Evolent Clinical Guideline ~~066~~7336 for Transesophageal Echocardiogram (TEE)

Guideline ~~or Policy~~ Number:	Applicable Codes	
Evolent_CG_~~066~~7336		
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Original Date:	**Last Revised Date:**	**Implementation Date:**
July 2011	July 2025~~4~~	January 2025~~5~~6

TABLE OF CONTENTS

STATEMENT

General Information

- *It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.*
- *Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

Purpose

Transesophageal echocardiography (TEE) enables cardiac ultrasound imaging from within the esophagus, which provides a window for enhanced quality images as well as additional views, beyond that acquired by standard transthoracic echocardiography (TTE).

Clinical Reasoning

All criteria are substantiated by the latest evidence-based medical literature. To enhance transparency and reference, Appropriate Use (AUC) scores, when available, are diligently listed alongside the criteria.

This guideline first defaults to AUC scores established by published, evidence-based guidance endorsed by professional medical organizations. In the absence of those scores, we adhere to a standardized practice of assigning an AUC score of 6. This score is determined by considering variables that ensure the delivery of patient-centered care in line with current guidelines, with a focus on achieving benefits that outweigh associated risks. This approach aims to maintain a robust foundation for decision-making and underscores our commitment to upholding the highest standards of care. (1,2,3,4,5)

INDICATIONS FOR TRANSESOPHAGEAL ECHOCARDIOGRAPHY (TEE)

General Criteria (6,7)~~,8,9,10)~~

- TEE may be performed after a nondiagnostic transthoracic echocardiogram (TTE) due to inadequate visualization of relevant structures, or if there is a high likelihood of a nondiagnostic TTE **(AUC Score 7)** ~~(11)~~(8)

Aortic Pathology

- Suspected acute aortic pathology, such as aortic dissection ~~(6,12)~~(9)

- Dilated aortic sinuses or ascending aorta on TTE **(AUC Score 7)** [11](8)
- Evaluation of aortic sinuses, sinotubular junction, or ascending aorta in patients with bicuspid aortic valve when morphology cannot be assessed by TTE, and other imaging including CT or MRI (Magnetic Resonance Imaging) have not been done **(AUC Score 7)** [11](8)

Valvular Disease (6,10)~~13)~~

- Discordance between clinical assessment and TTE assessment of the severity of mitral regurgitation (MR) **(AUC Score 9)** (6)
- Evaluation of mitral stenosis, when there is a discrepancy between clinical signs or symptoms, and TTE is inadequate **(AUC Score 6)** (6)
- Discordance between clinical assessment and TTE assessment of the severity of aortic regurgitation (AR) **(AUC Score 8)** (6)
- Evaluation of native or prosthetic valves with clinical signs or symptoms suggesting valve dysfunction, when TTE is inadequate **(AUC Score 8)** (6)
- Re-evaluation of known prosthetic valve dysfunction when it would change management or guide therapy, (and TTE is inadequate) **(AUC Score 7)** (6)

Infective Endocarditis (6,11)~~14,15)~~

- Suspected infective endocarditis (IE) of native valve, prosthetic valve, or endocardial lead with positive blood culture or new murmur **(AUC Score 8)** (6)
- Moderate to high pretest probability of IE (i.e., staph bacteremia, fungemia, prosthetic heart valve, or intracardiac device) when TTE is negative **(AUC Score 9)** (6)
- Re-evaluation of IE in a patient with a change in clinical status or cardiac examination (e.g., new murmur, embolism, persistent fever, heart failure (HF), abscess, or atrioventricular block) **(AUC Score 8)** (6)
- Re-evaluation of IE if the patient is at elevated risk for progression/complications or when the findings alter therapy, when TTE is inadequate **(AUC Score 6)** (6)

Cardiac Mass or Source of Emboli (8,11–13)

- Initial evaluation of patient to exclude cardiac origin of TIA or ischemic stroke **(AUC Score 7)** ~~(6)~~(8)
- Evaluation of cardiac mass, suspected tumor, or thrombus, when other cardiac imaging is inconclusive **(**~~6,15)~~**AUC Score 7)** (8)
- Re-evaluation of prior TEE finding for interval change (e.g., resolution of thrombus after anticoagulation), when the findings would change therapy **(AUC Score 7)** ~~(6)~~(8)

Atrial Fibrillation/Flutter ~~(6)~~(12,13)

- Evaluation for clinical decision-making regarding anticoagulation, cardioversion, and/or radiofrequency ablation

TAVR (Transcatheter Aortic Valve Replacement/Repair)

(6,14)~~16)~~

(AUC Score 7) (6)

- Pre-procedural assessment of annular size and shape, number of cusps, and degree of calcification, when computed tomography (CT) or CMR (Cardiovascular Magnetic Resonance) cannot be performed
- Post-procedural assessment of degree of aortic regurgitation (including valvular and paravalvular) with suspicion of valve dysfunction, if TTE is inadequate

Patent Foramen Ovale or Atrial Septal Defect ~~(6,17)~~(15)

~~(AUC Score 8)~~ ~~(11)~~

- Evaluation for anatomy, potential cardiac source of emboli, and suitability for percutaneous device closure **(AUC Score 7)** (15)
- Evaluation post device closure with clinical concern for infection, malposition, embolization, or persistent shunt **(AUC Score 8)** (15)

Left Atrial Appendage Occlusion ~~(11)~~

- Evaluation of anatomy, potential cardiac source of emboli, and suitability for percutaneous occlusion device placement **(AUC Score 9)** ~~(11)~~(8)
- Surveillance at 45 days and 1 year or FDA (U.S. Food and Drug Administration) guidance/guidelines for follow-up to assess device stability and device leak, and exclude migration, displacement, or erosion ~~(18,19)~~(16) **(AUC Score 8)** ~~(11)~~(8)
  - Reassessment at 6 months if 45-day TEE shows incomplete closure of left atrial appendage ~~(18,19)~~(16)

Percutaneous Mitral Valve Repair (6)

- Determination of patient eligibility for percutaneous mitral valve procedures **(AUC Score 9)** (6)
- Procedural evaluation for percutaneous mitral valve procedures may be performed in addition to CT imaging ~~(20)~~(17)
- To exclude the presence of intracardiac mass, thrombus, or vegetation prior to (within 3 days of) the procedure **(AUC Score 9)** (6)

Hypertrophic Cardiomyopathy ~~(21)~~(17)

- When TTE is inconclusive in planning for myectomy, to exclude subaortic membrane or mitral regurgitation, or to assess need for septal ablation

Adult Congenital Heart Disease ~~(17,22)~~(15,18)

- Imaging with provocative maneuvers (Valsalva, cough) to assess the presence of right-to-left cardiac shunt **(AUC Score 7)** ~~(17)~~(15)
- Evaluation prior to planned repair of the following lesions when TTE, CMR, or CT are not adequate:

- Isolated secundum atrial septal defect **(AUC Score 7)** ~~(17)~~(15)
- Sinus venosus defect and/or partial anomalous pulmonary venous connection **(AUC Score 7)** ~~(17)~~(15)
- Congenital mitral stenosis or mitral regurgitation **(AUC Score 7)** ~~(17)~~(15)
- Subvalvular aortic stenosis **(AUC Score 7)** ~~(17)~~(15)
- Transposition of the Great Arteries **(AUC Score 8)** ~~(17)~~(15)

- Evaluation postoperative or post catheter-based repair due to change in clinical status and/or new concerning signs or symptoms when TTE, CMR, or CT are not adequate **(AUC Score 7)** ~~(17)~~(15)

Ventricular Assist Devices ~~(6,23)~~(19)

- Preoperative evaluation of suitability for ventricular assist device (VAD) (8)
- Re-evaluation of VAD-related complication or suspected infection **(AUC Score 7)** ~~(11)~~(8)

CODING AND STANDARDS

~~Coding~~

~~CPT~~ Codes

93312, 93313, 93314, 93315, 93316, 93317, 93318, ~~+~~93319, ~~+~~93320, +93321, +93325, 96374

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

AUC Score

A reasonable diagnostic or therapeutic procedure ~~care~~ can be defined as that for which the expected clinical benefits outweigh the associated risks, enhancing patient care and health outcomes in a cost-effective manner. (4)

- Appropriate Care - Median Score 7-9

- May be Appropriate Care - Median Score 4-6
- Rarely Appropriate Care - Median Score 1-3

Acronyms/Abbreviations

AR: Aortic regurgitation

CMR: Cardiac magnetic resonance

CT(A): Computed tomography (angiography)

HF: Heart failure

IE: Infective endocarditis

MR: Mitral regurgitation

MRI: Magnetic resonance imaging

TAVR: Transcatheter aortic valve replacement/repair

TEE: Transesophageal echocardiography

TIA: Transient ischemia attack

TTE: Transthoracic echocardiography

VAD: Ventricular assist device

SUMMARY OF EVIDENCE

ACC/AATS/AHA/ASE/ASNC/HRS/SCAI/SCCT/SCMR/STS 2017 Appropriate Use Criteria for Multimodality Imaging in Valvular Heart Disease [6]

Study Design: This document presents the 2017 Appropriate Use Criteria (AUC) for multimodality imaging in valvular heart disease. It was developed by the American College of Cardiology and other related societies.

Target Population: The criteria apply to patients with valvular heart disease, including those undergoing initial evaluation, follow-up, and pre- and post-procedural assessments.

Key Factors: The document provides a comprehensive framework for the appropriate use of various imaging modalities such as transthoracic echocardiography (TTE), transesophageal echocardiography (TEE), cardiac magnetic resonance (CMR), and computed tomography (CT). It includes detailed tables outlining the indications for each modality based on clinical scenarios

Transesophageal Versus Transthoracic Echocardiography for Assessment of Left Ventricular Diastolic Function [7]

Study Design: This study compares transesophageal echocardiography (TEE) and transthoracic echocardiography (TTE) for the assessment of left ventricular diastolic function (LVDF) in patients with systemic lupus erythematosus (SLE) and healthy controls.

Target Population: The study included 66 patients with SLE (mean age 36 years, 91% women) and 26 age- and sex-matched healthy volunteers (mean age 34 years, 85% women).

Key Factors: The study found that LVDF parameters were worse in SLE patients than in controls by both TEE and TTE. Most LVDF parameters were similar within each group by TEE and TTE, and the parameters were significantly correlated between the two techniques. The study supports the use of TEE for assessing LVDF in appropriate clinical settings.

ACC/AATS/AHA/ASE/ASNC/HRS/SCAI/SCCT/SCMR/STS 2019 Appropriate Use Criteria for Multimodality Imaging in the Assessment of Cardiac Structure and Function in Nonvalvular Heart Disease [8]

Study Design: This document is the 2019 Appropriate Use Criteria for multimodality imaging in the assessment of cardiac structure and function in nonvalvular heart disease. It was developed by the American College of Cardiology and other related societies.

Target Population: The criteria apply to patients with nonvalvular heart disease, including those undergoing initial evaluation, follow-up, and pre- and post-procedural assessments.

Key Factors: The document provides a comprehensive framework for the appropriate use of various imaging modalities such as TTE, TEE, CMR, and CT. It includes detailed tables outlining the indications for each modality based on clinical scenarios. The document also addresses the evaluation of cardiac structure and function in patients undergoing transcatheter interventions .

ANALYSIS OF EVIDENCE

Analysis [6–8]:

In summary, while all three documents support the use of TEE and TTE for cardiac imaging, Win et al. 2020 provides specific evidence for the use of TEE in assessing LVDF in SLE patients, demonstrating its diagnostic and prognostic value in this population. The Doherty et al. 2017 and 2019 documents offer comprehensive guidelines for the appropriate use of TEE and TTE in a wider range of cardiac conditions.

Shared Conclusions

- **TEE and TTE Utility**: All three documents highlight the utility of TEE and TTE in assessing cardiac function. Doherty et al. 2017 and 2019 emphasize the appropriate use of TEE and TTE in various clinical scenarios, while Win et al. 2020 specifically compares the two techniques for LVDF assessment.
- **Correlation of Parameters**: Win et al. 2020 found significant correlations between LVDF parameters assessed by TEE and TTE, suggesting that both techniques provide similar diagnostic value. This aligns with the general consensus in Doherty et al. 2017 and 2019 that TEE and TTE are valuable tools for cardiac imaging.

POLICY HISTORY

~~*Summary*~~

Date	Summary
July 2025	• Guideline name adjustment from 7336 for Transesophageal Echocardiography (TEE) to 7336 for Transesophageal

	Echocardiogram (TEE)
~~March 2024~~April 2025	• ~~Added AUC Scoring to Cardiac Guidelines from published Societies. When an AUC score was not published by a Society, we assigned an AUC score of 6 based upon AUC scoring standards – this has been explained in Clinical Reasoning~~ • ~~Approvable having a TEE during a TAVR with criteria for pre and post procedural assessment~~This guideline merges and replaces two Evolent guidelines with identical clinical criteria: Evolent Clinical Guideline 7336-01 for Transesophageal Echocardiography and Evolent Clinical Guideline 066 for Transesophageal Echocardiography into Evolent Clinical Guideline 7336 for Transesophageal Echocardiogram (TEE) ○ This guideline also merges procedural codes from these two Evolent guidelines • Added and updated AUC Scores • Applicable Line of Business adjusted – Medicare checked • Statement, general Information section added bullet regarding guideline criteria • Added a Summary of Evidence and Analysis of Evidence
January 2025	• Corrected CPT code typo
~~April 2023~~November 2024	• ~~Added statement on clinical indications not addressed in~~ This guideline replaces UM CARDIO_1122 Transesophageal Echocardiography (TEE)

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

Evolent Clinical Guidelines do not constitute medical advice. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Evolent uses Clinical Guidelines in accordance with its contractual obligations to provide utilization management. Coverage for services varies for individual members according to the terms of their health care coverage or government program. Individual members' health care coverage may not utilize some Evolent Clinical Guidelines. Evolent clinical guidelines contain guidance that requires prior authorization and service limitations. A list of procedure codes, services or drugs may not be all inclusive and does not imply that a service or drug is a covered or non-covered service or drug. Evolent reserves the right to review and update

this Clinical Guideline in its sole discretion. Notice of any changes shall be provided as required by applicable provider agreements and laws or regulations. Members should contact their Plan customer service representative for specific coverage information.

Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

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