



CT Perfusion 4D

Comprehensive perfusion analysis available for neurology, oncology and cardiology. Easy-to-use, protocol-driven workflow for all organs.

Perfusion 4D has been expanded beyond stroke and oncology to now include dynamic myocardial perfusion. For any organ where blood perfusion is of interest Perfusion 4D is a complete package to quantitatively provide the necessary information to guide treatment decisions.

The protocol-driven design leads the user step-by-step through the process, reducing keystrokes and improving repeatability. Get the information you want quickly and reliably.

Overview

GE's Perfusion 4D is a fast, easy-to-use automated software for analyzing CT Perfusion images related to stroke, tumor angiogenesis and dynamic myocardial perfusion. Its simple user interface and automated perfusion post-processing make it easy for you to diagnose quickly and accurately – and make treatment decisions more confidently.

GE leverages its deconvolution expertise, with its innovative delay correction algorithm. Perfusion 4D takes perfusion assessment to the next level, with the addition of CT Dynamic Myocardial Perfusion. Providing the classic color overlays with quantitative measurements to evaluate myocardial blood perfusion.

What's new

- Dynamic myocardial perfusion maps
- Improved IQ of functional maps in presence of noise.
- Improved processing times
- Improved ROI mirroring for brain protocols
- Streamlined workflow for tissue classification.
- Permits injection rates of 4cc/sec.
- Incorporates the GE delay-corrected deconvolution method.
- Dynamic registration



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Features

- Visualize all information in true volumetric form with the ability to employ all the volumetric-based image analysis tools in the AW Volume Viewer.
 - Whole heart perfusion with semi-automatic guided workflow to aid in assessment of myocardial ischemia
 - Smart Maps using the intelligent 4D noise suppression algorithm improves functional map image quality in the presence of noise.
 - Streamlined tissue classification and visualization incorporates thresholding of selected functional maps.
 - Dynamic non-rigid registration protocols for dynamic acquisitions within the body.
 - Productivity enhancements include:
 - Ability to select automated vessel detection or manual vessel detection for Brain Perfusion
 - Faster processing times for functional map computations
 - Volumetric visualization of functional maps
 - Access from anywhere using AW Server.
 - Time stamps on functional maps and Regions of interest (ROIs).
 - Interactive large vessels exclusion.
 - Many basic features, including the ability to:
 - Process double phase acquisition data.
 - Create 4D Regions of interest (ROIs).
- Display Regions of interest (ROI) statistical information.
 - Display averaged time intensity information of the Regions of interest (ROI).
 - Simultaneously review any number of functional maps.
 - Customize protocols
 - Save parameters.
- Includes these CT post-processing protocols:
 - Brain stroke
 - Brain tumor
 - Dynamic Myocardial Perfusion
 - Body tumor
 - Liver perfusion
 - Pancreas perfusion
 - Prostate perfusion
 - Kidney perfusion
 - Soft tissue perfusion
 - Spleen perfusion
 - Bone perfusion
 - Liver Dynamic Registration
 - Cardiac Dynamic Registration
 - Functional maps:
 - Regional cerebral blood volume
 - Regional cerebral blood flow
 - Regional mean transit time
 - Contrast arrival delay
 - Transit time to peak of impulse residue function
 - Capillary permeability surface area for lengthened acquisition protocols
 - Mean Slope of Increase
 - Base image
 - Average image

System Requirements

Advantage Workstation Volume Share

- 4.7 or higher, AW Server 3.2 or higher, Centricity™ Universal Viewer
- Z820, Z440 (and later) with 24GB or higher of RAM for the AW
 - Recommended monitor resolution is up to dual 2MP (1600 x 1200) or a single 3MP (1536 x 2048) for the AWS

Intended Use

CT Perfusion 4D is an image analysis software package that allows the user to produce dynamic image data and to generate information with regard to changes in image intensity over time. It supports the analysis of CT Perfusion images, obtained by cine imaging (in the head and body) after the intravenous injection of contrast, in calculation of the various perfusion-related parameters (i.e. regional blood flow, regional blood volume, mean transit time and capillary permeability). The results are displayed in a user-friendly graphic format as parametric images. This software will aid in the assessment of the extent and type of perfusion, blood volume and capillary permeability changes, which may be related to stroke or tumor angiogenesis and the treatment thereof.

Regulatory Compliance

This product complies with the European Council Directive 93/42/EEC Medical Device Directive as amended by European Council Directive 2007/47/EC.



GE imagination at work