

Title: NM-Cardiac Perfusion Scan – Cardiologist Protocol	Procedure
Patient Age Group:	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> All Ages <input type="checkbox"/> Newborns <input type="checkbox"/> Pediatric <input type="checkbox"/> Adult

Special Instructions	None
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Radiopharmaceutical: Tc-99m tetrofosmin (Myoview). Sestamibi (Cardiolite) may be substituted if tetrofosmin is unavailable.

Dose (Adult/Pediatric): Refer to Nuclear Medicine Dose Chart

Route of Administration: Intravenous (preferred angiocatheter size at least 22 gauge). Ensure intravenous position of the catheter before radiopharmaceutical administration.

Patient Preparation: Please ensure the following:

- NPO from midnight on the day of the exam (morning exam) or eat breakfast by 7am for afternoon test.
- No caffeine (chocolate, coffee, decaf coffee, cokes, headache medicines containing caffeine, etc) for 24 hours prior to vasodilator (Lexiscan) stress.
- While caffeine does not interfere with exercise stress, abstaining from caffeine is also recommended in case the examination needs to be converted to pharmacologic stress.

If patient is taking nitroglycerine:

- D/C IV nitro 6 hours prior to study
- D/C Sublingual 1 hour prior to study
- D/C Patch 1 hour prior to study

If patient is a smoker and uses a patch or the gum:

- D/C Patch or Gum 1 hour prior
- Hold oral diabetic medicine day of exam and only take ½ dose of insulin the morning of the exam.
- If possible, hold inhalers day of exam and bring with the patient for the exam.
- For Treadmill studies, please hold medications as per the list of medications below.

Equipment Setup:

Collimator: High Resolution

Computer setup:

For rest (nongated) SPECT study:

Category: Cardiac – 1. REST ACQ

- Pull out c.clear wings (to turn on attenuation correction)
- Noncircular orbit prescan
- Starting angle 45 degrees
- ZOOM 1.0
- CCW (counter clockwise)
- 32 steps
- 25 sec/step (adjust accordingly for larger patients)
- step and shoot
- Det. reconfiguration 90 degrees

For gated (stress) SPECT study:

Category: Cardiac – 2. STRESS ACQ

- Pull out c.clear wings (to turn on attenuation correction)
- 32 steps
- 20 sec/step (adjust accordingly for larger patients)
- step and shoot
- Starting angle 45 degrees, CCW (counter clockwise)
- ZOOM 1.0
- Det. Reconfiguration 90 degrees
- After beginning the acquisition, check that the histogram peak falls well within a 20% window. If necessary, the window can be opened to 30%, but not more than 30%.
- Reject PVCs
- Forward/backward by thirds
- Autotracking
- Autocenter primary window
- Step and Shoot/simultaneous

Patient Positioning:

Supine, feet first

Procedure:

- Rest and stress portions are performed on the same day, with the rest portion first, followed by the stress portion. The stress portion may begin as soon as rest imaging is complete.
- Imaging should be performed approximately 15 minutes after injection for resting images and approximately 15 minutes after stress.

Processing:

- For rest and stress portions, examine for motion before taking patient off bed; consider applying motion correction or repeating the examination if motion is excessive.
- After acquisition is complete, choose the patient file and click on 'c.clear Cardiac Processing' button.
- It will open to the AutoRecon Activity Tab and the Reconstruction Tab. Place the ROI around heart for Stress and Rest. Align all views of the heart. If masking/centering is necessary, click on the Masking/Centering Tab and adjust.

Slice Display:

- Align stress and rest slices under Flexible Display, with slices displayed on two pages. (Dr Hai prefers uncorrected slices and corrected slices for a total of 4 pages)
- Adjust intensities so that the overall intensity of the heart matches on all images.
- Make savescreens and send.

QPS/QGS:

- After completing the slice display, choose your patient and click on the QPS_QGS Cardiac Slice Display Review button to launch program.
- Colors should be prism for polar maps.

QPS:

- Click on the manual process and bring in limits as necessary.
- Click on the results tab and click print and ok. (Dr Hai prefers that under the results tab, save the uncorrected and corrected views).
- Click on the save button and save all.
- Click on the exit button and it will automatically move to the QGS process screen.

QGS:

- Click on the manual process and bring in limits as necessary.
- Click on the results tab and click on the print button.
- Click on the view tab and adjust the center image to have the apex pointing directly at you and click on the print button.
- Click on the surface button and visually inspect the motion of the heart.
- Click on the save button and save all.
- Exit and complete.

****Note:** all scans must be processed before patient leaves. If there are critical results, the cardiologist must be notified for further instructions.

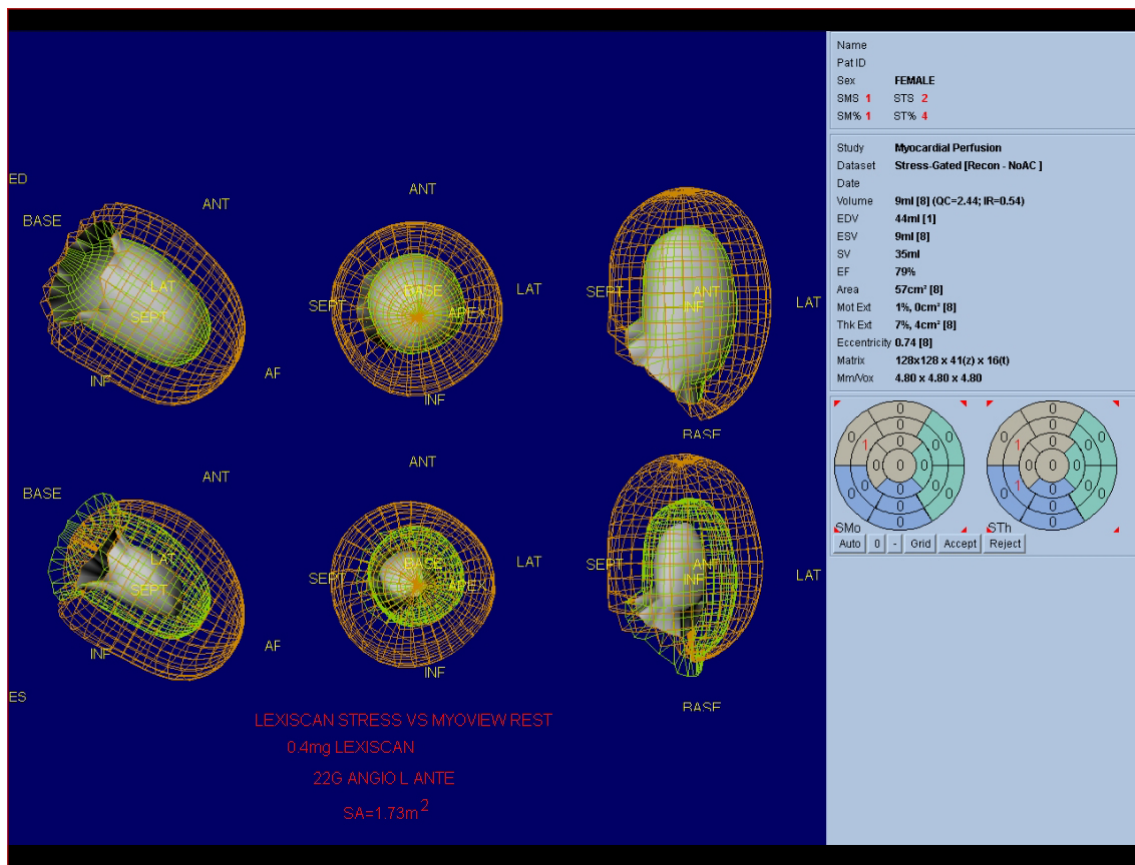
Items Required For Complete Study:

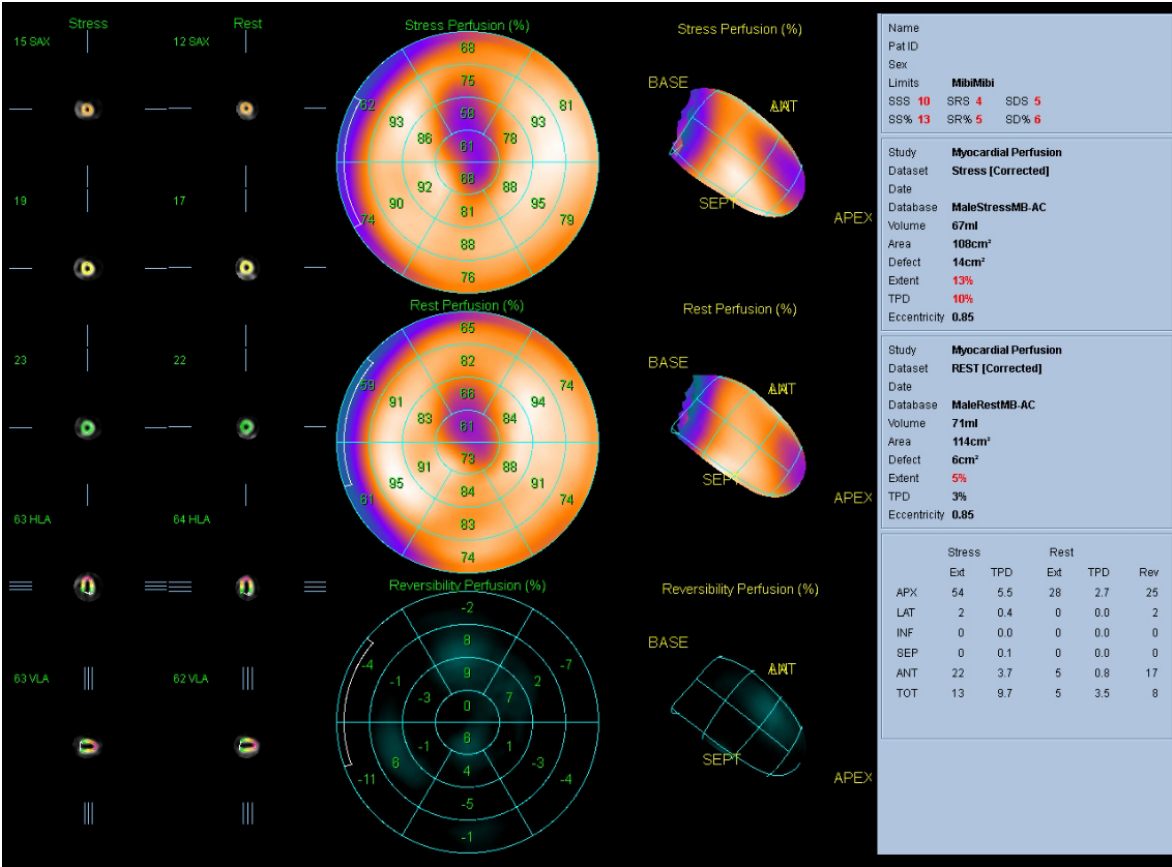
- All raw/processed data
- Stress over rest slices and QGS images (Views and Results)
- Transfer of all digital images and raw data to ISITE, NMLEO1, NMLEO2, PICS_BCS, SPECTLEO, STENTOR_SCP
- Complete the examination in RIS

Review and Approval

Initials: _____ Date: _____
 SRMC Cardiology Medical Director

Initials: _____ Date: _____
 NM Director/Supervisor/Lead Tech





Name
 Pat ID
 Sex
 Limits **MibiMibi**
 SSS **10** SR6 **4** SDS **5**
 SS% **13** SR% **5** SD% **6**

Study **Myocardial Perfusion**
 Dataset **Stress [Corrected]**
 Date
 Database **MaleStressMB-AC**
 Volume **67ml**
 Area **108cm²**
 Defect **14cm²**
 Extent **13%**
 TPD **10%**
 Eccentricity **0.85**

Study **Myocardial Perfusion**
 Dataset **REST [Corrected]**
 Date
 Database **MaleRestMB-AC**
 Volume **71ml**
 Area **114cm²**
 Defect **6cm²**
 Extent **5%**
 TPD **3%**
 Eccentricity **0.85**

	Stress		Rest		Rev
	Ext	TPD	Ext	TPD	
APX	54	5.5	28	2.7	25
LAT	2	0.4	0	0.0	2
INF	0	0.0	0	0.0	0
SEP	0	0.1	0	0.0	0
ANT	22	3.7	5	0.8	17
TOT	13	9.7	5	3.5	8



PLEASE READ THESE INSTRUCTIONS CAREFULLY

If you have any questions about your study, please call 505-994-7213.

Patient Instructions and Preparation for Outpatient Nuclear Stress Tests

Caffeine:

- ❖ Please, do not drink coffee, tea, colas or soda drinks, caffeinated or decaffeinated, and "caffeine free", beverages for 24 hours prior to your stress test.
- ❖ Avoid taking any of the following medications on the day of your stress test as they contain caffeine:
 - ✓ Anacin, Cafergot, Darvon, Excedrin, Fiorinal, NoDoz
- ❖ Do not consume foods or beverages containing chocolate for 24 hours prior to your stress test.
- ❖ If you are taking any form of Nitro, please inform the technologist

Diabetic Medications:

- ❖ Do not take any oral diabetic medications on the morning of your test. (Glucophage, Glyburide, Metformin, etc.)
- ❖ If you are taking insulin, take ½ of your morning dose the day of the test.

Dietary Instructions:

- ❖ You may drink water, fruit juices, or milk on the day before and on the day of your study.

General Instructions:

- ❖ Avoid using inhalers the day of the exam. If this will pose a problem to you, please alert us of this concern before scheduling your stress test.

- ❖ Wear comfortable clothing (preferably two pieces) and walking/jogging shoes. Do not wear shirts with metal snaps.
- ❖ Please plan on being at our office for approximately 2 hours.
- ❖ Radioactive doses are ordered especially for you. Please let us know if you cannot make your appointment for any reason at 505-994-7213.
- ❖ Please note that if you take any of the medications listed below or consume any foods or drinks containing caffeine during the period immediately preceding the stress test we will not be able to do the test and will ask that you reschedule to the next appropriate appointment time.

Medications:

- ❖ If you take any of the following medications, please hold them for the indicated amount of time prior to your stress test appointment. ****Nitroglycerine (NTG) patch – Remove before study****

Hold for 48 hours:

Atenolol	Lopressor	Theophylline
“Beta-blockers”	Nadolol	Timolol
Betapace	Ocupress	Toprol
Carita	Sotolol	Visken
Corzide	Tenoretic	Zebeta
Innopran	Tenormin	Ziac

Hold for 24 hours:

Acebutolol	Iso-bid	Plendil
Adalat	Isodril	Prazpsam
Amlodipine	Isosorbide	Sectral
Azor	Kerlone	Sotalol
Bisoprolol	Labetolol	Sular
Blocardren	Lexxel	Tenolol
Cardiac	Lopressor	Terazosin
Cardura	Lotrel	Theo-Dur
Carvedilol	Metoprolol	Tiazac
Coreg	Monoket	Trandate
Coregard	Niacin	Trental
Covera	Niacin	Vascor
DinaCirc	Niaspan	Verapamil
Doxazosin	Nitroglycerin	Visken
Felodipine	Normadine	Ziac
Ismo	Norvasc	
Imdur	Pindolol	

Hold the morning of the test (12 hours):

Altace

Atacand

Avalide

Avapro

Benicar

Calan

Cardene

Cardiazem

Cozaar.

Digoxin

Dilacor

Diltiazem

Diovan

Dipyridamole

Enalapril

Hyzaar

Isoptin

Inderol

Lanoxin

Lisinopril

Micardis

Nicardipine

Nifedipine

Prinivil

Procardia

Propranolol

Verelan

Vasotec

Zest