



Appropriate Use Criteria

Based on the 2011 ASE/ACC AUC Guidelines

For quick & easy access to AUC appropriateness determination use our

AUC Analysis Tool at <http://www.iheartecho.com/appropriateusecriteria.html>

-----TRANSTHORACIC ECHOCARDIOGRAPHY AUC-----

- TTE for General Evaluation of Cardiac Structure and Function Suspected Cardiac Etiology - A(9): Symptoms or conditions potentially related to suspected cardiac etiology including but not limited to chest pain, shortness of breath, palpitations, TIA, stroke, or peripheral embolic event
- TTE for General Evaluation of Cardiac Structure and Function Suspected Cardiac Etiology - A(9): Prior testing that is concerning for heart disease or structural abnormality including but not limited to chest X-ray, baseline scout images for stress echocardiogram, ECG, or cardiac biomarkers
- Arrhythmias With TTE - I(2): Infrequent APC's or infrequent VPC's without other evidence of heart disease
- Arrhythmias With TTE - A(8): Frequent VPC's or exercise-induced VPC's
- Arrhythmias With TTE - A(9): Sustained or nonsustained atrial fibrillation, SVT, or VT
- Arrhythmias With TTE - I(2): Asymptomatic isolated sinus bradycardia
- Lightheadedness/Presyncope/Syncope With TTE - A(9): Clinical symptoms or signs consistent with a cardiac diagnosis known to cause lightheadedness/presyncope/syncope (including but not limited to aortic stenosis, hypertrophic cardiomyopathy, or HF)
- Lightheadedness/Presyncope/Syncope With TTE - I(3): Lightheadedness/presyncope when there are no other symptoms or signs of cardiovascular disease
- Lightheadedness/Presyncope/Syncope With TTE - A(7): Syncope when there are no other symptoms or signs of cardiovascular disease
- Murmur or Click With TTE - A(9): Initial evaluation when there is a reasonable suspicion of valvular or structural heart disease
- Murmur or Click With TTE - I(2): Initial evaluation when there are no other symptoms or signs of valvular or structural heart disease
- Murmur or Click With TTE - I(1): Re-evaluation in a patient without valvular disease on prior echocardiogram and no change in clinical status or cardiac exam
- Murmur or Click With TTE - A(9): Re-evaluation of known valvular heart disease with a change in clinical status or cardiac exam or to guide therapy
- Hypertension With TTE - A(8): Initial evaluation of suspected hypertensive heart disease
- Hypertension With TTE - I(3): Routine evaluation of systemic hypertension without symptoms or signs of hypertensive heart disease
- Hypertension With TTE - U(4): Re-evaluation of known hypertensive heart disease without a change in clinical status or cardiac exam
- Pulmonary Hypertension With TTE - A(9): Evaluation of suspected pulmonary hypertension including evaluation of right ventricular function and estimated pulmonary artery pressure
- Pulmonary Hypertension With TTE - I(3): Routine surveillance (<1 y) of known pulmonary hypertension without change in clinical status or cardiac exam



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- Pulmonary Hypertension With TTE - A(7): Routine surveillance (≥ 1 y) of known pulmonary hypertension without change in clinical status or cardiac exam
- Pulmonary Hypertension With TTE - A(9): Re-evaluation of known pulmonary hypertension if change in clinical status or cardiac exam or to guide therapy
- Hypotension or Hemodynamic Instability With TTE - A(9): Hypotension or hemodynamic instability of uncertain or suspected cardiac etiology
- Hypotension or Hemodynamic Instability With TTE - U(5): Assessment of volume status in a critically ill patient
- Evaluation of Ventricular Function With TTE - I(2): Initial evaluation of ventricular function (e.g., screening) with no symptoms or signs of cardiovascular disease
- Evaluation of Ventricular Function With TTE - I(3): Routine surveillance of ventricular function with known CAD and no change in clinical status or cardiac exam
- Evaluation of Ventricular Function With TTE - I(1): Evaluation of LV function with prior ventricular function evaluation showing normal function (e.g., prior echocardiogram, left ventriculogram, CT, SPECT MPI, CMR) in patients in whom there has been no change in clinical status or cardiac exam
- Perioperative Evaluation With TTE - I(2): Routine perioperative evaluation of ventricular function with no symptoms or signs of cardiovascular disease
- Perioperative Evaluation With TTE - U(6): Routine perioperative evaluation of cardiac structure and function prior to noncardiac solid organ transplantation
- Myocardial Ischemia/Infarction With TTE - A(9): Acute chest pain with suspected MI and nondiagnostic ECG when a resting echocardiogram can be performed during pain
- Myocardial Ischemia/Infarction With TTE - A(8): Evaluation of a patient without chest pain but with other features of an ischemic equivalent or laboratory markers indicative of ongoing MI
- Myocardial Ischemia/Infarction With TTE - A(9): Suspected complication of myocardial ischemia/infarction, including but not limited to acute mitral regurgitation, ventricular septal defect, free-wall rupture/tamponade, shock, right ventricular involvement, HF, or thrombus
- Evaluation of Ventricular Function after ACS With TTE - A(9): Initial evaluation of ventricular function following ACS
- Evaluation of Ventricular Function after ACS With TTE - A(9): Re-evaluation of ventricular function following ACS during recovery phase when results will guide therapy
- Respiratory Failure With TTE - A(8): Respiratory failure or hypoxemia of uncertain etiology
- Respiratory Failure With TTE - U(5): Respiratory failure or hypoxemia when a noncardiac etiology of respiratory failure has been established
- Pulmonary Embolism With TTE - I(2): Suspected pulmonary embolism in order to establish diagnosis



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- Pulmonary Embolism With TTE - A(8): Known acute pulmonary embolism to guide therapy (e.g., thrombectomy and thrombolytics)
- Pulmonary Embolism With TTE - Routine surveillance of prior pulmonary embolism with normal right ventricular function and pulmonary artery systolic pressure
- Pulmonary Embolism With TTE - Re-evaluation of known pulmonary embolism after thrombolysis or thrombectomy for assessment of change in right ventricular function and/or pulmonary artery pressure
- Cardiac Trauma With TTE - A(9): Severe deceleration injury or chest trauma when valve injury, pericardial effusion, or cardiac injury are possible or suspected
- Cardiac Trauma With TTE - I(2): Routine evaluation in the setting of mild chest trauma with no electrocardiographic changes or biomarker elevation
- Native Valvular Stenosis With TTE - I(3): Routine surveillance (<3 y) of mild valvular stenosis without a change in clinical status or cardiac exam
- Native Valvular Stenosis With TTE - A(7): Routine surveillance (>/=3 y) of mild valvular stenosis without a change in clinical status or cardiac exam
- Native Valvular Stenosis With TTE - I(3): Routine surveillance (<1 y) of moderate or severe valvular stenosis without a change in clinical status or cardiac exam
- Native Valvular Stenosis With TTE - A(8): Routine surveillance (>/=1 y) of moderate or severe valvular stenosis without a change in clinical status or cardiac exam
- Native Valvular Regurgitation With TTE - I(1): Routine surveillance of trace valvular regurgitation
- Native Valvular Regurgitation With TTE - I(2): Routine surveillance (<3 y) of mild valvular regurgitation without a change in clinical status or cardiac exam
- Native Valvular Regurgitation With TTE - U(4): Routine surveillance (>/=3 y) of mild valvular regurgitation without a change in clinical status or cardiac exam
- Native Valvular Regurgitation With TTE - U(6): Routine surveillance (<1 y) of moderate or severe valvular regurgitation without a change in clinical status or cardiac exam
- Native Valvular Regurgitation With TTE - A(8): Routine surveillance (>/=1 y) of moderate or severe valvular regurgitation without change in clinical status or cardiac exam
- Prosthetic Valves With TTE - A(9): Initial postoperative evaluation of prosthetic valve for establishment of baseline
- Prosthetic Valves With TTE - I(3): Routine surveillance (<3 y after valve implantation) of prosthetic valve if no known or suspected valve dysfunction
- Prosthetic Valves With TTE - A(7): Routine surveillance (≥3 y after valve implantation) of prosthetic valve if no known or suspected valve dysfunction



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- Prosthetic Valves With TTE - A(9): Evaluation of prosthetic valve with suspected dysfunction or a change in clinical status or cardiac exam
- Prosthetic Valves With TTE - A(9): Re-evaluation of known prosthetic valve dysfunction when it would change management or guide therapy
- Infective Endocarditis (Native or Prosthetic Valves) With TTE - A(9): Initial evaluation of suspected infective endocarditis with positive blood cultures or a new murmur
- Infective Endocarditis (Native or Prosthetic Valves) With TTE - I(2): Transient fever without evidence of bacteremia or a new murmur
- Infective Endocarditis (Native or Prosthetic Valves) With TTE - I(3): Transient bacteremia with a pathogen not typically associated with infective endocarditis and/or a documented nonendovascular source of infection
- Infective Endocarditis (Native or Prosthetic Valves) With TTE - A(9): Re-evaluation of infective endocarditis at high risk for progression or complication or with a change in clinical status or cardiac exam
- Infective Endocarditis (Native or Prosthetic Valves) With TTE - I(2): Routine surveillance of uncomplicated infective endocarditis when no change in management is contemplated
- TTE for evaluation of intracardiac and extracardiac structures and chambers - A(9): Suspected cardiac mass
- TTE for evaluation of intracardiac and extracardiac structures and chambers - A(9): Suspected cardiovascular source of embolus
- TTE for evaluation of intracardiac and extracardiac structures and chambers - A(9): Suspected pericardial conditions
- TTE for evaluation of intracardiac and extracardiac structures and chambers - I(2): Routine surveillance of known small pericardial effusion with no change in clinical status
- TTE for evaluation of intracardiac and extracardiac structures and chambers - A(8): Re-evaluation of known pericardial effusion to guide management or therapy
- TTE for evaluation of intracardiac and extracardiac structures and chambers - A(9): Guidance of percutaneous noncoronary cardiac procedures including but not limited to pericardiocentesis, septal ablation, or right ventricular biopsy
- TTE for evaluation of aortic disease - A(9): Evaluation of the ascending aorta in the setting of a known or suspected connective tissue disease or genetic condition that predisposes to aortic aneurysm or dissection (e.g., Marfan syndrome)
- TTE for evaluation of aortic disease - A(9): Re-evaluation of known ascending aortic dilation or history of aortic dissection to establish a baseline rate of expansion or when the rate of expansion is excessive
- TTE for evaluation of aortic disease - A(9): Re-evaluation of known ascending aortic dilation or history of aortic dissection with a change in clinical status or cardiac exam or when findings may alter management or therapy



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- TTE for evaluation of aortic disease - I(3): Routine re-evaluation for surveillance of known ascending aortic dilation or history of aortic dissection without a change in clinical status or cardiac exam when findings would not change management or therapy
- Heart Failure With TTE - A(9): Initial evaluation of known or suspected Heart Failure (systolic or diastolic) based on symptoms, signs, or abnormal test results
- Heart Failure With TTE - A(8): Re-evaluation of known Heart Failure (systolic or diastolic) with a change in clinical status or cardiac exam without a clear precipitating change in medication or diet
- Heart Failure With TTE - U(4): Re-evaluation of known Heart Failure (systolic or diastolic) with a change in clinical status or cardiac exam with a clear precipitating change in medication or diet
- Heart Failure With TTE - A(9): Re-evaluation of known Heart Failure (systolic or diastolic) to guide therapy
- Heart Failure With TTE - I(2): Routine surveillance (<1 y) of Heart Failure (systolic or diastolic) when there is no change in clinical status or cardiac exam
- Heart Failure With TTE - U(6): Routine surveillance (>/=1 y) of Heart Failure (systolic or diastolic) when there is no change in clinical status or cardiac exam
- Device Evaluation (Including Pacemaker, ICD, or CRT) With TTE - A(9): Initial evaluation or re-evaluation after revascularization and/or optimal medical therapy to determine candidacy for device therapy and/or to determine optimal choice of device
- Device Evaluation (Including Pacemaker, ICD, or CRT) With TTE - U(6): Initial evaluation for CRT device optimization after implantation
- Device Evaluation (Including Pacemaker, ICD, or CRT) With TTE - A(8): Known implanted pacing device with symptoms possibly due to device complication or suboptimal pacing device settings
- Device Evaluation (Including Pacemaker, ICD, or CRT) With TTE - I(1): Routine surveillance (<1 y) of implanted device without a change in clinical status or cardiac exam
- Device Evaluation (Including Pacemaker, ICD, or CRT) With TTE - I(3): Routine surveillance (>/=1 y) of implanted device without a change in clinical status or cardiac exam
- Ventricular Assist Devices and Cardiac Transplantation With TTE - A(9): To determine candidacy for ventricular assist device
- Ventricular Assist Devices and Cardiac Transplantation With TTE - A(7): Optimization of ventricular assist device settings
- Ventricular Assist Devices and Cardiac Transplantation With TTE - A(9): Re-evaluation for signs/symptoms suggestive of ventricular assist device-related complications
- Ventricular Assist Devices and Cardiac Transplantation With TTE - A(7): Monitoring for rejection in a cardiac transplant recipient



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- Ventricular Assist Devices and Cardiac Transplantation With TTE - A(9): Cardiac structure and function evaluation in a potential heart donor
- Cardiomyopathies With TTE - A(9): Initial evaluation of known or suspected cardiomyopathy (e.g., restrictive, infiltrative, dilated, hypertrophic, or genetic cardiomyopathy)
- Cardiomyopathies With TTE - A(0): Re-evaluation of known cardiomyopathy with a change in clinical status or cardiac exam or to guide therapy
- Cardiomyopathies With TTE - I(2): Routine surveillance (<1 y) of known cardiomyopathy without a change in clinical status or cardiac exam
- Cardiomyopathies With TTE - U(5): Routine surveillance (>/=1 y) of known cardiomyopathy without a change in clinical status or cardiac exam
- Cardiomyopathies With TTE - A(9): Screening evaluation for structure and function in first-degree relatives of a patient with an inherited cardiomyopathy
- Cardiomyopathies With TTE - A(9): Baseline and serial re-evaluations in a patient undergoing therapy with cardiotoxic agents
- TTE for adult congenital heart disease - A(9): Initial evaluation of known or suspected adult congenital heart disease
- TTE for adult congenital heart disease - A(9): Known adult congenital heart disease with a change in clinical status or cardiac exam
- TTE for adult congenital heart disease - A(9): Re-evaluation to guide therapy in known adult congenital heart disease
- TTE for adult congenital heart disease - I(3): Routine surveillance (<2 y) of adult congenital heart disease following complete repair + without a residual structural or hemodynamic abnormality + without a change in clinical status or cardiac exam
- TTE for adult congenital heart disease - U(6): Routine surveillance (>/=2 y) of adult congenital heart disease following complete repair + without residual structural or hemodynamic abnormality + without a change in clinical status or cardiac exam
- TTE for adult congenital heart disease - U(5): Routine surveillance (<1 y) of adult congenital heart disease following incomplete or palliative repair + with residual structural or hemodynamic abnormality + without a change in clinical status or cardiac exam
- TTE for adult congenital heart disease - A(8): Routine surveillance (>/=1 y) of adult congenital heart disease following incomplete or palliative repair + with residual structural or hemodynamic abnormality + without a change in clinical status or cardiac exam