Cardiac Nuclear

When calling Anthem (1-800-533-1120) or using the Point of Care authorization system for a Health Service Review, the following clinical information may be needed to process your request. Being prepared with complete information will help expedite our response.

**Generally with all requests, we will need:**
- ✓ Diagnosis or symptoms that the patient is displaying and the duration of symptoms
- ✓ Any “rule out” conditions
- ✓ Any previous radiological studies and results
- ✓ Any previous therapeutic treatment and the results of that treatment

*In some instances we will only need the diagnosis and symptoms. For these conditions, the following information may be asked.*

<table>
<thead>
<tr>
<th>Cardiac Nuclear</th>
<th>78460</th>
<th>Planar, single study at rest or stress</th>
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<tbody>
<tr>
<td></td>
<td>78461</td>
<td>Planar, multiple studies at rest and/or stress</td>
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<td></td>
<td>78464</td>
<td>SPECT, single study at rest or stress</td>
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<tr>
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<td>78465</td>
<td>SPECT, multiple studies at rest and/or stress</td>
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<tr>
<th>Infarct Imaging</th>
<th>78466</th>
<th>Planar, infarct avid; qualitative or quantitative</th>
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<td>78468</td>
<td>Planar, infarct avid; with ejection fraction by first pass technique</td>
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<td>78469</td>
<td>SPECT, infarct avid; with or w/o quantification</td>
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<tr>
<th>Cardiac Blood Pool Imaging</th>
<th>78472</th>
<th>Gated equilibrium; planar, single study, wall motion plus ejection fraction</th>
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<td>78473</td>
<td>Gated equilibrium; planar, multiple studies, wall motion study plus ejection fraction</td>
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<td>78481</td>
<td>First pass tech; single study, wall motion study plus ejection fraction</td>
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<td>78483</td>
<td>First pass tech; multiple studies, wall motion study plus ejection fraction</td>
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<td>78494</td>
<td>Gated equilibrium, SPECT, at rest, wall motion study plus ejection fraction</td>
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<td>78496</td>
<td>Gated equilibrium, single study, at rest, with right ventricular ejection fraction by first pass technique</td>
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<th>Myocardial Perfusion add on</th>
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<th>Myocardial perfusion study with wall motion</th>
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<td>78480</td>
<td>Myocardial perfusion study with ejection fraction</td>
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**Stress Myocardial Perfusion Imaging**
- Did the patient have a myocardial infarction and the study is
  - o To assess extent of ischemia (myocardium at risk)
  - o To quantitate infarct size
  - o To assess myocardial for salvage/areas of cardiac viability

Does the patient have documented history of coronary artery disease?
- Symptomatic coronary artery disease
  - o To identify extent/location of myocardium in jeopardy
CARDIAC NUCLEAR IMAGING
FACT SHEET

To demonstrate myocardial viability status post coronary artery bypass grafting/angioplasty
- After myocardial infarction
- For detection of reversibility dysfunctional myocardium in patients with coronary artery disease and left ventricular dysfunction

To correlate with catheterization findings to determine the functional significance of an intermediate stenosis

Asymptomatic coronary artery disease
- For preoperative risk assessment for patients undergoing major surgery in the presence of recurrent symptoms or > 3 years since revascularization and with recent stress imaging
- Periodically in selected high risk patients with electrocardiogram abnormalities (i.e. complete left bundle branch block, widespread rest ST depression (>1mm), pre-excitation, ventricular paced rhythm) which would render routine treadmill testing alone suboptimal or nondiagnostic for the evaluation of progressive CAD.
- For follow-up 1-6 months after revascularization procedures in high risk patients.
- For abnormal exercise treadmill tests.

Suspected ischemic chest pain or anginal equivalent symptoms
- Positive exercise stress test and low clinical suspicion of high risk anatomy (i.e. proximal LAD disease or multivessel PCI)
- Complete left bundle branch block, pre-excitation, or ventricular paced rhythm or other changes which preclude interpretation of the electrocardiogram.
- Physical limitations which would preclude ability to exercise to a sufficient level enough to give meaningful results on a routine stress electrocardiogram treadmill
- Has risk factors for coronary artery disease
  - Diabetes
  - Hypertension
  - Abnormal lipid profile
  - Cigarette smoking
  - Family history of premature coronary artery disease (men<55, women<65)
  - Age >40

In the absence of risk factors and the baseline ECG is normal
- For preoperative risk stratification of patients undergoing vascular, orthopedic, or high risk operations such as abdominal, thoracic, or urologic procedures
- For differentiation of ischemic and non-ischemic cardiomyopathy
- Congenital heart disease; for assistance in determining the diagnosis of anomalies of coronary circulation
- Valvular heart disease; for detection and assessment of the functional significance of concomitant coronary artery disease

Asymptomatic patients
- Arrhythmias present (ventricular tachycardia, atrial fibrillation or flutter, supraventricular tachycardia)
- Patients who have a baseline ECG which precludes accurate interpretation or inability to exercise to a sufficient level to give meaningful results on a routine stress electrocardiogram treadmill test (i.e. orthopedic problem, severe PVD, COPD, amputation) in patients who have a high risk occupation (i.e. airline pilot, fireman, policeman, etc.)
- Patients who have severe coronary calcification in the presence of baseline ECG abnormalities or the inability to exercise sufficiently.

Radionuclide Angiography (RNA)
- Acute myocardial infarction
  - Right ventricular infarction
  - Rest right ventricular/left ventricular function
Myocarditis
- To determine initial and serial left ventricular and right ventricular performance
- For initial and serial left ventricular function in patients treated with doxorubicin (i.e. Adriamycin) or other chemotherapeutic agents which cause myocardial dysfunction

Congenital heart disease
- For detection and localization of shunts
- For initial and serial measurements of ventricular function

After cardiac transplant to assess ventricular function

Valvular heart disease for initial and serial assessment of left ventricular and right ventricular volume and ejection fraction

Preoperative Stress Myocardial Perfusion Imaging
- High or intermediate risk surgical procedures; such as vascular, orthopedic, thoracic and abdominal, CEA, head and neck, prostate, transplant procedures (renal, liver, etc.)
- History of coronary disease in the presence of recurrent symptoms or > 3 years since revascularization and without recent stress imaging
- For patients undergoing lower risk procedures
  - Does the patient have intermediate clinical predictors
  - Does the patient have minor clinical predictors
  - Does the patient have a poor functional class

MUGA (multiple gated acquisition) Gated Blood Pool Scan
- Assess ventricular volumes
- Assess right ventricular function in patients with congenital heart disease
- Assess shunt severity
- Assess ejection fraction and wall motion during stress perfusion imaging
- Cardiotoxic drug monitoring for
  - As baseline or serial quantitative assessment of left ventricular function in patient receiving doxorubicin or other anthracycline chemotherapy (e.g. Adriamycin)
  - When adequate echo can not be obtained

Mitral regurgitation
- At time of diagnosis of mitral valve regurgitation, if echocardiogram is suboptimal or equivocal
- Preoperative evaluation of patient with mitral valve regurgitation for whom left or right ventricular function must get evaluated and echogram is suboptimal or equivocal

Aortic regurgitation
- At time of diagnosis of aortic regurgitation, if echocardiogram is suboptimal or equivocal
- Periodic evaluation of aortic regurgitation,
  - Mild to moderate regurgitation with normal left ventricular function and no clinical evidence that regurgitation has worsened
  - Previous echocardiogram of MUGA scan showed progressive ventricular dilatation or declining systolic function
  - Severe aortic regurgitation, even if asymptomatic;
    - Left ventricular dilatation >60mm
    - Left ventricular dilatation >70mm
- As confirmatory test when clinical assessment and echocardiogram results do not agree

Heart failure

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