

Table S1 Modified Rankin Scale (mRS)

Grade	Grade Description
0	No symptoms
1	Occasional seizures, no cognitive dysfunction or psychiatric disturbances
2	Not very frequent seizures, mild cognitive dysfunction, mild psychiatric disturbances
3	Little frequent seizures, moderate cognitive dysfunction, more obvious psychiatric disturbances
4	Frequent seizures or status epilepticus, severe cognitive dysfunction, severe psychiatric disturbances, requiring some help in general life
5	ICU, status epilepticus, bedridden, incontinent and requiring constant nursing care and attention
6	Dead

Abbreviation: ICU: intensive care unit.

Table S2 Scanning parameters of 3.0T MRI sequences

sequence	TR (ms)	TE (mm)	thickness(mm)	interslice gap(mm)	FOV (mm×mm)	matrix	layer	b value(s/mm ²)
T1WI	8.3	3.8	1	0	256×181	256×256	220	-
T2W2	3000	280	1	-0.5	250×170	252×252	440	-
T2 FLAIR	4800	340	1	-0.5	250×170	252×251	440	-
DWI	5000	-67.5	3	0	240×240	120×118	50	0,1000

Abbreviation: DWI: diffusion weighted imaging; FOV: field of view; MRI: magnetic resonance imaging; TE: time of echo; T2 FLAIR: T2 fluid attenuated inversion recovery; TR: time of repetition; T1WI: T1 weighted imaging; T2W2: T2 weighted imaging.

Table S3 Scanning parameters of 1.5T MRI sequences

sequence	TR (ms)	TE (mm)	thickness(mm)	interslice gap(mm)	FOV (mm×mm)	matrix	layer	b value(s/mm ²)
T1WI	8.6	3.3	1.2	0	256×230	256×256	138	-
T2W2	2500	74.2	1.2	0	240×216	252×252	160	-
T2 FLAIR	6000	128.9	1.2	0	240×216	224×192	160	-
DWI	6500	82.8	4	1	260×260	128×128	27	0,1000

Abbreviation: DWI: diffusion weighted imaging; FOV: field of view; MRI: magnetic resonance imaging; TE: time of echo; T2 FLAIR: T2 fluid attenuated inversion recovery; TR: time of repetition; T1WI: T1 weighted imaging; T2W2: T2 weighted imaging.

Table S4 Correlation analysis of quantitative values under different sequences of ROI with cerebrospinal fluid and serum antibody titers, disease severity, treatment response, and prognostic scores in patients with antibody-mediated AE

	r value	P value
ADC value and Ab titer in CSF	-0.1166	0.468
ADC value and Ab titer in serum	0.09408	0.5585
ADC value and disease severity	0.6891	<0.0001****
ADC value and treatment response	-0.2557	0.1066
ADC value and prognostic scores	0.8102	<0.0001****
T1 value and Ab titer in CSF	-0.2636	0.0959
T1 value and Ab titer in serum	0.07872	0.6247
T1 value and disease severity	0.2881	0.0677
T1 value and treatment response	-0.1479	0.3559
T1 value and prognostic scores	0.2583	0.1029
T2 value and Ab titer in CSF	-0.02675	0.8682
T2 value and Ab titer in serum	0.185	0.2469
T2 value and disease severity	-0.04953	0.7584
T2 value and treatment response	-0.06556	0.6838
T2 value and prognostic scores	0.05609	0.7276
T2 FLAIR value and Ab titer in CSF	-0.128	0.4252
T2 FLAIR value and Ab titer in serum	0.03116	0.8466
T2 FLAIR value and disease severity	-0.06463	0.6881
T2 FLAIR value and treatment response	-0.01639	0.919
T2 FLAIR value and prognostic scores	0.07236	0.653

Abbreviation: Ab: antibody; ADC: apparent diffusion coefficient; CSF: cerebrospinal fluid; T2 FLAIR: T2 fluid attenuated inversion recovery.

Table S5 Binary logistic regression of different factors affecting prognosis

imaging factor	regression coefficient	P value
Sex	15.795	0.4891
Age	-1.97	0.2507
ADC value	-317.175	0.0193 [*]
T1 value	138.314	0.1526
T2 value	-32.768	0.358
T2 FLAIR value	134.844	0.1038
√Ab titer in CSF	-16.752	0.381
√Ab titer in serum	-1.231	0.4438
disease severity	-26.457	0.1234
treatment response	79.548	0.0107 [*]

Abbreviation: Ab: antibody; ADC: apparent diffusion coefficient; CSF: cerebrospinal fluid; T2 FLAIR: T2 fluid attenuated inversion recovery.

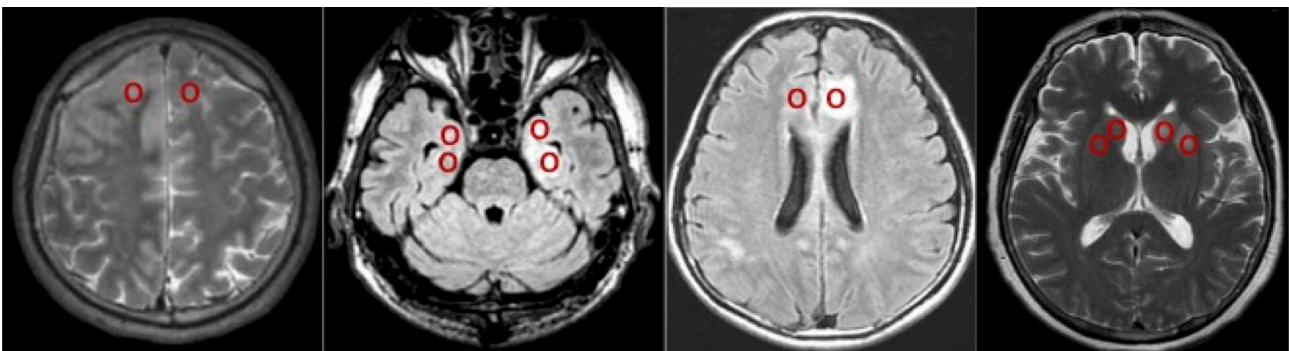


Figure S1 Selection of Region of interest (ROI) on brain MRI of different antibody-mediated autoimmune encephalitis (AE).

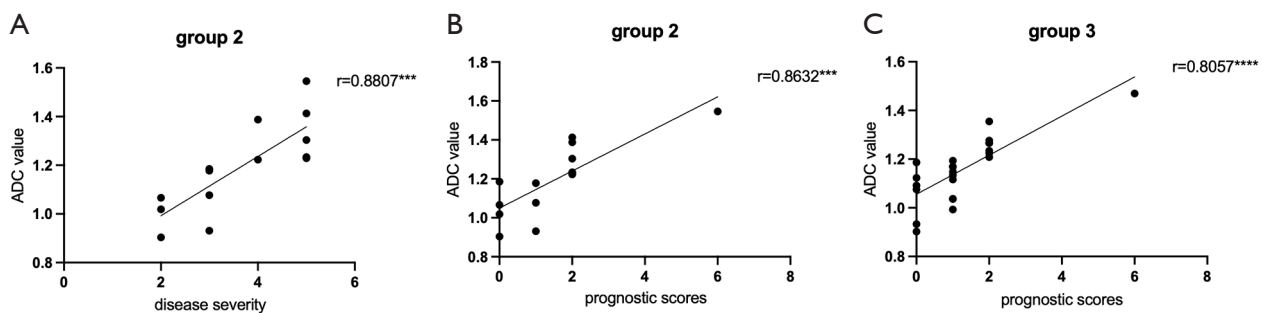


Figure S2 Correlation analysis between the ADC value within ROI and disease severity and prognostic scores for each subgroup of antibody-mediated autoimmune encephalitis (AE). In group 2, the ADC value within ROI positively correlated with disease severity ($r=0.8807$, $P<0.001$) (A) and prognosis score ($r=0.8632$, $P<0.001$) (B). In group 3, the ADC value within the ROI positively correlated with prognosis score ($r=0.8057$, $P<0.0001$) (C).