this view, assess:**
- LV size and function
 - LA size
 - MR etiology
 - calcification in mitral valve area (if any/severity)
 - vena contracta width

Parasternal Short Axis View: Aortic Valve Level



- In this view, assess:**
- for ASDs, VSDs, and shunts by interrogating the intra-atrial septum

Parasternal Short Axis View: Mitral Valve Level



- In this view, assess:**
- calcification in mitral valve area (if any/severity)
 - jet origin with color Doppler applied
 - size of mitral valve area by planimetry

Apical 4-chamber View



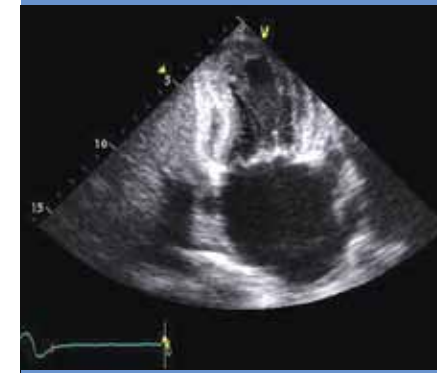
- In this view, assess:**
- LV size and function
 - LA size
 - MR etiology
 - MR severity
 - pulmonary vein flow
 - calcification in mitral valve area (if any/severity)

Apical 5-chamber View



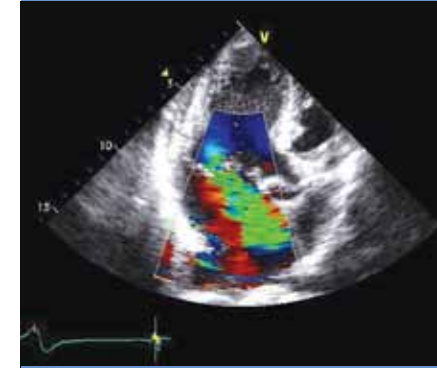
- In this view, assess:**
- LA size
 - MR etiology
 - MR severity
 - pulmonary vein flow
 - interrogate aortic valve using standard technique

Apical 2-chamber View



- 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 color Doppler applied

Apical 3-chamber View



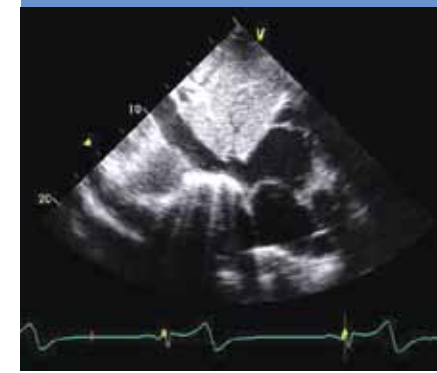
- In this view, assess:**
- LV size and function
 - LA size
 - MR etiology
 - calcification in mitral valve area (if any/severity)

Subcostal Long Axis View



- In this view, assess:**
- color Doppler of atrial septum to interrogate presence of ASD

Subcostal Short Axis View



- In this view, assess:**
- 2D of inferior vena cava collapsing (sniff test)



MITRACLIP CLIP DELIVERY SYSTEM

INDICATION FOR USE

The MitraClip Clip Delivery System is indicated for the percutaneous reduction of significant symptomatic mitral regurgitation (MR \geq 3+) due to primary abnormality of the mitral apparatus [degenerative MR] in patients who have been determined to be at prohibitive risk for mitral valve surgery by a heart team, which includes a cardiac surgeon experienced in mitral valve surgery and a cardiologist experienced in mitral valve disease, and in whom existing comorbidities would not preclude the expected benefit from reduction of the mitral regurgitation.

CONTRAINDICATIONS

The MitraClip Clip Delivery System is contraindicated in DMR patients with the following conditions:

- Patients who 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

WARNINGS

- **DO NOT use MitraClip outside of the labeled indication. Treatment of non-prohibitive risk DMR patients should be conducted in accordance with standard hospital practices for surgical repair and replacement.**
- MitraClip is intended to reduce mitral regurgitation. The MitraClip procedure is recommended to be performed when an experienced heart team has determined that reduction of MR to \leq 2+ is reasonably expected following the MitraClip. If MR reduction to \leq 2+ is not achieved, the benefits of reduced symptoms and hospitalizations, improved quality of life, and reverse LV remodeling expected from MitraClip may not occur.
- The MitraClip Device should be implanted with sterile techniques using fluoroscopy and echocardiography (e.g., transesophageal [TEE] and transthoracic [TTE]) in a facility with on-site cardiac surgery and immediate access to a cardiac operating room.
- Read all instructions carefully. Failure to follow these instructions, warnings and precautions may lead to device damage, user injury or patient injury. Use universal precautions for biohazards and sharps while handling the MitraClip System to avoid user injury.
- Use of the MitraClip should be restricted to those physicians trained to perform invasive endovascular and transseptal procedures and those trained in the proper use of the system.
- The Clip Delivery System is provided sterile and designed for single use only. Cleaning, re-sterilization and/or reuse may result in infections, malfunction of the device or other serious injury or death.
- Inspect all product prior to use. DO NOT use if the package is opened or damaged.

PRECAUTIONS

- Patient Selection:
 - Prohibitive risk is determined by the clinical judgment of a heart team, including a cardiac surgeon experienced in mitral valve surgery and a cardiologist experienced in mitral valve disease, due to the presence of one or more of the following documented surgical risk factors:
 - ◆ 30-day STS predicted operative mortality risk score of
 - \geq 8% for patients deemed likely to undergo mitral valve replacement or
 - \geq 6% for patients deemed likely to undergo mitral valve repair
 - ◆ Porcelain aorta or extensively calcified ascending aorta.
 - ◆ Frailty (assessed by in-person cardiac surgeon consultation)
 - ◆ Hostile chest
 - ◆ Severe liver disease / cirrhosis (MELD Score $>$ 12)
 - ◆ Severe pulmonary hypertension (systolic pulmonary artery pressure $>$ 2/3 systemic pressure)
 - ◆ Unusual extenuating circumstance, such as right ventricular dysfunction with severe tricuspid regurgitation, chemotherapy for malignancy, major bleeding diathesis, immobility, AIDS, severe dementia, high risk of aspiration, internal mammary artery (IMA) at high risk of injury, etc.
 - Evaluable data regarding safety or effectiveness is not available for prohibitive risk DMR patients with an LVEF $<$ 20% or an LVESD $>$ 60mm. MitraClip should be used only when criteria for clip suitability for DMR have been met.
- The major clinical benefits of MitraClip are reduction of MR to \leq 2+ resulting in reduced hospitalizations, improved quality of life, reverse LV remodeling and symptomatic relief in patients who have no other therapeutic option. No mortality benefit following MitraClip therapy has been demonstrated.
- The heart team should include a cardiac surgeon experienced in mitral valve surgery and a cardiologist experienced in mitral valve disease and may also include appropriate physicians to assess the adequacy of heart failure treatment and valvular anatomy.
- The heart team may determine an in-person surgical consult is needed to complete the assessment of prohibitive risk. The experienced mitral valve surgeon and heart team should take into account the outcome of this surgical consult when making the final determination of patient risk status.
- For reasonable assurance of device effectiveness, pre-procedural evaluation of the mitral valve and underlying pathologic anatomy and procedural echocardiographic assessment are essential.

- The inside of the outer pouch is not a sterile barrier. The inner pouch within the outer pouch is the sterile barrier. Only the contents of the inner pouch should be considered sterile. The outside surface of the inner pouch is NOT sterile.
- Note the “Use by” date specified on the package.

POTENTIAL COMPLICATIONS AND ADVERSE EVENTS

The following ANTICIPATED EVENTS have been identified as possible complications of the MitraClip procedure.

Allergic reaction (anesthetic, contrast, Heparin, nickel alloy, latex); Aneurysm or pseudo-aneurysm; Arrhythmias; Atrial fibrillation; Atrial septal defect requiring intervention; Arterio-venous fistula; Bleeding; Cardiac arrest; Cardiac perforation; Cardiac tamponade/ Pericardial Effusion; MitraClip erosion, migration or malposition; MitraClip Device thrombosis; MitraClip System component(s) embolization; Coagulopathy; Conversion to standard valve surgery; Death; Deep venous thrombus (DVT); Dislodgement of previously implanted devices; Drug reaction to anti-platelet/anticoagulation agents/contrast media; Dyspnea; Edema; Emboli (air, thrombus, MitraClip Device); Emergency cardiac surgery; Endocarditis; Esophageal irritation; Esophageal perforation or stricture; Failure to deliver MitraClip to the intended site; Failure to retrieve MitraClip System components; Fever or hyperthermia; Gastrointestinal bleeding or infarct; Hematoma; Hemolysis; Hemorrhage requiring transfusion; Hypotension/hypertension; Infection and pain at insertion site; Infection and pain at incision site; Injury to mitral valve complicating or preventing later surgical repair; Lymphatic complications; Mesenteric ischemia; Mitral stenosis; Mitral valve injury; Multi-system organ failure; Myocardial infarction; Nausea/vomiting; Peripheral ischemia; Prolonged angina; Prolonged ventilation; Pulmonary congestion; Pulmonary thrombo-embolism; Renal insufficiency or failure; Respiratory failure/atelectasis/pneumonia; Septicemia; Single leaflet device attachment (SLDA); Skin injury or tissue changes due to exposure to ionizing radiation; Stroke or transient ischemic attack (TIA); Urinary tract infection; Vascular trauma, dissection or occlusion; Vessel spasm; Vessel perforation or laceration; Worsening heart failure; Worsening mitral regurgitation; Wound dehiscence

Rx STEERABLE GUIDE CATHETER

ONLY INDICATION FOR USE The Steerable Guide Catheter is used for introducing various cardiovascular catheters into the left side of the heart through the interatrial septum.

CONTRAINDICATIONS

- Patients who cannot tolerate procedural anticoagulation or post procedural anti-platelet regimen
- Evidence of intracardiac, inferior vena cava (IVC) or femoral venous thrombus.

WARNINGS

- Read all instructions carefully. Failure to follow these instructions, warning and precautions may lead to device damage, user injury or patient injury. Use universal precautions for biohazards and sharps to avoid user injury.
- Use the Steerable Guide Catheter with sterile techniques using fluoroscopy and echocardiography (e.g., transesophageal [TEE] and transthoracic [TTE]) in a facility with on-site cardiac surgery and immediate access to a cardiac operating room.
- The Steerable Guide Catheter is designed for single use only. Cleaning, re-sterilization and/or reuse may result in infections, malfunction of the device or other serious injury or death.
- Patients with the following considerations in whom the Steerable Guide Catheter is used may have an increased risk of having a serious adverse event which may be avoided with preoperative evaluation and proper device usage.
 - Previous interatrial septal patch or prosthetic atrial septal defect (ASD) closure device which could result in significant difficulty in visualization or technical challenges during transseptal puncture and/or introducing the SGC into the left atrium.
 - Known or suspected unstable angina or myocardial infarction within the last 12 weeks could increase the procedural morbidity and mortality, due to increased hemodynamic stress secondary to general anesthesia.
 - Patients with active infection have an increased risk of developing an intraoperative and/or postoperative infection, such as sepsis or soft tissue abscess.
 - Known or suspected left atrial myxoma could result in thromboembolism and tissue injury due to difficulty with device positioning.
 - Recent cerebrovascular event (CVA) may increase the procedural morbidity associated with a transcatheter intervention, such as recurrent stroke.

PRECAUTIONS

NOTE the “Use by” date specified on the package. -

Inspect all product prior to use. Do not use if package is opened or damaged. -

The inside of the outer pouch is not a sterile barrier. The inner pouch within the outer pouch is the sterile barrier. Only the contents of the inner pouch should be considered sterile.

The outside surface of the inner pouch is NOT sterile.

Prior to use, please reference the Instructions for Use at www.abbottvascular.com/ifu for more information on indications, contraindications, warnings, precautions, and adverse events.

Abbott Vascular

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MitraClip is a trademark of the
Abbott Group of Companies.

www.AbbottVascular.com

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