

Supplementary Material

Figure S1. ROC curve for European Society of Cardiology (ESC) / European Respiratory Society (ERS) Risk Score and ESC/ERS Risk Score + SIRS in predicting clinical worsening. SIRS, Systemic inflammatory response index; ROC, receiver operator characteristic.

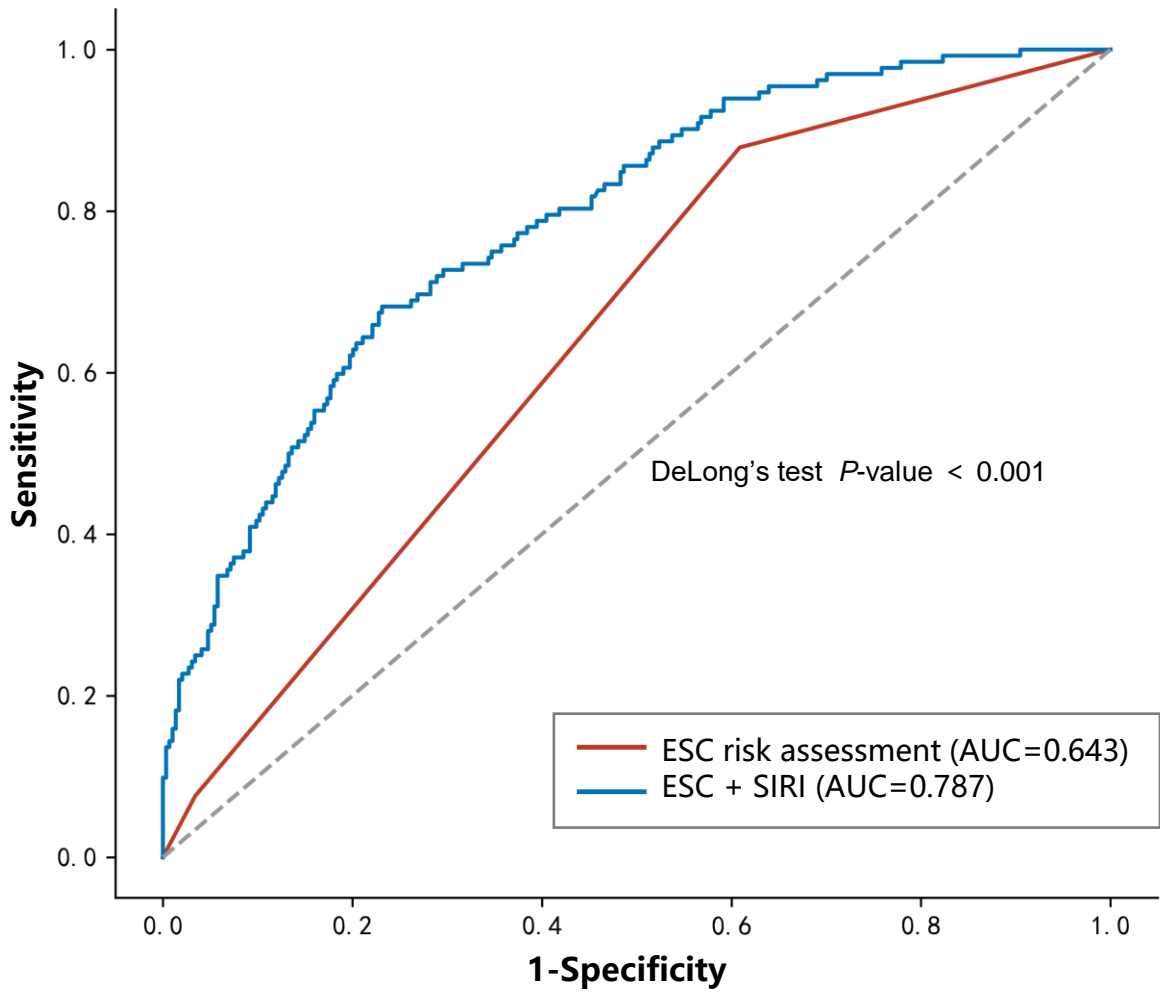


Table S1. Variables and cut-off values used for abbreviated European Society of Cardiology (ESC)/European Respiratory Society (ERS) risk score.

Points assigned	1	2	3
WHO function class	I/II	III	IV
6 MWD, m	>440	165-440	<165
BNP, ng/L or NT-proBNP, ng/L	<50 <300	50-300 300-1400	>300 >1400
Right atrial pressure, mmHg	<8	8-14	>14
Cardiac index, L/min/m ²	≥2.5	2.0-2.4	<2.0
SvO ₂ , %	>65	60-65	<60

The ESC/ERS risk stratification strategy was used to categorize patients as low, intermediate or high risk. All patients had at least three of the six listed variables available. Briefly, the cut-off values proposed in the guidelines were graded from 1 (low risk), 2 (intermediate risk) and 3 (high risk). For each patient, the sum of all grades was divided by the number of available variables and rounded to the next integer to define the risk group.

WHO, World Health Organization; 6 MWD, 6-minute walk distance; BNP: brain natriuretic peptide; NT-proBNP, N-terminal pro-brain natriuretic peptide; SvO₂: mixed venous oxygen saturation.

Table S2. Baseline variables in groups with high or low levels of SIRI.

Variables	SIRI ≤ 0.714 (n = 241)	SIRI > 0.714 (n = 185)	P-value
Age, years	30.0 [26.0-38.0]	33.0 [26.0-39.0]	0.395
Female, n (%)	203 (84.2)	127 (68.6)	<0.001*
BMI, kg/m ²	22.6 [20.7-24.8]	22.4 [19.9-25.4]	0.603
WHO-FC, n (%)			0.315

I or II	138 (57.3)	96 (51.9)	
III or IV	103 (42.7)	89 (48.1)	
6 MWD, m	426 [372-472]	414 [367-451]	0.101
Smoking, n (%)	21 (8.7)	25 (13.5)	0.154
Alcohol intake, n (%)	14 (5.8)	15 (8.1)	0.459
Diabetes mellitus, n (%)	5 (2.1)	7 (3.8)	0.446
Hypertension, n (%)	26 (10.8)	18 (9.7)	0.845
PH specific medication, n (%)	200 (83.0)	149 (80.5)	0.601
Laboratory data			
NT-proBNP, pg/mL	945 [352-1873]	1202 [456-2166]	0.084
White blood cell, 10 ⁹ /L	6.0 [5.1-7.5]	8.0 [6.8-9.0]	<0.001*
Neutrophil, 10 ⁹ /L	3.3 [2.7-4.2]	5.2 [4.4-6.3]	<0.001*
Lymphocyte, 10 ⁹ /L	2.3 [1.8-2.8]	2.0 [1.6-2.4]	<0.001*
Monocyte, 10 ⁹ /L	0.3 [0.3-0.4]	0.5 [0.4-0.6]	<0.001*
Hemoglobin, g/L	152 [135-166]	157 [142-171]	0.036*
Platelets, 10 ⁹ /L	193 [156-250]	208 [168-248]	0.087
Albumin, g/L	43.8 ± 5.2	43.5 ± 5.8	0.586
ALT, IU/L	25.0 [16.0-37.0]	23.0 [16.0-36.0]	0.859
AST, IU/L	26.0 [21.0-34.0]	25.0 [20.0-36.0]	0.688
Triglyceride, mmol/L	1.2 [0.9-1.7]	1.2 [0.9-1.8]	0.754
Cholesterol, mmol/L	4.2 ± 0.9	4.1 ± 1.0	0.398
Serum creatinine, umol/L	71.1 [61.7-80.6]	74.4 [63.1-84.3]	0.022*
Blood urea nitrogen, mmol/L	5.1 [4.2-6.4]	5.5 [4.5-6.5]	0.043*
Inflammatory Hematological Ratios			
SII	293 [215-388]	549 [401-739]	<0.001*
NLR	1.50 [1.23-1.85]	2.65 [2.17-3.26]	<0.001*
PLR	87.3 [68.0-112.0]	103.0 [79.0-138.0]	<0.001*
Echocardiography			

Pericardial effusion, n (%)	36 (14.9)	38 (20.5)	0.166
LA, mm	29.0 [27.0-32.0]	30.0 [27.0-32.0]	0.439
LVED, mm	36.0 [32.0-40.0]	36.0 [32.0-40.0]	0.233
LVEF, mm	65.0 [60.0-68.5]	64.0 [60.0-69.1]	0.434
RVED, mm	32.0 [28.0-36.8]	34.0 [29.0-40.0]	0.013*
TRV, m/s	4.4 [4.0-4.8]	4.5 [4.1-4.9]	0.133
sPAP, mmHg	88.7 ± 21.8	91.7 ± 23.4	0.171
Hemodynamics			
S _v O ₂ , %	68.6 [64.0-72.8]	68.4 [63.9-72.7]	0.691
mRAP, mmHg	5.0 [2.0-7.0]	4.0 [2.0-7.0]	0.883
mPAP, mmHg	53.0 [45.0-62.0]	57.0 [49.0-70.0]	0.001*
PAWP, mmHg	7.0 [5.0-9.0]	7.0 [5.0-9.0]	0.959
CI, L/min/m ²	2.8 [2.3-3.4]	2.7 [2.2-3.2]	0.313
PVR, wood units	11.7 [8.4-14.7]	13.0 [9.2-17.1]	0.004*

ALT, Alanine aminotransferase; AST, Aspartate aminotransferase; BMI, Body mass index; CI, Cardiac index; LA, Left atrium dimension; LVED, Left ventricular end-diastolic diameter; LVEF, Left ventricular ejection fraction; mPAP, Mean pulmonary arterial pressure; mRAP, Mean right atrial pressure; NLR, neutrophil-to-lymphocyte ratio; NT-proBNP, N-terminal pro-brain natriuretic peptide; PAWP, Pulmonary arterial wedge pressure; PH, Pulmonary hypertension; PLR, platelet-to-lymphocyte ratio; PVR, Pulmonary vascular resistance; RVED, Right ventricular end-diastolic diameter; 6 MWD, 6-min walk distance; SII, systemic immune-inflammation index; SIRI, Systemic inflammatory response index; sPAP, Systolic pulmonary arterial pressure; S_vO₂, Mixed venous oxygen saturation; TRV, Tricuspid regurgitation velocity; WHO-FC, World Health Organization functional class.

Data are presented as mean ± standard deviation, median [25th–75th percentile] or number (percentage).

* P < 0.05.

Table S3. Sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) for SIRI, SII, PLR, and NLR.

	Sensitivity	Specificity	PPV	NPV
SIRI	0.735	0.701	0.524	0.855
SII	0.500	0.724	0.449	0.763
PLR	0.500	0.568	0.342	0.717
NLR	0.697	0.626	0.455	0.821

NLR, neutrophil-to-lymphocyte ratio; PLR, platelet-to-lymphocyte ratio; SII, systemic immune-inflammation index; SIRI, Systemic inflammatory response index;