

MR Brain Epilepsy

Last Updated: 02/07/2020

Name	Plane	Sequence	Slice	Gap	FOV	Scan Range
3-Plane Localizer	Ax, Sag, Cor				21-25 cm	
3D T1	Sag w/ Ax & Cor Ob recons	3DT1 FSPGR, MPRAGE, or CUBE	1 mm	0 mm	21-25 cm	Scalp to Scalp
COR T2	Coronal Oblique	T2 FSE	3 mm	0.3 mm	18-21 cm	Temporal lobes
COR FLAIR	Coronal Oblique	T2 FLAIR	3 mm	0.3 mm	18-21 cm	Temporal lobes
AX DWI AX ADC	Axial	Epi DWI	4 mm	0.4 mm	21-25 cm	Vertex to Odontoid
AX T2	Axial	T2 FSE	4 mm	0.4 mm	21-25 cm	Vertex to Odontoid
AX FLAIR	Axial	T2 FLAIR	4 mm	0.4 mm	21-25 cm	Vertex to Odontoid
AX GRE/SWI	Axial	T2* FGRE or SWAN	4 mm	0.4 mm	21-25 cm	Vertex to Odontoid
INJECT CONTRAST						
AX T1 POST	Axial	T1 FLAIR or FSE	4 mm	0.4 mm	21-25 cm	Vertex to Odontoid
COR T1FS POST	Coronal	T1 FS FSE	4 mm	0.4 mm	21-25 cm	Frontal Sinus through Occiput

Notes:

- Coronal oblique imaging oriented perpendicular to the long axis of the hippocampus covering from temporal pole to occipital horn (see below)
- May use 3D FLAIR if available reconstructed at 1mm slices in axial, sagittal, and coronal oblique planes.

- 3 min delay between injection of contrast and scanning. May acquire T2 axial after contrast injection during delay before acquiring post-contrast sequences.
- Contrast type –per site. Dose- 0.2ml/kg.
- Use Propeller if excessive motion
- Orient DWI axial slices parallel to glabella and foramen magnum to reduce air-bone interface artifacts from sinuses.
- Use ARC/GRAPPA if available for parallel imaging to reduced scan times.

Images:

- AXIAL- Plan on sagittal plane, angle parallel to genu and splenium of corpus callosum, cover from odontoid to vertex (**see Figures 1, 2, 3**).
- SAGITTAL- Plan on axial plane, angle parallel to midline, cover temporal bone to temporal bone (**see Figures 4, 5, 6**).
- CORONAL OBLIQUE- Plan on sagittal plane, slice angle perpendicular to the long axis of the hippocampus (**see Figures 7, 8, 9**).

Figure 1:

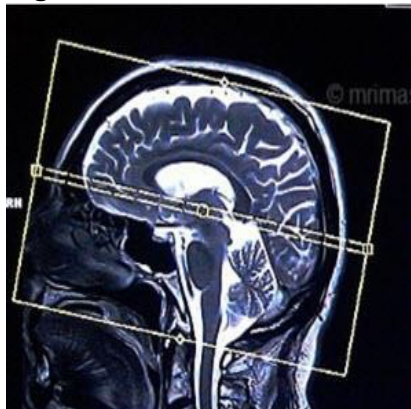


Figure 3:



Figure 2:

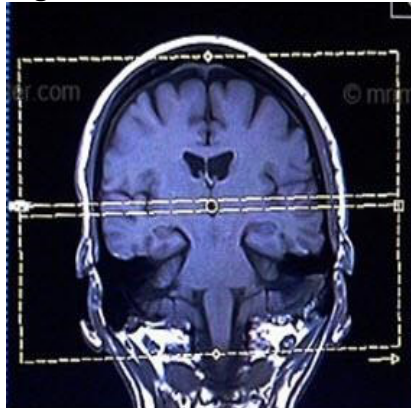


Figure 4:

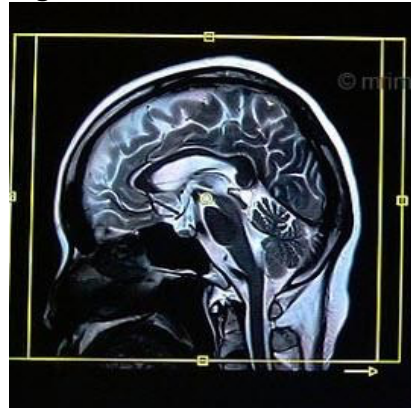


Figure 5:

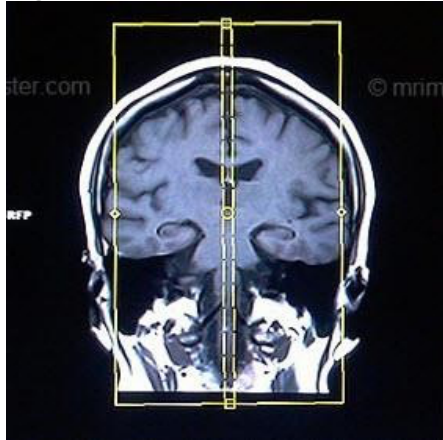


Figure 8:

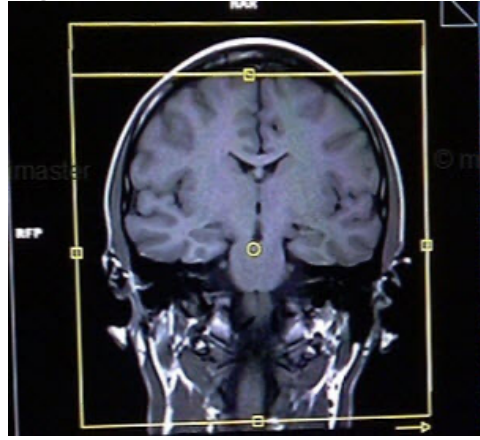


Figure 6:

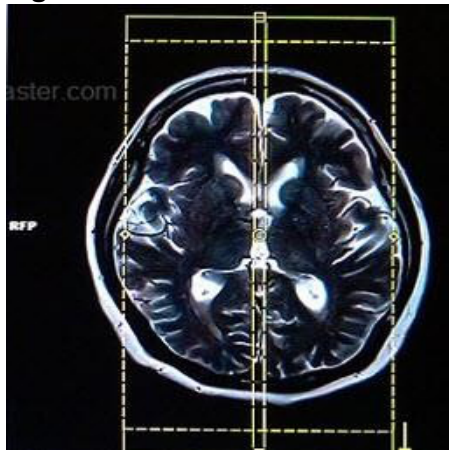


Figure 9:



Figure 7:

