Online Supplement

A Novel Nomogram for Predicting the Risk of Acute Heart Failure in Intensive Care Unit Patients With COPD

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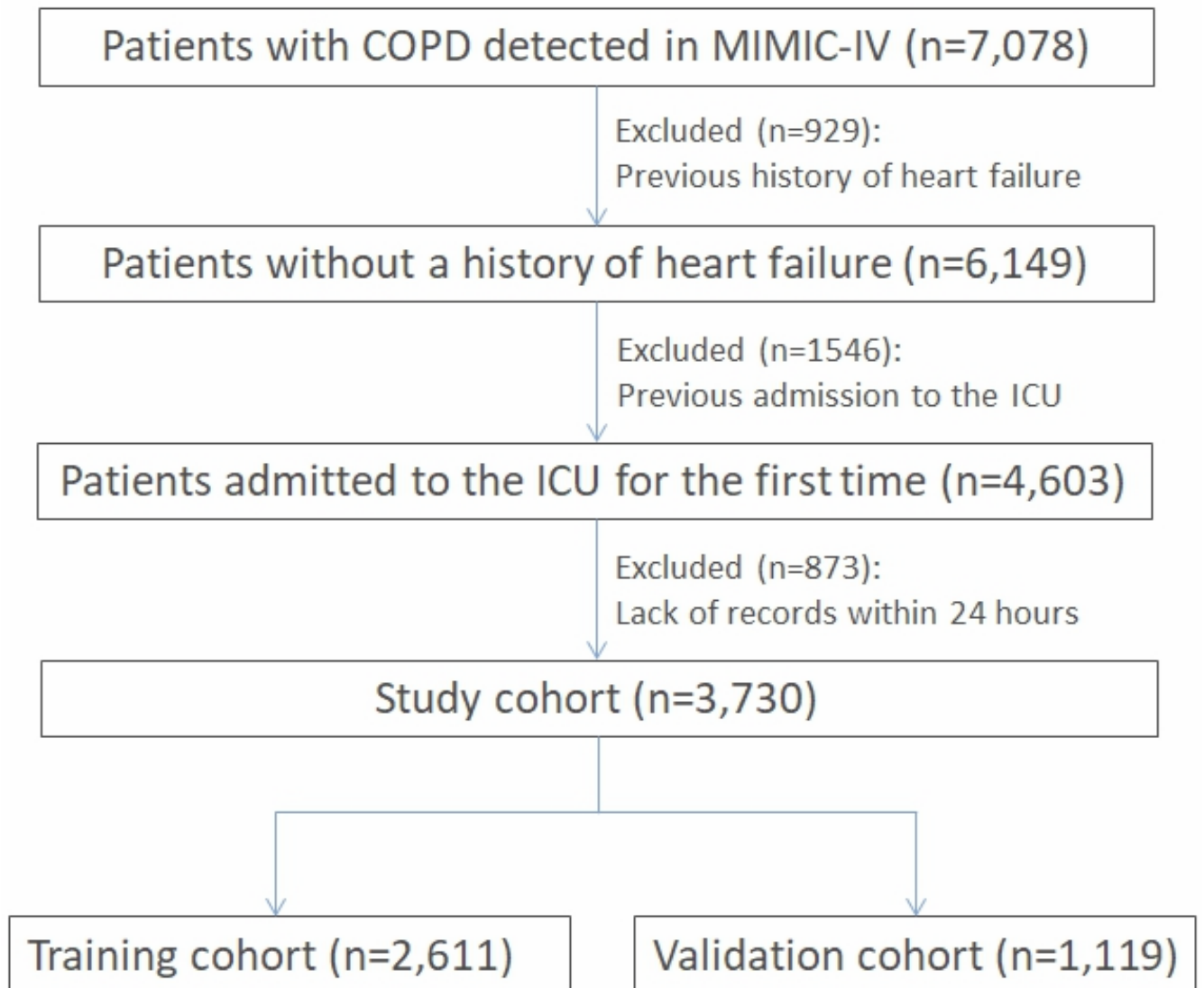Zhongda Hospital
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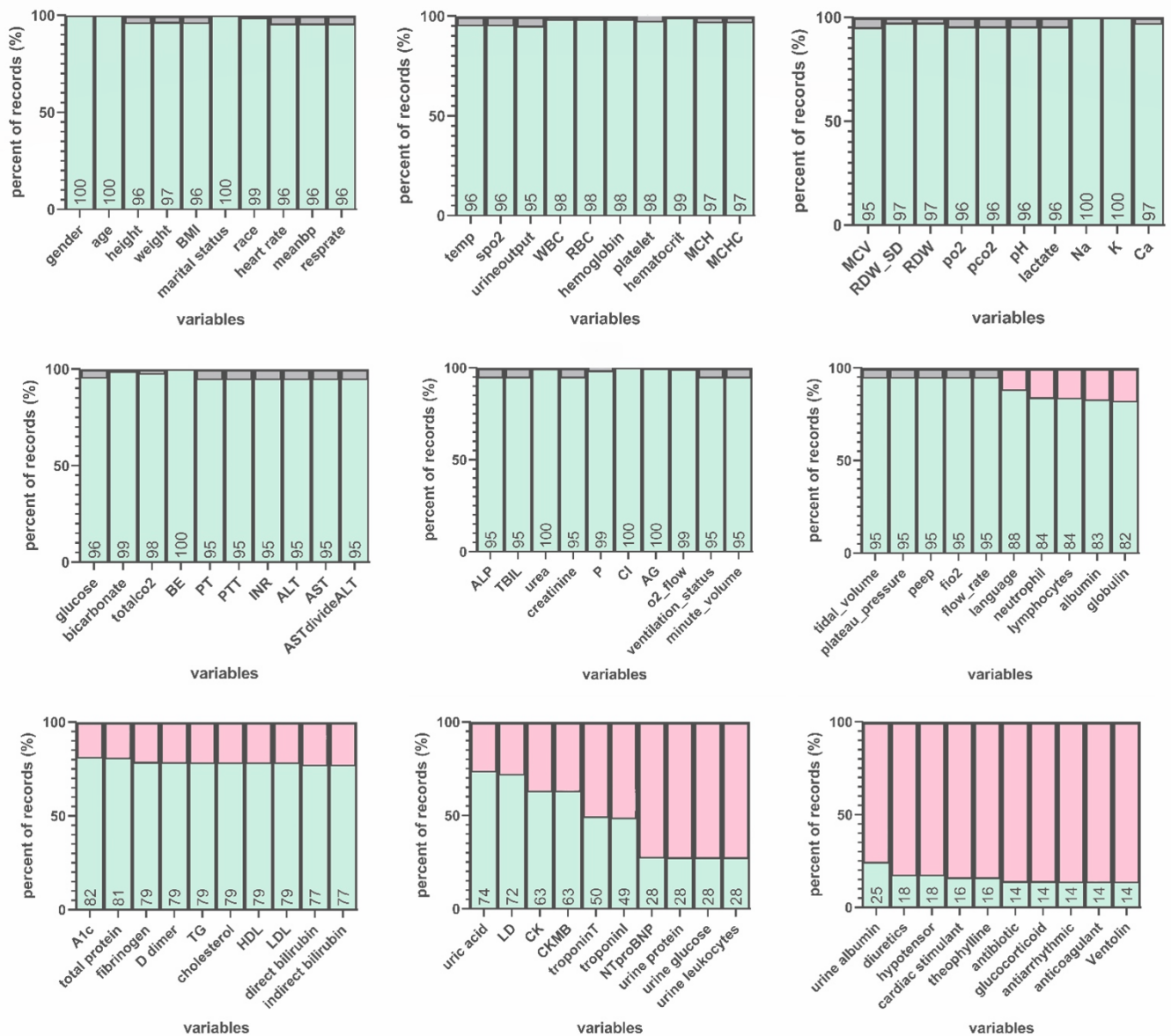Nanjing, China
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Supplementary Figure 1 Flowchart showing the cohort selection process

Footnote to Supplementary Figure 1: COPD, chronic obstructive pulmonary disease; MIMIC,

Medical Information Mart for Intensive Care; ICU, intensive care unit

Supplementary Figure 2 Proportion of records for all variables

Footnote to Supplementary Figure 2: The green section indicates the percentage of records available in the database for each variable. The gray section represents missing values comprising < 5% of the total, which were imputed. The pink section indicates missing values exceeding 5%, leading to the exclusion of these variables from the analysis.
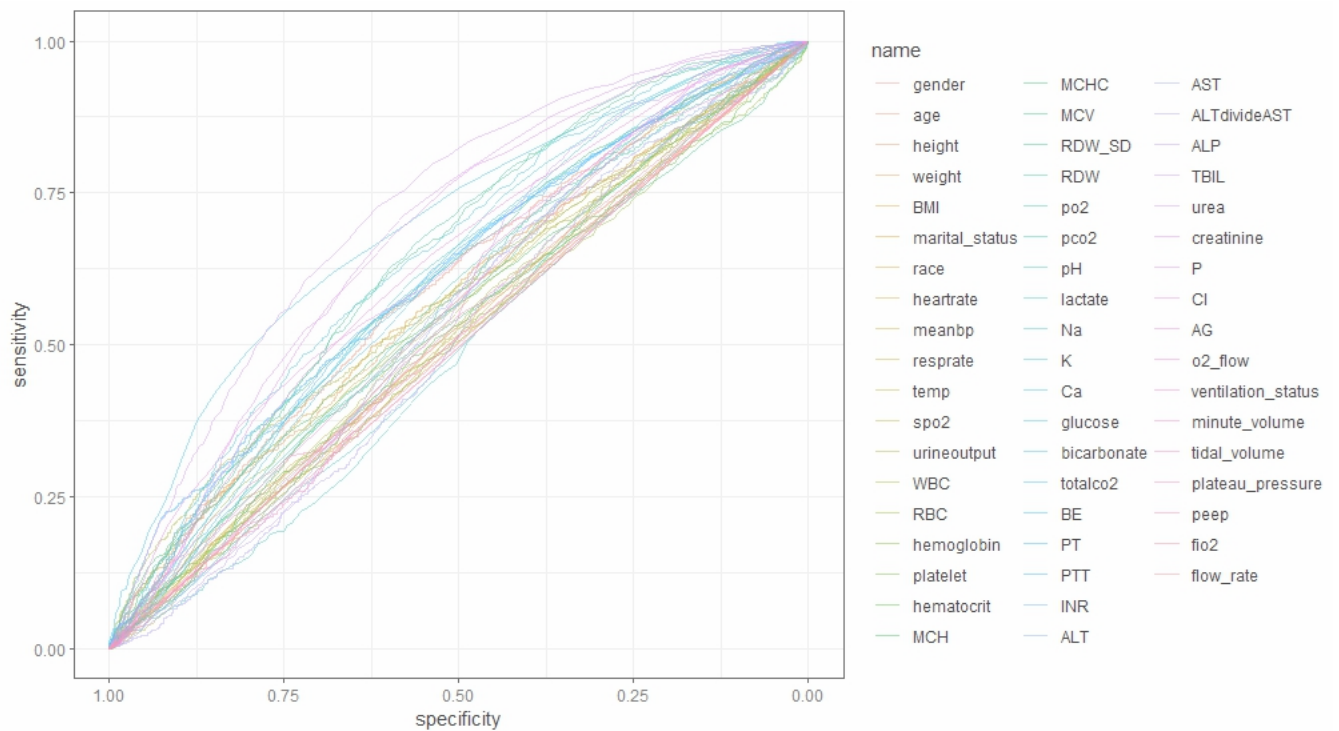
BMI, body mass index; meanbp, mean blood pressure; resprate, respiratory rate; temp, temperature; spo2, oxygen saturation of blood; WBC, white blood cells; RBC, red blood cells; MCH, mean corpsular hemoglobin; MCHC, mean corpuscular hemoglobin concentration;
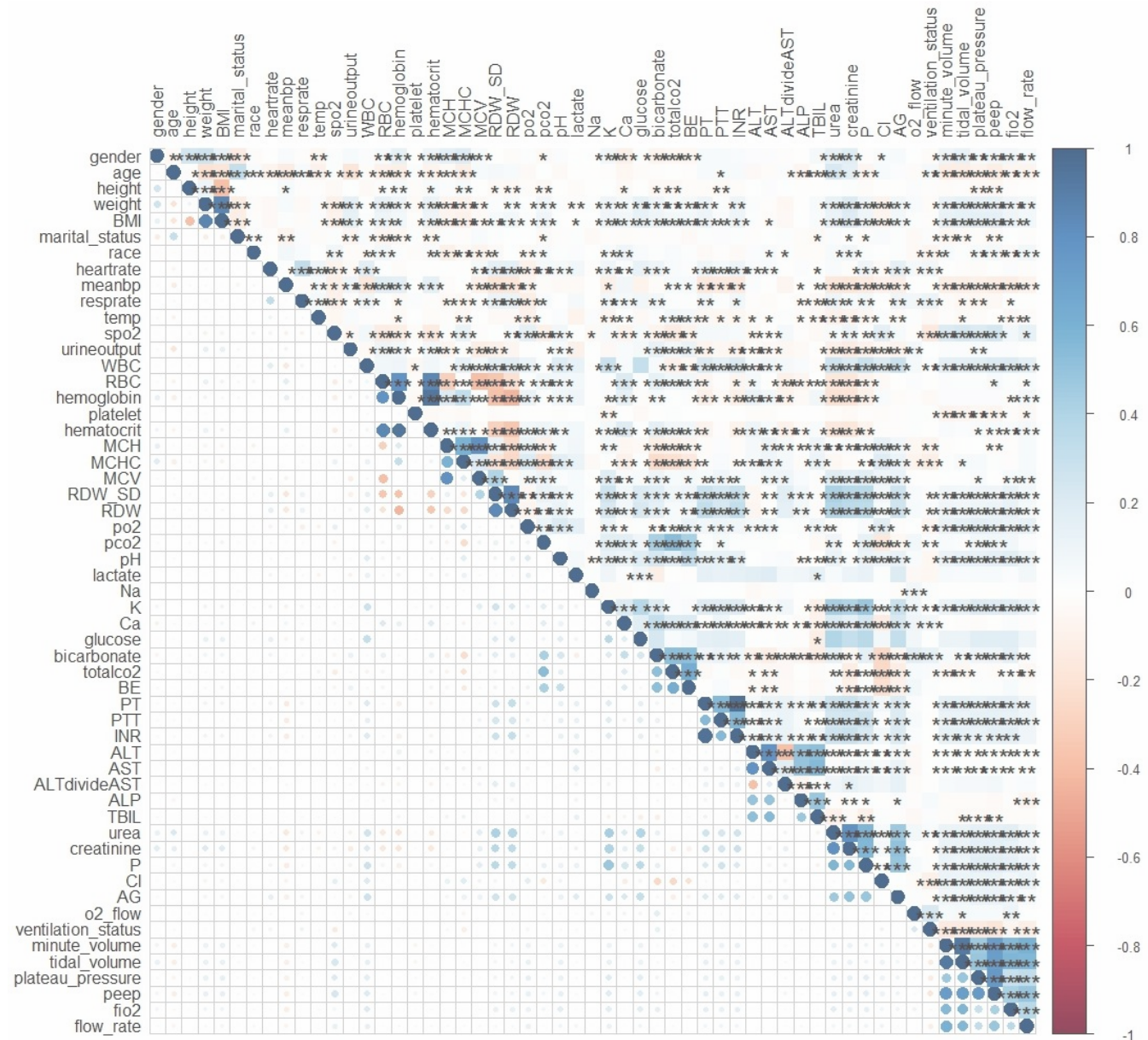
MCV, mean corpuscular volume; RDW, red blood cell distribution width; RDW-SD, red blood cell distribution width-standard deviation; po2, partial pressure of oxygen; pco2, partial pressure of carbon dioxide; pH, potential of hydrogen; Na, sodium; K, potassium; Ca, calcium; totalco2, total carbon dioxide; BE, base excess; PT, prothrombin time; PTT, partial thromboplastin time; INR, international normalized ratio; ALT, glutamic pyruvic transaminase; AST, glutamic oxaloacetic transaminase; ALP, alkaline phosphatase; TBIL, total bilirubin; urea, blood urea nitrogen; P, serum inorganic phosphorus; Cl, chloride; AG, anion gap; o2_flow, oxygen flow rate; peep, positive end-expiratory pressure; fio2, fraction of inspiration oxygen; flow_rate, oxygen delivery rate; A1c, glycosylated hemoglobin; TG, total triglycerides; HDL, high density lipoprotein; LDL, low density lipoprotein; LD, lactic dehydrogenase; CK, creatine kinase; CKMB,

Supplementary Figure 3 ROC curves of all screened variables

Footnote to Supplementary Figure 3: BMI, body mass index; meanbp, mean blood pressure; resprate, respiratory rate; temp, temperature; spo2, oxygen saturation of blood; WBC, white blood cells; RBC, red blood cells; MCH, mean corpsular hemoglobin; MCHC, mean corpuscular hemoglobin concentration; MCV, mean corpuscular volume; RDW, red blood cell distribution width; RDW-SD, red blood cell distribution width-standard deviation; po2, partial pressure of oxygen; pco2, partial pressure of carbon dioxide; pH, potential of hydrogen; Na, sodium; K, potassium; Ca, calcium; totalco2, total carbon dioxide; BE, base excess; PT, prothrombin time; PTT, partial thromboplastin time; INR, international normalized ratio; ALT, glutamic pyruvic transaminase; AST, glutamic oxaloacetic transaminase; ALP, alkaline phosphatase; TBIL, total bilirubin; urea, blood urea nitrogen; P, serum inorganic phosphorus; Cl, chloride; AG, anion gap; o2_flow, oxygen flow rate; peep, positive end-expiratory pressure; fio2, fraction of inspiration oxygen; flow_rate, oxygen delivery rate
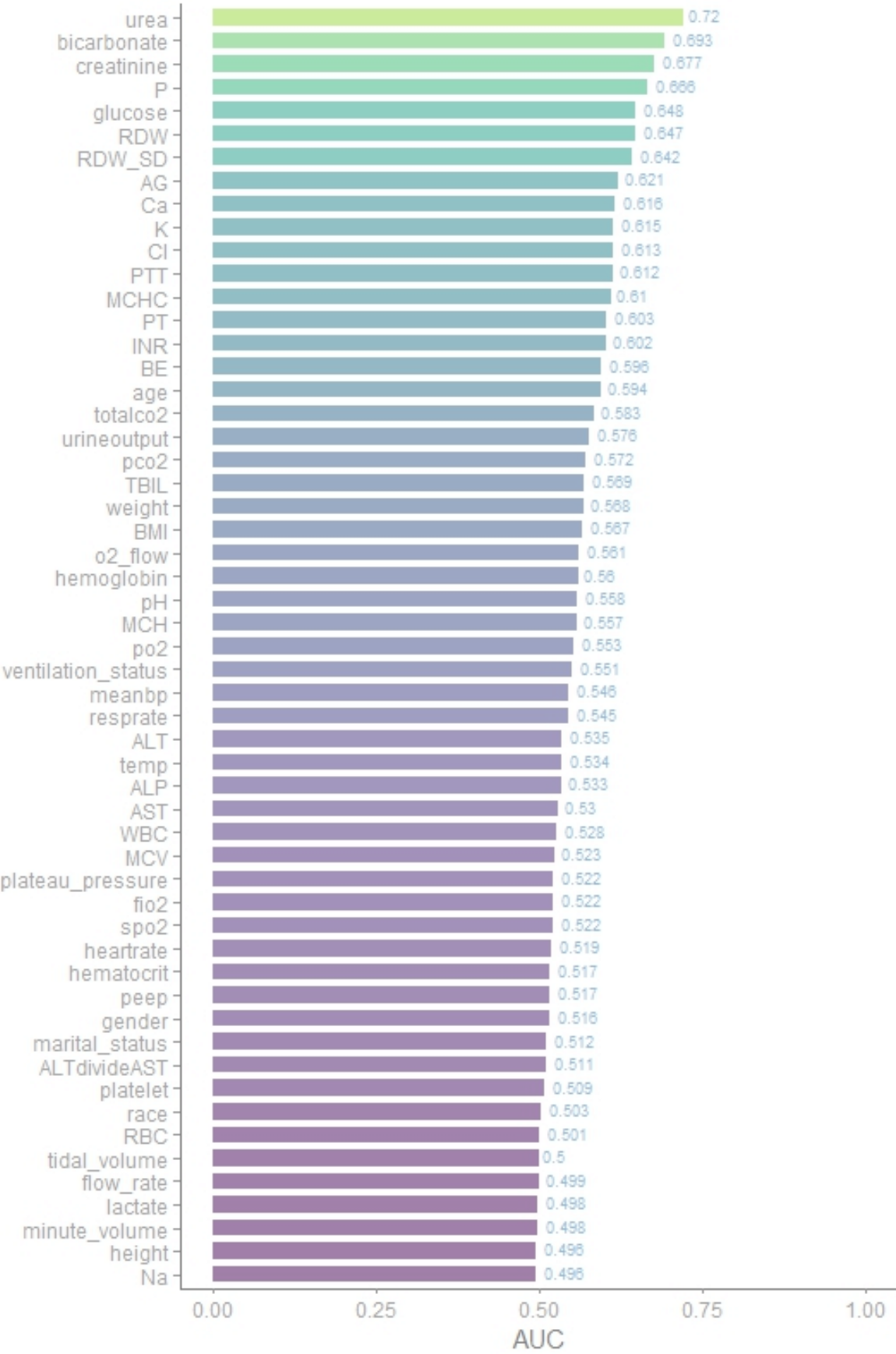
Supplementary Figure 4 Heatmap involving all screened variables

Footnote to Supplementary Figure 4: BMI, body mass index; meanbp, mean blood pressure;

resprate, respiratory rate; temp, temperature; spo2, oxygen saturation of blood; WBC, white

blood cells; RBC, red blood cells; MCH, mean corpsular hemoglobin; MCHC, mean

corpuscular hemoglobin concentration; MCV, mean corpuscular volume; RDW, red blood cell

distribution width; RDW-SD, red blood cell distribution width-standard deviation; po2, partial

pressure of oxygen; pco2, partial pressure of carbon dioxide; pH, potential of hydrogen; Na,

sodium; K, potassium; Ca, calcium; totalco2, total carbon dioxide; BE, base excess; PT, prothrombin time; PTT, partial thromboplastin time; INR, international normalized ratio; ALT, glutamic pyruvic transaminase; AST, glutamic oxaloacetic transaminase; ALP, alkaline phosphatase; TBIL, total bilirubin; urea, blood urea nitrogen; P, serum inorganic phosphorus; Cl, chloride; AG, anion gap; o2_flow, oxygen flow rate; peep, positive end-expiratory pressure; fio2, fraction of inspiration oxygen; flow_rate, oxygen delivery rate

Supplementary Figure 5 AUC histogram involving all screened variables

Footnote to Supplementary Figure 5: BMI, body mass index; meanbp, mean blood pressure; resprate, respiratory rate; temp, temperature; spo2, oxygen saturation of blood; WBC, white blood cells; RBC, red blood cells; MCH, mean corpsular hemoglobin; MCHC, mean corpuscular hemoglobin concentration; MCV, mean corpuscular volume; RDW, red blood cell distribution width; RDW-SD, red blood cell distribution width-standard deviation; po2, partial pressure of oxygen; pco2, partial pressure of carbon dioxide; pH, potential of hydrogen; Na, sodium; K, potassium; Ca, calcium; totalco2, total carbon dioxide; BE, base excess; PT, prothrombin time; PTT, partial thromboplastin time; INR, international normalized ratio; ALT, glutamic pyruvic transaminase; AST, glutamic oxaloacetic transaminase; ALP, alkaline phosphatase; TBIL, total bilirubin; urea, blood urea nitrogen; P, serum inorganic phosphorus; Cl, chloride; AG, anion gap; o2_flow, oxygen flow rate; peep, positive end-expiratory pressure; fio2, fraction of inspiration oxygen; flow_rate, oxygen delivery rate