NEW SPIRAL CT SCANNERS OFFER LATEST TECHNOLOGY AVAILABLE IN DIAGNOSTIC CT SCANS

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Wake Radiology is proud to announce the recent installation of two new state-of-the-art Siemens Plus 4 Spiral CT scanners, one at our North Hills Office and the other at our West Raleigh Office. While spiral CT technology is not yet required as the “standard of care” in dynamic contrast-enhanced diagnostic CT, it likely soon will be. Rapid scanning during the relatively brief period of peak contrast enhancement achievable with spiral technology is more accurate in detecting and characterizing pathology, compared with more protracted, equilibrium-phase scanning provided by the older, conventional CT scanners which they replace.

With spiral CT, the tube-detector apparatus within the CT gantry revolves continuously around the patient while the cradle upon which the patient rests rapidly advances through it. During the scanning cycle, there is continuous acquisition of data, resulting in the generation of a 3-D volume data set from which standard 2-D axial images are automatically generated.

When indicated, the 3-D data set can be retrieved and manipulated long after the patient has left the department to create overlapping 2-D axial images for the evaluation of small, subtle abnormalities. These overlapping images can then be assembled through multi-planar reconstruction (MPR) techniques to render additional images of the patient in an infinite number of planes other than the traditional axial views, thus approaching the multi-planar capabilities routinely available with MRI. This added capability can be very helpful in the accurate interpretation of CT findings and is currently routinely employed in orthopedic CT imaging.

The primary advantage of Plus 4 Spiral CT is that it allows extremely rapid scanning through the volume of interest during peak vascular and/or parenchymal contrast enhancement, a capability essential for optimum detection and accurate characterization of pathology in the neck, chest, abdomen and pelvis. Because the data acquisition is so rapid, multi-phasic arterial and portal venous studies through the solid organs of the abdomen can easily be performed when indicated. Since most scans through the chest or abdomen can be performed within a single comfortable breath-hold, respiratory motion and misregistration artifacts inherent with conventional scanners are virtually eliminated.

The speed with which these instruments can scan a patient has not only reduced the time necessary to scan a patient but has effectively eliminated the need for sedation in the pediatric population. In the chest, spiral technology has also enabled us to reduce the amount of iodinated...
Wake Radiology’s Chapel Hill office, Village Radiology, has assumed management of the open MR previously run by Chapel Hill Diagnostic Imaging. This scanner, which will be the only open MR scanner in the Triangle region, will soon be moved to our Village Radiology office at 110 South Estes Drive in Chapel Hill.

Renovations have been launched at our Village Radiology office for the relocation of this unit. Our Siemens 0.2T VIVA open architecture MRI scanner. We anticipate the new scanner will be installed and operational by January 1999. This office will then offer the full range of on-site, state-of-the-art diagnostic imaging, including MR, CT, ultrasound, nuclear medicine (SPECT), mammography, fluoroscopy, and routine x-ray studies. There will be no interruption of MR service during this relocation.

Until installation of the new scanner is completed, we will continue to use the existing Siemens VIVA open MR in the former Chapel Hill Diagnostic Imaging, Inc. office, located at 1506 E. Franklin Street, Suite 102 in Chapel Hill. All operations in that site, including scheduling, scanning and interpretation will be performed by Village Radiology. After the MR installation in our Village Radiology office is finished, the former Chapel Hill Diagnostic office (previously owned by MedQuest of Norcross, Georgia) will be closed.

The new open architecture MR unit will complement our other fixed high-field MR units operating at Raleigh MR and Wake Medical Center. Open MR scanning technology has only recently advanced so significantly that these scanners no longer suffer the severe resolution and long imaging time constraints of the previous generation of lower field strength and open scanners.

The Siemens 0.2T VIVA is the newest of the open scanners. It allows friendly, comfortable, and anxiety-free examinations.

 improvements in image quality on this open scanner is a function of the development of stronger gradients (electronics), improved coil design, and more robust software, as well as higher operating magnetic field strength relative to other older open units. In fact, imaging of certain off-center anatomic regions may be improved over high-field-strength units because of easier centering of the area of interest within the larger “open bore” architecture and new, flexible surface coil designs.

For Raleigh MR scheduling, call (919) 942-5700, or fax: (919) 942-8877. For Raleigh MR scheduling, call (919) 782-7666.

If you have additional questions, please feel free to contact Dr. Robert E. Schaaf, Dr. Richard J. Max, Dr. G. Glenn Coates, or Dr. William T. Djang at (800) 722-6077.
intravenous contrast administered, thus reducing the cost to the patient and the risk of radiographic contrast-induced renal failure. When indicated, the entire chest, abdomen and pelvis can be scanned using the standard amount of iodinated intravenous contrast, each during its own optimal phase of contrast enhancement, without compromise. With a slightly higher total dose of intravenous contrast, the occasional patient who also requires CT of the neck can be easily accommodated in one visit, a capability not optimally possible with conventional CT scanners. In addition to routine diagnostic scanning, the 3-D and multi-planar capabilities of these instruments, along with additional software, also allow us to perform CT angiography, a relatively new imaging option on the horizon.

Our new Siemens Plus 4 CT scanners offer the latest technology commercially available in diagnostic CT scanning. Each of these instruments is equipped with Siemens’ newest ceramic detector, which is more sensitive than the older type of xenon gas chamber detector it replaces. Higher detector sensitivity allows for a significant reduction in the total radiation dose to the patient without compromising image quality. Each instrument is also equipped with specialized software (C.A.R.E. Bolus) specifically designed to trigger scanning at peak contrast enhancement of the target tissue for optimum image quality. Furthermore, patient comfort is enhanced—total scan time is reduced to a only a few minutes. For example, routine diagnostic spiral CT scans of the neck, chest, abdomen and pelvis individually require less than 30 seconds of actual scan time, and a scan of the chest, abdomen and pelvis can be completed in less than 120 seconds, including intervals between individual breath-holds. We plan to add even more advanced image processing in the future to allow for CT endoscopy, to further enhance the imaging work-up of your patients.

Wake Radiology Oncology Services is dedicated to serving you and your patients’ best interests. We have a long-standing relationship with Siemens Medical Systems, which we consider to be the leader in the marketplace with CT technology. The addition of these two new CT scanners complements the presence of a Siemens spiral CT scanner already in operation in our Cary office and six other spiral CT scanners either in operation or soon to be installed throughout our service area at Wake Medical Center in Raleigh, Western Wake Medical Center in Cary, Johnston Memorial Hospital in Smithfield, and Maria Parham Hospital in Henderson. Replacement of our existing Siemens CT scanners with the new Siemens Plus 4 Spiral CT platform enables us to routinely produce the highest quality diagnostic CT studies across our entire practice and will allow us to incorporate future upgrades in CT technology without any interruption in service.

Dr. Way can be reached at Wake Radiology (787-7411) for specific questions pertaining to the various uses of spiral CT in the diagnostic work-up of your patients.
DR. FOLZ SPEAKS TO RALEIGH ASSOCIATION OF INSURANCE WOMEN

Dr. Emily Folz, a member of Wake Radiology's Save-a-Life Team, addressed the Raleigh Association of Insurance Women on September 9 on the subject of early breast cancer detection. Dr. Folz was the featured speaker at the monthly meeting and reminded the women present of the importance of self-examinations and regular mammograms as the first line of defense against breast cancer. Using mammogram films as illustration, she explained the differences between screening and diagnostic mammography, and when breast ultrasound is called for. Members had questions for Dr. Folz after her presentation. The physicians of Wake Radiology's Save-a-Life Team often visit civic and professional organizations to spread the message of early breast cancer detection.