

# CardioPACS™ 5.0 Analysis

CARDIOPACS MODULES

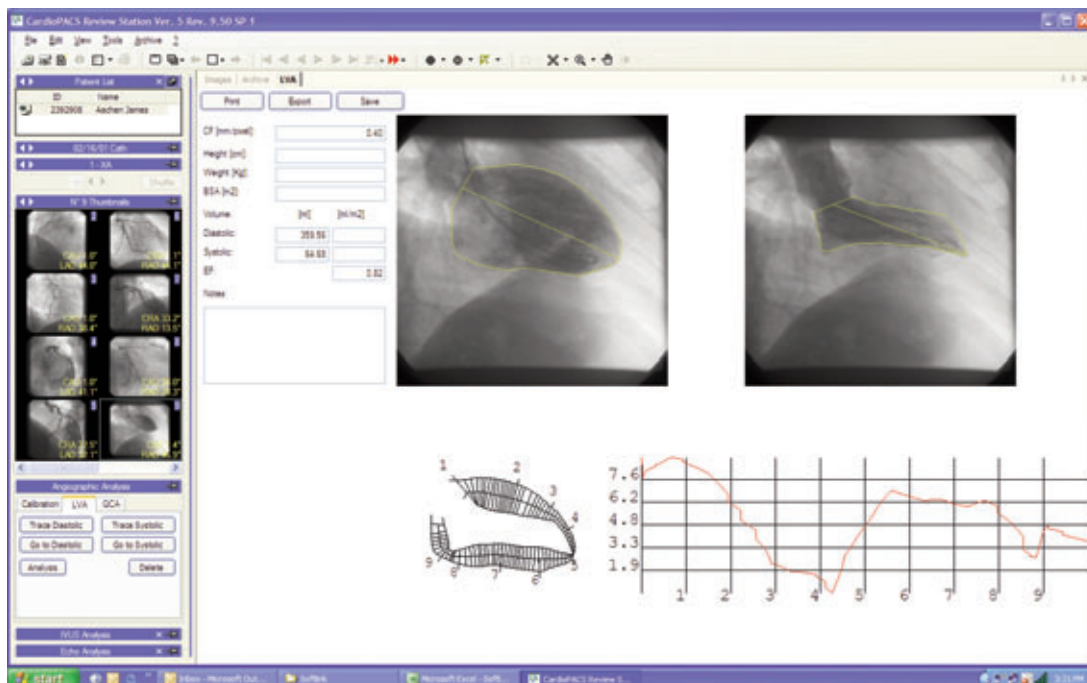
CardioPACS 5.0 Analysis Modules are vendor-neutral solutions supporting viewing and advanced computation, calibration and calculation of angiographic and ultrasound images. These tools—specific to each clinical area—enable complex analysis, resulting in better-informed diagnoses, procedural reports and treatment plans.

## CardioPACS 5.0 LVA Module

**For left ventricle angiography analysis.** Supports left ventricle tracings for computation of volume, ejection fraction, fractional and body surface area from angiographic image runs.

### Module provides:

- Distinct calibration procedures based on: default values, known structures measurements, known catheters
- Mouse-based profile tracing and correction
- Automatic computation of body surface, ventricle volumes, ejection fraction and regional shortenings
- Automatic exploitation of DICOM file information
- Automatic report printout or storage as DICOM image file
- Export of images and data in common formats



Left Ventricle Angiography Analysis

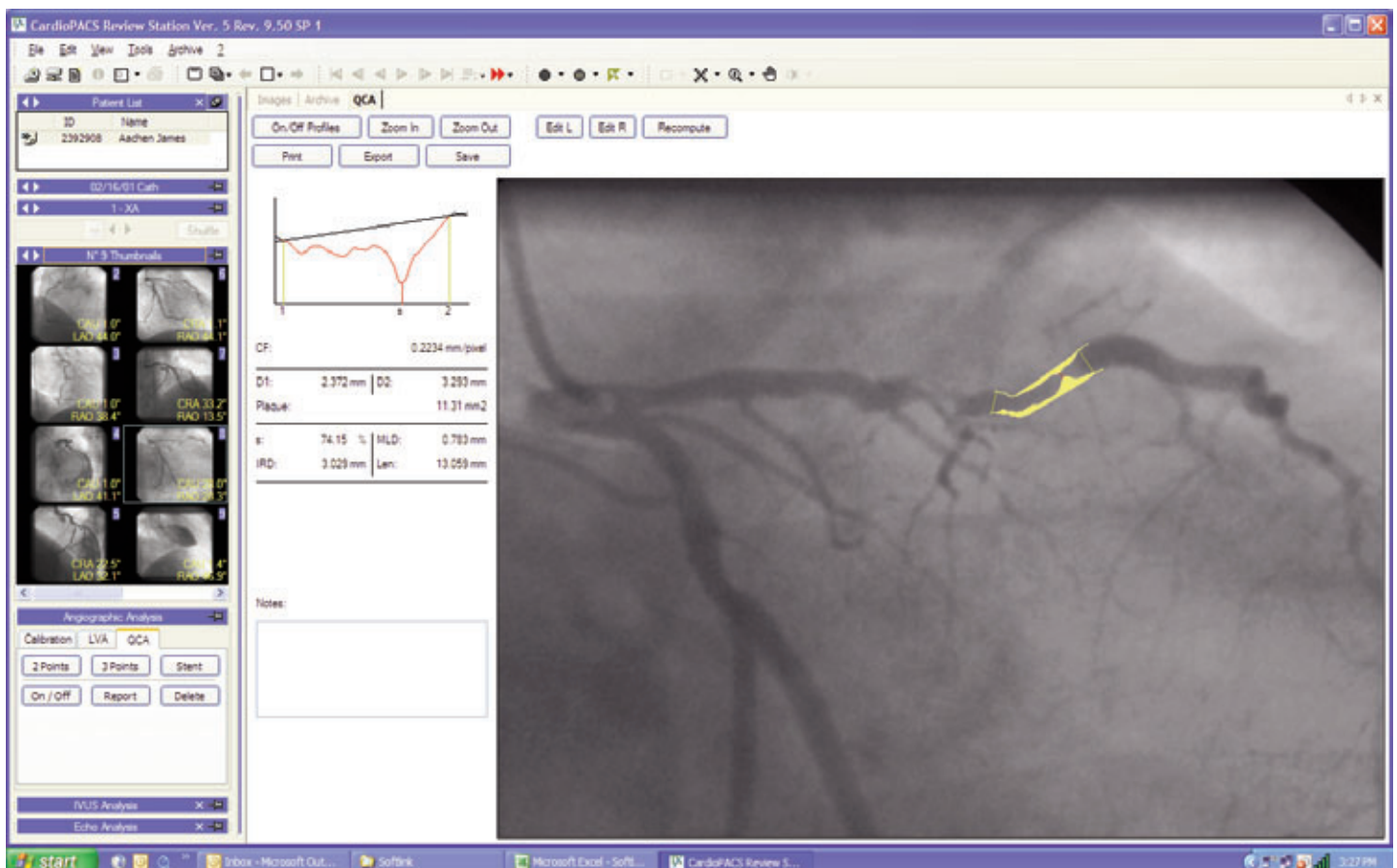
# CardioPACS 5.0 QCA Module

**For quantitative coronary angiography analysis.** Supports user positioning of only two calipers, one above and one below a coronary lesion or stent, for identifying a region of interest. CardioPACS 5.0 QCA then simultaneously identifies the coronary skeleton, maps native/residual lumens and calculates percent stenosis with absolutely reproducible results.

This Module derives a densitometry display useful for identifying mismatches in geometric profiles. This is preferable to other QCA systems which extract the coronary skeleton by computing directly from user-selected, often-multiple points; these systems are therefore operator-dependent and frequently require manual corrections.

## Module features:

- Deterministic (operator-independent) results
- Automatic skeleton detection based on only two points
- Automatic calibration on catheter
- Geometric and densitometry lesion and stent analysis
- Compatibility with both direct and projector images
- Automatic compensation of the Point Spread Function
- Exportation of images and data in common formats (e.g., Microsoft® Excel)
- Exportation of images and data in personalized formats on demand
- Automatic report printout or storage as DICOM image file



*Quantitative Coronary Angiography Analysis*

# CardioPACS 5.0 CVUS Module

For cardiac and vascular ultrasound analysis. Provides 2D, MMode, Doppler and Tissue Doppler off-line measurements, and calculations for cardiac and vascular ultrasound images.

## Module measures:

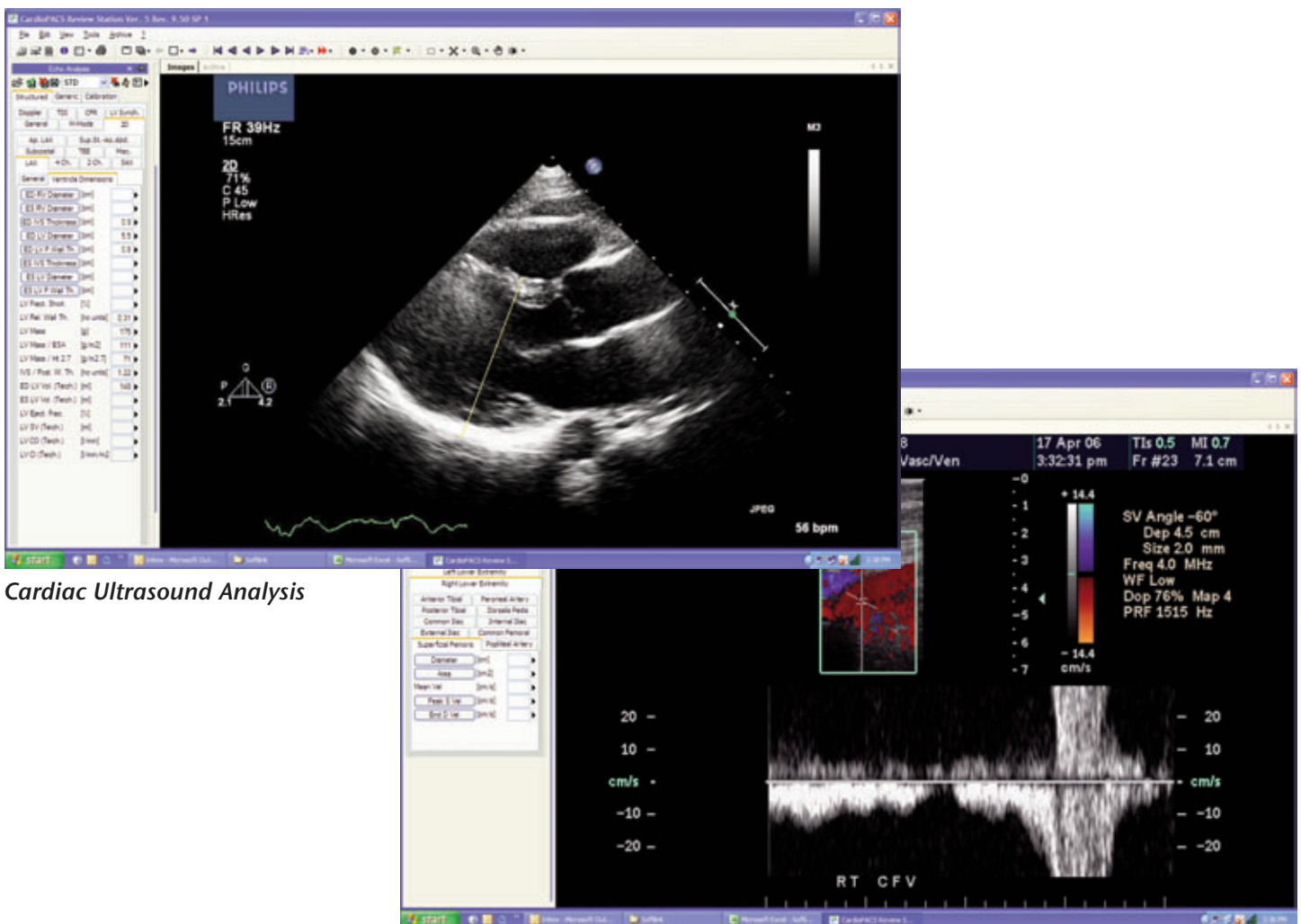
- Distance
- Time
- Velocity
- Slope
- Circumference

## Module computes:

- Area
- Volume
- Mass
- Shape
- Ejection fraction
- Fractional shortening
- Regional wall motion

For each of these measurements, the system is capable of storing both single values and multiple samples, computing the average and standard deviation. User-programmable measurements and derived calculations are also available.

Measurements performed on the CardioPACS 5.0 Workstation can be saved back into the image as a DICOM SR object. This module also allows the user to re-measure, edit and update existing DICOM SR measurements within the study.



Cardiac Ultrasound Analysis

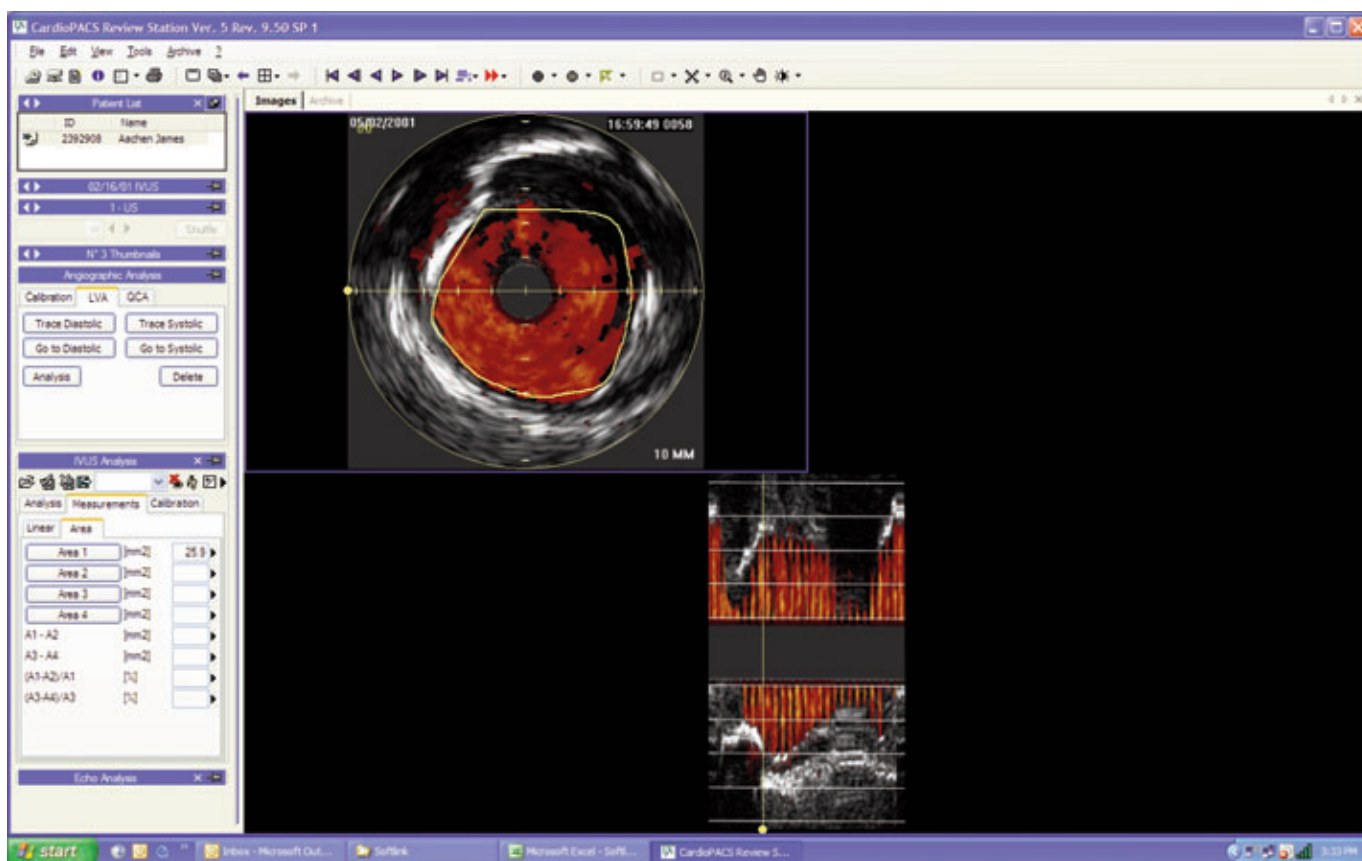
Vascular Ultrasound Analysis

## CardioPACS 5.0 IVUS Module

For intravascular ultrasound analysis. Supports IVUS viewing and constructs real-time In-Line Display (ILD) from imaging runs. Pullback rate can be input, enabling accurate distance and area measurements from 2D and ILD displays.

### Module provides:

- Automatic image calibration based on DICOM data fields; manual calibration allowed if missing
- Real-time longitudinal reconstruction
- Real-time sampling direction modification
- Exportation of reconstructed images or sequences to standard image files (BMP, JPEG, AVI, etc.)
- Exportation of reconstructed images to clipboard for rapid slide preparation
- Automatic extraction of pullback information from DICOM data fields; can be manually defined if missing
- Distance and area measurements on both the cross-sectional and longitudinal images
- Custom report creation and storage with export of data in common formats (e.g., Microsoft® Excel)



*Intravascular Ultrasound Analysis*

**About LUMEDX:** With over 500 heart center clients worldwide, LUMEDX is the market leader in fully integrated cardiovascular information and imaging systems and the No. 1 independent integrator of cardiology information solutions. LUMEDX offers the most proven, comprehensive package of clinical information tools, cardiovascular products, and services to help medical institutions enhance quality of patient care, reduce costs, streamline workflow, increase patient volume, and grow revenue.