

Table A1: Comparison of the total cohort and cohort selected for analysis

Number of Patients, n (%)	Total Cohort 7132	Selected Cohort 1303
Sociodemographics		
Age, median (quartiles)	62 (46, 76)	66 (52, 80)
Male gender, n (%)	3767 (53.3%)	658 (50.5%)
Vital signs, median (quartiles)		
Blood pressure diastolic (mmHg)	80 (70, 90)	78 (67, 89)
Blood pressure systolic (mmHg)	137 (121, 154)	139 (121, 159)
Confusion, n (%)	522 (7.3%)	44 (3.4%)
Pulse (bpm)	83 (71, 97)	83 (71, 98)
Respiratory rate (per minute)	18 (18, 20)	18 (18, 20)
SpO ₂ (%)	96.8 (94, 98)	97 (95, 99)
Temperature (°C)	36.8 (36.4, 37.2)	36.6 (36.2, 36.9)
Initial blood biomarkers, median (quartiles)		
Creatinine (µmol/L)	81.0 (67.0, 103.0)	79.6 (70.7, 106.1)
Glucose (mmol/L)	6.1 (5.3, 7.5)	6.3 (5.3, 8.1)
White blood cells (G/L)	8.385 (6.58, 10.98)	8.2 (6.3, 10.8)
PCT (µg/L)	0.08 (0.06, 0.13)	0.08 (0.06, 0.14)
ProADM (nmol/L)	0.8 (0.6, 1.2)	0.9 (0.6, 1.5)
Main symptom at ED admission, n (%)		
Diarrhea, vomitus, dysuria	495 (6.9%)	106 (8.1%)
Fever	343 (4.8%)	23 (1.8%)
Gastrointestinal bleeding	199 (2.8%)	31 (2.4%)
Neurological symptoms	1379 (19.3%)	90 (6.9%)
Nonthoracic pain	1217 (17.1%)	124 (9.5%)
Respiratory symptoms	948 (13.3%)	356 (27.3%)
Thoracic pain	1038 (14.6%)	240 (18.4%)
Worsening of general condition	837 (11.7%)	333 (25.6%)
Main diagnosis, n (%)		
Cancer	344 (4.8%)	52 (4.0%)
Cardiovascular	1660 (23.3%)	486 (37.3%)
Gastrointestinal	983 (13.8%)	160 (12.3%)
Infection	1039 (14.6%)	190 (14.6%)
Metabolic	192 (2.7%)	49 (3.8%)
Neurological	1566 (22.0%)	176 (13.5%)
Pulmonary	297 (4.2%)	110 (8.4%)
Miscellaneous	1051 (14.7%)	80 (6.1%)
Comorbidities, n (%)		
Cancer	968 (13.6%)	123 (9.4%)
Chronic renal disease	872 (12.2%)	96 (7.4%)
Congestive heart failure	487 (6.8%)	154 (11.8%)
COPD	359 (5.0%)	94 (7.2%)
Coronary heart disease	838 (11.7%)	164 (12.6%)
Diabetes	1088 (15.3%)	269 (20.6%)
History of stroke	566 (7.9%)	22 (1.7%)
Hypertension	2795 (39.2%)	568 (43.6%)
Events, n (%)		
Death 30 days	331 (4.6%)	54 (4.1%)
Intensive Care	453 (6.4%)	171 (13.1%)

COPD, chronic obstructive pulmonary disease; ED, emergency department; NEWS, national early warning score; PCT, procalcitonin; MR-proADM, midregional pro-Adrenomedullin; SpO₂, peripheral oxygen saturation (%). NEWS was calculated without oxygen supplementation data and thus represents “NEWS - potentially minus 2”

Table A2: Regression analyses for associations of NEWS and blood markers with primary outcome

	Events, n (%)	30 day mortality Regression analyses, OR (95% CI), p-value			
		Unadjusted	Model 1	Model 2	Model 3
NEWS					
Low	25/966 (2.6)	Ref.	Ref.	Ref.	Ref.
Moderate	16/262 (6.1)	2.45 (1.29 to 4.66), p=0.006	2.04 (1.06 to 3.92), p=0.032	2.01 (1.05 to 3.87), p=0.036	1.71 (0.87 to 3.37), p=0.123
High	13/75 (17.3)	7.89 (3.85 to 16.18), p<0.001	7.01 (3.36 to 14.63), p<0.001	6.79 (3.23 to 14.3), p<0.001	4.89 (2.22 to 10.75), p<0.001
Continuous		1.35 (1.23 to 1.48), p<0.001	1.32 (1.2 to 1.46), p<0.001	1.32 (1.19 to 1.45), p<0.001	1.26 (1.13 to 1.40), p<0.001
WBC					
4.0-10.0	27/829 (3.3)	Ref.	Ref.	Ref.	Ref.
10.01-15.0	10/299 (3.3)	1.03 (0.49 to 2.15), p=0.942	1.05 (0.5 to 2.21), p=0.893	1.05 (0.5 to 2.21), p=0.9	1.07 (0.50 to 2.31), p=0.855
>15.0	15/111 (13.5)	4.64 (2.39 to 9.03), p<0.001	4.41 (2.22 to 8.76), p=0	4.37 (2.2 to 8.69), p=0	3.73 (1.80 to 7.75), p<0.001
<4.0	2/46 (4.4)	1.35 (0.31 to 5.86), p=0.689	1.52 (0.34 to 6.74), p=0.583	1.52 (0.34 to 6.76), p=0.58	1.05 (0.22 to 4.99), p=0.951
Continuous		1.02 (1.00 to 1.03), p=0.051	1.02 (1 to 1.03), p=0.033	1.02 (1 to 1.03), p=0.028	1.02 (1.00 to 1.03), p=0.036
PCT					
1st Quartile	5/321 (1.6)	Ref.	Ref.	Ref.	Ref.
2nd Quartile	7/321 (2.2)	1.41 (0.44 to 4.49), p=0.562	1.32 (0.41 to 4.22), p=0.642	1.33 (0.41 to 4.26), p=0.632	1.24 (0.38 to 4.09), p=0.722
3rd Quartile	10/321 (3.1)	2.03 (0.69 to 6.01), p=0.2	1.77 (0.59 to 5.26), p=0.307	1.84 (0.62 to 5.48), p=0.276	1.79 (0.59 to 5.45), p=0.306
4th Quartile	32/322 (9.9)	6.97 (2.68 to 18.14), p<0.001	6.01 (2.29 to 15.79), p<0.001	6.12 (2.33 to 16.09), p<0.001	5.17 (1.88 to 14.18), p=0.001
Continuous		2.66 (1.81 to 3.92), p<0.001	2.77 (1.85 to 4.17), p<0.001	2.71 (1.79 to 4.08), p<0.001	2.45 (1.54 to 3.89), p<0.001
MR-proADM					
1st Quartile	1/324 (0.3)	Ref.	Ref.	Ref.	Ref.
2nd Quartile	6/325 (1.9)	6.08 (0.73 to 50.75), p=0.096	4.42 (0.52 to 37.78), p=0.175	4.44 (0.52 to 37.93), p=0.174	4.93 (0.57 to 42.58), p=0.147
3rd Quartile	12/323 (3.7)	12.46 (1.61 to 96.42), p=0.016	7.66 (0.94 to 62.38), p=0.057	7.77 (0.96 to 63.12), p=0.055	7.93 (0.96 to 65.37), p=0.054
4th Quartile	35/326 (10.7)	38.85 (5.29 to 285.36), p<0.001	22.46 (2.87 to 175.82), p=0.003	22.22 (2.84 to 173.70), p=0.003	17.18 (2.15 to 137.36), p=0.007
Continuous		17.58 (8.05 to 38.38), p<0.001	13.89 (5.94 to 32.49), p<0.001	13.40 (5.70 to 31.54), p<0.001	10.33 (3.77 to 28.34), p<0.001

Adjustments: Model 1: age and sex; Model 2: age, sex, and main diagnosis; Model 3: fully adjusted for age, sex, main diagnosis, and comorbidities

For regression analysis with continuous values, PCT and Pro-ADM were log transformed with a base of ten before entering into statistical models. Therefore, the ORs correspond to a tenfold increase in PCT and MR-proADM values.

CI, confidence interval; ICU, intensive care unit; NEWS, national early warning score; PCT, procalcitonin; MR-proADM, midregional pro-Adrenomedullin; Ref, reference; WBC, white blood cell count

NEWS was calculated without oxygen supplementation data and thus represents "NEWS - potentially minus 2"

Table A3: Regression analyses for associations of NEWS and blood markers with secondary outcome

	events, n (%)	ICU admission Regression analyses, OR (95% CI), p-value			
		unadjusted	model 1	model 2	model 3
NEWS					
Low	89/966 (9.2)	Ref.	Ref.	Ref.	Ref.
Moderate	57/262 (21.8)	2.74 (1.90 to 3.95), p<0.001	2.75 (1.90 to 3.99), p<0.001	2.75 (1.90 to 3.99), p<0.001	2.71 (1.85 to 3.98), p<0.001
High	25/75 (33.3)	4.93 (2.91 to 8.35), p<0.001	4.90 (2.88 to 8.35), p<0.001	4.88 (2.86 to 8.33), p<0.001	4.33 (2.48 to 7.57), p<0.001
Continuous		1.25 (1.17 to 1.33), p<0.001	1.25 (1.17 to 1.33), p<0.001	1.25 (1.17 to 1.33), p<0.001	1.24 (1.15 to 1.32), p<0.001
WBC					
4.0-10.0	84/829 (10.1)	Ref.	Ref.	Ref.	Ref.
10.01-15.0	41/299 (13.7)	1.41 (0.95 to 2.10), p=0.092	1.43 (0.96 to 2.13), p=0.081	1.43 (0.96 to 2.13), p=0.081	1.52 (1.01 to 2.29), p=0.045
>15.0	27/111 (24.3)	2.85 (1.75 to 4.65), p<0.001	2.75 (1.68 to 4.49), p<0.001	2.74 (1.68 to 4.49), p<0.001	2.78 (1.67 to 4.62), p<0.001
<4.0	15/46 (32.6)	4.29 (2.23 to 8.27), p<0.001	4.19 (2.16 to 8.12), p<0.001	4.18 (2.15 to 8.10), p<0.001	4.42 (2.21 to 8.84), p<0.001
Continuous		1.01 (0.99 to 1.02), p=0.355	1.01 (0.99 to 1.02), p=0.317	1.01 (0.99 to 1.02), p=0.313	1.01 (0.99 to 1.02), p=0.267
PCT					
1st Quartile	27/321 (8.4)	Ref.	Ref.	Ref.	Ref.
2nd Quartile	34/321 (10.6)	1.29 (0.76 to 2.19), p=0.347	1.27 (0.74 to 2.15), p=0.386	1.27 (0.75 to 2.16), p=0.381	1.23 (0.72 to 2.11), p=0.449
3rd Quartile	36/321 (11.2)	1.38 (0.81 to 2.32), p=0.234	1.33 (0.78 to 2.25), p=0.294	1.34 (0.79 to 2.27), p=0.276	1.35 (0.79 to 2.29), p=0.276
4th Quartile	73/322 (22.7)	3.19 (1.99 to 5.12), p<0.001	2.99 (1.86 to 4.81), p<0.001	3.00 (1.86 to 4.84), p<0.001	2.78 (1.68 to 4.59), p<0.001
Continuous		2.33 (1.76 to 3.08), p<0.001	2.31 (1.74 to 3.07), p<0.001	2.31 (1.74 to 3.06), p<0.001	2.18 (1.61 to 2.96), p<0.001
MR-proADM					
1st Quartile	20/324 (6.2)	Ref.	Ref.	Ref.	Ref.
2nd Quartile	36/325 (11.1)	1.89 (1.07 to 3.35), p=0.028	2.26 (1.24 to 4.09), p=0.007	2.26 (1.25 to 4.09), p=0.007	2.26 (1.24 to 4.13), p=0.008
3rd Quartile	34/323 (10.5)	1.79 (1.01 to 3.18), p=0.048	2.24 (1.20 to 4.20), p=0.011	2.25 (1.20 to 4.20), p=0.011	2.25 (1.19 to 4.27), p=0.013
4th Quartile	81/326 (24.9)	5.03 (3.00 to 8.43), p<0.001	6.36 (3.53 to 11.48), p<0.001	6.35 (3.52 to 11.44), p<0.001	6.27 (3.36 to 11.68), p<0.001
Continuous		7.65 (4.59 to 12.75), p<0.001	8.64 (5.00 to 14.95), p<0.001	8.62 (4.98 to 14.95), p<0.001	9.20 (4.83 to 17.51), p<0.001

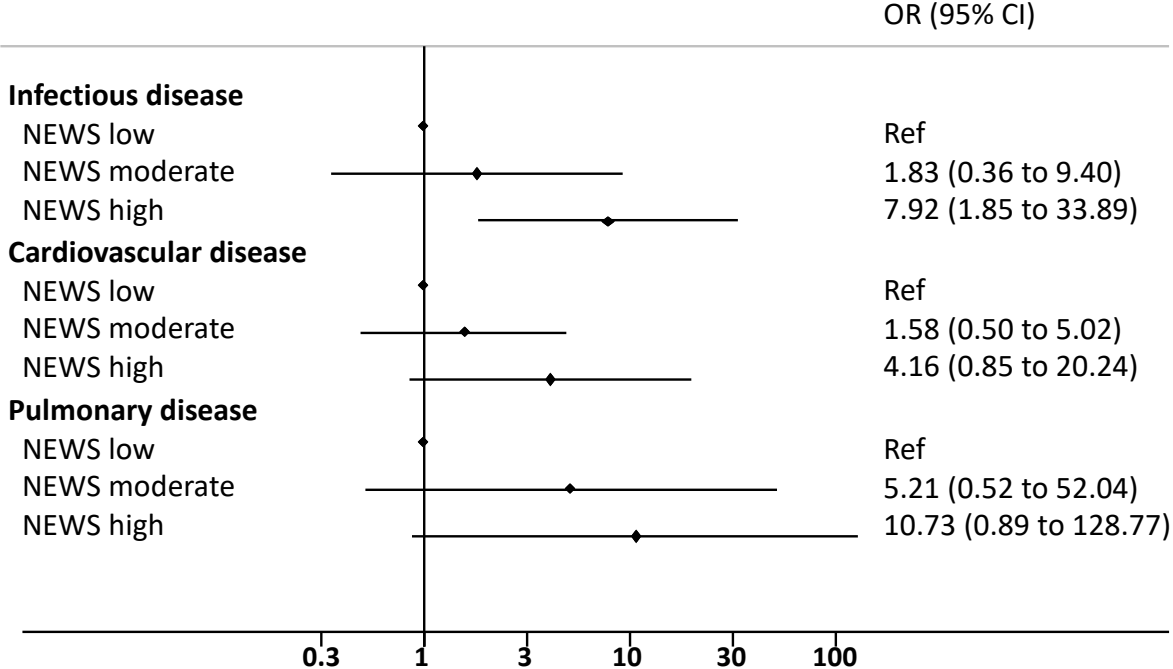
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NEWS was calculated without oxygen supplementation data and thus represents “NEWS - potentially minus 2”

Figure A1: Subgroup analyses. Association of NEWS category with all-cause 30-day mortality among different diagnoses leading to ED admission



CI, Confidence interval; ED, emergency department; NEWS, national early warning score; OR, Odds ratio
 NEWS was calculated without oxygen supplementation data and thus represents “NEWS - potentially minus 2”