Siemens asks: What's your SPECT’s IQ?
Intelligent new Symbia feature offers maximum speed and utility in SPECT scanning

Taking innovation and efficiency to the next level, Siemens Healthcare announces the next big thing in SPECT imaging: “intelligence.” At the ESC 2008, the congress of the European Society of Cardiology in Munich, August 30th - September 3rd, IQ•SPECT (Works in Progress) takes center stage as Siemens newest Symbia® feature that enables a comprehensive cardiac evaluation including perfusion, attenuation correction and calcium scoring in just five minutes.

“This exciting new Symbia feature is really all about added value and optimization. IQ•SPECT improves the performance of the Symbia by allowing it to become organ specific and provide complete cardiac evaluations with an extremely quick turnaround time,” says Michael Reitermann, chief executive officer, Molecular Imaging, Siemens Medical Solutions USA, Inc. “And because of its speed and versatility, IQ•SPECT offers enhanced cardiac image quality and thus offers physicians more confident diagnostic ability because of decreased patient movement. We expect this new capability to provide organ specific, cardiac imaging on general purpose systems, as it could potentially expand to other organs as well.”

IQ•SPECT technology is achieved with SMARTZOOM, a specially designed “smart” collimator that magnifies the heart while imaging the rest of the torso under traditional conditions. Typically, cardiac SPECT data is obtained through keeping the detectors positioned at 90 degrees and as close to the body as possible, utilizing mechanically centered detector rotation, where organ specific magnification cannot be achieved. The flexible mechanics of the Symbia S and T gantries allow an organ centric detector rotation that can zero-in on the organ of interest; in this case, the heart. Combining this organ centric orbit acquisition technique, fast, 3D iterative reconstruction that

1 Works In Progress. The information about the product is preliminary. The product is under development and is not commercially available in the United States, and its future availability cannot be ensured.

2 New product feature based on preliminary internal data. Actual performance characteristics have not been established.
is optimized for more confident diagnoses, and improved patient comfort from a quicker scan, IQ•SPECT will set the standard for image quality, speed, productivity and throughput.

IQ•SPECT will be available for all new Symbia S and T systems, and is field upgradeable for any existing Symbia S or T systems that are already widely available in leading hospitals and imaging centers across the globe. The new SMARTZOOM feature is seamlessly integrated into the current Symbia workflows and automation features, giving users access to the most flexible and versatile system available today. From a user perspective, IQ•SPECT is fully automated and can therefore accommodate more patients per day and meet a variety of patient needs. For example, pediatric patients can benefit from a lower injected dose in regular acquisition time, or from less motion and more comfort with a regular dose and quicker acquisition time. A quicker scan allows for less patient movement and lowers the probability of retakes.

Using traditional SPECT systems, cardiac perfusion studies average about 15 to 20 minutes, limiting the amount of patients per day. With an “intelligent” Symbia IQ•SPECT imager, more patients can be scanned per day in much less time; as little as four minutes per patient for a full cardiac work-up.

Raising the bar even higher in well-established myocardial perfusion SPECT imaging evaluations is possible with hybrid Symbia SPECT•CT and IQ•SPECT. The addition of calcium scoring, extracted from a quick low-dose spiral CT scan that is also used to obtain attenuation correction information, is becoming a critical element in the cardiac work-up to screen patients for coronary artery disease (CAD). It can improve the risk stratification of patients who are at intermediate to high risk. Calcium scoring is an independent indicator of prognosis in CAD and in combination with SPECT, does improve diagnostic confidence.

Adding the 30-second CT to the SPECT study can not only illustrate any ischemia present in the patient, but also can assess the buildup of calcium in the coronary arteries. Because many heart attacks occur in patients without obvious signs or risk factors, calcium scoring can definitively screen for and detect CAD. The addition of IQ•SPECT to SPECT•CT studies may lead to new risk stratification algorithms and work-ups for patients with suspected CAD.

There is a picture available at http://www.siemens.com/med-pictures/IQSPECT
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 more than 49,000 people worldwide and operates in 130 countries. In the fiscal year 2007 (Sept. 30), Siemens Healthcare reported sales of €9.85 billion, orders of €10.27 billion, and group profit of €1.32 billion. Further information can be found by visiting http://www.siemens.com/healthcare.