

**On-line Table 1: Sequence parameters of study MR imaging examinations**

Sequence	T1 (Pre/Post)	T2 (Pre)	FLAIR (Pre)
Sequence type	SE/TSE (GRE)	TSE	TSE
Orientation	Axial	Axial	Axial
TR	450–650 ms (GRE, 250 ms)	2500–4000 ms	6000–11,000 ms
TE	7–16 ms (GRE, 2.4–4 ms)	70–120 ms	120–140 ms
T1	–	–	2000–2800 ms
Acquisitions (NSA/NEX)	1–2	1	1
Section thickness	3–5 mm	3–5 mm	3–5 mm
No. of sections <sup>a</sup>	28–50	28–50	28–50
Section gap <sup>b</sup>	≤10%	≤10%	≤10%
FOV (readout)	220–240 mm	220–240 mm	220–240 mm

**Note:**—GRE indicates gradient recalled-echo; NSA, number of signal averages; Pre, precontrast; Post, postcontrast; SE, spin-echo.

<sup>a</sup> All sequences with the same number of sections, sufficient to cover the complete brain anatomy from the foramen magnum to the vertex.

<sup>b</sup> The same section gap for all sequences. For 3D FLAIR images, axial reformatted section thickness was equal to that in the 2D axial section plus the gap (intersection interval).

**On-line Table 2: Demographic characteristics (safety set)<sup>a</sup>**

	Arm 1	Arm 2	Total (n = 268)
	Gadoterate Meglumine/Gadobutrol (n = 138)	Gadobutrol/Gadoterate Meglumine (n = 130)	
Age (yr)			
Mean (SD)	52.9 (15.2)	54.4 (15.1)	53.6 (15.1)
Median	53	56	55
Min; Max	19; 98	18; 91	18; 98
Sex (No.) (%)			
Female	87 (63.0%)	85 (65.4%)	172 (64.2%)
Male	51 (37.0%)	45 (34.6%)	96 (35.8%)
Body mass index (kg/m <sup>2</sup> )			
Mean (SD)	27.71 (5.35)	27.62 (5.23)	27.66 (5.28)
Median	27.1	27.1	27.1
Min; Max	17.4; 43.4	18.8; 51.2	17.4; 51.2
Missing	1	1	2

**Note:**—Min indicates minimum; Max, maximum.

<sup>a</sup> No missing data unless otherwise stated.

**On-line Table 3: Sum of scores for lesion border delineation, visualization of internal morphology, and degree of contrast enhancement at the patient level**

	LS Mean <sup>a</sup> (SE)		LS Mean <sup>a</sup> Difference (95% CI)	P Value
	Gadoterate Meglumine	Gadobutrol		
Border delineation <sup>b</sup>				
Reader 1	1.83 (0.06)	1.81 (0.06)	0.02 (−0.08 to 0.13)	.665
Reader 2	1.67 (0.05)	1.69 (0.05)	−0.01 (−0.10 to 0.07)	.713
Reader 3	2.04 (0.06)	2.12 (0.06)	−0.09 (−0.18 to −0.00)	.049
Internal morphology				
Reader 1	2.12 (0.05)	2.07 (0.05)	0.05 (−0.04 to 0.14)	.257
Reader 2	1.87 (0.05)	1.91 (0.05)	−0.03 (−0.11 to 0.05)	.405
Reader 3	2.16 (0.05)	2.22 (0.05)	−0.06 (−0.14 to 0.03)	.180
Degree of contrast enhancement <sup>c</sup>				
Reader 1	1.99 (0.06)	1.97 (0.06)	0.02 (−0.08 to 0.11)	.725
Reader 2	2.00 (0.07)	2.01 (0.07)	−0.01 (−0.08 to 0.07)	.845
Reader 3	1.98 (0.06)	2.04 (0.06)	−0.06 (−0.14 to 0.02)	.154

**Note:**—SE indicates standard error.

<sup>a</sup> LS means are the means controlled for covariates of the model.

<sup>b</sup> Three-point scale of border delineation and internal morphology: 0, unevaluable; 1, seen, but imperfectly; and 2, seen completely/perfectly.

<sup>c</sup> Three-point scale of the degree of contrast enhancement: 0, nil; 1, mild enhancement; and 2, strong enhancement.