

MR Brain Multiple Sclerosis and Other Demyelinating Diseases

Last Updated: 02/07/2020

| Name | Plane | Sequence | Slice | Gap | FOV | Scan Range |
|--------------------------|--------------|------------------|-------|--------|----------|-------------------------------|
| 3-Plane Localizer | Ax, Sag, Cor | | | | 21-25 cm | |
| SAG T1 | Sagittal | T1 FLAIR | 4 mm | 0.4 mm | 21-25 cm | Scalp to Scalp |
| SAG FLAIR | Sagittal | T2 FLAIR | 4 mm | 0.4 mm | 21-25 cm | Scalp to Scalp |
| AX FLAIR | Axial | T2 FLAIR | 4 mm | 0.4 mm | 21-25 cm | Vertex to Odontoid |
| AX DWI AX ADC | Axial | Epi DWI | 4 mm | 0.4 mm | 21-25 cm | Vertex to Odontoid |
| AX T1 | Axial | T1 FLAIR or FSE | 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 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:

- Use protocol for known or possible Multiple Sclerosis
- May use 3D FLAIR if available reconstructed at 1mm slices in sagittal and axial 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
- T1 FLAIR preferred over T1 FSE especially at 3T and when using Propeller.
- 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- Plan on sagittal plane, angle parallel to brainstem, cover from frontal sinus to occiput (**see Figures 7, 8, 9**).
- AX for DWI- Plan on sagittal plane, angle parallel to line from glabella to the foramen magnum (**see Figure 10**).

Figure 1:

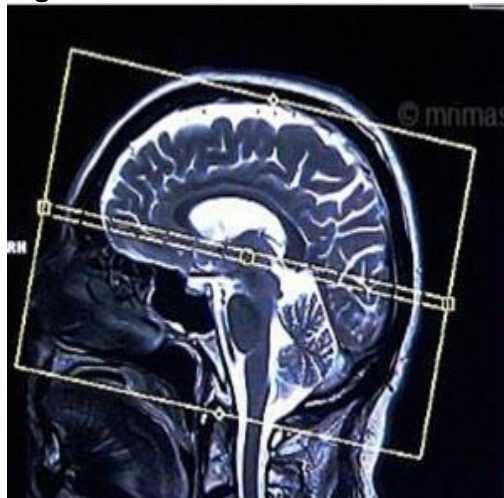


Figure 3:

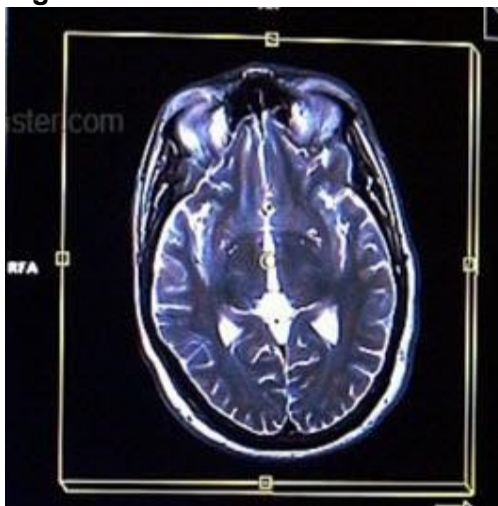


Figure 2:

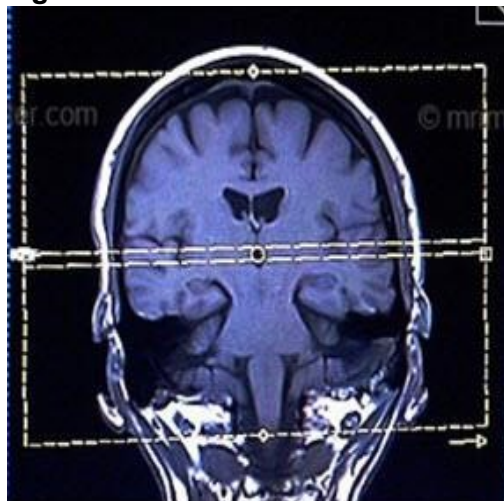


Figure 4:

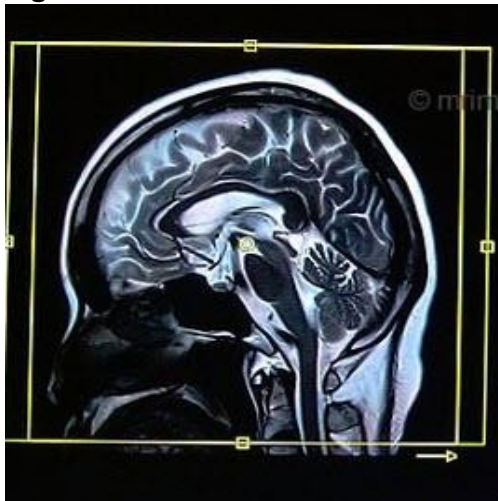


Figure 5:

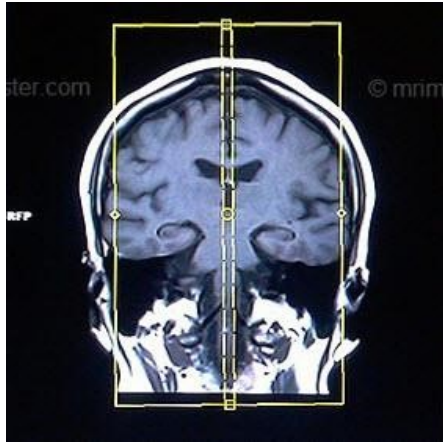


Figure 6:



Figure 9:

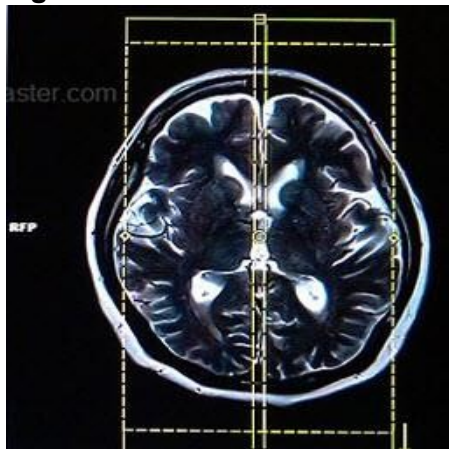


Figure 7:

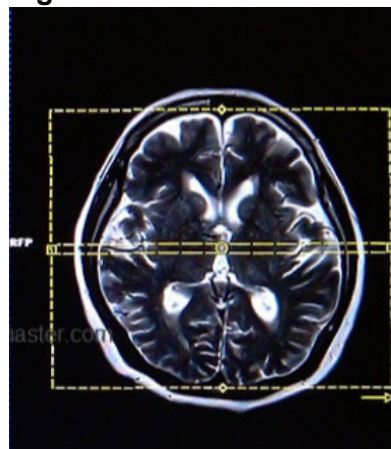


Figure 10:

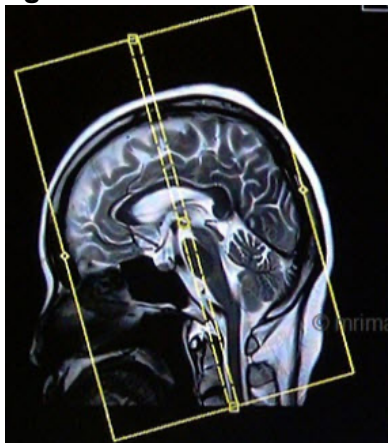


Figure 8:

