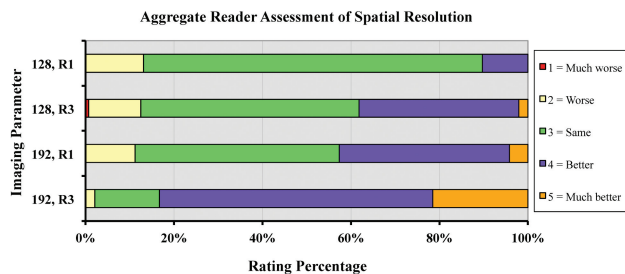


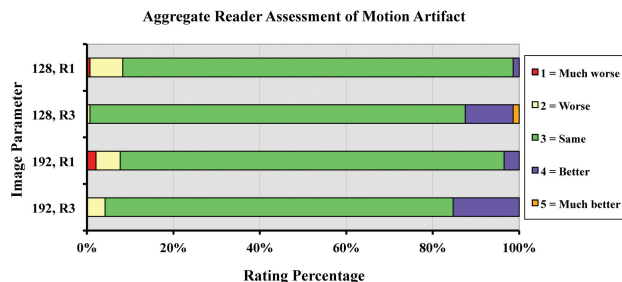
On-line Table: Patient Demographics

Pt	Age	Gender	Presenting Symptoms	Cumulative Reader Diagnosis	Reference Standard Diagnosis	F/U MRI
1	65	M	L face droop and hemiplegia	R MCA S	R MCA, WS & PCA S	N
2	83	F	Slurred speech & drooling	L MCA S	L corona radiata MCA S	4D
3	52	F	Homonymous hemianopsia & R side numb	L PCA S	L OCCIP WM and VPL THAL S	N
4	65	M	Known L ICH from OSH	L MCA H	L F/P and BG H (PH2), IVH & SAH	N
5	78	M	3–5 days worsening ataxia, slurred speech	R MCA S	R ANT THAL S	N
6	52	M	HA, L hemiparesis	R MCA H	R frontotemporal H (PH2, HTN VS other)	3 M
7	56	F	R side weak & face droop	L MCA S	L caudate, putamen, GP S	N
8	59	M	Homonymous hemianopsia & R UE/LE weak	L PCA S	L PCA S	N
9	52	M	Acute R ataxia, ASYM pupils	R VB S	LAT R medullary S (+R VERT DISSEC)	N
10	86	F	R facial droop	L MCA H	LRG L TEMP H (PH2) + IVH	N
11	87	F	HA	R VB H + L MCA S	Multifocal (pons, BG, MCA) H-emboli, L insula S. H1	7 M
12	58	F	HA, DESCEND AO DISSEC	B WS S	B/L WS embolic S	N
13	82	M	New diplopia	L VB S	L dorsal medullary S	N
14	52	M	New R side weakness and aphasia	L MCA S	LRG L MCA and WS S (BG, TEMP, PARIET, insula)	1Y
15	74	M	Stutter, L face droop, slurred speech	R MCA + WS S	R MCA and WS embolic S	2D
16	62	F	Loss of consciousness	L MCA H	L BG H, PH2 + IVH	3 M
17	59	F	3 W H/O aphasia	L MCA and WS S	Multifocal embolic L MCA and WS S	N
18	53	F	Acute L UE tingling, numb, dizzy	No lesion	No lesion	N
19	82	F	L face/UE weakness & A-FIB	R MCA S	R MCA WS S (COR RAD, insula, etc.)	N
20	59	M	R face droop, R UE deficit, aphasia	L MCA HS	L putaminal H (PH2, likely HTN), L THAL S	7 M
21	56	M	Neck pain, prior R ICA dissection	No lesion	No lesion	31 M
22	64	F	R side weakness	L PCA S	L posterior THAL S	3Y
23	75	M	Weakness	B ACA + WS S	R genu & body CC, B F WS, R F PERIVENT S	N
24	68	M	Blurry vision	L PCA + cerebellar S	L PCA + cerebellar S	N
25	84	M	Slurred speech	L MCA S	L corona radiata S	N
26	91	F	Slurred speech, L face droop	R MCA S	R corona radiata S	N
27	70	M	R side numbness	L PCA S	Small L THAL S	N
28	81	F	N, V, worsening HA	L cerebellar H	L cerebellar H (PH2)	4 M
29	79	M	HTN, S/P fall	L PCA S +/- H	L PCA S, + L THAL & M cerebral PED H (PH2)	N
30	30	F	N, V, worsening HA, R side weakness	L PCA H	L occipitoparietal H, PH2	N
31	65	F	Aphasia and R sided weakness	L MCA S	L MCA + WS S	N
32	59	M	Found down	R MCA + WS HS	New R cerebral PED S, old LRG R centrum S	N
33	79	M	R UE weakness	LRG L MCA S	Complete L MCA S	N
34	55	F	L face droop + foot drop	R MCA S	R prefrontal gyrus S	N
35	79	F	R UE & LE weakness	No lesion	No lesion	3Y
36	86	M	Fall, L leg weakness	No lesion	No lesion	N
37	38	M	R UE/LE weakness, aphasia, & L ICA stenosis	No lesion	No lesion	8 M
38	70	F	S/P fall, comatose	B WS +/- MCA H	R WS and L FP H (PH2)	N
39	71	M	Lightheaded, N,V	R cerebellar + VB S	R cerebellar and dorsal pontine S	8 M
40	87	M	L UE & LE weakness x 1 W	R VB S	R ANT pontine S	3D
41	56	M	Transient L side weak/numb	R MCA S	R caudate body and POST putaminal S	N
42	34	F	HA, known HTN	B ACA, MCA, PCA + WS S	L insula, THAL, BG, splenium CC, centrum, & R F WS S	N
43	35	F	Word finding difficulty, R hand clumsy	L MCA and WS S	L MCA and WS (F + P) S	N
44	47	M	R BG bleed, tooth abscess	R MCA HS	R BG HS, PH1 (GBM on pathology)	10 M
45	82	F	R side weak S/P AVR	L cerebellar, MCA, PCA, R PCA S	L cerebellar, MCA and PCA, R PCA embolic S	N
46	63	M	R side dysmetria, HA S/P syncope	SM R VB S	SM R DORSOLAT medullary S	N
47	58	M	R face UE + LE paresthesias, mild aphasia	L PCA H	Small L THAL H (PH2)	3 M
48	75	F	Found down, unresponsive	Marked L IVH & HS	L MCA & B/L ACA S + H (PH2) + IVH	N

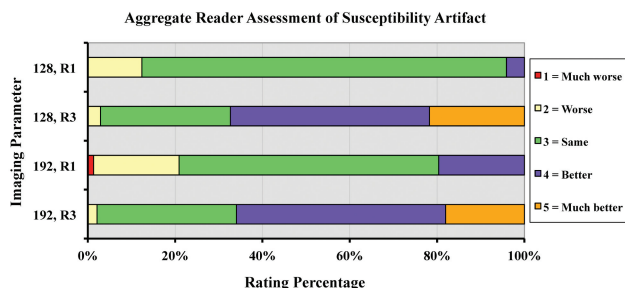
R indicates right; L, left; B, bilateral; H, hemorrhage; S, ischemic stroke; HS, ischemic stroke with hemorrhagic transformation; IVH, intraventricular hemorrhage; WS, watershed territory; VB, vertebral; F, frontal; P, parietal; THAL, thalamus; GP, globus pallidus; GBM, glioblastoma multiforme; UE, upper extremity; LE, lower extremity; N, nausea; V, vomiting; HTN, hypertension; HA, headache; AO, aortic; DISSEC, dissection; AVR, aortic valve replacement; H1, petechial infarction without space-occupying effect; PH1, hematoma involving $\leq 30\%$ of infarct area with some mild space-occupying effect; PH2, hematoma involving $>30\%$ of infarcted area with significant mass effect or clot remote from the infarcted area [12]; F/U, follow-up; N, none; D, day; M, month(s); Y, year(s); Pt, patient; OSH, outside hospital; ASYM, asymmetry; DESCEND, descending; H/O, history of; A-FIB, atrial fibrillation; S/P, status post; BG, basal ganglia; PCA, posterior cerebral artery; LRG, large; ACA, anterior cerebral artery; SM, small; ANT, anterior; OCCIP, occipital; VPL, ventral posterolateral; LAT, lateral; VERT, vertebral; TEMP, temporal; DORSOLAT, dorsolateral; PERIVENT, periventricular; PARIET, parietal; COR RAD, corona radiata; PED, peduncle; CC, corpus callosum; POST, posterior.



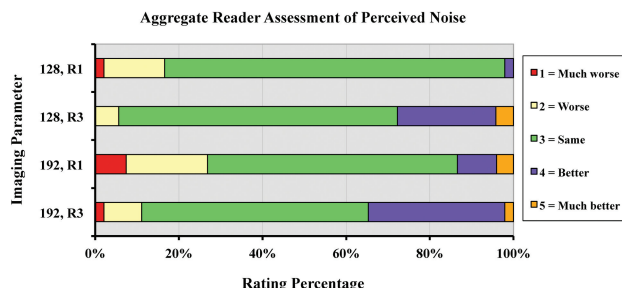
On-line Figure 1. Effect of matrix size and reduction factor upon reader assessment of spatial resolution. (128, R1 = matrix size of 128 x 128, and reduction factor of 1.) Nominal values 1–5 represent reader grading and assessment of spatial resolution compared with the standard DWI SS-EPI phase-encoding scheme at 1.5T, represented by percentage of total assigned values.



On-line Figure 3. Effect of matrix size and reduction factor upon reader assessment of motion artifact. (128, R1 = matrix size of 128 x 128, and reduction factor of 1.) Nominal values 1–5 represent reader grading and assessment of motion artifact compared with the standard DWI SS-EPI phase-encoding scheme at 1.5T, represented by percentage of total assigned values.



On-line Figure 2. Effect of matrix size and reduction factor upon reader assessment of overall susceptibility artifact. (128, R1 = matrix size of 128 x 128, and reduction factor of 1.) Nominal values 1–5 represent reader grading and assessment of susceptibility artifact compared with the standard DWI SS-EPI phase-encoding scheme at 1.5T, represented by percentage of total assigned values.



On-line Figure 4. Effect of matrix size and reduction factor upon reader assessment of image noise. (128, R1 = matrix size of 128 x 128, and reduction factor of 1.) Nominal values 1–5 represent reader grading and assessment of perceived noise compared with the standard DWI SS-EPI phase-encoding scheme at 1.5T, represented by percentage of total assigned values.