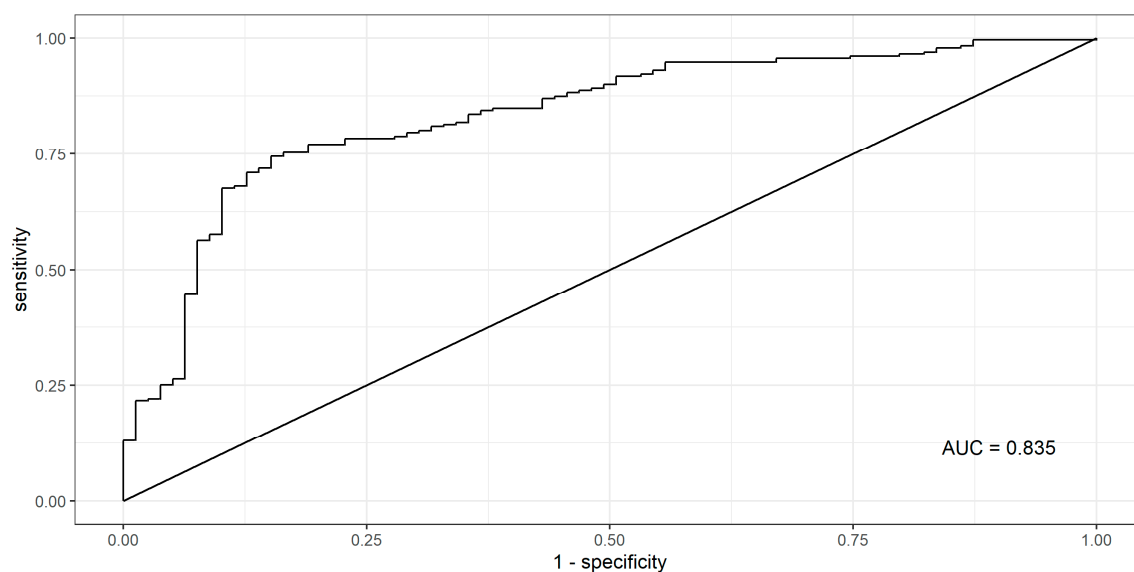
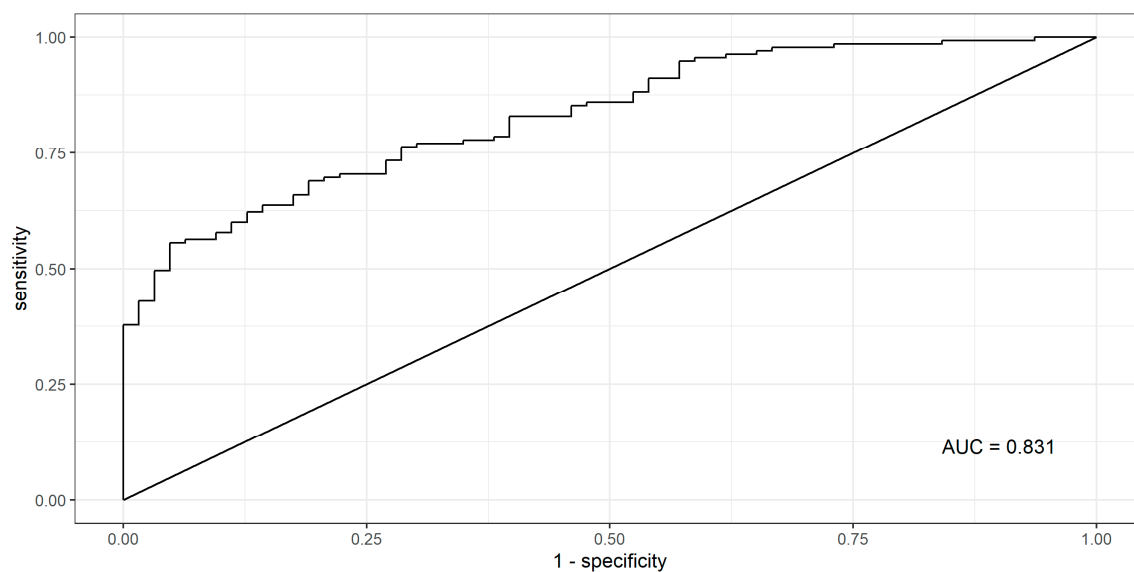


Figure S1. Receiver operating characteristic (ROC) curve of the regression model analysis of the impact phenodata on a worsened functional status of patients (>2 points on modified Rankin Scale) on the 10th day of stroke.



The curve was estimated in a “leave-one-out” procedure and the AUC estimator were used (AUC = 0.835)

Figure S2. Receiver operating characteristic (ROC) curve of the regression model analysis of the impact phenodata on a worsened functional status of patients (>2 points on modified Rankin Scale) on the 90th day of stroke.



The curve was estimated in a “leave-one-out” procedure and the AUC estimator were used (AUC = 0.831)

Table S1. The concentration of air pollutants (SO₂, NO₂, CO, O₃) collected in the period during all study period.

	2019 (01 JAN- 31 DEC)				2020 (01 JAN-31 DEC)				2021 (01 JAN-31 DEC)				2022 (01 JAN-30 JUN)			
	SO ₂	NO ₂	CO	O ₃	SO ₂	NO ₂	CO	O ₃	SO ₂	NO ₂	CO	O ₃	SO ₂	NO ₂	CO	O ₃
DAILY med±SD, [ref.]	6.58± 4.58 [0- 23.16]	23.66 ±6.47 [0- 55.72]	0.44± 0.16 [0.18 - 1.25]	45.44± 19.49 [3.73- 90.11]	5.77± 5.01 [0- 20.11]	23.66 ±6.47 [0- 51.02]	0.18± 1.17 [0- 1.19]	35.24± 19.49 [3.73- 90.11]	6.78± 4.58 [0- 23.16]	19.23 ±4.14 [0- 53.44]	0.25± 0.18 [0- 1.42]	31.22± 9.31 [2.68- 93.47]	5.48± 3.58 [0- 19.26]	19.23 ±4.14 [0- 53.44]	0.09± 0.19 [0.72 - 1.44]	27.47± 7.81 [3.72- 95.17]
MONT HLY med±SD, [ref.]	6.69± 4.48 [0- 26.63]	24.13 ±7.18 [7.45- 53.55]	0.12± 0.21 [0- 1.16]	45.46± 19.81 [2.48- 103.11]	6.08± 4.22 [0- 20.55]	24.13 ±7.18 [4.15- 53.55]	0.13± 1.19 [0- 1.51]	45.46± 19.81 [2.48- 103.11]	7.69± 4.34 [0- 25.63]	21.19 ±6.3 [0- 54.16]	0.66± 0.31 [0- 1.43]	40.16± 17.12 [1.98- 100.01]	6.01± 4.12 [0- 22.13]	21.19 ±6.3 [0- 54.16]	0.14± 0.42 [0.61 - 1.47]	33.13± 14.22 [0.88- 96.97]
ANNU ALLY med±SD, [ref.]	6.98± 4.29 [0- 26.98]	24.77 ±9.88 [0- 56.15]	0.1±0 .47 [0- 1.27]	47.13± 18.11 [2.12- 107.01]	6.98± 5.02 [0- 27.43]	25.16 ±8.11 [0- 56.15]	0.21± 1.48 [0- 1.88]	47.13± 18.11 [2.12- 107.01]	6.98± 4.29 [0- 27.18]	24.77 ±9.88 [0- 58.13]	0.11± 0.25 [0- 1.52]	42.17± 16.77 [0- 103.74]	6.18± 3.37 [0- 26.98]	24.77 ±9.88 [0- 58.13]	1.14± 0.13 [0.02 - 1.51]	29.27± 14.34 [0.81.9 9- 99.37]

CO - carbon monoxide, NO₂ - nitrogen dioxide, O₃ - ozone, SO₂ - sulfur dioxide

Table S2. The concentration of air pollutants (PM 2.5, PM 10) collected in the period during all study period.

Time range	2019 (01 JAN- 31 DEC)		2020 (01 JAN-31 DEC)		2021 (01 JAN-31 DEC)		2022 (01 JAN-30 JUN)	
	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10
DAILY, med±SD, [ref.]	20.81±13.6 8 [0-76.33]	30.04±17.8 6 [0-98.79]	21.05±15.1 9 [0-81.24]	28.04±15.82 [0-112.9]	19.89±15.5 8 [0-87.23]	30.50±19.8 8 [0-98.13]	22.88±14.6 6 [0-73.98]	29.74±15.77 [0-87.14]
MONTHLY med±SD, [ref.]	21.28±14.6 [0-78.23]	30.71±18.9 0 [0-105.25]	20.35±12.8 3 [0-87.11]	26.08±16.82 [0-119.77]	22.27±12.8 [0-93.23]	24.76±19.3 4 [0-112.99]	24.24±16.6 [0-80.23]	31.11±17.53 [0-99.24]
ANNUALL Y med±SD, [ref.]	20.71±13.6 9 [0-80.91]	30.38±18.3 5 [0-123.22]	21.87±13.0 1 [0-91.93]	317.71±19.4 4 [0-126.12]	21.28±12.3 6 [0-103.33]	29.76±17.3 0 [0-136.92]	24.11±18.1 4 [0-82.57]	30.76±189.3 1 [0-105.23]

PM - particulate matter (PM_{2.5} - particles with aerodynamic diameter <2.5 µm; PM₁₀ - particles with aerodynamic diameter <10 µm)

Table S3. The correlation between the concentration of air pollutions and the functional outcomes at discharge, the 30th and the 90th day after stroke onset.

contaminant	mRS>2 discharge		mRS>2 30 th day		mRS>2 90 th day	
	Correlation coefficient	p.value	Correlation coefficient	p.value	Correlation coefficient	p.value
PM 2.5 0day	0.91	0.09	0.94	0.06	0.84	0.16
PM 2.5 1day	0.96	0.04	0.94	0.06	0.96	0.04
PM 2.5 3day	0.77	0.23	0.80	0.20	0.85	0.15
PM 2.5 5day	0.73	0.27	1.00	<0.01	0.63	0.37
PM 2.5 8day	0.32	0.68	0.20	0.80	0.18	0.82
PM 10 0day	0.84	0.16	0.88	0.12	0.80	0.20
PM 10 1day	0.84	0.16	0.74	0.26	0.84	0.16
PM 10 3day	0.42	0.58	0.80	0.20	0.95	0.05
PM 10 5day	0.89	0.11	0.67	0.33	0.38	0.62
PM 10 8day	0.71	0.29	1.00	<0.01	0.71	0.29
NO2 0day	0.88	0.12	0.72	0.28	0.80	0.20
NO2 1day	0.89	0.11	0.89	0.11	0.91	0.09
NO2 3day	0.57	0.43	0.42	0.58	0.53	0.47
NO2 5day	0.63	0.37	0.89	0.11	0.55	0.45
NO2 8day	0.69	0.34	0.45	0.55	0.73	0.27
SO2 0day	-0.14	0.86	-0.25	0.75	-0.12	0.88
SO2 1day	0.55	0.45	0.77	0.23	0.89	0.11
SO2 3day	0.00	1.00	0.89	0.11	0.63	0.37
SO2 5day	0.55	0.45	0.30	0.70	0.55	0.45
SO2 8day	0.77	0.23	0.75	0.25	0.63	0.37
CO 0day	0.86	0.14	0.87	0.13	0.84	0.16
CO 1day	0.91	0.09	0.74	0.26	0.63	0.37
CO 3day	0.85	0.15	0.80	0.20	0.55	0.45
CO 5day	0.63	0.37	0.30	0.70	0.18	0.82
CO 8day	-0.91	0.09	-0.75	0.25	-0.73	0.27
O3 0day	-0.60	0.40	-0.25	0.75	0.00	1.00
O3 1day	-0.45	0.55	0.40	0.60	0.60	0.40
O3 3day	0.95	0.05	0.40	0.60	0.18	0.82
O3 5day	0.00	1.00	0.20	0.80	0.32	0.68
O3 8day	0.60	0.40	0.89	0.11	0.84	0.16