

Supplementary Table 1. Categories and descriptions of features used in the AKI prediction model

Category	Features
Demographics ^a	Age, sex, BMI
Clinical status ^b	ICU admission
Baseline kidney function ^c	Baseline creatinine, baseline eGFR
Comorbidities ^d	Acute myocardial infarction, congestive heart failure, peripheral vascular disease, dementia, pulmonary disease, connective tissue disorder, peptic ulcer, paraplegia, renal disease, cancer, metastatic cancer, diabetes mellitus, diabetes complications, cardiovascular diseases, liver disease, severe liver disease, HIV/AIDS, hypertension, AKI
Comorbidity index ^e	Charlson comorbidity index
Medicine use ^f	Angiotensin-converting enzyme inhibitor, acyclovir, aminoglycoside, amphotericin B, angiotensin receptor blockers, beta blocker, calcium channel blockers, cisplatin, colistin, cyclosporine, diuretics, nonsteroidal anti-inflammatory drugs, statin, tacrolimus, vancomycin, vasopressor
Laboratory findings ^g	Albumin, bilirubin, blood urea nitrogen, calcium, chloride, creatine kinase, total CO ₂ , serum creatinine, C-reactive protein, glucose, AST, ALT, hemoglobin, lipase, platelet, potassium, sodium, troponin I, white blood cell count
Vital signs ^g	Systolic blood pressure, diastolic blood pressure, heart rate, body temperature
Surgery information ^h	General anesthesia, non-general anesthesia, surgery time

AKI, acute kidney injury; ALT, alanine aminotransferase; AST, aspartate aminotransferase; BMI, body mass index; eGFR, estimated glomerular filtration rate; HIV/AIDS, human immunodeficiency virus/acquired immunodeficiency syndrome; ICD-10, International Classification of Diseases, 10th revision; ICU, intensive care unit.

^aStatic variables: Age and BMI are continuous; Sex is binary (male = 1). ^bStatic variable: Binary indicating ICU admission at the time of hospital admission.

^cStatic variables: Continuous measurements (creatinine is the minimum value from 6 months prior to admission; eGFR is the maximum value during the same period). ^dStatic variables: All comorbidities are binary, indicating diagnosis before admission based on ICD-10 codes. ^eStatic variable: Continuous, calculated using the comorbidities. ^fStatic and dynamic variables: For each medication, a static binary variable indicates prescription within 6 months prior to admission. Dynamic binary variables indicate daily prescription status for the first 7 days of admission. ^gDynamic variables: Continuous measurements aggregated into 8-hour intervals for the first 7 days of admission. For laboratory findings, the mean value is calculated for each 8-hour period. For vital signs, the mean, minimum, and maximum values are calculated for each 8-hour period. ^hStatic variables: General and non-general anesthesia are binary; Surgery time is continuous.

Surgery time is continuous.