



MASSACHUSETTS

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Medical Policy

Nuclear Cardiology: Cardiac Blood Pool Imaging Blood Pool Imaging includes MUGA (Multi-Gated Acquisition) & First Pass Radionuclide Ventriculography

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Policy Number: 830

BCBSA Reference Number: N/A

Related Policies

- **Medicare Advantage: High-Technology Radiology and Sleep Disorder Management Clinical and Utilization Guidance Redirect, #[923](#)**
- Nuclear Cardiology Infarct Imaging, #[834](#)
- Nuclear Cardiology Myocardial Perfusion Imaging, #[836](#)

Policy¹

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity

Cardiac Blood Pool Imaging Blood Pool Imaging includes MUGA (Multi-Gated Acquisition) & First Pass Radionuclide Ventriculography are considered [MEDICALLY NECESSARY](#) for the following conditions:

Evaluation of left ventricular function

Note: It is assumed that left ventricular function will be evaluated using a single imaging modality. Thus, if left ventricular function has been evaluated recently by echocardiography reevaluation using blood pool imaging is not necessary

- Initial evaluation of known or suspected heart failure; **OR**
- Reevaluation of patients with known LV dysfunction (systolic or diastolic) in a patient with a deterioration in clinical status; **OR**
- Evaluation of patients with resting EKG abnormalities (LBBB, RBBB with left anterior or posterior hemiblock, LVH, RVH, Q waves suggestive of prior infarction); **OR**
- Reevaluation of patients with known heart failure (systolic or diastolic) in a patient with a change in clinical status; **OR**
- Baseline and serial reevaluation in patients undergoing, planning to undergo or who have undergone therapy with cardiotoxic agents (examples including but not limited to some chemotherapeutic agents for cancer, Novantrone [mitoxantrone] for multiple sclerosis); **OR**

- Screening study for left ventricular dysfunction every two (2) years in clinically stable and first-degree relatives of patients with inherited cardiomyopathy; **OR**
- Evaluation of suspected restrictive, infiltrative or genetic cardiomyopathy; **OR**
- Evaluation of patients with diagnosed or suspected myocarditis; **OR**
- Evaluation of LV function in a patient with known cardiomyopathy being considered for cardiac resynchronization therapy (CRT), implantable defibrillator (AICD) or ventricular assist device (VAD); **OR**
- Initial evaluation for cardiac resynchronization therapy (CRT) device optimization following implantation; **OR**
- Evaluation of a patient being treated with cardiac resynchronization therapy (CRT) with new or persistent signs or symptoms of heart failure for device optimization; **OR**
- Blood pool imaging is indicated for optimization of device settings in patients with ventricular assist device (VAD); **OR**
- When left ventricular dysfunction is suggested by other testing (chest x-ray, elevated BNP) and LV function has not been evaluated by another modality since that testing was performed; **OR**
- Where a clinically significant discrepancy that might influence patient management exists in the evaluation of left ventricular dysfunction by two other imaging modalities, MUGA/First Pass can be used as an arbiter; **OR**
- Pre and post cardiac transplantation

Evaluation of right ventricular function

- In patients suspected of having right ventricular dysfunction based on history and/or physical examination; **OR**
- Reevaluation of patients with established right ventricular dysfunction in patients with a change in clinical status; **OR**
- Evaluation of right ventricular function in patients with pulmonary hypertension; **OR**
- Evaluation of right ventricular function in patients with diagnoses known to cause right ventricular dysfunction including but not limited to coronary artery disease, valvular heart disease, left ventricular dysfunction, congenital heart disease, morbid obesity, sleep apnea syndrome, advanced lung disease, pulmonary thromboembolic disease, and right ventricular dysplasia; **OR**
- Evaluation of right ventricular function in patients with myocardial infarction where right ventricular involvement is suspected; **OR**
- Evaluation of right ventricular function in patients who are being evaluated for or have undergone cardiac or lung Transplantation

Coronary artery disease (CAD) (applies to patients with established coronary artery disease)

- Recent (less than 3 weeks) acute coronary syndrome (myocardial infarction or unstable angina) for initial assessment of LV function
 - This study is usually done prior to discharge
 - Not required if left ventricular function has been assessed using another imaging modality; **OR**
- Prior acute coronary syndrome (myocardial infarction or unstable angina) for reevaluation of ventricular function during recovery phase (up to six [6] months following acute coronary syndrome); **OR**
- Prior acute coronary syndrome (myocardial infarction or unstable angina) for reevaluation of ventricular function after the recovery phase (more than six [6] months) in patients who develop new signs or symptoms suggestive of heart failure; **OR**
- Prior myocardial infarction for reevaluation of LV function in patients being considered for AICD or cardiac resynchronization therapy (CRT)

Congenital heart disease

- For detection and localization of shunts (ventricular septal defect [VSD], atrial septal defect [ASD], patent ductus arteriosus [PDA], anomalous pulmonary venous drainage)
 - Echocardiography is generally considered to be a preferable imaging modality in this clinical situation

- For evaluation of RV and/or LV function in a patient with established complex congenital heart disease

Valvular heart disease

- Established valvular heart disease in patients with new or worsening signs or symptoms
 - In patients with suspected valvular heart disease echocardiography is the appropriate initial imaging modality; **OR**
- Patients with severe asymptomatic aortic regurgitation to assist in optimal timing of aortic valve replacement
 - Rest and stress studies are appropriate in this clinical situation

Prior Authorization Information

Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	The requirements of BCBSMA Radiology Management Program may require a precertification/prior authorization via AIM Specialty Health. These requirements are member-specific:
Commercial PPO and Indemnity	<p>Please verify member eligibility and requirements through Online Services by logging onto Provider Central. Refer to our Quick Tip for an overview of precertification and prior authorization requirements.</p> <p>Ordering clinicians should request pre-certification from AIM Specialty Health or call 1-866-745-1783 (when applicable).</p> <p>Prior authorization information for Medicare HMO Blue and Medicare PPO Blue is addressed in medical policy #923, High Technology Radiology and Sleep Disorder Management for Medicare Advantage Products.</p>

CPT Codes / HCPCS Codes / ICD Codes

Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The following codes are included below for informational purposes only; this is not an all-inclusive list.

The above medical necessity criteria **MUST be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity:**

CPT Codes

CPT codes:	Code Description
78472	Gated equilibrium; planar, single study, wall motion plus ejection fraction
78473	Gated equilibrium; planar, multiple studies, wall motion study plus ejection fraction
78481	First pass technique; single study, wall motion study plus ejection fraction
78483	First pass technique; multiple studies, wall motion study plus ejection fraction
78494	Gated equilibrium: SPECT, at rest, wall motion study plus ejection fraction
78496	Cardiac blood pool imaging, gated equilibrium, single study, at rest, with right ventricular ejection fraction by first pass technique (List separately in addition to code for primary procedure) This code is an add-on code to be used in conjunction with 78472. As such, this code does not require separate review

Policy History

Date	Action
1/2018	Prior authorization information for Medicare HMO Blue and Medicare PPO Blue removed. Prior authorization information for Medicare HMO Blue and Medicare PPO Blue is addressed in medical policy #923, High Technology Radiology and Sleep Disorder Management for Medicare Advantage Products , 1/1/2018
5/2017	Prior Authorization Information clarified. 5/1/2017
10/1/2016	New medical policy describing medically necessary indications. Effective 10/1/2016. Adopted AIM Clinical Appropriateness Guidelines: Advanced Imaging: Cardiac Imaging Effective Date: March 1, 2016.

Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

[Medical Policy Terms of Use](#)

[Managed Care Guidelines](#)

[Indemnity/PPO Guidelines](#)

[Clinical Exception Process](#)

[Medical Technology Assessment Guidelines](#)

References

N/A

Endnotes

¹ Based on AIM Clinical Appropriateness Guidelines: Advanced Imaging: Cardiac Imaging.