Supplementary Table S2. Comparison of characteristics of the derivation cohort and the external validation cohort 1 (Asan Medical Center)

Characteristics	Derivation cohort (n = 5,805)	External validation 1 cohort (n = 889)
Age, years	68.4 ± 13.1	65.6 ± 12.7
Male	4,003 (57.3)	521(58.6)
Past Medical History		
Hypertension	2,520 (43.4)	314 (35.3)
Diabetes mellitus	1,945 (33.5)	227 (25.5)
Cardiac disease	867 (14.9)	89 (10.0)
Chronic pulmonary disease	475 (8.2)	89 (10.0)
Malignancy	1,580 (27.2)	425 (47.8)
Chronic renal disease	561 (9.7)	59 (6.6)
Liver cirrhosis	590 (10.2)	141 (15.9)
Cerebrovascular disease	799 (13.8)	48 (5.4)
Source of infection		
Pulmonary	1,914 (33.0)	216 (24.3)
Genitourinary	1,600 (27.6)	125 (14.1)
Gastrointestinal	1,055 (18.2)	124 (13.9)
Hepatobiliary	1,149 (19.8)	302 (34.0)
Unknown	367 (6.3)	90 (10.1)
Initial vital signs		
Systolic blood pressure (mmHg)	99.7 ± 29.7	92.8 ± 26.7
Diastolic blood pressure (mmHg)	59.9 ± 18.6	58.8 ± 18.0
Heart rate (per min)	109.7 ± 25.5	107.0 ± 26.1
Respiratory rate (per min)	21.9 ± 5.7	21.7 ± 4.9

Clinical characteristics		
Initial SOFA score	6.4 ± 3.3	5.9 ± 3.1
Laboratory Finding		
White blood cells, $\times 10^3/\mu L$	13.0 ± 18.6	11.8 ± 10.7
Hemoglobin, g/dL	10.8 ± 2.6	10.7 ± 2.4
Hematocrit, %	32.7 ± 7.7	33.4 ± 17.3
Platelets, $\times 10^3/\mu L$	164 ± 128	162 ± 114
Sodium, mmol/L	135 ± 7	134 ± 6
Potassium, mmol/L	4.2 ± 0.9	4.4 ± 4.3
Chloride, mmol/L	100 ± 8	98 ± 9
Blood urea nitrogen, mg/dL	35 ± 24	31.2 ± 20.3
Creatinine, mg/dL	1.9 ± 1.8	2.0 ± 2.3
Albumin, g/dL	3.0 ± 0.7	2.6 ± 0.6
AST, IU/L	136 ± 520	152 ± 517
ALT, IU/L	77 ± 269	80 ± 180
Prothrombin time (INR)	1.5 ± 0.9	1.5 ± 0.9
C-reactive protein, mg/dL	16.1 ± 13.6	14.0 ± 10.6
Initial lactate, mmol/L	4.4 ± 3.3	4.1 ± 3.1
Arterial pH	7.404 ± 0.117	7.412 ± 0.106
$PaCO_2$ (mmHg)	29.4 ± 12.2	29.3 ± 9.5
PaO_2 (mmHg)	91.2 ± 45.9	86.5 ± 40.1
Bicarbonate (arterial, mmol/L)	18.3 ± 6.4	19.4 ± 5.0
Clinical outcomes		
ICU admission	3,416 (58.8)	526 (59.2)
28-day mortality	1,529 (26.3)	488 (17.4)
90-day mortality	2,191 (37.7)	273 (30.7)

Values are expressed as the mean ± standard deviation or number (%).