SUPPLEMENTAL MATERIAL

Supplementary Table 1. MR imaging parameters

Parameters	3D-T2-FLAIR[a]	3D-T1-FSPGR	3D-T1-TSE
Repetition time (msec)	4800	9.7–9.9	500
Echo time (msec)	267.4–269.2	4.6–4.7	34.8
Echo train length	120	1	20
Flip angle (degree)	120	20	90
Section thickness (mm)	1.2	0.6	1.2
Field of view (mm)	150 × 150	150 × 150	150 × 150
Matrix	216 × 215	252 × 250	252 × 250
No. of signals acquired	1	1	1
Parallel imaging factor[b]	1.5 [2.0]	x	1.5 [2.0]
Acquisition time[c] (min:sec)	5:07 [5:43]	3:44 [3:50]	3:43 [3:55]
No. of sections	90	180	90

All patients were scanned at a 3.0T scanner; either Signa Architect (GE Healthcare, Milwaukee, Wisconsin) or Achieva (Philips, Amsterdam, Netherlands). [a]Only 3D-T2-FLAIR sequence, which was acquired on the Architect utilized compressed sensing factor of 1.3. [b,c]Parameters for the Architect scanner are in square brackets.

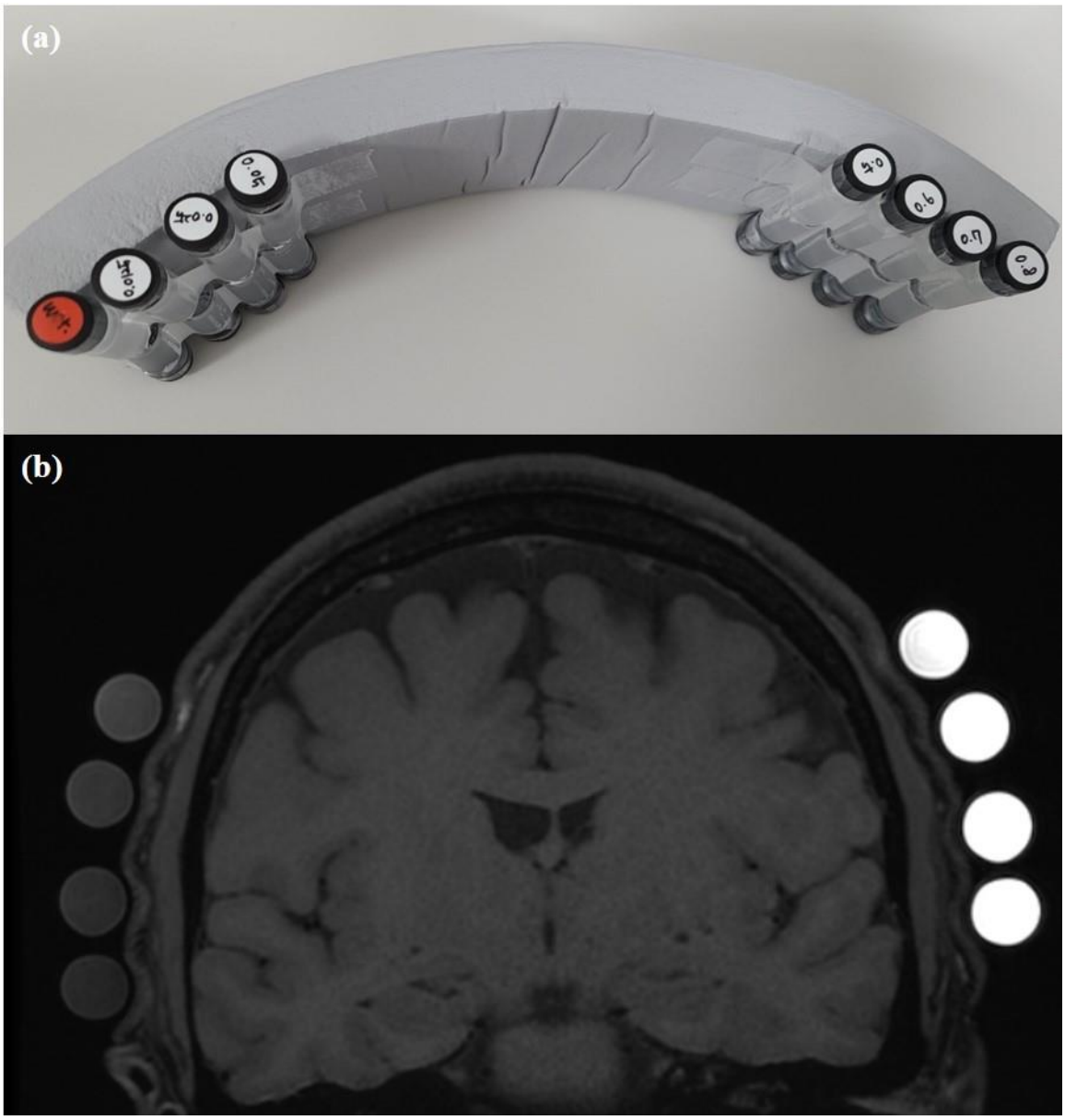
Supplementary Table 2. Comparison of diagnostic accuracy of 3D-T2-FLAIR, 3D-T1-FSPGR, and 3D-T1-TSE

		Sensitivity (%)	Specificity (%)	Accuracy (%)
Inexperienced reader	3D-T2-FLAIR	55	60	57
	3D-T1-FSPGR	50	65	57
	3D-T1-TSE	80	100	90
Experienced reader	3D-T2-FLAIR	30	90	60
	3D-T1- FSPGR	85	80	82
	3D-T1-TSE	85	90	87

Supplementary Table 3. AUC for the detection of neuritis

	3D-T2-FLAIR	3D-T1-FSPGR	3D-T1-TSE	*p*-value		
				3D-T1-FSPGR vs. 3D-T2-FLAIR	3D-T1-TSE vs. 3D-T2-FLAIR	3D-T1-TSE vs. 3D-T1- FSPGR
Inexperienced reader	0.56	0.75	0.91	0.083	0.001	0.053
Experienced reader	0.71	0.86	0.87	0.044	0.049	0.891

Supplementary Figure 1. A clinical head band phantom (a) containing gadobutrol solutions (Gadovist; Bayer Schering Pharma, Berlin, Germany) of varying concentrations (range, 0.0125 to 3 mmol/L), (b) a representative scan of the head band set to the volunteer's head.



Supplementary Figure 2. The signal intensity ratios of various concentrations of gadobutrol solution to normal white matter on 3D T1-TSE, 3D-T1-FSPGR and 3D-T2-FLAIR images.