SUPPLEMENTAL MATERIAL

Table S1: Patient Event Characteristics

Characteristics	Stroke	Stroke Mimics	Neurotoxicity Related to Chemotherapy	Tumor Progression	Seizure/ PRES	Infection	P value [a]
Stroke Alert Activations	14	23	8	6	6	3	
Median Age at Activation (years)	14 [7, 16]	13 [9, 17]	16	10.5	15.5	1.7	0.76
Males	13 (93%)	15 (65%)	3	5	4	3	0.11
Primary Oncologic Diagnosis	5 (36%)	14 (61%)	8	6	0	0	0.14
History of Transplant	8 (57%)	5 (22%)	0	0	4	1	**0.03**
Liver Transplant	3	0	0	0	0	0	
Lung Transplant	0	3	0	0	3	0	
Cardiac Transplant	4	1	0	0	1	0	
Kidney Transplant	1	1	0	0	0	1	
Primary immunodeficiency	1 (7%)	4 (17%)	0	0	2	2	0.38
Steroids/Immune-modulating therapy	11 (79%)	20 (87%)	7	5	5	2	0.65
Diffusion Positive on MRI	12/13[b] patients who had a MRI	14/23 patients who had a MRI	6	3	2	3	0.15
Median NIHSS	17 [13, 30]	7 [3,14]	4.5	8.5	4.5	24	**0.002**
Hemiparesis	12	13	5	4	2	3	0.08
Facial Droop	6	8	2	3	0	2	0.62
Dysarthria	1	5	1	2	1	1	0.38
Aphasia	3	4	1	2	1	0	1.00
Headache	3	4	1	0	2	1	1.00
Altered mental status	11	5	3	2	0	0	**0.002**
Persistent Neurologic Symptoms at follow up, n	11/13[c] patients	10/21[c] patients	3	4	1	2	**0.048**
Death Directly Related to Alert	4	5	0	4	1	0	0.58

[a] Comparison of strokes and stroke mimics with Fisher/chi-square for categorical variables; Wilcoxon/Mann-Whitney U for continuous variables

[b] One patient with a large hemorrhagic stroke did not get a MRI at the time of his alert, because he was clinically unstable; one patient had a left middle cerebral artery syndrome and had a delayed MRI due to the presence of pacemaker wires. When his MRI was obtained 3 days later, it was without diffusion changes.

SUPPLEMENTAL MATERIAL

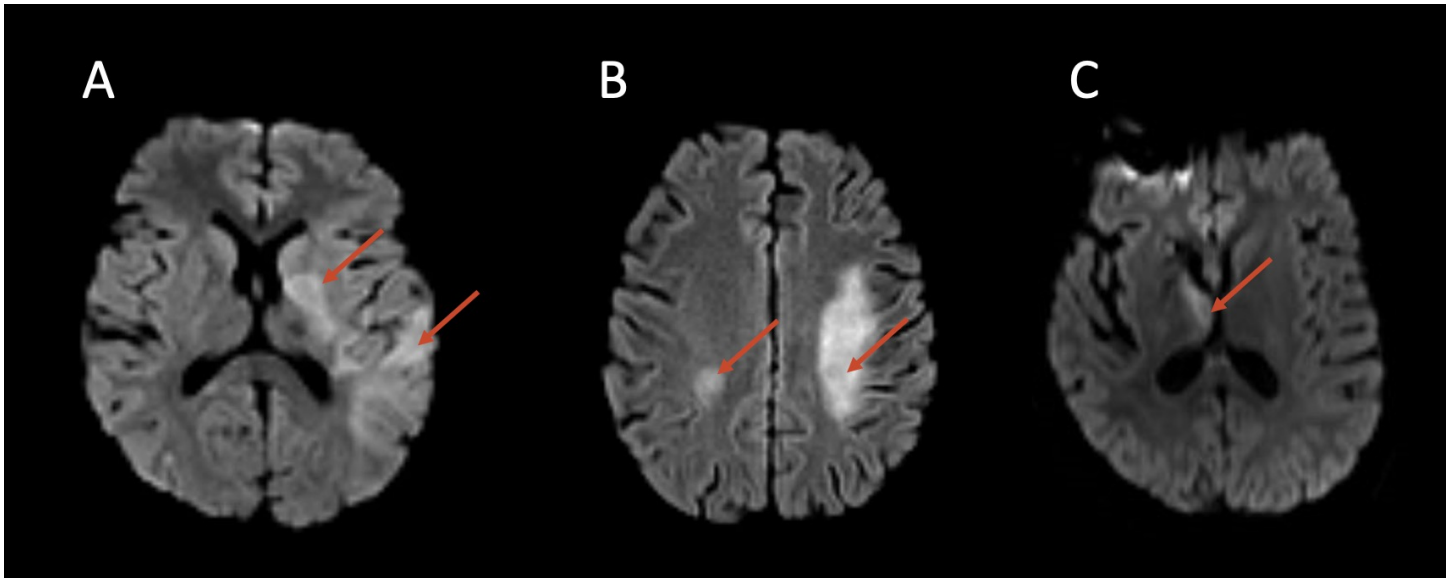

Figure S1: Patterns of diffusion restriction (red arrows) observed in hyperacute magnetic resonance imaging for code strokes. A: Wedge-shaped diffusion restriction in left hemisphere. Final diagnosis: Left middle cerebral artery cardioembolic stroke. B: Asymmetric deep white matter diffusion restriction. Final diagnosis: Methotrexate toxicity. C: Diffusion restriction in the thalamus. Final diagnosis: Tumor progression.