

### 1<sup>st</sup> Step for Non-Invasive Testing in Epilepsy Surgery

- MRI
- EMU
- Neuropsychology Assessment

**Seizure Conference:** Multi-Disciplinary team meets to discuss case and then family is informed on next steps

**Surgical Consult:** Family meets with the Paediatric Neurosurgeon and Epilepsy Team to be informed on potential surgery

Yes

**Epilepsy Surgery**

### 2<sup>nd</sup> Possible Steps in Non-Invasive Testing in Epilepsy surgery

- PET scan
- MEG
- Ictal SPECT
- 3T MRI
- fMRI

**2<sup>nd</sup> Seizure Conference:** Multi-Disciplinary Team meets to discuss case and then family is informed on next steps

**Surgical Consult:** Family meets with the Paediatric Neurosurgeon and Epilepsy Team to be informed on potential invasive monitoring

Yes

**Sub-Dural Grids:** are electrodes that are placed on the surface of the brain and require the surgeon to do a craniotomy (open up the surface of the brain).

Yes

**SEEG Stereo-EEG:** is a minimally invasive procedure where needle electrodes are placed via robotics, this technique is preferred when deep areas of the brain are suspected to be part of the seizure generator.

**Cortical Stimulation:** The Epileptologist perform stimulations a test to delineate functional areas of the brain and their proximity to the seizure generator. After this invasive monitoring phase is completed, a detailed map of the areas of the brain involved in seizure generation and their relationship with the functional areas of the brain is explained to the family by the Epileptologist and Neurosurgeon. In the majority of the cases a second resective procedure will be offered to the patient and family to remove the affected area.

Yes

