# PHILIPS

**IntelliSpace Portal 9.0**

**Cardiovascular applications**

All your advanced analysis needs
# One comprehensive solution

**As many as 62% of cath lab patients have been shown NOT to have obstructive coronary artery disease.**[*]

With thorough, correct diagnosis, over 200 patients a day could have been spared catheterization in the U.S. In addition, studies have shown that advanced visualization tools can shorten the reading times of vascular anomalies by a factor of three to five.[**] Multi-modality cardiac imaging is becoming increasingly essential to provide accurate patient selection and in monitoring the interventional procedures in order to optimize the success rate and minimize the frequency of complications.[***]

**Do you have the tools needed to provide confident diagnoses quickly and effectively?**

The IntelliSpace Portal offers a rich, comprehensive suite of cardiovascular applications that allow you to diagnose and monitor cardiovascular diseases with confidence from a single solution.

**From diagnosis to treatment planning and follow-up, the Intellipace Portal has the tools to help you obtain results faster, all from a single workspace.**

[*]    Pate MR, et. Al, "Low Diagnostic Yield of Elective Coronary Angiography," New England Journal of Medicine, 362;10, 886–895, March 11, 2010
[**]   http://www.ncbi.nlm.nih.gov/pubmed/23238153 (accessed August 2, 2014)
[***]  http://www.ncbi.nlm.nih.gov/pubmed/24215196 (accessed August 2, 2014)
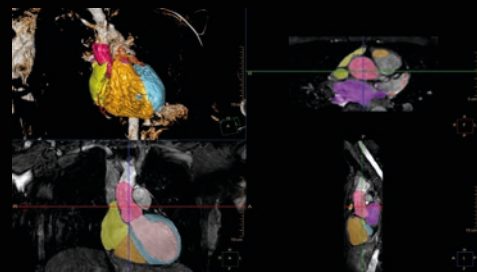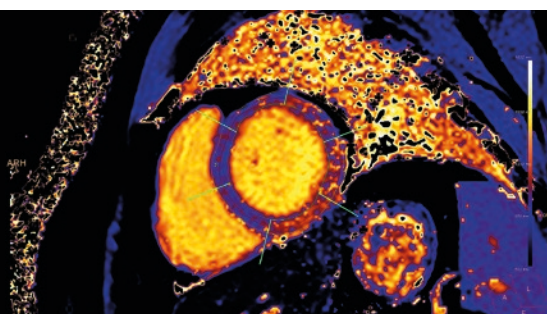
# Streamlined patient management, **from one chair**

## Diagnosis

- **Multi-modality** – Patient diagnosis often takes into account multiple scans. The IntelliSpace Portal includes viewing and advanced analysis of CT, MR, MI, US, DXR, and iXR images, from multiple vendors on one platform.[*]
- **Speed time to results** – A unified user interface across all clinical applications with faster throughput features like task guidance, zero click processing, and pre-fetching for consistent and efficient workflows.
- 3D and 4D image analysis to turn data into quantitative information for rich volumetrical and dynamic assessment.

## Treatment planning

- **The information you need** – Automatic measurements such as calculations of cath lab angles, and quickly discernable perfusion maps are a few of the time-saving tools which provide the information you need for treatment planning.
- **Mobile access** – Share bookmarks and results, and transfer studies hassle-free. Enjoy access to your studies virtually anywhere with Web Collaboration. It turns any mobile device into a true multi-modality viewer.[**]
- Bring advanced diagnostic imaging closer to the interventional suite by integrating your Allura Interventional Suite with the IntelliSpace Portal.

## Follow-up

- Robust quantification and visualization tools to measure and track disease states, providing greater insight into your patient's condition.

## For example
The **CT TAVI Planning application** provides assessment and measurements of relevant heart structures for TAVI-device sizing.
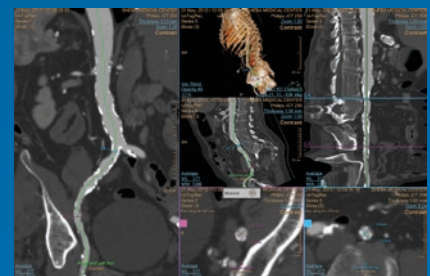


- Automatic 3D model-based segmentation of the aortic valve and aortic arch
- Visualization of aortic valve calcification

- Interventional bookmarks bring analysis to the cath lab
- Selectable C-arm starting angle from possible entry positions
- Vascular analysis for optimal access route assessment

- Improved full fidelity iXR image loading
- Post-operative CT for follow

*   Please contact your local Philips representative for details on multi-vendor coverage
**  Web Collaboration enables viewing and sharing with tablets and smartphone devices – not intended for diagnosis
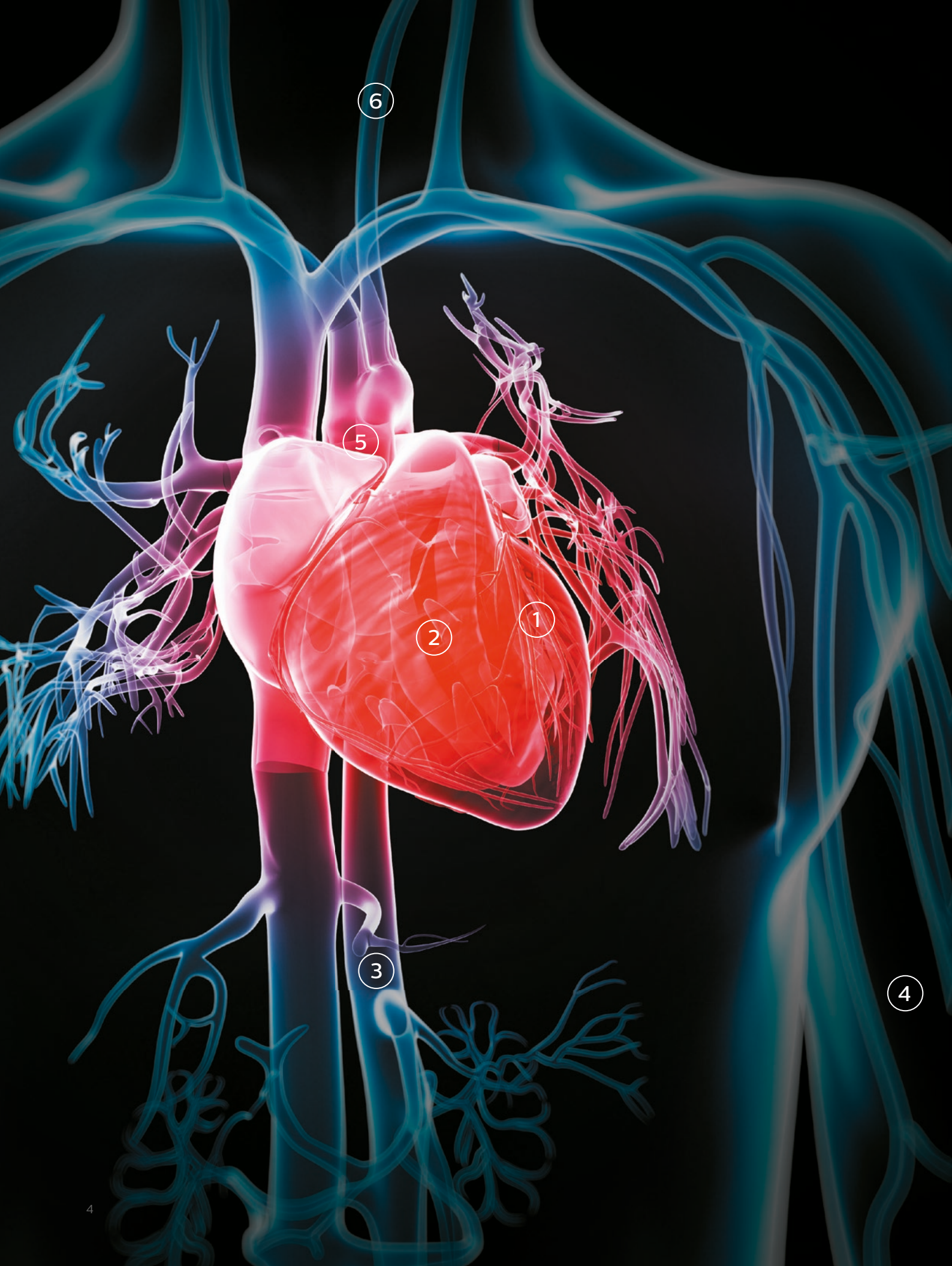
Whether you're diagnosing heart failure, coronary artery disease, structural heart disease, aortic stenosis, or even peripheral vascular disease, the IntelliSpace Portal offers a robust tool set to give you more information on patient condition for a quick, yet comprehensive diagnosis.

## 1 Coronary Artery Disease
Detailed analysis of vessel fitness to help assess patient risk
- ● CT Spectral Advanced Vessel Analysis
- ● CT Spectral Comprehensive Cardiac Analysis
- ● CT Comprehensive Cardiac Analysis (CCA)
- ● Multi Modality Advanced Vessel Analysis (AVA)
- ● NM Review
- · CT Calcium Scoring
- · CT Cardiac Plaque Assessment
- · CT Dynamic Myocardial Perfusion (DMP)
- · iXR Viewing (in MMV)
- · NM Astonish Reconstruction
- · NM Cedars-Sinai Cardiac Suite 2015[3]
- · NM Corridor 4DM 2016[1]
- · NM Emory Cardiac Toolbox (ECTb) version 4.1[2]
- · MR QFlow
- · Ultrasound Q-App General Imaging 3D Quantification (GI 3DQ)

## 2 Heart Failure
Get the full picture to quantify disease state and drive treatment planning
- ● CT Spectral Advanced Vessel Analysis
- ● CT Spectral Comprehensive Cardiac Analysis
- ● CT Comprehensive Cardiac Analysis (CCA)
- ● MR Cardiac Quantitative Mapping
- ● MR Cardiac Whole Heart
- ● Multi Modality Advanced Vessel Analysis (AVA)
- ● NM Review
- · CT Cardiac Plaque Assessment
- · CT Cardiac Viewer
- · CT Dynamic Myocardial Perfusion (DMP)
- · CT EP Planning
- · CT Myocardial Defect Assessment
- · CT Pulmonary Artery Analysis (PAA)
- · NM Astonish Reconstruction
- · NM Cedars-Sinai Cardiac Suite 2015[3]
- · NM Corridor 4DM 2016[1]
- · NM Emory Cardiac Toolbox (ECTb) version 4.1[2]
- · MR Cardiac
- · MR Cardiac Temporal Enhancement
- · MR QFlow

## 3 Aortic Aneurism
Tailor patient stent planning with 3D modeling, guided workflows, and automatic removal of non-target anatomy
- ● CT Spectral Advanced Vessel Analysis
- ● Multi Modality Advanced Vessel Analysis (AVA)
- · CT Advanced Vessel Analysis (AVA) Stent Planning
- · CT Calcium Scoring
- · Ultrasound Q-App MicroVascular Imaging (MVI)
- · Ultrasound Q-App Intima Media Thickness (IMT)

## 4 Peripheral Artery Disease
Quantification and visualization tools to measure and track disease states
- ● CT Spectral Advanced Vessel Analysis
- ● CT Brain Perfusion
- ● MR T2* (Neuro) Perfusion
- ● Multi Modality Advanced Vessel Analysis (AVA)
- · CT Body Perfusion
- · CT Calcium Scoring
- · MR Diffusion
- · Ultrasound Q-App General Imaging 3D Quantification (GI 3DQ)
- · Ultrasound Q-App Intima Media Thickness (IMT)
- · Ultrasound Q-App MicroVascular Imaging (MVI)
- · Ultrasound Q-App Vascular Plaque Quantification (VPQ)

## 5 Structural Heart Disease
3D viewing into patient condition with advanced tools for intervention planning
- ● CT Spectral Comprehensive Cardiac Analysis
- ● CT Comprehensive Cardiac Analysis (CCA)
- ● CT TAVI Planning
- ● MR Cardiac Quantitative Mapping
- ● MR Cardiac Whole Heart
- ● MR Cardiac Temporal Enhancement
- · CT Advanced Vessel Analysis (AVA) Stent Planning
- · CT Calcium Scoring
- · CT Cardiac Viewer
- · MR QFlow
- · NM Emory Cardiac Toolbox (ECTb) version 4.1[2]
- · NM Astonish Reconstruction
- · NM Cedars-Sinai Cardiac Suite 2015[3]
- · NM Corridor 4DM 2016[1]

## 6 Neurovascular Disease
Focus on the relevant anatomical structures to gather insight for confident diagnoses
- ● CT Brain Perfusion
- ● MR T2* (Neuro) Perfusion
- ● Multi Modality Advanced Vessel Analysis (AVA)
- · Ultrasound Q-App Vascular Plaque Quantification (VPQ)

● New in IntelliSpace Portal 9.0
● Enhanced in IntelliSpace Portal 9.0
Information on new and enhanced applications refer to the latest version of IntelliSpace Portal

"We use the comprehensive cardiac package on **100% of our cases.**"

**Dr. Tony Fuisz**
MedStar Washington Hospital Center, Washington, D.C., USA

[1] Corridor4DM is a registered trademark of Invia, LLC.
[2] Emory Cardiac Toolbox, ECTb, HeartFusion, and SyncTool are registered trademarks of Emory University.
[3] Not available for sale in all countries. Please check for availability in specific countries.

# Leverage the **strengths of multiple**
throughout the continuum of care on

## Patient-centric workflow

**Viewing**
Review Angiography and Fluoroscopy as well as 3D volumes created by 3D rotational angiography and cone beam CT

**Workflow efficiency**
Accelerate time from image acquisition to diagnosis with confidence, data connectivity, and workflow efficiency tools like pre-fetching and guided workflows

**Post-processing**
Perform measurements, ROI, and annotation to describe findings within a region

**Reporting**
Include interventional annotation in your patient report – throughout the process and whenever it's convenient to you

**Analysis**

**Scan**
(pre-op CT)
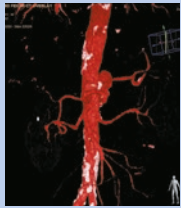
**Surgical planning**
(peri-op CT)
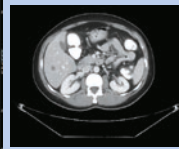
**Surgery**
(iXR)

**Surgical follow-up**
(post-op angio)

**True patient centricity**
The integration between the IntelliSpace Portal and Allura Interventional Suite allows you to automatically launch the relevant advanced analysis from the Portal, providing rich diagnostic information as the starting point of the procedure.

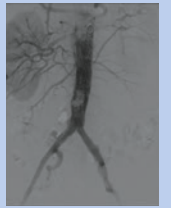# modalities
# one imaging platform

**Total patient overview from one seat**
Compare your historical data from multiple imaging modalties (MR, CT, MI, US, DXR, and iXR) to get a comprehensive view of your patient. With a server based solution, there's no need for multiple workstations. Perform all your viewing and analysis in one session, on a single client, without leaving your chair. Moreover, the IntelliSpace Portal can be accessed from virtually any computer in your department, your hospital, or even across your network.

**The key to outstanding performance: integration with your hospital**
Open interfaces on the IntelliSpace Portal support connectivity with CVIS, RIS, and PACS. This means you can port clinical results directly into PACS or RIS using HL7, DICOM, or mXML; save key images, notes, and tables directly to your reports; and combine many patient findings into a single patient-level report to share results quickly.

From version 9.0, the IntelliSpace Portal supports even tighter integration with the IntelliSpace CardioVascular Platform helping you transform the way you work and think. Integrations such as automatic study notification, opening studies with patient context, and smart 3D bookmarks help to bring added clinical depth to your workflow.

" Cardiac MR and CT together (on the IntelliSpace Portal) have **lowered overall analysis time by 20%–30%**[*]."

**Dr. Gaby Weissman, M.D.**
MedStar Washington Hospital Center, Washington, D.C., USA

[*] Results are specific to the institution where they were obtained and may not reflect the results achievable at other institutions.
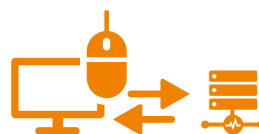
Multiple **clinical domains**

Multiple **modalities**

Multiple **patient data sets**

Multiple **third-party applications and scanners**

Multiple **imaging data systems**

One **solution**

- **Single** license set
- **Single** version
- **Single** advanced platform for all modalities
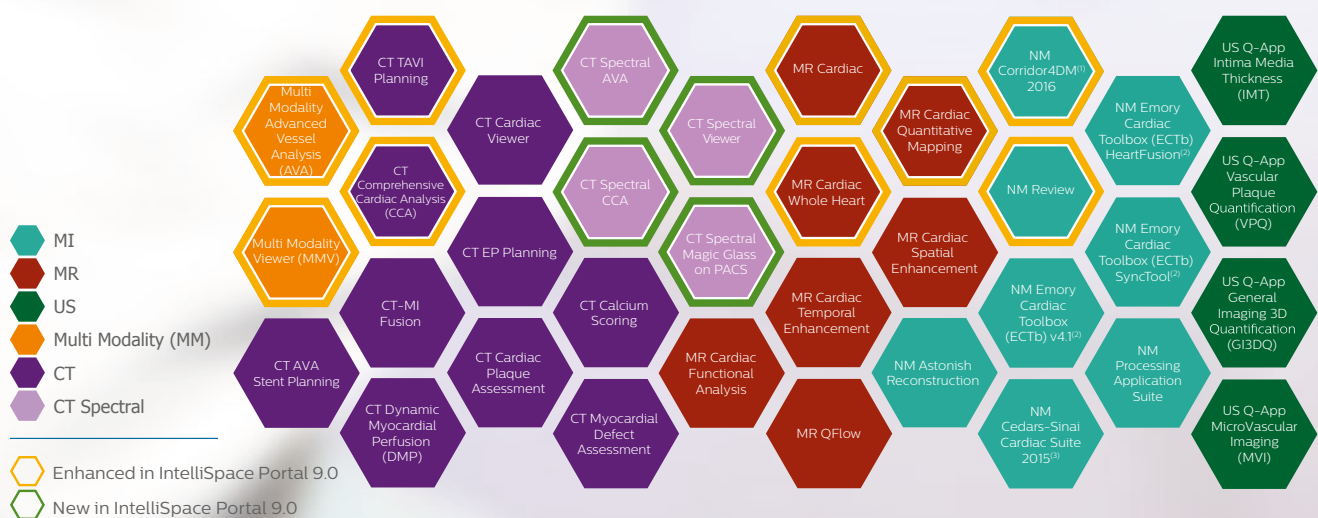- **Single** point of service

Multiple clients

Multiple departments

Network of hospitals

# A full suite of
# cardiovascular applications

**Legend:**
- MI
- MR
- US
- Multi Modality (MM)
- CT
- CT Spectral

- ⬡ Enhanced in IntelliSpace Portal 9.0
- ⬡ New in IntelliSpace Portal 9.0

**Application hexagons:**

- CT TAVI Planning
- Multi Modality Advanced Vessel Analysis (AVA)
- CT Cardiac Viewer
- CT Spectral AVA
- CT Spectral Viewer
- MR Cardiac
- MR Cardiac Quantitative Mapping
- NM Corridor4DM[1] 2016
- US Q-App Intima Media Thickness (IMT)
- CT Comprehensive Cardiac Analysis (CCA)
- CT Spectral CCA
- MR Cardiac Whole Heart
- NM Review
- NM Emory Cardiac Toolbox (ECTb) HeartFusion[2]
- US Q-App Vascular Plaque Quantification (VPQ)
- Multi Modality Viewer (MMV)
- CT EP Planning
- CT Spectral Magic Glass on PACS
- MR Cardiac Spatial Enhancement
- NM Emory Cardiac Toolbox (ECTb) SyncTool[2]
- CT-MI Fusion
- CT Calcium Scoring
- MR Cardiac Temporal Enhancement
- NM Emory Cardiac Toolbox (ECTb) v4.1[2]
- US Q-App General Imaging 3D Quantification (GI3DQ)
- CT AVA Stent Planning
- CT Cardiac Plaque Assessment
- MR Cardiac Functional Analysis
- NM Astonish Reconstruction
- NM Processing Application Suite
- CT Dynamic Myocardial Perfusion (DMP)
- CT Myocardial Defect Assessment
- MR QFlow
- NM Cedars-Sinai Cardiac Suite 2015[3]
- US Q-App MicroVascular Imaging (MVI)

[1] Corridor4DM is a registered trademark of Invia, LLC.
[2] Emory Cardiac Toolbox, ECTb, HeartFusion, and SyncTool are registered trademarks of Emory University.
[3] Not available for sale in all countries. Please check for availability in specific countries.

MM

## Multi Modality Advanced Vessel Analysis (AVA)
**Reduce comprehensive vascular analysis planning to five minutes***

Take advantage of multiple presets and user-defined options to reduce comprehensive vascular analysis planning to five minutes. The robust bone removal algorithm on Multi Modality Advanced Vessel Analysis (AVA) provides 3D visualization of the vessels. Additional automatic tools, such as bone removal and centerlines and vessel labeling as well as inner and outer lumen contours, contribute to fast, consistent results. New enhancements include optimized algorithms for head/neck and body analysis and volume rendering of images.

Easily navigate through multiple findings and when you're finished, export rich, customizable reports to your RIS or PACS without hassle.
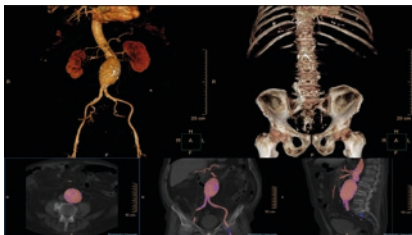


**Benefits**
- Examine and quantify vascular lesions from CTA and MRA studies
- Accommodate different modes of inspection and label different vascular lesions
- Reduce the time to produce end results with automatic creation of cMPR, cross-sectional, MPR, extracted centerlines, and volume images created even before you open your study
- Get exceptional visualization of vascular structures with simplified zero-click bone removal and visualize the carotid siphon with skull removal
- Enhance workflows for specific findings creation, like stenosis, aneurysm, and diameter measurements with customizable views

* Together with the Enhanced Zero-click Performance option

## Speed up workflows by 77%

Multi Modality Advanced Vessel Analysis (AVA) reduces the manual time-to-results by 77% for neuro (head/neck) and body CT angiography (CTA) exams.*, **



**77%**
time savings

■ Multi Modality Advanced Vessel Analysis (AVA) with ASC
■ Manual procedures

\* Compared to the Philips EBW v4.x workstation

\*\* Kadavigere, R., Maiya, M., Rao, V., Read, K. Standardized Results of CT Angiography Obtained with Automated Postprocessing Using a Dedicated Server: A Workflow Optimization Study. A collaboration of Philips Healthcare and Kasturba Medical College at Manipal University, India. Radiological Society of North America 2011 Scientific Assembly and Annual Meeting, November 26 - December 2, 2011, Chicago, USA.

# CT  Cardiovascular applications



**New**
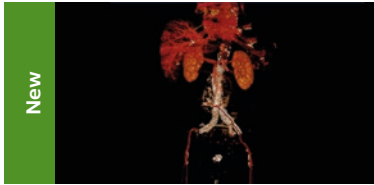
## Vascular analysis based on spectral data
**CT Spectral Advanced Vessel Analysis** offers a set of tools for general vascular analysis. Based on spectral data, it supports the user in removing bone, extracting and editing vessel wall and lumen, and performing lesion analysis. Moreover the application allows you to compare the extracted vessels using various spectral results. It also supports spectral plots to characterize plaque and stenosis and offers comparisons of results at different energy levels.

**New**

## Cardiac segmentation at different energy levels
**CT Spectral Comprehensive Cardiac Analysis** provides the ability to run cardiac segmentation on different energy levels, compare vessel curves with various spectral data types, and enhance the visual assessment of coronary vessel patency. It also supports automatic chamber and coronary segmentation using monoenergetic images, plus beam hardening reduction for perfusion deficits visualization and calcified plaque visualization.

**Enhanced**
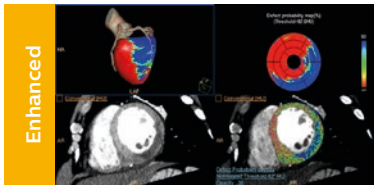
## Fast cardiac analysis
**CT Comprehensive Cardiac Analysis (CCA)** and advanced LV/RV functional analysis provides endoluminal and epiluminal segmentation of the heart chambers to calculate ejection-fraction, stroke volume, cardiac output, and left and right ventricular mass. Visualize the entire coronary tree, vessel lumen via morphological analysis, and analyze free lumen diameter. Perform functional analysis of ventricles and analyze chamber and valve morphology in 3D and using dynamic cine mode. Additional calculations include regurgitation volume and fraction index, RV/LV Early and Late (active and passive) filling volumes, and Early/Late LV filling ratio.

**Enhanced**
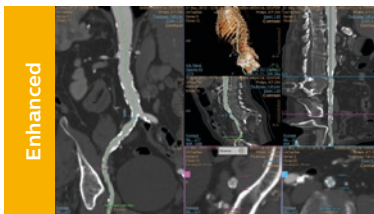
## CT imaging in TAVI to advance patient care
**CT TAVI Planning** is a non-invasive post-processing application that provides semi-automatic measurements of the aorta and aortic valve that are useful for pre-TAVI planning. It also provides model-based segmentation of the aortic valve with automatic calcium segmentation and improved landmark detection, ascending aorta and left ventricle, semiautomated detection of the coronary ostia, semiautomated planes detection and dimensions measurements of the aortic annulus, left ventricular outflow tract, sinotubular junction, sinus of valsalva, ascending aorta and distance to coronary ostia for TAVI-device sizing. This application also provides a reasonable starting angle of the C-arm for device deployment, which allows for less time used for the TAVI procedure itself performed in the catheterization laboratory or hybrid operating room. New enhancements speed time to results by incorporating vascular entry steps.
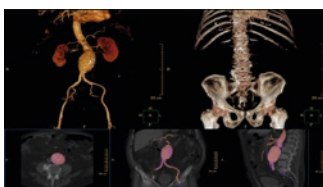
## Quickly plan endovascular stent placement
**CT Advanced Vessel Analysis (AVA) Stent Planning** includes multiple preset and user-defined options to gain detailed information for use in stent planning, reducing overall planning time to five minutes compared to 30–45 minutes without the application. The application includes an option that allows you to print results on a customized report.
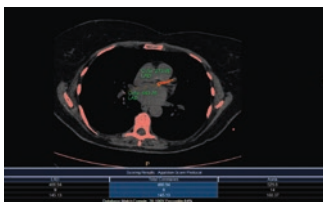
## One-click 2D calcium segmentation
**CT Calcium Scoring** rapidly quantifies coronary artery calcifications (CAC) and includes mass, Agatston score, and volume scores. It allows you to distribute automated, customizable reports electronically or on paper.
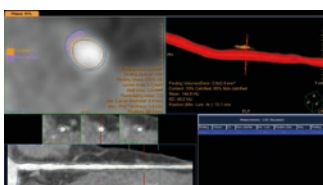
## Evaluate plaque risk
**CT Cardiac Plaque Assessment** includes robust capabilities allowing quantification and characterization of coronary plaque from multidetector computed tomography
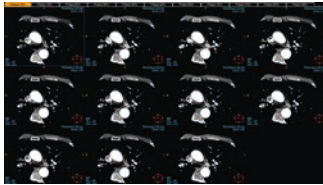
### Quick cardiac visualization

**CT Cardiac Viewer** provides a comprehensive set of tools that allows quick visualization of one or multiple cardiac phases, synchronization of multiple cardiac phases with interactive slab-MIP tools for review purposes, cine mode for cardiac axes views, and a simple "Area-Length" calculation of end systolic volume (ESV), end diastolic volume (EDV), cardiac output (CO), and ejection fraction (EF) for basic ventricular functional assessment.
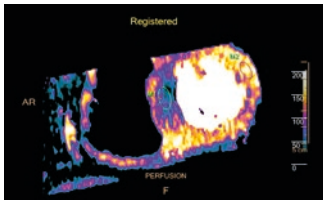


### Dynamic color maps provide an assessment of myocardial risk

**CT Dynamic Myocardial Perfusion (DMP)** is intended for visualization, diagnostic assessment, and quantification of cardiac images focusing on the left ventricular myocardium, specificallyproviding quantitative myocardial blood flow measurements for CT images, including the abilityto identify areas of decreased perfusion within the myocardium that may represent ischemia. Theapplication supports axial, ECG-gated CT images, consisting of multiple time shots of the samemyocardial region over time. CT DMP displays the results as a composite image (single image that is calculated from a set of time-course images at a single location).
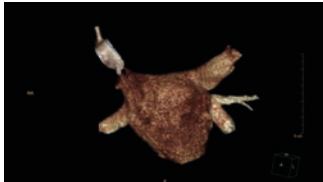
### Fast planning for EP procedures

**CT EP Planning** provides fast, overall assessment of pulmonary vein, left atrial, and appendage anatomy, enabling the electrophysiologist to quickly identify anatomy that may complicate the EP procedure.



### Fusing cardiac CT-MI

**CT-MI Fusion** incorporates support for myocardial perfusion imaging (MPI).CCA with the CT-MI Fusion option allows loading both gated and un-gatedrest, and gated and un-gated stress MI datasets simultaneously with the CT.The MI images are displayed in the short axis and the two long axis planes.The axes definition is derived from the CT study.
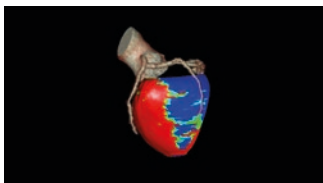


### Assessing myocardial defects

**CT Myocardial Defect Assessment** provides visual and quantitative assessment of segmented, low-attenuation defect areas within the myocardium from a single, gated cardiac CTA scan (retrospectively-gated spiral or Step and Shoot Cardiac). The ability to derive this information from a single cardiac CTA scan reduces the need for multiple scans. The application itself is based on the robust, automatic, model-based, whole heart segmentation from the CT Comprehensive Cardiac Analysis application.



"CT TAVI Planning is outstanding – it delivers good segmentation and it's easy to edit the automatic results for **fine landmark positioning**."

**Professor Philippe Douek**
Hospices Civils de Lyon, France

# MR Cardiovascular applications
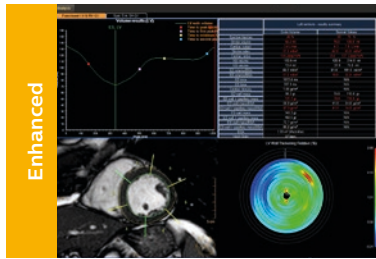


**Detailed quantification of cardiac function**
**MR Cardiac** facilitates easy visual scoring in various examination contexts. The package enables comprehensive functional volumetric analysis for the ventricles, such as without papillary muscle corrections and segmentations for generation of global functional parameters such as wall motion, thickness, and thickening. Identification of spatial enhancement based on intensity signal changes is included while bookmark functionality "frames" any view on the data that is relevant for saving or communicating to other physicians. MR Cardiac also allows for quick functional analysis using the Areal Length Ejection Fraction (ALEF) method.
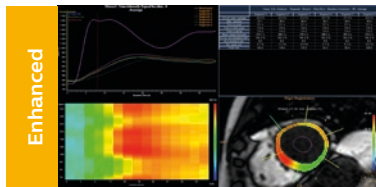


**Assessing temporal enhancements of the myocardium**
**MR Cardiac Temporal Enhancement** facilitates myocardial analysis of dynamically resolved cardiac data (multi-slice, dynamics) and enables comparison of rest and stress studies. Results are presented using either the AHA standardized or adapted bull's eye views. The package includes a correction algorithm and manual tools to correct frame-to-frame heart displacements caused by breathing.
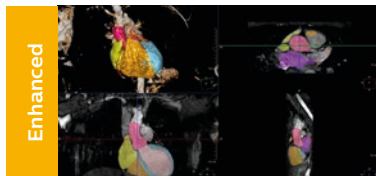
**Detailed 3D visualization of the segmented heart**
**MR Cardiac Whole Heart** performs automated segmentation of the heart into individual segments such as left-ventricle, right-ventricle, atria, and coronaries. Results can be presented in a high-quality 3D rendering. Now with STL/VTK export functionality to aid in printing of 3D models, and enhanced scene support.
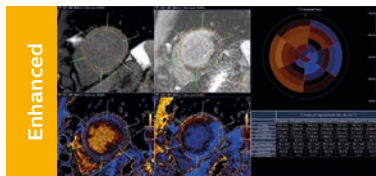


**Assess myocardial tissue characteristics**
**MR Cardiac Quantitative Mapping** helps you assess and review myocardial tissue characteristics in multiple, user-defined, field-strength specific lookup tables. Review global and diffuse myocardial pathologies by means of T1 maps, T2 maps, and T2* maps. Now, manual and automatic motion correction tools are provided which may enhance map calculations.
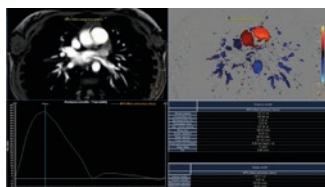


**Visualizing and quantifying blood flow dynamics**
**MR QFlow** enables review of QFlow data. The tooling creates 2D color flow overlay maps on anatomical references to be used, for example, to calculate stroke volumes. The package includes automatic vessel contour detection for large vessels to quickly analyze vessel flow. Background correction allows for offset correction required for QFlow data of certain MR vendors.

"The IntelliSpace Portal MR Cardiac package is used on all our MR cardiac cases, and we feel it supports us in delivering analyses of **consistently high quality.**"

**Dr. Vimal Raj**
Narayana Hrudayalaya Hospitals, India

# Cardiovascular applications  **MI**



**Enhanced**
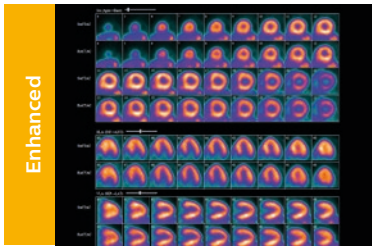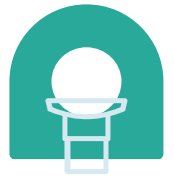
## SPECT and PET cardiovascular quantification, review and reporting

**NM Corridor4DM 2016**[1] is designed for advanced cardiovascular quantification and image display and includes intelligent workflow and quality assurance measures for increased confidence. Quantify myocardial perfusion, function, and viability using multiple review screens, with integrated reporting through customizable templates. NM Corridor4DM 2016 also includes: LV surface estimation and quantification, additional normal databases to support, and GEMS Evolution SPECT reconstruction. The most recent enhancements to include:
· CFR enhancements
· DICOM Encapsulated PDF Viewer
· DICOM Waveform and 12-lead Viewer
· Enhancements to LV Surface Generator Algorithm

(1) Corridor4DM is a registered trademark of Invia, LLC.

**Enhanced**
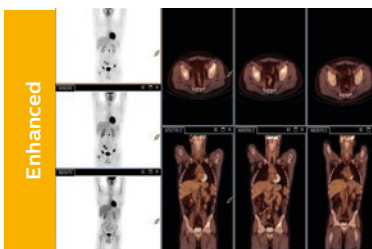
## Enterprise-wide MI review

**NM Review** provides a powerful yet simple-to-use MI and multi-modality image review and analysis environment for clinical evaluation of MI planar, SPECT, SPECT/CT, PET/CT, and PET/MR examinations. It offers:
· Quick Layouts Selection, allows user to define different layouts for different presets. For each preset the user will have 4 different layouts.
· MPR, MIP and fused 3D volume display
· Enhanced application with continuous scrolling option added
· 2D and 3D SUV measurements: SUV Body Weight, SUV Lean Body Mass, SUV Body, Surface Area, and SUV Body Mass Index
· Automated 3D segmentation of lesions based on SUV value or percentage of SUV max, and the ability to export 3D contours in DICOM-RT Structure Set format to radiation therapy planning systems
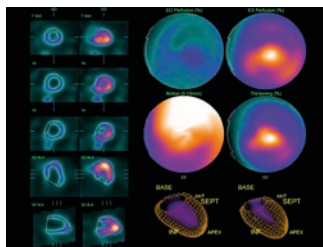
## Advanced cardiac quantification

Developed at Cedars-Sinai Medical Center in Los Angeles, California, **NM Cedars-Sinai Cardiac Suite 2015**[3] provides comprehensive cardiac quantification tools for gated, perfusion, and blood pool SPECT and quantitative PET. Widely accepted by clinicians worldwide, the Cedars- Sinai Cardiac Suite 2015 application provides efficient workflow for study interpretation with exclusive integration of perfusion and function. New enhancements:
· RV quantification: Automated RV contouring, quantification and analysis
· Perfusion polarmap defect editor: users can manually edit polar map
· New DataView feature: user customizable viewing layouts
· Enhanced Phase Analysis algorithm, Smart Launch, color pallet editor

(3) Not available for sale in all countries. Please check for availability in specific countries.
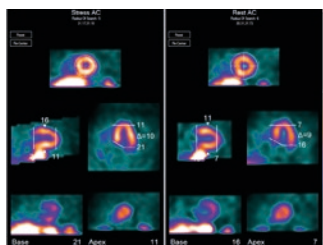
## Cardiac analysis

The **NM Emory Cardiac Toolbox (ECTb)**[2] **v4.1** provides advanced tools for cardiac SPECT and PET analysis including comparison of perfusion to viability data, display of 3D images with coronary overlays and gated 3D cine, normal limits for agent match/mismatch as well as optional phase analysis for wall motion and evaluation of thickening.
· New SmartReport option – Automated structured reporting dedicated to Nuclear Cardiology
· Transaxial reorientation
· General performance enhancements
· Enhanced Systolic Dyssynchrony analysis
· Diastolic Dyssynchrony analysis

(2) Emory Cardiac Toolbox, ECTb, HeartFusion, and SyncTool are registered trademarks of Emory University.
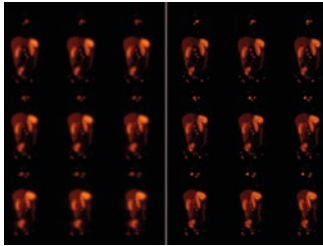
### Enhance SPECT resolution and reduce scan times

**NM Astonish Reconstruction** is an advanced reconstruction algorithm that uses a Philips-patented matched dual filtering technique to minimize noise and improve reconstructed image resolution and uniformity. Additionally, a CT attenuation map can be used in conjunction with Astonish to provide attenuation correction. By improving signal-to-noise ratio, it can provide equivalent image quality with shortened SPECT scan times, to achieve increased throughput, enhanced patient comfort and reduced motion-induced artifacts. Astonish Reconstruction Suite is compatible with the following Philips cameras only: CardioMD (acquisition software v2.x), Forte, BrightView, BrightView X, BrightView XCT, SkyLight and Precedence.
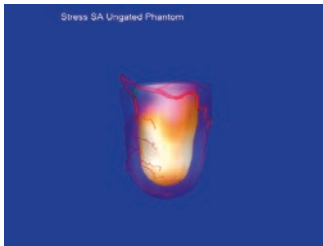


### Evaluate fused coronary anatomy

**NM Emory Cardiac Toolbox (ECTb) HeartFusion**[*][2] tool offers fusion of a patient's coronary tree from cardiac CT angiography with Molecular Imaging perfusion images to correlate stenosis with perfusion defects and identify muscle mass at risk.

(2) Emory Cardiac Toolbox, ECTb, HeartFusion, and SyncTool are registered trademarks of Emory University.
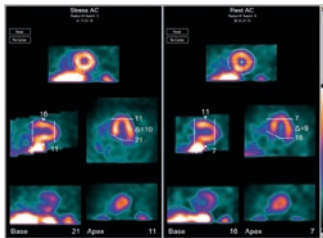


### Assess cardiac mechanic dyssynchrony

**NM Emory Cardiac Toolbox (ECTb) SyncTool**[*][2] provides an objective evaluation of left ventricular (LV) dyssynchrony using phase analysis. It also provides the cardiologist with additional prognostic information that can be obtained from 3D perfusion images, such as the presence and location of scar tissue. The SyncTool review screen includes phase polar maps, phase histograms, and a summary of systolic wall thickening analysis including peak phase and standard deviation of the phase distribution.

(2) Emory Cardiac Toolbox, ECTb, HeartFusion, and SyncTool are registered trademarks of Emory University.

## The power of ONE partner – The Philips informatics suite

While the IntelliSpace Portal is designed to work with HIS, RIS, and offers wide multi-vendor support allowing you to easily integrate data sets from many scanners*, you can achieve an even more harmonized experience by combining Philips Informatics and Advanced Visualization solutions. Smart bookmarking and context-based application launch are just a few examples of the tighter integration between Philips' solutions. Combined solutions may help deepen your understanding of the patient care continuum, diagnosis, and treatment options. Contact your representative for more information on the suite of Philips informatics solutions.
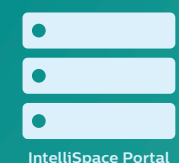
**IntelliSpace CardioVascular**

**IntelliSpace Portal**

* Please contact your local Philips representative for details on multi-vendor coverage.
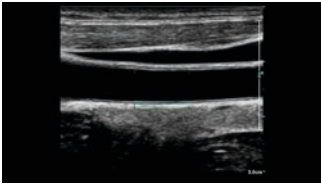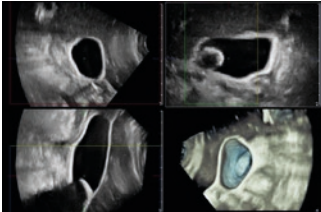
### Help determine cardiovascular disease risk
**US Q-App Intima Media Thickness (IMT)** provides easy and consistent measurement of intima media thickness in carotids and other superficial vessels. Report IMT values and appended to patient reports.



### Perform advanced visualization and quantification of ultrasound volume
**US Q-App General Imaging 3D Quantification (GI3DQ)** is designed to provide advanced viewing, manipulation, and quantification of 3D data sets. Users can perform advanced functions such as MPR interrogation, iSlice tomographic imaging, and volume rendering. Clinicians can also perform volumetric measurements using multiple methods including semi-automated tools. Results generated from this tool can be appended to the patient's exam for complete documentation.
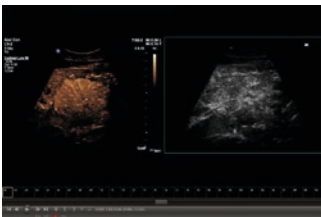


### Enhanced vessel conspicuity
**US Q-App Microvascular Imaging (MVI)** allows you to map contrast agent progression with contrast enhanced ultrasound (CEUS) for tumor assessment and monitoring.



### A novel measurement of atherosclerotic plaque volume
**US Q-App Vascular Plaque Quantification (VPQ)** helps you perform comprehensive volume analysis for carotid plaque analysis, a significant indicator in cardiovascular disease. Automatically measure plaque composition throughout a captured volume, percent area vessel reduction and other characteristics using 3D technology. Results may be posted to patient exams.

**Contact your local representative** for more information on how the IntelliSpace Portal works or to request a demo.