

FOR BACKGROUND
CT Solutions

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SIEMENS SENSATION 16-SLICE CARDIAC CT SCANNER— IT'S NOT JUST FOR RESEARCH ANYMORE

Multi-Slice CT Scanner Proves its Value in High-End Hospital Research and is Now Breaking New Ground in Front-Line Cardiology Practice

Advances in multi-slice computed tomography (CT) technology have provided new opportunities in the cardiology imaging field. Available for less than one year, Siemens Medical Solutions SOMATOM Sensation 16-slice CT scanner has nearly 200 customers in the U.S. and is used in a variety of clinical environments, ranging from research to medical group practices to outpatient diagnostic imaging centers. After having built a strong foundation in the high-end teaching hospital cardiology and research environment, the 16-slice Sensation CT scanner is available today as a vital tool for clinicians, in particular, the cardiologists. Latest research shows that the 16-slice Sensation CT scanner is being successfully used to evaluate coronary artery stenosis¹ in its earliest stages and that is important to anyone imaging the heart — and for the general population.

“Siemens diverse CT product line is making the best imaging technology available to physicians who specialize in a variety of fields. We are showcasing our dedicated cardiac CT scanner, the SOMATOM Sensation Cardiac, at this year’s ACC and truly believe that it provides the medical community with the most comprehensive imaging solution for evaluating coronary artery disease. Customers from the research side and the clinical side are marveled at the image quality, resolution and speed of the system,” said Don Werner, Segment Manager for Cardiology and Preventive Care, CT Division of Siemens Medical Solutions.

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¹ “Detection of Coronary Artery Stenoses With Thin-Slice Multi-Detector Row Spiral Computed Tomography and Multiplanar Reconstruction,” *Circulation*, February 11, 2003

Examples of facilities using Siemens Sensation Cardiac in varying environments include:

- *South Carolina Heart Center (SCHC)*, a multi-modality, outpatient clinical cardiac facility, recently replaced its Volume Zoom CT Scanner with the 16-slice Sensation Cardiac CT scanner and is already experiencing a reduction in procedure time and an increase in clinical efficiency. *SCHC* is using the CT scanner for procedures such as chest imaging, CT angiography (CTA), and calcium scoring. The increased speed and resolution of the Sensation 16 has helped *SCHC* to improve workflow and patient care. Cardiologists believe the Sensation Cardiac will enable them to more quickly identify problems since the scans are faster than any other non-invasive imaging modality currently used at the facility. In addition, patient satisfaction will be greatly improved since patients will not have to spend as much time going through the procedure. For example, a bilateral, lower extremity study using doppler ultrasound may take as long as 45 minutes. However, with the Sensation Cardiac, the peripheral vessels can be imaged and ready for physician interpretation within 10 minutes.
- *Advanced Imaging Institute (AII)*, Santa Rosa, CA, an independent clinical research, imaging center that focuses on advanced radiologic techniques, is an example of radiologists' close support of cardiology applications. *AII* is working with the region's largest cardiology group, Northern California Medical Associates (NCMA), using the 16-slice Sensation CT technology and cardiac CT protocols to evaluate coronary and peripheral vessels, as well as for the evaluation and quantification of calcium scores. Doctors believe that imaging modalities, such as CT and MRI, provide a non-invasive alternative for identifying patients with vascular disease requiring treatment or intervention at an early stage. Coronary CTA studies at *AII* are helping the physicians identify coronary artery stenoses and soft plaques in many patients, instead of using conventional higher risk arterial catheterization studies. An illustration of this involves a patient whose severe peripheral atherosclerotic disease prevented conventional catheterization, the intravenous injected CTA revealed several high-grade stenoses in the coronary arteries.

- *Mount Sinai Hospital, New York, NY*, a premier research institution and hospital, is using the 16-slice Sensation CT scanner in cutting-edge cardiology research and routine clinical practice, often in conjunction with other non-invasive imaging modalities, such as magnetic resonance (MR). After only six months of owning the Sensation CT, doctors are performing state-of-the-art non-invasive studies using Siemens CT fly-through technology, which allows clinicians to see the heart from the inside, and CTA that provides the doctors and patients with an alternative to catheter-based invasive angiography procedures. As *Mount Sinai* physicians have found, the 16-slice SOMATOM Sensation CT has tremendous value for patients with grafts, because it reduces the risks involved with repeated invasive testing. Doctors also use the cut-plane technique, which lets clinicians assess the valvular structure inside the heart by “cutting” through to a specific area. This is going to be very important for the teaching of the next generation of doctors, because for the first time “heart dissection” can be performed through non-invasive imaging technologies allowing for a more precise diagnosis.

The SOMATOM Sensation Cardiac CT system is a member of the Siemens SOMATOM family and is based on the well-recognized 16-slice detector platform with optimized performance for cardiac and cardiovascular applications. The technology uses cutting-edge cardiac reconstruction and cardiac function analysis software, as well as concepts for electrocardiogram (ECG)-correlated acquisition for non-invasive cardiac imaging. Please contact us if you require additional information or would like to interview a Siemens CT expert or customers using the Sensation 16 or Sensation Cardiac. More information can be found at www.siemensmedical.com.

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