ACUSON Redwood Ultrasoud System

Stress Echo
VA20 SW Release
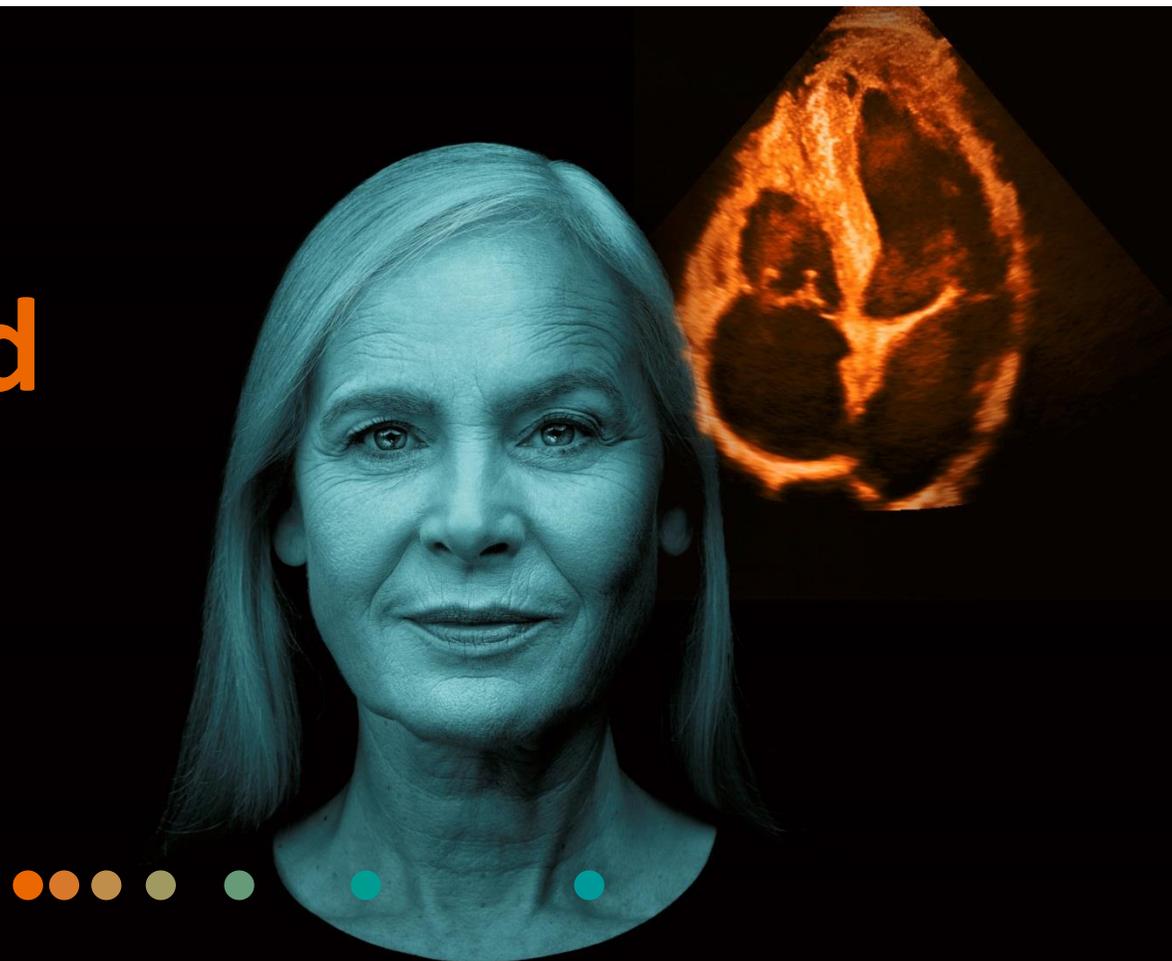
ACUSON Redwood stress echo
Key features

Supports 6 user-definable factory default protocols

View control workflow

Comprehensive wall motion scoring package

Consistency across platforms

Objectives

- **Describe the user interface**

- Explain protocol configuration

- Illustrate quick protocol configuration

- Discuss step-by-step workflow

- Describe stress echo review and image selection

- Summarize quick exam

User interface

Region of Interest (ROI)

Reference image

Thumbnail panel

Navigation Panel

ROI Size / Position
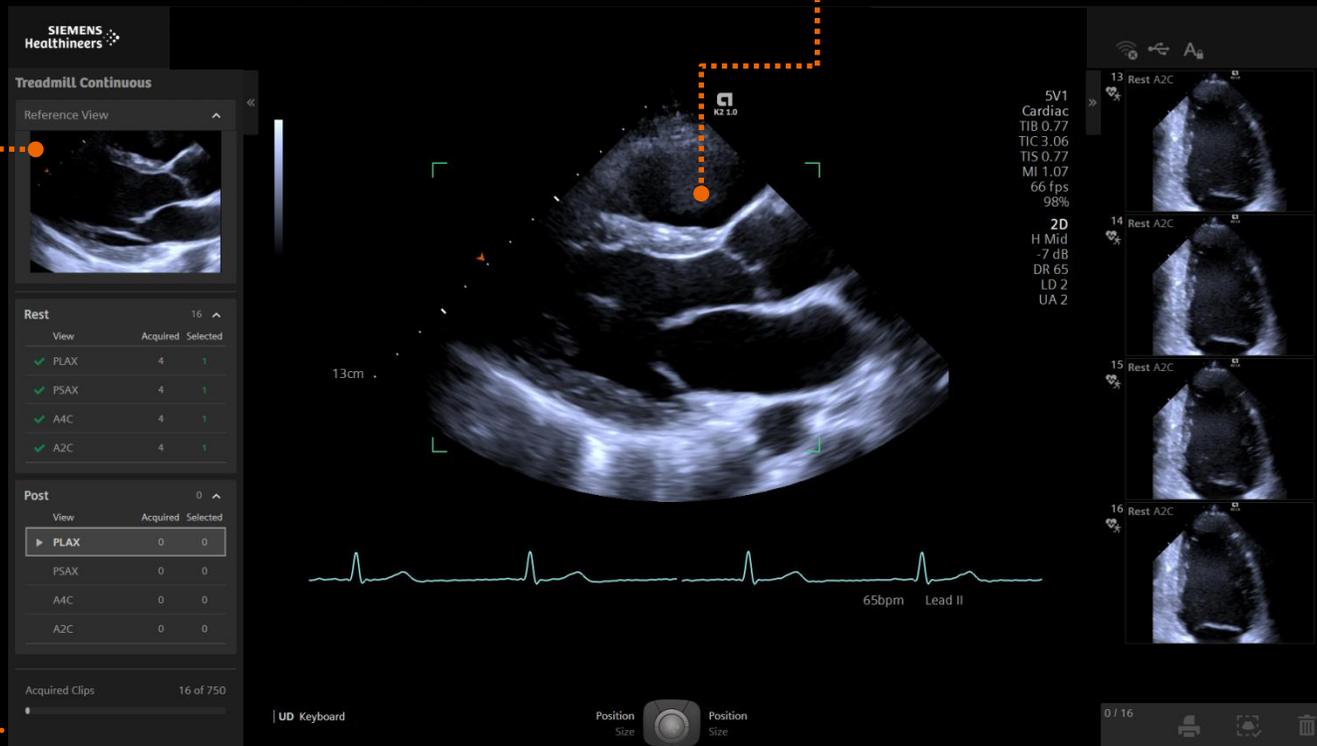
Region of interest

To modify the ROI size/position:

- Press the left or right **Set** key to move between position and size

- Modify ROI size/position using trackball

- Press left or right **Set** key again to confirm size/position
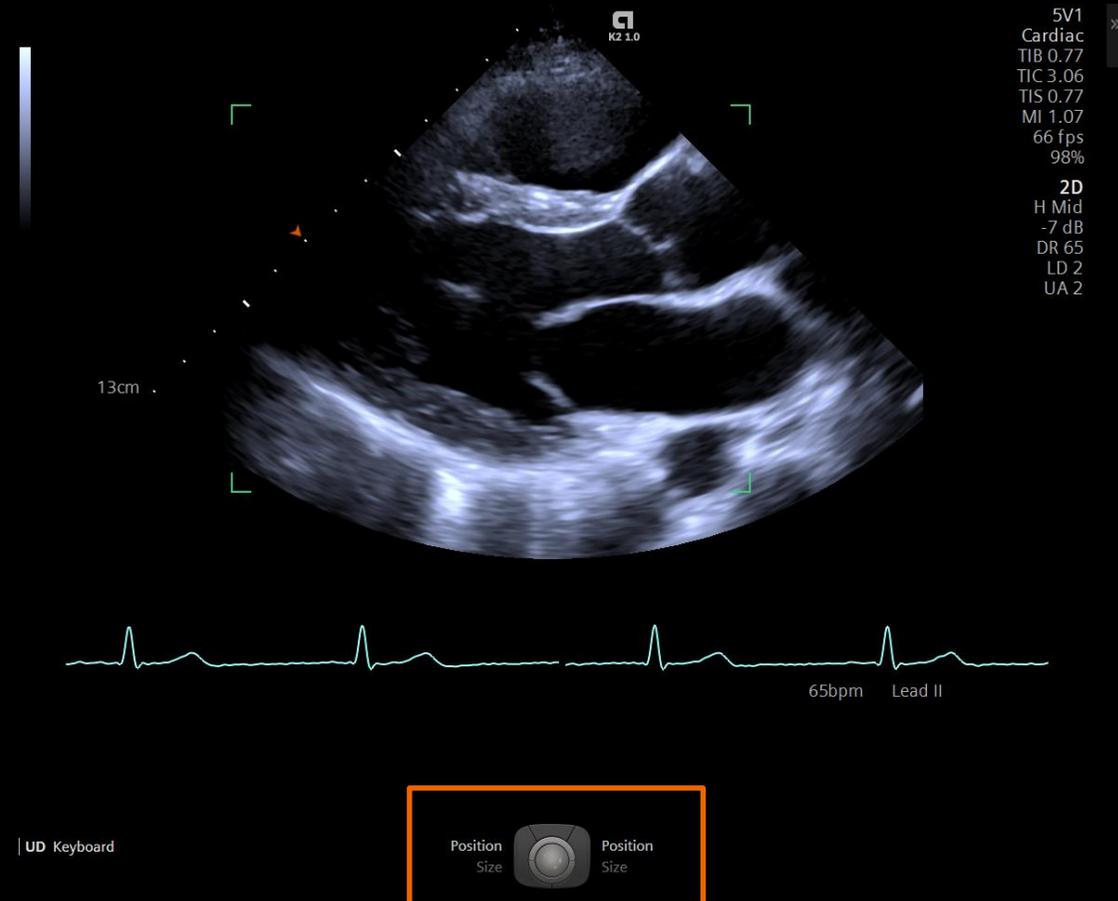
Review and selection – touch screen

1. Review Mode or
   Selection Mode

2. Defer Selection, Accept All,
   Reject All

3. Rename View

4. Image layout options
   (4 up recommended)

5. General Review
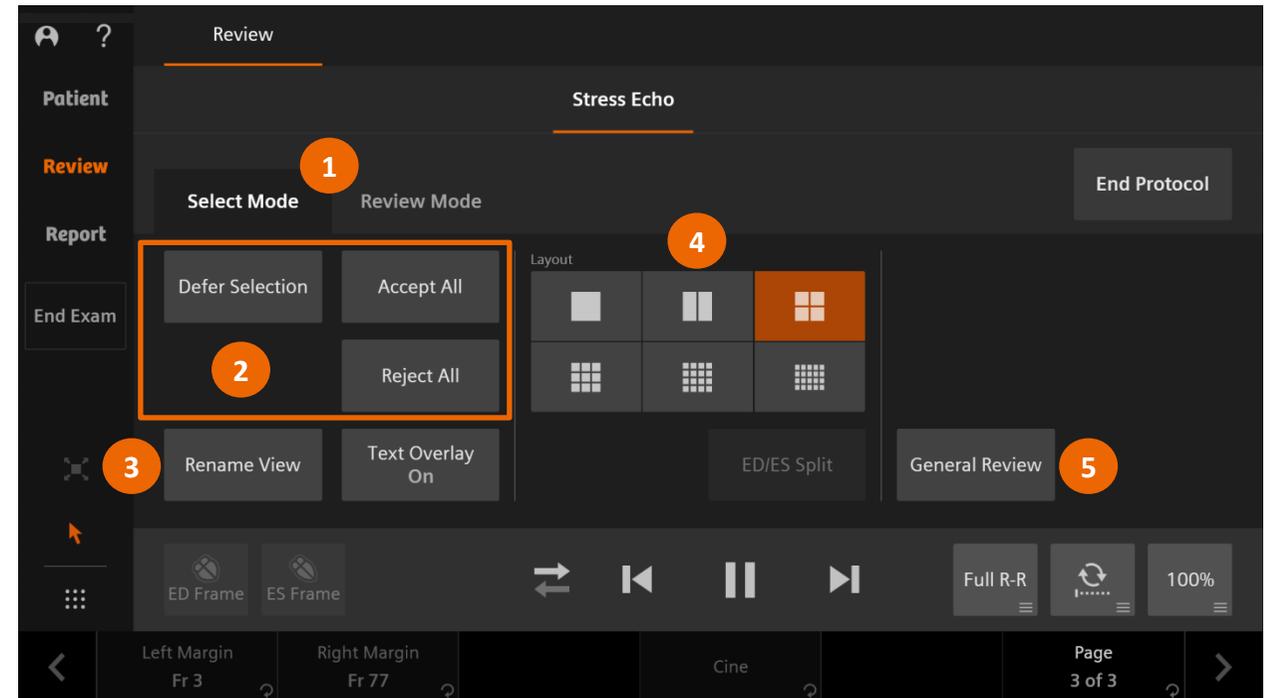
Image selection

1. Navigation panel
2. Image selected, indicated by check mark ✓
3. Image not selected, indicated by ✗

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System configuration

Select **Stress Echo** from System Configuration

Stress echo configuration

Stress echo configuration – protocol settings

Stress echo configuration – stage settings

Stress echo configuration – view settings

Stress echo configuration – view settings

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Quick protocol configuration

1. Highlight factory stress echo protocol
2. Copy the highlighted protocol
3. Change protocol name
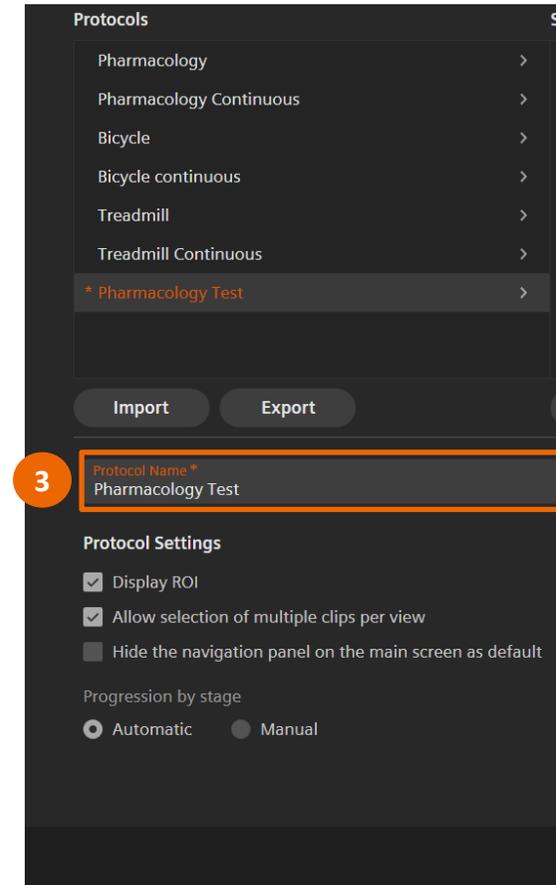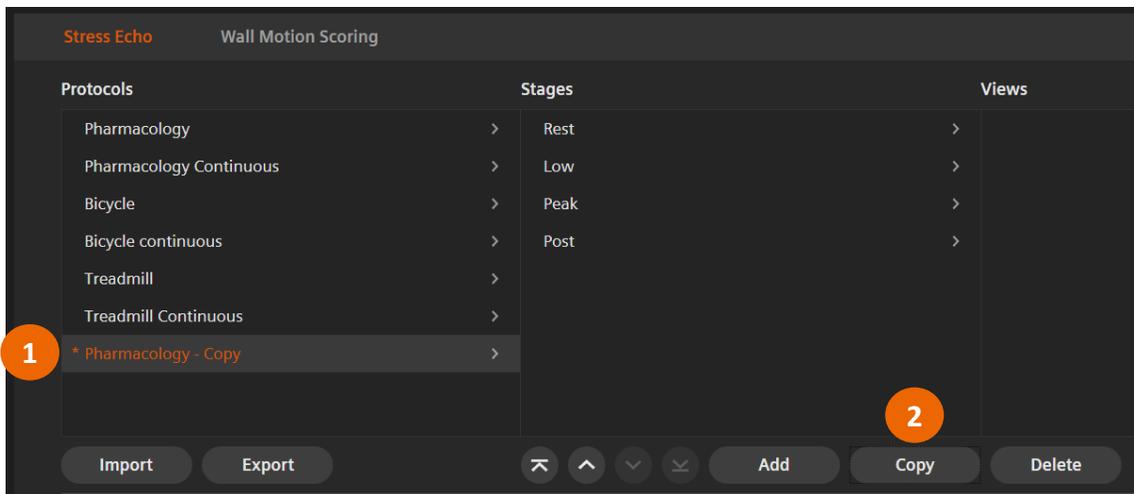
Quick protocol configuration

4. Modify stage and view settings

5. Select **Close** to save changes

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Begin an exercise stress echo

Select **New Patient** and enter patient information, or select a patient from a modality worklist
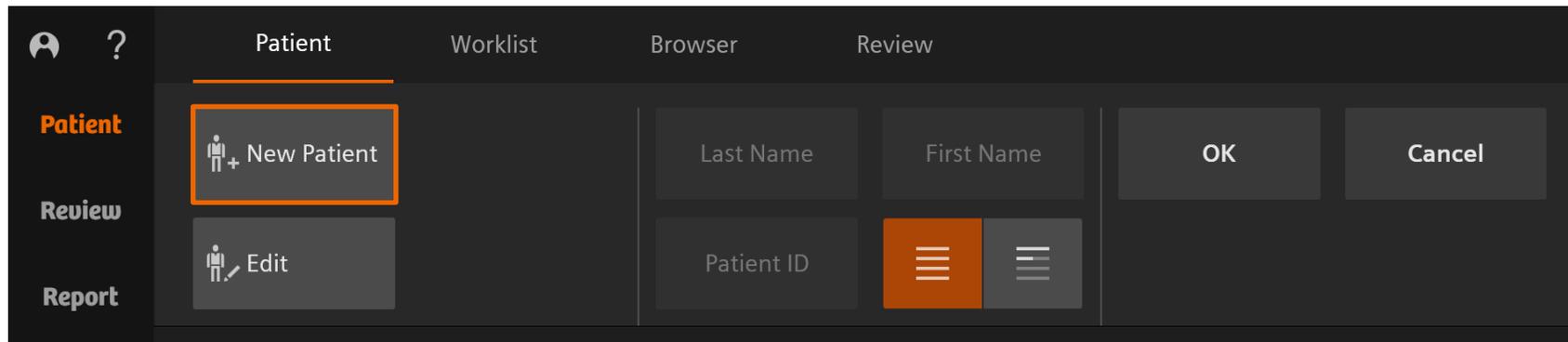
Activate stress echo protocol

1. Select the 5V1 cardiac transducer
2. Select **Stress Echo** from the **Workflow** tab at the top right-hand portion of the touch screen
   - A pop-up window appears
3. Select desired protocol
   - An ROI appears on the image
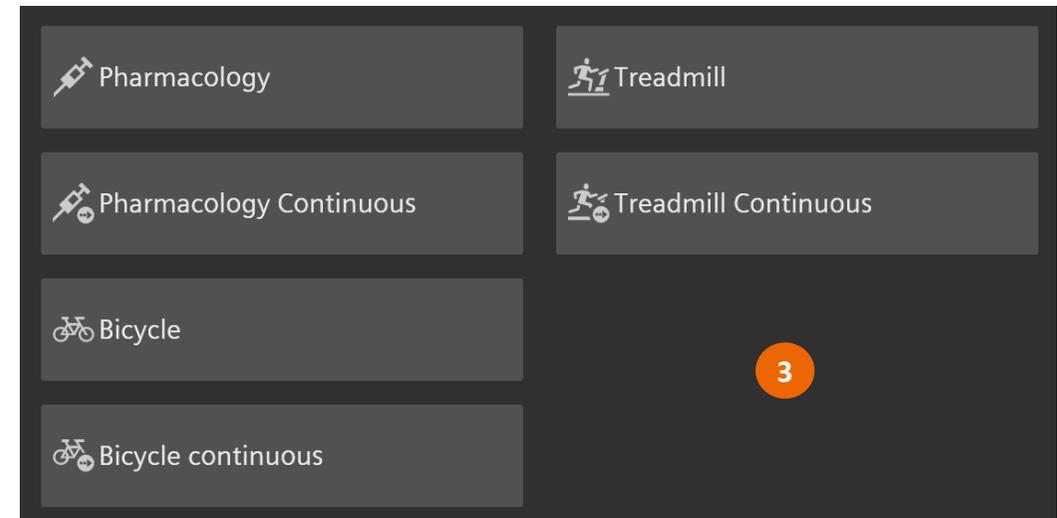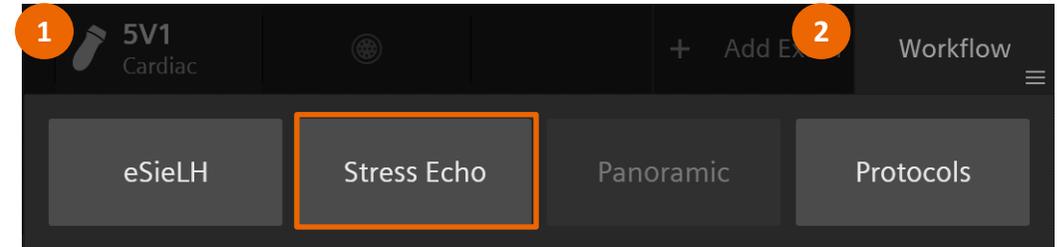
Rest stage – imaging screen

1. Select **Clip Store** to acquire images for a view
2. Select from available clips
3. Multiple clips can be selected
   - Double click on last clip selection to progress to next acquisition
4. A check mark ✓ appears on selected clips; an X appears on non-selected clips
5. A check mark ✓ appears next to each view as it is completed

Rest stage – touch screen

1. Defer Selection – continues to acquisition for next view; selection completed later

2. Accept All – accepts all acquired images for current view

3. Reject All – rejects all acquired images for current view and returns to acquisition mode
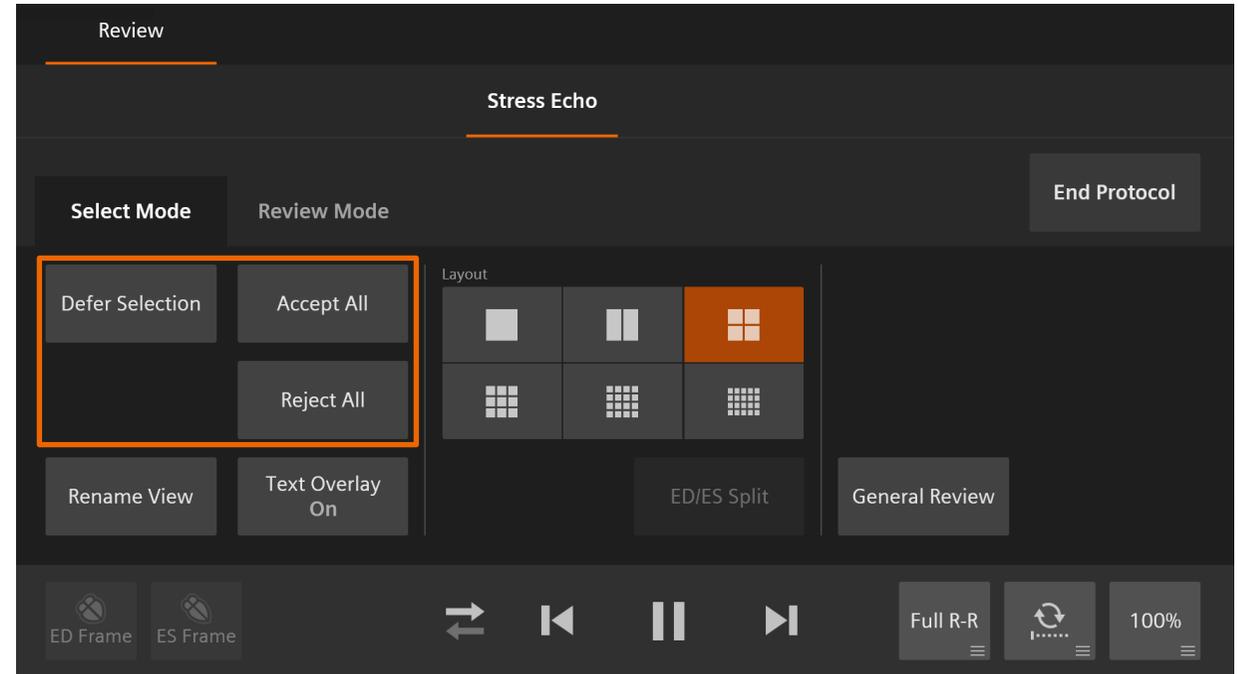
Post stage – continuous capture with view control

1. Select **Clip Store** to begin acquisition

   - Select **Clip Store** to stop acquisition for current view

   - Select **Clip Store** again to begin acquisition of next view

2. When acquisition for last view is completed, select **Clip Store** to end capture

   - Select **Pause Protocol** if additional images are needed

3. System will enter **Selection Mode**

Post stage – continuous capture with view control

To use touch screen for view control:

1. Select the current view from the list on the touch screen

2. Once a view is completed, a green check mark ✓ appears

3. Once all views are completed, system enters **Select Mode** and image selection can be completed
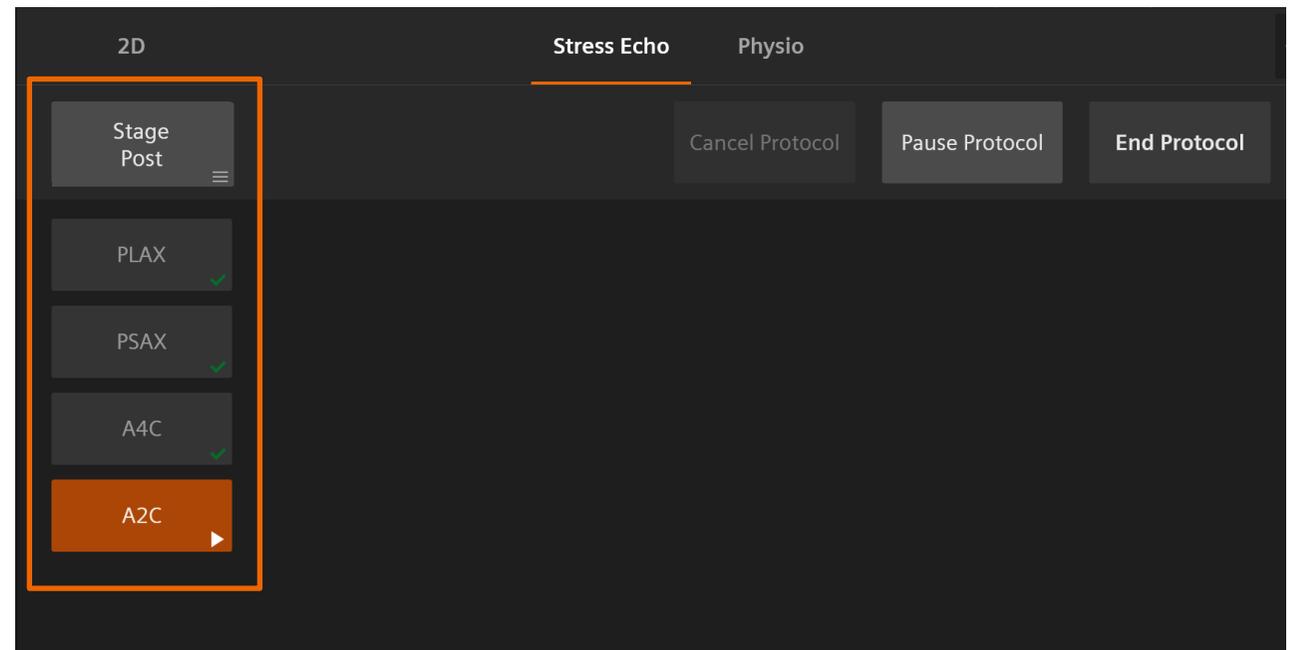
Post stage – continuous capture without view control

1. Select **Clip Store** to begin acquisition
2. Select **Clip Store** to end acquisition
   - Select **Pause Protocol** if additional images are needed
3. System can be configured to enter **Review** automatically or user can manually select from the touch screen

Note: All images will be labeled as same view and will need to be renamed when selected

Add view

Add View can be used to add a view during a stress echo protocol

1. Select **Add View**

2. Type in view name

3. Select **OK**

26

Add stage

Add Stage can be used to add a stage during a stress echo

1. Select **Add Stage**

2. Select **Stage Property**

3. Type in **Stage Name**

4. Select **OK**

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Review post stress: selection mode with view control

1. Select left or right **Set** key to select a clip; once selected, the clip will have a green check mark ✓

2. Double-click the **Set** key to confirm selections and the application will progress to next view for selection

3. Repeat steps 1 and 2 until all desired views are selected

- Once images are acquired, the application will automatically advance to **Select Mode**

- If desired, change the layout
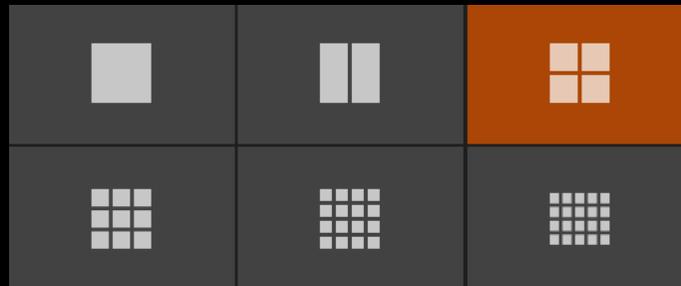
- Toggle through pages to review and select images

Select Mode   Review Mode

Page
14 of 20
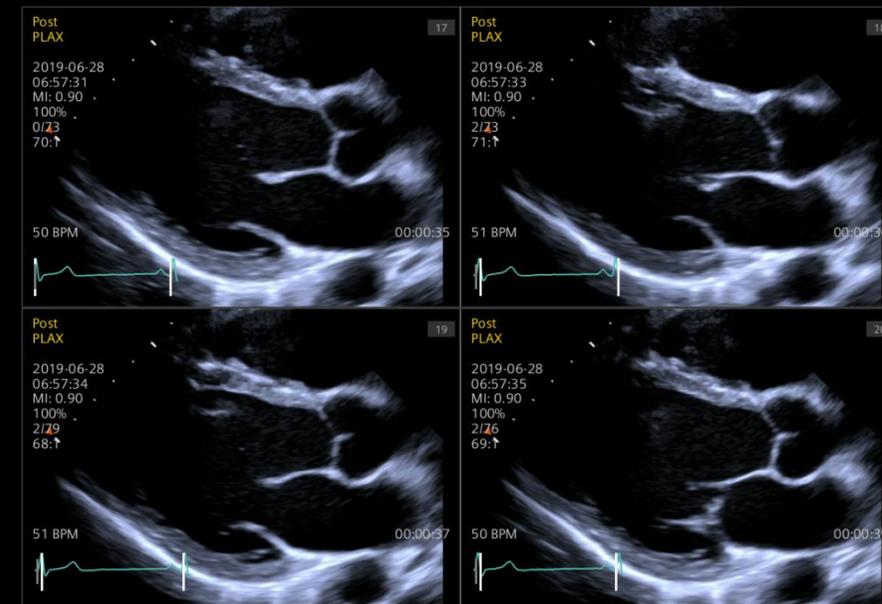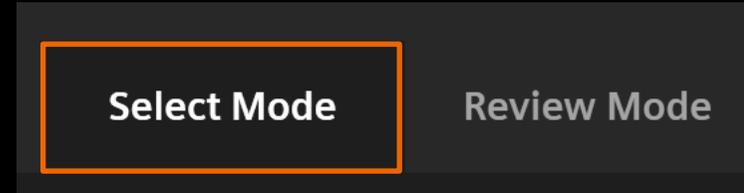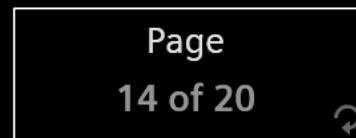
Review post stress: selection without view control

1. Select **Rename View**

2. Select image to rename

   • Can select multiple images at one time

3. Select view name

4. Select **OK**
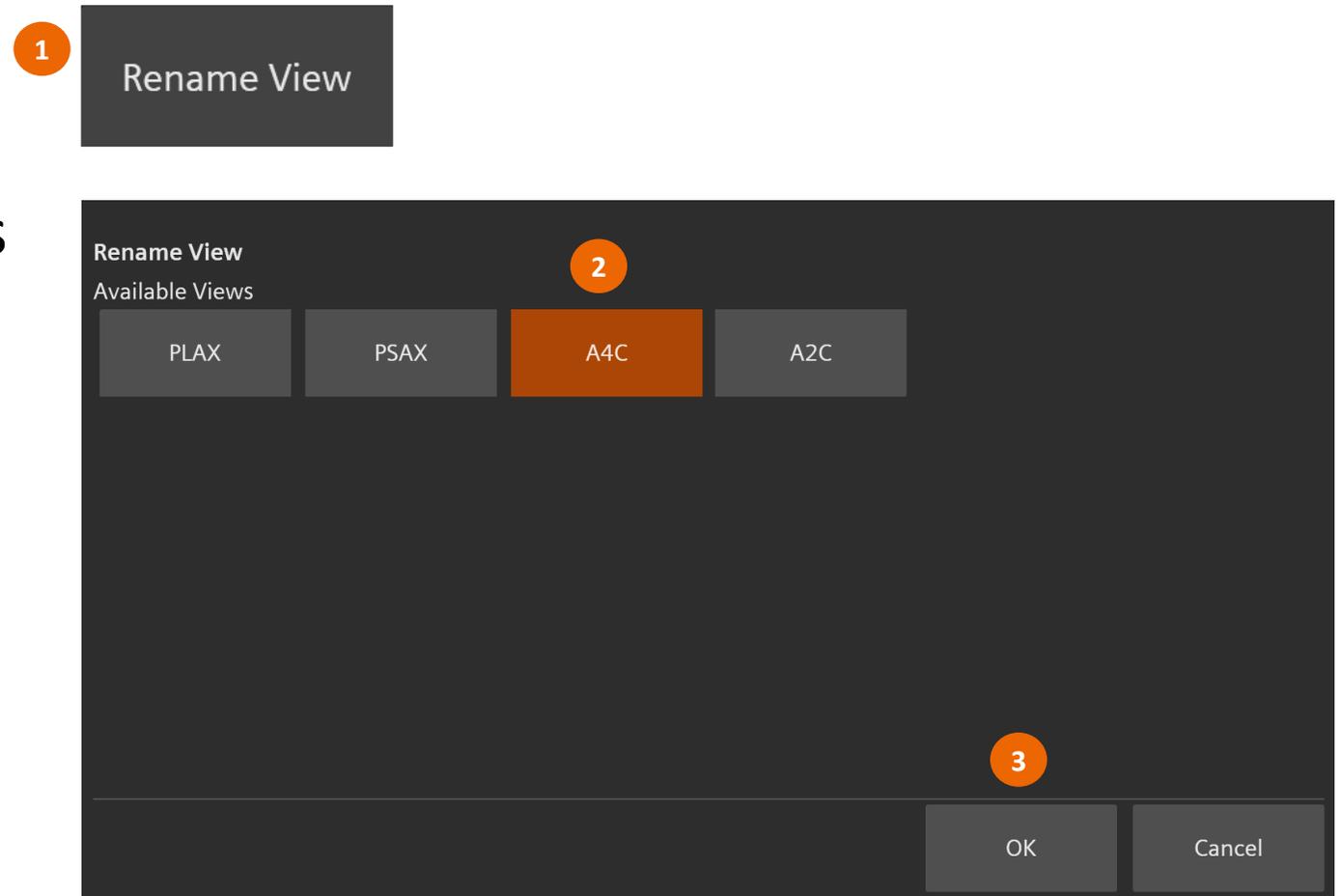
Review post stress: selection without view control

- Selected clips will have a green check mark

- Navigation Panel displays number of clips selected for each view

Review post stress: selection complete

- Once selection is completed, the Navigation Panel displays a green check mark beside all views
- The number of selected views also appears to the right of each view
- Compare option is available
- Images can be sorted **By View** or **By Stage**
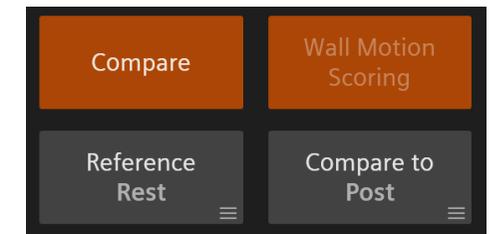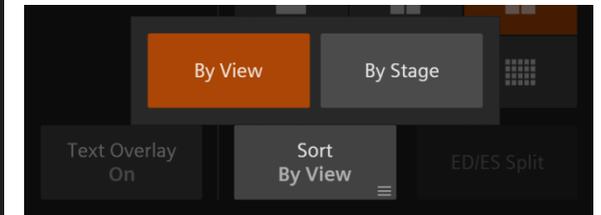
General review

- A **General Review** option for stress echo is available
- Allows the operator to review multiple images simultaneously; also includes all images that were acquired throughout stress echo exam
- In Review and Select Modes, **General Review** is located on the touch screen
- Select **Stress Echo Review** to return to Review and select Modes
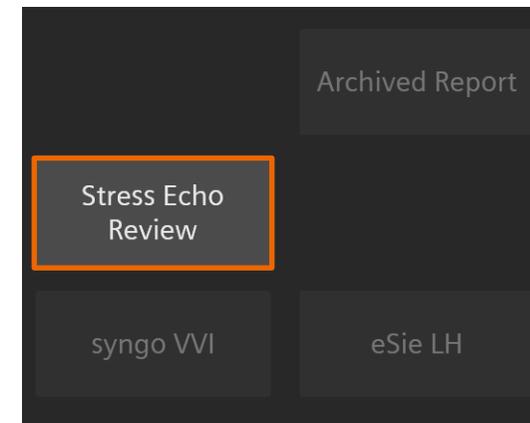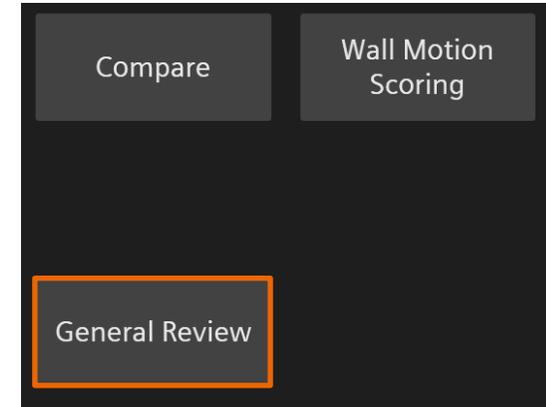
Wall motion scoring
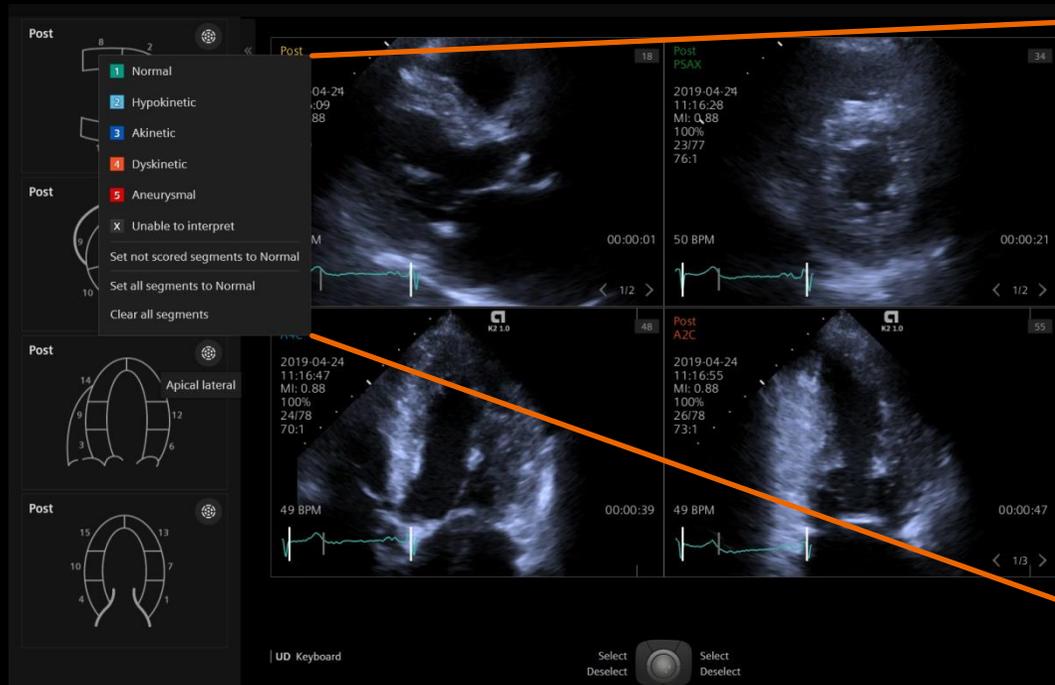
TIP Use the **Set not scored segments to Normal** and **Set all segments to Normal** options for efficiency

Wall motion scoring

- Select the bull's eye icon to view the segments in a bull's eye format

- This provides a global display of all of the segments

Report

End the stress echo protocol

1. Select **End Protocol** on the touch screen

2. Select **OK** (a message will alert the user of any views that have not been completed)

- Standard imaging screen will be available

- If desired, capture non-stress images

- Selecting **End Study** from the touch screen will end the study completely
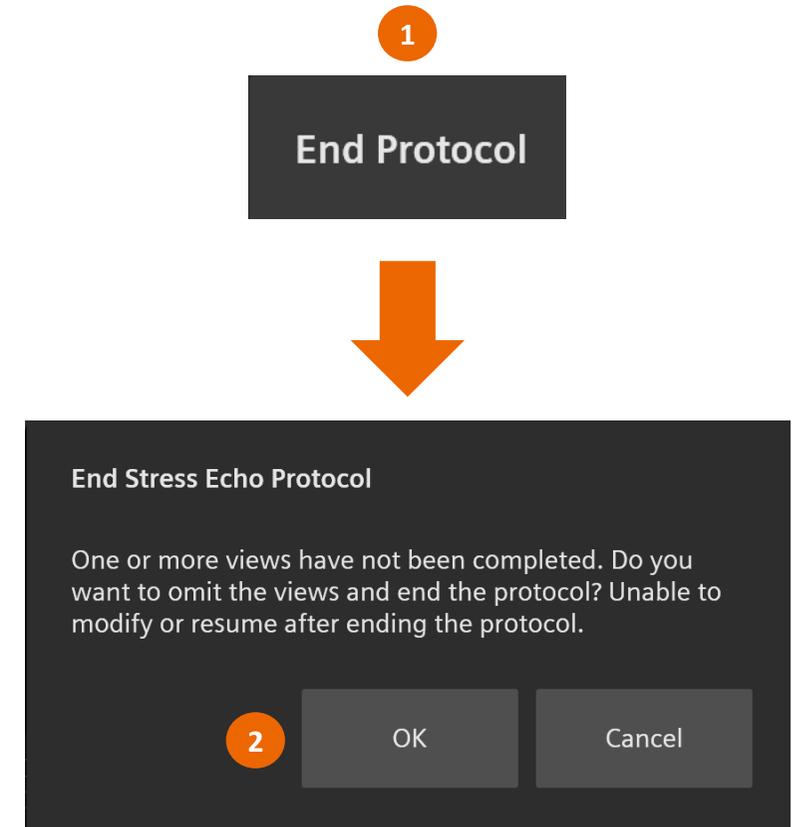
1

End Protocol

End Stress Echo Protocol

One or more views have not been completed. Do you want to omit the views and end the protocol? Unable to modify or resume after ending the protocol.

2   OK   Cancel

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- **Summarize quick exam**

Quick stress echo exam

- Determine stress echo workflow and customize a protocol

- Begin the study
  - Obtain images outside of the stress echo
  - Launch stress echo protocol
  - Evaluate flexibility of the protocol by using View Control or without using View Control
  - Demonstrate how to pause protocol and take additional images

Summary

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Thank you for your enthusiasm!

Questions?