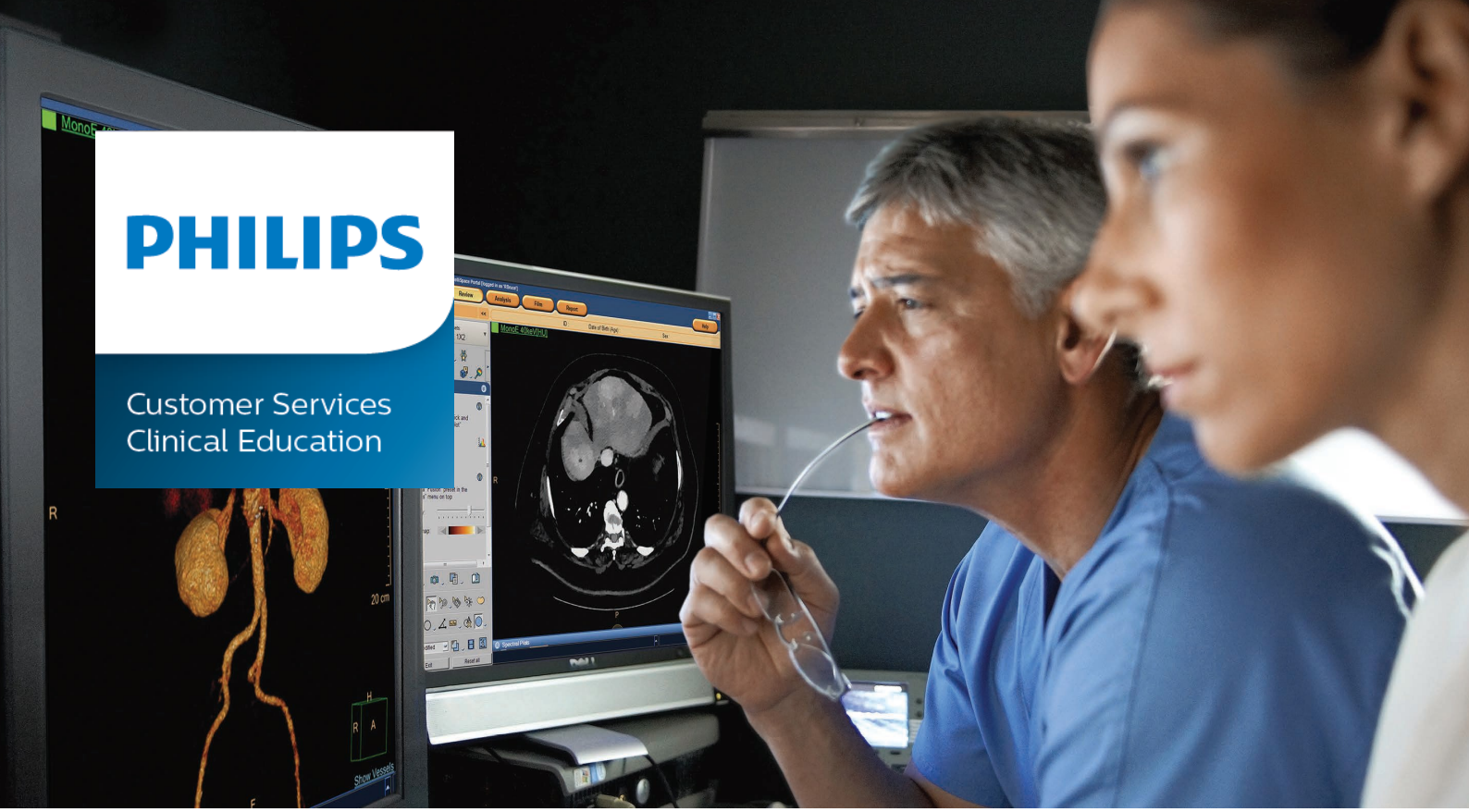


MR Cardiac Analysis Suite

Functional Long Axis LV

IntelliSpace Portal

MR Applications

Quick Step Guides

Application

The Functional LA analysis package provides rapid long-axis functional analysis for LV, based on an **ALEF method (Area Length Ejection Fraction)** for 2– and 4 chamber series or combined 2-/4-chamber (biplane) analysis.

Before you begin

To use the biplane method, select two series that have been scanned perpendicular to each other. The accuracy of this analysis method depends on the acquired series displaying the maximum volume for LV. The acquisition should be made perpendicular to the SA plane.

From Version 9 and up, IntelliSpace Portal MR Cardiac Suite also provides multisclice analysis as well as realtime acquisition.

Workflow

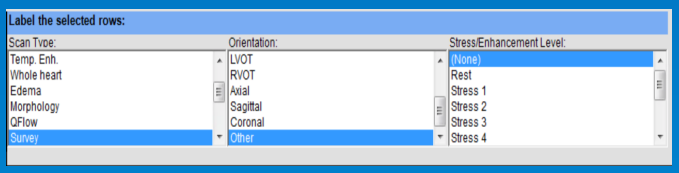
From the **Patient Directory**, select the study and click 

Labeling Stage

The **Labeling** screen displays a list of the series selected in the study. Thumbnail images of each series are displayed for reference. Each series should be labeled with its **scan type** and **orientation**. If applicable, a stress level label can be applied optionally. Details of currently applied labels are displayed on the right side of the series list.

Analysis can be done on a single stress or rest series, or you can select both for analysis for a direct comparison. Additionally, to compare series, the stress series should be labeled as "**stress**" and the rest series should be labeled as "**rest**".

When all labels are set correctly, proceed to Stage 2 of the MR Cardiac Viewer (Viewing).



Start Analysis

In the Cardiac MR **Viewing** screen, select a suitable functional LA view 2CH or 4CH, or select two biplane series.

Select **Functional LA LV** in the analysis type list in the task guidance panel and click **Start Analysis Application.** 

Segmentation Stage

The Functional LA package opens in the **Segment** screen and displays LA views in two columns. The first column displays the first phase, which is typically the End Diastolic (ED) phase. The second column displays the End Systolic (ES) phase as calculated by the system.

Scroll through the image series to verify End Systole (ES) and End Diastole (ED) selected by the system. The selected phases are color coded with the images.

Start drawing contours on each image for ED and ES:

 Draw endo contour at **ED in 2CH**

 Draw endo contour at **ED in 4CH**

 Draw endo contour at **ES in 2CH**

 Draw endo contour at **ES in 4CH**

Draw contours on each image for the ED and ES phase.

• Draw a contour starting at one side of the valve plane, following the endocardium to the other side of the valve plane.

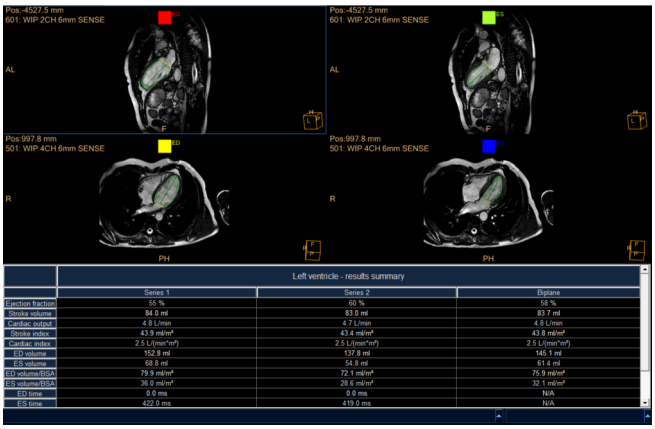
• Double-click to complete the contour. The valve plane and the long axis are drawn automatically.

Reposition the midline to the apex to fine-tune the contour for optimal result. When you have drawn contours on all images, click the right arrow in the title panel to display the **View Results** screen.

Result Stage

The patient's heart rate is entered automatically from the acquisition information. However, if you need to correct the heart rate, enter a number in the **Heart rate** box in the **View Results** task guidance panel.

If desired, select a different result protocol from the protocol list.



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