2015 Revised CMSC MRI Protocol and Guidelines

Standardized Brain MRI Protocol (Diagnosis and Routine Follow-up of MS)

Field strength	Scans should be of good quality, with adequate signal-noise ratio and resolution (in slice pixel resolution of ≤1 mm x 1mm)
Scan prescription Coverage Slide thickness and gap	Use the subcallosal plane to prescribe or reformat axial oblique slides Whole brain coverage ≤3 mm, no gap (for 2D acquisition or 3D reconstruction)
Core sequences	Anatomic 3D inversion-recovery prepared T1 gradient echo (eg, 1.0-1.5 mm thickness) Gd single dose of 0.1 mmol/kg given over 30 secs* 3D sagittal T2-weighed FLAIR (eg, 1.0-1.5 mm thickness) 3D T2-weighted (eg, 1.0-1.5 mm thickness) 2D axial diffusion weighted imaging; DWI (≤5 mm slices, no gap)** 3D FLASH (non IR*** prep) post-Gd** (eg, 1.0-1.5 mm thickness) 3D series would be typically reconstructed to 3 mm thickness for display and subsequent comparison for lesion counts
Optical sequences	Axial proton density Pre/pot-Gd axial T1 spin echo (for chronic black holes) SWI for identification of central vein within T2 lesions

*Min 5-min delay before obtaining post-Gd T1. The 3D sagittal FLAIR may be acquired immediately after contrast injection before the 3D FLASH series; **If unable to do 3D acquisition, then 2D axial and sagittal FLAIR, axial fast spin echo proton density/T2 and axial post-Gd T1-weighted spin echo at ≤3 mm slice thickness; ***Inversion recovery.

Source: http://c.ymcdn.com/sites/www.mscare.org/resource/collection/9C5F19B9-3489-48B0-A54B-623A1ECEE07B/MRIProtocol2015_updated102015.pdf. Accessed Nov. 13, 2015.