



Supplementary Figure 1. Study design for developing machine learning algorithms. From 2,105 postoperative acute kidney injury (PO-AKI) patients, feature selection was conducted by excluding cases if the missing rate was above 30% and the p-value was less than 0.05. Following clinical expert opinion, 39 variables were identified. For missing values, the mean was used for imputation. The dataset was split into training and test datasets at a 7:3 ratio, with the model being trained on 1,474 patients in the training dataset using machine learning algorithms and evaluated on 631 patients in the test dataset.