

MS Journal Appendix for MRI methodology

Hardware	
Field strength	3T
Manufacturer	General Electric
Model	Signa Excite
Coil type (e.g. head, surface)	Multi-channel Head and Neck Coil
Number of coil channels	8

Acquisition sequence		
Type (e.g. FLAIR, DIR, DTI, fMRI)	3D T1-WI (IR-FSPGR)	
Acquisition time	9:18	
Orientation	Oblique	
Alignment (e.g. anterior commissure/poster commissure line)	anterior commissure/poster commissure line	
Voxel size	1x1x3	
TR	6.6ms	
TE	2.8ms	
TI	900ms	
Flip angle	10	
NEX	1	
Field of view	25.6cm x 19.2cm	
Matrix size	256 x 256	
Parallel imaging	Yes	No
If used, parallel imaging method: (e.g. SENSE, GRAPPA)		
Cardiac gating	Yes	No
If used, cardiac gating method: (e.g. PPU or ECG)		
Contrast enhancement	Yes	No
If used, provide name of contrast agent, dose and timing of scan post-contrast administration		
Other parameters:		

Acquisition sequence		
Type (e.g. FLAIR, DIR, DTI, fMRI)	FLAIR	
Acquisition time	5:16	
Orientation	Axial-oblique	
Alignment (e.g. anterior commissure/poster commissure line)	parallel to the sub-callosal line	
Voxel size	1 x 1 x 3	
TR	8500ms	
TE	120ms	
TI	2100ms	
Flip angle	90	
NEX	1	
Field of view	25.6cm x 19.2cm	
Matrix size	256 x 192	
Parallel imaging	Yes	No
If used, parallel imaging method: (e.g. SENSE, GRAPPA)		
Cardiac gating	Yes	No
If used, cardiac gating method: (e.g. PPU or ECG)		
Contrast enhancement	Yes	No
If used, provide name of contrast agent, dose and timing of scan post-contrast administration		
Other parameters:		

Image analysis methods and outputs	
Lesions	
Type (e.g. Gd-enhancing, T2-hyperintense, T1-hypointense)	T2 hyperintense lesions
Analysis method	Semi-automated edge detection contouring/thresholding technique
Analysis software	JIM version 6.0
Output measure (e.g. count or volume [ml])	mL
<i>Tissue measures (e.g. MTR, DTI, T1-RT, T2-RT, T2*, T2', ¹H-MRS, perfusion, Na)</i>	
Type (e.g. whole brain, grey matter, white matter, spinal cord, normal-appearing grey matter or white matter)	Gray matter volume
Analysis method	SIENAX
Analysis software	FSL
Output measure	mL