

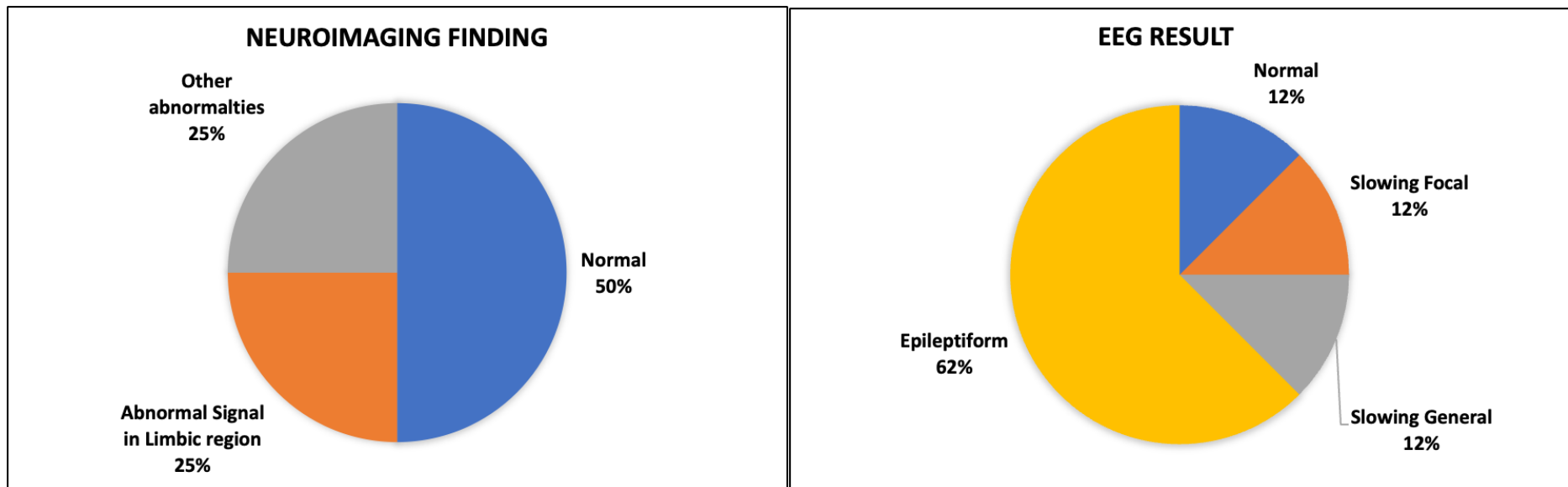
Supplementary Table 1: False-positive Autoimmune Encephalitis (AE) subjects with available workup and final diagnosis

Serial Number	Number of criterion present for possible AE	Antibody Detected Serum	Antibody detected CSF	CSF analysis	EEG finding	CT brain finding	MRI brain finding	Follow up duration (months)	Final diagnosis
1	1	anti-Ma2			Slowing general		Multiple petechial hemorrhages with subarachnoid component	2	Myeloproliferative disease with Severe systemic infection
2	2	Anti-NMDA	Negative	Negative	Epileptiform discharges.		Normal	42	Schizophrenia and generalized epilepsy
3	0	Anti-SOX1			Not done		Not done	0	Diabetic polyneuropathy
4	1	anti-amphiphysin			Slowing general		Bilateral chronic subdural hematomas. Left-sided occipital old infarct with gliosis.	0	Post stroke Epilepsy
5	2	Anti-LGI1			Normal		Right temporal arachnoid cyst	38	Epilepsy
6	1	Anti-NMDA			Normal		Normal	0	Conversion disorder
7	0	Anti-Caspr2			Not done		Severe brain atrophic changes in the bilateral cerebellar hemispheres, cerebellar vermis as well as the brainstem.	47	Spinocerebellar ataxia
8	1	Anti-Caspr2			Not done		Normal	42	Acute inflammatory demyelinating polyneuropathy
9	0	Anti-Yo			Slowing focal		Normal	51	Temporal lobe epilepsy
10	0	Anti-Yo			bilateral temporal epileptiform discharges		right intraventricular lesion old and stable	40	Temporal lobe epilepsy
11	0	Anti-Gad65			Slowing focal		Normal	53	Epilepsy

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12	0	Anti-Gad65			bilateral temporal epileptiform discharges		Gray matter heterotopia	42	Temporal lobe epilepsy
13	0	Anti-amphiphysin			Normal	Diffuse cerebral cortical atrophy with old microvascular ischemic changes		43	Diffuse Lewy body dementia
14	1	Anti-Gad65	Negative	Negative	Slowing general		Normal	32	Parkinsonism
15	0	Anti-Rec			Not done		Bilateral fronto-parietal white matter foci of altered signal intensity most likely ischemic in nature	40	Motor neuron disease
16	1	AntiSOX1			Not done		Developmental venous anomaly in right frontal lobe	8	Autistic spectrum disorder
17	1	Anti-Caspr2	Negative	Negative	focal slowing		Edema of cortical and subcortical white matter at the left parieto-temporo-occipital lobes with diffusion restriction	6	complicated meningoencephalitis
18	0	Anti-Yo			Not done	Normal	Not done	29	Juvenile Myoclonic epilepsy
19	1	Anti-Rec			Not done		Not done	36	Anxiety with depression
20	0	AntiSOX1			focal slowing		Normal	45	Temporal lobe epilepsy
21	1	Anti-Yo			Not done	old ischemic infarct		30	Ischemic stroke
22	0	Anti-Titin			Epileptiform discharges		band heterotopia	33	Epilepsy

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23	1	Anti-Yo	Not done	Negative	Epileptiform discharges		Right cerebellar ischemic infarct, multiple old hemorrhages	9	ischemic stroke and background of cerebral amyloid angiopathy
24	0	Anti-Gad65			Epileptiform discharges		pituitary micro adenoma	59	Epilepsy
25	0	Anti-Gad65			Not done		Not done	43	Mayesthenia Gravis
26	0	Anti-amphiphysin			Not done		Not done	4	systemic Sepsis
27	1	Anti-amphiphysin			Not done		diffuse cerebral atrophy	5	systemic Sepsis
28	1	Anti-Gad65			Normal		diffuse cerebral atrophy	53	Post Traumatic Epilepsy
29	1	Anti-Zic4	Negative	Negative	Not done		Normal	42	leukemic infiltration of spinal nerve roots in a known leukemic patient
30	2	Anti-Gad65	Negative	WBC 15, RBC2000	Not done		Not done	10	aseptic meningitis
31	0	Anti-Titin			Not done		not done	36	lumbar radiculopathy
32	0	Anti-Rec			Not done		Diffuse cerebellar hemispheric and vermian atrophy. Cerebrum and brain stem are unremarkable	0	genetic Cerebellar ataxia with peripheral motor sensory neuropathy
33	1	Anti-Rec			Not done		Old lacunar infarction in right thalamus & bilateral basal ganglia. Cerebral atrophy	50	Lewy body dementia
34	0	Anti-CRMP5			Not done		Not done	4	inclusion body myositis
35	1	Anti-Yo			Slowing focal		Normal	58	Temporal lobe epilepsy

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36	1	Anti-Rec			Slowing general		Bilateral cerebral and cerebellar hemisphere multifocal discrete tiny acute infarcts	58	Systemic Sepsis
37	1	anti-Ma2			Not done	Microvascular ischemic changes		28	Vascular dementia
38	1	AntiSOX1			Not done		Normal	7	Essential tremor
39	0	Anti-amphiphysin			Not done		Not done	56	schizophrenia
40	2	Anti-Zic4			Normal		Normal	27	schizophrenia
41	1	AntiSOX1	Negative	Negative	Normal		Bilateral temporal lobe atrophic changes suggestive of Alzheimer's disease.	56	Alzheimer's disease
42	1	AntiSOX1			Epileptiform discharges		Normal	29	Epilepsy
43	2	Anti-Gad65	Negative	Negative	Not done		minimal hyperintense signals at frontal lobes White matter,	36	Alzheimer's disease
44	1	Anti-Zic4			Not done		Not done	30	Mayesthenia Gravis
45	1	Anti-Titin			Not done		Not done	15	Mayesthenia Gravis
46	1	Anti-Titin			Not done		Not done	0	Mayesthenia Gravis
47	1	Anti-CRMP5			Not done		Classic Mutiple sclerosis plaques	1	Multiple sclerosis
48	0	Anti-Rec			Not done		Mild diffuse cerebral atrophy	5	myopathy in context of a pre-existing motor axonopathy



Supplementary Figure 1: Neuroimaging and EEG results of patients with Anti-NMDAR encephalitis (n=8).

Note. NMDAR: *N-methyl-D-aspartate receptor* EEG: *Electroencephalogram*;