



# Myocardial Perfusion-Thallium

Please contact one of the technologists if you have any questions concerning the information seen on this page.

## Indications

- Diagnosis of CAD
  - Presence, Location and Severity
- Assessment of the impact of coronary stenosis on regional perfusion
- Help distinguish viable ischemic myocardium from scar
- Risk assessment and stratifications
  - Postmyocardial infarction
  - Pre-operative for major surgery if high risk
- Monitor treatment effect
  - After coronary revascularization
  - Medical therapy for CHF or angina

## Billing/Coding

Nuclear Sonics Billing #: 88

CPT Code: 78452

CPT Name: Myocardial perfusion imaging, tomographic (SPECT): multiple studies, at rest and/or stress and/or redistribution and/or rest reinjection

Radiopharmaceutical Used: Tl-201 thallium

HCPCS Code: A9505

NDC #: if needed, please contact NSA technologist

Billing for Rp: per millicurie, typically 5 millicuries

Interventional Drug: refer to cardiac rehab or radiology for interventionals and other codes

## Study Overview

### Prep:

- NPO for 12 hours prior with the exception of water
- Discontinue aminophylline and theophylline containing products for 48 hours prior to exam (vasodilator stress)
- Beta blockers and calcium channel blockers should be discontinued for at least 24 hours (treadmill and dobutamine studies)
- NTG should be withheld at least 1 hour prior
- Long lasting nitrates should be discontinued for at least 4 hours

### Exam Time:

- ~5 hours

### Overview:

- Patient will have IV started by staff. Patient will undergo stress portion of test. Either the patient will walk on treadmill or be given a pharmaceutical and then will be injected with the radiopharmaceutical. Images will be taken immediately following stress.
- Patient will return 3 to 4 hours later and reinjected. Images will be taken after a 30 minute wait.

## Contraindications

- Pregnancy
- Breastfeeding
- Hypersensitivity to any material used
- Absolute treadmill contraindications
  - MI w/in 72 hours
  - Unstable angina
  - Severe CHF
  - Uncontrollable arrhythmias
- Relative treadmill contraindications
  - Digitalis
  - Left ventricular hypertrophy
  - BBB
  - Aortic stenosis
  - Exercise limitations
  - Beta and Calcium Channel Blockers
- Absolute vasodilator contraindications
  - Symptomatic hypotension
  - Unstable angina
  - MI w/in 72 hours
  - Sick Sinus Syndrome
  - 2nd or 3rd degree AV block
  - Severe CHF
  - Heart transplant recipient
  - Use of oral dipyridamole or theophylline w/in 48 hours
  - Use of caffeine w/in 12 hours
- Relative vasodilator contraindications
  - pulmonary disease (Lexiscan is an option for those with increased chance of bronchospasms)

## Pregnancy/Breastfeeding Concerns

It is at the discretion of the ordering physician, the radiologist and the patient, whether or not a pregnant patient should have any nuclear medicine procedures performed until after the pregnancy has ended. It is the recommendation of Nuclear Sonics that patients who are breastfeeding should discontinue for 10 half-lives of the radiopharmaceutical. This is typically a Technetium product, which has a radioactive half-life of 6 hours, so the typical discontinuation should occur for 60 hours.

Disclaimer: These are the recommendations of Nuclear Sonics. At times, the ordering provider may choose a different prep, use the study for something other than what is indicated or order the study even if the study is contraindicated. The prospective Radiology Department and/or Nuclear Sonics will ascertain whether or not the ordering provider wishes to go against the recommendations.

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