

Online Supplement, Table 2. Appropriate Use Criteria for Imaging and Invasive Procedures—2017 ACC Expert Consensus Decision Pathway for Optimization of Heart Failure Treatment: Answers to 10 Pivotal Issues About Heart Failure With Reduced Ejection Fraction

Non-Invasive Imaging and Invasive Procedures Appropriate Use Criteria (1-4)
<p>Echocardiography</p> <ul style="list-style-type: none"> • Suspected or new-onset HF • Change in the clinical status • After maximization of GDMT to make a decision regarding device therapy
<p>Cardiac MRI</p> <ul style="list-style-type: none"> • Assessment of LV function in patients with limited echocardiography images • Viability assessment in patients with known LV dysfunction and eligible for revascularization • Evaluation of an infiltrative cardiomyopathy (e.g., amyloidosis, sarcoidosis) • Evaluation of specific cardiomyopathies such as hypertrophic cardiomyopathy or those due to cardiotoxic therapies • Evaluation of pericardial disease • Evaluation of myocarditis • Evaluation of an LV thrombus or mass and inability to assess with other imaging modalities
<p>Radionuclide angiography</p> <ul style="list-style-type: none"> • Inability to assess LV function by another modality • Baseline and serial assessment of LV function in patients on cardiotoxic drugs (e.g., anthracyclines)
<p>SPECT/PET MPI</p> <ul style="list-style-type: none"> • Viability assessment in patients with known LV dysfunction and eligible for revascularization • Suspect coronary artery disease as etiology of HF
<p>CT angiography</p> <ul style="list-style-type: none"> • Suspect coronary artery disease as the etiology of HF
<p>Coronary angiography</p> <ul style="list-style-type: none"> • Suspect coronary artery disease as the etiology of HF
<p>Right heart catheterization</p> <ul style="list-style-type: none"> • Patients with respiratory distress or with evidence of impaired perfusion in which filling pressures cannot be assessed clinically • Evaluation of patients for advanced therapies such as transplant and left ventricular assist devices
<p>Endomyocardial biopsy</p> <ul style="list-style-type: none"> • In patients in whom a diagnosis will change the course of therapy (e.g., giant cell myocarditis)

GDMT indicates guideline-directed medical therapy; HF indicates heart failure; and LV, left ventricular.

REFERENCES

1. Yancy CW, Jessup M, Bozkurt B, et al. 2013 ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol.* 2013;62:e147-239.

2. Taylor AJ, Cerqueira M, Hodgson JM, et al. ACCF/SCCT/ACR/AHA/ASE/ASNC/NASCI/SCAI/SCMR 2010 appropriate use criteria for cardiac computed tomography. A report of the American College of Cardiology Foundation Appropriate Use Criteria Task Force, the Society of Cardiovascular Computed Tomography, the American College of Radiology, the American Heart Association, the American Society of Echocardiography, the American Society of Nuclear Cardiology, the North American Society for Cardiovascular Imaging, the Society for Cardiovascular Angiography and Interventions, and the Society for Cardiovascular Magnetic Resonance. *J Am Coll Cardiol.* 2010;56:1864–94.

3. Hundley WG, Bluemke DA, Finn JP, et al. ACCF/ACR/AHA/NASCI/SCMR 2010 expert consensus document on cardiovascular magnetic resonance: a report of the American College of Cardiology Foundation Task Force on Expert Consensus Documents. *J Am Coll Cardiol.* 2010;55:2614–62.

4. Hendel RC, Berman DS, Di Carli MF, et al. ACCF/ASNC/ACR/AHA/ASE/SCCT/SCMR/SNM 2009 appropriate use criteria for cardiac radionuclide imaging: A report of the American College of Cardiology Foundation Appropriate Use Criteria Task Force, the American Society of Nuclear Cardiology, the American College of Radiology, the American Heart Association, the American Society of Echocardiography, the Society of Cardiovascular Computed Tomography, the Society for Cardiovascular Magnetic Resonance, and the Society of Nuclear Medicine. *J Am Coll Cardiol.* 2009;53:2201–29.