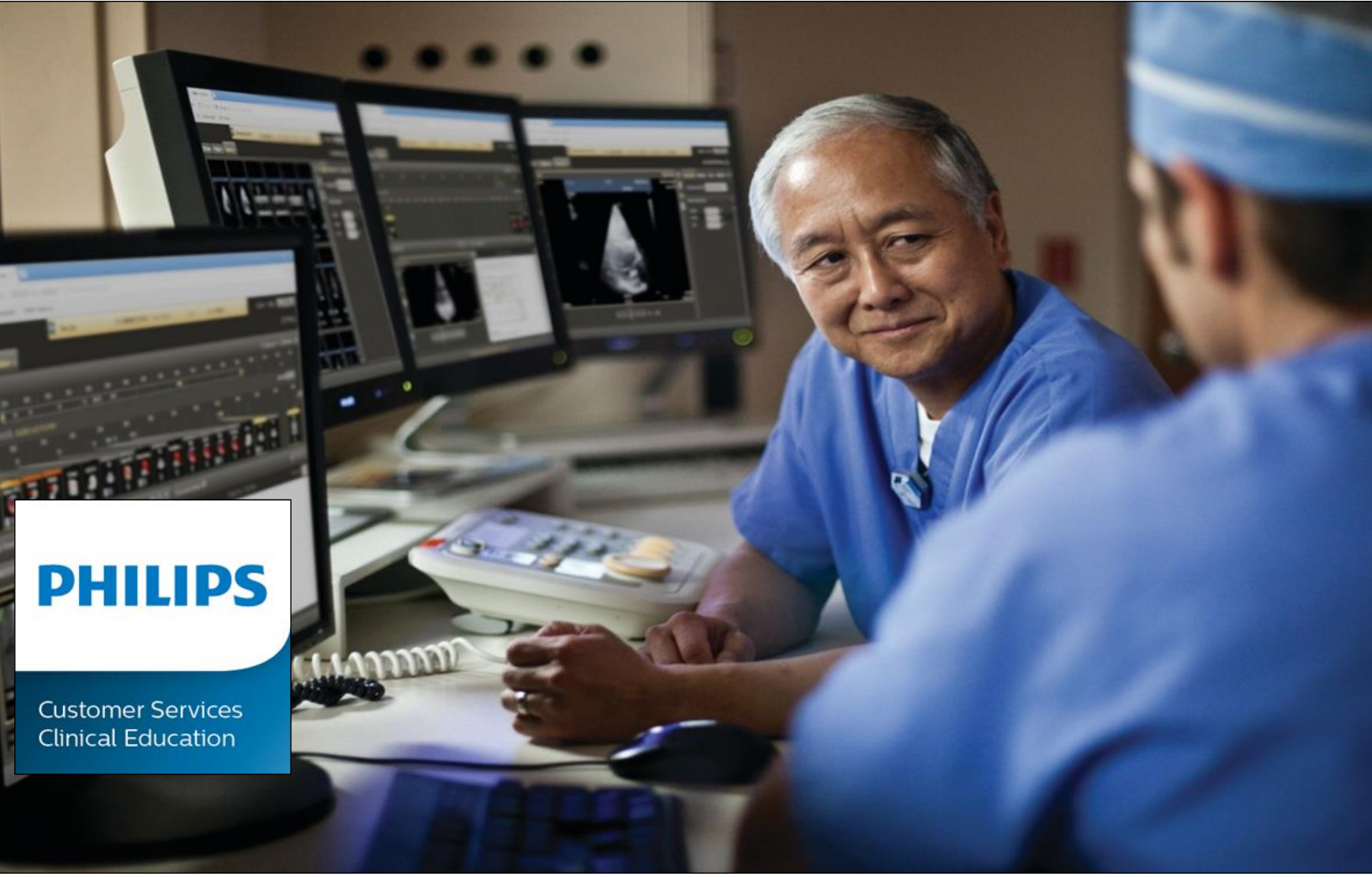


CT Cardiac Viewer

Purpose

CT Cardiac Viewer provides a set of tools for the visualization of one or multiple cardiac phases using original images or MPR\MIP images in axial, coronal, sagittal or dedicated cardiac axes (short axis, horizontal long axis, and vertical long axis).

Benefits

- Automatic removal of the rib-cage structures enables a 3D anatomical Volume Rendering image of the heart and the large blood vessels connected to it.
- The Viewer supports basic measurements as well as basic ventricular functional analysis based on “Area-Length” method to estimate end systolic volume (ESV), end diastolic volume (EDV), cardiac output (CO), and ejection fraction (EF).

Workflow

To view CT cardiac images:

1. From the **Patient Directory**, select the study and series and click 

.

   The matching ECG strip is auto selected. To load multiple series press the **Control key** and select the appropriate series.

Note To be eligible for the Cardiac Viewer, the study must be ECG gated, and have the same orientation, spacing between the images, and reconstruction matrix.

2. The study opens in the **Slab** mode, but you can select any mode.

3. In Slab mode select either:
   - General axes: coronal, sagittal, or axial.

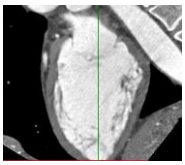
   - Cardiac axes: horizontal long axis, vertical long axis or short axis views.

4. Review the images.
5. Click  to save images, or right-click and select **Key Images** to save images to findings.
6. In the left **Navigation** panel, click the  (drop-down arrow) and select **Functional Analysis**.

   The study is processed and cardiac axes views are created and displayed.

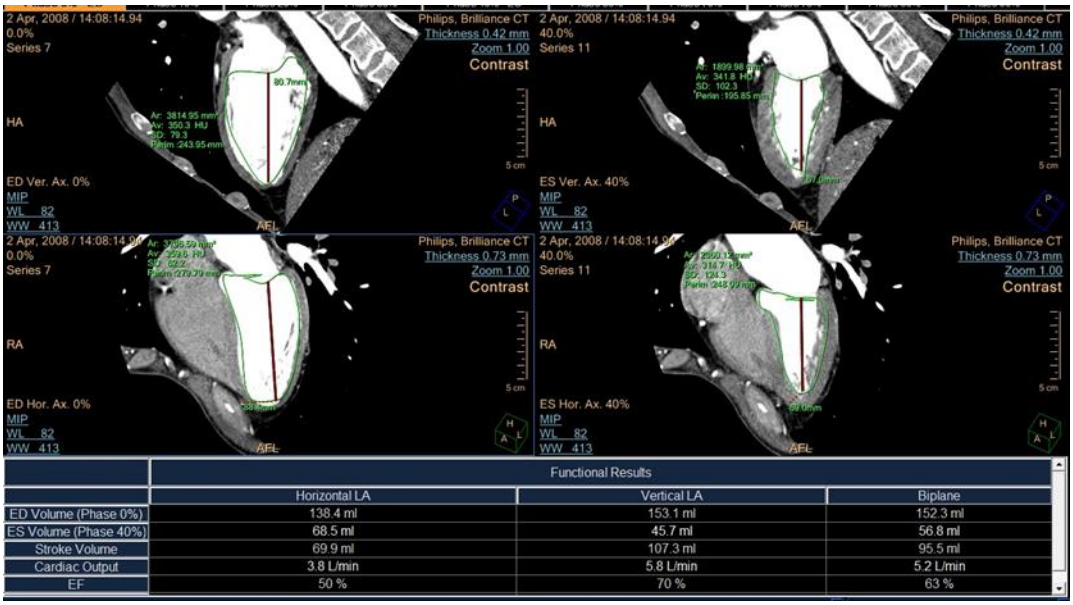
   The basic purpose of **Functional Analysis** is to determine the proportion of contrasted blood ejected by the left ventricle during one heart cycle. This is the **ejection fraction**.

7. Review the Cardiac Axes images. The cardiac axes are generated so that the crosshairs of the long axis views cross the left ventricle through the apex and the mitral valve.

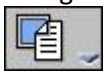


8. To correct the long axis, click  (**Correct Axis**).
9. Click 

10. Click  (**Area/Length Ejection Fraction**).
11. Draw the endocardial contours on all four images and adjust the length dimension.



	Functional Results		
	Horizontal LA	Vertical LA	Biplane
ED Volume (Phase 0%)	138.4 ml	153.1 ml	152.3 ml
ES Volume (Phase 40%)	68.5 ml	45.7 ml	56.8 ml
Stroke Volume	69.9 ml	107.3 ml	95.5 ml
Cardiac Output	3.8 L/min	5.8 L/min	5.2 L/min
EF	50 %	70 %	63 %

12. Review the results.
13. Do one or more of the following:
    - To save the images, click  (**Save**) and select the way you want to save the images.
    - To bookmark the images, click  (**Bookmark**) and set the bookmark in the **Save Bookmark** dialog box.
    - To send the final images to the reporting package, click the drop-down next to the displayed reporting option and click  (**Send selected images to report**)

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