

Supplementary Table S5. Performance of eight ML models to predict bacterial infection in ACLF.

Model names	AUC	PRAUC	Accuracy	Specificity	Recall	Precision	F1 score
CatBoost_TRAIN	0.881	0.861	0.800	0.855	0.728	0.792	0.759
DT_TRAIN	0.826	0.732	0.752	0.816	0.669	0.734	0.700
KNN_TRAIN	0.854	0.776	0.775	0.832	0.699	0.760	0.728
Logistic_TRAIN	0.79	0.727	0.721	0.817	0.596	0.711	0.648
MLP_TRAIN	0.795	0.740	0.718	0.827	0.574	0.716	0.637
NB_TRAIN	0.793	0.738	0.711	0.788	0.610	0.686	0.646
RF_TRAIN	0.899	0.882	0.816	0.838	0.787	0.787	0.787
SVM_TRAIN	0.791	0.726	0.711	0.821	0.566	0.706	0.629
CatBoost_TEST	0.835	0.800	0.743	0.811	0.662	0.750	0.701
DT_TEST	0.786	0.722	0.713	0.865	0.532	0.767	0.629
KNN_TEST	0.781	0.690	0.728	0.770	0.678	0.712	0.694
Logistic_TEST	0.826	0.782	0.750	0.837	0.645	0.769	0.702
MLP_TEST	0.827	0.784	0.750	0.865	0.613	0.792	0.691
NB_TEST	0.824	0.788	0.765	0.865	0.645	0.800	0.714
RF_TEST	0.812	0.770	0.721	0.797	0.629	0.722	0.672
SVM_TEST	0.826	0.783	0.750	0.851	0.629	0.780	0.696

Note: ACLF, acute-on-chronic liver failure; AUC, area under the ROC curve; CatBoost, Categorical boosting; DT, decision tree; KNN, K-nearest neighbor; Logistic, logistic regression; ML, machine learning; MLP, multilayer perceptron; NB, naive bayes; RF, random forest; SVM, support vector machine.