

Baystate introduces 64-Slice CT Scanner to Western Mass

Tomorrow's Technology Today

Last year, Baystate Medical Center became the first hospital in Western Massachusetts to obtain a 64-slice CT scanner, transforming the way some patients are diagnosed and treated for coronary artery disease and other conditions, and resulting in decreased outpatient wait times for CT scans.

To create a CT image, X-rays pass through the body and send digitized signals that are reconstructed as an image. Each X-ray measurement lasts less than a second and captures a "slice" of an organ or tissue. The new scanner takes 64 of these "slices" while rotating four times per second. In less than 10 seconds, up to 5,000 images can be obtained to create a 3-D image of superior quality.

"The image quality is like nothing we have seen before," says J. Robert Kirkwood, M.D., chairman of the Department of Radiology at Baystate Medical Center. "For example, we can now look at the heart and obtain a clear image that was previously unattainable."

A Better Look at Your Heart

Coronary artery disease is typically diagnosed using an angiogram, an invasive procedure that carries some risk to the patient, or by a stress test, which is not an option for many patients, including those with arthritis, vascular disease, or other

conditions. Thanks to the detailed images provided by the new 64-slice scanner, doctors now have a quicker and less invasive option to identify coronary artery disease.

Approximately 73 patients per day arrive at Baystate Medical Center's Emergency Department with chest pain. However, only 20 percent of these patients are found to have chest pain of cardiac origin. If an EKG does not equivocally show whether the patient is experiencing a heart attack, patients may spend up to 14 hours in the hospital undergoing additional testing.

The new scanner holds great promise for these patients, because if the 64-slice CT scan indicates that arteries are indeed diseased, patients can receive earlier diagnosis and treatment, which leads to better and more efficient care. For example, a patient identified as having diseased arteries will move to the cardiac catheterization laboratory for treatment more quickly, while a patient whose scan shows healthy arteries is able to avoid this type of invasive testing.

George Hartnell, M.D., director of Cardiovascular and Interventional Radiology for Baystate Medical Center, cautions that some patients do not qualify for this procedure, including those with poor heart function, an irregular heart, or kidney failure. "However," he notes, "the 64-slice CT scanner provides quality imaging for many patients without subjecting them to an invasive angiogram. Offering this diagnostic tool shows Baystate's commitment to provide the best imaging available as we work toward

Seeing You Clearly

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developing our collaborative heart and vascular center.”

Clearer, Faster- and More-Imaging Options

While its cardiac applications may be the most talked-about, the 64-slice CT scanner offers many other potential applications as well. For example, when every second counts while treating trauma patients, the 64-slice scan takes mere seconds rather than the several minutes required for a traditional CT scan. And with the addition of this fourth scanner, wait times for patients requiring an outpatient CT scan have been reduced.

In addition, the 3-D rendering afforded by the 64-slice scanner is a valuable resource for vascular and orthopedic surgeons who are able to view displacements in multiple dimensions. In the future, the scanner may also be commonly used to identify the risk of stroke, to diagnose kidney stones and appendicitis, and even to replace the traditional colonoscopy.

“Ultimately, thin slice scanners will become mainstream technology,” says Dr. Kirkwood. “We are relatively early adapters at Baystate. We know where we want to go in terms of better patient care, and we added this technology because it is going to help us get there.” ❖



The new 64-Slice CT Scanner at Baystate Medical Center.

Out in the Open

Baystate MRI & Imaging recently introduced the only “true” high field open MRI to the region at its 3300 Main Street Springfield location. This new and innovative form of magnetic resonance imaging combines more space for claustrophobic and larger patients, along with the ability to capture high field quality diagnostic images.

The unit features an opening of 2.3 feet in diameter and almost one foot of free space between a patient’s head and the magnet. In addition, more than 60 percent of exams can be completed with the patient’s head outside of the scanner.

Baystate MRI & Imaging is a joint venture with Baystate Radiology & Imaging and Shields Health Care Group that has been providing service in Springfield since 1999. Baystate MRI & Imaging also provides services at Franklin Medical Center in Greenfield and Baystate Mary Lane Hospital in Ware.

For more information, talk to your doctor or call *The Professionals* at **1-800-377-HEALTH**.