Baylor Dallas Offers a New Choice in Advanced Imaging Services

3 Tesla MRI, CT and Digital Radiology/Fluoroscopy

The new Advanced Imaging Center at Baylor University Medical Center at Dallas offers patients more options than ever for quality imaging exams. The center—the fifth outpatient imaging location for Baylor Dallas—offers high-resolution 3 Tesla MRI, CT, and digital radiology and fluoroscopy with equipment designed specifically to accommodate bariatric patients. The center also offers complex neurological and orthopaedic exams.

“The Advanced Imaging Center offers services that are not available elsewhere in the Baylor system,” said Stephan Lopez, M.S., RT(R), director of radiology for Baylor University Medical Center at Dallas. “In the past, we’ve had to turn away patients if their build exceeded the capacity of our scanners, as well as patients with claustrophobia. Now we can accommodate virtually all patients.”

The Advanced Imaging Center at Baylor Dallas focuses on providing quality exams in a comfortable and convenient setting. The lobby and patient dressing/waiting areas are tastefully designed to create a calm and soothing environment.

The full array of imaging services includes:
• Magnetic resonance imaging (MRI)
• Computed tomography (CT)
• Diagnostic X-ray
• Digital fluoroscopy

3 Tesla MRI scanner
The Siemens 3T MAGNETOM® Skyra MRI has twice the field strength of a conventional magnet, allowing for more precise diagnoses, better pre-surgical planning and enhanced patient care. The 3T MRI produces images with extreme detail and clarity while revealing fine changes in body structures or physiological processes.

Features include:
• Table will accommodate up to 550 lbs.
• 70 cm bore accommodates a large variety of patient sizes, shapes and conditions
• Enhanced functional MRI to precisely localize area of activation for more accurate mapping of brain function
• Improved MR angiography (MRA) since high-field strength makes it possible to visualize blood vessels as small as 200 to 300 microns
• Advanced neurological imaging procedures such as functional, perfusion and spectroscopy
• High-resolution imaging for all exams, which means a significant improvement in detail and clarity for all exams

“There is a significant difference in the bore width of the 3T scanner,” said Christy McSpedden, manager of the Advanced Imaging Center and Baylor Diagnostic Imaging Center at Junius. “With the 3T MRI, patients have much less anxiety because they don’t feel so closed in.”
CT LightSpeed® Xtra Wide Bore

The GE LightSpeed Xtra wide bore 16-slice multidetector scanner produces high-quality images at a faster acquisition speed. Scans are available for general body, neurological and orthopaedic imaging and CT angiography. The distinctively designed 80 cm large bore offers more access for large patients and creates a less-intimidating environment, making it ideal for patients with claustrophobia, anxiety or panic disorder.

Features include:
- Table will accommodate up to 600 lbs.
- 80 cm bore size
- High-resolution exams
- Neuro, body and orthopaedic exams
- CT angiograms
- CT enterography

Digital Fluoroscopy

The digital radiology and fluoroscopy rooms in the Advanced Imaging Center are available to perform fluoroscopy, including upper gastrointestinal (GI), barium enemas, small bowel and musculoskeletal studies.

Features include:
- Table will accommodate up to 600 lbs.
- Barium studies
- Routine X-rays
- Bariatric and orthopaedic exams

Experienced Radiologists and Advanced Technologists

On-site radiologists are board certified by the American Board of Radiology and are members of the medical staff at Baylor Dallas. Many have subspecialty capabilities in areas such as diagnostic neuroradiology, musculoskeletal and body imaging. An on-site MRI scientist, Tianliang Gu, Ph.D., oversees the sequence development and programming, and also works closely with radiologists, ordering physicians and physicists within the department.

Convenient and Accessible Location

The Advanced Imaging Center is located on the first floor of the Baylor Tom Landry Health and Wellness Center on the campus of Baylor Dallas. Valet parking is available for a small fee. Surface parking is free in nearby lots, including three reserved spots, and in the Baylor Landry Center underground parking garage.

Office hours are Monday through Friday from 8 a.m. to 4 p.m. Many same-day appointments are available, and walk-in diagnostic X-rays are accepted until 3:30 p.m.

Call Us

To learn more about services at the Advanced Imaging Center, contact Christy McSpedden at Christmc@BaylorHealth.edu. To schedule a patient, call 214.820.8770.

MRI Offers Personalized Entertainment Option

MRI scans generally last 45 minutes to an hour. To help pass the time, patients undergoing an MRI in the Advanced Imaging Center can watch a movie on the Invivo™ ESys, an MRI-safe entertainment system that allows the patient to view a screen by wearing reflective glasses and headphones. Patients are encouraged to bring their own DVDs or CDs to view or listen to during the scan.
With the implementation of the Eclipsys EHR on the campus of Baylor University Medical Center at Dallas in April, radiology images taken in the Medical Imaging Department at Baylor Dallas, Advanced Imaging Center, Baylor Diagnostic Imaging Center at Junius, Baylor Diagnostic Imaging Center at North Dallas and Baylor Charles A. Sammons Cancer Center MRI Department are now immediately available for review by referring physicians.

“Previously, if a physician was in the Physician Portal looking at patient information, he or she would be able to view images only when the report was signed. Now physicians can stay in one system with the same log-in and get a link to the images as soon as the exam is performed,” said Stephan Lopez, M.S., RT(R), director of radiology for Baylor Dallas.

Baylor is in the process of migrating historical data about all imaging services patients have received at any site in the Baylor Health Care System. Any physician on the enterprise radiology system will be able to access a complete list of radiology services his or her patient had, whether it was in Grapevine, Garland, Irving or another Baylor hospital. All of the separate PACS at the various hospitals will be rolled into one PACS in the near future.

“There are several advantages to having everything in the same database,” said Joe Schneider, M.D., MBA, FAAP, chief medical information officer for Baylor Health Care System. “Patients won’t have to undergo repeat studies, and physicians will have quick access to studies done throughout the Baylor system.”

Another initiative by Baylor is to standardize the names of all exams. For example, at different centers the same exam may be called “MR brain with contrast,” “MR head with contrast” or “MR head” with the use of contrast assumed. With this change, there will be consistency in what exams are called no matter where a patient receives a test.

The EHR also includes a “Most Frequently Selected Reason” for an exam to be performed, both for consistency and to expedite the entry process. In addition to the “quick list,” whoever is entering the order will continue to have the option to free text if he or she prefers.

For all outpatients who receive an imaging service at Baylor Dallas and the outpatient imaging centers, a signed report now can be faxed automatically to any physician in the physician directory with a valid fax number.

The physician directories in the enterprise radiology system use data received from the Baylor Medical Staff Services offices and from the Texas Medical Board for physicians not credentialed by a hospital. Contact information received from these two sources supersedes information from any other source. If you want to receive faxed reports of imaging studies, please make sure your fax number is correct.

To change or update contact information with the Texas Medical Board, please download, print and mail in the change-of-address form located online at www.tmb.state.tx.us/professionals/hcpres/changeaddress.php. To contact the Texas Medical Board, please call 512.305.7010.
Baylor Neuroscience Center’s Headache Center takes a comprehensive and individualized medical approach to relieve patients’ severe headache pain and help them achieve a better quality of life. To accurately diagnose the source of the pain, the Headache Center works closely with Baylor Diagnostic Imaging Centers, particularly Baylor Diagnostic Imaging Center at North Dallas. Both the Headache Center and Baylor Diagnostic Imaging Center at North Dallas are located in the Baylor Health Center building at 9101 North Central Expressway at Park Lane.

“The imaging centers are extremely useful in helping to provide clarity about diagnosis,” said Frederick Freitag, D.O. “We have many patients who come to the Headache Center with evolving headache patterns, which increases the likelihood of organic disease. Even in straightforward migraine patients with normal exams, three-tenths of a percent of these patients will have abnormal MRIs with structural findings. These can be anything from an arteriovenous malformation to a pineal cyst, pituitary tumor or aneurysm.”

A key feature of the relationship between the Headache Center and Baylor Diagnostic Imaging Centers is the expertise of the radiologists on the medical staff at Baylor Dallas who specialize in neuroradiology, Dr. Freitag said.

“Imaging studies often show small white matter lesions in patients with chronic migraines. Radiologists who are not familiar with headache pathology may term these lesions small vessel disease, which raises many issues for the patient, as well as the clinician. The ability of the radiologists on the medical staff at Baylor Dallas to examine films in the proper context and render an appropriate evaluation is extremely important,” he said.

MRI is the primary neuroradiological procedure performed on headache patients. Advantages include the ability to visualize the base of the brain without the issue of X-ray scatter, to detect small vascular lesions and to reduce the risk of potential reaction to contrast dye. “MR gives us a better understanding of the structure of the brain itself as opposed to the cranial bony structures,” Dr. Freitag said.

CT is important in certain situations, including new onset headache in elderly, history of trauma and nasal sinus disease investigations. CT also may be used in lieu of an MR scan when there are potential cervical spine issues that may contribute to the headache pain. For patients who have more complex presentations to their headache and where there is concern about the possibility of a vascular lesion, MR and CT angiograms or MR venograms may be performed.

“For intracranial exams, advances in technologies like MR and CT angiogram have reduced the number of patients who have to go on to have a four-vessel angiogram,” he said.

Dr. Freitag said he and his colleagues in the Headache Center work closely with the radiologists on the medical staff at Baylor Dallas, as well as the well-trained technologists.

“We have a wonderful working relationship with them,” he said. “If they find something while scanning a patient or redoing films, they will call us to ask questions or alert us to issues. The radiologists are extremely responsive when we have a question while reviewing films or reports. They are very cooperative and willing to share their expertise whenever we request it.”

“We do everything we can to accommodate patients. We often can see them on the same day they’ve been seen at the Headache Center if insurance pre-certification can be completed,” said Lori Williams, manager of the Baylor Diagnostic Imaging Center at North Dallas.

“Our MR technologists have a passion for their field and compassion toward patients,” Ms. Williams said. “MR scans can be very difficult for a patient to undergo, especially one who is experiencing headaches. They make sure each patient has earplugs and extra padding by the ears. The technologist communicates with the patient throughout the exam and provides music if possible.”

While not every patient with headaches requires a neuroradiological examination, the occurrence of headaches that are “not typical,” or where there are neurological signs and symptoms, or changing patterns or symptoms, should be considered for radiological exams. If a clinician is not sure which would be the best study to order for the patient, discussion with one of the neuroradiologists on the medical staff at Baylor Dallas can be extremely useful in obtaining the most appropriate test for the patient.
SPECT/CT: What’s New in Nuclear Medicine

Nuclear medicine provides physiologic information that most other imaging technologies cannot provide. Conventional nuclear medicine images have traditionally been two-dimensional. Single photon emission computed tomography, or SPECT, is a nuclear medicine imaging technique that is able to take the physiologic information from the planar (2-D) imaging and provide a three-dimensional representation. While the SPECT images make localizing abnormalities easier, the anatomical detail is sometimes still very limited.

The solution is a relatively new hybrid imaging modality called SPECT/CT. SPECT, in combination with CT, offers a direct correlation of anatomical information with functional data, resulting in better diagnostic information.

“The SPECT study gives us the physiological information, while the CT gives us the anatomical detail,” said Heather Webb, M.D., a nuclear medicine fellow at Baylor University Medical Center at Dallas.

For most SPECT/CT scans, the patient is placed on the scanner’s imaging table and first undergoes a special low radiation dose CT scan. Then, with the patient lying on the same table, the SPECT imaging portion of the exam is performed. The individual sets of images from both studies are then fused.

Dr. Webb said, “We can use SPECT/CT to complement most of the many types of studies we perform in nuclear medicine. It is best used to answer a specific question, and it is most useful in nuclear studies performed to look for tumors of various types or for orthopedic problems.”

For example, some of the areas in which SPECT/CT is particularly helpful include better localization of a site of infection during a labeled white blood cell scan or gallium scan; more accurate identification of primary or metastatic neuroendocrine tumors during an OctreoScan study, or better characterization of indeterminate skeletal lesions during bone scans. It can also be extremely helpful in performing attenuation correction to help minimize artifacts during myocardial perfusion studies performed to evaluate coronary artery disease.

SPECT/CT imaging has proved so useful that its applications continue to extend into new areas. According to Dr. Webb, “In the simplest terms of the abnormalities that we typically are attempting to visualize in nuclear medicine, the SPECT portion of the study gives us the what, while the CT portion gives us the where.”

To schedule a SPECT/CT, call 214.820.1700.

Baylor Dallas Adds On-Site MRI Scientist

Tianliang Gu, Ph.D., has joined the Department of Radiology at Baylor University Medical Center at Dallas as on-site MRI scientist.

As an MRI scientist, Dr. Gu has a wide range of responsibilities. He works with the radiologists on the medical staff of Baylor Dallas and MRI technologists to improve image quality, and is responsible for system quality assurance and accreditation. He also educates the technologists and residents on MRI physics and MRI safety.

His background includes many areas of MRI with experience on both GE and Siemens systems. Before joining Baylor Dallas, Dr. Gu was MRI physicist/instructor at the Dana-Farber Cancer Institute in Boston. There he developed new analysis methods and oversaw the MRI clinical trials, clinical protocol optimization, system ACR accreditation and quality assurance.

At the University of Rochester, he worked at both the Brain Imaging Center and the Department of Radiology, providing technical support to the clinical scanners and developing new MRI acquisition and post processing methods. Dr. Gu earned his doctorate in medical physics from the University of Wisconsin at Madison, where he developed a new MRA technique.

“I provide technical support for all of our MRI scanners for protocol optimization and daily trouble shooting,” Dr. Gu said. “At the Advanced Imaging Center, we are developing fMRI, perfusion and diffusion MRI programs on our 3T system. As an MRI scientist, working together with clinicians, I will evaluate the new developments and help bring them to clinical application.”
A 1.5 Tesla MR scanner has been installed in the new outpatient cancer center on the campus of Baylor University Medical Center at Dallas. This scanner adds capacity for magnetic resonance imaging in another comfortable and convenient location on the Baylor Dallas campus.

The MRI Department at the new Baylor Charles A. Sammons Cancer Center, the largest outpatient facility of its kind in North Texas, is located at 3410 Worth Street, Suite 760, Dallas Texas 75246.

“This is a very easy location for oncology patients to access,” said Olivia Dahlgren, supervisor of the MRI Department at Baylor Dallas. “But it is definitely not limited to patients with cancer. Any patient who needs an MRI can be scanned at this location.”

For more information about MR imaging services at Baylor Sammons Cancer Center, contact Olivia Dahlgren at Olivia.Dahlgren@BaylorHealth.edu. To schedule a patient, call 214.820.1700.
Quick, Easy and Electronic

Three-to-five minute electronic survey.

Be entered to win Ranger tickets by completing the Baylor Diagnostic Imaging Centers at Baylor University Medical Center at Dallas survey.

Details on the reverse side
If you are a physician, nurse, office manager, scheduler or other staff member in a physician’s practice, we invite you to complete the Baylor Diagnostic Imaging Centers at Baylor University Medical Center at Dallas survey that will provide valuable information for improvements at these facilities. Also, in appreciation of your time, you* will be eligible for one of two drawings for a pair of tickets to a Texas Rangers baseball game at the Rangers ballpark ($100 value), and will receive a report with the results of the survey.

Simply log onto www.surveymonkey.com/s/imagingsurvey

*Only physicians, who have not exceeded the non-monetary compensation limit or will not exceed the non-monetary compensation limit with acceptance of this prize, are eligible to win the drawing. Prize cannot be redeemed by a physician office staff member.

Three-to-five minute Baylor Diagnostic Imaging Centers electronic survey

This survey applies to services performed at the Baylor Diagnostic Imaging Centers affiliated with Baylor University Medical Center at Dallas, including Baylor Diagnostic Imaging Center at Junius, Baylor Advanced Imaging Center, Baylor Diagnostic Imaging Center at North Dallas Baylor Sammons Cancer Center MRI Department, and Baylor University Medical Center at Dallas Medical Imaging Department.