



Stress Echocardiography

Clinical Guideline Tip Sheet

*This tip sheet is intended to further assist you with the clarification of the National Imaging Associates, Inc. (NIA) clinical guidelines. It is for informational purposes only and is **NOT** intended as a substitute for the clinical guidelines that must be utilized when reviewing cases for medical necessity and clinical appropriateness.*

Overview

Stress Echo is indicated for the evaluation of suspected coronary artery disease in most cases where myocardial perfusion imaging (MPI) is indicated for the evaluation of possible ischemia:

- ETT is generally endorsed over SE if patient is low or intermediate pretest probability (as determined by Diamond Forrester classification), and the patient has an interpretable EKG (examples of **uninterpretable** EKG's are listed below)
 - o Pre-excitation pattern such as Wolff-Parkinson-White
 - o Greater or equal to 1.0 mm ST segment depression (NOT nonspecific ST/T wave changes)
 - o LVH with repolarization abnormalities, (NOT without repolarization abnormalities or by voltage criteria)
 - o Patients on digitalis

Note: RBBB is not a contraindication to ETT

Indications for doppler evaluation in the performance of stress echocardiography

- For assessment of exercise hemodynamics in valvular heart disease, including aortic, mitral, and tricuspid valvular lesions both rheumatic and acquired, especially if there is a discrepancy between the physical exam findings and the transthoracic echocardiogram
- For the evaluation of shortness of breath when pulmonary hypertension (both primary and secondary) is suspected of evaluating changes in right ventricular function and pulmonary artery pressures with exercise.
- Evaluation of response to exercise in cardiomyopathies- including systolic, diastolic, and hypertrophic cardiomyopathies
- Evaluation of response to exercise in congenital heart disease (such as Tetralogy, ASD, VSD)
- Evaluation of hemodynamics in prosthetic heart valves for the evaluation of transvalvular gradients

Clinical scenarios such as palpitations, chest pain or dyspnea do not require the addition of doppler evaluation when this may be evaluated by a transthoracic echocardiogram

References

Doherty JU, Kort S, Mehran R, et al. 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: A Report of the American College of Cardiology. Appropriate Use Criteria Task Force, American Association for Thoracic Surgery, American Heart Association, American Society of Echocardiography, American Society of Nuclear Cardiology, Heart Rhythm Society, Society for Cardiovascular Angiography and Interventions, Society of Cardiovascular Computed Tomography, Society for Cardiovascular Magnetic Resonance, and the Society of Thoracic Surgeons. *J Nucl Cardiol*. 2019; 26(4):1392-1413.

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Douglas PS et al. ACCF/ASE/AHA/ASNC/HFSA/HRS/SCAI/SCCM/SCCT/SCMR 2011 Appropriate Use Criteria for Echocardiography. *J Am Soc Echocardiography*. 2011; 24:229-67.