PEDIATRIC EPILEPSY SURGERY

WHAT IS MEDICALLY-INTRACTABLE EPILEPSY?
Children with seizures that fail to respond to medication are considered to have medically-intractable epilepsy. Seizure freedom rarely occurs in children who have not responded to 2 or 3 adequate medication trials. For this reason, epilepsy surgery is considered in children with medically-intractable epilepsy.

MY CHILD HAS MEDICALLY-INTRACTABLE EPILEPSY. IS HE/SHE A GOOD SURGICAL CANDIDATE?
Surgery is not appropriate for all forms of medically-intractable epilepsy. Children with seizures caused by a structural brain lesion (i.e. cortical dysplasia, a type of congenital brain malformation, or tumors) may be candidates for epilepsy surgery. The goal of epilepsy surgery is to remove the epileptic focus, or the area of the brain where the seizures begin.

WHAT TESTS ARE NEEDED PRIOR TO EPILEPSY SURGERY?
A team of epilepsy specialists composed of child neurologists, neurosurgeons, nurses, and neuropsychologists are involved in the surgical evaluation. Tests may include an electroencephalogram (EEG), structural and function brain imaging (MRI, PET, SPECT), and neuropsychological testing. Your child will require hospital admittance for prolonged EEG monitoring. Capturing seizures on video-EEG in an Epilepsy Monitoring Unit is a critical part of the child’s pre-surgical evaluation. If the location of the seizure focus remains unclear after this first phase of evaluation, the physician may require your child to undergo intracranial monitoring (“Phase 2 evaluation”). Intracranial electrodes are temporary wires that are surgically placed onto the brain surface or inside the brain. Detecting seizures using this method allows for more accurate surgical planning. Your doctor will make sure you and your child are comfortable proceeding with each test and stage of the evaluation.

WHAT ARE THE RISKS ASSOCIATED WITH EPILEPSY SURGERY?
Your doctor will discuss the risks associated with the particular type of surgery you are considering for your child.

WHAT CAN I EXPECT AFTER SURGERY?
Antiepileptic drugs (AEDs) are typically continued for a prolonged period of time (at least one year) following surgery. There are some children that require medication even after this period to maintain remission. Other expectations will be determined by the type of epilepsy surgery your child has.