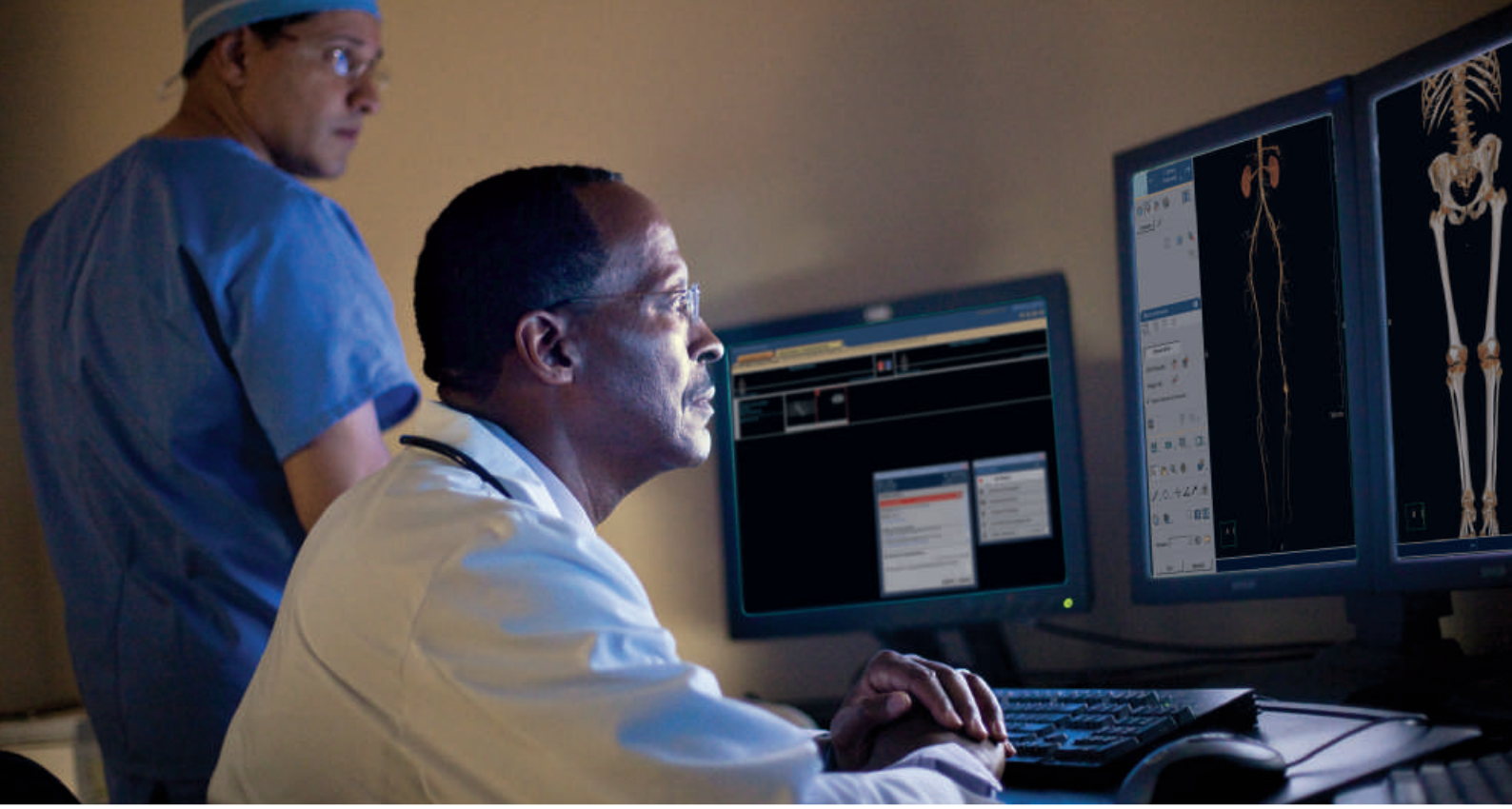


See more, more easily

IntelliSpace advanced clinical applications with IntelliSpace PACS and iSite

Philips IntelliSpace PACS 4.4 provides access to relevant, multi-modality information to support clinical decision making anywhere,[1] anytime. It simplifies PACS via a unique service delivery model with built-in flexibility, scalability and interoperability. Ultimately, it facilitates collaboration throughout the enterprise to enhance clinician workflow, patient care, and financial outcomes.

IntelliSpace advanced clinical applications with Philips IntelliSpace PACS 4.4 and iSite feature a full set of optional multi-modality applications to help improve clinical workflow, improve communication, and increase diagnostic confidence for radiologists and clinicians. These advanced applications, provided through a streamlined delivery model, offer dedicated functionality for advanced image post-processing and analysis features for CT, MR, and NM imaging datasets. The applications enhance the user experience and allow more focus on patient care.

Philips IntelliSpace PACS solutions include 2D/3D/4D review for a non-disruptive reading workflow for the majority of studies. In case additional analysis and quantification are required, the user can quickly and easily select the appropriate application from a comprehensive, in-depth set of clinical applications – all within the same environment.

PHILIPS

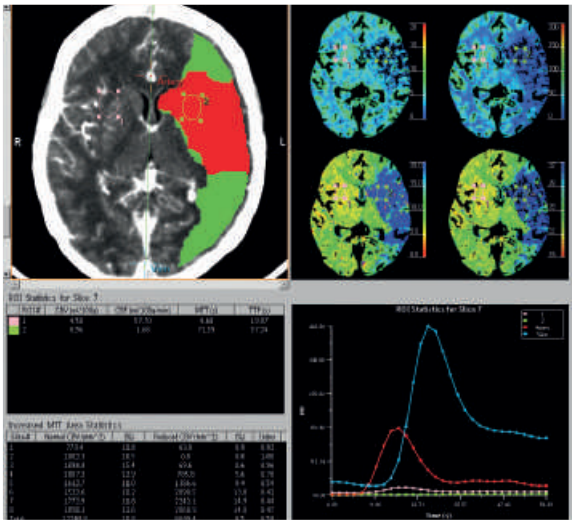
sense and simplicity

Neurology

IntelliSpace CT Advanced Brain Perfusion

Identify salvageable areas in acute stroke

CT Advanced Brain Perfusion, exclusive to Philips, calculates and displays reduced summary maps to identify areas of salvageable tissue in the acute stroke patient. The program automatically corrects for misregistration or motion artifacts. To assist in treatment planning, it displays summary maps, which may distinguish between still-viable and non-viable infarcted tissue correlated to MR perfusion and MR diffusion imaging. In addition, optional time-sensitive algorithms are also available.



Allows clinicians to make reasonably accurate predictions in individual patients about which brain tissue will clinically improve with reperfusion therapy.

IntelliSpace CT Brain Perfusion Time-Insensitive Maps

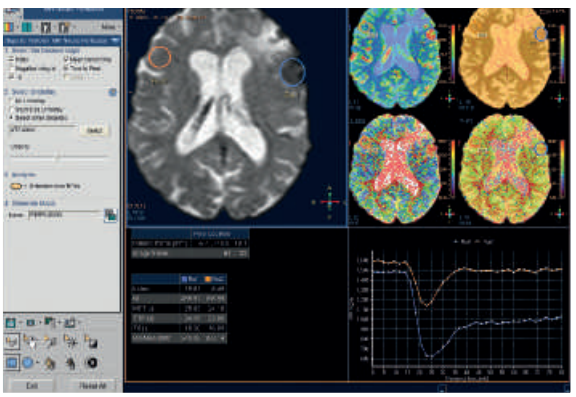
Reduce the effects of contrast arrival delays

The CT Brain Perfusion Time-Insensitive algorithm uses a mathematical technique to reduce the effects of contrast arrival delays on perfusion parameter maps. This algorithm may be used to complement other clinically validated brain perfusion algorithms.

IntelliSpace MR Neuro Perfusion

Assess MR neuro perfusion

MR Neuro Perfusion map types include mean transit time (MTT), negative integral (NI), time to peak (TTP), time of arrival (T0), and index. To improve SNR, the user can perform registration of source images in the dynamic series in addition to temporal and spatial smoothing of the input data. The package includes user-selected color-coding of functional data. Maps can be viewed and stored as overlays on top of anatomical reference images. The opacity of the overlay is user-defined, and ROI analysis and define arterial input functions (AIF) can be performed as required.

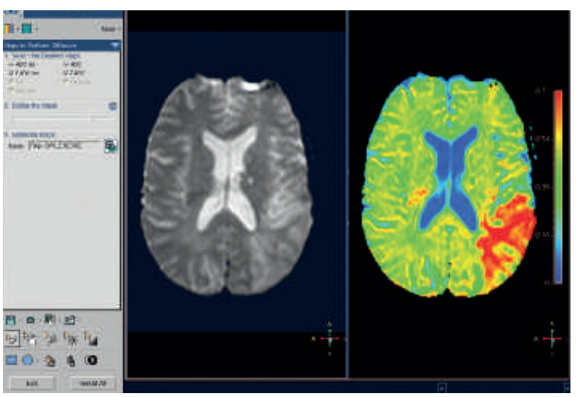


Enables processing and calculation of hemodynamic maps from an appropriate set of dynamic images.

IntelliSpace MR Diffusion

Calculate MR diffusion

MR Diffusion enables the processing and calculation of various diffusion maps from an appropriate set of diffusion-weighted images. Map types include ADC, eADC, FA, and trace-weighted. Registration of source diffusion-weighted images may be performed.



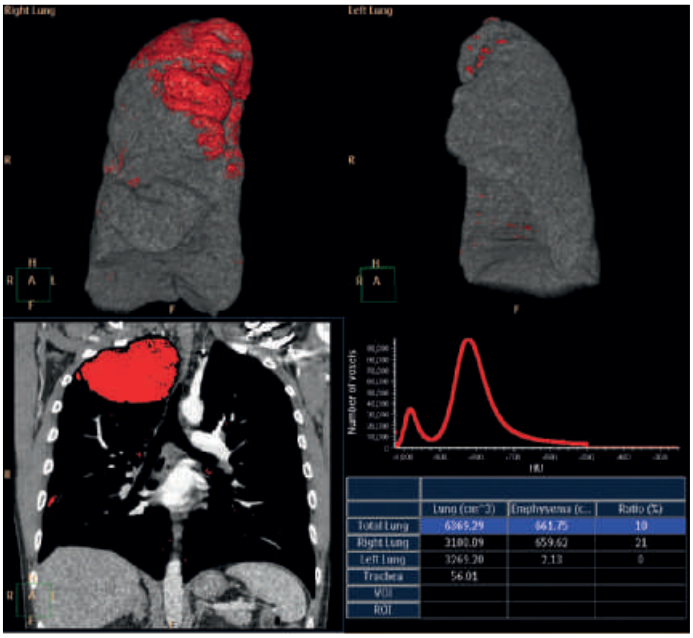
Includes capabilities such as user-selected color-coding of output maps and user-selected choice of specific b-values for the end calculation..

Pulmonary

IntelliSpace CT Lung Density

Track lung disease

CT Lung Density offers a quick and easy mechanism to quantify diffuse lung disease, including emphysema, asbestosis, and black lung, as well as localize specific affected areas.

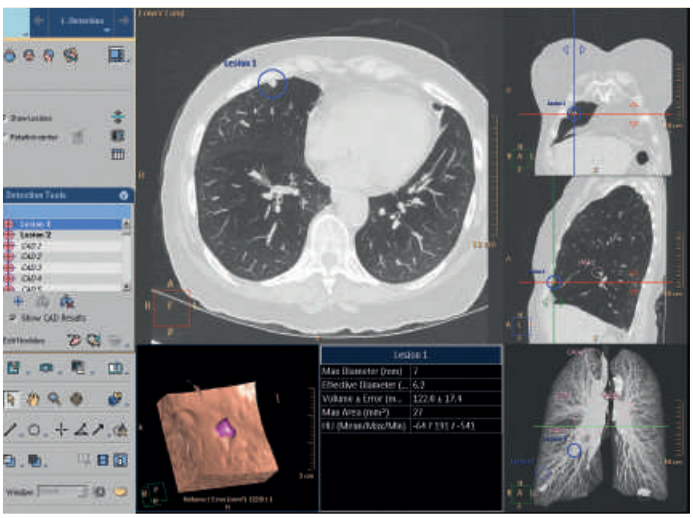


Provides the quantification and localization of the extent of lung disease critical to accurate pre-surgical assessment prior to lung surgery.

IntelliSpace CT Lung Nodule Assessment

Assess lung nodules over time

CT Lung Nodule Assessment (LNA) can provide quantitative information about the size, shape, and change over time of physician-indicated lung nodules. The package provides one-click volume segmentation, advanced reporting for rapid distribution of paper and electronic results, and the ability to compare studies by scrolling through multiple linked datasets.



Assess lung nodule changes over time and nodule doubling time.

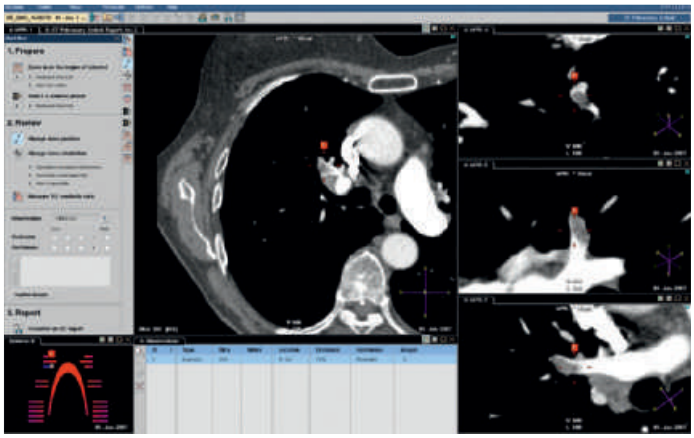
Pulmonary

IntelliSpace CT Pulmonary Embolism Assessment*

Quickly differentiate true pulmonary emboli from other finding entities

CT Pulmonary Embolism Assessment provides a dedicated solution for radiologists to speed up the interpretation of CT cases for suspected pulmonary emboli. It enhances workflow and can potentially save time for radiologists while increasing their diagnostic confidence. IntelliSpace CT Pulmonary Embolism Assessment introduces significant automation to help clinicians detect problematic clots by making clever use of multi-planar reformat (MPR) technology. Every click results in three zoomed MPR views that are automatically lined up along – and perpendicular to – the centerline direction of a suspicious blood vessel. These MPRs help radiologists and clinicians quickly differentiate true pulmonary emboli from other finding entities, such as parenchymal tissue at vessel bifurcations or motion artifacts. Very little manipulation of the automatically linked MPRs is required. These views also allow the user to determine the amount of obstruction, and they can provide information about the extent of the lesion. This IntelliSpace visualization combines the speed of 2D cine-viewing with the confidence of 3D MPR problem-solving.

* IntelliSpace CT Pulmonary Embolism Assessment is part of IntelliSpace Clinical Applications R8.2 and iSite ViewForum Applications R7.4 (Pulmonary Embolism Assessment).



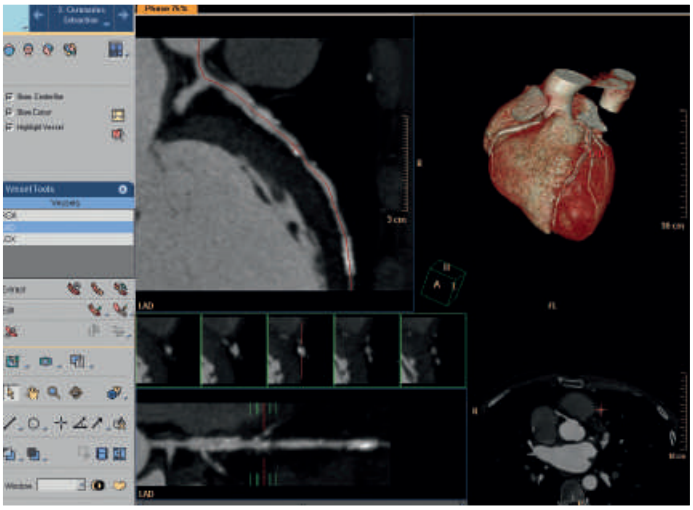
Every click results in three zoomed MPR views that are automatically lined up along – and perpendicular to – the centerline direction of a suspicious blood vessel.

Cardiac

IntelliSpace CT Comprehensive Cardiac Analysis

Fast cardiac analysis

CT Comprehensive Cardiac Analysis and advanced LV/RV functional analysis is provided with endo- and epiluminal segmentation of the heart chambers in order to calculate ejection-fraction, stroke volume, cardiac output, and left/right ventricular mass. It allows visualization of the entire coronary tree, vessel lumen morphological analysis, and free lumen diameter area analysis. It also provides ventricular functional analysis and 3D heart chamber and valve morphology, including a dynamic cine mode.



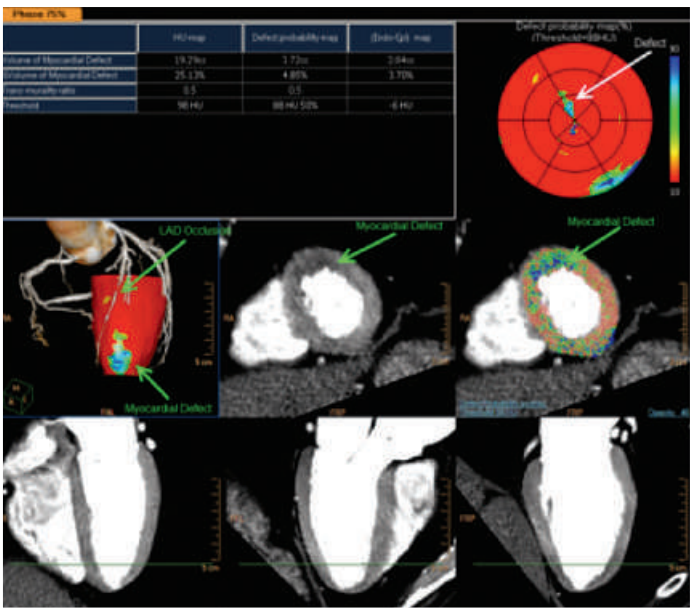
Offers a wealth of powerful analysis tools based on 0-click total heart segmentation.

IntelliSpace CT Myocardial Defect Assessment

Assess 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 & Shoot Cardiac). Because this is adjunct information obtained from a single cardiac CTA scan, there is no additional increase in radiation dose from multiple scans.
The application itself is based on the robust, automatic, model-based, whole-heart segmentation of the Comprehensive Cardiac Analysis application. Myocardial Defect Assessment provides visual assessment of low-attenuation deficits within the left-ventricular myocardium via the following:

1. Color maps shown in short-axis views
2. Segmentation maps shown on short-axis and polar plots, displayed along with long-axis reference images
3. Volumetric visualization of coronary arteries along with segmentation maps displayed as an overlay on top of a 3D myocardial surface



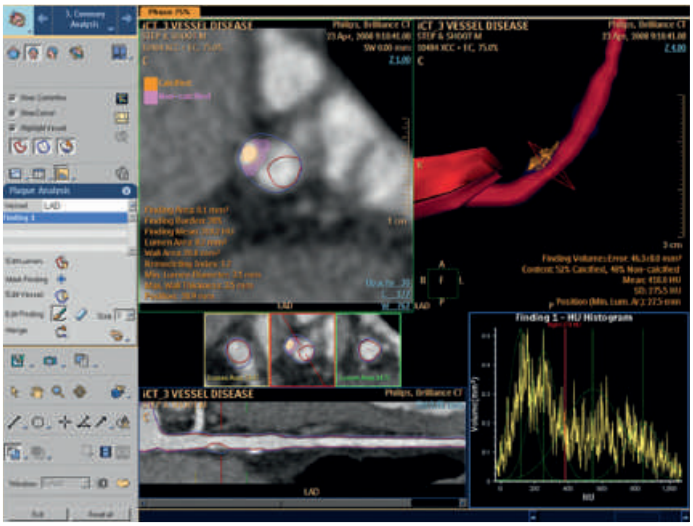
Includes volume of low attenuation areas within the myocardium based on various maps and the percentage of defect volume out of total myocardial volume.

Cardiac

IntelliSpace CT Cardiac Plaque Assessment

Evaluate plaque risk

CT Cardiac Plaque Analysis Assessment includes robust capabilities to calculate stenosis and evaluate coronary plaque for analysis, quantification, and classification of plaque, allowing the clinician to assess plaque sites.



Allows a better understanding of the distribution and composition of plaque in individual patient vessels.

IntelliSpace CT Calcium Scoring

One-click 3D calcium segmentation

CT Calcium Scoring rapidly quantifies coronary artery calcifications (CAC) and includes mass, Agatston, and volume scores with automated, customizable reporting.

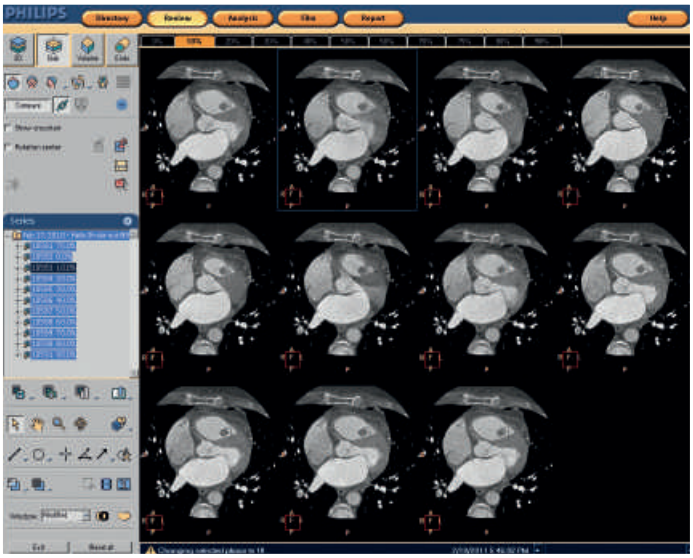
Reports percentile risk based on more than 5,000 multislice CAC scores from Philips CT scanners.

Cardiac

IntelliSpace CT Cardiac Viewer

Quick cardiac visualization

CT Cardiac Viewer provides a comprehensive set of user tools to allow 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

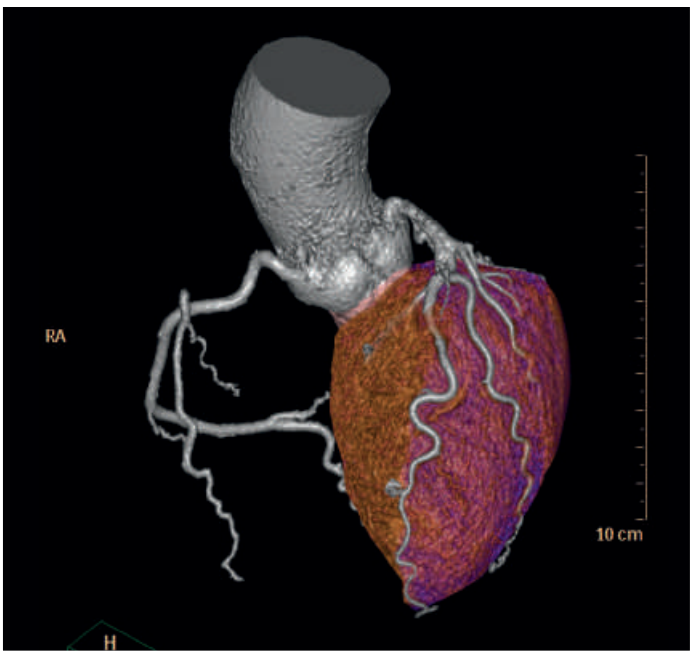


Allows quick visualization for cardiac assessment through a comprehensive set of user tools.

IntelliSpace CT-NM MPI Cardiac Fusion

Fuse cardiac CT-NM

Comprehensive Cardiac Analysis (CCA) incorporates support for myocardial perfusion imaging (MPI). CCA with the CT-NM MPI Fusion option allows loading the following NM datasets simultaneously with the CT data: rest, gated and un-gated as well as stress, gated and un-gated. The applications display NM images in the short axis and two long-axis planes. The axes definition is derived from the CT study.



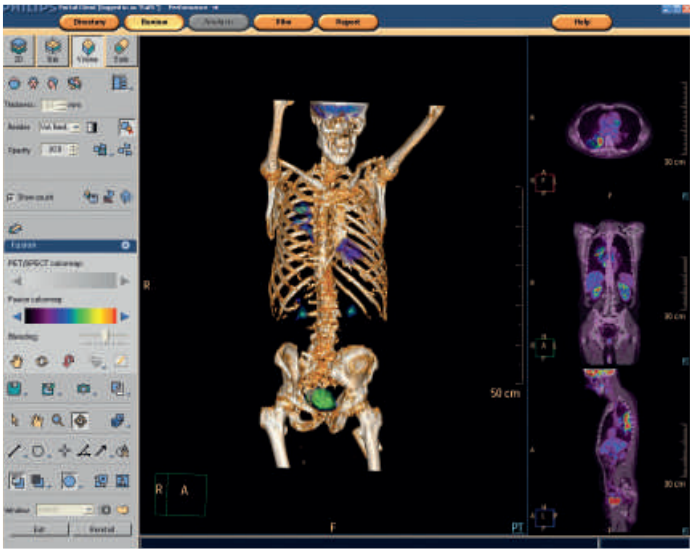
Allows simultaneous loading of NM datasets.

Oncology

IntelliSpace NM Viewer

Access images and tools anytime, anywhere

NM Viewer offers enterprise-wide NM viewing including SUV measurements (cursor and ROI), alpha blending, and slab display.

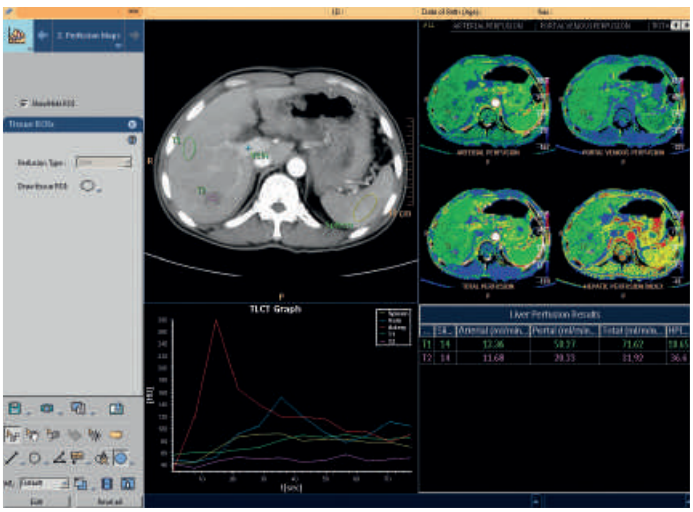


Share fused images with oncologists and surgeons during multidisciplinary meetings, conferences, and tumor boards.

IntelliSpace CT Body Perfusion

Quantifiable perfusion

CT Body Perfusion aids in the evaluation of acute or chronic stroke patients, as well as providing whole-organ or single-location liver perfusion. Provides motion correction for accuracy and large coverage/low-dose imaging for superb neuro results.



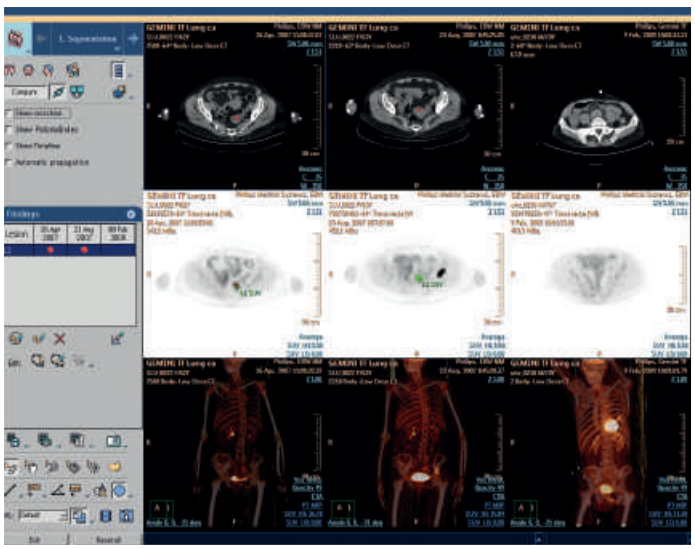
Delivers quantifiable organ perfusion results and can evaluate tumor perfusion to enhance characterization of known lesions.

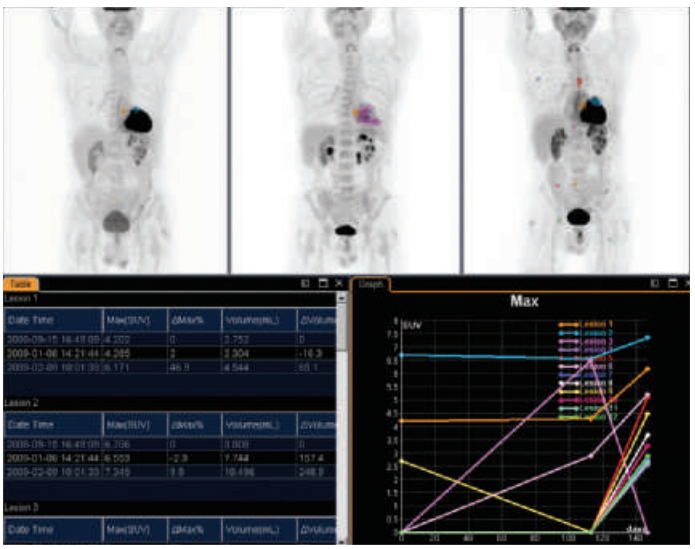
Oncology

IntelliSpace Multimodality Tumor Tracking

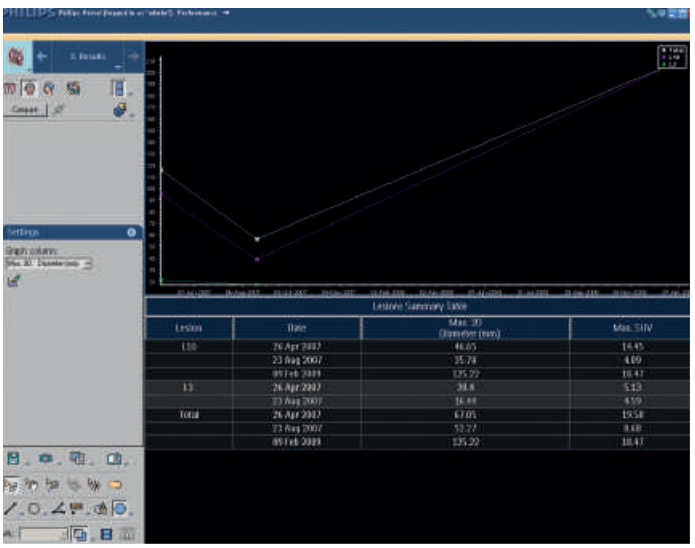
Monitor change in disease status

Multimodality Tumor Tracking, exclusive to Philips, offers efficient tools to assist clinicians in monitoring change in disease status including disease progression or assessment of therapy response using sequential PET/CT exams, with automatic segmentation of target lesions and quantified results over time.





Provides automatic and standardized measurements of tumor progression, including RECIST, WHO, and PERCIST measurements, and tumor burden calculation.



Automatically quantifies anatomic and metabolic changes to allow for more personalized treatment decisions.

Oncology

IntelliSpace Automatic Registration Tool

Automated 3D registration

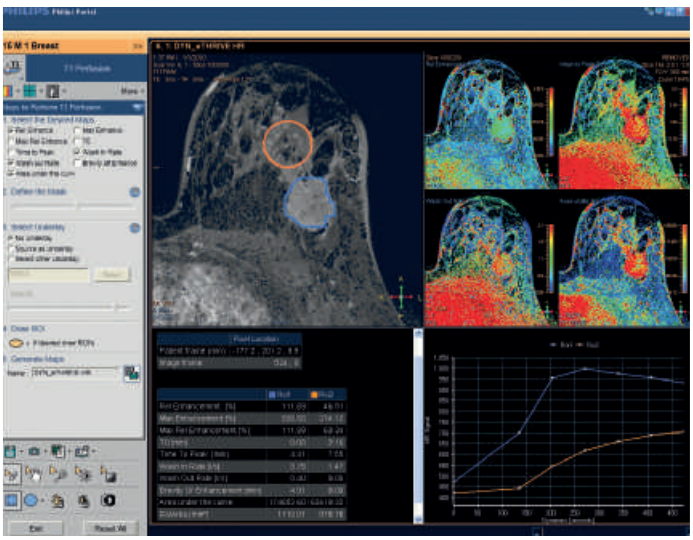
The Automatic Registration Tool provides automated 3D registration of multimodality studies (PET, SPECT, CT, and MR).

Supports mutual information, cross correlation, auto correlation, and fiducial matching methods of registration.

IntelliSpace MR T1 Perfusion

Assess MR T1 perfusion, perform ROI analysis

MR T1 Perfusion map types include relative enhancement, maximum enhancement, and time to peak (TTP). Perform registration of source images in the dynamic series, as well as temporal and spatial smoothing of the input data to improve SNR. The package includes user-selected color-coding of the functional data. Maps can be viewed and stored as overlays on top of anatomical reference images, with user-defined opacity of the overlay.



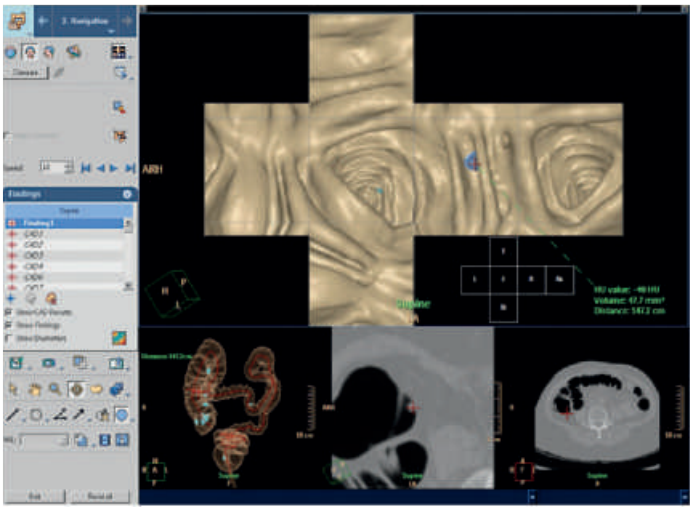
Example of T1 Perfusion analysis depicting a clear overview of the various hemodynamic maps and tabulated output.

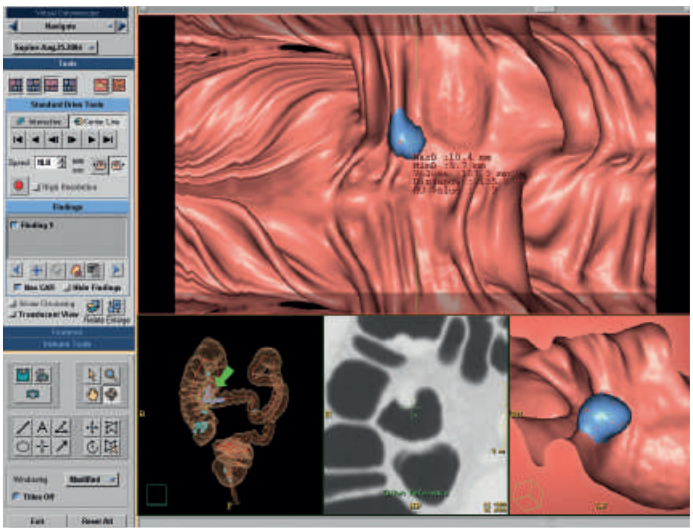
Oncology

IntelliSpace CT Virtual Colonoscopy

Reduce reading times in virtual colonoscopy

Exclusive to Philips, CT Virtual Colonoscopy with Perspective Filet View allows clinicians to perform a "virtual dissection" of the colon by unfolding or unrolling along the centerline and displaying a portion of the colon for inspection, providing a 100% view of the surface of the colon with no image or hands-on manipulation.





Provides power and flexibility, and can help reduce reading times to just five to ten minutes compared with 30 to 40 minutes previously.

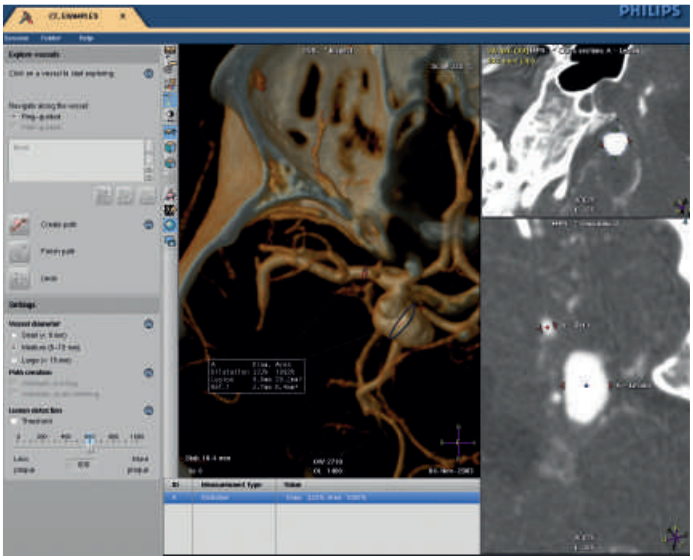
Vascular

IntelliSpace CT/MR Vessel Explorer*

Fast and confident quantification of vessel lesions

CT/MR Vessel Explorer, available with IntelliSpace PACS, is a dedicated application to support confident and quick quantification of blood vessels in CT-Angio and MR-Angio examinations. This application is advanced, yet simple to use for radiology workstations. It is designed to fit in the radiology workflow and boost efficiency, allowing the user to create accurate and reproducible results quickly.

* IntelliSpace CT/MR Vessel Explorer is part of Philips IntelliSpace Clinical Applications R8.2 and iSite ViewForum Applications R7.4 (Vessel Explorer).

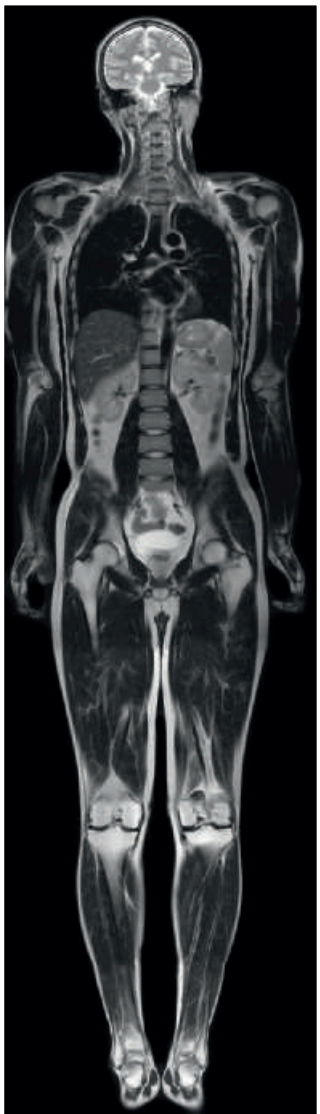


A smart vessel segmentation algorithm referred to as "the ring" makes path tracking superfluous.

IntelliSpace MR MobiView

Multi-station acquisition which you can review as one

MR MobiView enables the stitching and viewing of MRI and MRA series acquired during a multi-station acquisition. The stitched, full FOV images are created with a single mouse-click in the Multimodality Viewer. Applications for MobiView include the generation of full field of view images or MRAs for the whole body, eye-to-thighs, torso, lower peripherals, whole spine, and complete CNS. The resulting image series can be viewed, filmed, and exported in DICOM format.



Vascular

IntelliSpace CT Advanced Vessel Analysis Stenosis

Detailed inspection of contrast enhanced vessels

CT Advanced Vessel Analysis Stenosis includes an automatic centerline for major vessels, 0-click bone removal for bony structures obscuring vascular structures, and skull removal for clear visualization of carotid siphon.

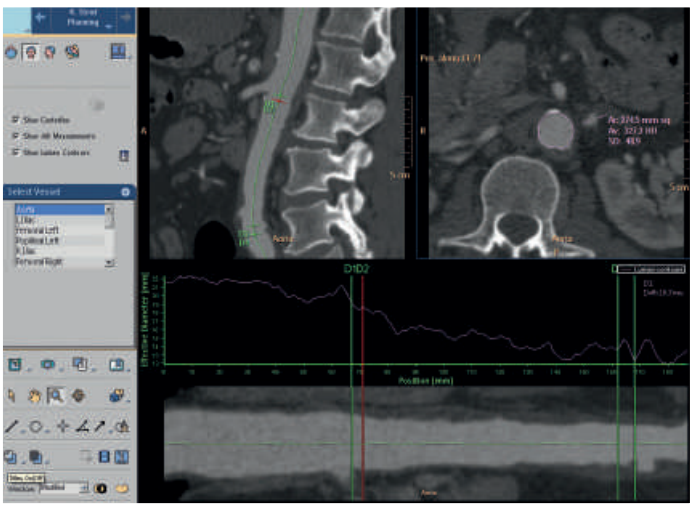
Includes tools required for a closer look of contrast-enhanced vessels.

IntelliSpace CT Advanced Vessel Analysis Stent Planning

Quickly plan endovascular stent placement

CT Advanced Vessel Analysis 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 to 45 minutes without the program.

The application includes an option that allows results to be printed on a customized report.



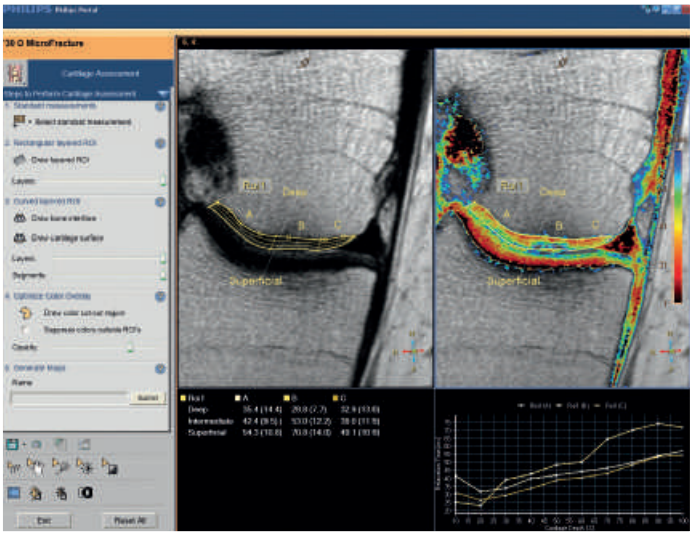
Allows planning of stent placement in a matter of minutes and is useful for nearly any vessel.

Musculoskeletal

IntelliSpace MR Cartilage Assessment

Visualize cartilage quality

MR Cartilage Assessment enables the visualization of cartilage structures using color-coded T2 maps. Precise positioning of cartilage-shaped layered ROIs is used to assess variation of T2 values across the cartilage depth.



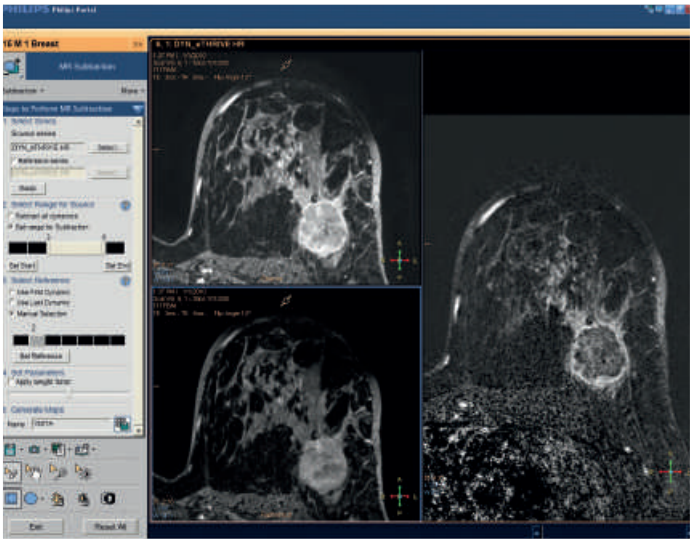
Enables visualization of cartilage structures through color-coded T2 maps.

Other applications

IntelliSpace MR Subtraction

Calculate MR subtraction

MR Subtraction enables subtraction calculations and also provides for computation of magnetization transfer contrast ratio (MTC) images from an appropriate set of input images. Weighting factors can be defined to influence the subtraction or MTC outcome.

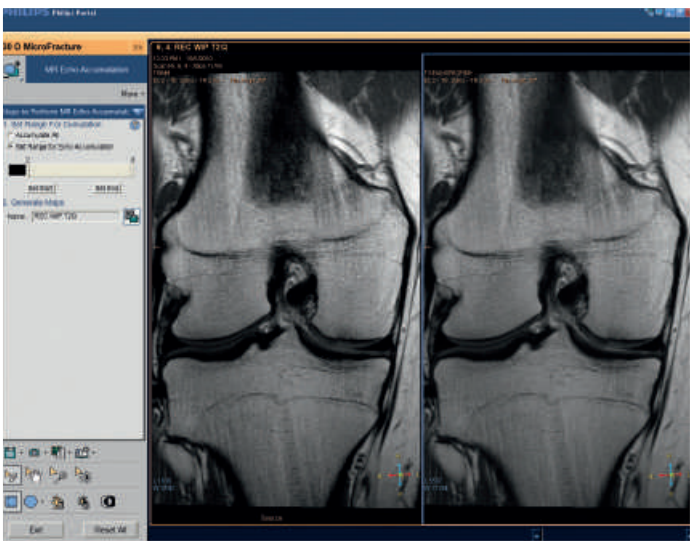


Enables calculation of the subtraction, relative subtraction, and ratio of MR images.

IntelliSpace MR Echo Accumulation

Calculate MR echo accumulation

MR Echo Accumulation enables the calculation of a new image based on the sum of images with a variety of echo times. The echo times are user-defined and processing provides interactive update of results.



Enables the calculation of a new image based on a variety of echo times.

Clinical applications

These optional applications, except where noted by an *, are IntelliSpace Portal-based and part of IntelliSpace advanced clinical applications for IntelliSpace PACS 4.4 and iSite.

Neurology
IntelliSpace CT Advanced Brain Perfusion
IntelliSpace CT Brain Perfusion Time-Insensitive Maps
IntelliSpace MR Neuro Perfusion
IntelliSpace MR Diffusion

Pulmonary
IntelliSpace CT Lung Density
IntelliSpace CT Lung Nodule Assessment
IntelliSpace Pulmonary Embolism Assessment*

Cardiac
IntelliSpace CT Comprehensive Cardiac Analysis
IntelliSpace CT Coronary imaging and functional analysis
IntelliSpace CT Myocardial Defect Assessment
IntelliSpace CT Cardiac Plaque Assessment
IntelliSpace CT Calcium Scoring
IntelliSpace CT Cardiac Viewer
IntelliSpace CT-NM MPI Cardiac Fusion

Oncology
IntelliSpace NM Viewer
IntelliSpace CT Body Perfusion
IntelliSpace Multimodality Tumor Tracking
IntelliSpace Automatic Registration Tool
IntelliSpace MR T1 Perfusion
IntelliSpace CT Virtual Colonoscopy

Vascular
IntelliSpace CT/MR Vessel Explorer*
IntelliSpace MR MobiView
IntelliSpace CT Advanced Vessel Analysis Stenosis
IntelliSpace CT Advanced Vessel Analysis Stent Planning

Musculoskeletal
IntelliSpace MR Cartilage Assessment

Other applications
IntelliSpace MR Subtraction
IntelliSpace MR Echo Accumulation
IntelliSpace Routine MR Enterprise License Package

* Part of IntelliSpace Clinical Applications R8.2 and iSite ViewForum Applications R7.4. See your Philips representative for details.

[1] It is the user's responsibility to ensure that Philips network performance recommendations for IntelliSpace PACS 4.4 are met.

Please visit www.philips.com/IntelliSpacePACS

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