

Association between blood urea nitrogen-to-creatinine ratio and all-cause mortality in critically ill patients with sepsis: an analysis based on the MIMIC-IV database

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Supplementary Tables

Supplementary Table S1 — Correlation matrix of BCR and severity scores

Variable	BCR	SOFA	APS III	SAPS II	OASIS	SIRS
BCR	1.0	-0.025	0.105	0.141	0.071	-0.025
SOFA	-0.025	1.0	0.673	0.634	0.497	0.163
APS III	0.105	0.673	1.0	0.743	0.611	0.244
SAPS II	0.141	0.634	0.743	1.0	0.654	0.144
OASIS	0.071	0.497	0.611	0.654	1.0	0.278
SIRS	-0.025	0.163	0.244	0.144	0.278	1.0

Note: Values are correlation coefficients. BCR, blood urea nitrogen-to-creatinine ratio; SOFA, Sequential Organ Failure Assessment; APS III, Acute Physiology Score III; SAPS II, Simplified Acute Physiology Score II; OASIS, Oxford Acute Severity of Illness Score; SIRS, systemic inflammatory response syndrome.

Supplementary Table S2 — Multicollinearity assessment for Model 3 covariates

Variable	VIF
Chloride	2.884
Sodium	2.635
Anion gap	1.534
Age	1.499
SOFA score	1.384
Heart failure	1.288
Atrial fibrillation	1.28
Weight	1.226
Heart rate	1.208
CRRT	1.203
RDW	1.197
RBC	1.19
Potassium	1.178
Respiratory rate	1.17
PT	1.164
BCR	1.134
Hypertension	1.12
PTT	1.119
Sex	1.108
AKI	1.105
Systolic blood pressure	1.089
Myocardial infarction	1.086
Malignant tumor	1.063
WBC	1.03

Note: VIF, variance inflation factor. All VIF values were <3, indicating no evidence of problematic multicollinearity. BCR, blood urea nitrogen-to-creatinine ratio; SOFA, Sequential Organ Failure Assessment; CRRT, continuous renal replacement therapy; RDW, red blood cell distribution width; RBC, red blood cell; PT, prothrombin time; PTT, partial thromboplastin time; AKI, acute kidney injury; WBC, white blood cell.

Supplementary Table S3 — Incremental prognostic value of BCR based on AUC comparison

Outcome	Model	AUC	N
28-day mortality	Age + Sex + SOFA	0.686	12514
28-day mortality	Age + Sex + SOFA + BCR	0.701	12514
365-day mortality	Age + Sex + SOFA	0.684	12514
365-day mortality	Age + Sex + SOFA + BCR	0.699	12514

Note: AUC, area under the receiver operating characteristic curve; BCR, blood urea nitrogen-to-creatinine ratio; SOFA, Sequential Organ Failure Assessment.