# Advance Neuroscience Technology

## Intraoperative Magnetic Resonance Imaging (iMRI)

Cook Children's is one of a handful of children's hospitals in the country to acquire the revolutionary intraoperative MRI (iMRI). The iMRI system technology enhances surgical procedures by displaying highly accurate, real-time digital images of the brain during surgery

### What is iMRI?

iMRI stands for intraoperative magnetic resonance imaging. Put in simple terms it is an MRI that is part an operating, or surgical, suite and is a procedure that allows neurosurgeons to see images during surgery with the use of MRI scanners similar to the MRI scanners used in the Radiology department.

The iMRI suite is a special operating room developed for brain surgery. It combines innovative surgical and imaging tools in one place. Surgeons can take high-quality MRIs during surgery to see the area of the brain they are operating on, the size and shape of tumors, and the difference between healthy and unhealthy tissue. And because surgeons have the ability to see and remove the entire tumor during one surgery, these tools make surgery more precise, reducing risk and the need for a second surgery. In addition to tumors, the doctors at Cook Children's use the iMRI suite for conditions such as epilepsy and as a tool for performing laser ablation surgery.

### How is iMRI performed?

Our iMRI suite is comprised of a surgical suite and an MRI scanner. During a surgical procedure the MRI scanner can be moved over a patient and an MRI procedure can be performed during surgery without moving the patient.

Our surgeons utilize special software that accurately maps areas of the brain to help them remove tumors, seizure spots, and other lesions. By providing timely information, the technology allows better-informed decisions and leads to more effective treatment, the signature of Cook Children's care.

### Going farther

At Cook Children's, we are always looking for advanced forms of care to give our patients more advantages. Cook Children's is the first pediatric hospital in North Texas to perform laser ablation surgery in an iMRI suite. For many patients, this advanced surgical procedure means that doctors can treat certain areas of the brain that were once considered inoperable. Depending on the condition being treated, it can also shorten recovery time because it is less invasive. Learn more about laser ablation surgery and see how Cook Children's is further advancing technology for the patient's we treat.

Need help referring a patient?
Please call the International Patient Services department at +1-682-885-4685,
send faxes to +1-682-885-2557, or email international@cookchildrens.org