

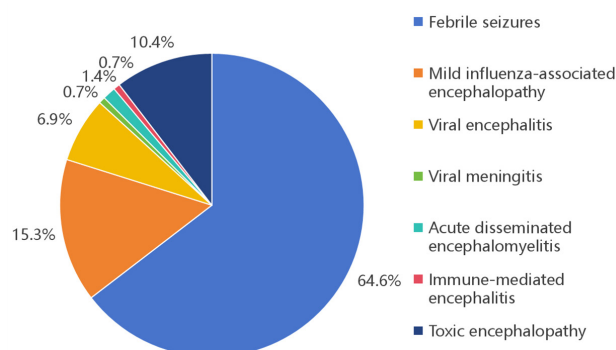


Figure S1 Distribution of clinical diagnoses in the non-ANE group.

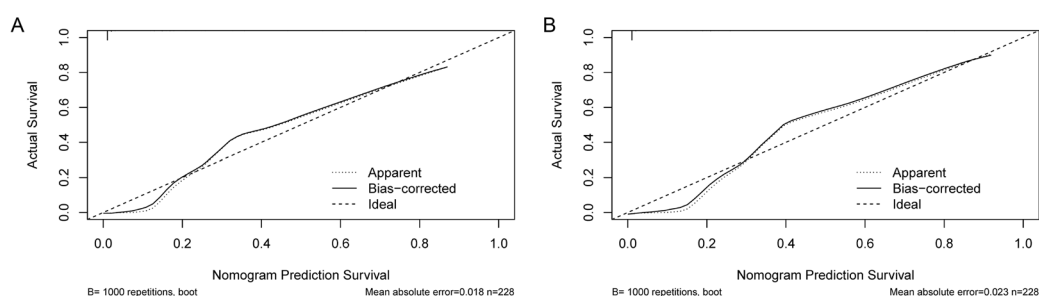


Figure S2 Calibration curve for the early prediction nomogram model of ANE onset risk. (A) Model constructed using LASSO regression. (B) Model constructed using multivariate logistic regression. The X-axis represents the nomogram-predicted incidence rate, and the Y-axis represents the actual incidence rate.

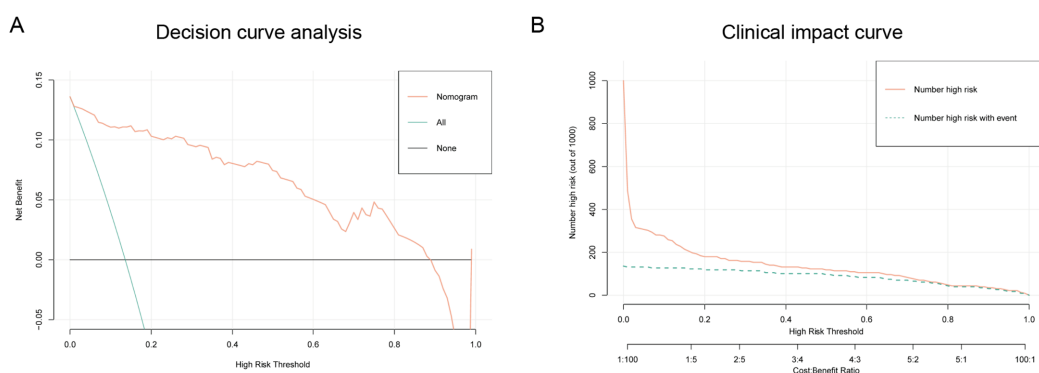


Figure S3 Decision curve analysis and clinical impact curves for the early prediction nomogram model of ANE onset risk. (A) The X-axis represents the threshold probability, and the Y-axis represents the net benefit. The threshold probability ranges from 0 to 1.0, which represents the full spectrum from no intervention (black line) to intervention in all cases (blue line). The red line represents interventions at the model's predicted threshold. (B) The X-axis represents the threshold probability, and the Y-axis represents the number of individuals. The red and blue lines indicate the number of individuals classified as high-risk by the model at different threshold probabilities and the number of high-risk individuals who actually developed ANE, respectively. The cost-benefit ratio reflects the proportion of losses to benefits at different threshold probabilities.

Table S1 Comparison of clinical characteristics and laboratory examinations between training and validation sets

Variables	Total (n=327)	Training (n=228)	Validation (n=99)	P
ANE, n (%)	39 (11.93)	31 (13.60)	8 (8.08)	0.157
Age (months)	41.00 (22.00, 73.00)	43.50 (21.75, 74.25)	38.00 (23.00, 69.00)	0.345
Sex (female), n (%)	120 (36.70)	80 (35.09)	40 (40.40)	0.359
Season of onset, n (%)				0.445
Spring	76 (23.24)	52 (22.81)	24 (24.24)	
Summer	27 (8.26)	20 (8.77)	7 (7.07)	
Autumn	70 (21.41)	44 (19.30)	26 (26.26)	
Winter	154 (47.09)	112 (49.12)	42 (42.42)	
Seizure, n (%)	298 (91.13)	209 (91.67)	89 (89.90)	0.605
History of previous seizure, n (%)	107 (32.72)	76 (33.33)	31 (31.31)	0.721
Disturbance of consciousness, n (%)	89 (27.22)	66 (28.95)	23 (23.23)	0.286
Cough, n (%)	203 (62.08)	138 (60.53)	65 (65.66)	0.380
Vomit, n (%)	117 (35.78)	88 (38.60)	29 (29.29)	0.107
Diarrhea, n (%)	44 (13.46)	31 (13.60)	13 (13.13)	0.910
Duration of seizure (min)	3.00 (1.00, 5.00)	3.00 (1.00, 8.50)	2.00 (1.00, 5.00)	0.141
Number of seizures before hospital admission (time)	1.00 (0.50, 1.00)	1.00 (0.50, 1.00)	0.50 (0.50, 1.00)	0.075
Time from the first convulsion to disease onset (day)	1.00 (1.00, 2.00)	1.00 (1.00, 2.00)	1.00 (1.00, 1.50)	0.255
Tmax (°C)	39.50 (39.00, 40.00)	39.50 (39.00, 40.00)	39.50 (39.00, 40.00)	0.636
Infectious pathogen, n (%)				0.651
Influenza A	219 (66.97)	151 (66.23)	68 (68.69)	
Influenza B	77 (23.55)	54 (23.68)	23 (23.23)	
Influenza A+B	4 (1.22)	2 (0.88)	2 (2.02)	
COVID-19	27 (8.26)	21 (9.21)	6 (6.06)	
WBC, 1×10 ⁹	7.60 (5.39, 10.59)	7.81 (5.62, 11.14)	6.77 (5.24, 9.68)	0.030
N%, n (%)	71.00 (58.00, 80.50)	71.10 (59.63, 80.73)	69.70 (56.60, 79.85)	0.278
L%, n (%)	19.10 (11.35, 29.25)	18.80 (11.17, 27.92)	20.20 (12.10, 32.80)	0.381
PLT, 1×10 ⁹	216.00 (177.00, 263.00)	216.00 (177.50, 261.25)	218.00 (178.00, 267.50)	0.615
CRP, mg/L	2.92 (1.20, 7.42)	3.44 (1.39, 7.46)	2.61 (0.92, 6.88)	0.148
Lac, mmol/L	1.80 (1.40, 2.60)	1.80 (1.40, 2.60)	1.80 (1.30, 2.65)	0.902
G, mmol/L	5.90 (5.15, 7.10)	5.95 (5.20, 7.23)	5.80 (5.10, 6.80)	0.398
ALT, U/L	19.00 (14.40, 26.00)	19.30 (14.40, 27.10)	17.60 (14.35, 24.25)	0.216
AST, U/L	44.50 (35.80, 60.10)	45.85 (35.95, 60.57)	42.90 (34.70, 57.50)	0.197
LDH, U/L	309.00 (268.50, 368.90)	312.60 (271.10, 388.63)	299.70 (260.15, 335.75)	0.018
BUN, mmol/L	4.11 (3.46, 5.16)	4.11 (3.44, 5.28)	4.22 (3.50, 4.86)	0.822
SCr, μmol/L	34.80 (27.00, 44.30)	34.80 (27.00, 44.30)	34.50 (27.35, 43.95)	0.764
PT, s	13.70 (12.95, 14.70)	13.70 (13.00, 15.03)	13.60 (12.90, 14.10)	0.089
APTT, s	32.50 (29.25, 36.70)	32.45 (29.17, 36.78)	32.70 (29.40, 36.05)	0.936
Fib, g/L	2.49 (2.11, 2.92)	2.45 (2.04, 2.92)	2.56 (2.20, 2.92)	0.234
INR	1.18 (1.12, 1.26)	1.19 (1.12, 1.30)	1.16 (1.11, 1.21)	0.030
CKMB, ng/mL	1.86 (1.10, 2.99)	1.87 (1.10, 3.11)	1.80 (1.11, 2.60)	0.484
hs-cTnT, pg/mL	4.89 (3.19, 7.74)	4.89 (3.13, 8.13)	4.89 (3.35, 7.46)	0.873

Table S2 Comparison of clinical characteristics and laboratory examinations between ANE and non-ANE groups

Variables	Total (n=327)	Non-ANE (n=288)	ANE (n=39)	P
Age (months)	41.00 (22.00, 73.00)	40.50 (21.75, 73.50)	43.00 (26.00, 69.50)	0.667
Sex (female), n (%)	120 (36.70)	98 (34.03)	22 (56.41)	0.006
Season of onset, n (%)				0.208
Spring	76 (23.24)	63 (21.88)	13 (33.33)	
Summer	27 (8.26)	24 (8.33)	3 (7.69)	
Autumn	70 (21.41)	66 (22.92)	4 (10.26)	
Winter	154 (47.09)	135 (46.88)	19 (48.72)	
Seizure, n (%)	298 (91.13)	266 (92.36)	32 (82.05)	0.068
History of previous seizure, n (%)	107 (32.72)	102 (35.42)	5 (12.82)	0.005
Disturbance of consciousness, n (%)	89 (27.22)	52 (18.06)	37 (94.87)	<0.001
Cough, n (%)	203 (62.08)	184 (63.89)	19 (48.72)	0.067
Vomit, n (%)	117 (35.78)	88 (30.56)	29 (74.36)	<0.001
Diarrhea, n (%)	44 (13.46)	31 (10.76)	13 (33.33)	<0.001
Duration of seizure (min)	3.00 (1.00, 5.00)	3.00 (1.00, 5.00)	2.00 (1.00, 10.00)	0.736
Number of seizures before hospital admission (time)	1.00 (0.50, 1.00)	0.50 (0.50, 1.00)	1.00 (0.50, 1.25)	0.079
Time from the first convulsion to disease onset (day)	1.00 (1.00, 2.00)	1.00 (1.00, 2.00)	1.00 (1.00, 2.50)	0.953
Tmax (°C)	39.50 (39.00, 40.00)	39.50 (39.00, 40.00)	40.00 (39.45, 41.50)	<0.001
Infectious pathogen, n (%)				0.051
Influenza A	219 (66.97)	194 (67.36)	25 (64.10)	
Influenza B	77 (23.55)	71 (24.65)	6 (15.38)	
Influenza A+B	4 (1.22)	4 (1.39)	0 (0.00)	
COVID-19	27 (8.26)	19 (6.60)	8 (20.51)	
WBC, 1×10 ⁹	7.60 (5.39, 10.59)	7.63 (5.47, 10.37)	7.31 (4.98, 11.57)	0.745
N%, n (%)	71.00 (58.00, 80.50)	71.10 (59.40, 80.30)	65.00 (53.95, 83.50)	0.509
L%, n (%)	19.10 (11.35, 29.25)	18.80 (11.20, 27.68)	25.50 (12.50, 39.60)	0.070
PLT, 1×10 ⁹	216.00(177.00, 263.00)	221.00 (184.00, 266.25)	165.00 (126.00, 199.50)	<0.001
CRP, mg/L	2.92 (1.20, 7.42)	2.64 (1.05, 6.88)	6.30 (2.44, 14.98)	<0.001
Lac, mmol/L	1.80 (1.40, 2.60)	1.75 (1.30, 2.40)	3.10 (1.90, 5.65)	<0.001
G, mmol/L	5.90 (5.15, 7.10)	5.80 (5.07, 6.90)	7.50 (5.75, 10.40)	<0.001
ALT, U/L	19.00 (14.40, 26.00)	17.80 (14.00, 23.00)	76.30 (41.25, 203.00)	<0.001
AST, U/L	44.50 (35.80, 60.10)	42.90 (35.18, 54.42)	233.00 (109.80, 518.00)	<0.001
LDH, U/L	309.00(268.50, 368.90)	302.00 (264.88, 344.55)	702.00 (449.00,1271.00)	<0.001
BUN, mmol/L	4.11 (3.46, 5.16)	3.98 (3.38, 4.73)	7.28 (5.92, 8.54)	<0.001
SCr, μmol/L	34.80 (27.00, 44.30)	33.00 (25.87, 41.25)	58.00 (39.50, 76.20)	<0.001
PT, s	13.70 (12.95, 14.70)	13.60 (12.90, 14.30)	17.90 (14.90, 23.10)	<0.001
APTT, s	32.50 (29.25, 36.70)	32.20 (29.08, 35.62)	39.30 (33.45, 46.10)	<0.001
Fib, g/L	2.49 (2.11, 2.92)	2.50 (2.18, 2.95)	2.04 (1.55, 2.52)	<0.001
INR	1.18 (1.12, 1.26)	1.17 (1.11, 1.23)	1.58 (1.38, 2.29)	<0.001
CKMB, ng/mL	1.86 (1.10, 2.99)	1.83 (1.08, 2.60)	3.10 (1.60, 7.60)	<0.001
hs-cTnT, pg/mL	4.89 (3.19, 7.74)	4.49 (3.03, 6.72)	52.73 (15.11, 197.60)	<0.001