

Healthcare Sector Imaging & IT Division

Siemens Demonstrates Comprehensive Solutions for Echocardiography at ACC

ACUSON SC2000 echocardiography system acquires full-volume heart images in a single heartbeat

Atlanta, Ga., March 14, 2010 – Siemens Healthcare will be showcasing the 1.2 release of its ACUSON SC2000™ volume imaging ultrasound system at the 59th Annual Scientific Session of the American College of Cardiology (ACC), March 14-16 in Atlanta (booth #1018). The ACUSON SC2000 system represents the latest in the evolution of echocardiography delivering instantaneous, full-volume images of the heart in one single heartbeat – without gating or stitching.

Building upon Siemens' superior architecture and strengthened by Siemens' patented technologies, this new release of the ACUSON SC2000 system features unique technologies and applications that further improve diagnostic confidence and workflow in echocardiography.

"Siemens' Echo in a Heartbeat™ technology delivers vastly more diagnostic information than today's conventional systems, while simultaneously accelerating clinical workflow", said Dr. Linda Calhoun, cardiologist at the New Hanover Regional Medical Center (NHRMC) in Wilmington, N.C. "We're imaging the whole heart in one single beat, before segmenting it to achieve views we previously haven't been able to see, with an image quality that is amazing."

Full-volume imaging enables new workflow pathways to improve diagnostic efficiency: According to Calhoun, the instantaneous full-volume technology also reduces time-to-diagnosis. "Using the ACUSON SC2000 system, we see a considerable decrease of examination time; traditional echocardiograms can take up to one hour. Thus, we are able to arrive more quickly at the diagnosis, at the cause of our patients' heart failures or the severity of their heart disease, so they can be treated more quickly," Calhoun said.

The ACUSON SC2000 system delivers superior volume imaging that can be easily integrated into a routine adult echocardiography scan. Non-stitched, real-time full-volume imaging provides wider access to patients and captures true physiologic information including color flow and accurate volume quantification for the left and right ventricle.

In addition, the system features the Rapid Stress™ volume stress echo application, with full-volume acquisition in one single heartbeat per stage and auto-extraction of reference planes for comparison. The resulting volume stress workflow enables the only volume stress echo solution for patients with arrhythmia. Consequently, faster acquisition time and comprehensive review of all wall segments in one single capture leads to potentially improved accuracy and time savings.

Extending the transmit technology pioneered in the ACUSON Sequoia™ ultrasound system, the new ACUSON SC2000 system features unique IN Focus coherent imaging technology that elevates the gold standard in echocardiography imaging. Without the need to continuously set and select a given location of best focus, IN Focus technology sharpens the full-field image at all times – without sacrificing frame rate. Building on the ACUSON Sequoia 4V1c transducer technology, the ACUSON SC2000 system delivers continuous full-field transmit focusing using the power of 64 receive beams, maximizing the imaging information rate to better resolve the cardiac structure and motion for superior diagnostic volumetric imaging.

An innovative approach to workflow enhancement are eSieScan™ Workflow Protocols, which streamline exam workflows, both on the user level and in the entire lab, bringing higher reproducibility and quality standards to the echocardiography workflow. Customizable and based on user or department requirements, eSieScan protocols dramatically reduce the need for user interaction and the number of keystrokes during the imaging process.

Knowledge-based Workflow Applications

Siemens will also be showcasing on various platforms its unique knowledge-based workflow applications, which are designed to automate measurements for rapid, accurate and reproducible results.

- *syngo*® Velocity Vector Imaging™ (VVI) technology uses individual vectors to display direction and relative velocity of tissue from frame to frame to instantaneously measure motion at any point in the cardiac cycle. This unique visual representation of cardiac contraction-relaxation mechanics allows easy gathering of information for a variety of applications, including rapid assessment of ventricular synergy in heart failure.

- Using sophisticated system intelligence based on learned pattern recognition technology, *syngo* Auto Left Heart (Auto LH) technology automatically generates left atrial and left ventricular volumes and ejection fractions rapidly and reliably.
- *syngo* Arterial Health Package (AHP)* provides physicians with the capability to measure carotid intima-media thickness (CIMT). This gives physician the opportunity to provide real-time feedback on the state of their patient's cardiovascular system, allowing for proactive prevention against cardiovascular disease, which causes an estimated 16.7 million deaths globally each year.

These clinical applications and more will be demonstrated on the ACUSON S2000™ Cardiovascular (CV) ultrasound system, a comprehensive dedicated cardiovascular system for pediatric, neonatal, vascular, and OR environments. From image acquisition to application and review, the ACUSON S2000 CV system offers individually customizable protocols for maximum user flexibility to further streamline echocardiography workflow and accelerate cardiovascular throughput. The system's open architecture and transducer compatibility across multiple Siemens ultrasound platforms provides investment protection to new and existing Siemens customers.

Pocket Ultrasound Delivers Instant Insight

Another highlight of the show is Siemens' smallest ultrasound solution, the ACUSON P10™ handheld ultrasound system. A little larger than a common PDA, it weighs only 1.6 pounds, and fits easily into the coat pocket or medical bag of emergency personnel.

"The ACUSON P10 system is *the* exam tool in emergency situations. It enables earlier, faster and more accurate screening and triage decisions by delivering immediate ultrasound imaging at first patient contact," said Dr. Jeffrey Bundy, vice president of Customer Relationship Management for Ultrasound, Siemens Healthcare. "Not since the introduction of the stethoscope has one tool promised to do more to enhance immediate patient care and triage emphasizing Siemens' leadership in innovation and product design."

The ACUSON P10 system's instant availability, application flexibility and portability are changing the way emergency care is administered. It can be used by physicians and medical personnel in almost any environment, including ambulances and medevac helicopters. Emergency exams, such as FAST (Focused Assessment with Sonography for Trauma), enable medical personnel to detect free fluid in and around the heart, lungs and abdomen, determine cardiac activity, and perform pelvic exams.

Excellence for the Clinical Routine

With the ACUSON X300™ ultrasound system, Premium Edition (PE), Siemens offers advanced diagnostic tools to meet all clinical challenges in the daily clinical routine. The system delivers excellent imaging performance in a compact, color Doppler system over a wide range of clinical applications and advanced features. The system offers contrast agent imaging**, *fourSight*™ TEE view, and integrated stress echo. Anatomical M-mode, DTI™ Doppler Tissue Imaging technology, and ACUSON AcuNav™ ultrasound catheter family complete the package.

* This feature should be utilized according to the "ASE Consensus Statement "Use of Carotid Ultrasound to Identify Subclinical Vascular Disease and Evaluate Cardiovascular Disease Risk: A Consensus Statement from the American Society of Echocardiography Carotid Intima-Media Thickness Task Force, Endorsed by the Society for Vascular Medicine"

** At the time of publication, the U.S. Food and Drug Administration has cleared ultrasound contrast agents only for use in LVO. Check current regulations for the country in which you are using this system for contract agent clearance.

The **Siemens Healthcare Sector** is one of the world's largest suppliers to the healthcare industry and a trendsetter in medical imaging, laboratory diagnostics, medical information technology and hearing aids. Siemens offers its customers products and solutions for the entire range of patient care from a single source – from prevention and early detection to diagnosis, and on to treatment and aftercare. By optimizing clinical workflows for the most common diseases, Siemens also makes healthcare faster, better and more cost-effective. Siemens Healthcare employs some 48,000 employees worldwide and operates around the world. In fiscal year 2009 (to September 30), the Sector posted revenue of 11.9 billion euros and profit of around 1.5 billion euros. For further information please visit: www.siemens.com/healthcare.