

Cupid Expansion Non-Invasive Exercise Booklet

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Cupid Expansion Non-Invasive

Cupid Expansion is expanding the workflow and functionality of Cardiology users. The coronary toolset offering both invasive and non-invasive functionality will guide structured reporting.

The exercises below introduce the basic functionality and aesthetic of the Non-Invasive module used for resulting and documentation. Study documentation practice in this exercise includes:

1. Stress Test preview
2. 2D Echocardiogram Documentation
3. Transesophageal Echo (TEE)
4. Vascular Study

Overall documentation functionality is the same regardless of study performed. The Reading Palette is the same for the Tech, Sonographer and Provider.

Exercises are to be completed in the Hyperspace PLY environment. DO NOT ATTEMPT to use your production credentials in the Hyperspace PLY environment. Log in credentials are provided below. If you have selected a training patient on which documentation has been completed, simply close the chart and select another patient.

Hyperspace Playground Instructions

The exercises below will be completed in the Playground (PLY) training environment. To access PLY:

1. From the Citrix Receiver window, click to launch Hyperspace PLY.



If Citrix Receiver is not visible on your device:

- Navigate to the toolbar located on the bottom of the screen OR use the search tool, bottom left, to search for Citrix Receiver.
- Click the 'show hidden icons' on the lower right side of the tool bar, then click the Citrix Receiver icon

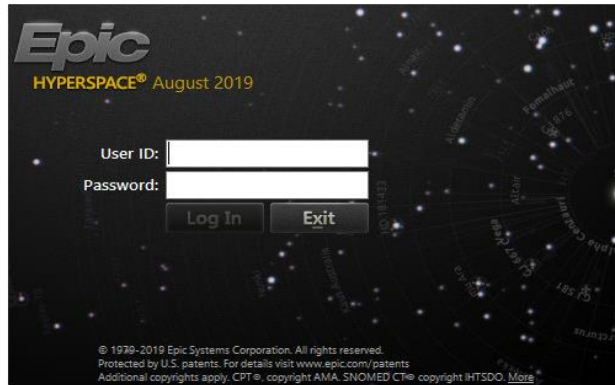


- Click to open Hyperspace Playground.

If PLY is not visible upon Citrix launch, click the “+” sign in the Citrix window. Scroll the list and left click to select PLY.

2. Enter the training Login ID in the User ID field with the password of 'train'.

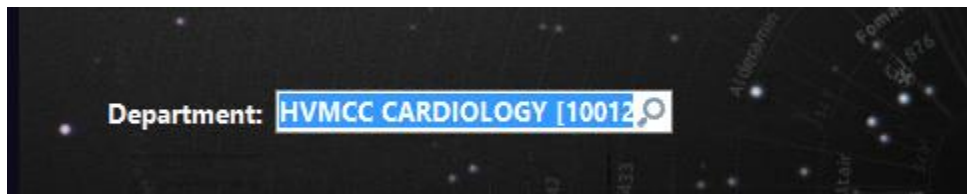
- The training Login ID's are consecutive between **TRN24760** and **TRN24784**.



3. Verify the defaulting department and click Continue and/or Ok until the home screen (i.e. Provider Planner) displays.

The defaulted department for training should be **“HVMCC Cardiology”**. If not, after confirming that you’ve logged in using the correct ID, click the search tool to locate and select **HVMCC Cardiology**.

Dept:



You are now logged into Hyperspace **PLY**. Click ‘Ok’ and/or ‘Continue’ to clear Task reminders, etc.

Again, if your chart displays as Read-only, select another log in from those provided.

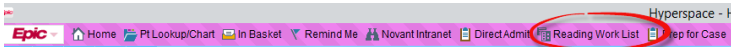
The exercises below facilitate both guided and self-guided practice.

Overview

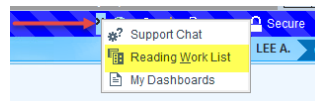
To document:

Locate and launch the Reading Work List (RWL) using one of the 3 pathways listed below:

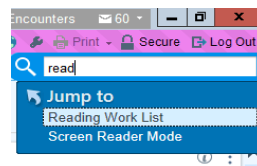
1. - The EPIC toolbar



2. - Underneath the chevron(s) within the workspace



3. - Via search using the search field in the upper right corner



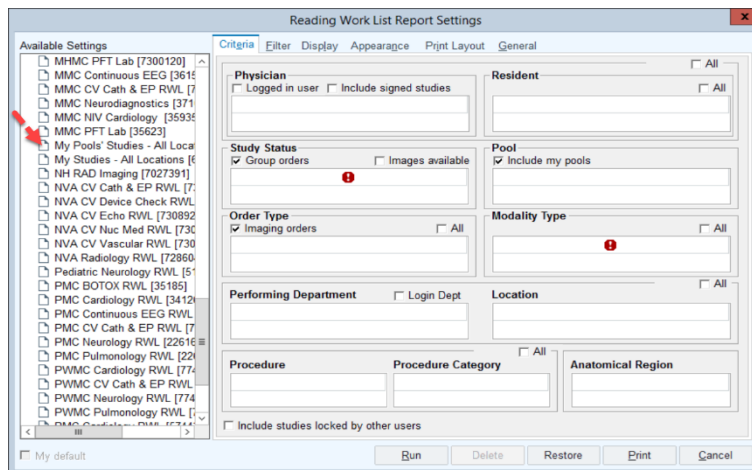
1. The **Reading Work List Report Settings** window populates, arranged by facility and location. For example, a user needing to review echo studies performed at PMC would select the **PMC Cardiology RWL** and **Run** to launch that specific list.

In addition to a worklist for a specific location, the user may:

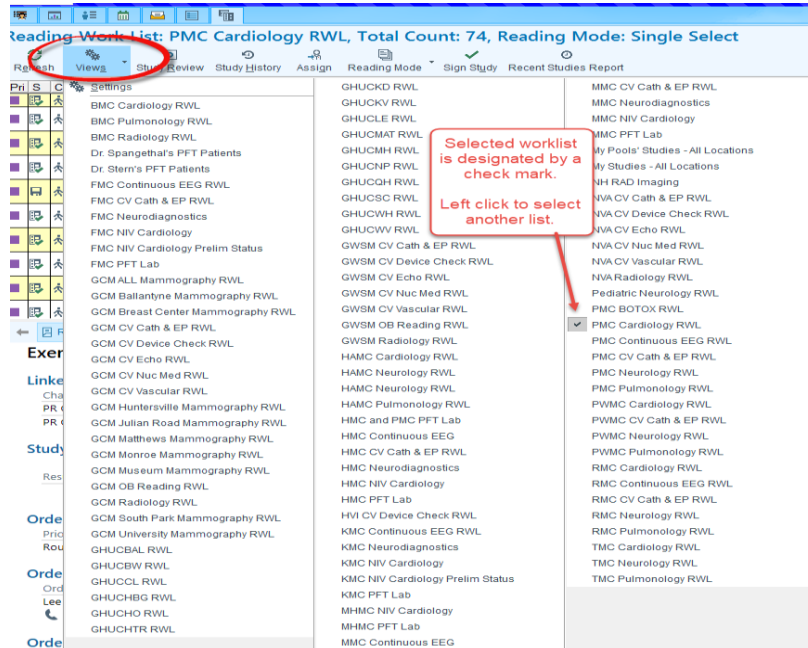
- Select **My Studies – All Locations** to view studies assigned to the user.
- Select **My Pools’ Studies – All locations** to view all studies assigned to physicians within a pool.
 - o Exercise 1 below will use **My Pools’ Studies** to complete documentation for a patient on the RWL.

Selecting **My Default** in the lower left corner of the Reading Work List Report Settings window, places ‘priority’ on that selection. This causes the designated list to auto populate each time RWL is launched. (See image below). To activate My Default, select a worklist, then select the checkbox beside ‘My default’. Click **Run**. Double clicking a selection will also launch the list.

- o Remove designated list priority by deselecting ‘My default’.



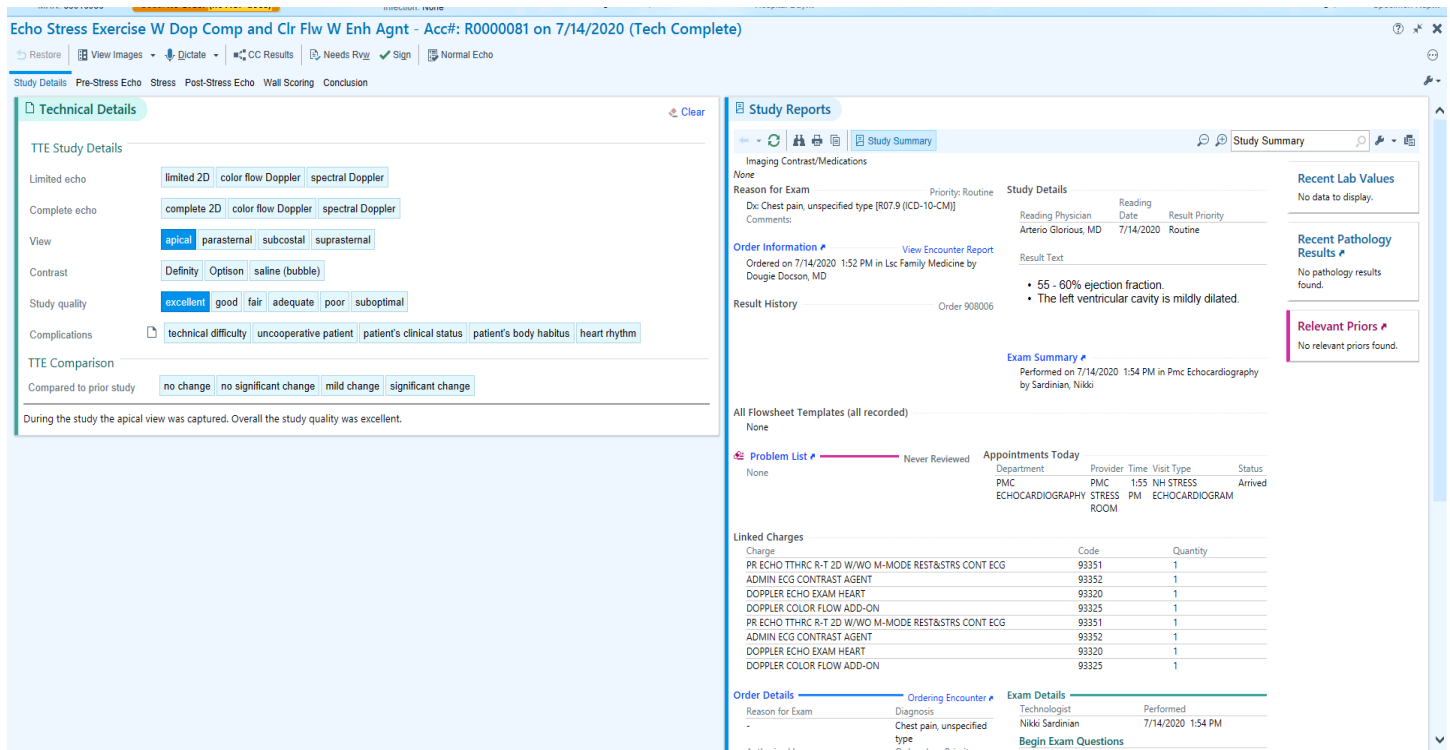
If a work list is selected in error, click **Views** located above the patient names to select the desired option from the resulting list.



3. Once the desired RWL is launched, left click once to select your **Stewart** patient.

- Review the reading details in the lower half of the workspace.

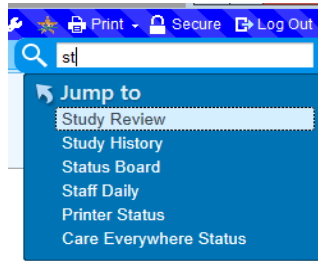
Double click to open **Stewart's** chart, launching the **Study Review** palette for the **Echo Stress** test.



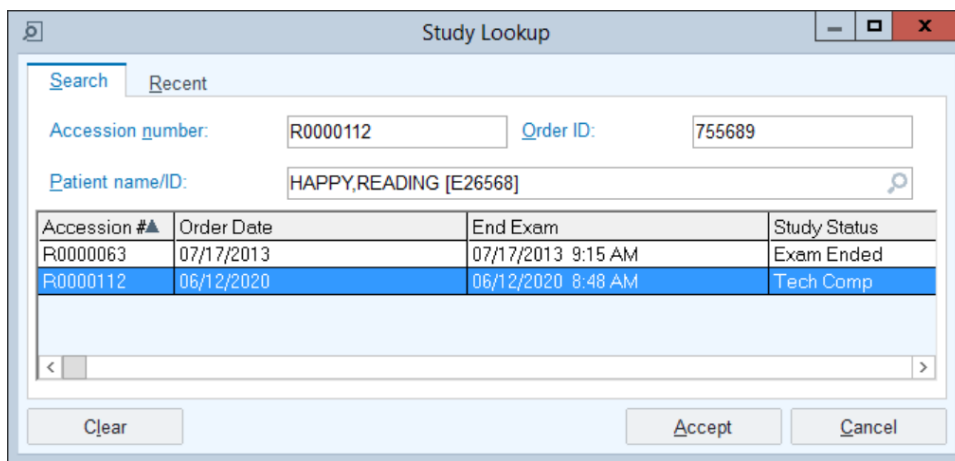
Troubleshoot: Patient not on Worklist

Only exams with a status of **Tech Complete** appear on the worklist. If your patient is *not* on the worklist:

- Use the search field in the upper right corner to locate and launch **Study Review**.



- The **Study Lookup** window presents. In **PRD**, execute your search using the **NH Red Rule**, selecting 2 identifiers for patient verification.

A screenshot of the 'Study Lookup' window. The window has a title bar with standard window controls. Inside, there are tabs for 'Search' and 'Recent'. Below the tabs are input fields for 'Accession number' (R0000112), 'Order ID' (755689), and 'Patient name/ID' (HAPPY,READING [E26568]). Below these fields is a table with the following data:

Accession #▲	Order Date	End Exam	Study Status
R0000063	07/17/2013	07/17/2013 9:15 AM	Exam Ended
R0000112	06/12/2020	06/12/2020 8:48 AM	Tech Comp

At the bottom of the window are three buttons: 'Clear', 'Accept', and 'Cancel'.

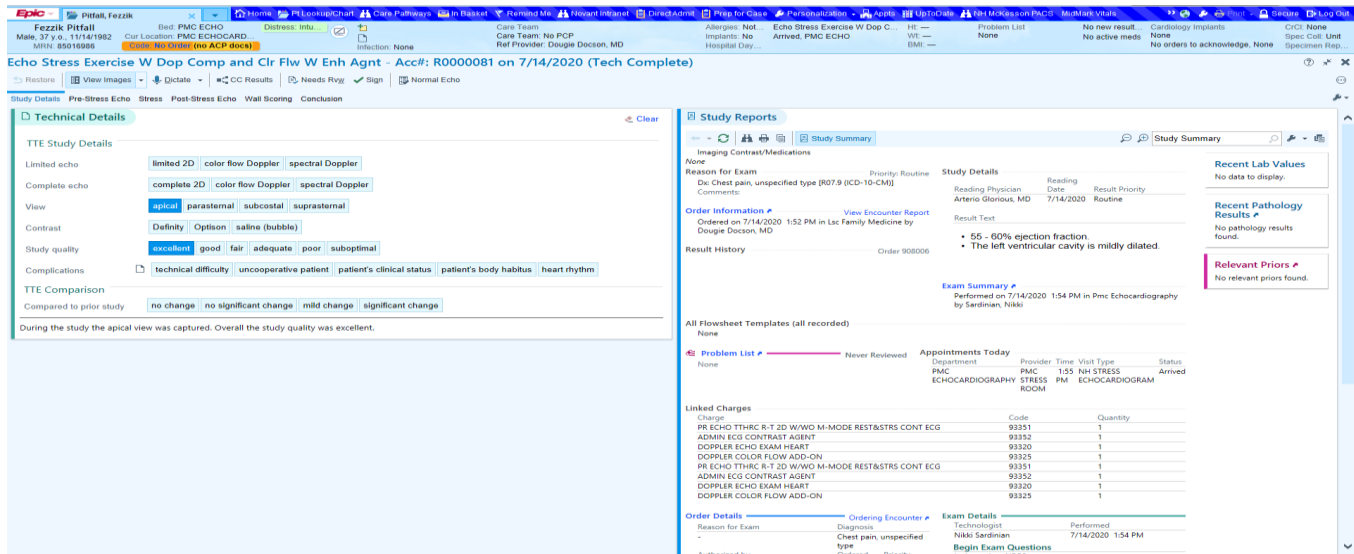
For training:

- Enter **ONLY** the patient name and press Enter.
- Highlight the desired entry.
- **Click Accept** to launch the **Study Review Palette**.

Stress Test: High Level Workspace Overview

Study Review palette

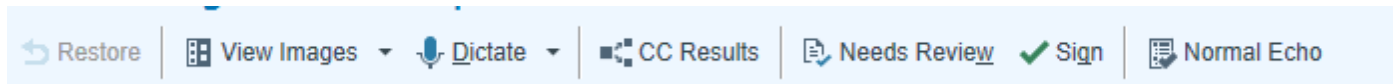
The workspace provides an overall snapshot of the current encounter and exam or procedure.



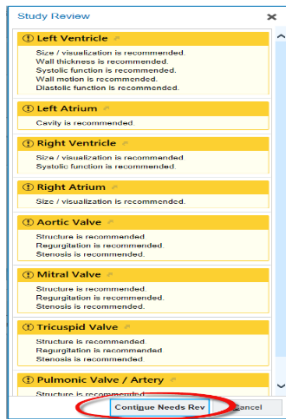
Click the  icon in the upper right corner of the workspace to display **Storyboard** and **Activities** if not visible.

The upper left body of the workspace is comprised of a tool bar with options. Some of the available buttons (options) within the toolbar are determined by the study performed.

Toolbar



- **Restore:**
 - o Restores all data since opening the study, does **not** change data recorded during the exam, (i.e. the original data entered).
- **View Images:** View study associated images.
- **CC Results:** Forward final exam data to other providers
- **Needs Review:** Used if additional review is required.
 - o Once selected, the **Study Review** pop up window presents. **“Continue Needs Review”** will save documentation and return to the RWL. (See screenshot below).

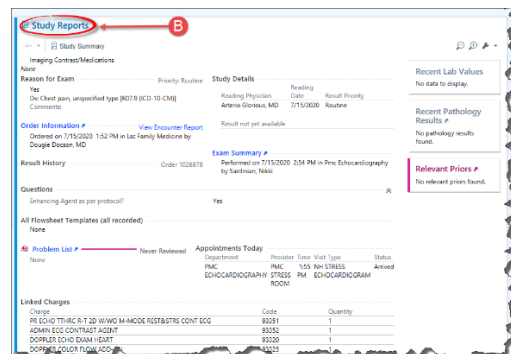
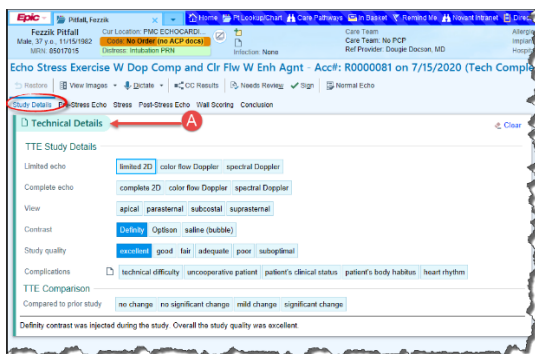


- **Sign:** Sign documentation once complete to finalize the study.
- **Normal Echo:** Macro (predefined system generated template) used for documentation.

The workspace defaults to “Study Details”.

1. For the Stress Test, **Study details** is comprised of 2 sections:

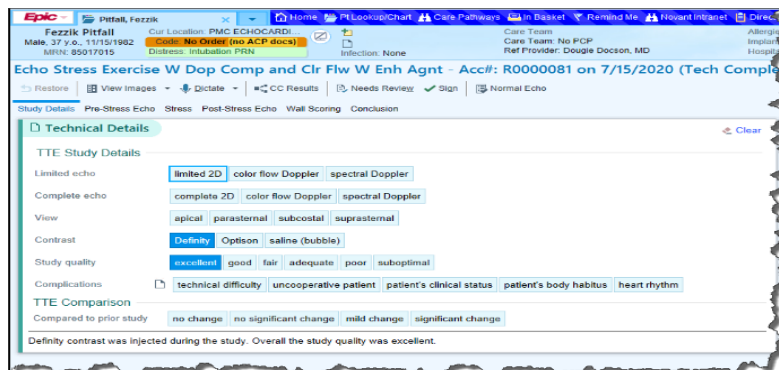
- Left side of the workspace defaults to **Technical Details**
- Right side of the workspace defaults to **Study Report** which provides an overall snapshot.



Study Details includes data documented during the exam; allows for additional documentation post examination in the Technical Details section.

Technical Details: Data entered prior to and/or during the exam.

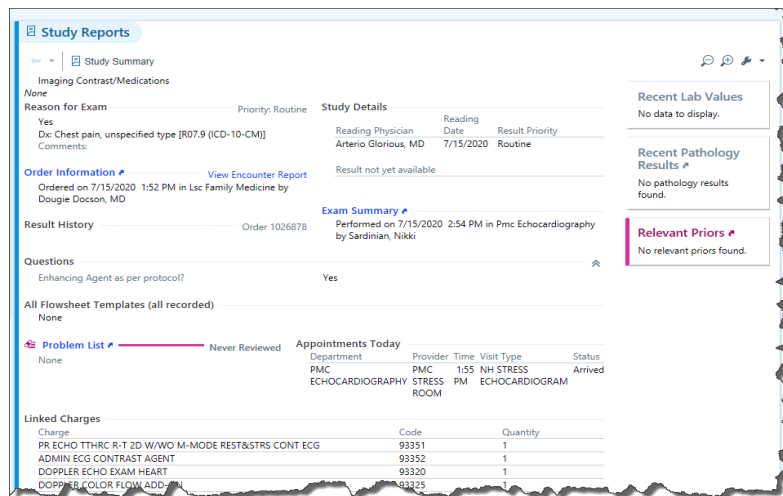
- To update SmartForm data, select or de-select options within the Technical Details section.
 - Selections generate a narrative below the **Technical Details** section.
 - The **Restore** button is active once edits are made within the section. If edits are made and the user wishes to return to the original data entered, click **Restore**.
- Select **Clear** to delete **ALL** data from the SmartForm, including the resulting narrative.



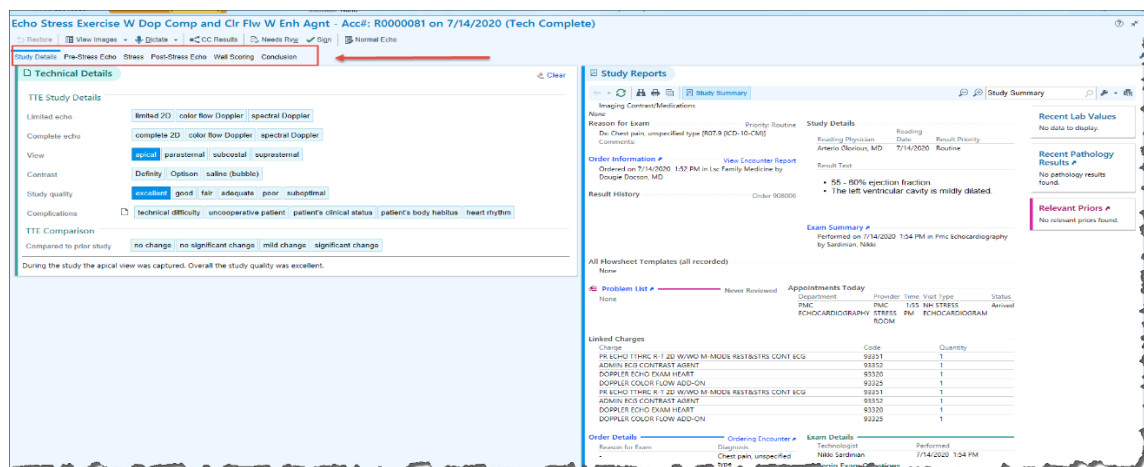
The right side of the workspace displays **Study Reports**.

1. The **Study Summary** has all information related to the study and the encounter

- Review current encounter information using the hyperlinks within the report.

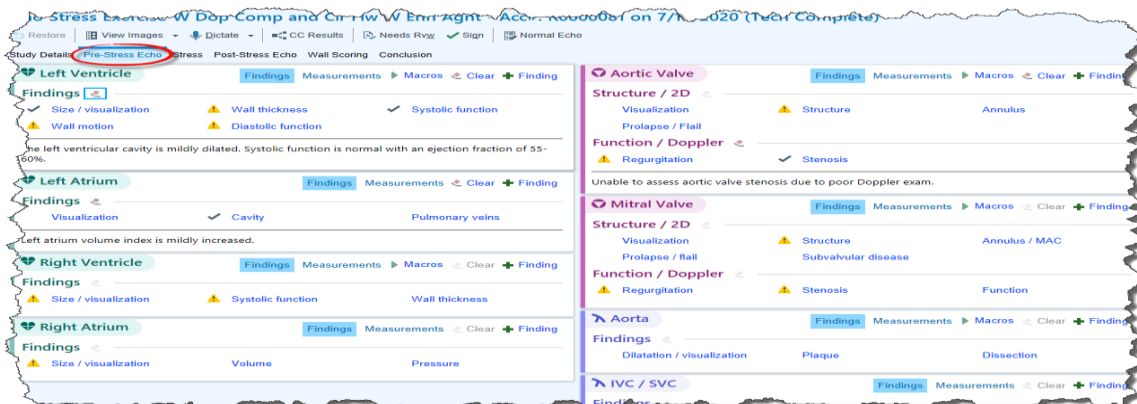


While functionality and appearance within the non-invasive workspace vary minimally, the difference is most visible in the tabs available for documentation. Each tab offers a workspace custom to the exam performed.



Take a moment to click on each tab, reviewing the overall layout for each. Make selections as desired to test preview appearance and functionality. Exercises below will offer both guided and self-guided practice.

Pre-stress Workspace (Image)



Stress Workspace (Image)

Echo Stress Exercise W Dop Comp and Clr Flw W Enh Agnt - Acc#: R0000081 on 7/14/2020 (Tech Complete)

Study Details Pre-Stress Echo **Stress** Post-Stress Echo Wall Scoring Conclusion

Resting ECG

Findings

- ✓ ECG
- ⚠ ST deviation
- ✓ Rhythm

ECG is abnormal. The ECG shows atrial fibrillation and atrial flutter.

Stress ECG

Findings

- ST Deviation
- ST deviation

Arrhythmias

- ✓ Stress arrhythmias
- Recovery arrhythmias

ECG Conclusion

- Diagnostic
- Non-diagnostic
- Uninterpretable

Arrhythmias during stress: rare PACs.

Stress

Stress Test

- ✓ Exercise
- ✓ Pharmacologic

Exercise Details

- ⚠ Exercise capacity
- ⚠ Angina Index
- ✓ Reason stopped

Pharmacologic Details

- ✓ Low level exercise
- Combination protocol

Symptoms

- ✓ Symptoms

Hemodynamics

- Hemodynamics
- ✓ BP / HR response

A bicycle protocol stress test was performed. In addition to exercise, the patient was administered dobutamine. The test was stopped because the patient experienced fatigue. The patient reported dizziness and shortness of breath during the stress test. Blood pressure demonstrated a hypertensive response to stress. The patient's heart rate recovery was normal.

Post-stress Workspace (Image)

Echo Stress Exercise W Dop Comp and Clr Flw W Enh Agnt - Acc#: R0000081 on 7/14/2020 (Tech Complete)

Study Details Pre-Stress Echo Stress **Post-Stress Echo** Wall Scoring Conclusion

Post-Stress

Left Ventricle

- Size
- Systolic function
- Wall motion

Post-Stress Impression

Impression

- Study impression
- Prognostic risk
- Concordancy

Wall Scoring Workspace (Image)

Study Details Pre-Stress Echo Stress Post-Stress Echo **Wall Scoring** Conclusion

Wall Scoring

We've redesigned this tool. Stage editing tools are now in the upper right corner. Click on wall segments to increase (left click) or decrease (right click) the scoring options.

Got it Show me later

Baseline Low Dose Peak Dose Resting

Basal SA Mid SA Apical SA

4C 2C Long Axis

Not Assessed
1 Hyperkinesis
2 Normal
3 Hypokinesis
4 Akinesis
5 Dyskinesis
6 Aneurysmal

Clear All
All Hyperkinetic
All Normal
All Hypokinetic

1.00
Score Index

Comments

Wall Scoring Report

Wall Scoring %

Baseline Score Index: 1.00

Basal SA Mid SA Apical SA

Ant Ant Ant

Sept Lat Lat Lat

4C 2C Long Axis

Sept Lat Lat Ant Lat Sept

The left ventricular wall motion is normal.

Once review is complete, close **Stewart's** chart.

To review layout and functionality in greater detail, we will review a finalized **2D Echo with Enhancing Agent**. Locate your **Reading** patient and double click to open his chart. The overall layout is the same as the **Stress Echo**, acknowledging the differences in the exercises below.

The workspace defaults to “**Study Details**”.

1. Study details is comprised of **3 sections**:

- a. Prior Exams
- b. Technical Details
- c. Study Report which provides an overall snapshot.

Prior Exams: Lists relevant prior exams within 5 years.

Copy Previous: Allows the clinician the ability to copy forward the previous report into the current study and edit appropriately.

Technical Details

Technical Details

Clear all data recorded in the SmartForm → **Clear**

TTE Study Details

Limited echo:

Complete echo:

View:

Contrast:

Study quality:

Complications:

TTE Comparison

Compared to prior study:

A complete echo was performed using complete 2D. Definity contrast was used during the study. Overall the study quality was excellent.

Select the following in the “Technical Details” section if not defaulted:

- Complete 2D
- Definity
- Excellent

Study Reports, located on the right side of the workspace, has the same purpose and function as previously mentioned.

Study Reports

Study Summary

Imaging Contrast/Medications: None

Reason for Exam: Dx: Chest pain, unspecified type [R07.9 (ICD-10-CM)] Priority: Routine

Study Details: Reading Physician: Arterio Glorious, MD; Reading Date: 7/14/2020; Result Priority: Routine

Order Information: Ordered on 7/14/2020 1:52 PM in Lsc Family Medicine by Dougie Docson, MD

Result History: Order 908006

Exam Summary: Performed on 7/14/2020 1:54 PM in Pmc Echocardiography by Sardinian, Nikki

All Flowsheet Templates (all recorded): None

Problem List: None

Appointments Today: Department: PMC; Provider: PMC; Time: 1:55; Visit Type: NH STRESS; Status: Arrived

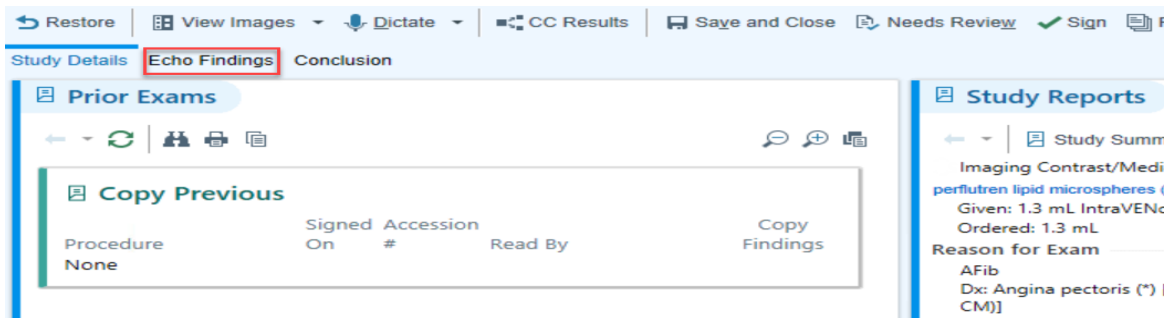
Charge	Code	Quantity
PR ECHO TTHRC R-T 2D W/WO M-MODE REST&STRS CONT ECG	93351	1
ADMIN ECG CONTRAST AGENT	93352	1
DOPPLER ECHO EXAM HEART	93320	1
DOPPLER COLOR FLOW ADD-ON	93325	1
PR ECHO TTHRC R-T 2D W/WO M-MODE REST&STRS CONT ECG	93351	1
ADMIN ECG CONTRAST AGENT	93352	1
DOPPLER ECHO EXAM HEART	93320	1
DOPPLER COLOR FLOW ADD-ON	93325	1

Order Details: Reason for Exam: Chest pain, unspecified type; Authorized by: [blank]

Exam Details: Technologist: Nikki Sardinian; Performed: 7/14/2020 1:54 PM

Begin Exam Questions: Is the patient NPO?

The exercise below will explore the use of exam specific macros as well as SmartForm entry. To begin documentation, click the **Echo Findings** tab located beside **Study Details**.



The SmartForm is primarily organized or sectioned by anatomic structure. Functionality, where applicable, allows the entry of Findings, Measurements, use of anatomic specific Macros and/or the option to add additional findings.

- A check mark beside a “**variable/characteristic**” indicates data input.
- Sections **without** documentation are designated by caution sign icons.

The upper right corner of each section includes the following hyperlinks:

1. **Findings**
 - a. Data entered during exam
 - b. Hyperlinks available for information entry
2. **Measurements**
3. **Macros**
 - a. System generated, pre-built phrase or text used for quick documentation
4. **Clear**
 - a. Clear data entered in a section
5. **+Finding**
 - a. Add additional findings

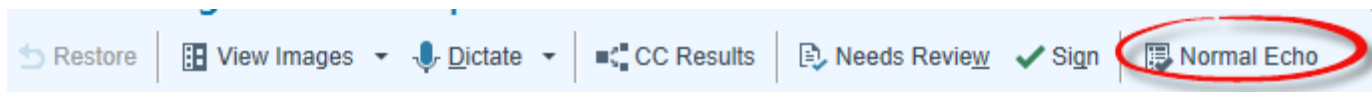
We will review featured functionality during the exercise.



Using a Macro

A Macro is a pre-built, system generated phrase or text used for quick documentation. Exam specific macros appear in the workspace toolbar while anatomy specific macros appear in the designated anatomic section.

Select the Normal Echo macro within the workspace toolbar.



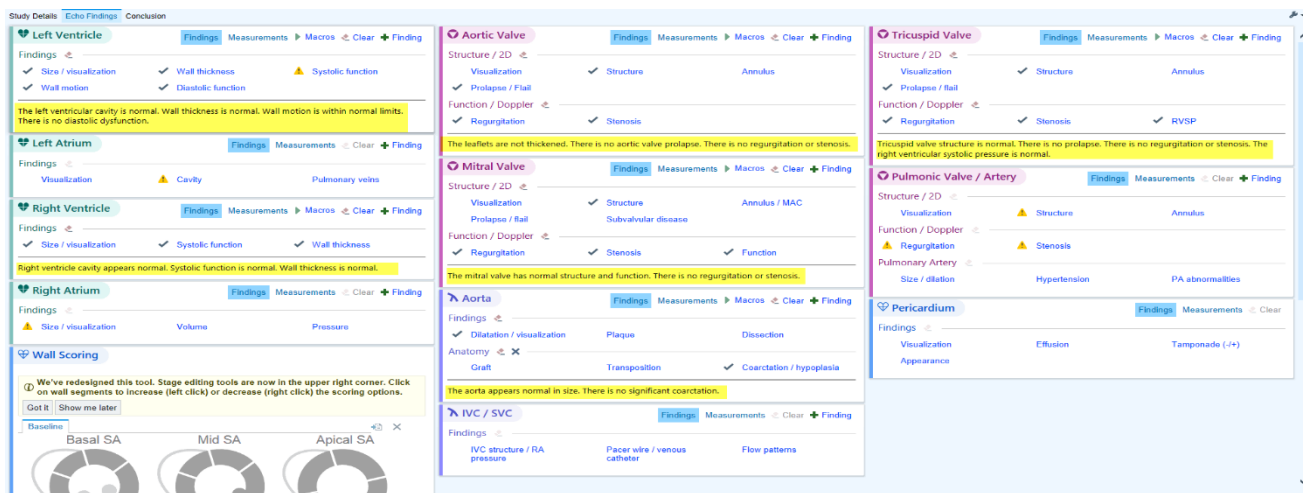
Several sections within the reading palette have been updated with findings.

- Review the documented variables if desired (compare the check mark vs. caution symbol)
 - Click a hyperlink(s) to add or update data.
 - Review the narrative below each section.

To view narrative appearance in the final report, click the **Conclusion** tab to the right of the **Echo Findings** tab and review the report. Once reviewed, return to the **Echo Findings** tab.

To clear the form, select **Clear** in the upper right of each section displaying information. With the SmartForm clear of all entries, prepare to proceed to the exercise below. Paying attention to the icons beside each hyperlink within a section, how does a user recognize when no data is entered?

- **ANS:** Caution symbols, rather than check marks are present.

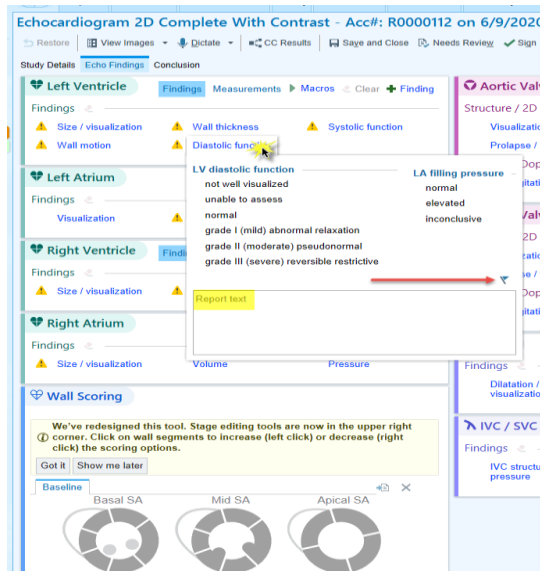


Exercise I: 2D Echo with Enhancing Agent (Contrast)

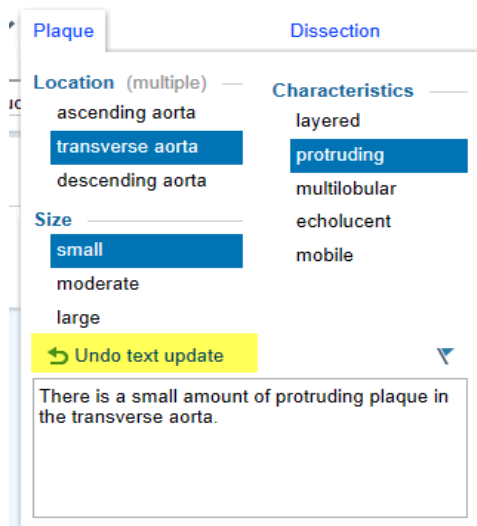
The exercise below is a finalized report. Use your **Reading** patient to review and document the findings within the report using the Cupid Expansion toolset. **Document findings of your choice using the wall scoring diagram.**

Things to know before you start:

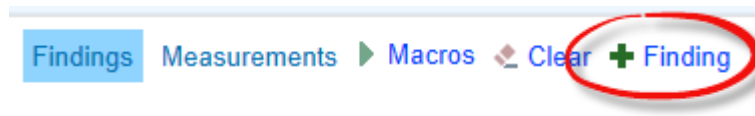
1. Clicking a hyperlink within a section opens a window offering expanded detail documentation options. (Ex. Cavity, Diastolic Function, Size/Visualization)
 - Selecting the flag icon will send the statement to the summary section of the report.
 - Selections generate text in the Report text window.
 - Free text is a documentation option in the Report text window. Dragon One Medical is **not** SmartForm supported.
 - Free text should be entered in the Report Text section **after** all selections within the pop-up window have been made. If NOT, the free text is overwritten by the selection.
 - A message appears stating 'Edited text has been overwritten'. To avoid, be sure to make selections first, then free text. Click elsewhere in the form to save.



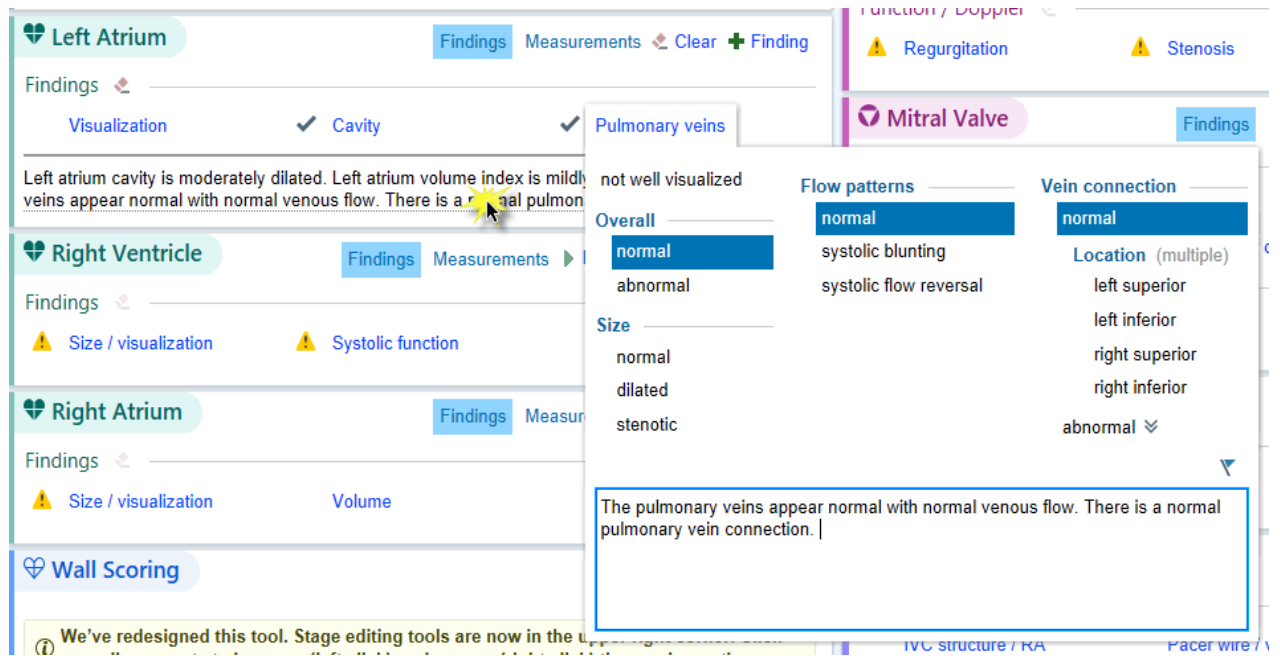
2. Select “Undo Text Update” to return to original text entered in the Report Text field.



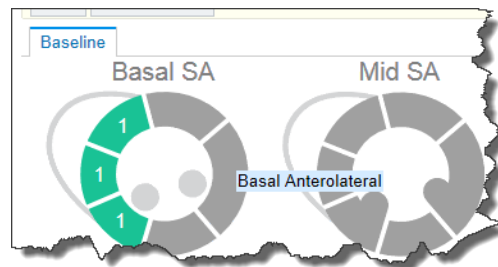
3. Findings not visible as hyperlinks on the SmartForm launch can be located under “+ Findings”



4. Clicking on a sentence within the narrative text below a section opens the corresponding section for that characteristic. Additional options are available via cascade and inverted chevrons indicate additional options for expanded documentation.



- To document the wall scoring diagram, hover over a segment and left click until the segment is highlighted with the desired scoring.



- Measurements will flow over from the modality cart. Click "Measurement" within a section to edit recorded data.

What questions do you have?

Use the final result report below to document the stated findings for your Reading patient.

Final Result

Interpretation Summary

- Severe LV dysfunction. EF is in the 15-20% range.
- 2+ TR with moderate-severe increase in the RVSP
- Moderate LVH.

Left Ventricle

The left ventricle is severely dilated. There is no thrombus. There is moderate concentric left ventricular hypertrophy. Left ventricular systolic function is severely reduced. Indeterminate diastolic function. Flattened septum is consistent with RV pressure/volume overload. There is severe global hypokinesis of the left ventricle. The inferior segment appears more severely hypokinetic.

Right Ventricle

The right ventricle is severely dilated. The right ventricular ejection fraction is grossly normal.

Atria

LA Volume is c/w severely dilated (>48 ml/m²). LA Volume is 55 ml/m². The right atrium is severely dilated.

Mitral Valve

There is apical tethering of the subcordal mitral valve apparatus due to the LV dysfunction. There is mild mitral annular calcification. There is no mitral valve stenosis. There is mild to moderate mitral regurgitation.

Tricuspid Valve

There is no tricuspid stenosis. There is moderate tricuspid regurgitation (2+). Right ventricular systolic pressure is elevated at 50-60mm Hg (does not allow for a range), consistent with moderate-severe pulmonary hypertension.

Aortic Valve

The aortic valve is trileaflet. Mild aortic sclerosis is present with good valvular opening. Mild aortic regurgitation.

Pulmonic Valve

The pulmonic valve is not well visualized. There is no pulmonic valvular stenosis. There is trace pulmonic valvular regurgitation. (Pushed pulm valve not visualized to end of narrative).

Great Vessels

Borderline aortic root dilatation.

Pericardium/Pleural

There is no pericardial effusion.

MMode/2D Measurements & Calculations

IVSd: 1.5 cm LVIDd: 7.1 cmFS: 12.4 % Ao root diam: 3.8 cm LVIDs: 6.2 cm EDV(Teich): 261.0 ml

Ao root area: 11.3 cm² LVPWd: 1.4 cm EF(Teich): 26.0 %
LA dimension: 5.6 cm

LVOT diam: 2.1 cm

Doppler Measurements & Calculations

Ao V2 max: 191.0 cm/sec AI max vel: 395.2 cm/sec LV V1 max PG: 2.4mmHg SV(LVOT): 55.7ml

Ao max PG: 15.0 mmHg AI max PG: 61.7 mmHg LV V1 mean PG: 1.8 mmHg
Ao mean PG: 7.5 mmHg AI dec slope: 11 .3 mmHg LV V1 max: 76.8 cm/sec

AVA(V,D): 1.4 cm²

AI P1/2t: 588.1 m/sec

LV V1 mean: 52.6 cm/sec

LV V1 VTI: 16.1 cm

TR max vel: 318.2 cm/sec

TR max PG: 40.5 mmHg




What questions do you have about using the SmartForm to document your findings?

To review and continue documentation, click the Conclusion tab.

[Study Details](#) [Echo Findings](#) [Conclusion](#)

Reviewing the Conclusion tab workspace, the left side is comprised of the following sections:

1. Summary Statements

- Statements appearing here comprise the Interpretation Summary
- Free-text capability within Summary Statement section
 - Real-time text displays in both Study Details tab – Study Reports (right side of screen) and Conclusion tab – Result Report
- De-selecting any statement removes the statement from the Interpretation Summary and report(s)
- Updating information in the Summary Statements section will update the Interpretation Summary section in the Result Report but will **not** update the narrative in the Findings SmartForm
- Hover over the  icon to identify “linked unedited text”
 - Link icon does not appear for text/statements manually entered
 - Statements without edit from SmartForm remain linked to the original finding 
 - Edited statements display as “Edited” and are not linked to the original finding 

2. **Result Text** – Free text or use SmartPhrases to document

3. **Reading Physicians and Roles** – See or Edit Reading physician

4. **Indications** – Displays diagnosis entered at time of ordering; Enter post study indication (required)

5. **Interesting Study** – Use the search tool to indicate a reason along with free text entry in the window provided.

Once documentation and review are complete, click “**Sign**” in the workspace toolbar.

A Best Practice Advisory (BPA) may appear with recommendation(s). Address the BPA and **Continue Sign**. You are returned to the RWL Homepage.

What questions do you have?

Exercise 2: Transesophageal Echocardiogram w Enhancing Agent (TEE)

For additional practice documenting, complete the exercise below. Use your **Teri** patient to complete this exercise.

If you haven’t already, log into Dimensions using the information provided by the facilitator. Click “Enter” or “Ok” until you have reached the homepage. If you are logged in, use one of the methods previously discussed to locate your patient and/or study (hint: Study Review or RWL).

TEE Reading Palette Overview

The Reading Palette opens to Study Details. There are 3 sections:

1. **Study Details**
2. **Prior Exams**
3. **Technical Details**
 - a. Greater detail/more options in this section for the TEE than other exams
 - b. Available selection(s) are driven by the procedure performed

Transesophageal Echocardiogram with Contrast - Acc#: R0023307 on 6/23/2020 (Tech Complete)

Full Edit Mode Limited Edit Mode Restore View Images Dictate CC Results Save and Close Sign Needs RVG Reading Mode

Study Details No Findings Conclusion

Prior Exams

Copy Previous
Procedure: None
Signed On: Accession #: Read By: Copy Findings

Technical Details

TEE Study Details

Timeout called immediately prior to procedure? Yes No

Limited echo: limited 2D color flow Doppler limited spectral Doppler

Complete echo: complete 2D color flow Doppler spectral Doppler

Views: esophageal transgastric descending thoracic

Contrast: Definity Optison saline (bubble)

Probe insertion by: anesthesiologist cardiologist

Insertion difficulty: none minimal moderate difficult

Sedation: general sedation moderate sedation

Lidocaine: yes no

Midazolam (mg):

Fentanyl (mL):

Other medications:

Study Reports

Imaging Contrast/Medications
perfloran lipid microspheres (DEFINITY) injection 25 mL
Given: 25 mL IntraVEnous
Ordered: 23 mL

Reason for Exam: Dx: New onset a-fib (?) [I48.91 (ICD-10-CM)] Priority: Routine
Comments: Reading Physician: Arterio Glamorous, MD Reading Date: 6/24/2020 Result Priority: Routine

Order Information: Ordered on 6/23/2020 8:48 AM in Pmc Echocardiography by Lee Indium, MD
View Encounter Report Result: not yet available

Result History: Order 212484 Exam Summary: Performed on 6/23/2020 12:55 PM in Pmc Echocardiography by Abate, Feime, RN

Imaging Contrast/Medications: perfloran lipid microspheres (DEFINITY) injection 25 mL
Given: 25 mL IntraVEnous

All Flowsheet Templates (all recorded):
All LDAs
Anthropometrics
Custom Formula Data
Has the patient had esophageal stretching or stricture?
Immediate Reassessment
IV Placement
Kantara Dose Calculator
NPO Status
Quickbar Vitals
TEE
Vital Signs
Vitals
Vitals Reassessment

Flowsheet Data by Column (last 72 hours)

Date/Time	Tilt Series	Cardiac Rhythm	BP	Pulse	SpO2	Patient Symptoms
06/23/20 12:54:21	—	—	140/80	52	99 %	—
06/23/20 12:53:14	—	—	150/60	52	98 %	—

Recent Lab Values: No data to display.

Recent Pathology Results: No pathology results found.

Relevant Priors: No relevant priors found.

There are 3 sections within Technical Details

1. TEE Study Details:
 - a. General study details (i.e. Timeout, views, enhancing agent)
2. Sedation:
 - a. Document medications and anesthesia type
3. Post Procedure:
 - a. Post procedure diagnosis *must* be entered in order to sign/finalize the study
 - b. Specimen
 - i. A selection of 'Yes' opens a window for entry to record specimen

Technical Details Clear

1 TEE Study Details

Timeout called immediately prior to procedure? Yes No ← Required entry

Limited echo: limited 2D color flow Doppler limited spectral Doppler

Complete echo: complete 2D color flow Doppler spectral Doppler

Views: esophageal transgastric descending thoracic

Contrast: Definity Optison saline (bubble)

Probe insertion by: anesthesiologist cardiologist

2 Insertion difficulty: none minimal moderate difficult

Sedation

Sedation: general sedation moderate sedation

Lidocaine: yes no

Midazolam (mg):

Fentanyl (mL):

Other medications:

3 Post Procedure

Post Procedure diagnosis: ← Required entry

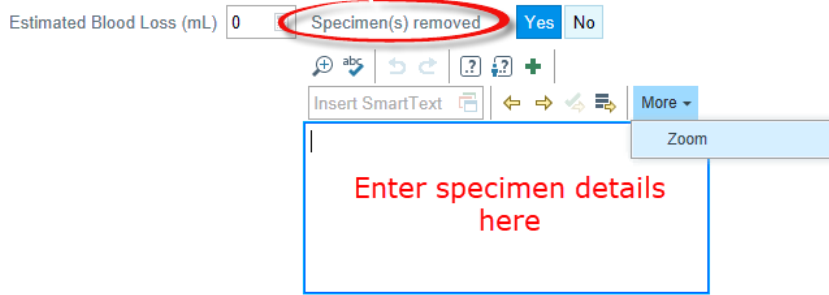
Assistant:

Complications: blood on removal of probe no complications

Estimated Blood Loss (mL): 0 Specimen(s) removed: Yes No

Hardstops in all sections must be addressed. Note that some items **not** indicated by hardstop are also required (i.e. Post Procedure Diagnosis)

This entry is required. When answered "Yes" a pop-up window appears for specimen documentation.

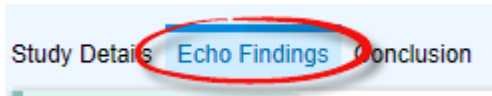


Selecting 'More' offers the option to Zoom in or out. This does *not* launch the Zoom application.

Make the following selections in the Technical Details section of the workspace addressing all hardstops.

A screenshot of the 'Technical Details' section of a workspace. The section is titled 'Technical Details' and has a 'Clear' button in the top right. It is divided into three main sections: 'TEE Study Details', 'Sedation', and 'Post Procedure'.
TEE Study Details:
- Timeout called immediately prior to procedure?: Yes (selected), No
- Limited echo: limited 2D (selected), color flow Doppler, limited spectral Doppler
- Complete echo: complete 2D (selected), color flow Doppler, spectral Doppler
- Views: esophageal, transgastric (selected), descending thoracic
- Contrast: Definity (selected), Optison, saline (bubble)
- Probe insertion by: anesthesiologist, cardiologist (selected)
- Insertion difficulty: none (selected), minimal, moderate, difficult
Sedation:
- Sedation: general sedation (selected), moderate sedation
- Lidocaine: yes (selected), no
- Midazolam (mg): [text input field]
- Fentanyl (mL): [text input field]
- Other medications: [text input field]
Post Procedure:
- Post Procedure diagnosis: [text input field with a warning icon]
- Assistant: [text input field with a search icon]
- Complications: blood on removal of probe (selected), no complications
- Estimated Blood Loss (mL): 0 [calculator icon] Specimen(s) removed Yes No

Review the narrative generated below the section and select the **Echo Findings** tab.



Workspace functionality is the same here as previously demonstrated. The exercise facilitates guided practice. The exercise below is a finalized report. Use your Teri patient to review and document the findings within the report using the Cupid Expansion toolset. **Document findings of your choice using the wall scoring diagram.**

Final Result

Procedure/Quality

A complete transesophageal echocardiogram was performed (2D, 3D reconstruction, Doppler, and color flow Doppler). Patient underwent a transesophageal echocardiogram under sedation. Topical anesthesia to the throat was performed with viscous lidocaine. Sedation was achieved with IV Propofol per anesthesia protocol. The probe was swallowed without complications. Agitated saline contrast (enhancing agent) was used. The study was of good diagnostic quality.

Interpretation Summary

NO INTRACARDIAC THROMBUS. OKAY TO PROCEED WITH DC CARDIOVERSION.

MILDLY DILATED LEFT ATRIUM.

LOW-NORMAL LV SYSTOLIC FUNCTION, LVEF 50-55%.

AORTIC VALVE SCLEROSIS WITH MILD AORTIC REGURGITATION.

MILD MITRAL REGURGITATION.

MODERATE ATHEROSCLEROTIC PLAQUE IN AORTIC ARCH.

Left Ventricle

The left ventricle is normal in size. There is no thrombus. There is normal left ventricular wall thickness. Left ventricular systolic function is low normal. Ejection Fraction is 50-55 %. No regional wall motion abnormalities noted.

Right Ventricle

The right ventricle is normal size. The right ventricular ejection fraction is grossly normal.

Atria

LA Volume is 39 ml/m². LA Volume is c/w mildly dilated (35 ml/m²- 41ml/m²). No thrombus is detected in the left atrial appendage. No left atrial mass or thrombus visualized. The right atrium is normal. Injection of enhancing agent (contrast) documented no interatrial shunt. The interatrial septum is intact with no evidence for an atrial septal defect. The thickening of interatrial septum suggests lipomatous hypertrophy.

Mitral Valve

The mitral valve leaflets appear thickened, but open well. There is mild mitral regurgitation.

Tricuspid Valve

The tricuspid valve leaflets are thin and pliable and the valve motion is normal. There is trace tricuspid regurgitation. Pulmonary hypertension is not suggested by Doppler findings.

Aortic Valve

Mild aortic sclerosis is present with good valvular opening. The aortic valve is tri-leaflet. There is no aortic stenosis. There is mild aortic regurgitation (1+).

Pulmonic Valve

The pulmonic valve is normal in structure and function. There is trace pulmonic valvular regurgitation.

Vessels

Moderate atherosclerotic plaque(s) in the aortic arch. Mild atherosclerotic plaque(s) in the descending aorta.

Pericardium

There is no pericardial effusion.

MMode/2D Measurements & Calculations

LVLd ap4: 7.9 cm

EF(MOD-sp2): 47.4% SV(MOD-sp4): 38.9 ml SV(MOD-sp2): 54.5 ml

EDV(MOD-sp4): 84.8 ml

LVLs ap4: 6.1 cm

ESV(MOD-sp4): 45.9 ml

EF(MOD-sp4): 45.9 %

Doppler Measurements & Calculations

Ao V2 max: 129.0 cm/sec AI max vel: 378.6 cm/sec

Ao max PG: 6.7 mmHg AI max PG: 57.3 mmHg

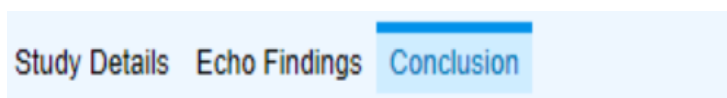
Ao mean PG: 3.6 mmHg

AI dec slope: 229.7 cm/sec²

AI P1/2t: 482.8 m/sec

What questions do you have about using the toolset for documentation?

The remaining functionality exists just as the 2D Echo w/ Enhancing Agent. To review and continue documentation, click the Conclusion tab.



Once documentation and review are complete, click “**Sign**” in the workspace toolbar.

A Best Practice Advisory (BPA) may appear with recommendation(s). Address the BPA and **Continue Sign**. You are returned to the Homepage.

What questions do you have?

Exercise 3: Vascular Studies (Carotid Dup-Bilateral)

The overall functionality of Cupid Expansion is the same across vascular and non-vascular study documentation.

Complete the self-guided exercise below. Here, you will use the **GCM CV Vascular RWL** to document findings.

To begin:

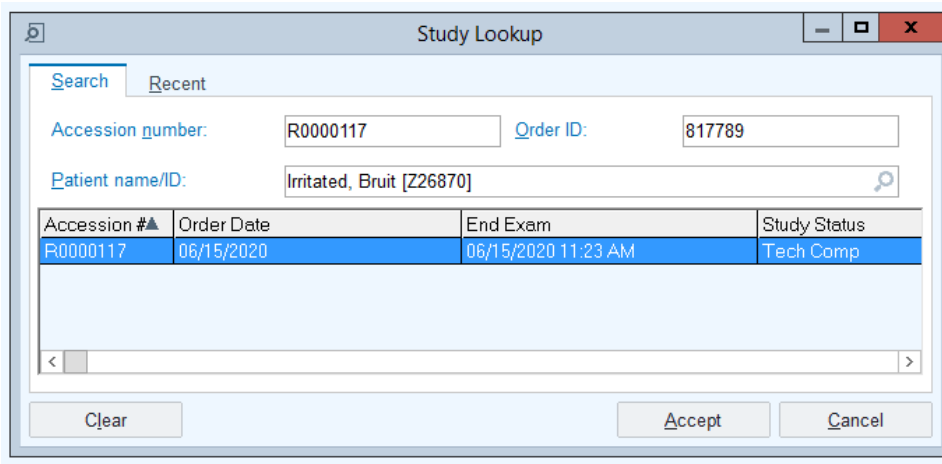
1. Locate and click **Views** in the workspace toolbar.
2. Double click GCM CV Vascular RWL to launch.
3. Locate your **Bruit** patient. Left click once to review the Reading details, then double click the patient name to open the chart.

This exercise is self-guided. Make your own selections.

Note: Only vascular anatomy observed during the exam will be available for documentation.

If the RWL is unavailable or to review studies that have not been completed by the tech, launch Study Review to document.

1. Using the search field above the patient list, search for and launch Study Review.
2. Enter your Bruit patient name in the Name/ID field of the Study Lookup window.
 - a. Review and verify the populated information



The screenshot shows a 'Study Lookup' window with a search bar and a table of results. The search bar contains 'Irritated, Bruit [Z26870]'. The table has four columns: Accession #, Order Date, End Exam, and Study Status. The first row is highlighted in blue.

Accession #▲	Order Date	End Exam	Study Status
R0000117	06/15/2020	06/15/2020 11:23 AM	Tech Comp

3. Click Accept or press Enter to open the chart.
4. The chart opens to Study Details
 - o Review the report.
5. Click the Findings tab
6. Make selections of your own.

- Be sure to add measurements and free text.

In the image below, the user has completed documentation using the **Normal Carotid** macro.

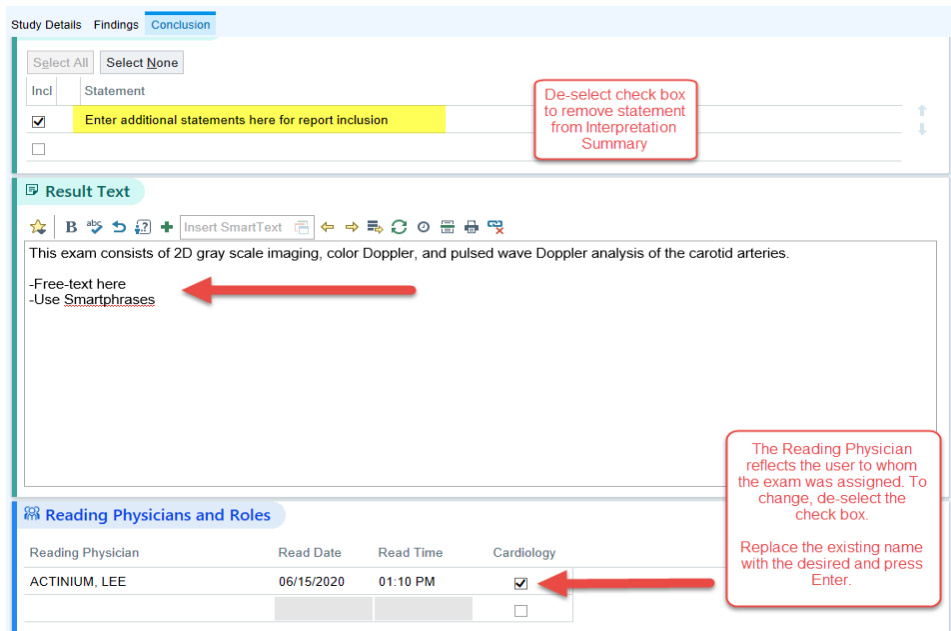


7. Once documentation is complete, click the Conclusion tab.

Review the information presented in the Result Report on the right. This report contains all data currently documented. Summary Statements and Result Text are updated real time.

Information and data documented during the exam can be edited by returning to the Study Details or Findings tabs on the left side of the workspace. This is the data contributing to the finalized report.

While in the Conclusion tab, take a few moments to enter and remove summary statements; change the reading provider and add information to the Result Text.



After reviewing the overall functionality of the workspace, click **Sign** to finalize the documentation and return to the RWL homepage.

What questions do you have about Cupid Expansion Non-Invasive?