

Table S1 Adjusted odds ratio of hospital mortality using PLR as design variable in multivariable logistic regression

Variables	Odds ratio	95% CI	p
PLR Level 1 (≤ 150)	1.15	0.96 – 1.38	0.123
PLR Level 2 (151 ~ 250)	Ref.	–	–
PLR Level 3 (> 250)	1.29	1.09 – 1.53	0.003
Age (> 65)	2.27	1.97 – 2.62	< 0.001
Maximum SOFA	1.19	1.16 – 1.21	< 0.001
Urinary infection	0.65	0.56 – 0.76	< 0.001
Respiratory infection	1.25	1.08 – 1.44	0.002
Blood infection	1.49	1.29 – 1.71	< 0.001
Fluid balance (ml/kg/48hrs)	1.002	1.0008 – 1.0031	0.001
MICU	1.16	0.98 – 1.37	0.082
CCU/CSRU	1.04	0.84 – 1.27	0.700

Note: The mean variance inflation factor (VIF) was 2.53 and p value of goodness of fit was 0.665.

Abbreviation: PLR platelet to lymphocyte ratio; CI confidence interval; SOFA sequential organ failure assessment; MICU multiple intensive care unit; CCU coronary care unit; CSRU cardiac surgery care unit.

Table S2 Comparisons of subgroups according to the existence of vasopressor use, AKI and SOFA score

Variables	Vasopressor-use (n = 2554)	Non-Vasopressor-use (n = 2983)	p	AKI (n = 2542)	Non-AKI (n = 2995)	p	SOFA > 10 (n = 2390)	SOFA <= 10 (n = 2147)	p
age	66.3 ± 15.2	63.6 ± 16.8	< 0.001	65.1 ± 15.4	64.6 ± 16.8	0.211	64.0 ± 15.7	65.5 ± 16.4	< 0.001
Vasopressor-use [n (%)]	-	-	-	1321	1233	< 0.001	1554	1000	< 0.001
Fluid intake (ml/kg/48hr)	114.4 ± 661.	81.1 ± 50.0	< 0.001	94.3 ± 62.0	98.3 ± 58.8	0.013	110.7 ± 65.5	85.6 ± 53.6	< 0.001
Fluid balance (ml/kg/48hr)	63.2 ± 64.1	28.1 ± 48.5	< 0.001	48.4 ± 60.9	40.8 ± 56.9	< 0.001	62.0 ± 64.1	30.8 ± 50.6	< 0.001
Maximum SOFA median (IQR)	12 (9 – 14)	8 (6 – 11)	< 0.001	11 (8 – 14)	9 (7 – 11)	< 0.001	13 (12 – 15)	7 (6 – 9)	< 0.001
Platelet count (10⁹/L)	225.0 ± 240.1	236.0 ± 148.7	0.005	219.2 ± 143.4	240.9 ± 145.5	< 0.001	208.4 ± 147.1	248.1 ± 140.8	< 0.001
Lymphocyte count (10⁹/L)	1.26 ± 3.32	1.28 ± 3.32	0.890	1.21 ± 2.21	1.32 ± 4.03	0.246	1.24 ± 3.42	1.29 ± 3.24	0.529
Hospital LOS	17.8 ± 14.3	16.7 ± 14.1	0.002	19.7 ± 15.6	15.1 ± 12.3	< 0.001	19.6 ± 14.6	15.5 ± 13.4	< 0.001
AKI [n (%)]	1321	1221	< 0.001	-	-	-	1360	1182	< 0.001
Hospital mortality [n (%)]	777	612	< 0.001	875	514	< 0.001	884	505	< 0.001

Abbreviation: SOFA sequential organ failure assessment; IQR interquartile range; LOS length of stay; AKI acute kidney injury.

Table S3 Risk factors associated with in-hospital mortality

Variables	Odds ratio	95% CI	p
Age (> 65)	1.77	1.56 – 2.01	< 0.001
Gender (male)	0.91	0.81 – 1.03	0.173
BMI (Kg/m²)	1.00	0.99 – 1.00	0.485
TSICU/SICU	Ref.	–	–
MICU	1.34	1.15 – 1.56	< 0.001
CCU/CSRU	1.22	1.01 – 1.47	0.032
Fluid balance (ml/kg/48hrs)	1.006	1.005 – 1.007	< 0.001
Urine output (ml/kg/48hrs)	0.98	0.98 – 0.98	< 0.001
Respiratory infection	1.29	1.13 – 1.47	< 0.001
Blood infection	2.14	1.89 – 2.42	< 0.001
Urinary infection	0.66	0.57 – 0.76	< 0.001
Abdominal infection	0.93	0.77 – 1.11	0.458
Cerebral infection	0.66	0.51 – 0.85	0.002
SOFA on ICU admission	1.15	1.13 – 1.17	< 0.001
Maximum SOFA	1.20	1.18 – 1.22	< 0.001
Maximum serum creatinine (mg/L)	1.15	1.12 – 1.19	< 0.001
Minimum hemoglobin level (g/dl)	0.84	0.81 – 0.88	< 0.001
Maximum serum sodium (mmol/L)	1.02	1.01 – 1.02	< 0.001
Platelet count (10⁹/L)	0.998	0.997 – 0.998	< 0.001
Lymphocyte count (10⁹/L)	0.972	0.934 – 1.01	0.163

Abbreviations: BMI body mass index; MICU, multiple intensive care unit; CCU, coronary care unit; CSRU, cardiac surgery care unit; TSICU, traumatic surgical intensive care unit; SICU, surgical intensive care unit; SOFA, sequential organ failure assessment;

Figure S1 Crude relationship between hospital mortality and PLR

