

Healthcare Sector Imaging & IT Division

Siemens Demonstrates Groundbreaking Approach to Stroke Diagnosis at ASNR 2009

Rapid volume perfusion acquisition, intuitive post-processing and remote access highlight new CT Neuro Engine for comprehensive workflow efficiency and patient care

Malvern, Pa., May 18, 2009 – As the third leading cause of death in the United States, stroke effects approximately 795,000 Americans each year – with an estimated 610,000 accounting as first-time cases¹. And for a stroke victim, the first few hours are the defining time when a quick and effective diagnosis can mean the difference between full recovery and permanent disability. At the 47th Annual Meeting of the American Society of Neuroradiology in Vancouver, British Columbia, Canada, May 16-21, Siemens Healthcare (booth #207) brings stroke diagnosis to the patient with a combination of Siemens SOMATOM® computed tomography (CT) scanner technology and CT Neuro Engine, offering a unique and complete solution for all aspects of neuroradiology.

Stroke is the leading cause of serious long-term disability in the United States¹. The crucial time for any patient is during the first three hours after the stroke occurred. Information gathered from the CT scan can efficiently provide the essential data for a proper diagnosis and next steps for the patient's well being.

"Siemens is proud to offer volume perfusion capabilities on a wide variety of our scanners," said Kulin Hemani, vice president, Computed Tomography, Siemens Healthcare. "Adaptive 4D Spiral, the innovative acquisition, which allows volume perfusion coverage of up to 15 centimeters on SOMATOM Definition Flash, is currently available, not only on our premium scanners, but across the entire spectrum of our SOMATOM Definition CT portfolio, bringing the technology to every patient. Moreover, the 15 centimeter coverage is offered in the entire field-of-view, unlike other perfusion techniques offered on large-area detectors where large cone-beam angle impacts the volume that can be visualized."

3D Stroke Imaging

Whether a fast stroke evaluation or the display of the infarcted and surrounding area is needed, the CT Neuro Engine makes all the data available in only seconds. With *syngo*® Expert-I findings can be shared with the treating physician or a colleague by simply granting them remote access from any PC in the network. And to speed up clinical workflow, 3D evaluations can be performed by simply using *syngo* WebSpace from any PC or laptop where the Internet can be accessed.

Siemens 3D stroke imaging provides the highest clinical confidence using SOMATOM CT exquisite image quality. Fully automated 3D *syngo* Volume Neuro Perfusion CT tools facilitate quantitative volume evaluation for differential diagnosis of ischemic stroke and supports simultaneous multislice processing, as well as the stringent time and workflow requirements in an emergency setting where time is of the essence. The automated guided workflow provides quick and reliable assessment of dynamic cerebral perfusion parameters, such as Cerebral Blood Flow (CBF), Cerebral Blood Volume (CBV), and Time To Peak (TTP) and Mean Transit Time (MTT).

CT Neuro Engine is designed to answer the key questions that stroke team faces in diagnosis of ischemic stroke, such as excluding existence of hemorrhage, understanding of irreversibility of infarcted tissue, and determining portion of potentially salvageable tissue.

Adaptive 4D Spiral

Siemens Adaptive 4D Spiral technology allows the possibility to adapt the coverage to virtually any organ size, allowing for full brain perfusion information, enabling a comprehensive view whole disease in stroke imaging.

Adaptive 4D Spiral capabilities are currently available to more than 300 CT scanners installed throughout the United States. It is available on SOMATOM Definition Flash, Definition, and Definition AS scanners, including the newly introduced, cost effective 20-slice configuration.

With Adaptive 4D Spiral, the Siemens CT scanners are able to address functional imaging (perfusion images of blood flow over time) specific to the organ being imaged. This allows Siemens to offer information beyond simple perfusion and into phase contrast CT. In the case of a stroke, physicians can use whole-organ perfusion imaging, not only for a small part of the brain, but for all of it.

Time Is Brain

“Time is brain” – a time until treatment impacts the level of damage caused by the stroke. In other words: the faster a stroke is treated, the better the odds that the patient could have a complete recovery, or, at the most, a mild disability. With Siemens CT stroke imaging, the stroke team can have the confidence in the imaging excellence and the speed of the data to make the best decision for the patient.

¹http://www.cdc.gov/Stroke/stroke_facts.htm

The **Siemens Healthcare Sector** is one of the world’s largest suppliers to the healthcare industry. The company is a renowned medical solutions provider with core competence and innovative strength in diagnostic and therapeutic technologies as well as in knowledge engineering, including information technology and system integration. With its laboratory diagnostics acquisitions, Siemens Healthcare is the first integrated healthcare company, bringing together imaging and lab diagnostics, therapy, and healthcare information technology solutions, supplemented by consulting and support services. Siemens Healthcare delivers solutions across the entire continuum of care – from prevention and early detection, to diagnosis, therapy and care. Additionally, Siemens Healthcare is the global market leader in innovative hearing instruments. The company employs around 49,000 people worldwide and operates in 130 countries. In the fiscal year 2008 (Sept. 30), Siemens Healthcare reported sales of €11.2 billion, orders of €11.8 billion, and Sector profit of €1.2 billion. Further information can be found by visiting <http://www.siemens.com/healthcare>.