Le Bonheur will be the first children's hospital in the country with a 3T intraoperative MRI when it opens a new facility next summer.

The IMRI is located in the surgery suite and will provide high resolution images before, during and after an operation. Surgeons will be able to collect scans without moving the patient from the surgical table, ensuring that the optimum position for surgery is never compromised.

The new suite will also give surgeons access to live Web casting capabilities during surgical procedures, enhancing the teaching capabilities the Neuroscience Institute can offer.

In partnership with St. Jude Children’s Research Hospital, Le Bonheur Children’s is home to one of the nation’s largest pediatric brain tumor programs. St. Jude contributed $7 million to help build Le Bonheur’s new operating room suites and clinical facilities associated with post-operative, intensive care for brain tumor patients in the new Le Bonheur.

**Surgical benefits**

Today, when surgeons remove a tumor, they must move the child to the ICU overnight and wait for an MRI the next day – a process that requires additional sedation.

“If we see residual tumor in the MRI scan, we have to take the child back to surgery to remove it, requiring another craniotomy and anesthetic,” said Rick Boop, MD, chief surgeon.
of pediatric neurosurgery at Le Bonheur Children’s. “The intraoperative MRI will allow us to do all of this in one operative setting.”

Boop points out that the IMRI will be located in the same spot that anesthesiologists, surgeons and pharmacists are working. In fact, the wide bore 3T IMRI will move between an operating theatre and diagnostic facility, so the patient never has to leave the table. The magnet is removed completely from the operating room when scanning is complete.

“For our brain tumor program to maintain its national and international leadership position, it is essential that our neurosurgeons have access to this level of imaging,” said Dr. Joseph Laver, St. Jude clinical director and executive vice president.

Boop also expects the IMRI to give Le Bonheur the ability to localize where motor nerves run in relation to tumors or other lesions, especially in children who suffer from epilepsy.

Furthermore, the IMRI’s 3 Tesla function is a first for children’s hospitals – giving surgeons the optimal resolution when looking at scans.

Along with the IMRI, four beds of Le Bonheur’s new Pediatric Intensive Care Unit will be dedicated to post-operative care of neurosurgery patients. A 24-bed patient floor will also be dedicated for patients recovering from neurosurgery or receiving neurological treatment.

**Diagnostics and teaching**

Beyond the surgical advantages, Neurologist James Wheless expects the high-quality IMRI to give Le Bonheur a diagnostic edge in caring for patients with neurological disorders.

The machine will allow for functional testing, for example, in patients who are being considered for surgery. It will also complement existing diagnostic equipment, giving more in-depth information for a patient.

“We’ll have a full breadth of diagnostic capabilities, which is unique for a pediatric hospital,” said Wheless, who also serves as director of Le Bonheur’s Neuroscience Institute. “Usually, children’s hospitals get to borrow from adult facilities. This equipment allows us to enhance how we take care of these kids.”

In turn, Le Bonheur can help improve care for children all over the country, as Wheless and his colleagues share what they’ve learned with other neuroscientists around the country.

That won’t be the only teaching opportunity. Le Bonheur’s new operating suites will be equipped with Web casting capabilities, which will allow neurosurgeons and neurologists to share their procedures straight from the operating room.

“Having Web casting allows us to educate the community on treatment options here and what we’re doing here.”

Wheless also expects that neurosurgeons will want to visit Le Bonheur’s operating rooms, to see how they could incorporate the IMRI into their practice.

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**Klimo to join neurosurgical team**

Pediatric Neurosurgeon Paul Klimo, MD, MPH, Lt. Col., USAF, will soon join Le Bonheur’s Neuroscience Institute. Klimo currently serves as chief of neurosurgery for the 88th Medical Group at Wright-Patterson Air Force Base in Ohio. He will join Le Bonheur’s program in summer 2010.

“Le Bonheur has a great reputation and is in the process of an aggressive expansion of its facility,” Klimo said. “For me, the opportunity to work with children with brain tumors is the greatest draw. To have that opportunity coupled with the volume and world-renowned reputation that Le Bonheur has is a dream come true.”

Klimo will work closely with Dr. Rick Boop, chief of pediatric neurosurgery at Le Bonheur Children’s. He said he was attracted to the opportunity of working with both Le Bonheur and St. Jude Children’s Research Hospital – which partner in caring for children with brain tumors.

“Everyone in the small world of pediatric neurosurgery world knows and highly respects Dr. Boop, and he is a well-respected senior pediatric neurosurgeon,” Klimo said. “For a young physician like me coming out of the military, this is truly a wonderful opportunity.”

While Klimo expects to spend much of his time working with tumors, he also has interests in spine, epilepsy and vascular neurosurgery.

When Klimo begins at Le Bonheur, he’ll have access to a new 3T intraoperative MRI in the hospital’s neurosurgical operating suite. Le Bonheur is the first children’s hospital in the country to have the new technology, which allows surgeons to collect scans without moving the patient from the surgical table, ensuring that the optimum position for surgery is never compromised.

Klimo added that he’s excited to be able to work with the 3T, and that the machine was a great attraction to Le Bonheur.

Klimo completed his pediatric neurosurgery fellowship at Children’s Hospital Boston, and his neurosurgery residency and master’s in public health from University of Utah at Salt Lake City. He is currently serving active duty at Bagram Air Field, Afghanistan, earlier this year.
Clinic offers care for demyelinating disorders

A new demyelinating disorders clinic at Le Bonheur Children’s is the first in a multi-state region treating pediatric multiple sclerosis.

The clinic, led by Namrata Shah, MD, FRCPC (neurology), offers diagnosis and treatment to children with acquired demyelinating disorders of the central nervous system early.

“By diagnosing and treating these disorders early, we are able to reduce further attacks of demyelination (acute relapses) and improve the ultimate neurological outcome of these children,” Shah said. “The clinic also helps initiate disease modifying therapy, symptomatic treatment and early intervention with physical, occupational and speech therapy services when children are diagnosed with these conditions.”

Shah’s expertise in neuromuscular disorders includes myopathies, muscular dystrophies and neuropathies. She also has a special interest in acquired (inflammatory/immune mediated) myopathies, neuropathies and neuromuscular junction disorders. Shah trained at Children’s Hospital Los Angeles for pediatric neurology and at the Hospital for Sick Kids, Toronto for the pediatric neuromuscular diseases.

She is board certified in pediatric neurology by the American Board of Psychiatry and Neurology and in pediatrics by the American Board of Pediatrics. She is also certified in Neurology by the Royal College of Physicians and Surgeons of Canada. She has certification in EEG and EMG from the Canadian Society of Clinical Neurophysiology.

To refer a patient to the demyelinating disorders clinic, call Judy Sinquefield at (901) 287-5168.

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Save the Date

The Le Bonheur Neuroscience Institute will host the fourth annual Greater Mid-South Pediatric Neurology Update on April 9-10 at the Peabody Hotel in downtown Memphis.

The seminar is designed to encompass state-of-the-art practices and trends in treating children with neurologic disorders. Seminar faculty will provide insight into common situations subspecialists in pediatric neurology face, using case-based learned and didactic lectures with question and answer time.

To learn more or to register online, go to www.methodistmd.org and click on CME.

did you know?

• 2-5 percent of all people with MS have symptoms before age 18

• Diagnosis in children is more challenging than in adults due to the frequency of other childhood disorders with similar symptoms and characteristics.

• Increasing evidence suggests that disease-modifying therapies are safe and well tolerated in children, but large clinical trials are needed to assess treatment efficacy.

• Increasing evidence suggests a slower disease course in children with MS, but significant disability can accumulate at an earlier age compared to individuals with adult onset MS.

Source: National Multiple Sclerosis Society
Le Bonheur Children’s will soon be home to the state’s first accredited clinical neurophysiology fellowship program for pediatric neurologists.

The program will allow pediatric neurologists the chance to develop special expertise in epilepsy and clinical neurophysiology. The fellowship is accredited by the Accreditation Council for Graduate Medical Education (ACGME).

“ACGME recognized both the need for physicians with this training, and the high quality of education they would obtain at Le Bonheur,” said James Wheless, MD, director of the Le Bonheur Comprehensive Epilepsy Program and Neuroscience Institute.

The first trainees in the program will come from Le Bonheur’s pediatric neurology program and will start their fellowships in June 2010.

“There is an extreme shortage of pediatric neurologists with training in clinical neurophysiology, and this site will provide an opportunity for physicians to train at a Level IV National Association of Epilepsy Centers facility,” Wheless said.

Fellows will train in routine EEG, video, EEG (scalp and intracranial), all modalities of evoked potential, EMG/NCV, sleep studies, intra-operative monitoring and epilepsy monitoring.

“It is our hope that we will continue to attract high quality candidates, and our training program will help with the current national shortage,” Wheless said.