

Reporting Workflow

Nuclear Reporting Module

ACV 8.0

doc v1



To build and record a study, ASCEND aggregates and assembles information from multiple data sources, including the hospital information system's electronic health record, the nuclear lab's monitoring devices, and the image review workstation.

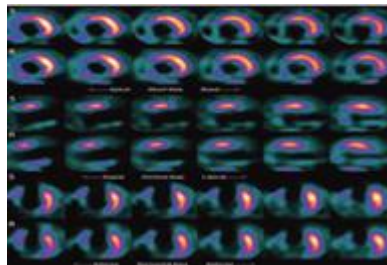
HIS / EHR system



Monitoring device



Image review



ASCEND General Hospital
1234 Main St. Anywhere, USA 02345
Phone: (800) 555-1234
Fax: (800) 555-1235

Myocardial Perfusion Imaging
Bruce protocol
Gated SPECT and planar imaging

Patient: Albert Roberts **Study date:** 04/30/2009 **Height:** 180 cm
MRN: #NUC123 (MRN) **Birth date:** 03/14/1979 (70.9 in)
Accession: #NUCSTUDY001 **Age:** 30 year(s) **Weight:** 80 kg (176 lb)
Patient location: EC 2B 2011 **Birth:** M **BSA:** 2.01 m²
Study status: **gender:** **BMI:** 24.7 kg/m²
Facility: East Campus **Patient status:** ObservationHR: BP:

Summary:

1. Stress-induced regional perfusion abnormality, affecting a moderate-sized region left anterior descending and left circumflex coronary arteries. []
2. Stress ECG conclusions: Duke scoring: exercise time of 7 min 14 sec; maximum ST deviation of 8.4 mm; no angina; resulting score is -12. This score predicts a high risk of cardiac events. []
3. Rest: Moderately reduced perfusion of the apical anterior wall. []
4. [New summary item]

Recommendations: [New recommendation](#) []

Prior history: Allergies: Aspirin allergy. []

Study data: Race: White. [] Patient unit: EC 2B. [] Patient room number: 2011. [] Study location: Procedure room # A123. [] Consent: The risks, benefits, and alternatives to the procedure were explained to the patient and informed consent was obtained. [] Procedure: Initial setup. The patient was brought to the laboratory. A baseline ECG was recorded. Intravenous access was obtained. Surface ECG leads and manual cuff blood pressure measurements were monitored. [] Treadmill exercise testing was performed using the

Patient information is pulled from the hospital information system (HIS), including patient identity, age, birth date, demographics, and the physicians involved in the study. The hospital system reports what kind of study was ordered and where the results will be sent.

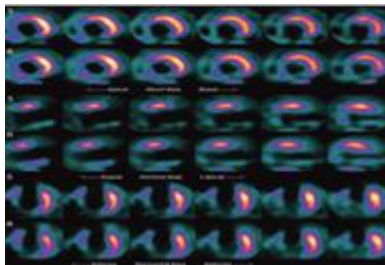
HIS / EHR system



Monitoring device



Image review



Undo Redo Help Options LEARN

Search Index Stress table Stress MPI Diagrams Conclusions Findings Report

Impressions and recommendations

Impressions

- Normal exercise stress
- Normal pharmacological stress
- Stress impression

Result	Normal
Stress type	Maximal exercise
Symptom reproduction	Present
False positive	ECG portion
Limited sensitivity	Submaximal stress
Limited specificity	Baseline ECG

Perfusion summary 1 New

Absence, uncertainty	Study suggests
Syndrome	Stress perfusion def
Territory	2 items recorded
Response to stress	Viable with ischemia
Comparison v prior study	Unchanged
Prior study date	2018-08-08

Recommendations

- Cardiac cath

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Facility: East Campus	Patient status:	ObservationHR: BP:

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3. **Rest:** Moderately reduced perfusion of the apical anterior wall.
4. **[New summary item]**

Recommendations: [New recommendation](#)

Prior history: **Allergies:** Aspirin allergy.

Study data: **Race:** White. **Patient unit:** EC 2B. **Patient room number:** 2011. **Study location:** Procedure room # A123. **Consent:** The risks, benefits, and alternatives to the procedure were explained to the patient and informed consent was obtained. **Procedure:** Initial setup. The patient was brought to the laboratory. A baseline ECG was recorded. Intravenous access was obtained. Surface ECG leads and manual cuff blood pressure measurements were monitored. **Treadmill exercise testing** was performed using the

From the monitoring device, ASCEND imports a great deal of information, including ECGs, heart rate, and blood pressure monitoring.

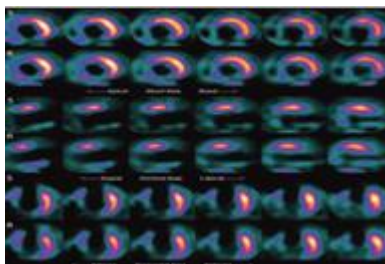
HIS / EHR system



Monitoring device



Image review



Undo Redo Help Options LEARN

Search Index Stress table Stress MPI Diagrams Conclusions Findings Report

Impressions and recommendations

Impressions

Normal exercise stress ↕

Normal pharmacological stress ↕

Stress impression

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Recommendations

Cardiac cath ↕

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Patient location: EC 2B 2011	Birth: M	BMI: 24.7 kg/m ²
Study status:	gender:	Patient HR:
Facility: East Campus	status:	Observation BP:

Summary:

1. Stress-induced regional perfusion abnormality, affecting a moderate-sized region left anterior descending and left circumflex coronary arteries. 📄
2. Stress ECG conclusions: Duke scoring: exercise time of 7 min 14 sec; maximum ST deviation of 8.4 mm; no angina; resulting score is -12. This score predicts a high risk of cardiac events. 📄
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4. [New summary item](#)

Recommendations: [New recommendation](#)

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8.0 v1

An image review workstation is usually positioned side-by-side with the ASCEND reporting interface so you can review the blood flow to the heart muscle both at rest and during stress, optionally embedding images in the report.

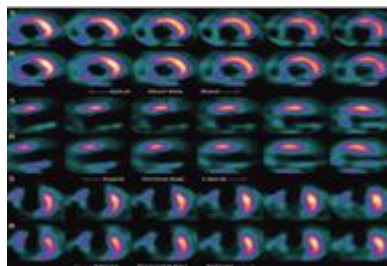
HIS / EHR system



Monitoring device



Image review



Undo Redo Help Options LEARN

Search Index Stress table Stress MPI Diagrams Conclusions Findings Report

Impressions and recommendations

Impressions ▾

Normal exercise stress ↕

Normal pharmacological stress ↕

Stress impression

Result	Normal	↕
Stress type	Maximal exercise	↕
Symptom reproduction	Present	↕
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Limited specificity	Baseline ECG	↕

Perfusion summary 1 New

Absence, uncertainty	Study suggests	↕
Syndrome	Stress perfusion def	✕
Territory	2 items recorded	↕
Response to stress	Viable with ischemia	↕
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Prior study date	2018-08-08	↕

Recommendations ▾

Cardiac cath ↕

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8.0 v1

The nuclear reporting module supports a comprehensive set of studies, each being rich in content. The technician sets up the study, and then exits the *Startup* screen using the technician workflow. This provides a separate user interface for the technician and the physician. For this example we will use the 'Stress MPI' study.

Undo Redo Help Options LEARN

Startup

Responses

No questions have been completed.

What type of report is this?

- Stress MPI (stress and imaging results)
- Stress MPI (stress results only)
- Stress MPI (imaging results only)
- Stress, no imaging
- MPI, no stress
- RNA
- Enter manually

Previous Next

Findings Report

Summary

[New summary item](#)

Study data

Patient birthdate: 03/14/1979. White. Birth gender: male. [Study type ?](#) Observation.

Recommendations

[New recommendation](#)

Each nuclear laboratory sets policies to delineate the technologist's and the physician's responsibilities for report generation. In most laboratories, the technologist is responsible for recording the patient's history, describing the procedure performed, and recording staged data and other results of the procedure.

The screenshot displays a medical software interface with a dark blue header and a light grey main area. The header includes navigation buttons for Undo, Redo, Help, Options, and LEARN. Below the header, there are tabs for Search, Index, and Prior reports, followed by a 'History' tab and a sub-menu with options: Study, Stress table, Stress, MPI, Diagrams, and Conclusions. On the right side, there are tabs for Findings and Report.

The main content is divided into two columns. The left column is titled 'History' and contains several expandable sections:

- HPI and indications**
 - Signs and symptoms*: Dyspnea (checkbox)
 - Coronary*: Angina pectoris, CAD (both with double arrows)
 - Cardiac*: CHF, Abnormal ECG (both with double arrows)
 - Rhythm*: Atrial fibrillation, Atrial flutter (both with double arrows)
- Patient status, risk factors**
 - Family history of CAD (checkbox)
 - Smoking (checkbox)
 - Hypertension (checkbox)
 - Diabetes mellitus (checkbox)
 - Dyslipidemia (checkbox)
- Allergies, diet, and meds**
 - Beta blockers (checkbox)
 - Calcium channel blockers (checkbox)
 - Nitrates (checkbox)
- Past medical history**
 - Prior MI on date... (double arrows)
 - MI (double arrows)
- Labs, prior procedures**
 - Prior cath on date... (double arrows)
 - Prior CABG (double arrows)
 - Prior coronary stent on date... (double arrows)
 - Prior CABG on date... (double arrows)
 - Prior transplant on date... (double arrows)

The right column is titled 'Findings' and contains several sections:

- Summary**: [New summary item](#)
- Study data**: Patient birthdate: 03/14/1979. White. Birth gender: male. Bruce protocol. Myocardial perfusion imaging. Gated SPECT and planar imaging; rest/stress. The risks, benefits, and alternatives to the procedure were explained to the patient and informed consent was obtained. Observation. The patient tolerated the procedure well.
- Procedure narrative**: Initial setup. The patient was brought to the laboratory. A baseline ECG was recorded. Intravenous access was obtained. Surface ECG leads and manual cuff blood pressure measurements were monitored. Treadmill exercise testing was performed using the Bruce protocol. Gated imaging was performed.
- Injection and imaging times**
- Stress data**: Stress table
- Myocardial perfusion**: Baseline: Imaging performed. Peak stress: Imaging performed.
- Recommendations**: [New recommendation](#)

The basic study description is provided by the *Startup* screen choices, and is configured to match your laboratory's preferences. The *Study* tab is used to describe additional information not represented in the study text. This may include the circumstances of the patient and the study, the procedure description, and complications. Technologists may also leave private notes for the physician, which will be prominently displayed in the *Findings* viewer, but will not show in the report.

The screenshot displays the ASCEND software interface. At the top, there is a navigation bar with buttons for 'Undo', 'Redo', 'Help', 'Options', and 'LEARN'. Below this is a secondary navigation bar with buttons for 'Search', 'Index', 'Prior reports', 'History', 'Study' (highlighted in red), 'Stress table', 'Stress', 'MPI', 'Diagrams', and 'Conclusions'. The main content area is divided into several sections:

- Study**: A section containing various study parameters such as 'Stress protocol' (Bruce), 'Study type' (Stress MPI), 'Study components' (2 items recorded), 'Purpose of study', 'Consent' (Item recorded), 'Study status and location' (Patient status: Observation, Study status: Routine, Location: Nuclear lab, Procedure room number: A123), 'Study completion' (All catheters removed: unchecked, Tolerated well: checked), and 'Medications given'.
- Study data** (highlighted in red): A section containing 'Study data' (highlighted in red) and 'Tech notes' (highlighted in red).
- Procedure narrative** (highlighted in red): A section containing 'Procedure narrative' (highlighted in red) and 'Initial setup' (1 New) with checkboxes for 'Baseline ECG' and 'IV access obtained', and a dropdown for 'Physiologic monitoring' (2 items recorded).
- Oxygen (cont'd)**: A section containing 'FIO2 (%)', 'Route' (Face mask), 'Pharmacologic protocol' (Stress medication: Dipyridamole), 'Initial rate', 'Rate increment', 'Final rate', 'Rate units' (mcg/kg/min), 'Adjunct, augmentation' (Hand grips), 'Termination' (Target HR), 'Exercise protocol' (Protocol: Bruce, Duration: 7 min 14 sec, Final stage: 3, Maximal work rate (mets): 8.9, Termination: Target HR), 'Positioned for imaging, recovery' (unchecked), and 'Imaging information' (Gated: Yes, Image timing: Equilibrium, Attenuation correction: Transmission, Orbit: Circular, Number of stops, Time per stop (see) for additional content).
- Findings** and **Report**: A section containing 'Findings' and 'Report' tabs, with the 'Summary' section visible. The 'Summary' section includes 'Stress ECG conclusions' (Duke scoring: exercise time of 7 min 14 sec; maximum ST deviation of 8.4 mm; no angina; resulting score is -12. This score predicts a high risk of cardiac events.) and 'Allergies, diet, and meds' (Aspirin allergy).

The *Stress table* tab has a data entry table containing detailed measurements collected during the study. Data taken with the monitoring device is usually imported to the stress table, while data not available for import can be manually inserted using the table tools.

Undo Redo Help Options LEARN

Search Index Prior reports History Study **Stress table** Stress MPI Diagrams Conclusions

Stress table Columns Keyboard help

	Stage	Time into phase	HR (bpm)	BP	ST/T	Rhythm
1	Baseline	01:00	62	122/80 (94)		
2	Stage 1	03:00	60	120/78 (92)		
3	Stage 2	06:00	115	133/84 (100)		
4	Stage 3	09:00	120	134/82 (99)		
5	Stage 4	12:00	125	136/84 (101)		
6	Stage 5	15:00	131	136/82 (100)		
7	Stage 6	18:00	129	138/86 (103)		
8	Stage 7	21:00	135	140/88 (105)	<0.5 mm in II, III and aVF	
9	Immediate post stress	21:30	136	138/86 (103)		
10	Recovery; 1 min	22:00	134	136/84 (101)		
11	Recovery; 2 min	23:00	134	134/84 (101)		
12	Recovery; 3 min	24:00	128	128/84 (99)		
13	Recovery; 5 min	26:00	126	128/84 (99)		
14	Recovery; 10 min	31:00	124	126/82 (97)		
15	Late recovery					
New						

Findings Report

Summary

[New summary item](#)

Study data

Patient is 39 year(s) old. Patient birthdate: 03/14/1979. Study date: 07/27/2018. White. Birth gender: male. Height: 182.9 cm. Height: 72 in. Weight: 84.1 kg. Weight: 185 lb. BMI: 25.1 kg/m². BSA: 2.07 m². Bruce protocol. Myocardial perfusion imaging. Gated SPECT and planar imaging; rest/stress. The risks, benefits, and alternatives to the procedure were explained to the patient and informed consent was obtained. Observation. The patient tolerated the procedure well.

Procedure narrative

Initial setup. The patient was brought to the laboratory. A baseline ECG was recorded. Intravenous access was obtained. Surface ECG leads and manual cuff blood pressure measurements were monitored. Treadmill exercise testing was performed using the Bruce protocol. Gated imaging was performed.

Injection and imaging times

Stress data

Stress table

Maximal heart rate during stress was 136 bpm (75% of maximal predicted heart rate). The maximal predicted heart rate was 181 bpm. The target heart rate was 154 bpm. The rate-pressure product for the peak heart rate and blood pressure was 18900 mm Hg/min.

Myocardial perfusion

Scroll for additional content →

Electrocardiographic findings and the stress response during the study can be entered on the *Stress* tab.

The screenshot displays a medical software interface with a dark blue header and a light grey main area. The header contains navigation buttons: 'Undo', 'Redo', 'Help', 'Options', and 'LEARN'. Below the header is a menu bar with 'Search', 'Index', 'Prior reports', 'History', 'Study', 'Stress table', 'Stress', 'MPI', 'Diagrams', and 'Conclusions'. The 'Stress' tab is highlighted with a red box. The main area is titled 'Findings - stress response and stress ECG' and is divided into several sections:

- Baseline ECG**: A list of ECG findings with checkboxes and expand/collapse icons. Findings include Normal, Artifact, NSR, Sinus brady, Sinus tach, PAC, PVC, RBBB, RBBB/LAFB, LAFB, LBBB, Old MI, Poor R-wave prog, LVH, LVH+repol abn, Nonspecific ST/T, Nonspecific T, and Nonspecific ST.
- Heart rate response (cont'd)**: A form with input fields for Max predicted HR (bpm) (157), Target HR (Not achieved), Heart rate response (Normal), Blood pressure (Resting: Normal, Response to stress: Appropriate, Adenosine response: Normal), Rate-pressure (mm Hg/min) (10640), Stress-induced symptoms, and Functional capacity (Normal).
- Stress ECG**: A form with input fields for Rhythm, Duke treadmill score (Exercise time: 7.23, Max ST deviation: 8.4, Treadmill angina scale: 0 - none, Duke score: -12, Risk category: High risk).
- Stress data**: A form with input fields for Max HR achieved (bpm) (120) and % max predicted HR (%) (76).

On the right side, there is a 'Findings' panel with 'Summary', 'Allergies, diet, and meds', 'Study data', 'Procedure narrative', and 'Stress data' sections. The 'Summary' section contains a list of findings: '1. Stress ECG conclusions: Duke scoring: exercise time of 7 min 14 sec; maximum ST deviation of 8.4 mm; no angina; resulting score is -12. This score predicts a high risk of cardiac events.' and '2. New summary item'. The 'Study data' section contains patient information: 'Patient is 30 year(s) old. Patient birthdate: 03/14/1979. Study date: 04/30/2009. Study time: 12:16 PM. White. Birth gender: male. Height: 180 cm. Height: 70.9 in. Weight: 80 kg. Weight: 176 lb. BMI: 24.7 kg/m². BSA: 2.01 m². Bruce protocol. Myocardial perfusion imaging. Gated SPECT and planar imaging; rest/stress. The risks, benefits, and alternatives to the procedure were explained to the patient and informed consent was obtained. Observation. Procedure room # A123. Patient unit: EC 2B. Patient room number: 2011. The patient tolerated the procedure well. Financial class: Self Pay.'

From the *Myocardial perfusion imaging* tab, you can describe myocardial perfusion defects and LV function.

Findings - myocardial perfusion imaging

Myocardial perfusion

Diagram for perfusion by stage ▶

TID ratio

Perfusion defects

- None
- No new defects
- No significant abnormality
- Normal perfusion with artifact

Perfusion defects **New**

Defect type	Reversible
Size	Small
Severity	Mild
Segmental locations	
Timing	
Delayed reversibility	None
Consistent with	Ischemia
Vascular territory	LAD
Viability	Partial
Artifact	Breast attenuation

Otherwise normal

Gated SPECT / LV function

Calculated EF (%)

Global function

Gated SPECT / LV function (cont'd)

Regional abnormality

- Absent
- No diagnostic

Description ▶ **New**

Abnormality	Hypokinesis
Segmental locations	
Consistent with	Ischemia

Findings Report

Summary

- Stress ECG conclusions:** Duke scoring: exercise time of 7 min 14 sec; maximum ST deviation of 8.4 mm; no angina; resulting score is -12. This score predicts a high risk of cardiac events.
- [New summary item](#)

Allergies, diet, and meds

Aspirin allergy.

Study data

Patient is 30 year(s) old. Patient birthdate: 03/14/1979. Study date: 04/30/2009. Study time: 12:16 PM. White. Birth gender: male. Height: 180 cm. Height: 70.9 in. Weight: 80 kg. Weight: 176 lb. BMI: 24.7 kg/m². BSA: 2.01 m². Bruce protocol. Myocardial perfusion imaging. Gated SPECT and planar imaging; rest/stress. The risks, benefits, and alternatives to the procedure were explained to the patient and informed consent was obtained. Observation. Procedure room # A123. Patient unit: EC 2B. Patient room number: 2011. The patient tolerated the procedure well. Financial class: Self Pay.

Procedure narrative

Initial setup. The patient was brought to the laboratory. A baseline ECG was recorded. Intravenous access was obtained. Surface ECG leads and manual cuff blood pressure measurements were monitored. Treadmill exercise testing was performed using the Bruce protocol. The patient exercised for 7 min 14 sec, to protocol stage 3, to a maximal work rate of 8.9 mets. Gated imaging was performed.

Injection and imaging times

Stress data

If study data becomes available after you have started reporting, it will not be imported automatically – you will choose if and when you want to import it. ASCEND notifies you that a data set is available by placing a red exclamation point next to the *Data* button in the header. Click *Data* to open the data import interface.

The screenshot displays the ASCEND software interface. At the top, the header includes the ASCEND logo and a navigation bar with buttons for **Data** (highlighted with a red box), Images, Participants, Study details, Workflow, Manage studies, and Print. Below the header is a secondary navigation bar with buttons for Undo, Redo, Help, Options, and LEARN. The main interface is divided into several sections:

- Study**: A sidebar on the left containing a **Study data** section with dropdown menus for Stress protocol (Bruce), Study type (Stress MPI), Study components (2 items recorded), Purpose of study, Consent (Item recorded), Study status and location (Patient status: Observation, Study status: Routine, Location: Nuclear lab, Procedure room number), Study completion (All catheters removed, Tolerated well), and Medications given. Below this are **Tech notes** and **Procedure narrative** sections, with the latter showing checkboxes for Baseline ECG and IV access obtained, and a dropdown for Physiologic monitoring.
- Oxygen (cont'd)**: A section with input fields for FIO2 (%), Route (Face mask), and Pharmacologic protocol (Stress medication: Dipyridamole, Initial rate, Rate increment, Final rate, Rate units: mcg/kg/min, Adjunct, augmentation: Hand grips, Termination: Target HR).
- Exercise protocol**: A section with input fields for Protocol (Bruce), Duration, Final stage (5), Maximal work rate (mets), Termination (Target HR), and Positioning (Positioned for imaging, recovery).
- Imaging information**: A section with input fields for Gated (Yes), Image timing (Equilibrium), Attenuation correction (Transmission), and Orbit (Circular).
- Findings**: A sidebar on the right containing a **Summary** section with a **New summary item** button, a **Study data** section with a text area containing patient information (birthdate, gender, protocol, procedure), a **Procedure narrative** section with a text area containing procedure details, and **Stress data** and **Myocardial perfusion** sections with buttons for **Stress table**, **Baseline: Imaging performed**, and **Peak stress: Imaging performed**. At the bottom of the Findings sidebar is a **Recommendations** section with a **New recommendation** button.

A list of available imports will be shown, with patient data and the data source clearly indicated. You may either *Import* or *Decline* any data set. If you decline an import, you can change your mind later.

ASCEND ! Data ! Images ! Participants ! Study details ! Workflow ! Manage studies ! Print

Data import

Pending Refresh

Source info	Patient info	MRN	Account number	Action	Information
08/03/2018 4:13:22 PM HIS	Roberts, Albert 03/14/1979	NUC123	NUC123	<div style="border: 2px solid red; padding: 2px;"> Import Decline </div>	Contents: New order
08/01/2018 1:47:56 PM INVIA Nuclear	Roberts, Albert 03/14/1979	NUC123	NUC123	Import Decline	
07/24/2018 8:08:22 AM GE Case	Roberts, Albert 03/14/1979	NUC123	NUC123	Import Decline	

Previous

Source info	Patient info	MRN	Account number	Action	Information
07/24/2018 8:08:22 AM INVIA Nuclear	Roberts, Albert 03/14/1979	NUC123	NUC123	Import	Import status: Automatically declined, newer data available

Close

Procedure narrative

Initial setup 1 New

- Baseline ECG
- IV access obtained
- Physiologic monitoring 2 items recorded

Termination Target PK

Positioned for imaging, recovery

Imaging information Yes

- Gated Equilibrium
- Image timing Transmission
- Attenuation correction Circular
- Orbit

Baseline: Imaging performed. Peak stress: Imaging performed.

Recommendations New recommendation

The participant panel may also display, showing what information is needed. In this case, the technologist has not been selected. Your lab policies determine which fields are required. Every study must have a responsible physician, which is set automatically to be the user signing the report.

Participants

Show only: East Campus Nuclear cardiology Role

	Role	Participant
	Responsible physician	[none]
	Preliminary signer	[none]
!	Technologist	[none]
	Ordering physician	Abrahams, Tim, MD
	Practice	[none]

! These fields are required

Ok Cancel

Study

Study data

Stress protocol: Bruce

Study type: Stress MPI

Study components: 2 items recorded

Purpose of study: Item recorded

Consent: Observation

Study status and location

Patient status: Routine

Study status: Nuclear lab

Location: A123

Procedure room number: A123

Study completion

All catheters removed:

Tolerated well:

Medications given

Tech notes

Procedure narrative

Initial setup: 1 New

Baseline ECG:

IV access obtained:

Physiologic monitoring: 2 items recorded

Oxygen: New

Imaging information

Gated: Yes

Image timing: Equilibrium

Attenuation correction: Transmission

Orbit: Circular

Number of stops:

Time per stop: (see) for additional content

Findings

Report

Summary

1. Stress ECG conclusions: Duke scoring: exercise time of 7 min 14 sec; maximum ST deviation of 8.4 mm; no angina; resulting score is -12. This score predicts a high risk of cardiac events.

Patient birthdate: 03/14/1979

Study time: 12:16 PM

White

Height: 180 cm

Height: 70.9 in

Weight: 176 lb

BMI: 24.7 kg/m²

protocol

Myocardial perfusion CT and planar imaging; rest/stress. and alternatives to the procedure patient and informed consent was n.

Procedure room # A123

Patient room number: 2011

The procedure well.

Financial class: Self

was brought to the laboratory. A baseline ECG was recorded. Intravenous access was obtained. Surface ECG leads and manual cuff blood pressure measurements were monitored. Treadmill exercise testing was performed using the Bruce protocol. The patient exercised for 7 min 14 sec, to protocol stage 3, to a maximal work rate of 8.9 mets. Gated imaging was performed.

Injection and imaging times

Stress data

When the exam is completed, the technologist marks the study *To be read* or *Preliminary release*, depending on your laboratory's protocol, and closes the study. This lets the physician know that the technologist's work has been completed, and it is available to be opened, read, and signed

ECG complete **To be read** ECG fellow complete For attending overread **Preliminary release** Sign Close

Undo Redo Help Options LEARN

Search Index Prior reports History Study Stress table Stress MPI Diagrams Conclusions Findings Report

Findings - myocardial perfusion imaging

Myocardial perfusion

Diagram for perfusion by stage ▶

TID ratio

Perfusion defects

- None
- No new defects
- No significant abnormality
- Normal perfusion with artifact

Perfusion defects **New**

Defect type	Reversible
Size	Small
Severity	Mild
Segmental locations	
Timing	
Delayed reversibility	None
Consistent with	Ischemia
Vascular territory	LAD
Viability	Partial
Artifact	Breast attenuation

Otherwise normal

Gated SPECT / LV function

Calculated EF (%)

Global function

Gated SPECT / LV function (cont'd)

Regional abnormality

- Absent
- No diagnostic

Description ▶ **New**

Abnormality	Hypokinesis
Segmental locations	
Consistent with	Ischemia

Summary:

- Stress ECG conclusions:** Duke scoring: exercise time of 7 min 14 sec; maximum ST deviation of 8.4 mm; no angina; resulting score is -12. This score predicts a high risk of cardiac events.
- [New summary item](#)

Recommendations: [New recommendation](#)

Prior history: Allergies: Aspirin allergy.

Study data: Race: White. Patient unit: EC 2B. Patient room number: 2011. Study location: Procedure room # A123. Consent: The risks, benefits, and alternatives to the procedure were explained to the patient and informed consent was obtained. Procedure: Initial setup. The patient was brought to the laboratory. A baseline ECG was recorded. Intravenous access was obtained. Surface ECG leads and manual cuff blood pressure measurements were monitored. Treadmill exercise testing was performed using the Bruce protocol. The patient exercised for 7 min 14 sec, to protocol stage 3, to a maximal work rate of 8.9 mets. Imaging information: Gated imaging was performed. Study completion: The patient tolerated the procedure well.

Isotope administration:

Stage	Rest	Stress	Rest	Stress
Agent	Tc-99m sestamibi	Tc-99m sestamibi	Rb-82	Rb-82
Injected dose	6 mCi	24 mCi	--	--
Calibration dose	--	--	0 mCi	0 mCi
Injection to	00:15	00:15	--	--

Physicians are responsible for entering impressions and recommendations on the *Conclusions* tab.

ECG complete To be read ECG fellow complete For attending overread Preliminary release Sign Close

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Impressions and recommendations

Impressions

Normal exercise stress

Normal pharmacological stress

Stress impression

Result	Normal
Stress type	Maximal exercise
Symptom reproduction	Present
False positive	ECG portion
Limited sensitivity	Submaximal stress
Limited specificity	Baseline ECG

Perfusion summary **New**

Absence, uncertainty	Study suggests
Syndrome	
Territory	LAD
Response to stress	Viable with ischemia
Comparison v prior study	Unchanged
Prior study date	2018-08-03

Recommendations

Cardiac cath

Summary

1. LV perfusion is abnormal and consistent with ischemia.
2. **Stress ECG conclusions:** Duke scoring: exercise time of 7 min 14 sec; maximum ST deviation of 8.4 mm; no angina; resulting score is -12. This score predicts a high risk of cardiac events.
- 3.
4. [New summary item](#)

Allergies, diet, and meds

Aspirin allergy.

Study data

Patient is 30 year(s) old. Patient birthdate: 03/14/1979. Study date: 04/30/2009. Study time: 12:16 PM. White. Birth gender: male. Height: 180 cm. Height: 70.9 in. Weight: 80 kg. Weight: 176 lb. BMI: 24.7 kg/m². BSA: 2.01 m². Bruce protocol. Myocardial perfusion imaging. Gated SPECT and planar imaging; rest/stress. The risks, benefits, and alternatives to the procedure were explained to the patient and informed consent was obtained. Observation. Procedure room # A123. Patient unit: EC 2B. Patient room number: 2011. The patient tolerated the procedure well. Financial class: Self Pay.

Procedure narrative

Initial setup. The patient was brought to the laboratory. A baseline ECG was recorded. Intravenous access was obtained. Surface ECG leads and manual cuff blood pressure measurements were monitored. Treadmill exercise testing was performed using the Bruce protocol. The patient exercised for 7 min 14 sec, to protocol stage 3, to a maximal work rate of 8.8 meta. Gated imaging was

After reviewing the content of the final patient report, select *Sign* to electronically sign the report and close the study. The report may then be printed or saved.

The screenshot displays a medical software interface with a dark blue header and a light grey main area. The header contains several tabs: 'ECG complete', 'To be read', 'ECG fellow complete', 'For attending overread', 'Preliminary release', 'Sign', and 'Close'. The 'Sign' and 'Close' buttons are highlighted with red boxes, and red arrows point to them from the right. Below the header is a navigation bar with buttons for 'Undo', 'Redo', 'Help', 'Options', and 'LEARN'. The main area is divided into two panels. The left panel, titled 'Impressions and recommendations', contains a section for 'Impressions' with various fields and a 'Perfusion summary' section. The right panel, titled 'Report', contains a 'Summary' section with a list of findings, a 'Recommendations' section with a 'New recommendation' button, a 'Prior history' section with an 'Allergies' link, a 'Study data' section with various patient information, and an 'Isotope administration' section with a table.

Impressions and recommendations

Impressions

- Normal exercise stress
- Normal pharmacological stress
- Stress impression
 - Result: Normal
 - Stress type: Maximal exercise
 - Symptom reproduction: Present
 - False positive: ECG portion
 - Limited sensitivity: Submaximal stress
 - Limited specificity: Baseline ECG
- Perfusion summary
 - Absence, uncertainty: Study suggests
 - Syndrome: [Empty]
 - Territory: LAD
 - Response to stress: Viable with ischemia
 - Comparison v prior study: Unchanged
 - Prior study date: 2018-08-03

Recommendations

- Cardiac cath

Report

Summary:

- LV perfusion is abnormal and consistent with ischemia.
- Stress ECG conclusions:** Duke scoring: exercise time of 7 min 14 sec; maximum ST deviation of 8.4 mm; no angina; resulting score is -12. This score predicts a high risk of cardiac events.
-
- [New summary item](#)

Recommendations: [New recommendation](#)

Prior history: [Allergies:](#) Aspirin allergy.

Study data: [Race:](#) White. [Patient unit:](#) EC 2B. [Patient room number:](#) 2011. [Study location:](#) Procedure room # A123. [Consent:](#) The risks, benefits, and alternatives to the procedure were explained to the patient and informed consent was obtained. [Procedure:](#) Initial setup. The patient was brought to the laboratory. A baseline ECG was recorded. Intravenous access was obtained. Surface ECG leads and manual cuff blood pressure measurements were monitored. [Treadmill exercise testing](#) was performed using the Bruce protocol. The patient exercised for 7 min 14 sec, to protocol stage 3, to a maximal work rate of 8.9 mets. [Imaging information:](#) Gated imaging was performed. [Study completion:](#) The patient tolerated the procedure well.

Isotope administration:

Stage	Rest	Stress	Rest	Stress
Agent	Tc-99m sestamibi	Tc-99m sestamibi	Rb-82	Rb-82
Injected dose	6 mCi	24 mCi	--	--

The report signature confirmation form shows the final report as it will appear, along with a list of any missing information. In this case, study *Start date/time* is missing. The system may be configured to prevent signing without providing missing data, or may be configured to let you sign anyway, according to your lab's policy. Generally, you will cancel, provide the missing data, and then come back to sign it.

Report signature confirmation

Study details: The following are required:
Study start date/time



ASCEND General Hospital
1234 Main St. Anywhere, USA 02345
Phone: (800) 555-1234
Fax: (800) 555-1235

Myocardial Perfusion Imaging Bruce protocol Gated SPECT and planar imaging

Patient:	Albert Roberts	Study date:	04/30/2009	Height:	180 cm (70.9 in)
MRN:	#NUC123 (MRN)	Birth date:	03/14/1979	Weight:	80 kg (176 lb)
Accession:	#NUCSTUDY001	Age:	30 year(s)	BSA:	2.01 m ²
Patient location:	EC 2B 2011	Birth gender:	M	BMI:	24.7 kg/m ²
Study status:		Patient status:	Observation	HR:	
Facility:	East Campus			BP:	

Summary:

1. LV perfusion is abnormal and consistent with ischemia.
2. **Stress ECG conclusions:** Duke scoring: exercise time of 7 min 14 sec; maximum ST deviation of 8.4 mm; no angina; resulting score is -12. This score predicts a high risk of cardiac events.
- 3.

Prior history: Allergies: Aspirin allergy.

Study data: Race: White. Patient unit: EC 2B. Patient room number: 2011. Study location: Procedure room # A123. Consent: The risks, benefits, and alternatives to the procedure were explained to the patient and informed consent was obtained. Procedure: Initial setup. The patient was brought to the laboratory. A baseline ECG was recorded. Intravenous access was obtained. Surface ECG leads and manual cuff blood pressure measurements were monitored. Treadmill exercise testing was performed using the Bruce protocol. The patient exercised for 7 min 14 sec, to protocol stage 3, to a maximal work rate of 8.9 mets. Imaging

I have reviewed this report and assume responsibility for its accuracy and completeness.

Confirm

Cancel

Upon signature, ASCEND publishes the signed physician report back to the Electronic Health Record. ASCEND also sends the clinical data to ASCEND Analytics for administrative reporting and clinical investigation.

HIS / EHR system

ASCEND Data Images Participants Study details Workflow Manage studies Print

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Impressions and recommendations

Impressions

- Normal exercise stress
- Normal pharmacological stress
- Stress impression
 - Result: Normal
 - Stress type: Maximal exercise
 - Symptom reproduction: Present
 - False positive: ECG portion
 - Limited sensitivity: Submaximal stress
 - Limited specificity: Baseline ECG
- Perfusion summary: New
 - Absence, uncertainty: Study suggests
 - Syndrome: LAD
 - Territory: Viable with ischemia
 - Response to stress: Unchanged
 - Comparison v prior study: 2018-08-03

Recommendations

- Cardiac chat

ASCEND General Hospital
 1234 Main St. Anywhere, USA 02345
 Phone: (800) 555-1234
 Fax: (800) 555-1235

Myocardial Perfusion Imaging
 Bruce protocol
 Gated SPECT and planar imaging

Patient: Albert Roberts **Study:** 04/30/2009 **Height:** 180 cm
MRN: #NUC123 (MRN) **date:** (70.9 in)
Accession: #NUCSTUDY001 **Birth:** 03/14/1979 **Weight:** 80 kg
Patient: EC 2B 2011 **date:** (176 lb)
location: **Age:** 30 year(s) **BSA:** 2.01 m²
Study status: **Birth:** M **BMI:** 24.7 kg/m²
Facility: East Campus **gender:** **HR:**
Patient: Observation **BP:**
status:

Summary:

1. LV perfusion is abnormal and consistent with ischemia.
2. **Stress ECG conclusions:** Duke scoring: exercise time of 7 min 14 sec; maximum ST deviation of 8.4 mm; no angina; resulting score is -12. This score predicts a high risk of cardiac events.
- 3.
4. [New summary item](#)

Recommendations: [New recommendation](#)

Prior history: [Allergies:](#) Aspirin allergy.

Study data: [Race:](#) White. [Patient unit:](#) EC 2B. [Patient room number:](#) 2011. [Study location:](#) Procedure room # A123. [Consent:](#)



ASCEND Analytics



All Study Volumes by Month

Facility: All Financial Class #: All

Confirming Physician: All Study Type: All
 Technographer: All Study Status: All
 Referrer: All Patient Status: All
 Referring Physician: All Location: All

Group By:	Facility	Study Type	Then By:			Grand Total
			2018	2017	2016	
Facility	Study Type	2018 Total	2017 Total	2016 Total		
East Campus	Acute rest MPI		6	11	1	18
	Cardiac cath		27	200	18	245
	Cardiac echo		0	18	1	19
	Diagnostic thymostopgraph		3	20	2	25
	EP study		13	90	15	118
	Infect and imaging		2	18	1	21
	Other		2	43	8	53
	Renal duplex		7	47	6	60
	Risk		4	17	0	21
	Stress echo		19	89	5	113
	Stress MPI		9	37	5	51
	Transcranial doppler		14	83	9	106
	Transcranial, limited		8	43	4	55
Upper extremity physiologic, single level		4	10	4	18	



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