CONSIDERATION OF EPILEPSY SURGERY

INITIAL CLINICAL EVALUATION

- History of epilepsy
- Current seizure pattern
- Drug history: failure of 2+ AEDs?
- Any comorbidities that preclude surgery?
- Physical examination: neurological, cardiac, skin
- ECG

Patient accepts outline risk/benefit ratio of surgery

- yes
- no DEFER

INITIAL INVESTIGATIONS

- MRI brain; Prolonged interictal EEG; Scalp ictal video-EEG;
- Neuropsychology; Neuropsychiatry; Social & nursing perspective

MULTIDISCIPLINARY CONFERENCE

Contraindication to surgery
- Patient chooses not to proceed

Potential surgical candidate
- MRI negative
- Discordant data
- Potential resection near eloquent cortex

Concordant data
- Clear surgical option
- Language, motor fMRI, visual fields, tractography if planned resection near eloquent areas

Discuss risk/benefit ratio with patient. Proceed with surgery?

- yes
- no DEFER SURGERY. CONTINUE WITH MEDICAL THERAPY

FURTHER INVESTIGATIONS may include:
- FDG PET
- Ictal SPECT
- MEG
- Language, motor fMRI
- Electrical source imaging
- Developmental MRI

Review data. Discuss risk/benefit ratio with patient. Proceed with intracranial EEG

- no
- yes

Resection not feasible
- Intracranial EEG

Resection feasible with tolerable risk
- Epileptogenic zone defined

SURGERY

FOLLOW-UP