

Reporting Workflow

Echocardiography Reporting Module

ACV 8.0

doc v1

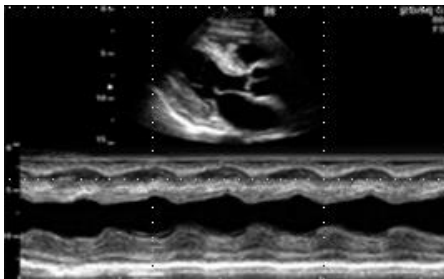


To build and record a study, ASCEND aggregates and assembles information from multiple data sources, including the hospital information system's electronic health record and the image review workstation.

HIS / EHR system



Image review



Undo Redo Help Options LEARN

Search Index grams Minor abnormalities Findings Comparisons Conclusions Findings Report

Impressions, recommendations - transthoracic

Impressions

- Normal study
- CHD, pediatric
- Coronary artery disease
 - Coronary artery disease
 - Angina, ischemia, infarction
- Myocardial disease Item recorded
- No vegetation
- Valve disease No valve disease
- No source of embolism
- Lesions/embolic sources Cannot exclude sou
- Pericardial disease
- Manifestations of systemic disease
- Hemodynamic description
 - Overall assessment Normal hemo
 - Comparison v prior study Unchanged
 - Prior study date 2018-08-09

Recommendations (cont'd)

- Refer for cath
- TEE
- TEE, R/O thrombus
- TTE, contrast
- TTE, saline

Study data

- Teaching case
- IAC candidate
- Changes from preliminary

Recommendations

- Discussed with referring ⚡

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

Transthoracic Echocardiography

M-mode, complete 2D, and complete spectral Doppler

Patient: Mitchell Carson	Study date: 08/09/2018	Height: 180 cm (70.9 in)
MRN: #3162935 (MRN)	Birth date: 12/25/1947	Weight: 90 kg (198 lb)
Accession: #112233	Study status: Routine	Age: 70 year(s)
Patient location: West Campus	Birth: M	BSA: 2.14 m ²
Facility: West Campus	gender: M	HR: 27.8 kg/m ²
	Patient status: Outpatient	BP:

Summary:

1. Mild left ventricular dysfunction. []
2. **Left ventricle:** The cavity size is normal. Wall thickness is normal. [] Systolic function is mildly reduced. The estimated ejection fraction is 55-65%. []
3. **Left ventricle:** There is hypokinesis of the apical anterior wall. []
4. [New summary item](#)

Recommendations:

1. This procedure has been discussed with the referring physician. []
2. [Transthoracic echocardiography in 6 month\(s\).](#) []
3. [New recommendation](#)

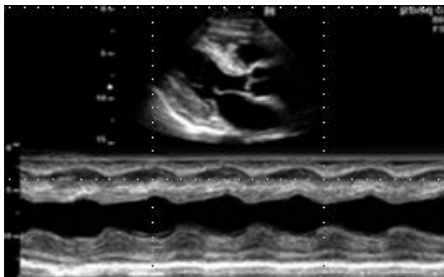
Study data: Race: White. [] Study status: Routine. [] Study location: Echo laboratory. [] Procedure: Transthoracic echocardiography was performed. Image quality was good. Scanning was performed from the parasternal, apical, and subcostal acoustic windows. [] Study completion: The patient tolerated the procedure well. []

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



Image review



Undo Redo Help Options LEARN

Search Index grams Minor abnormalities Findings Comparisons Conclusions Findings Report

Impressions, recommendations - transthoracic

Impressions

- Normal study
- CHD, pediatric
- Coronary artery disease
 - Coronary artery disease
 - Angina, ischemia, infarction
- Myocardial disease Item recorded
- No vegetation
- Valve disease No valve disease
- No source of embolism
- Lesions/embolic sources Cannot exclude sou
- Pericardial disease
- Manifestations of systemic disease
- Hemodynamic description
 - Overall assessment Normal hemo
 - Comparison v prior study Unchanged
 - Prior study date 2018-08-09

Study data

- Teaching case
- IAC candidate
- Changes from preliminary

Recommendations

- Discussed with referring

Recommendations (cont'd)

- Refer for cath
- TEE
- TEE, R/O thrombus
- TTE, contrast
- TTE, saline

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

Transthoracic Echocardiography
M-mode, complete 2D, and complete spectral Doppler

Patient: Mitchell Carson	Study date: 08/09/2018	Height: 180 cm
MRN: #3162935 (MRN)	Birth date: 12/25/1947	Weight: 90 kg
Accession: #112233	Age: 70 year(s)	BSA: 2.14 m ²
Patient location: Routine	Birth: M	BMI: 27.8 kg/m ²
Study status: West Campus	gender: M	HR:
Facility: West Campus	Patient status: Outpatient	BP:

Summary:

1. Mild left ventricular dysfunction.
2. **Left ventricle:** The cavity size is normal. Wall thickness is normal. Systolic function is mildly reduced. The estimated ejection fraction is 55-65%.
3. **Left ventricle:** There is hypokinesis of the apical anterior wall.
4. [New summary item](#)

Recommendations:

1. This procedure has been discussed with the referring physician.
2. [Transthoracic echocardiography in 6 month\(s\).](#)
3. [New recommendation](#)

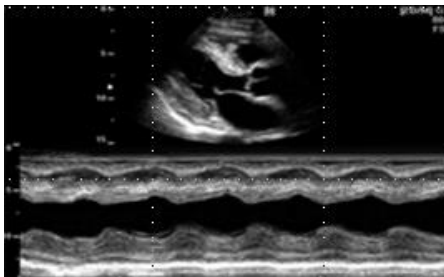
Study data: Race: White. Study status: Routine. Study location: Echo laboratory. Procedure: Transthoracic echocardiography was performed. Image quality was good. Scanning was performed from the parasternal, apical, and subcostal acoustic windows. Study completion: The patient tolerated the procedure well.

When the report is first opened, measurements made on the ultrasound machine will already have been imported into the image review workstation as well as the report. The image review workstation can be used to modify existing measurements or to add new ones, and new or changed measurements can be re-imported.

HIS / EHR system



Image review



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

Transthoracic Echocardiography M-mode, complete 2D, and complete spectral Doppler

Patient: Mitchell Carson **Study date:** 08/09/2018
MRN: #3162935 (MRN) **Height:** 180 cm (70.9 in)
Accession: #112233 **Birth date:** 12/25/1947
Patient location: Routine **Weight:** 90 kg (198 lb)
Study status: West Campus **Age:** 70 year(s) **BSA:** 2.14 m²
Facility: **Birth:** M **BMI:** 27.8 kg/m²
gender: HR:
Patient status: Outpatient BP:

Summary:

- Mild left ventricular dysfunction.
- Left ventricle:** The cavity size is normal. Wall thickness is normal. Systolic function is mildly reduced. The estimated ejection fraction is 55-65%.
- Left ventricle:** There is hypokinesis of the apical anterior wall.
- [New summary item](#)

Recommendations:

- This procedure has been discussed with the referring physician.
- [Transthoracic echocardiography in 6 month\(s\).](#)
- [New recommendation](#)

Study data: Race: White Study status: Routine Study location: Echo laboratory Procedure: Transthoracic echocardiography was performed. Image quality was good. Scanning was performed from the parasternal, apical, and subcostal acoustic windows. Study completion: The patient tolerated the procedure well.

Impressions, recommendations - transthoracic

Impressions

- Normal study
- CHD, pediatric
- Coronary artery disease
 - Coronary artery disease
 - Angina, ischemia, infarction
- Myocardial disease:
- No vegetation
- Valve disease:
- No source of embolism
- Lesions/embolic sources:
- Pericardial disease:
- Manifestations of systemic disease
- Hemodynamic description
 - Overall assessment:
 - Comparison v prior study:
 - Prior study date:

Study data

- Teaching case:
- IAC candidate:
- Changes from preliminary:

Recommendations

- Discussed with referring:

Recommendations (cont'd)

- Refer for cath
- TEE
- TEE, R/O thrombus
- TTE, contrast
- TTE, saline

The echocardiography reporting module supports a comprehensive set of studies, each being rich in content. The sonographer sets up the study by answering questions in the *Startup* screen using the sonographer workflow. For this example, we will use the 'Transthoracic complete' study.

Undo Redo Help Options LEARN

Startup

Findings Report

Responses

No questions have been completed.

What type of study is this?

- Transthoracic (TTE) complete
- Transthoracic (TTE) limited
- Transesophageal (TEE)
- Operative/procedure support
- Cardioversion (TEE)
- Pharmacological stress TTE
- Exercise stress TTE
- Bruce stress ECG without imaging
- Transcranial Doppler
- Enter manually

Previous Next

Summary

[New summary item](#)

Study data

Patient birthdate: 12/25/1947. White. Birth gender: male.
[Study type](#) ! [Observation](#)

Recommendations

[New recommendation](#)

Before entering the report, select the sonographer data entry option. This builds a separate user interface for the sonographer and the physician.

The screenshot displays a software interface with a dark blue header bar containing navigation icons for Undo, Redo, Help, Options, and LEARN. Below the header, there are two main panels. The left panel, titled 'Responses', contains a section 'What type of study is this?' with a bulleted list: 'Transthoracic (TTE) complete'. A red arrow points from this list to the right panel. The right panel, titled 'How do you want to start the report', contains three radio button options: 'Start with blank study', 'Prepopulate normal results', and 'Go to sonographer data entry now'. The third option is selected, and a red arrow points to it. At the bottom of the right panel are two buttons: 'Previous' and 'Begin reporting'. To the right of these panels is a vertical sidebar with tabs for 'Findings' and 'Report'. The 'Report' tab is active, showing sections for 'Summary' (with a 'New summary item' button), 'Study data' (with fields for 'Patient birthdate: 12/25/1947', 'White', 'Birth gender: male', and 'Study type ! Observation'), and 'Recommendations' (with a 'New recommendation' button).

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

The screenshot displays a software interface for echocardiography. The top navigation bar includes 'Undo', 'Redo', 'Help', 'Options', and 'LEARN'. Below this is a menu with 'Search', 'Index', 'Prior reports', 'History', 'Study', 'Measurements', 'Calculations', 'Diagrams', 'Minor abnormalities', 'Findings', and 'Comparisons'. The 'History' tab is active, showing a 'History - transthoracic' form. The form is organized into several sections: 'TTE indications', 'HPI and indications' (with sub-sections for signs and symptoms, endocarditis, coronary, myocardial, and HPI/indications cont'd), 'LV function', 'Past medical history', 'Labs, prior procedures', 'Patient status, risk factors', and 'Allergies, diet, and meds'. The 'HPI and indications' section includes categories like Pericardial, ECG and rhythm, Valve disease, and Noncardiac disease. The 'LV function' section includes 'Evaluate pre-chemotherapy' and 'Evaluate post-chemotherapy'. The 'Past medical history' section includes 'Prior MI on date... MI'. The 'Labs, prior procedures' section includes 'Prior cath on date...', 'Prior coronary stent on date...', 'Prior CABG', 'Prior CABG on date...', and 'Prior transplant on date... Abnormal ECG'. The 'Patient status, risk factors' section includes 'Family history of CAD', 'Smoking', 'Hypertension', 'Diabetes mellitus', and 'Dyslipidemia'. The 'Allergies, diet, and meds' section includes 'Beta blockers' and 'Calcium channel blockers'. A red text prompt at the bottom of this section says 'Scroll for additional content'. On the right side, the 'Findings' tab is active, showing a 'Summary' section with a 'New summary item' button, a 'Study data' section with patient information (birthdate: 12/25/1947, gender: male, race: White, procedure: Transthoracic echocardiography), and a 'Procedure narrative' section describing the procedure. Below the narrative is a 'Recommendations' section with a 'New recommendation' button.

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. Sonographers may also leave private notes for the physician, which will be prominently displayed in the *Findings* viewer, but will not show in the report.

Study - transthoracic

Study data

Patient

Height (cm)

Height (in)

Weight (kg)

Weight (lb)

Heart rate (bpm)

Systolic (mm Hg)

Diastolic (mm Hg)

Study status and location

Patient status

Study status

Location

Procedure room number

Study type

Study components

Teaching case

Teaching case details

Changes from preliminary

IAC candidate

Procedure narrative

Transthoracic echo

Procedure performed

Purpose

Ultrasound machine

Technical difficulty

Image quality

Acoustic windows

Image format

Enhancement purpose

Urgent and critical findings

Significance

Absence of...

Finding

Reported by

Reported to

Role

Date

Time

Read-back verified

Adverse outcomes

No complications

Technical notes [not on report]

IAC - echocardiography

Enforce compliance

Findings

Summary

New summary item

Study data

Patient birthdate: 12/25/1947. White. Birth gender: male. Transthoracic echocardiography. M-mode, complete 2D, and complete spectral Doppler. Observation. The patient tolerated the procedure well.

Procedure narrative

Transthoracic echocardiography was performed. Image quality was adequate. Scanning was performed from the parasternal, apical, and subcostal acoustic windows.

Recommendations

New recommendation

Scroll for additional content →

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.

ASCEND !Data Images !Participants !Study details Workflow Print

To be read For attending overread Preliminary release Sign Close

Undo Redo Help Options LEARN

Search Index Prior reports History Study Measurements Calculations Diagrams Minor abnormalities Findings Findings Report

Study - transthoracic

Study data

Patient

- Height (cm)
- Height (in)
- Weight (kg)
- Weight (lb)
- Heart rate (bpm)
- Systolic (mm Hg)
- Diastolic (mm Hg)

Study status and location

- Patient status: Observation
- Study status: Routine
- Location: Procedure room
- Procedure room number
- Study type: Transthoracic (TTE)
- Study components: 3 items recorded
- Teaching case
- Teaching case details
- Changes from preliminary
- IAC candidate

Technical notes [not on report]

- IAC - echocardiography
- Enforce compliance

Procedure narrative

Transthoracic echo

- Procedure performed
- Purpose: Diagnosis
- Ultrasound machine
- Technical difficulty: Limited windows
- Image quality: Adequate
- Acoustic windows: 3 items recorded
- Image format: Quad screen
- Enhancement purpose: Opacify LV

Urgent and critical findings

- Significance: Critical result
- Absence of...
- Finding
- Reported by
- Reported to
- Role
- Date: 2018-08-05
- Time: 11:27:01
- Read-back verified

Adverse outcomes

Summary

[New summary item](#)

Study data

Patient birthdate: 12/25/1947. White. Birth gender: male. Transthoracic echocardiography. M-mode, complete 2D, and complete spectral Doppler. Observation. The patient tolerated the procedure well.

Procedure narrative

Transthoracic echocardiography was performed. Image quality was adequate. Scanning was performed from the parasternal, apical, and subcostal acoustic windows.

Recommendations

[New recommendation](#)

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 Print

Data import

Pending Refresh

Source info	Patient info	MRN	Account number	Action	Information
08/05/2018 11:15:06 AM HIS	Carson, Mitchell 12/25/1947	3162935	10041889	<div style="border: 2px solid red; padding: 2px;">Import Decline</div>	Contents: New order
07/24/2018 8:04:28 AM TomTec DICOM Echo	Carson, Mitchell 12/25/1947	3162935	10041889	<div style="border: 2px solid red; padding: 2px;">Import Decline</div>	Description: Manufacturer model name: Image-Arena

Previous

Source info	Patient info	MRN	Account number	Action	Information
No data available in table					

Close

Procedure room number

Study type x

Study components

Teaching case

Teaching case details

Changes from preliminary

IAC candidate

Absence of...

Finding

Reported by

Reported to

Role

Date

Time

Read-back verified

Technical notes [not on report]

IAC - echocardiography Enforce compliance

Adverse outcomes

The participant panel may also display, showing what information is needed. In this case, the sonographer 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.

ASCEND Data Images !Participants Study details Workflow Print

To be read For attending overread Preliminary release Sign Close

Undo Redo Help Options Catalyst

Search Index Study Measurements Calculations Diagrams Minor abnormalities Findings Comparisons Findings Report

Findings

Left ventricle ▾

Normal by TTE

Cavity size Normal

Thickness Normal

Diffuse hypokinesis Mild

Systolic function worksheet ▾

Systolic function Normal

EF (%) 55-65

Normal, no regional abnormality

No RWMA, but limited sensitivity

Cannot exclude abnormality

Regional wall motion worksheet ▾

High LV filling pressure Absent

Cannot assess due to

Diastolic function Normal diastology

Ventricular septum ▾

Normal

Thickness Normal

Dyssynergy Present

Paradox Present

Other abnormalities Early diastolic notch

Diastolic flattening Present

Ventricular septum (cont'd)

Normal

Mild aortic calcification

Description 1 New

Visualization Poorly visualized

Participants

Show only: East Campus Echocardiography Role

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

! These fields are required

Ok Cancel

Study data

Patient is 67 year(s) old. Patient birthdate: 12/25/1947. Study date: 07/23/2015. Study time: 09:28 PM. White. Birth gender: male. Height: 70.1 in. Weight: 73 kg. BMI: 23 kg/m². BSA: thoracic echocardiography. 2D, and complete spectral observation. Patient unit: EC 2B. Number: 2011. The patient tolerated well. Financial class: Self Pay.

Interpretations

The valve is structurally normal. The valve is trileaflet. Cusp separation is normal. Transvalvular velocity is within the normal range. There is no stenosis. There is no regurgitation.

When the exam is completed, the sonographer 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 sonographer's work has been completed.

The screenshot displays the software interface for an echocardiography study. At the top, a dark blue navigation bar contains several buttons: 'Undo', 'Redo', 'Help', 'Options', and 'LEARN'. Below this is a secondary bar with 'Search' and 'Index' buttons, followed by tabs for 'Study', 'Measurements', 'Calculations', 'Diagrams', 'Minor abnormalities', 'Findings', 'Comparisons', 'Findings', and 'Report'. The 'Findings' tab is active, and three buttons are highlighted with red boxes and red arrows pointing to them: 'To be read', 'Preliminary release', and 'Close'. The main area is divided into several panels. On the left, the 'Findings' panel shows sections for 'Left ventricle' and 'Ventricular septum'. The 'Left ventricle' section includes fields for 'Normal by TTE', 'Cavity size', 'Thickness', 'Diffuse hypokinesis', 'Systolic function worksheet', 'Systolic function', 'EF (%)', and several checkboxes. The 'Ventricular septum' section includes a checkbox for 'Normal' and dropdown menus for 'Thickness', 'Dyssynergy', 'Paradox', 'Other abnormalities', 'Diastolic flattening', and 'Systolic flattening'. In the center, the 'Aortic valve' section includes 'Normal by TTE', 'Prosthesis', 'Prosthesis type', 'Overall impression', 'Description', 'Annular calcification', 'Visualization', 'Leaflet number', 'Appearance', 'Mild sclerosis', 'Sclerosis without stenosis', 'Velocity', 'Stenosis', and 'Regurgitation'. Below this is the 'Aorta and arteries' section with 'Normal', 'Mild aortic calcification', and 'Description' fields. On the right, the 'Study data' panel contains patient information such as age, birthdate, study date, time, gender, height, weight, BMI, BSA, and procedure details. Below this is the 'Procedure narrative' section with a text description of the exam. Further down, there are sections for 'Left ventricle' and 'Aortic valve' with 'Suggested interpretations' buttons.

The physician interface portion of the study is now available to be opened, read, and signed. Physician's workflow is likely to begin in the *Measurements* tab, where measurements from the study and any relevant reference ranges are located. The measurements displayed here will be shown in the final report.

The screenshot displays a medical 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 'Search', 'Index', and a 'Measurements' tab highlighted with a red box. Other tabs include 'Calculations', 'Diagrams', 'Minor abnormalities', 'Findings', 'Comparisons', and 'Concl'. The main area is a table of measurements for the 'Left ventricle'. The table has columns for 'Value', 'Reference', 'Summary', and 'Report'. The right side of the interface shows a 'Findings' panel with sections for 'Study data', 'Procedure narrative', 'Left ventricle', 'Suggested interpretations', 'Aortic valve', and 'Systemic arteries'.

Left ventricle	Value	Reference	Summary	Report	Table
GLS, 2D, A4C	-20.73	%	---		
GLS, 2D, A3C	-19.56	%	---		
GLS, 2D A2C	-22.97	%	---		
GLS, 3P	-20.95	%	---		
EDV, 3D	120	ml	67 - 155		
ESV, 3D	51	ml	22 - 58		
EF, 3D	57	%	52 - 72		
SV, 3D	69	ml	---		
EDV/bsa, 3D	63	ml/m ²	35 - 75		
ESV/bsa, 3D	27	ml/m ²	12 - 30		
SV/bsa, 3D	36.3	ml/m ²	---		
EDD, MM on 2D	5.8	cm	4.2 - 5.8		<input checked="" type="checkbox"/>
ESD, MM on 2D	4.2	cm	2.5 - 4.0		<input checked="" type="checkbox"/>
FS, MM on 2D	28	%	25 - 43		<input checked="" type="checkbox"/>
Mid-wall FS, MM on 2D	16	%	14 - 22		
PW, ED, MM on 2D	1.0	cm	0.6 - 1.0		<input checked="" type="checkbox"/>
PW, ES, MM on 2D	1.2	cm	---		<input checked="" type="checkbox"/>
PW thickening, MM on 2D	20	%	---		
IVS/PW, ED, MM on 2D	1.11		---		
PW/ID ratio, ED, MM on 2D	0.17		---		
Rel thickness, ED, MM on 2D	0.34	0.24 - 0.42			
EDV, MM on 2D Teich.	167	ml	67 - 155		
ESV, MM on 2D Teich.	79	ml	22 - 58		
EF, MM on 2D Teich.	53	%	≥55		<input checked="" type="checkbox"/>
SV, MM on 2D Teich.	88	ml	---		
EDV/bsa, MM on 2D Teich.	88	ml/m ²	35 - 75		

Study data
 Patient is 67 year(s) old. Patient birthdate: 12/25/1947. Study date: 07/23/2015. Study time: 09:38 PM. White. Birth gender: male. Height: 178 cm. Height: 70.1 in. Weight: 73 kg. Weight: 160.6 lb. BMI: 23 kg/m². BSA: 1.9 m². Transthoracic echocardiography. M-mode, complete 2D, and complete spectral Doppler. Observation. Patient unit: EC 2B. Patient room number: 2011. The patient tolerated the procedure well. Financial class: Self Pay.

Procedure narrative
 Transthoracic echocardiography was performed. Image quality was adequate. Scanning was performed from the parasternal, apical, and subcostal acoustic windows.

Left ventricle
 The cavity size is normal. Wall thickness is normal. Systolic function is normal. The estimated ejection fraction is 55-65%. Wall motion is normal; there are no regional wall motion abnormalities. Wall motion score: 1.00.

Suggested interpretations

Aortic valve
 The valve is structurally normal. The valve is trileaflet. Cusp separation is normal. Transvalvular velocity is within the normal range. There is no stenosis. There is no regurgitation.

Suggested interpretations

Systemic arteries
 Aortic root: The aortic root is normal-sized.

Additional anatomic, pathologic, and functional findings are located on the *Findings* tab.

Findings

Left ventricle

- Normal by TTE
- Cavity size: Normal
- Thickness: Normal
- Diffuse hypokinesis: Mild
- Systolic function worksheet
- Systolic function: Normal
- EF (%): 55-65
- Normal, no regional abnormality:
- No RWMA, but limited sensitivity:
- Cannot exclude abnormality:
- Regional wall motion worksheet
- High LV filling pressure: Absent
- Cannot assess due to:
- Diastolic function: Normal diastology

Aortic valve

- Normal by TTE
- Prosthesis
- Prosthesis type: Unspecified
- Overall impression: Normal function
- Description
- Annular calcification: Mild
- Visualization: Not well visualized
- Leaflet number: Trileaflet
- Appearance: Normal thickness
- Mild sclerosis
- Sclerosis without stenosis
- Velocity: Normal
- Stenosis: Absent
- Regurgitation: Absent

Ventricular septum

- Normal:
- Thickness: Normal
- Dyssynergy: Present
- Paradox: Present
- Other abnormalities: Early diastolic notch
- Diastolic flattening: Present
- Systolic flattening: Present
- Interpretation: Post-thoracotomy
- VSD measurements

Aorta and arteries

- Normal
- Mild aortic calcification
- Description: 1 New
- Visualization: Poorly visualized
- Size: Normal-sized
- Aortic pathology
- Coronary arteries

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

Transthoracic Echocardiography
M-mode, complete 2D, and complete spectral Doppler

Patient: Mitchell Carson
Study date: 07/23/2015
Height: 178 cm (70.1 in)

MRN: #3162935
Birth date: 12/25/1947
Weight: 73 kg (160.6 lb)

Accession: #12453
Age: 67 year(s)
BSA: 1.9 m²

Patient: EC 2B
Birth: M
BMI: 23 kg/m²

location: 2011
gender: M
HR:

Study status: Observation
Patient status: Observation
BP:

Facility: East Campus

Summary:

- Left ventricle:** The cavity size is normal. Wall thickness is normal. Systolic function is normal. The estimated ejection fraction is 55-65%. Wall motion is normal; there are no regional wall motion abnormalities.
- [New summary item](#)

Recommendations: [New recommendation](#)

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

Study data: **Race:** White. Patient unit: EC 2B. Patient room number: 2011. Procedure: Transthoracic echocardiography was performed. Image quality was adequate. Scanning was performed from the parasternal, apical, and subcostal acoustic windows. Study:

Morphology and function can be compared to prior studies on the *Comparisons* tab.

The screenshot shows the 'Comparisons' tab in a software application. The 'Comparisons' tab is highlighted with a red box. The interface is divided into several sections:

- Study data:** Comparison to prior study (None available), Report only (2018-08-10), Study (2018-08-10).
- Left ventricle:** Cavity size v prior study (Unchanged), Thickness v prior study (Unchanged), Hypertrophy v prior study (Unchanged), Systolic function v prior (Unchanged). Dynamic obstruction (New), Comparison v prior study (Unchanged). Filling pressure v prior (Unchanged), Diastolic function v prior (Unchanged).
- Ventricular septum:** Description (New), Shunt v prior study (Unchanged).
- Aortic valve:** Change since prior study (Unchanged), Stenosis v prior study (Unchanged), Regurgitation v prior study (Unchanged).
- Mitral valve:** (Section header).
- Mitral valve (cont'd):** Stenosis v prior study (Unchanged), Regurgitation v prior study (Unchanged).
- Left atrium:** Atrial size v prior (Unchanged).
- Right ventricle:** Cavity size v prior study (Unchanged), Thickness v prior study (Unchanged), Function v prior study (Unchanged).
- Pulmonic valve:** Change v prior study (Unchanged), Stenosis v prior study (Unchanged), Regurgitation v prior study (Unchanged).
- Tricuspid valve:** Change v prior study (Unchanged), Stenosis v prior study (Unchanged), Regurgitation v prior study (Unchanged).
- Right atrium:** Atrial size v prior (Unchanged).
- Atrial septum:** Shunt description (New), Comparison v prior study (Unchanged).

The right-hand panel shows the 'Summary' section:

- Summary:** 1. Left ventricle: The cavity size is normal. Wall thickness is normal. Systolic function is normal. The estimated ejection fraction is 55-65%. Wall motion is normal; there are no regional wall motion abnormalities. 2. [New summary item](#)
- Allergies, diet, and meds:** Aspirin allergy.
- Study data:** Patient is 67 year(s) old. Patient birthdate: 12/25/1947. Study date: 07/23/2015. Study time: 09:38 PM. White. Birth gender: male. Height: 178 cm. Height: 70.1 in. Weight: 73 kg. Weight: 160.6 lb. BMI: 23 kg/m². BSA: 1.9 m². Transthoracic echocardiography. M-mode, complete 2D, and complete spectral Doppler. Observation. Patient unit: EC 2B. Patient room number: 2011. The patient tolerated the procedure well. Financial class: Self Pay.
- Procedure narrative:** Transthoracic echocardiography was performed. Image quality was adequate. Scanning was performed from the parasternal, apical, and subcostal acoustic windows.
- Left ventricle:** The cavity size is normal. Wall thickness is normal. Systolic function is normal. The estimated ejection fraction is 55-65%. Wall motion is normal; there are no regional wall motion abnormalities. Wall motion score: 1.00.
- Suggested interpretations:** Aortic valve.

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

Conclusions

Impressions, recommendations - transthoracic

Impressions

- Normal study
- CHD, pediatric
- Coronary artery disease
 - Coronary artery disease
 - Angina, ischemia, infarction
- Myocardial disease
- No vegetation
- Valve disease (Item recorded)

Valve disease

Description: Select New

Severity	Mild
Syndrome	Stenosis
Category	
s/p Intervention	Prosthetic
c/w Etiology	Rheumatic
Sequelae	CHF
Comparison v prior study	Unchanged
Prior study date	2018-08-10

Recommendations

- Discussed with referring
- Refer for cath

Recommendations (cont'd)

- TEE
- TEE, R/O thrombus
- TTE, contrast
- TTE, saline

Findings Report

Summary

- Mild mitral stenosis.
- Left ventricle: The cavity size is normal. Wall thickness is normal. Systolic function is normal. The estimated ejection fraction is 55-65%. Wall motion is normal; there are no regional wall motion abnormalities.
- New summary item

Allergies, diet, and meds

Aspirin allergy.

Study data

Patient is 67 year(s) old. Patient birthdate: 12/25/1947. Study date: 07/23/2015. Study time: 09:38 PM. White. Birth gender: male. Height: 178 cm. Height: 70.1 in. Weight: 73 kg. Weight: 160.6 lb. BMI: 23 kg/m². BSA: 1.9 m². Transthoracic echocardiography. M-mode, complete 2D, and complete spectral Doppler. Observation. Patient unit: EC 2B. Patient room number: 2011. The patient tolerated the procedure well. Financial class: Self Pay.

Procedure narrative

Transthoracic echocardiography was performed. Image quality was adequate. Scanning was performed from the parasternal, apical, and subcostal acoustic windows.

Left ventricle

The cavity size is normal. Wall thickness is normal. Systolic function is normal. The estimated ejection fraction is 55-65%. Wall motion is normal; there are no regional wall motion abnormalities. Wall motion score: 1.00.

Suggested interpretations

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 the ASCEND software interface. At the top, a navigation bar includes 'ASCEND', 'Data', 'Images', 'Participants', 'Study details', 'Workflow', 'Print', 'For attending overread', 'Preliminary release', and 'Sign' (highlighted with a red box and a red arrow). Below this is a secondary bar with 'Undo', 'Redo', 'Help', 'Options', and 'LEARN'. The main interface is divided into several sections: 'Impressions, recommendations - transthoracic', 'Recommendations (cont'd)', 'Findings', and 'Report'. The 'Impressions' section includes a list of findings such as 'Normal study', 'CHD, pediatric', and 'Coronary artery disease'. The 'Recommendations' section lists 'TEE', 'TEE, R/O thrombus', 'TTE, contrast', and 'TTE, saline'. The 'Findings' section shows a 'Summary' with three items: 'Mild mitral stenosis', 'Left ventricle: The cavity size is normal...', and 'New summary item'. The 'Report' section contains 'Allergies, diet, and meds' (Aspirin allergy), 'Study data' (Patient is 67 year(s) old, birthdate: 12/25/1947, study date: 07/23/2015, etc.), 'Procedure narrative' (Transthoracic echocardiography was performed...), and 'Left ventricle' (The cavity size is normal...).

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.

Impressions, recommendations - transthoracic

Impressions

- Normal study
- CHD, pediatric
- Coronary artery disease
 - Coronary artery disease
 - Angina, ischemia, infarction
- Myocardial disease
- No vegetation
- Valve disease
- No source of embolism
- Lesions/embolic sources
- Pericardial disease
- Manifestations of systemic disease
- Hemodynamic description
 - Overall assessment
 - Comparison v prior study
 - Prior study date

Recommendations (cont'd)

- Refer for cath
- TEE
- TEE, R/O thrombus
- TTE, contrast
- TTE, saline

Study data

- Teaching case
- IAC candidate
- Changes from preliminary

Recommendations

- Discussed with referring

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

Transthoracic Echocardiography
M-mode, complete 2D, and complete spectral Doppler

Patient: Mitchell Carson
MRN: #3162935 (MRN)
Accession: #112233
Patient location: Routine
Study status: West Campus
Facility: West Campus

Study date: 08/09/2018
Birth date: 12/25/1947
Age: 70 year(s)
Birth gender: M
Height: 180 cm (70.9 in)
Weight: 90 kg (198 lb)
BSA: 2.14 m²
BMI: 27.8 kg/m²
HR:
Patient status: Outpatient BP

Summary:

- Mild left ventricular dysfunction.
- Left ventricle:** The cavity size is normal. Wall thickness is normal. Systolic function is mildly reduced. The estimated ejection fraction is 55-65%.
- Left ventricle:** There is hypokinesis of the apical anterior wall.
- [New summary item](#)

Recommendations:

- This procedure has been discussed with the referring physician.
- Transthoracic echocardiography in 6 month(s).
- [New recommendation](#)

Study data: Race: White. Study status: Routine. Study location: Echo laboratory. Procedure: Transthoracic echocardiography was performed. Image quality was good. Scanning was performed from the parasternal, apical, and subcostal acoustic windows. Study completion: The patient tolerated the procedure well.

HIS / EHR system



Analytics

All Study Volumes by Month

Group By:	Facility	Then By:	Study Type	Count	Grand Total
Confirming Physician:	All	Study Type:	All		Financial Class #: All
Sonographer:	All	Study Status:	All		
Follow-up:	All	Patient Status:	All		
Referring Physician:	All	Location:	All		
Facility ID	Study Type ID	Study Type	Count	Grand Total	
West Campus	Acoustic Doppler	Acoustic Doppler	6	11	18
	Cardiac cath	Cardiac cath	237	200	33
	Cardiac duplex	Cardiac duplex	0	16	17
	Diagrams (transthoracic)	Diagrams (transthoracic)	3	20	23
	Dr. Study	Dr. Study	15	50	118
	Inferior wall imaging	Inferior wall imaging	2	18	21
	Other	Other	2	43	45
	Renal duplex	Renal duplex	7	47	54
	TEE	TEE	4	17	21
	Stress echo	Stress echo	10	89	113
	Stress MRI	Stress MRI	9	37	46
	Transthoracic, complete	Transthoracic, complete	14	83	99
	Transthoracic, limited	Transthoracic, limited	8	45	55
	Upper extremity, physiologic, single level	Upper extremity, physiologic, single level	4	50	4



ASCEND[®]

HEALTH INFORMATION TECHNOLOGY

www.ascendhit.com

Phone (Toll Free): 844-413-2610

Email: information@ascendhit.com

© 2021 ASCEND HIT LLC. All Rights Reserved.

The distribution, publication, modification, or reproduction of this document is strictly prohibited without the prior written consent of ASCEND HIT LLC.