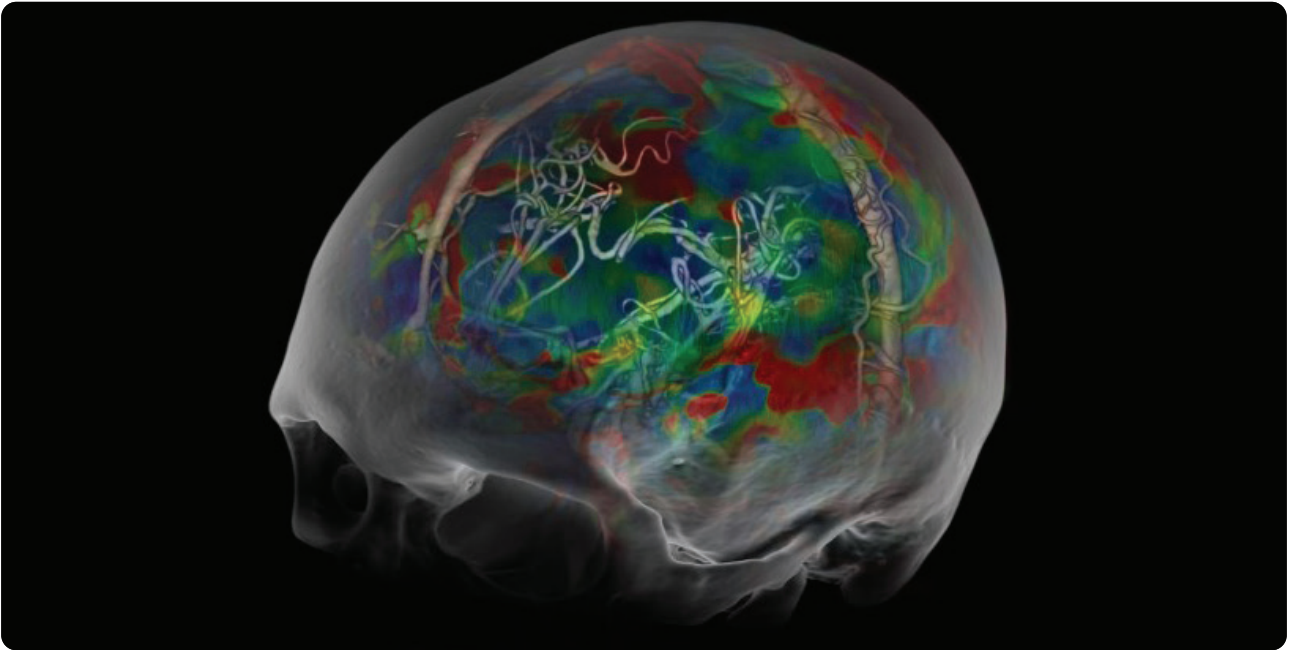# CT Brain Perfusion

CT Brain Perfusion harnesses the power of Vitrea Advanced Visualization and is a convenient method of assessing perfusion abnormalities within the brain. Concurrent display of the perfusion maps aid in the assessment of the type and extent of abnormal cerebral blood flow. Automated tools help to efficiently visualize anatomy and pathology.

Canon Medical has expanded its CT Brain Perfusion offering from 2D perfusion to the development of delay insensitive methods, semi-automated processing, full 4D scanning, and workflow enhancements to deliver impactful images.
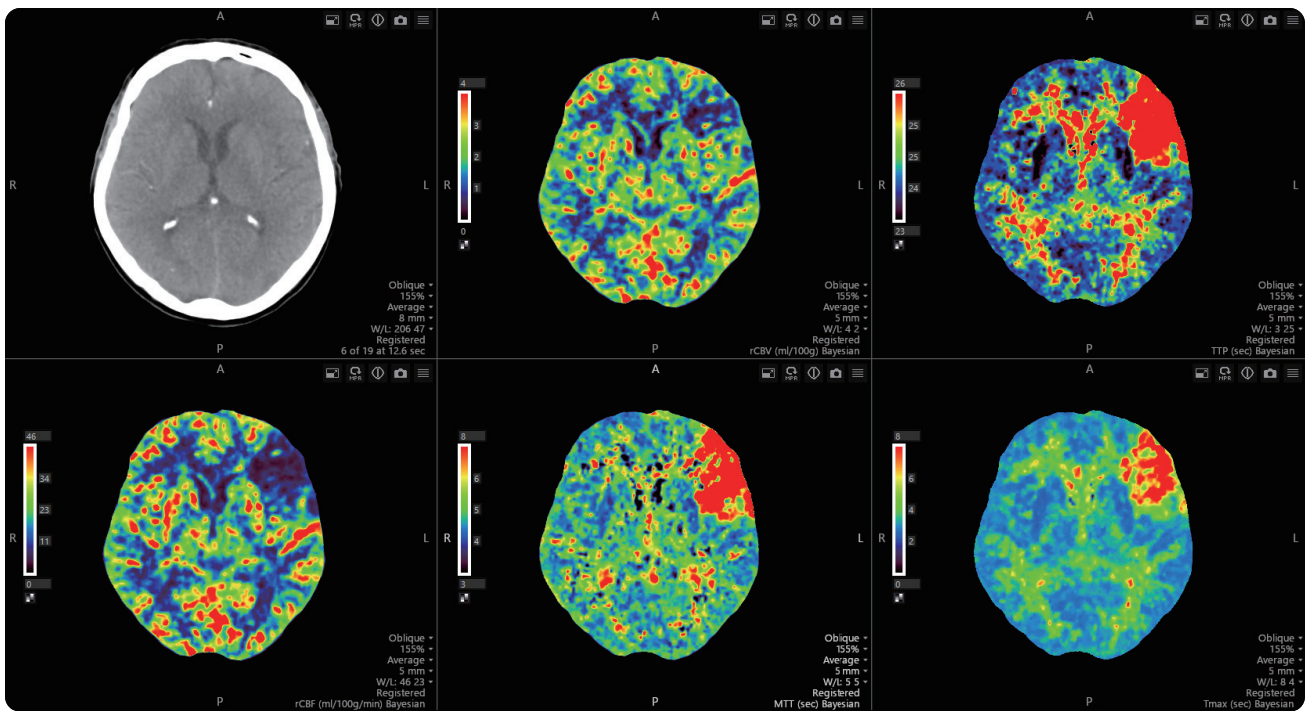
Key Benefits

- Streamlined workflow with automatic curve-fitting, midline correction, motion correction and region of interest templating
- Vitrea software identifies the artery and vein, then computes five parametric maps with quantitative results: time-to-maximum (Tmax*[1]), mean transit time (MTT), regional cerebral blood flow (rCBF), regional cerebral blood volume (rCBV) and time to peak (TTP)
- Summary maps communicate results of a CT perfusion exam and provide tissue classification
- Bayesian processing is available in CT Brain Perfusion in addition to our SVD*[2] and SVD+ options. The Bayesian method excels at processing low signal-to-noise ratio (SNR) images that help provide clarity on parametric images used to compute summary maps.[1,2]

Key Features

- Support for 2D, 4D and thick-slice CT scan data, as well as jog, shuttle, and wide coverage acquisition
- Three processing algorithm methods:
  - Singular value decomposition (SVD)
  - Delay-insensitive singular value decomposition (SVD+)
  - Bayesian method
- Simplified image collage creation and export
- Time density graph plots display the range of image density, transit time for the artery location, image density over time for the artery and vein and corresponding time values

CT Brain Perfusion Packages

Feature	2D	4D
Algorithms		
SVD	✓	
SVD+	✓	✓
Bayesian	✓	✓
Maps		
Angio Map		✓
Automatic arterial and venous phase separation 4D views of the arteriogram and venogram (generated CTA-V view)		✓
Fusion of perfusion maps and anatomical CT view		✓
Summary Map	✓	✓

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