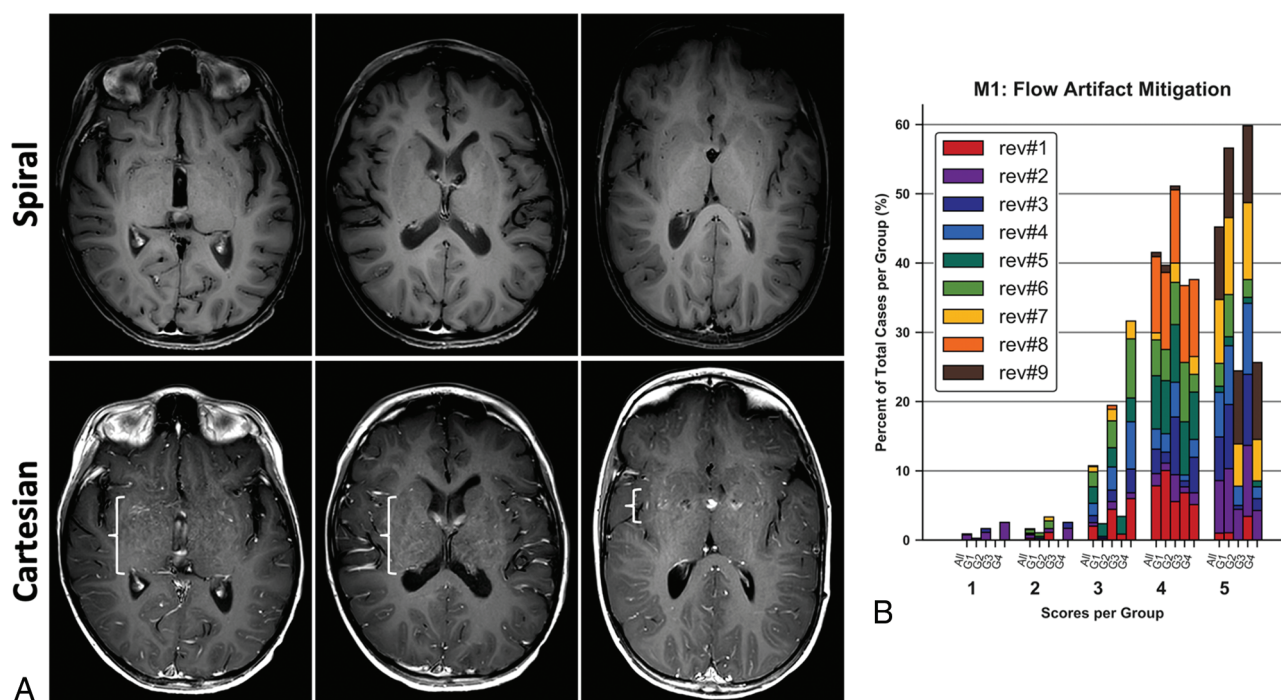


On-line Table: Scan parameters of the 4 protocol groups used for spiral-versus-Cartesian comparison^a

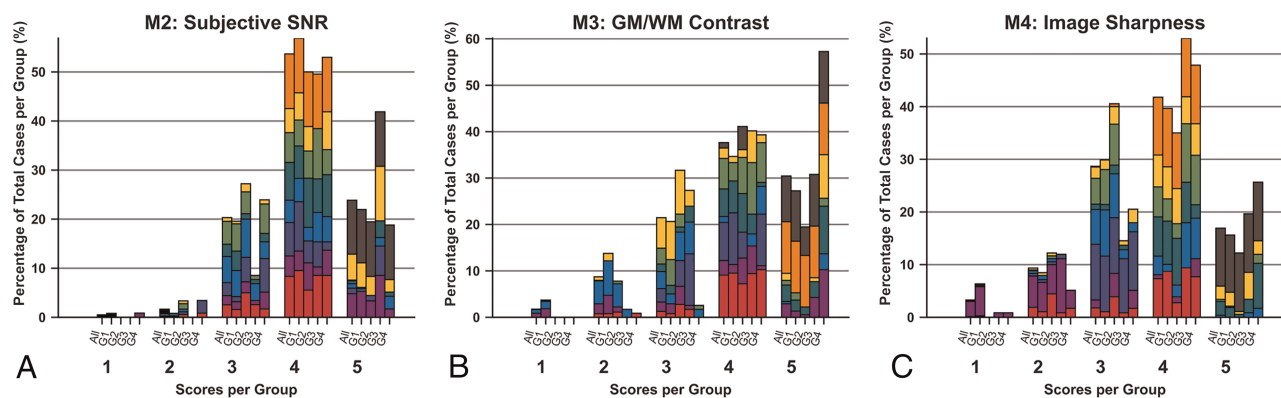
	Group 1 (G1)		Group 2 (G2)		Group 3 (G3)		Group 4 (G4)	
	Spiral-SE	Cart-SE 3T	Spiral-SE	Cart-SE 1.5T	Spiral-SE	Cart-SE hS	Spiral-SE	Cart-TSE
Field strength	3T	3T	1.5T	1.5T	3T	3T	1.5T	1.5T
Scan time (min:sec)	3:34	3:35	3:20	3:18	2:18	2:18	1:51	1:52
τ (ms)	12.3	4.4	21.9	9.1	11.3	3.0	20.5	3.6/echo
TR/TE (ms)	500/14	500/12	450/14	450/15	600/14	600/12	450/15	450/13
Dixon TEs	3	—	3	—	2	—	3	—
Flip angle	70°	70°	70°	70°	70°	70°	70°	90°
FOV (mm)	230 × 230	230 × 180	230 × 230	230 × 183	240 × 240	240 × 186	220 × 220	220 × 181
Voxel size (mm)	0.85 × 0.85	0.85 × 0.85	0.85 × 0.85	0.75 × 0.99	0.95 × 0.95	0.9 × 1.0	1 × 1	1 × 1
Slice Thk/gap (mm)	4/2	4/2	5/1	5/1	4/1	4/1	5/0	5/0
Slices	22	22	25	25	28	28	30	30
Packages	2	2	3	2	2	2	3	2
NSA	2.8	1	2.8	1	2.3	1	2.2	2
Half scan factor	—	—	—	—	—	0.6	—	—
Echo-train length	—	—	—	—	—	—	—	3

Note:—hS indicates half scan; —, parameter not used; NSA, number of signal averages; Thk, thickness.

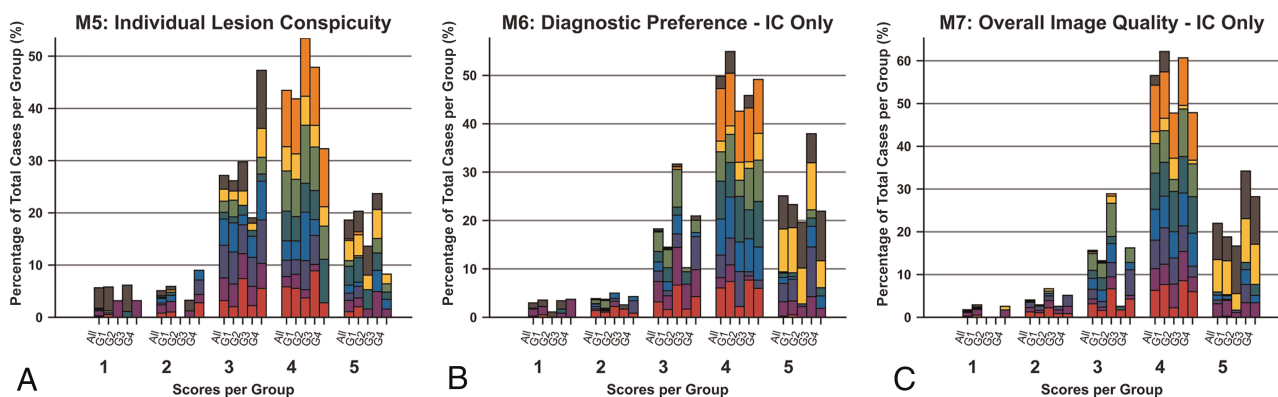
^a Each group (G1–G4) contains a pair of spiral T1-SE– versus Cartesian T1-SE–based scans, closely matched for scan time, geometry (FOV, voxel volume), and contrast-related parameters (TR, TE, flip angle).



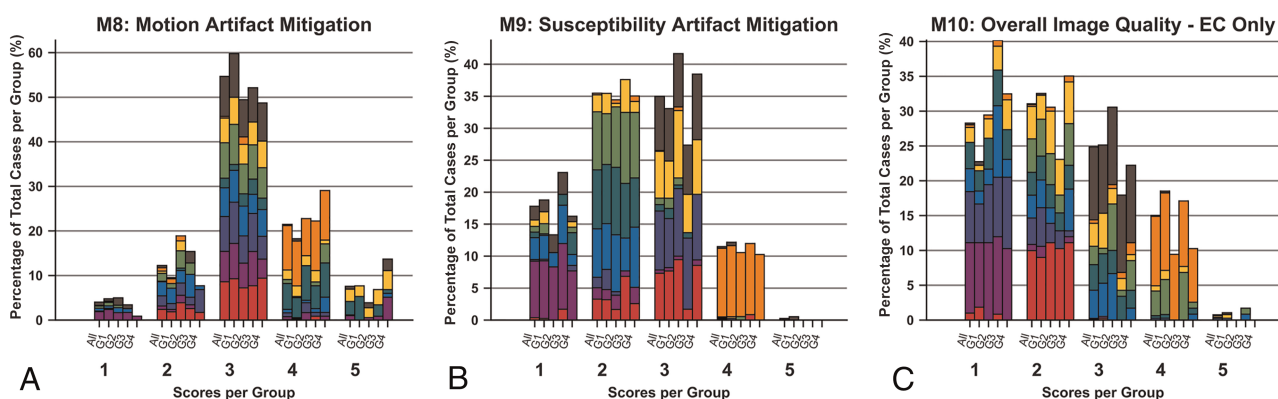
ON-LINE FIG 1. Supplemental material for Fig 1. A, Flow artifact mitigation in center slices of the brain. Spirals are clearer due to reduction of flow artifacts related to CSF and vessels, manifesting on Cartesian as general blurring or signal pile-up (*braces*). B, Normalized histogram of scores for M1, as a percentage of total cases per group (y-axis) versus scores on the ordinal 5-point Likert scale (x-axis). The shape of the distribution describes the relative overall performance of spiral versus Cartesian. A right-skew suggests spiral > Cartesian, left-skew is Cartesian > spiral, and symmetry about a score of 3 is Cartesian \approx spiral. Bars are grouped (x-axis) according to score and subgrouped by protocol (All = all cases; G1–G4); therefore, interprotocol variation is seen as relative height differences between immediately adjacent bars. Inter-reviewer agreement is visualized from the 9 different colors (*legend*), where each color represents a different reviewer. In On-line Figs 1–4, all histograms of scores for M1–M10 follow the same format. Rev indicates reviewer.



ON-LINE FIG 2. Supplemental material for Fig 2. A–C, Normalized histogram of scores for M2, M3, and M4, respectively.



ON-LINE FIG 3. Supplemental material for Fig 3. A–C, Normalized histogram of scores for M5, M6, and M7, respectively. For M5, cases marked NA (no lesions) were excluded from the plot. IC indicates intracranial compartment.



ON-LINE FIG 4. Supplemental material for Fig 4. A–C, Normalized histogram of scores for M8, M9, and M10, respectively. EC indicates extracranial compartment.

		Wilcoxon Signed-Rank Test Based on 3-Point Scale Per Protocol Comparison Group				
		All	G1	G2	G3	G4
Scoring Metrics	M1. Flow artifact					
	M2. Subjective SNR					
	M3. GM/WM contrast					
	M4. Image sharpness					
	M5. Lesion conspicuity					
	M6. Diagnostic pref. – IC					
	M7. Overall IQ – IC					
	M8. Motion artifact					
	M9. Susceptibility artifact					
	M10. Overall IQ – EC					

ON-LINE FIG 5. Supplemental material for Fig 5. The Wilcoxon signed rank test was repeated with scores based on the 3-point scale for all assessed metrics (rows: M1–M10), over all protocol groups (columns: All = all cases, G1–G4). Colors denote Wilcoxon signed rank test results (P value $< .05$): Green indicates that spiral is better than Cartesian; blue, spiral is comparable with Cartesian; and red, Cartesian is better than spiral. Noncolored cells in M5 are groups with insufficient samples ($n \leq 5$) because subjects without lesions were excluded (marked NA). IC indicates intracranial compartment; EC, extracranial compartment; pref, preference.