

Crown  
Edition



**ACUSON Sequoia Ultrasound System**

# Quick Reference Guide

Crown Edition 3.5 (VB30)

[siemens-healthineers.com/acuson-sequoia](https://www.siemens-healthineers.com/acuson-sequoia)



**SIEMENS**  
Healthineers 

We pioneer breakthroughs in healthcare. For everyone. Everywhere. Sustainably. The innovative healthcare solutions offered by Siemens Healthineers are crucial for making high-quality healthcare accessible for everyone, for clinical decision-making, and for treatment pathways. We are a team of more than 71,000 Healthineers in over 70 countries passionately pushing the boundaries of what is possible in healthcare to help improve the lives of people around the world.

Built from the ground up, with input from users around the world, the ACUSON Sequoia ultrasound system was created with users and patients in mind. Powered by BioAcoustic technology, the system can reduce the effects of ultrasound variability between users, patients and technology. By reducing the variability often experienced during ultrasound exams, the ACUSON Sequoia system can help to deliver effective clinical insights.

ACUSON Sequoia – Intelligent imaging. Expanded insights. User-driven design.

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# System Overview

1. Flat Panel Display Monitor
2. Touch Screen
3. Power On/Off (Hibernation)
4. Control Panel (Height- and Swivel-adjustable)
5. Retractable Keyboard
6. Four Transducer Ports
7. Gel Warmer
8. Wheel Lock
9. Swivel Wheels



# System Overview

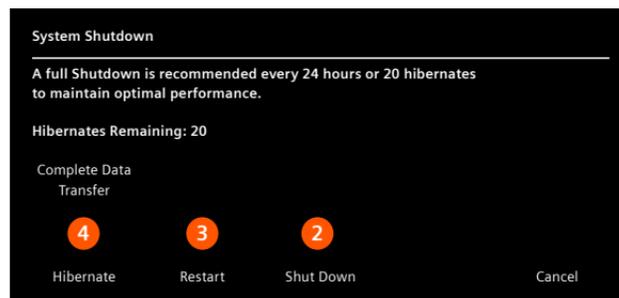
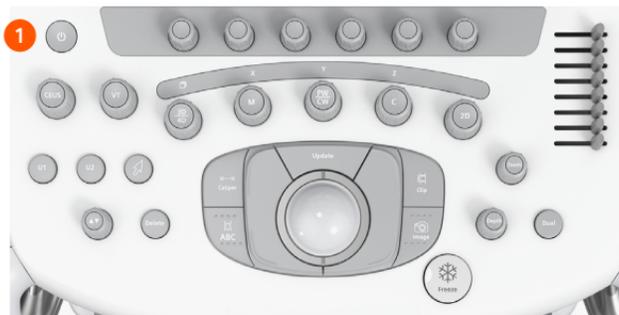
- 10. Articulating Arm  
(tilt, swivel, raise, lower)
- 11. Storage Tray
- 12. Rear Handle
- 13. Rear Storage Bin
- 14. Two USB Ports
- 15. Transducer Holders
- 16. Cable Hanger
- 17. Air Filter



# System Overview

## Power On and Hibernation Mode

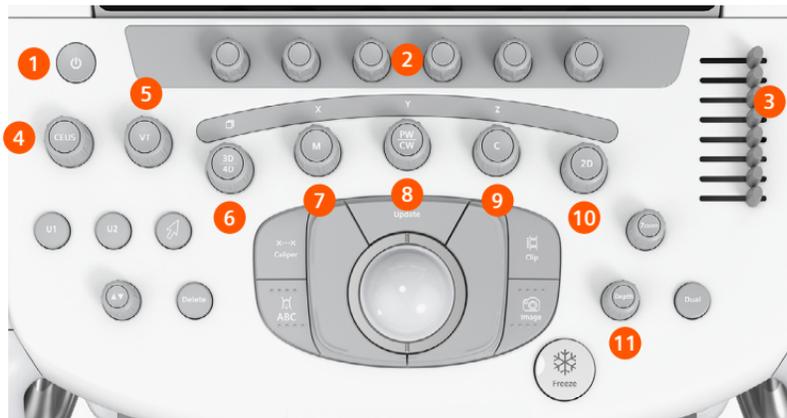
1. Press the **Power** key to turn the system on or to enter the system shutdown menu
2. Select **Shut Down** to turn the system off
3. Select **Restart** to reboot the system
4. Select **Hibernate** to enter hibernation mode which allows the system to power back on in approximately 30 seconds



# System Overview

## Control Panel

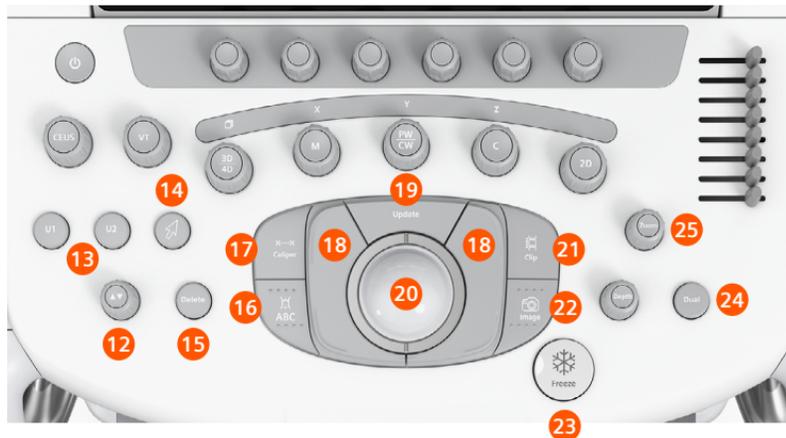
1. Power On/Off
2. Soft Key Rotary Controls
3. DGC Controls
4. Contrast
5. Elastography
6. 3D/4D
7. M-mode
8. Pulsed Wave Doppler/  
Continuous Wave Doppler
9. Color Doppler
10. 2D mode
11. Depth



# System Overview

## Control Panel

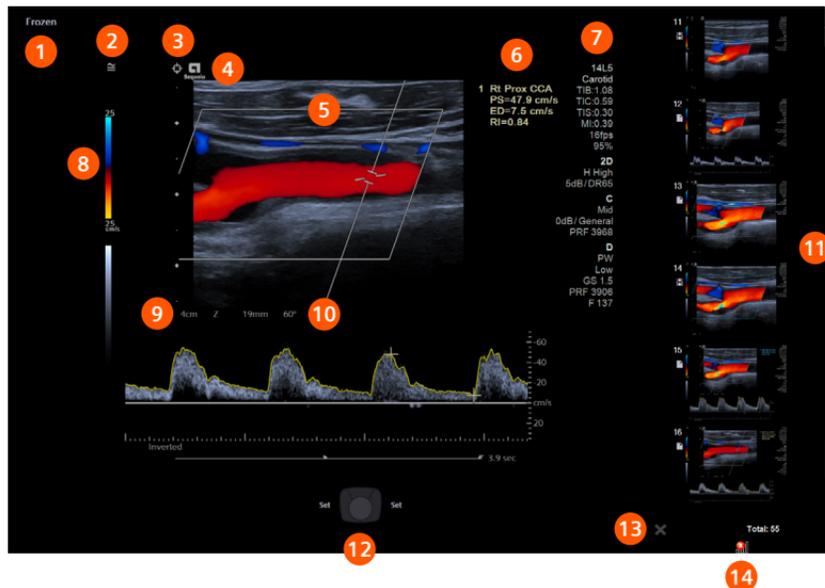
- 12. Forward/Backward
- 13. User-defined
- 14. Pointer
- 15. Delete
- 16. Text, Body Marker, Arrow
- 17. Caliper
- 18. Left/Right Set Keys
- 19. Update
- 20. Trackball
- 21. Clip
- 22. Image
- 23. Freeze
- 24. Dual
- 25. Zoom



# System Overview

## Monitor Screen Layout

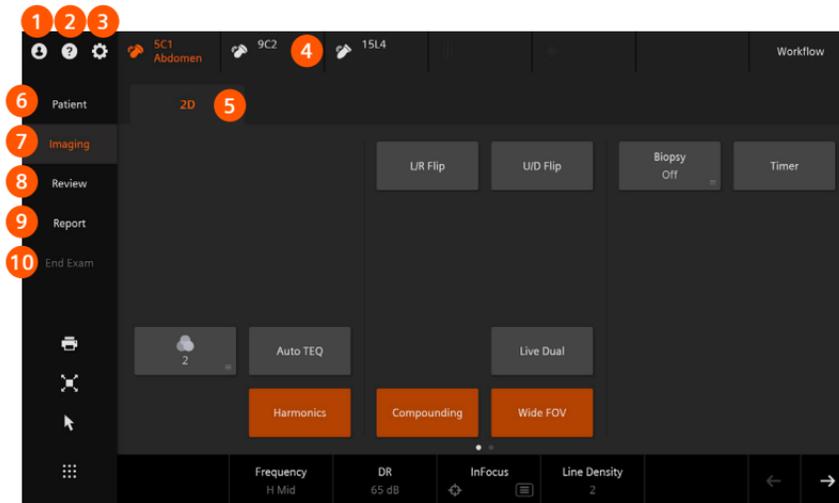
1. Imaging Status Indicator
2. Auto TEQ
3. InFocus
4. Orientation Marker
5. Image Display
6. Measured Results (Movable)
7. Imaging Parameters
8. Color Scale Indicator
9. Depth Indicator
10. Doppler Angle Indicator
11. Thumbnail Display
12. Trackball Functions
13. Delete Image
14. Status Icons



# System Overview

## Touch Screen Layout

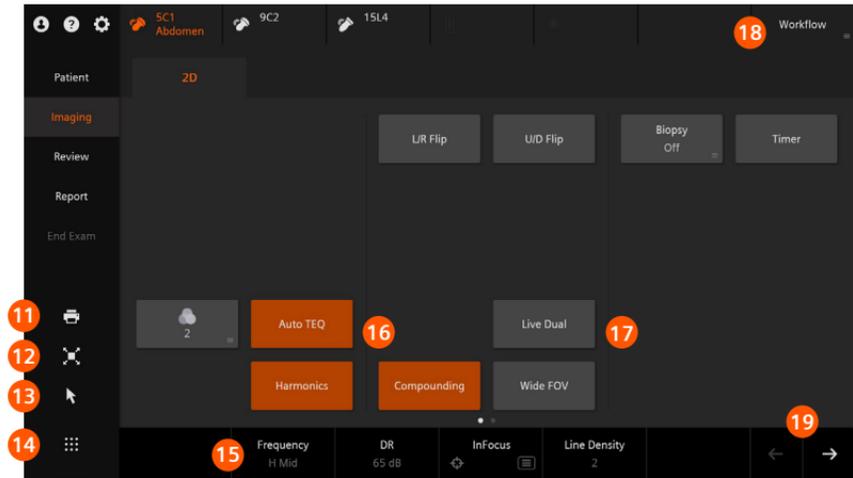
1. Login/Logoff
2. System User Manual
3. System Configuration
4. Transducers
5. Imaging Modes
6. Patient Registration
7. Imaging Menu
8. Review
9. Report
10. End Exam



# System Overview

## Touch Screen Layout

11. Print
12. Full Screen
13. Pointer
14. Additional Selections
15. Rotary Soft Keys
16. Orange Highlighting = Active Selection
17. Gray Highlighting = Available Selection
18. Workflow Applications
19. Page Navigation

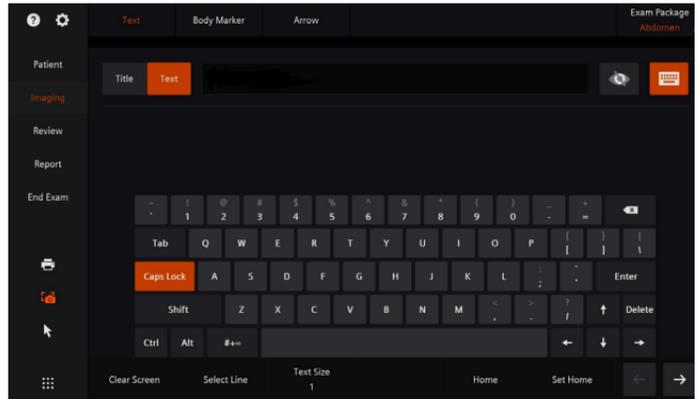


# System Overview

## Dual-option Keyboard



Retractable Keyboard



Digital Keyboard – To access, press **ABC** on the control panel and select the **Keyboard** icon.

# System Overview

## Connecting Transducers

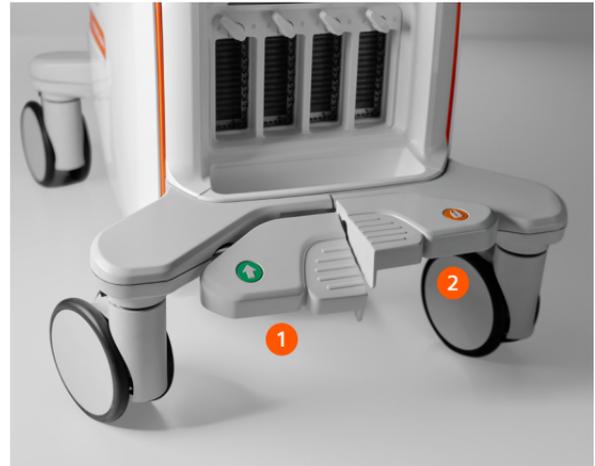
1. Ensure the lever lock is in the left unlocked position
2. Align the connector and press it into the transducer port (an audible click ensures the transducer is connected)
3. Place the lever into the right locked position



# System Overview

## Wheel Locks

1. Pressing the left pedal with the green arrow icon places the wheels in a swivel lock position to enable steering
2. To lock the wheels, press the right pedal with the orange key icon
3. Both pedals can be aligned to place the system in a neutral position to unlock the wheels



# Getting Started

## Patient Registration – Manual

### New Patient

1. On the touch screen, select **Patient**
2. Enter the patient information
3. Select Exam type
4. Select **Start Study**

Patient

### Pre-register

1. On the touch screen, select **Patient**
2. Enter the patient information
3. Select Exam type
4. Select **Pre-register** to add the patient to the worklist for later selection

Patient

---

**Tip:** Transducer and Exam can also be selected from the touch screen after patient registration by selecting the Imaging tab.

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# Getting Started

## Patient Registration – Worklist

Patient Registration

Local Database **Worklist** Paused Studies

Patient Name Patient ID Procedure Date & Time Accession No

Refresh Clear Worklist

Patient

Last Name  
First Name  
Middle Name  
Patient ID  
Date of Birth M D YYYY Age  
Gender  Male  Female  Other  
Units  Metric  English  
Height ft in  
Weight lb kg or  
BP / mmHg  
BSA

Institution

Institution Name  
Performing Physician  
Referring Physician  
Operator

Short Form

Exam

Exam  
Requested Procedure  
Request ID  
Accession No  
Comments

History

LMP M D YYYY Gravida  
DOC M D YYYY Aborta  
EDD M D YYYY Para  
Clinical Age weeks days Ectopics  
No. Fetuses

Start Study Preregister

3

2

4

# Getting Started

## Patient Registration – Worklist

1. Select Patient Patient
2. Select **Worklist** on the Imaging Screen, if necessary
3. Select the desired patient or search by Name, Procedure, Patient ID, etc.
4. Select **Start Study**



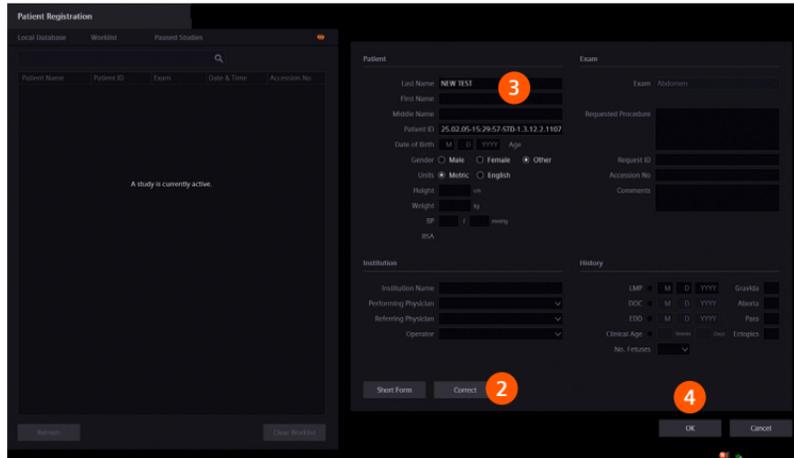
System must be connected to a HIS/RIS server to access patient worklist.

# Getting Started

## Edit Study

1. Select the **Patient** key
2. Select **Correct** on the image screen
3. Modify desired data fields
4. Select **OK**

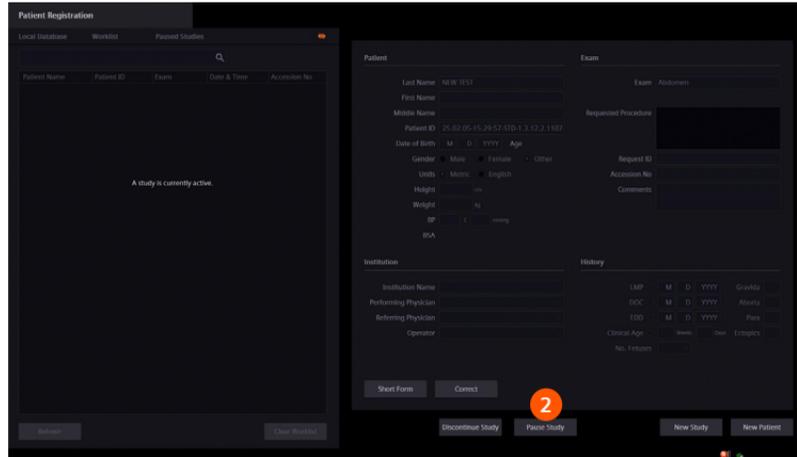
Patient



# Getting Started

## Pause Study

1. Select the **Patient** key 
2. Select **Pause Study** on the image screen



The screenshot displays the 'Patient Registration' interface. On the left, a table lists patients with columns for Patient Name, Patient ID, Exam, Date & Time, and Accession No. Below the table, a message states 'A study is currently active.' On the right, a detailed patient record is shown, including fields for Last Name, First Name, Middle Name, Patient ID, Date of Birth, Gender, Units, Height, Weight, BP, BSA, Institution Name, Performing Physician, Referring Physician, Operator, and Exam details like Exam, Accession, Requested Procedure, Request ID, and Comments. A red circle with the number '2' highlights the 'Pause Study' button at the bottom of the patient record section.

# Getting Started

## Resume Paused Study

1. Select the **Paused Studies** tab to see the exam
2. Select study
3. Select **Discontinue Study** or **Resume Study**

The screenshot displays the 'Patient Registration' interface. The 'Paused Studies' tab is selected, showing a table with the following data:

Patient Name	Patient ID	Exam	Date & Time	Accession No.
SMAR, SMAR	24.03.26.11.0	Amibion	3/26/2024 11:00	

The 'Patient' and 'Exam' details form is visible, containing fields for:

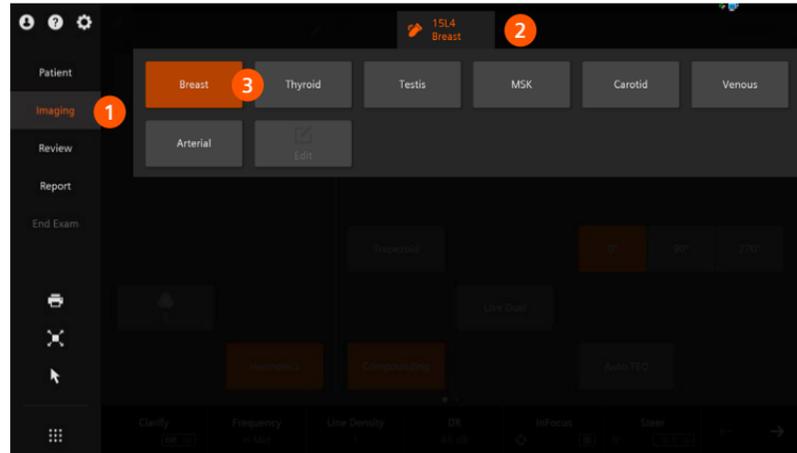
- Last Name, First Name, Middle Name, Patient ID
- Date of Birth (M, D, YYYY), Age
- Gender (Male, Female, Other)
- Links (Metic, English)
- Height (cm), Weight (kg)
- BP (mmHg), PWA
- Institution Name, Performing Physician, Referring Physician, Operator
- Exam, Requested Procedure, Request ID, Accession No., Comments
- History (IMP, M, D, YYYY, Gravidity, DDC, M, D, YYYY, Abortif, DDD, M, D, YYYY, Para, Clinical Age, Misc, Ectopic, No. Fetuses)

At the bottom of the form, there are buttons for 'Discontinue Study' and 'Resume Study', with a red circle and arrow pointing to the 'Resume Study' button.

# Getting Started

## Transducer/Study

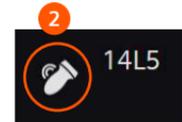
1. Select **Imaging**
2. Select the transducer on the touch screen
3. Select the desired Exam preset



# Getting Started

## Transducer Gesture Control

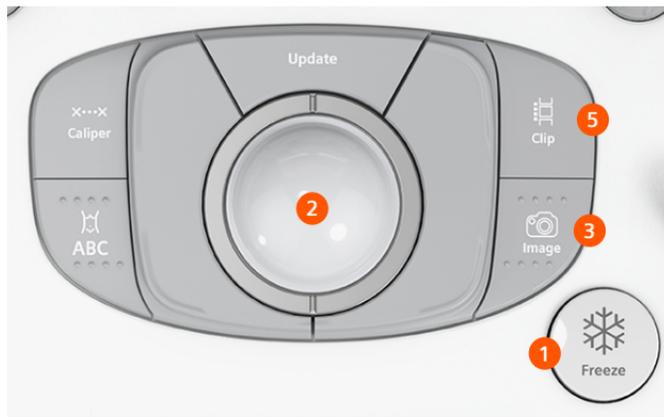
1. Transducer gesture control allows the transducer to be selected by double-tapping the handle →
2. Transducers with gesture control will display a semi-circular icon next to the transducer on the touch screen. The following transducers have gesture control capability:
  - 5C1
  - 9C2
  - 9C3
  - DAX
  - 7L2
  - 10L4
  - 14L5
  - 15L4
  - 18L6
  - 5V1
  - 7VC2
  - 9EC4
  - 9VE4
  - 10EV3
  - 11M2
  - HLX



# Getting Started

## Store, Print and Clip Store

1. Press **Freeze**
2. If desired, roll the trackball for frame-by-frame CINE review
3. Press **Image** to save a static image
4. Press the printer icon on the touch screen to save and print<sup>1</sup>
5. Press **Clip** to acquire and save a clip



<sup>1</sup> A compatible printer must be connected and assigned to the print function in the Configuration menu before using this selection.

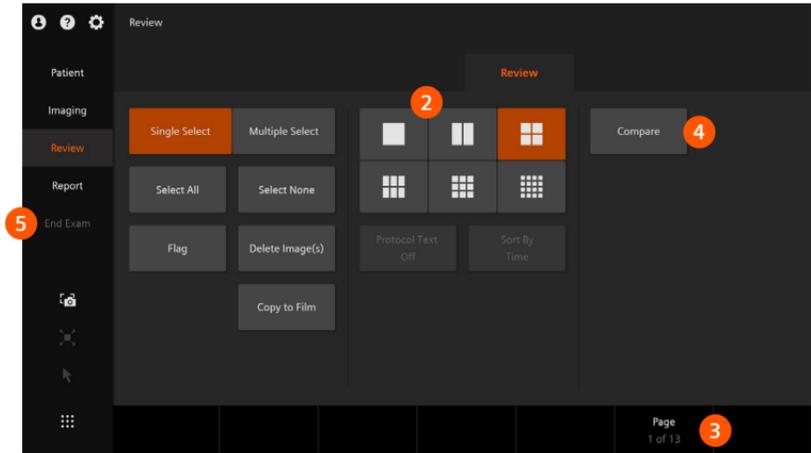
**Tip:** Clip Store length is adjustable on the touch screen during live scanning.

# Getting Started

## Review and End Exam

1. Select **Review**
2. Select the desired layout on the touch screen
3. Rotate **Page** to move between images
4. Select **Compare** to drag specific thumbnails into the review layout
5. Select **End Exam** to end the study

Review



# Getting Started

## Restart an Exam

1. Select Patient on the touch screen
2. Select Local Database
3. Select to highlight patient study from list
4. Select Append Study

The screenshot displays the 'Patient Registration' interface. On the left, a table lists patients with columns for Patient Name, Patient ID, Exam, Date & Time, and Accession No. The first row is highlighted, and a red circle '2' is placed over the 'Local Database' tab. A red circle '3' is placed over the first row in the table. On the right, a form for patient details is visible, including fields for Last Name, First Name, Middle Name, Patient ID, Date of Birth, Gender, Ethnicity, Height, Weight, BP, BSA, Institution Name, Performing Physician, Referring Physician, Operator, and Exam. A red circle '4' is placed over the 'Append Study' button at the bottom right.

Patient Name	Patient ID	Exam	Date & Time	Accession No.
✓ JOHN DOER	24.01.26.11.G...	Abdomen	2020/02/24 11:0...	
✓ ACUSON Sequa...	06	00	2/20/2024 08:2...	00
✓ ACUSON Sequa...	01	00	2/20/2024 08:2...	00
✓ ACUSON Sequa 1...	01	00	2/20/2024 08:2...	00
✓ ACUSON Sequa...	01	00	2/20/2024 08:2...	00
✓ JC DAX SWE	24.02.08.20.4...	Abdomen	28/2/2024 08:43...	
✓ CTABML2012.4.5...	Anonymous		28/2/2024 08:28...	
✓ CTABML2012.4.5...	Anonymous		28/2/2024 08:25...	
✓ TEST	24.02.08.20.2...		28/2/2024 08:24...	
✓ TEST MC	24.02.08.20.1...		28/2/2024 08:19...	
✓ TEST MC	24.02.08.20.1...		28/2/2024 08:15...	
✓ TEST CV REPORT	24.02.08.19.2...		28/2/2024 07:52...	
✓ CV REPORT	24.02.08.19.4...	Cardiac	28/2/2024 07:42...	
✓ CV REPORT	24.02.08.19.4...	Cardiac	28/2/2024 07:40...	
✓ TESTOLE FEB 8 BA...	24.02.08.11.4...		28/2/2024 11:43...	
✓ RP	24.02.07.17.0...		27/2/2024 05:06...	
✓ GR	24.02.07.14.0...		27/2/2024 02:03...	
✓ DB DAX	24.02.07.11.2...	Abdomen	27/2/2024 11:26...	
✓ DC DAX	24.02.07.09.2...	Abdomen	27/2/2024 09:21...	
✓ TEST1_DAY1	24.02.01.11.3...		21/2/2024 11:33...	
✓ TEST14_DAY2	24.01.31.13.5...		13/1/2024 01:5...	
✓ TEST1_DAY2	24.01.31.09.1...		13/1/2024 09:1...	
✓ TEST15E_DAY1	24.01.30.12.4...		11/20/2024 12:4...	
✓ TEST1_DAY1	24.01.30.10.2...		11/20/2024 10:2...	
✓ TEST1_DAY1	24.01.29.08.4...		11/20/2024 08:4...	

# Getting Started

## Restart an Exam

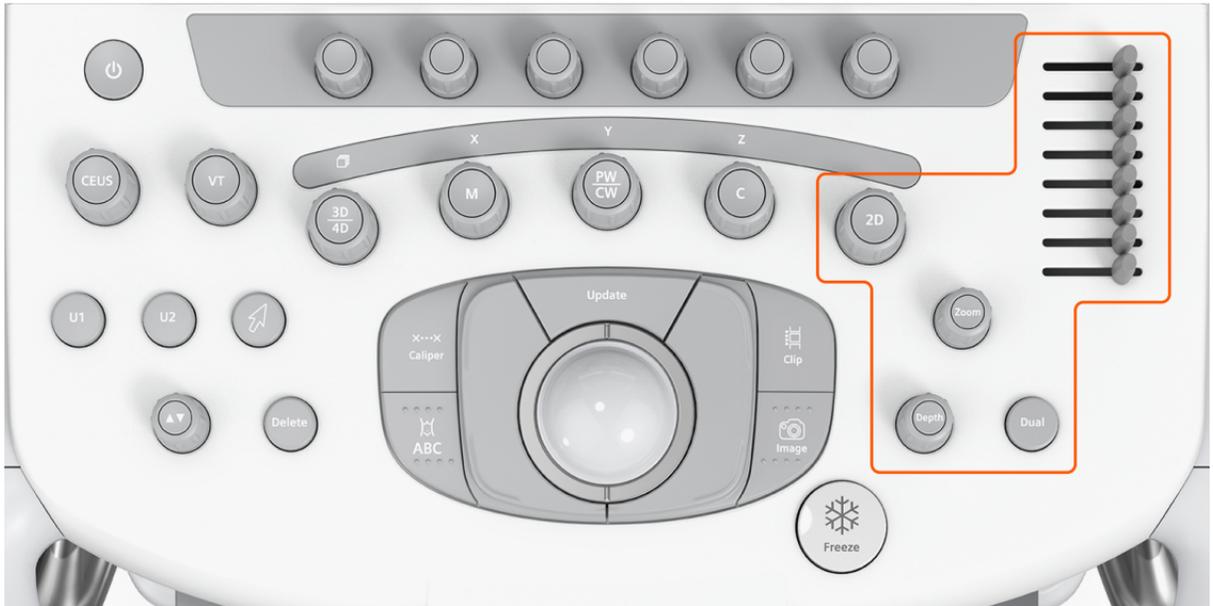
### 5. Select Start Study

The screenshot displays the 'Patient Registration' application interface. On the left, there is a 'Worklist' table with columns for Patient Name, Patient ID, Exam, Date & Time, and Accession No. Below the table, a message reads 'Click Cancel to select a different patient or study.' At the bottom of the worklist are 'Refresh' and 'Clear Worklist' buttons. On the right, the 'Patient' and 'Exam' forms are visible. The 'Patient' form includes fields for Last Name, First Name, Middle Name, Patient ID, Date of Birth (with month, day, and year dropdowns), Age, Gender (Male, Female, Other), Units (Metric, English), Height (cm), Weight (kg), BP (mmHg), and BSA. The 'Exam' form includes an Exam dropdown, Requested Procedure, Request ID, Accession No., and Comments. Below these forms are 'Institution' fields (Institution Name, Performing Physician, Referring Physician, Operator) and 'History' fields (LMP, DOC, LDD, Clinical Age, No. Fetuses, Gravida, Aborta, Para, Ectopics). At the bottom right, there are 'Start Study' and 'Cancel' buttons. A red circle with the number '5' is overlaid on the 'Start Study' button.

**Tip:** Images, clips and volumes can be added to a closed study within 24 hours.

# 2D and M-mode

## Control Panel



# 2D and M-mode

## Control Panel

2D Control Panel Controls	Function
2D	<p><i>Enters/exits 2D mode or adjusts overall 2D gain/brightness</i></p> <p>Rotate to adjust overall gain</p>
DGC	<p><i>Manually adjusts gain/brightness at depth</i></p> <p>Default all slide pots in the center, slide pot(s) to increase/decrease brightness</p>
Zoom	<p><i>Magnifies the image</i></p> <p>Rotate to increase or decrease image magnification</p> <p>Press to activate ROI (region of interest) for magnification and increased frame rate (HD Z)</p> <p>When activated while using color, the system enters HD Zoom with the image to the selected size and a 10% 2D border around the color box</p> <p><b>Note:</b> Zoom available on live and frozen image</p>

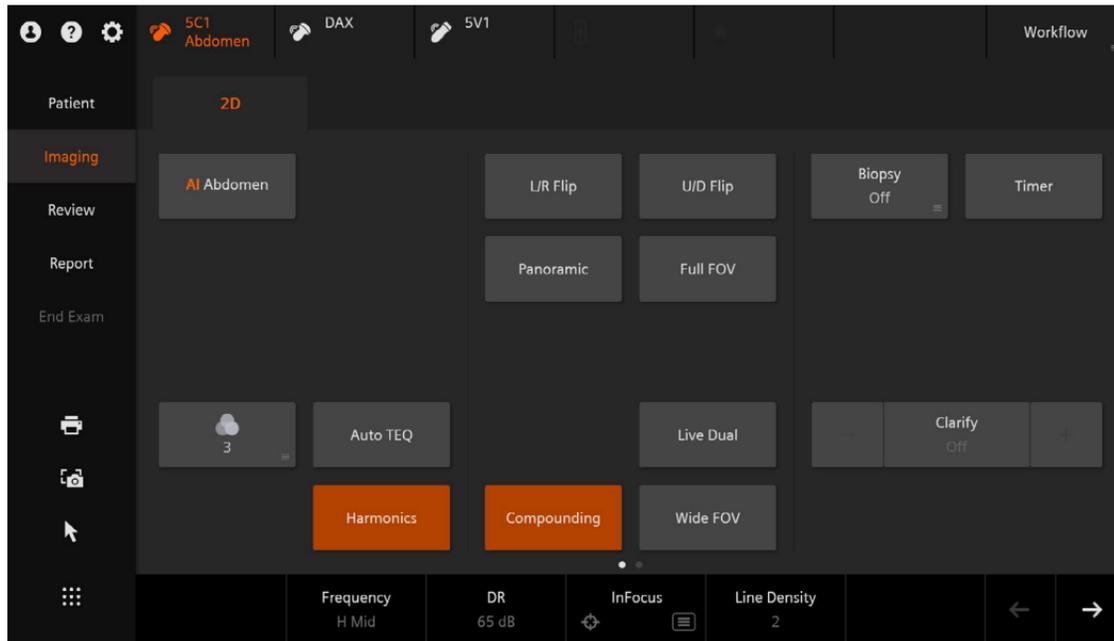
# 2D and M-mode

## 2D Control Panel

2D Control Panel Controls	Function
Depth	<i>Adjusts the scanning depth</i> Rotate to adjust depth
Dual	<i>Displays two separately acquired images side by side</i> Press <b>Dual</b> to activate and use update to toggle between images Press the <b>Dual</b> key to exit
2D Sector Width	<i>Increases the line density/frame rate</i> Press <b>Set</b> key and roll trackball to size sector Press <b>Set</b> key and roll trackball to position Press <b>Set</b> key to Set Press <b>Full FOV</b> on touch screen to return to the full field of view <b>Note:</b> Not available on linear transducers

# 2D and M-mode

## 2D Touch Screen

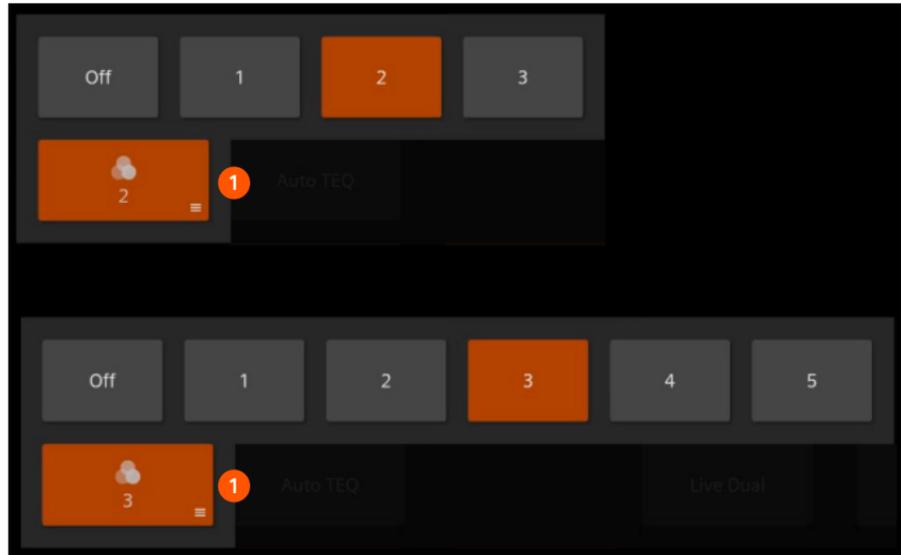


# 2D and M-mode

## UltraArt

UltraArt allows the user to select preferred image parameter settings by choosing an image from four to six choices before they are applied, depending upon which transducer is selected

1. Select **UltraArt** to choose from available options



# 2D and M-mode

## 2D Touch Screen

2D Controls	Function
UltraArt	<p><i>Allows the user to select preferred image parameter settings by choosing an image from several choices before they are applied</i></p> <p>Settings are Off, 1, 2, 3 or Off, 1, 2, 3, 4, 5 depending on which transducer is activated</p> <p><b>Note:</b> Available on live and frozen images</p>
Harmonics	<p><i>Increases contrast and lateral resolution, reduces noise and clutter</i></p> <p>Select to activate/deactivate</p> <p><b>Note:</b> Available in live imaging only</p>
Compounding	<p><i>Enhances contrast resolution and boundary detection</i></p> <p>Select to activate/deactivate</p> <p>Adjust compounding level by rotating the Line Density soft key</p> <p><b>Note:</b> Available in live imaging only</p>
Trapezoid	<p><i>Displays linear or trapezoid image format</i></p> <p>Select to activate/deactivate</p> <p><b>Note:</b> Available in live imaging only, available on linear transducers only</p>

## 2D and M-mode

### 2D Touch Screen

2D Controls	Function
Live Dual	<p><i>Activates two simultaneous images in dual format</i></p> <p>Select to activate/deactivate</p> <p>Press <b>C (color Doppler)</b> to display color Doppler on one of the images</p> <p><b>Note:</b> Available on live and frozen images</p>
Auto TEQ	<p><i>Automatically and continuously optimizes gain, DGC and suppresses noise in real-time</i></p> <p>Select to activate/deactivate</p>
U/D and R/L Flip	<p><i>Adjusts orientation on the image screen</i></p> <p>Select to activate/deactivate</p> <p><b>Note:</b> Available on live and frozen images</p>
Speed of Sound	<p><i>Changing the sound speed per body type or pathology improves spatial and contrast resolution</i></p> <p>Select to choose level</p> <p><b>Note:</b> Speed of Sound settings and adjustability is preset- and transducer-dependent</p>

## 2D and M-mode

### 2D Touch Screen

<b>2D Controls</b>	<b>Function</b>
<b>Capture Type and Clip Length</b>	<i>Selects the type and length of clip capture</i> Select prospective or retrospective capture and clip length
<b>Timer</b>	<i>Displays a count-up timer in the lower right corner of the imaging screen</i> Select to activate/deactivate
<b>Biopsy</b>	<i>Enables biopsy needle guide function with angle selection</i> Select to activate and choose from available angles (1–5, A & B)
<b>Image Size</b>	<i>Adjusts the size of the displayed image on the monitor</i> Select to choose size (1–5)
<b>Wide FOV</b>	<i>Increases field of view from 70° to 100° on the 5C1 transducer, and 85° to 130° on the 11M2 transducer</i>

# 2D and M-mode

## 2D Touch Screen

### 2D Controls

### Function

#### Clarify VE (Clarify Vascular Enhancement technology)

*Decreases artifacts, increases contrast resolution and boundary detection in structures with blood flow*

To activate/deactivate, select **Clarify** on the touch screen

Rotate the Clarify control to adjust Clarify sensitivity levels:  
(Selections are 1–5)

Select a higher level to increase sensitivity

Select a lower level to decrease sensitivity

**Note:** Available in live imaging only

#### Needle Enhancement

*Improves the visualization of a needle during special procedures*

To activate/deactivate, select the **needle enhancement** icon from the touch screen



**Note:** Available in trapezoid mode; available in live imaging only; not available in Biopsy mode

# 2D and M-mode

## Panoramic Imaging

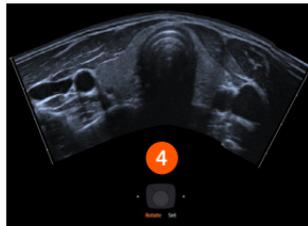
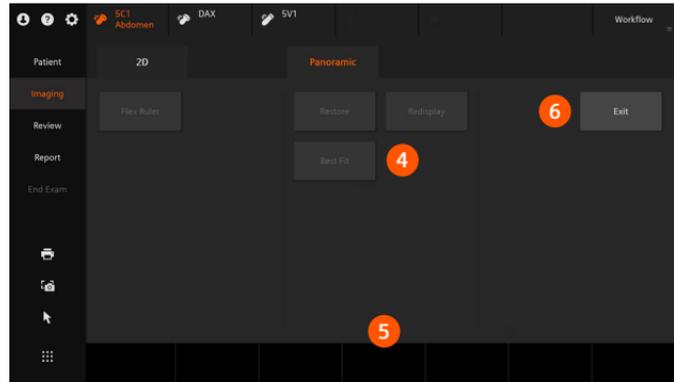
1. Select **Panoramic** on the touch screen
2. Press the **Update** key to start the acquisition
3. Move the transducer in the long-axis and press **Freeze** to end acquisition; press **Unfreeze** to reactivate the acquisition or press the **Update** key to Pause/Continue as desired



# 2D and M-mode

## Panoramic Imaging

4. Use Panoramic review controls after completing the acquisition to size, rotate, pan, zoom or measure the image
5. Use the **Cine** rotary control to recall single frames for review
6. Select **Exit** to exit Panoramic imaging



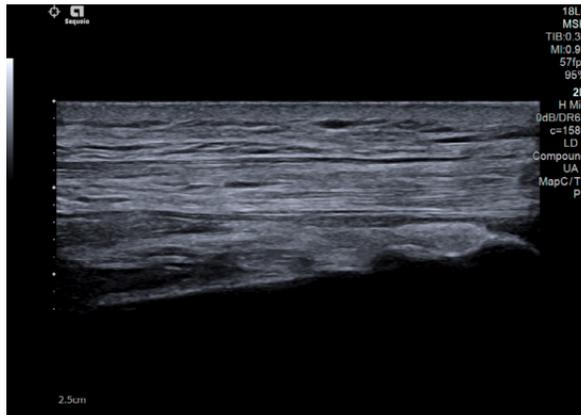
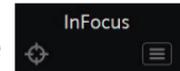
**Tip:** Available with Power Doppler.

# 2D and M-mode

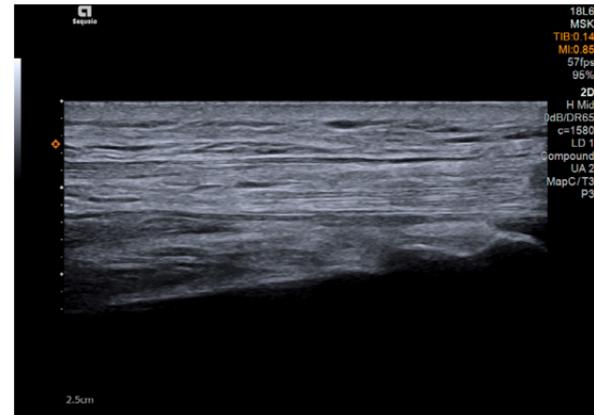
## InFocus

InFocus technology dynamically focuses the image at all depths, resulting in improved contrast resolution, lateral resolution and image uniformity.

Press the **InFocus** soft key on the touch screen to activate adjustable focal zones.



InFocus On



InFocus Off

# 2D and M-mode

## 2D Soft Keys

2D Controls	Function
InFocus/Focal Zones	<p><i>Dynamically focuses the image at all depths, resulting in improved contrast resolution, lateral resolution and image uniformity</i></p> <p>Press the <b>InFocus</b> soft key to activate adjustable focal zones</p> <p>Rotate to adjust focal zone position</p>
Frequency	<p><i>Balances between resolution and penetration</i></p> <p>Use a higher frequency range for increased resolution</p> <p>Use a lower frequency range to increase penetration</p> <p><b>Note:</b> Available in live imaging only</p>
Line Density	<p><i>Enhances contrast resolution and boundary detection</i></p> <p>Rotate to increase/decrease level of compounding when compounding is enabled</p> <p>Rotate to balance between resolution and frame rate when compounding is disabled</p> <p><b>Note:</b> Available in live imaging only</p>

# 2D and M-mode

## 2D Soft Keys

2D Controls	Function
DR (Dynamic Range)	<p><i>Adjusts number of gray shades displayed</i></p> <p>Rotate clockwise for a softer/grayer image Rotate counterclockwise for more contrast</p> <p><b>Note:</b> Available on live and frozen images</p>
Steer	<p><i>Steers the field of view (FOV)</i></p> <p>Rotate to steer left, center or right</p> <p><b>Note:</b> Available in live imaging only, available on linear transducers only</p>
Transmit Power	<p><i>Adjusts the level of acoustic energy delivered to the patient</i></p> <p>Rotate to increase/decrease (applies to all active imaging modes)</p> <p><b>Note:</b> Available in live imaging only, changes mechanical and thermal indices</p>

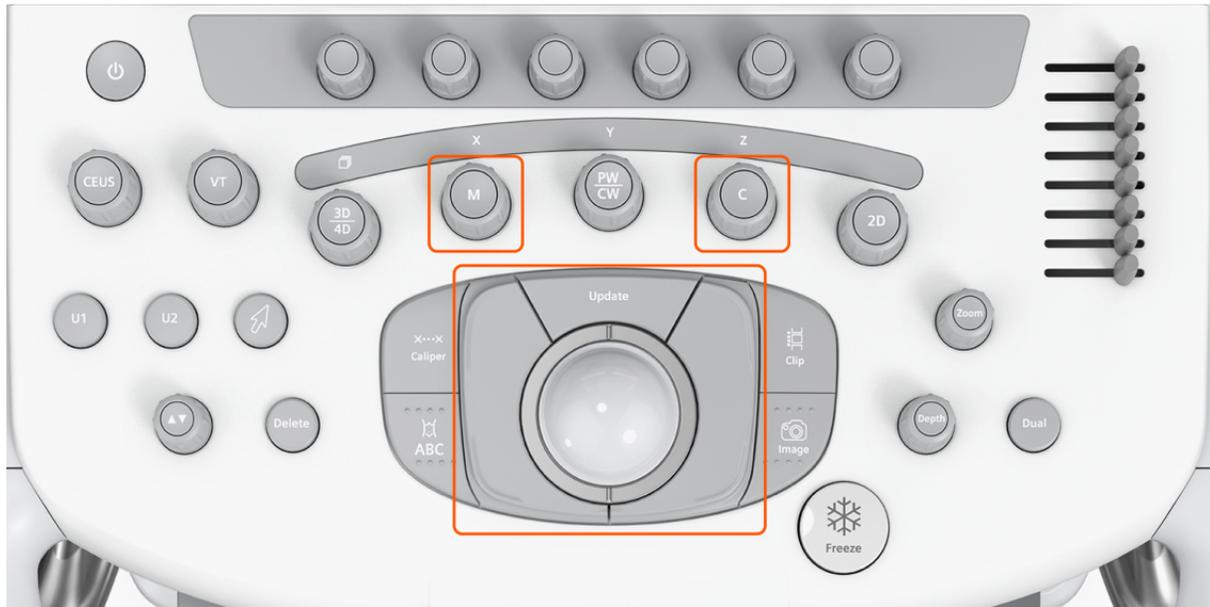
# 2D and M-mode

## 2D Soft Keys

2D Controls	Function
Persist (Persistence)	<p><i>Frame averaging – determines the number of frames combined into the final image</i></p> <p>Rotate clockwise to increase frame averaging            Rotate counterclockwise to demonstrate motion</p>
Maps	<p><i>Selects a processing curve that assigns echo amplitudes to gray shades</i></p> <p>Rotate to select desired map</p> <p><b>Note:</b> Available on live and frozen images</p>
Tint	<p><i>Colorizes the gray-scale image</i></p> <p>Rotate to select desired tint</p> <p><b>Note:</b> Available on live and frozen images</p>

## 2D and M-mode

### M-mode Control Panel



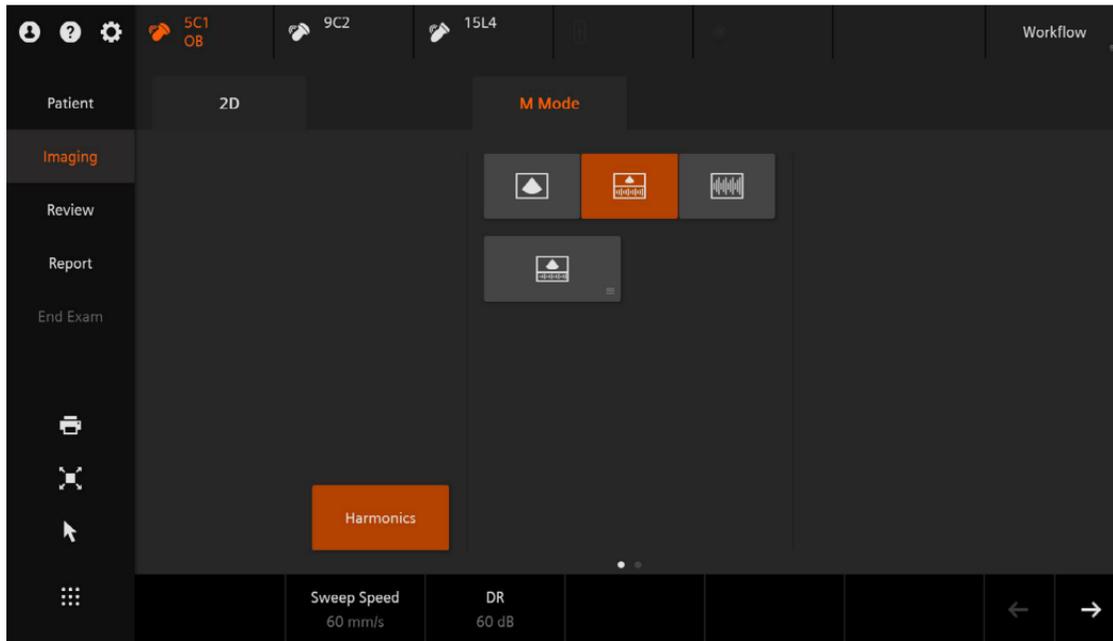
# 2D and M-mode

## M-mode Control Panel

M-mode Controls	Function
M (M-mode)	<p><i>Enters/exits M-mode or adjusts overall M-mode gain</i></p> <p>Press to activate/deactivate            Rotate to adjust overall M-mode gain            Roll trackball to position M-line</p> <p><b>Note:</b> Available in live imaging only</p>
M-mode Cursor	<p><i>Adjusts the size or position of the M-mode cursor</i></p> <p>Press the left or right <b>Set</b> keys to move between modes</p> <p><b>Note:</b> Available in live imaging only</p>
Color M-mode	<p><i>Enters/exits color M-mode</i></p> <p>With color Doppler (<b>C</b>) activated, press <b>M</b> (M-mode)            Position M-line and Press <b>M</b>            Press <b>M</b> to exit</p> <p><b>Note:</b> Only available with cardiac transducers</p>

# 2D and M-mode

## M-mode Touch Screen



# 2D and M-mode

## M-mode Touch Screen

M-mode Controls	Function
Full Screen Trace/ Split Screen Trace/ Full Screen 2D	<i>Changes the M-mode display format</i> Select the desired format to activate
Harmonics	<i>Increases contrast and lateral resolution, reduces noise and clutter</i> Select to activate/deactivate <b>Note:</b> Available in live imaging only
Edge	<i>Sharpens the appearance of the M-mode sweep</i> Increase for more sharpness Decrease for less sharpness

# 2D and M-mode

## M-mode Soft Keys

M-mode Touch Screen Controls	Function
Frequency	<p><i>Balances between resolution and penetration</i></p> <p>Use higher frequency range for increased resolution Use lower frequency range to increase penetration</p> <p><b>Note:</b> Available in live imaging only</p>
Maps	<p><i>Selects a processing curve that assigns echo amplitudes to gray shades in the M-mode sweep</i></p> <p>Rotate to select desired map</p> <p><b>Note:</b> Available on live and frozen images</p>
Tint	<p><i>Colorizes the M-mode sweep</i></p> <p>Rotate to select desired tint</p> <p><b>Note:</b> Available on live and frozen images</p>

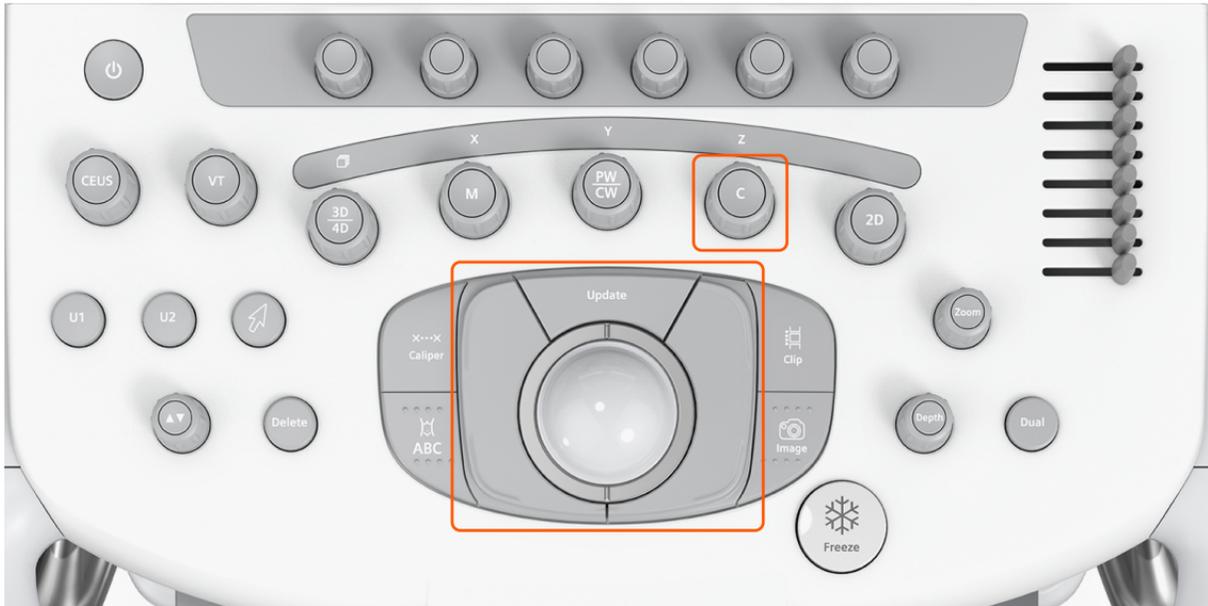
# 2D and M-mode

## M-mode Soft Keys

M-mode Touch Screen Controls	Function
DR (Dynamic Range)	<p><i>Adjusts the number of gray shades displayed in the M-mode sweep</i></p> <p>Rotate clockwise for a softer/grayer sweep            Rotate counterclockwise for more contrast</p> <p><b>Note:</b> Available on live and frozen images</p>
Sweep Speed	<p><i>Adjusts the scrolling speed of the M-mode sweep</i></p> <p>Increase to display fewer cardiac cycles            Decrease to display more cardiac cycles</p> <p><b>Note:</b> Available on live and frozen images</p>
Angle	<p><i>Views the M-mode sweep based on patient anatomy, independent of transducer orientation, utilizing angle rotation</i></p> <p>Rotate to adjust angle</p> <p><b>Note:</b> Available only on cardiac transducers</p>

# Color and Spectral Doppler

## Color Doppler Control Panel



# Color and Spectral Doppler

## Color Doppler Control Panel

Color Doppler Controls	Function
C (Color Doppler)	<p><i>Enters/exits color Doppler or adjusts overall color Doppler gain</i></p> <p>Press to activate/deactivate color Doppler mode</p> <p>Rotate to increase/decrease color Doppler gain</p> <p><b>Note:</b> Available in live imaging only</p>
Color Box Size/Position	<p><i>Adjusts the color ROI</i></p> <p>Increase the frame rate by decreasing the color ROI width or depth</p> <p>Press the <b>Set</b> to alternate between <b>Size/Position</b></p> <p>Roll the trackball to resize or reposition the color ROI</p> <p><b>Note:</b> Available in live imaging only</p>

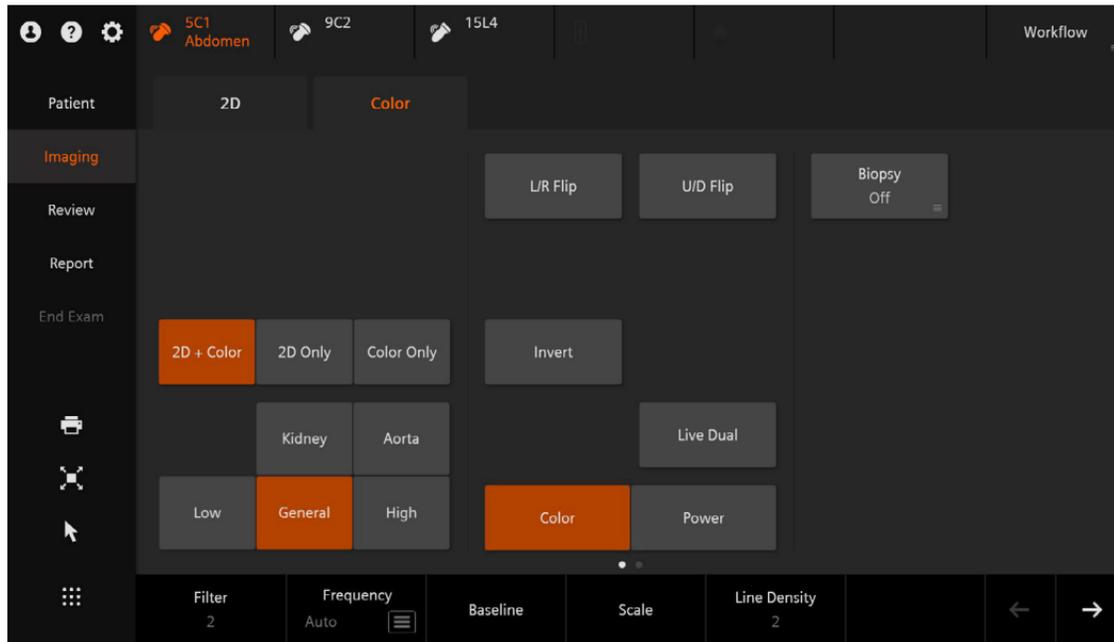
# Color and Spectral Doppler

## Color Doppler Control Panel

Color Doppler Controls	Function
Reduce FOV	<p>Narrows the lateral 2D image just to the outside of the color Doppler region of interest</p> <p>Select <b>Color</b> control on the control panel</p> <p>Select <b>Reduce FOV</b> on the touch screen to activate/deactivate; the imaging depth will not be affected</p> <p><b>Note:</b> Available on cardiac presets only</p>
Color Doppler with Zoom	<p>Automatically zooms to the color Doppler region of interest in HD Zoom mode</p> <p>Turn on <b>Color Doppler</b> and position the ROI</p> <p>Press the Zoom control on the control panel</p> <p>The image will enter HD Zoom and narrow the 2D image just to the outside of the color Doppler region of interest; the imaging depth will be at the level of the color ROI</p> <p><b>Note:</b> Available on cardiac presets only</p>

# Color and Spectral Doppler

## Color Doppler Touch Screen



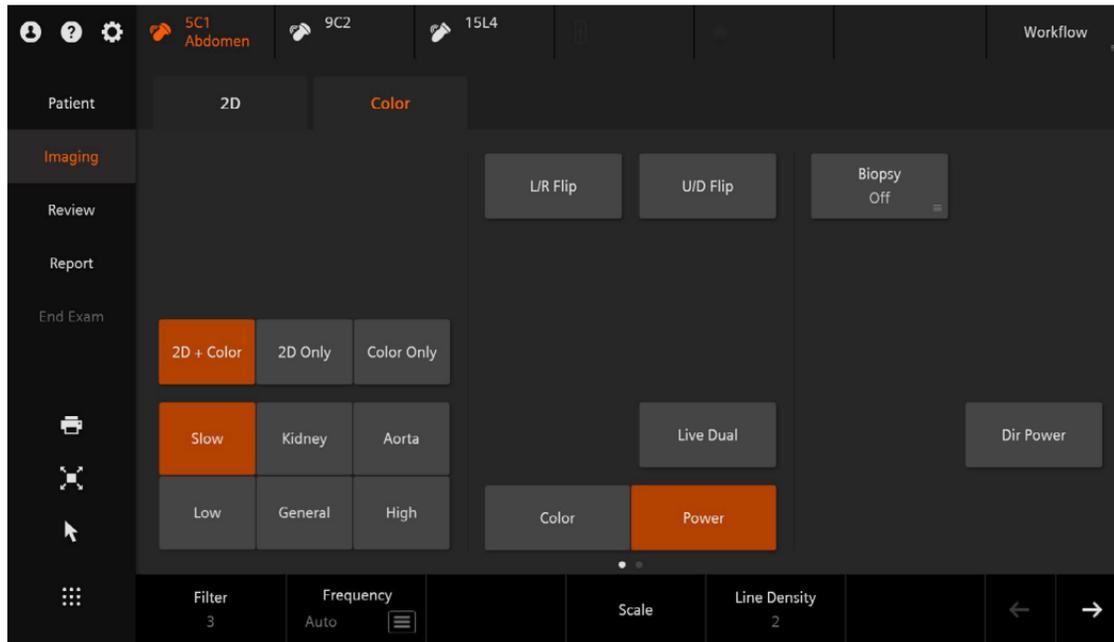
# Color and Spectral Doppler

## Color Doppler Touch Screen

Color Doppler Controls	Function
Color and Power	<p><i>Alternates between color and power Doppler modes</i></p> <p>Select <b>Color</b> to apply colors based on velocity and direction of flow            Select <b>Power</b> to apply colors based on flow amplitude</p> <p><b>Note:</b> Available in live imaging only</p>
Color Display Modes	<p><i>Turns color display or 2D image off when in color Doppler mode</i></p> <p>Select to activate desired format</p>
Invert	<p><i>Reverses the colors depicting forward and reverse flow in the color ROI and the color bar</i></p> <p>Select to activate/deactivate</p> <p><b>Note:</b> Available on live and frozen images</p>
DTI (Doppler Tissue imaging capability)	<p><i>Activates the Doppler Tissue imaging feature for cardiac exams</i></p> <p>Select to activate/deactivate</p> <p><b>Note:</b> Available in Spectral Doppler and in live imaging</p>

# Color and Spectral Doppler

## Power Doppler Touch Screen



# Color and Spectral Doppler

## Power Doppler Touch Screen

Color Doppler Controls	Function
Live Dual	<p><i>Displays two live images side by side with and without color Doppler</i></p> <p>Select to activate/deactivate</p> <p><b>Note:</b> Available on live and frozen images</p>
Directional Power	<p><i>Applies color based on flow amplitude and direction of flow (towards or away from the transducer)</i></p> <p>Select <b>Dir Power</b> to activate/deactivate when the <b>Power</b> menu is active</p>
Color Doppler Flow Presets	<p><i>Color Doppler parameter optimization for specific flow types or anatomy-specific applications</i></p> <p>Select from Low, General, High and a variety of anatomy-specific settings (e.g. Kidney, Aorta, Ovary); a "Slow" selection is available in power Doppler and Directional power Doppler dependent upon the transducer and preset selected</p>

# Color and Spectral Doppler

## Color Doppler Soft Keys

Color Doppler Controls	Function
Frequency	<i>Balances between resolution and penetration independent of the 2D frequency</i>
	<p>Use a higher frequency range for increased resolution</p> <p>Use a lower frequency range to increase penetration</p> <p>Select <b>Manual</b> to manually change frequency</p> <p>Select <b>Auto</b> to have the system automatically change frequency based on the color Doppler ROI depth position</p> <p><b>Note:</b> Available on live image only; Auto Color availability is transducer- and preset-dependent</p>
Maps	<i>Selects a processing curve that assigns the velocity/velocity variance (Color) or flow amplitudes (Power) to a range of colors</i>
	<p>Rotate to select desired map</p> <p><b>Note:</b> Available on live and frozen images</p>

# Color and Spectral Doppler

## Color Doppler Soft Keys

Color Doppler Controls	Function
	<i>Adjusts the level of acoustic energy delivered to the patient in color Doppler mode</i>
<b>Tx Power (Transmit Power)</b>	Rotate clockwise to increase power Rotate counterclockwise to decrease power <b>Note:</b> Available in live imaging only, changes mechanical and thermal indices
	<i>Adjusts spatial averaging (smoothing) for color flow</i>
<b>Smooth</b>	Increase for flow sensitivity Decrease for color spatial resolution <b>Note:</b> Available in live imaging only

# Color and Spectral Doppler

## Color Doppler Soft Keys

Color Doppler Controls	Function
Scale	<p><i>Adjusts the pulse repetition frequency (PRF)</i></p> <p>Rotate clockwise to increase PRF Rotate counterclockwise to decrease PRF</p> <p><b>Note:</b> Available on live and frozen images</p>
Baseline	<p><i>Adjusts the range of flow velocities displayed above and below the baseline</i></p> <p>Rotate to adjust the baseline of the active mode</p>
Priority	<p><i>Prioritizes the display of grayscale or color flow data</i></p> <p>Increase for greater vessel color fill Decrease to prioritize grayscale and less vessel color fill</p>
Steer	<p><i>Adjusts the color Doppler ROI angle</i></p> <p>Rotate or push to adjust the steering angle</p> <p><b>Note:</b> Available in live imaging only, available on linear transducers only; not available in Trapezoid mode</p>

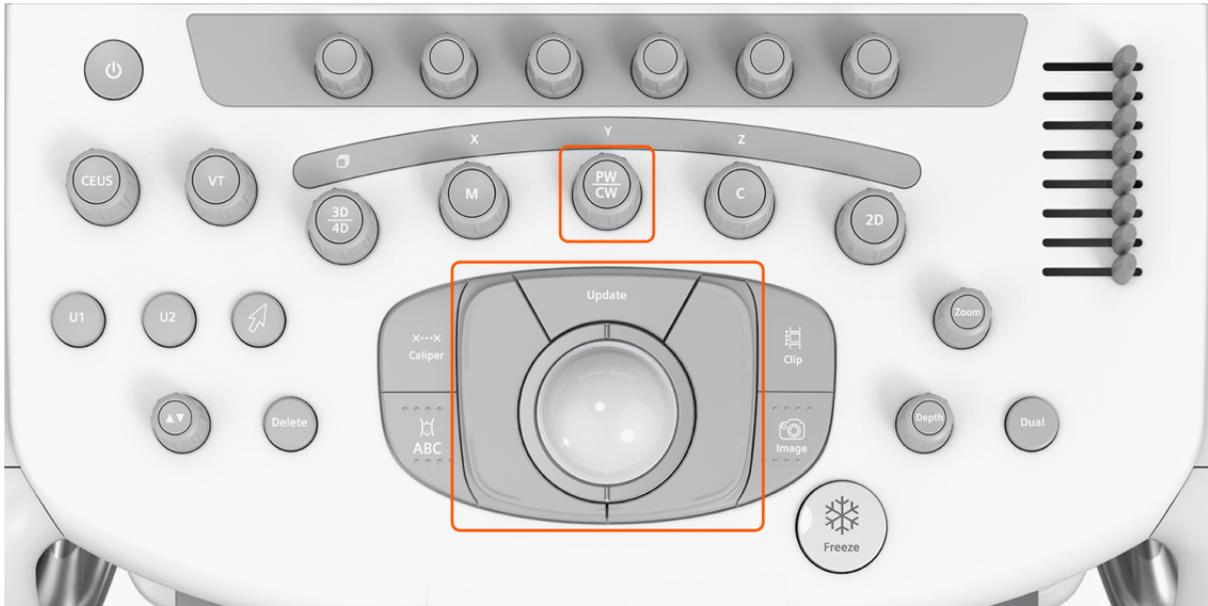
# Color and Spectral Doppler

## Color Doppler Soft Keys

Color Doppler Controls	Function
Persist (Persistence)	<p><i>Adjusts the time that the color flow data remains in the ROI before being replaced by another color</i></p> <p>Increase for greater vessel color fill Decrease to increase temporal resolution</p> <p><b>Note:</b> Available in live imaging only</p>
Filter	<p><i>Adjusts the color wall filter</i></p> <p>Increase to reduce motion artifacts Decrease to increase sensitivity to low flow states</p> <p><b>Note:</b> Available in live imaging only</p>

# Color and Spectral Doppler

## Spectral Doppler Control Panel



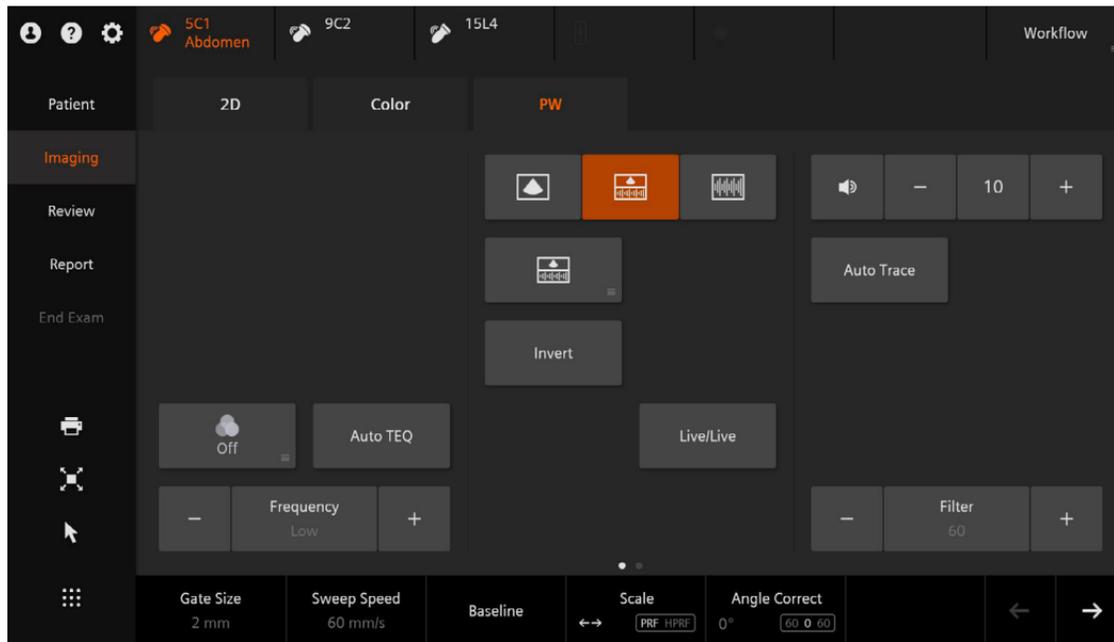
# Color and Spectral Doppler

## Spectral Doppler Control Panel

<b>Spectral Doppler Controls</b>	<b>Function</b>
<b>PW (pulsed wave) Doppler and CW (continuous wave) Doppler</b>	<i>Enters/exits spectral Doppler or adjusts overall spectral Doppler gain</i> Press to enter/exit Roll trackball to position Doppler gate Press <b>PW/CW</b> to activate the strip Rotate <b>PW/CW</b> to adjust overall spectral Doppler gain
<b>Update</b>	<i>Alternates between the Doppler spectrum and the 2D image</i> Press once to alternate between Doppler/2D <b>Note:</b> Available in live imaging only

# Color and Spectral Doppler

## Spectral Doppler Touch Screen



# Color and Spectral Doppler

## Spectral Doppler Touch Screen

<b>Spectral Doppler Controls</b>	<b>Function</b>
UltraArt	<p><i>Allows the user to select preferred Doppler display settings</i></p> <p>Settings are Off, 1, 2 and 3</p> <p><b>Note:</b> Available on live and frozen images</p>
Full Screen Trace/ Split Screen Trace/ Full Screen 2D	<p><i>Changes the spectral Doppler display format</i></p> <p>Select the desired format to activate</p>
Invert	<p><i>Reverses the Doppler spectrum (negative values display above the baseline)</i></p> <p>Select to activate/deactivate</p> <p><b>Note:</b> Available on live and frozen images</p>

# Color and Spectral Doppler

## Spectral Doppler Touch Screen

Spectral Doppler Controls	Function
Auto Trace	<p><i>Automatic tracing and display of PW Doppler measurements</i></p> <p>Select to activate/deactivate</p> <p>Select settings for data above, below or on both sides of the baseline</p> <p><b>Note:</b> Available on live and frozen images</p>
Sensitivity	<p>Allows the user to adjust the sensitivity of the Auto Trace in case it tracks slightly above or below the actual waveform</p> <ol style="list-style-type: none"><li>1. Activate Auto Trace and acquire the trace</li><li>2. Settings are from 1–20 (10 is the default)</li><li>3. Press the “-” or “+” to increase/decrease the sensitivity level on the touch screen</li><li>4. Increasing the sensitivity places the trace at a higher velocity and decreasing the trace at a lower velocity</li></ol>

# Color and Spectral Doppler

## Spectral Doppler Touch Screen

Spectral Doppler Controls	Function
Auto TEQ	<p><i>Optimizes spectral Doppler gain, baseline, scale and dynamic range automatically on freeze</i></p> <p>With Doppler spectrum active, select to activate/deactivate</p> <p><b>Note:</b> Available in live imaging only</p>
Live/Live (Triplex)	<p><i>Displays both the 2D image and spectral Doppler tracing in real-time</i></p> <p>Select to activate/deactivate</p> <p><b>Note:</b> Available in live imaging only</p>
Edge	<p><i>Sharpens the appearance of the Doppler sweep</i></p> <p>Increase for more sharpness</p> <p>Decrease for less sharpness</p>
Volume	<p><i>Adjusts the volume of the Doppler function</i></p> <p>Press + or - to adjust the level</p>

# Color and Spectral Doppler

## Spectral Doppler Touch Screen

<b>Spectral Doppler Controls</b>	<b>Function</b>
<b>Frequency</b>	<p><i>Balances between resolution and penetration independent of the 2D frequency or color frequency</i></p> <p>Use a higher frequency range for increased resolution Use a lower frequency range for increased penetration</p> <p><b>Note:</b> Available in live imaging only</p>
<b>Filter</b>	<p><i>Adjusts the spectral Doppler signal filter</i></p> <p>Increase to reduce motion artifacts Decrease to increase sensitivity to low-flow states</p> <p><b>Note:</b> Available in live imaging only</p>
<b>Baseline</b>	<p><i>Adjusts the range of velocities displayed</i></p> <p>Rotate to adjust the baseline of the active mode</p> <p><b>Note:</b> Available on live and frozen images</p>

# Color and Spectral Doppler

## Spectral Doppler Touch Screen

Spectral Doppler Controls	Function
Scale	<i>Adjusts the pulse repetition frequency (PRF)</i>
	Rotate clockwise to increase PRF
	Rotate counterclockwise to decrease PRF
	Press <b>Scale</b> to activate High Pulse Repetition Frequency (HPRF)
	<b>Note:</b> Available in live imaging only
Angle Correct	<i>Adjusts the PW Doppler angle</i>
	Rotate to adjust the steering angle or press to cycle through 60/60/0 degrees
	<b>Note:</b> Available in live imaging only, available on linear transducers only
Steer	<i>Adjusts the PW Doppler angle</i>
	Rotate or push to adjust the steering angle
	<b>Note:</b> Available in live imaging only, available on linear transducers only

# Color and Spectral Doppler

## Spectral Doppler Soft Keys

Spectral Doppler Controls	Function
Gate Size	<p><i>Adjusts sample volume size</i></p> <p>Rotate clockwise to increase the size Rotate counterclockwise to the decrease size</p> <p><b>Note:</b> Available in live imaging only</p>
Sweep Speed	<p><i>Adjusts the scrolling speed of the Doppler spectrum</i></p> <p>Increase to display fewer cardiac cycles Decrease to display more cardiac cycles</p> <p><b>Note:</b> Available on live and frozen images</p>
DR (Dynamic Range)	<p><i>Adjusts number of gray shades displayed</i></p> <p>Rotate clockwise for a softer/grayer spectrum Rotate counterclockwise for a blacker/whiter spectrum</p> <p><b>Note:</b> Available on live and frozen images</p>

# Color and Spectral Doppler

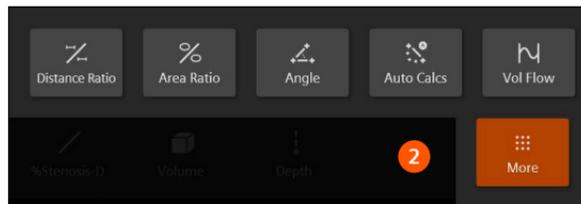
## Spectral Doppler Soft Keys

Spectral Doppler Controls	Function
Maps	<p><i>Selects a processing curve that assigns echo amplitudes to gray shades in the Doppler spectrum</i></p> <p>Rotate to select desired map</p> <p><b>Note:</b> Available on live and frozen images</p>
Tint	<p><i>Colorizes the Doppler spectrum</i></p> <p>Rotate to select the desired tint</p> <p><b>Note:</b> Available on live and frozen images</p>

# Measurements and Reports

## Unlabeled Measurements

1. Press **Caliper** 
2. To change the measurement type, choose from the available displayed options or select **More** for additional measurement types
3. Roll the trackball to position the first caliper
4. Press **Set** to anchor
5. Roll the trackball to position the second caliper
6. Press **Set** to complete the measurement
7. Roll the trackball to activate additional caliper sets



Unlabeled measurements do not enter into the exam report.

**Tip:** Measurements can be performed on frozen, CINE and stored images.

# Measurements and Reports

## Unlabeled Measurements

The screenshot displays a software interface for medical measurements and reports. The interface is organized into several sections:

- Top Navigation:** Includes icons for user, help, and settings. The main menu has tabs for "General" (selected), "Abdominal Vascular", and "Renal Vascular". On the right, there is an "Exam Package" dropdown menu currently set to "Abdomen".
- Left Sidebar:** Contains navigation options: "Patient", "Imaging" (selected), "Review", "Report", and "End Exam".
- Main Content Area:**
  - At the top, there are two buttons: "Right" (selected) and "Left".
  - Below these are two sub-sections: "Abdomen" (selected) and "Miscellaneous".
  - The main area contains a grid of measurement categories:
    - Row 1: Prox Aorta, Liver, Spleen, Kidney, Pre-Void Bladder, IVC
    - Row 2: Mid Aorta, Pancreatic Duct, GB Wall Thickness, Cortical Thickness, Post-Void Bladder
    - Row 3: Dist Aorta, CBD, CHD
- Bottom Toolbar:**
  - Measurement tools: Distance, Ellipse, 2D Trace, Open Trace, %Stenosis-A, %Stenosis-D, Volume, Depth, and a "More" button.
  - Control buttons: "Clear Screen", "Edit Caliper" (with left and right arrows and a "Select" button), "Hide Results", and navigation arrows.

# Measurements and Reports

## Labeled Measurements

1. Press **Caliper** The icon shows a small window with 'X' characters and the text 'Caliper' below it.
2. Select the desired measurement label
3. Roll the trackball to position the first caliper
4. Press **Set** to anchor
5. Roll the trackball to position the second caliper
6. Press **Set** to complete the measurement, send the labeled value(s) to the patient report and/or activate additional measurements
7. Select **Exam Package** to display additional labeled measurement packages

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**Tip:** The measurement label can be selected before or after calipers are placed.

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# Measurements and Reports

## Labeled Measurements

The screenshot displays a medical software interface for fetal measurements and reports. The interface is organized into several sections:

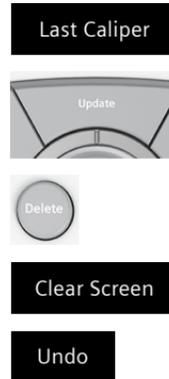
- Top Bar:** Includes a patient icon, a help icon, a settings gear, and tabs for "Fetal" and "Maternal". On the right, there is a red circle with the number "7" and the text "Exam Package OB".
- Patient Section:** Contains buttons for "Fetus A", "Fetus B", "Fetus C", and "Fetus D". "Fetus A" is highlighted in orange.
- Imaging Section:** A vertical sidebar on the left with the label "Imaging".
- Review Section:** A grid of measurement buttons including BPD, HL, Cerebellum, Nuchal Thickness, Binoc D, and LVOT s.
- Report Section:** A grid of measurement buttons including HC, OFD, Cist Magna, Nasal Bone, IOD, and RVOT s. The "HC" button is highlighted in orange with a red circle containing the number "2".
- End Exam Section:** A grid of measurement buttons including AC, CSP, LV - A, Facial Angle, and HW.
- Bottom Section:** A grid of measurement buttons including FL, Lat Vent, LV - P, and AFI.
- Bottom Bar:** Contains icons for "Distance", "Ellipse", "2D Trace", "Open Trace", "%Stenosis-A", "%Stenosis-D", "Volume", and "Depth". Below these are buttons for "Clear Screen", "Edit Caliper" (with a "Select" button), "Hide Results", and navigation arrows.

# Measurements and Reports

## Edit Measurements (Labeled and Unlabeled)

### Edit Completed Measurements

1. Select the **Last Caliper** soft key to activate calipers and cycle between caliper sets
2. Press **Update** to toggle between active calipers
3. Press **Delete** on the control panel to delete the active measurement
4. Select **Clear Screen** soft key to delete all measurements and annotations
5. Rotate **Undo** to edit a trace measurement



# Measurements and Reports

## Edit Measurements (Labeled and Unlabeled)

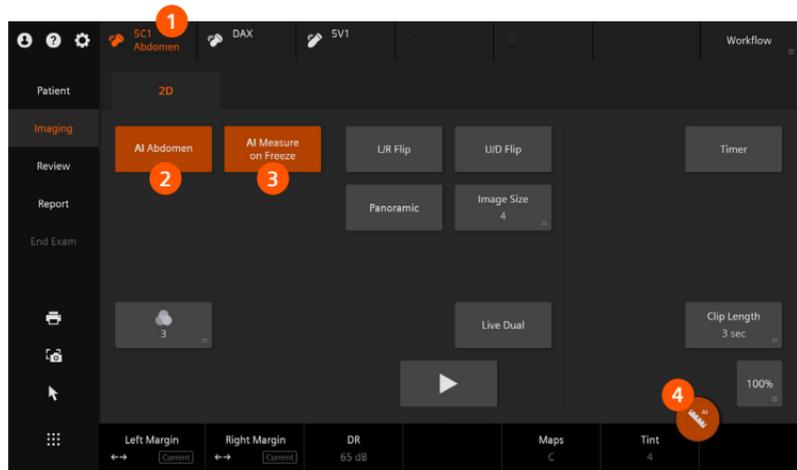
### Reposition Measurement Results

1. Move an active caliper over the measurement display area (MDA) results (a teal outline will appear around the outside of the MDA area)
2. Press the **Set** key to “grab” the MDA result box
3. Drag the MDA to the new location
4. Press the **Set** key again to lock it in place

# Measurements and Reports

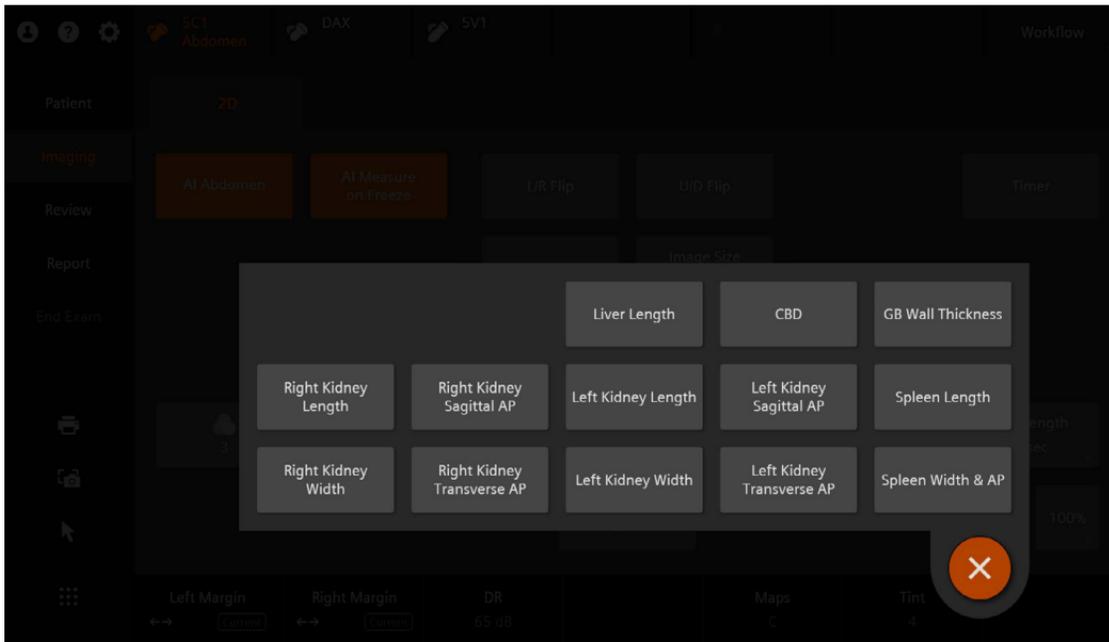
## AI Abdomen Measure

1. Activate a compatible transducer and the **Abdomen** or **Abdomen Difficult** preset
2. Activate **AI Abdomen** and the system recognizes 17 different anatomical views
3. Activate **AI Measure on Freeze** and the system can automatically measure anatomy if it is recognized
4. Select **AI Measure Ruler** to show the 12 AI Measure options



# Measurements and Reports

## AI Abdomen Measure

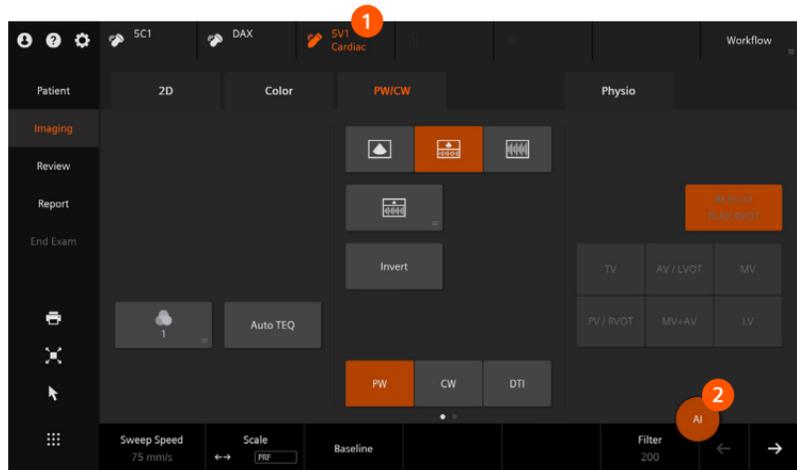


# Measurements and Reports

## AI Measure (Cardiac)

To activate  
AI Measure:

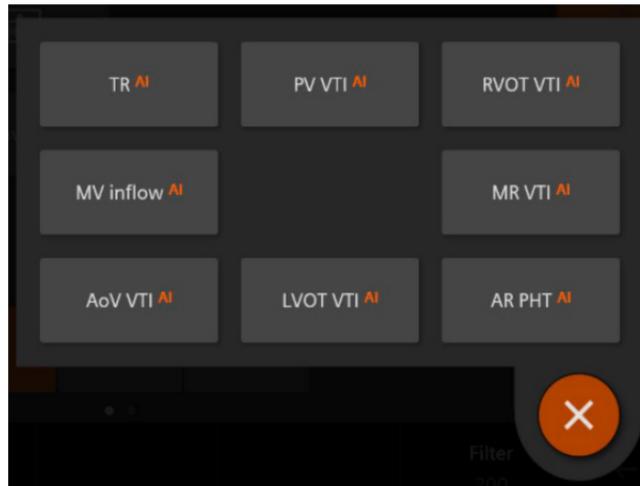
1. Activate **Cardiac** preset
2. The **AI** orange icon will appear in the lower right corner of the touch screen after pressing Freeze



# Measurements and Reports

## AI Measure (Cardiac)

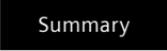
3. Select **AI** orange icon on the touch screen
4. Select the measurement label from the touch screen



# Measurements and Reports

## Report

### Review the Report

1. Select **Report** to enter/exit report page 
2. Choose a Method such as Last, Max and Min measurements
3. Values can be edited under columns 1-5
4. Select **Store Report** to capture the report as an image(s) 
5. Select **Print Report** on the imaging screen or the printer icon on the touch screen to send to connected external printer 
6. Select **Export to PDF** to save report to a USB 
7. To view a condensed summary of the report, select **Summary** 



Only labeled measurements appear on the report; an \* appears for any edited measurement.

# Measurements and Reports

## Report

SIEMENS Healthineers Patient Report

Patient History

Carotid

Images

Summary Comments

	Value	Method	1	2	3	4	5
Rt Mid CCA							
PS	79.40 cmh	Last	79.40				
ED	21.71 cmh		21.71				
Angle	-60 °		-60				
Rt Bulb							
PS	62.07 cmh	Last	62.07				
ED	18.28 cmh		18.28				
Angle	-60 °		-60				
Rt Prox ICA							
PS	80.74 cmh	Last	80.74				
ED	34.05 cmh		34.05				
Angle	60 °		60				
Carotid Ratios							

7 Summary

6 Export to PDF

4 Store Report Transfer Report

5 Print Report

Collapse All

Edited Value \*

# Measurements and Reports

## Report

### Import Images into the Report

1. Select the **Report** key from the touch screen to enter/exit the report page
2. Select **Images** from quick selections along the left of the imaging screen
3. Select the display format from the drop down on the imaging screen
4. Roll the trackball to the thumbnail image and press the **Set** key to transfer the selected image to the images section
5. To delete the image from the report, place the cursor over the image and select the **"X"** in the upper right corner of the image



---

**Tip:** Up to 20 images can be stored to the Summary.

---

# Measurements and Reports

## Report

The screenshot displays the Siemens Healthineers Patient Report interface. The left sidebar contains a navigation menu with the following items: Patient History, Carotid, Images (highlighted with an orange circle '2'), and Summary Comments. The main content area is divided into two columns. The left column shows two ultrasound images with Doppler waveforms, each with an orange circle '3' in the top right corner. The right column shows a vertical stack of three ultrasound images with Doppler waveforms, with an orange circle '4' in the top right corner. At the bottom left, there is a 'Summary' button and a 'Collapse All' button. Below these are four buttons: 'Export to PDF', 'Store Report', 'Transfer Report', and 'Print Report'. At the bottom right, there is a text label 'Edited Value \*'.

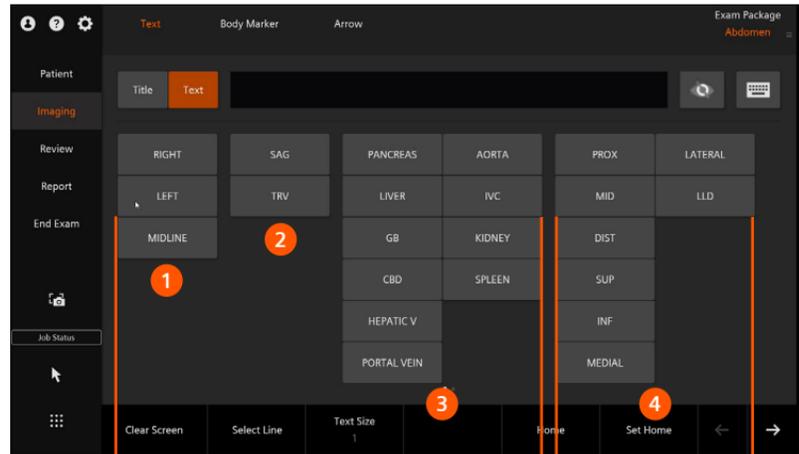
# Text, Body Markers and Arrows

## Text

Text located under the **Title** tab will not be changed as often, e.g., **RIGHT** or **LEFT**, while text located under the **Text** tab will change more often.

Text Replace Fields (1–3) will replace the text when selecting different text from the same field on the same line. Selecting choices from Additional Text (4) will add to the line of text rather than replacing text.

To move the text, place the cursor in the text and press the **Set** key. The line of text becomes teal and can be moved anywhere in the image screen.



Text Replace (1–3)

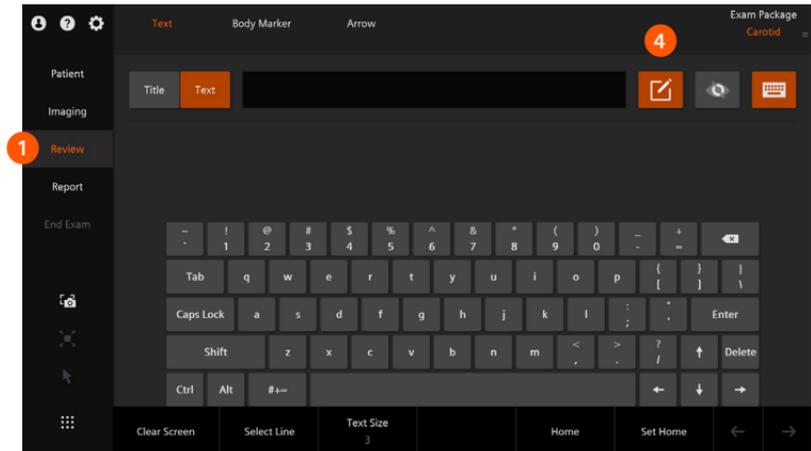
Additional Text (4)

# Text, Body Markers and Arrows

## Text

### Modifying Text from an Active Exam

1. Select **Review**
2. Select the desired image to display
3. Press **ABC** 
4. Select the overwrite icon
5. Enter the word over the area (the text will overwrite in a black box)
6. To reposition the edited text, press the **Set** key twice to activate the text
7. Press **Image** on the control panel to save the modified text

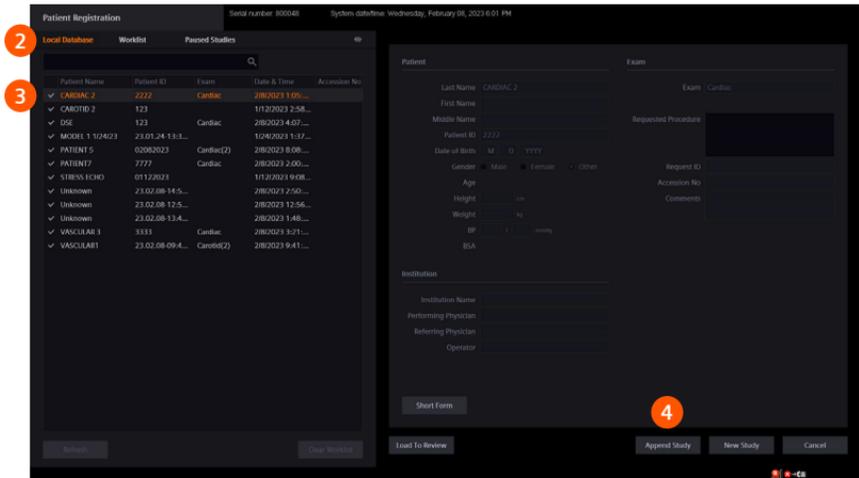


# Text, Body Markers and Arrows

## Text

### Modifying Text from a Closed Exam

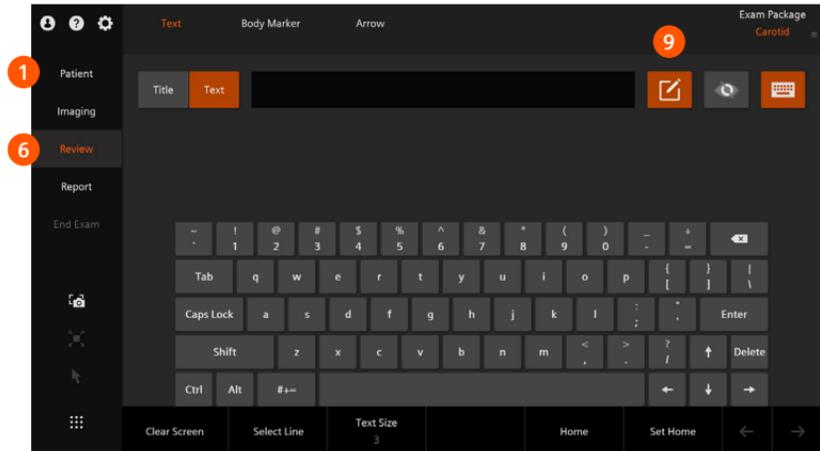
1. Select **Patient** on the touch screen
2. Select **Local Database**
3. Select to highlight patient study from list
4. Select **Append Study**
5. Select **Start Study**



# Text, Body Markers and Arrows

## Text

6. Select **Review**
7. Select the desired image display
8. Press **ABC** 
9. Select the **Overwrite** icon; place the text cursor near the word to be covered
10. The text will overwrite in a black box that can then be moved on top of the old text by rolling it into position with the trackball
11. Press **Image** on the control panel to save the modified text

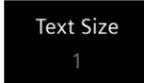


**Tip:** Text can be modified on a closed study within 24 hours and will appear as an added image.

# Text, Body Markers and Arrows

## Text Icons

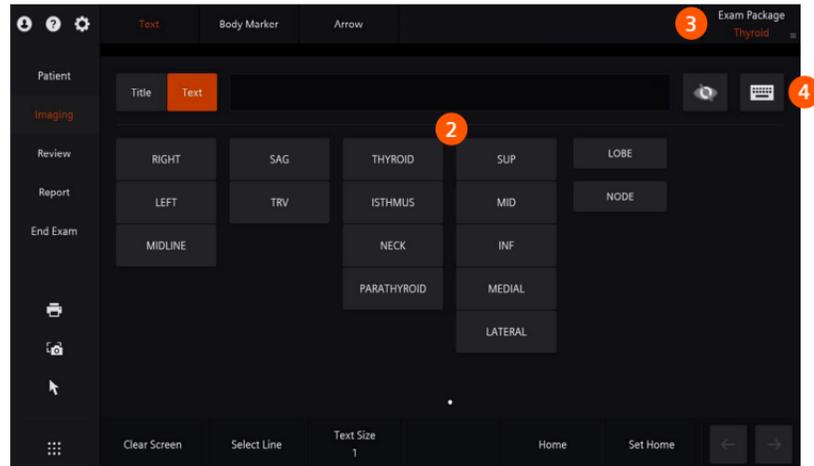
Controls	Function
	Activates/deactivates text cursor and the text touch screen menu
	Sets default position for the text cursor
	Positions the cursor at the home location
	Temporarily hides text
	Deletes all text, pictograms or arrows

Controls	Function
	Deletes text at the cursor
	Moves the cursor between separate text lines
	Displays the next or previous page when available
	Activates the Caps Lock functionality on the digital QWERTY keyboard
	Changes the size of the text

# Text, Body Markers and Arrows

## Text

1. Press the **ABC** key on the control panel 
2. Select the desired annotation on the touch screen
3. Select **Exam Package** to access text from a different exam type
4. Select the **Keyboard** icon on the touch screen to activate/deactivate the digital QWERTY keyboard



# Text, Body Markers and Arrows

## Body Markers

1. Press the **ABC** key on the control panel
  2. Select the **Body Marker** tab
  3. Select the desired Body Marker from the touch screen
  4. Use the **Body Marker** widget on the touch screen to adjust transducer orientation/position
  5. Press **Set** to anchor
- 
6. Press the **Trackball** soft key on the control panel to toggle between Transducer Marker and Body Marker for repositioning
  7. Press **Delete** on the control panel to delete the Body Marker

Trackball  
Body Marker

Trackball  
Transducer Marker

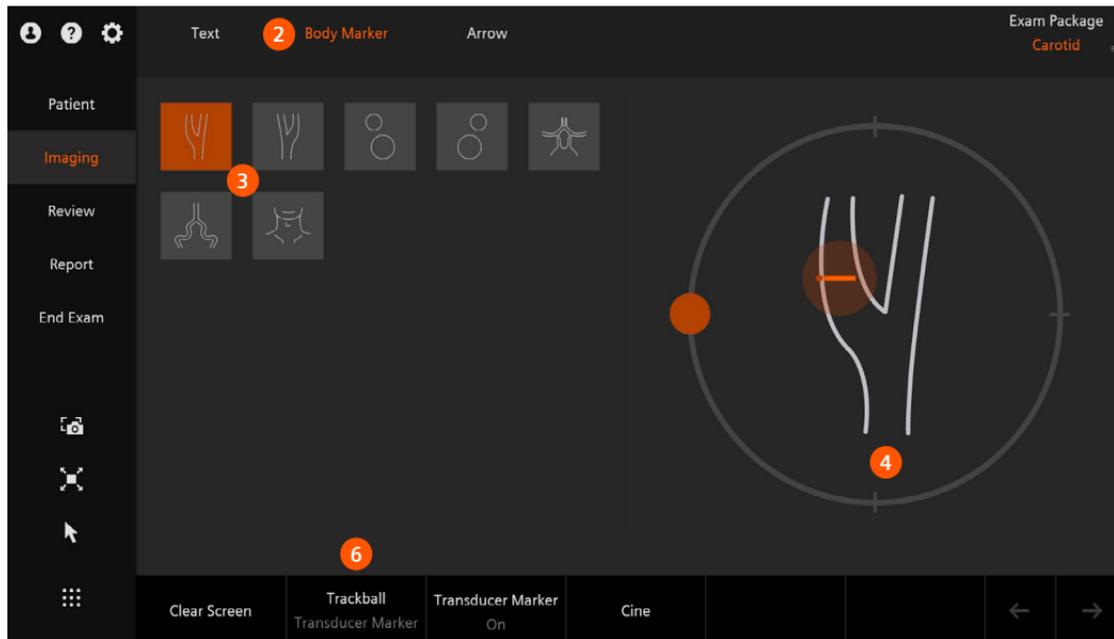
---

**Tip:** Body Marker options can be customized in the System Configuration menu.

---

# Text, Body Markers and Arrows

## Body Markers



# Text, Body Markers and Arrows

## Arrows

1. Press the **ABC** key on the control panel
  2. Select the **Arrow** tab on the touch screen
  3. Use the **Arrow** widget to adjust arrow orientation and tail length
  4. Roll the trackball to position
  5. Press **Update** to add additional arrows
- 
6. Press **Delete** on the control panel to delete the last arrow or **Clear Screen** to delete all markings
  7. Press **Previous Arrow** to cycle through multiple arrows
  8. Press **ABC** to exit Arrow function
- 

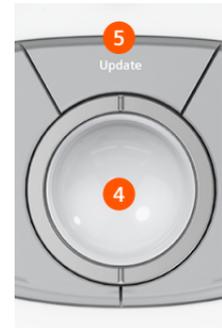
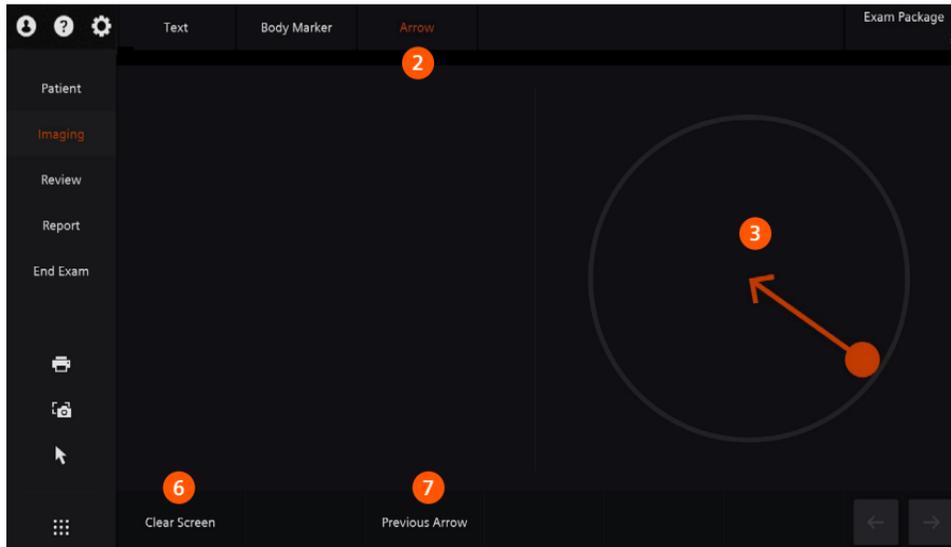
---

**Tip:** Unlimited arrows can be added.

---

# Text, Body Markers and Arrows

## Arrows



# Data and Image Management

## Review Images

### Review Images on Current Study

1. Select **Review** on the touch screen
2. Select the desired layout on the touch screen
3. Rotate the **Page** soft key to view more images
4. Select **Imaging** or **2D** to exit

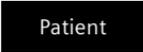
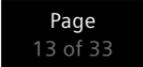


# Data and Image Management

## Review Images

### Review Images from a Closed Study

1. Select **Patient** on the touch screen
2. Select **Local Database** on the imaging screen
3. Select the desired study
4. Select **Load to Review**
5. Select the desired display format on the touch screen
6. Rotate the **Page** soft key to view more images
7. Select **Imaging** or **2D** to exit

A black rectangular button with the word "Patient" in white text.A black rectangular button with the text "Page" and "13 of 33" in white.A black rectangular button with the word "Imaging" in white text.

# Data and Image Management

## Review Images

The screenshot shows the 'Patient Registration' window with two panes. The left pane, labeled 'Local Database', contains a table of patients. The right pane shows the details for the selected patient, 'CANDID 2'.

Patient Name	Patient ID	Exam	Date & Time
✓ CANDID 2	2222	Cardiac	2002021 9:05...
✓ CANDID 2	123		9/12/2021 2:58...
✓ DR	123	Cardiac	2002021 4:02...
✓ MODEL 1 100023	23.01.24-13...		12062021 3:27...
✓ PATIENT 5	00062021	Cardiac(2)	2002021 8:06...
✓ PATIENT 7	7777	Cardiac	2002021 2:00...
✓ STRESS ECHO	01122021		9/12/2021 9:09...
✓ Unknown	23.02.09-14 S...		2002021 2:50...
✓ Unknown	23.02.09-12 S...		2002021 12:56...
✓ Unknown	23.02.09-13 S...		2002021 1:48...
✓ MUSCLEB1	3333	Cardiac	2002021 9:21...
✓ MUSCLEB1	23.02.09-09 A...	Cardiac(2)	2002021 9:41...

The right pane displays the following patient details:

- Patient:** Last Name: CANDID 2, Exam: Cardiac
- Exam:** Title Name, Module Name, Requested Procedure
- Demographics:** Patient ID: 2222, Date of Birth: 01-01-1971, Gender: Male, Race: Caucasian, Other
- Physical:** Age, Height, Weight, BP, HR, BSA
- Registration:** Request ID, Accession No, Comments
- Institution:** Institution Name, Referring Physician, Referring Physician, Operator

Buttons at the bottom include 'Short Exam', 'Load To Review', 'Approved Study', 'New Study', and 'Cancel'.

The screenshot shows the 'Patient Browser' window with a keyboard overlay. The 'Load To Review' button is highlighted with a red circle, indicating the next step in the process.

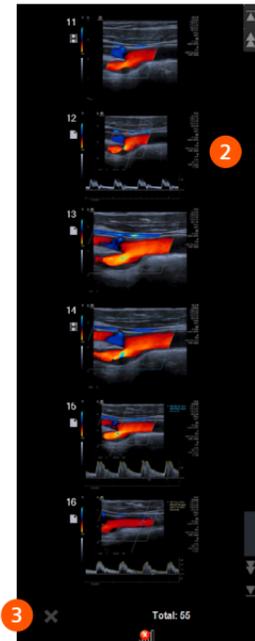
Buttons at the top right include 'Approved Study', 'New Study', and 'Cancel'.

# Data and Image Management

## Delete Images

### Delete Images from a Current Study or in Review

1. Select **Pointer** from the touch screen or console
2. Select an image on the thumbnail panel to highlight
3. Press the **Delete** button on the control panel or select **Delete Image(s)** from the touch screen



# Data and Image Management

## Export to Network

1. Select the patient name in the **Patient Browser**
2. Select the preconfigured destination from the drop down list
3. Select **Send**

---

**Tip:** Images automatically send to PACS if the system is configured to send during the exam or at the end of the exam.

---

# Data and Image Management

## Export to Network

Source Media: Local Database

Period: Custom Range, Show All

Query/Retrieve, Print Preview, Job Status

Search filters: Patient Name, Accession No., Operator, Patient ID, Date of Birth, Gender (All)

Study List

	Patient Name	Patient ID	Exam	Date & Time	Size (MB)
<input type="checkbox"/>	Patient 3	23.06.21-22:52:1...		21-Jun-23 22:52:12	1 0 3
<input type="checkbox"/>	Patient 2	23.06.21-22:50:3...		21-Jun-23 22:50:32	1 0 3
<input checked="" type="checkbox"/>	Patient, 1	23.06.21-22:45:5...		21-Jun-23 22:45:53	6 0 14

Total: 3

Buttons: Delete, Print, ID\_PACS, Send, Export

# Data and Image Management

## Export Study to CD-R/DVD or USB in DICOM/PC Format

1. Insert CD-R/DVD or USB
2. Go to the **Patient Browser** and select study
3. Select **Export**

---

**Tip:** To export in DICOM with Showcase viewer, select **Include DICOM Viewer**.

---

---

**Tip:** Exporting DICOM with Acoustic Data will allow the re-import of advanced application studies for analysis, such as 3D/4D manipulations.

---

4. Select the following depending on your preference:

### DICOM

- Acoustic Data
- Include DICOM Viewer
- Enable DICOM GDSF

**Note: Export 3D as Cartesian Data** – option available on individual image export

### PC Format (AVI JPEG)

### De-Identify

Rename file or anonymous will populate

5. Select the desired destination media
6. Select **Export**

# Data and Image Management

Export Study to CD-R/DVD or USB in DICOM/PC Format

The screenshot displays the 'Patient Browser' software interface. On the left, there are sections for 'Source Media' (set to 'Local Database') and 'Period' (set to 'Custom Range'). The main area features a search form with fields for Patient Name, Accession No., Operator, Patient ID, Date of Birth, and Gender. Below the search form is a 'Study List' table with columns for Patient Name, Patient ID, Exam, Date & Time, and Size (MB). The table contains three entries, with the first entry, 'Patient, 1', selected and highlighted in blue. A red circle with the number '2' is overlaid on the selected row. At the bottom of the interface, there are several buttons: 'Delete', 'Load to Review', 'Append Study', and 'New Study'. A 'Send' button is also present, with a red circle and the number '3' overlaid on it. The 'Send' button is set to 'JD\_PCS'. The status bar at the bottom right shows 'Total: 3 Selected: 1 (14.0 MB)' and '0 / 6'. On the right side of the interface, there is a vertical stack of image thumbnails, each labeled with a number from 1 to 6.

Patient Name	Patient ID	Exam	Date & Time	Size (MB)
Patient 3	23.06.21-22:52:1...		21-Jun-23 22:52:12	1 0 3
Patient 2	23.06.21-22:50:3...		21-Jun-23 22:50:32	1 0 3
<b>Patient, 1</b>	<b>23.06.21-22:45:5...</b>		<b>21-Jun-23 22:45:53</b>	<b>6 0 14</b>

# Data and Image Management

Export Study to CD-R/DVD or USB in DICOM/PC Format

Export

Available Media

USB

Patient Name	Patient ID	SR	Size (MB)	Status
Sequoia Share...	2024	5 26 10 0	3102	

Total: 1 Selected: 1 (3.0 GB)

File Format

DICOM

PC Format (JPEG/AVI)

DICOM Format

Acoustic Data

Include DICOM Viewer

Enable DICOM GSDF

Options

De-identify

Prefix: Anonymous

Export Close

# Data and Image Management

Export Individual Images to CD-R/DVD or USB in DICOM/PC Format

1. Insert CD-R/DVD or USB
2. Go to the **Patient Browser** and select study
3. Select individual thumbnails to export
4. Select the **Export** icon at the bottom of the thumbnails
5. Select the following depending on your preference:
  - DICOM**
    - Acoustic Data
    - Include DICOM Viewer
    - Enable DICOM GDSF
    - Export 3D as Cartesian Data
    - Available only for cardiac 3D volume images
  - PC Format (AVI JPEG)**
6. Select the desired destination media
7. Select **Export**

# Data and Image Management

Export Individual Images to CD-R/DVD or USB in DICOM/PC Format

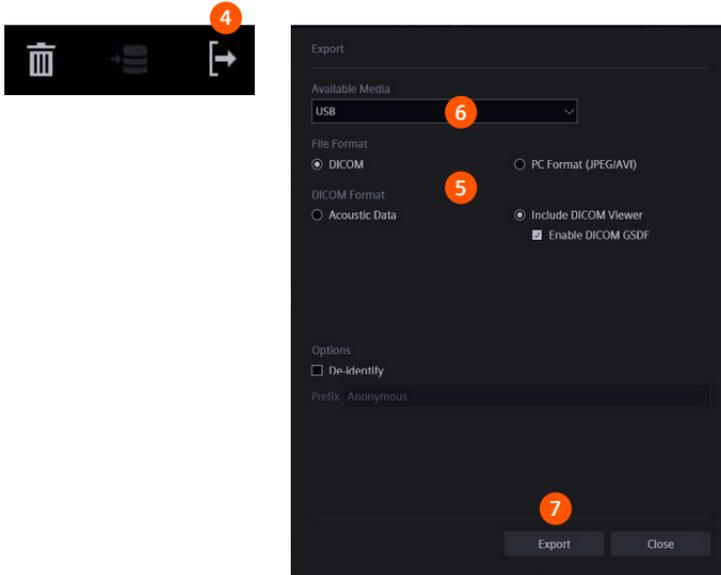
The screenshot displays the 'Patient Browser' interface with the following components:

- Search Filters (2):** Fields for Patient Name, Accession No., Operator, Patient ID, Date of Birth, and Gender. A 'Search' button is located to the right.
- Study List Table:**

Study List	Search within results
<input type="checkbox"/> UOE, JOHN	00
<input checked="" type="checkbox"/> IES	24.12.17-15:16:2...
<input type="checkbox"/> Unknown	24.12.05-13:06:3...
<input type="checkbox"/> Unknown	24.12.05-11:31:2...
<input checked="" type="checkbox"/> 2020 ACUSON Sequoia OB-GYN Volumes	Sequoia OB-GYN Volumes 7/11/2020 4:48... 0 0 457
- Image Grid (3):** A vertical column of image thumbnails on the right side of the interface. The thumbnail at row 4 is highlighted with a green border.
- Export Options (4):** Buttons for 'Delete', 'Print', 'Send', and 'Export' are located at the bottom of the interface. A status bar indicates 'Total: 5 Selected: 1 (457.0 MB)'.

# Data and Image Management

Export Individual Images to CD-R/DVD or USB in DICOM/PC Format



# Data and Image Management

Import from USB or CD-R/DVD

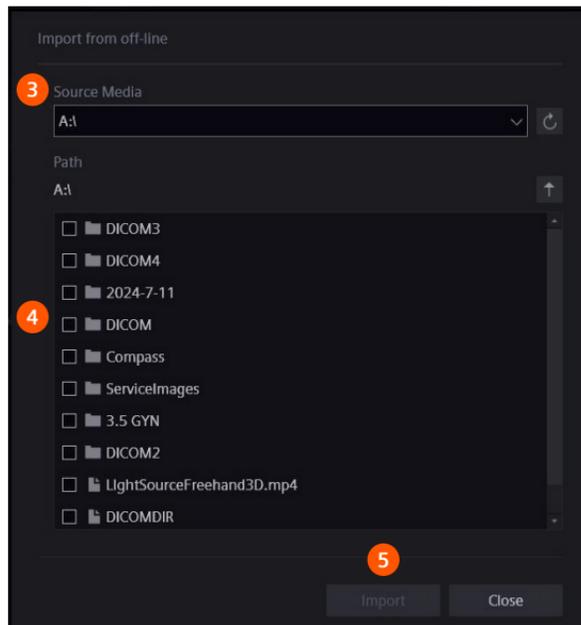
1. Insert CD-R/DVD or USB
2. Select **Import from off-line**

The screenshot displays the 'Patient Browser' application interface. On the left sidebar, under 'Search Media', the 'Local Database' is selected, and the 'Import from off-line' button is highlighted with a red circle containing the number '2'. Below this, the 'Period' section shows 'Custom Range' selected. At the bottom of the sidebar are buttons for 'Query/Retrieve', 'Print Preview', and 'Job Status'. The main window features a search form with fields for Patient Name, Accession No., Operation, Patient ID, Date of Birth, and Gender. Below the search form is a 'Study List' table with columns for Patient Name, Patient ID, Exam, Date & Time, and Size (MB). The table contains several rows of study data, including exams for 'DK BAX', 'TEST1, DAY1', 'TEST1, DAY2', 'TEST, LEE, DAY1', 'TEST3, DAY1', 'TEST2, DAY1', 'TEST1, DAY1', 'TEST', 'Unknown', 'ACUSON Sequa 2.0 V4M0', and 'CI/AMI 2012.4.5.12-35-45-484'. At the bottom of the interface, there are buttons for 'Done', 'Print', 'Send', and 'Export', along with a 'Total: 19' indicator.

# Data and Image Management

Import from USB or CD-R/DVD

3. Select **Source Media** and **Path**
4. Select patient study
5. Select **Import**
6. Select **Job Status** from the touch screen to view upload progress
7. Screen will provide status
  - Loading bar
  - Succeeded
  - Failed



# Data and Image Management

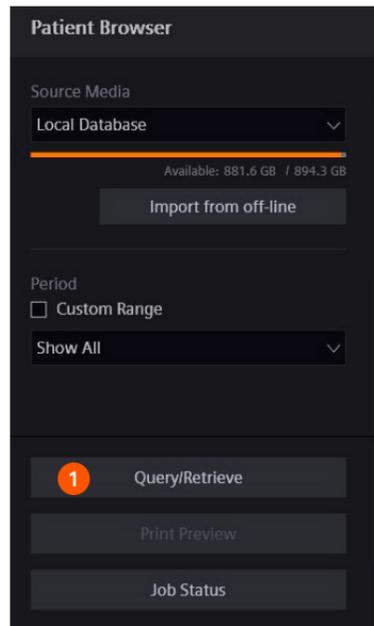
## Query/Retrieve from PACS

1. Select **Query/Retrieve** from the monitor or touch screen

---

**Tip:** Enter multiple parameters for a targeted query.

---



# Data and Image Management

## Query/Retrieve from PACS

2. Enter the patient search parameters
3. Select the desired study
4. Select **Import**

The screenshot displays a search interface with three main sections: Basic Search, Advanced Search, and Reporting Search. The Basic Search section includes fields for Patient Name, Patient ID, Date of Birth, Sex (set to 'Any'), Study Date, Study Time, Accession Number, and Modality. The Advanced Search section includes fields for Study Description, Study ID, Referring Physician, Reporting Physician, Study Instance UID, Series Instance UID, Series Number, Series Description, PPS Start Date, PPS Start Time, Body Part Exam, Performing Physician, Request Procedure ID, Scheduled Procedure ID, and Approval Status. The Reporting Search section includes a search bar with 'Type New Query Name' and buttons for Search, Clear, Save, and Delete. At the bottom, there are buttons for Import, Import Job Status, Image List, Discard search results on close, and Close. A red circle with the number 2 highlights the 'Sex' dropdown, and a red circle with the number 4 highlights the 'Import' button.

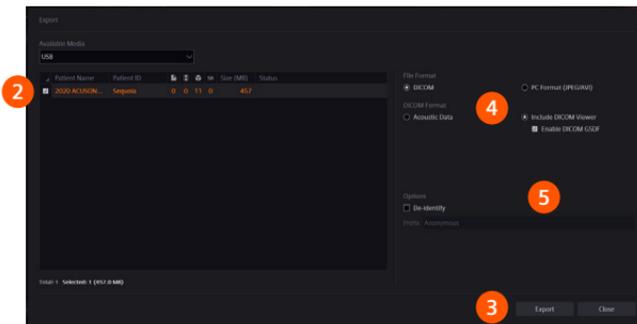
# Data and Image Management

## Anonymize a Patient Study

1. Select **Patient/Patient Browser**
2. Select the desired study from the **Local Database**
3. Select **Export**
4. Select the **Available Media**
5. Select **De-Identify**, enter a name with no spaces
6. Select **Export**

The system copies the study to the new destination and replaces the date of the exam with the date when the patient identifying information was removed from the file.

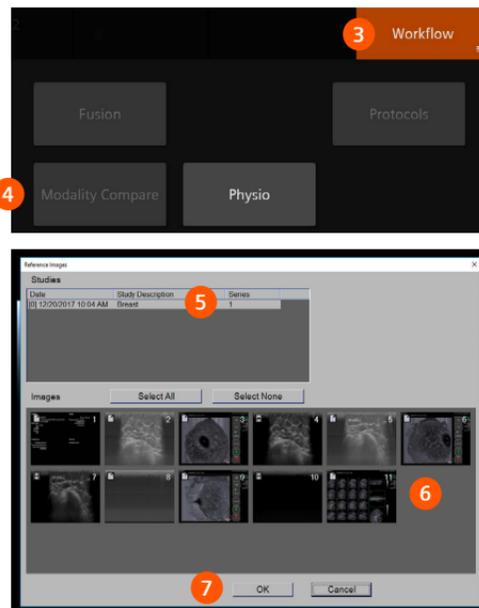
The system exports a DICOM file with the entered name. If an alternate name is not provided, the file will be labeled Anonymous.



**Tip:** All patient-identifying information is removed from the exam, for example, images of the patient registration page and patient report. The new patient folder contains only images and clips from the exam and the accession number. The accession number cannot be changed or removed.

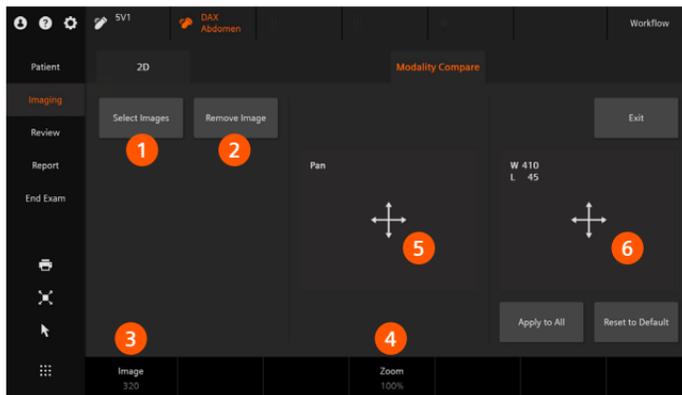
# Modality Compare

1. Import the study to the Local Database from source (CD/DVD/USB) or Query/Retrieve
2. Register the patient
3. Select **Workflow**
4. Select **Modality Compare**
5. Select the required study
6. Select the reference images
7. Select **OK**



# Modality Compare

1. **Select Images** – Return to the Patient Browser to select additional images for comparison
2. **Remove Images** – Removes previously selected images
3. **Image** – Rotate to change the displayed reference image
4. **Zoom** – Rotate to magnify the reference image
5. **Pan** – Slide your finger across the area to reposition the reference image
6. **Window/Level** – Slide your finger across the area to change the brightness/contrast the reference image



# Care and Cleaning

## Cleaning and Disinfecting the System

1. Power off the system and unplug the power supply
2. Use a clean gauze pad or lint-free cloth, lightly moistened with a mild detergent, to wipe the surface of the system
3. Use a clean, lint-free cloth to dry the surface
4. As required, use an approved disinfectant wipe to disinfect the system and accessories
5. Plug the power cord into the power supply

---

**Tip:** Ensure that fluids do not seep into any openings on the system.

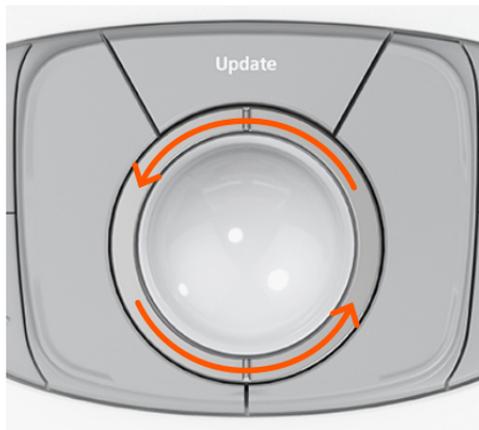
---



# Care and Cleaning

## Cleaning the Trackball

1. Rotate the ring around the trackball counterclockwise and carefully lift the ring to remove
2. Remove the trackball
3. Clean the ring, trackball and trackball assembly with a cotton swab or lint-free pad moistened with a mild detergent solution
4. As required, use an approved disinfectant wipe to disinfect the ring, trackball and trackball assembly
5. After allowing the trackball components to completely dry, place the trackball into the assembly
6. Place the ring over the trackball, aligning the tab with the point of attachment on the assembly, and rotate clockwise until the ring snaps into place



# Care and Cleaning

## Cleaning the Air Filter

1. Power off the system and unplug the power supply
2. Push the air filter tray to release the locking mechanism, then pull the tray from the system
3. Rinse the air filter tray with running water and allow filter to completely dry
4. Slide the dry air filter back into the system
5. Plug the power cord into the power supply

---

**Tip:** Air filter should be checked and cleaned weekly to maintain proper system cooling.

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For the proper use of the software or hardware, please always use the Operator Manual or Instructions for Use (hereinafter collectively “Operator Manual”) issued by Siemens Healthineers. This Quick Reference Guide is to be used as training material only and shall by no means substitute the Operator Manual. Any material used in this training will not be updated on a regular basis and does not necessarily reflect the latest version of the software and hardware available at the time of the training. The Operator Manual shall be used as your main reference, in particular for relevant safety information like warnings and cautions.

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