

Comprehensive Cardiac Analysis

Cardiovascular CT - Fast, Simple, Complete

Comprehensive Cardiac Analysis Package Features

- Heart Review
- Cardiac CT Angio
- Virtual IVUS
- GlobeView
- Advanced LV Function

Having an extensive history of partnering with clinicians specializing in cardiovascular care, Philips has a deep appreciation of your clinical needs. This experience has helped us create an extensive array of cardiology solutions. Our industry-leading Rate Responsive^{1,2,3} CVCT technology provides you with the most advanced capabilities, clear images, easy review capabilities and real-time reports. The result – clinical excellence and improved patient care.

FAST

The Comprehensive Cardiac Analysis (CCA) application is a complete cardiac evaluation application* that provides simplified workflow and minimal user interaction. This high-tech cardiac analysis tool helps you visualize coronary anatomy, perform detailed coronary artery evaluations and analyze ventricular function. With CCA, you can substantially reduce the time and complexity of a cardiac CT evaluation, opening the doorway to quicker, more accurate analysis for the operator and faster clinical results.

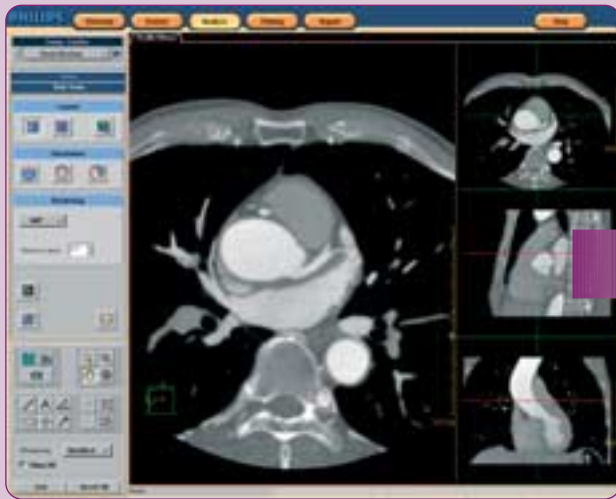


* Rate Responsive CV toolkit, Extended Brilliance Workspace v2.0 and Dell 650 or higher are pre-requisites.

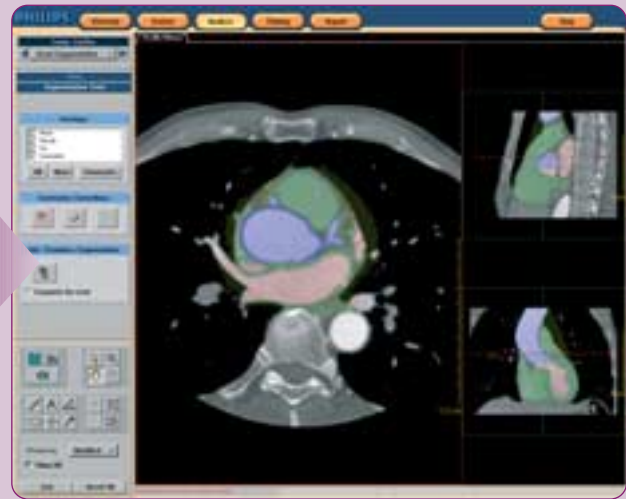
1. "Multi-phase cardiac imager." Heuscher DJ, Chandra S. US Patent 6,510,337. 2003
2. "A dynamic approach to identifying desired physiological phases for cardiac imaging using multislice spiral CT." Vembar M, Garcia MJ, Heuscher DJ, Haberl R, Matthews D, Boehme GE, Greenberg NL. Medical Physics July 2003, Volume 30, Number 8. PP 1683-1693
3. "Non-invasive coronary angiography with 16-detector row CT: Effect of heart rate." Hoffmann MHK, Shi H, Manzke R, Schmid FT, DeVries L, Grass M, Brambs H-J, Ashoff AJ. Radiology 234: 86-97. 2005.

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Fast, cardiac analysis is as simple as 1-2-3...



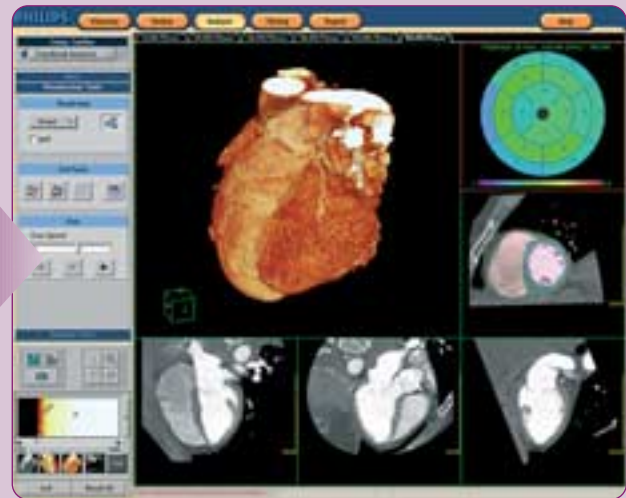
Heart Review



1 Initial visualization of images provides you with general review of the multi-phase data in oblique planes while full cardiac segmentation occurs in the background.



2 Complete extraction of cardiac anatomy. Outstanding visualization. Coronary arteries highlighted with cursor passover.



3 Advanced LV functional and the use of cut plane technology to visualize the heart or entire thorax, is immediately available without any additional segmentation required.

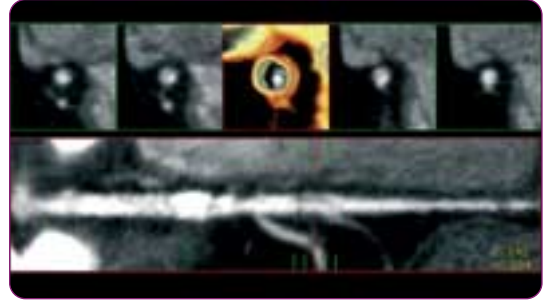
Rate Responsive CV toolkit, Extended Brilliance Workspace v2.0 and Dell 650 or higher are pre-requisites.

Simple

CCA provides a wealth of powerful analysis tools based on total heart segmentation, enabling entire coronary tree visualization, vessel lumen morphological analysis and free lumen diameter / area analysis (thanks to a cross sectional view of the artery in question). CCA also provides ventricular functional analysis and 3-D heart chamber and valve morphology, including a dynamic cine mode.

Virtual IVUS

Philips' exclusive CCA enables complete vessel visualization, including the ostium, allowing for proximal morphology assessment. The software also provides you with a unique, patent pending "IVUS-like" view for the central cross-sectional cut and stenosis calculations.†

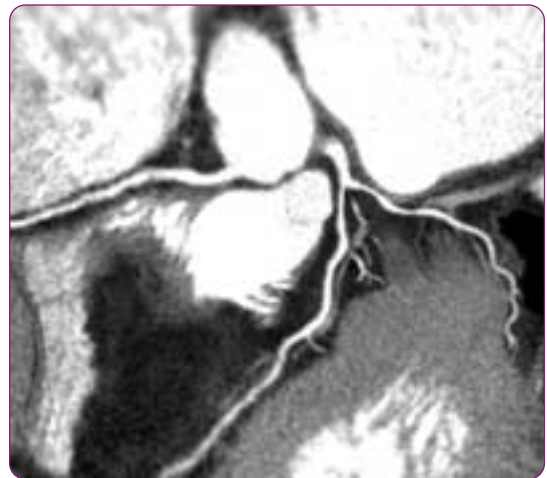


Globe View

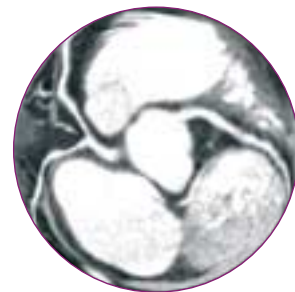
A novel and patented "GlobeView" visualization technique has been developed that maps the coronary arteries onto a spherical surface. This technique provides a fast detailed examination of the coronary tree and surrounding tissue without the overlying structures. A sphere or an ellipsoid serves as a base surface to map the coronary tree.

Globe View provides three modes of visualization:

- 3-D Map mode - "true form" surface is texture-mapped with the re-sampled volume data, giving a 3-D Map.
- Globe mode – projects the data onto the sphere that served as a base surface.
- 2-D Map mode - Peels the data to form a 2-D Map of the entire coronary tree in its context in the heart.



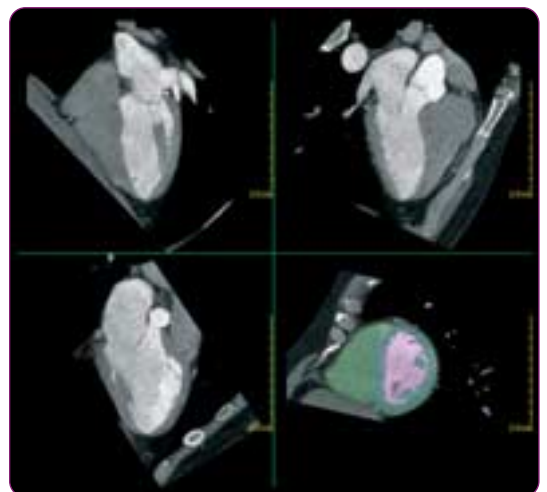
2-D Map



Globe

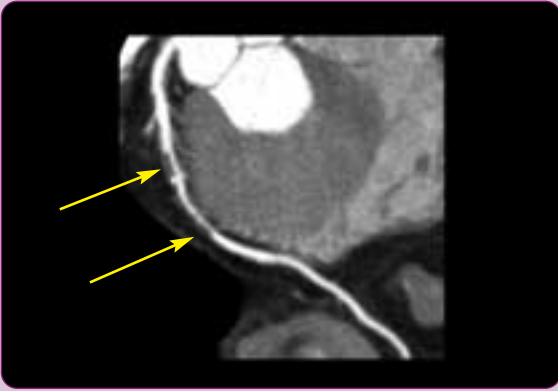
Advanced LV Function

Highly advanced and fully automated segmentation and quantitative analysis of the left ventricle is the centerpiece of this feature, ideal for reporting ejection-fraction, stroke volume, LV mass and cardiac output, as well as other functional assessment. Information on wall motion and wall thickness can be visualized on a typical bulls-eye plot and regionalized, if desired. Cine visualization is directly enabled.



† Extensive clinical correlation studies presently underway.

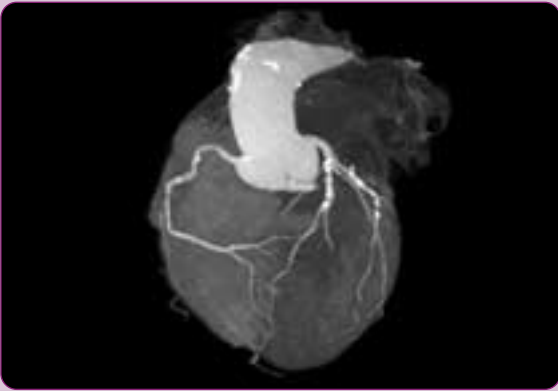
Image Gallery



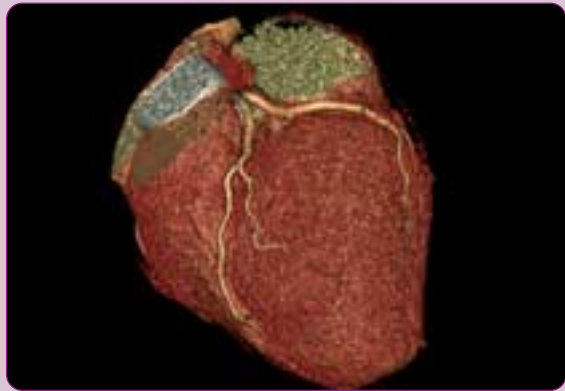
Soft plaque clearly identified



Fast coronary tree extraction



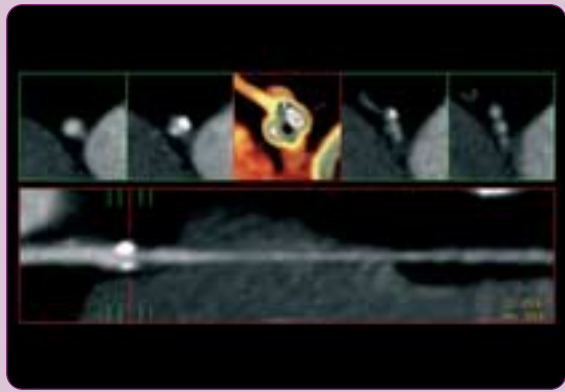
Coronaries automatically identified



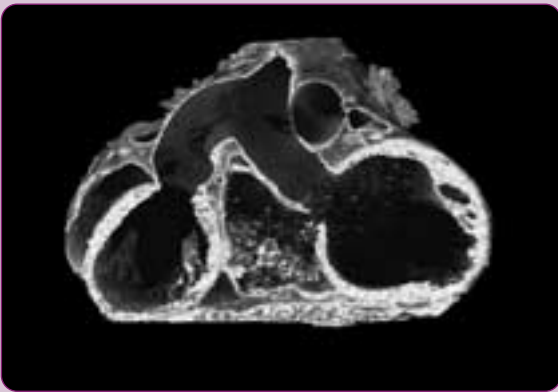
Exquisite detail



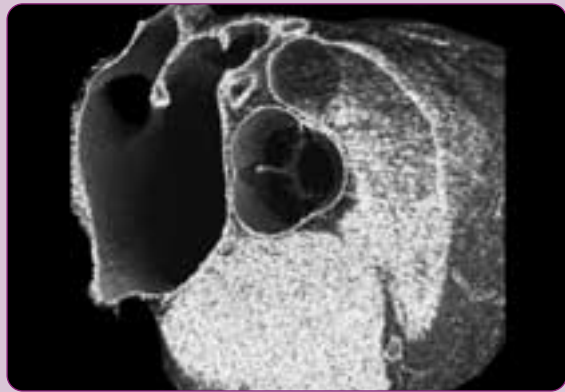
Bypass graft patency assessed



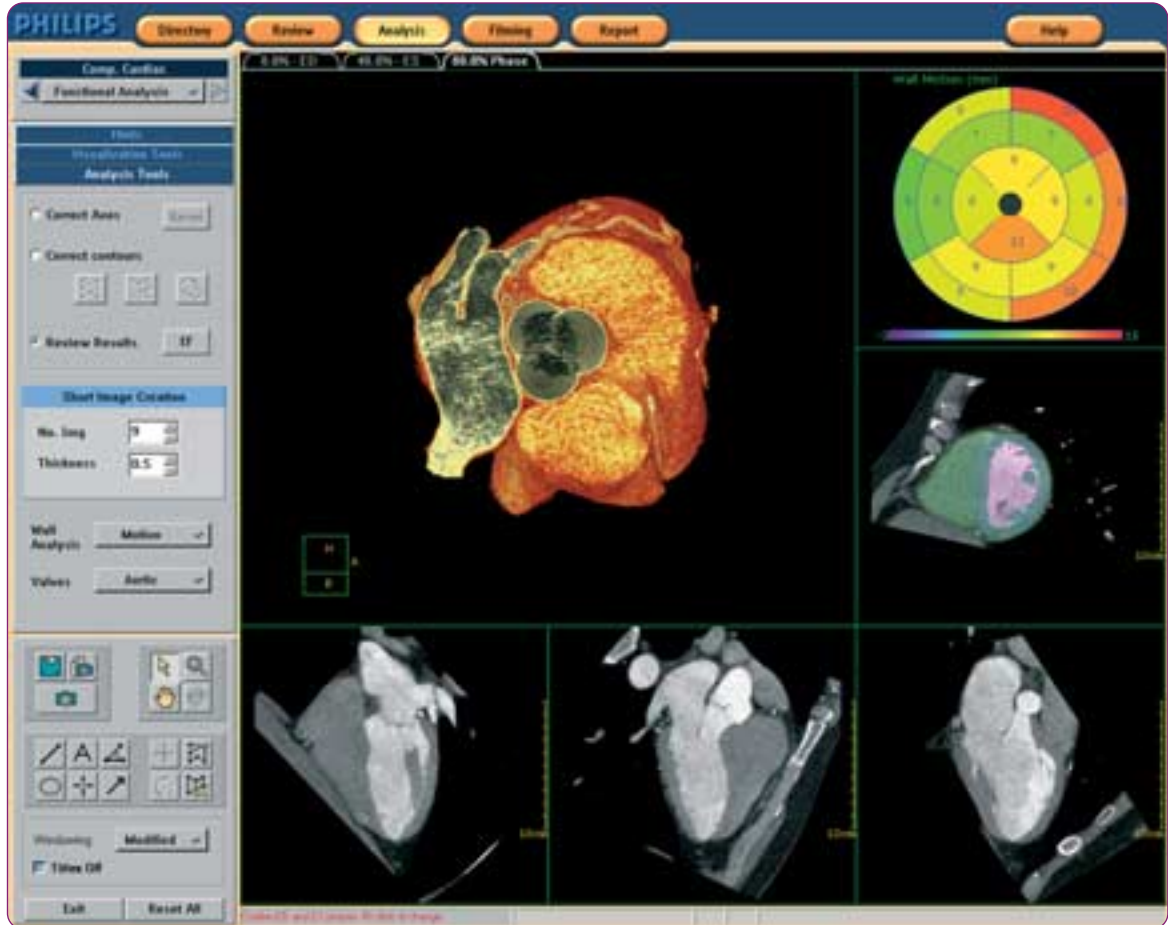
Virtual IVUS for plaque assessment



View any cut, any plane



Clear valve visualization



Advanced LV function analysis.

Comprehensive Cardiac Analysis Major Features

- **A no-click total cardiac segmentation for all phases selected**
- **Complete cardiac volume extraction**
- **Outstanding 3-D visualization**
- **Automatic coronary tree identification**
- **Complete vessel visualization including ostial morphology assessment**
- **Unique “IVUS-like” view for the central cross-sectional cut**
- **Simplified stenosis calculations**
- **GlobeView (Globe, 3-D Map and 2-D Map)**
- **Slab tools (including oblique cut planes) on 3-D images in cine**
- **Advanced Ventricular Functional Assessment, including bulls-eye presentation and automatic EF button**
- **Automatic Valve -view button**

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