

Figure S1 Calibration curve of the logistic regression analyses of invasiveness of GGNs in lung adenocarcinoma in the clinical model. GGNs, ground glass nodules.

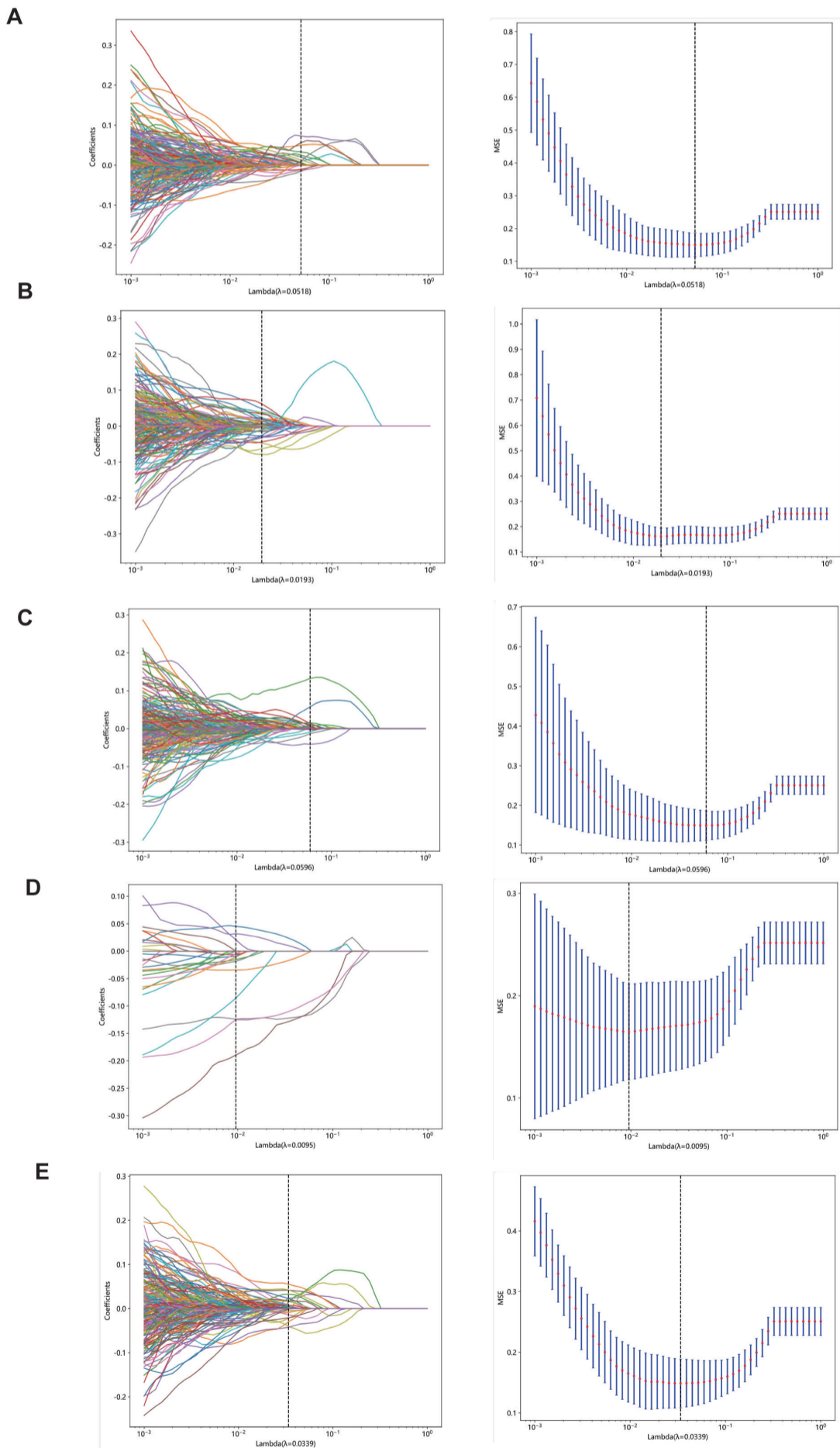


Figure S2 LASSO logistic regression of radiomics features and the AUC versus the regularization parameter lambda based on different DLCT parameters. (A) Conventional; (B) EffectiveZ; (C) ElectronDensity; (D) IodineDensity; (E) VNC. At the Lambda value corresponding to the dashed line, the model constructed using the features preserved after dimensionality reduction performs the best. LASSO, least absolute shrinkage and selection operator; AUC, area under the curve; DLCT, dual-layer spectral detector computed tomography; VNC, virtual non-contrast.

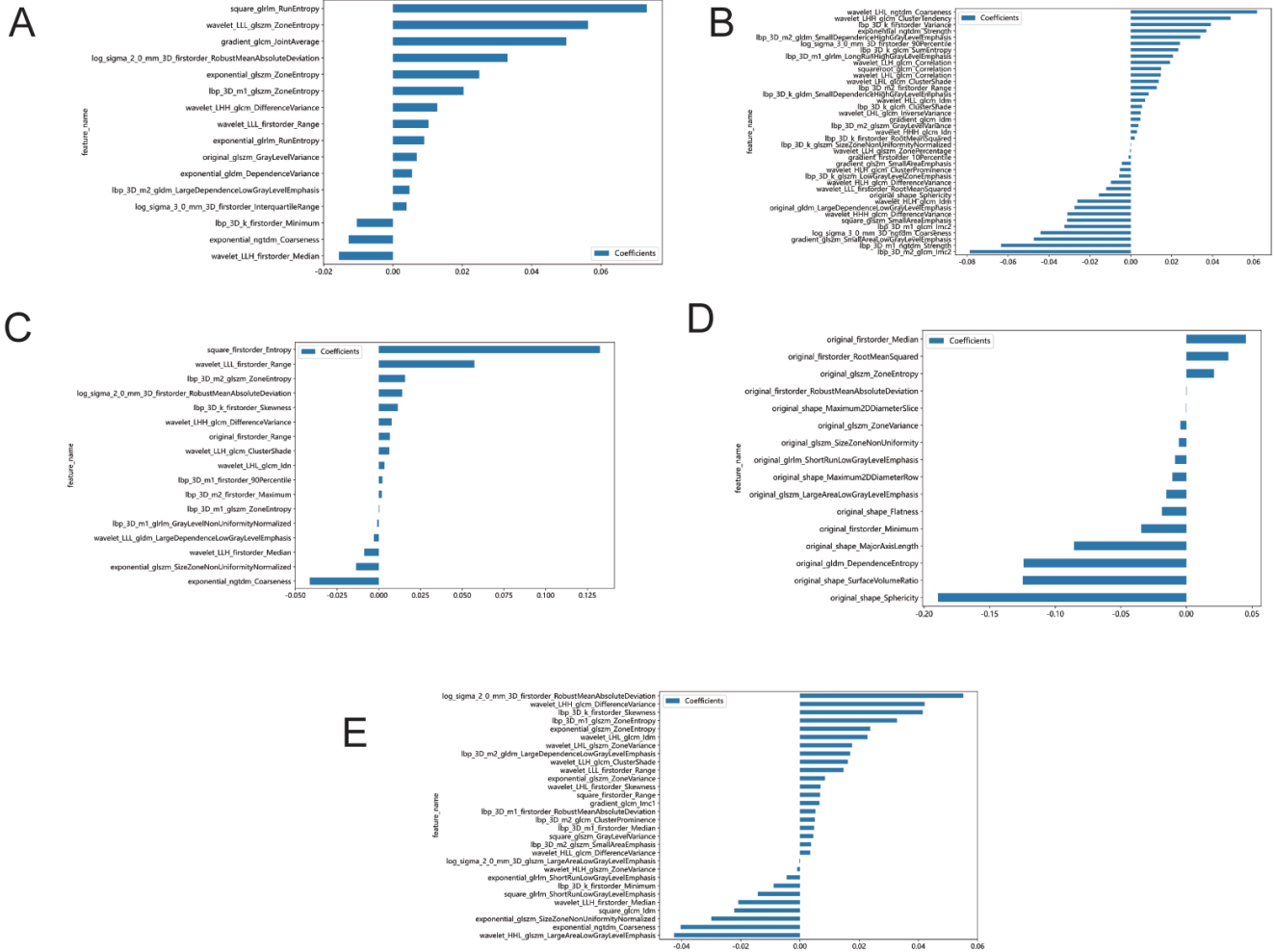


Figure S3 The corresponding weights of radiomics features selected by LASSO logistic regression based on different DLCT parameters. (A) Conventional; (B) EffectiveZ; (C) ElectronDensity; (D) IodineDensity; (E) VNC. LASSO, least absolute shrinkage and selection operator; DLCT, dual-layer spectral detector computed tomography; VNC, virtual non-contrast.

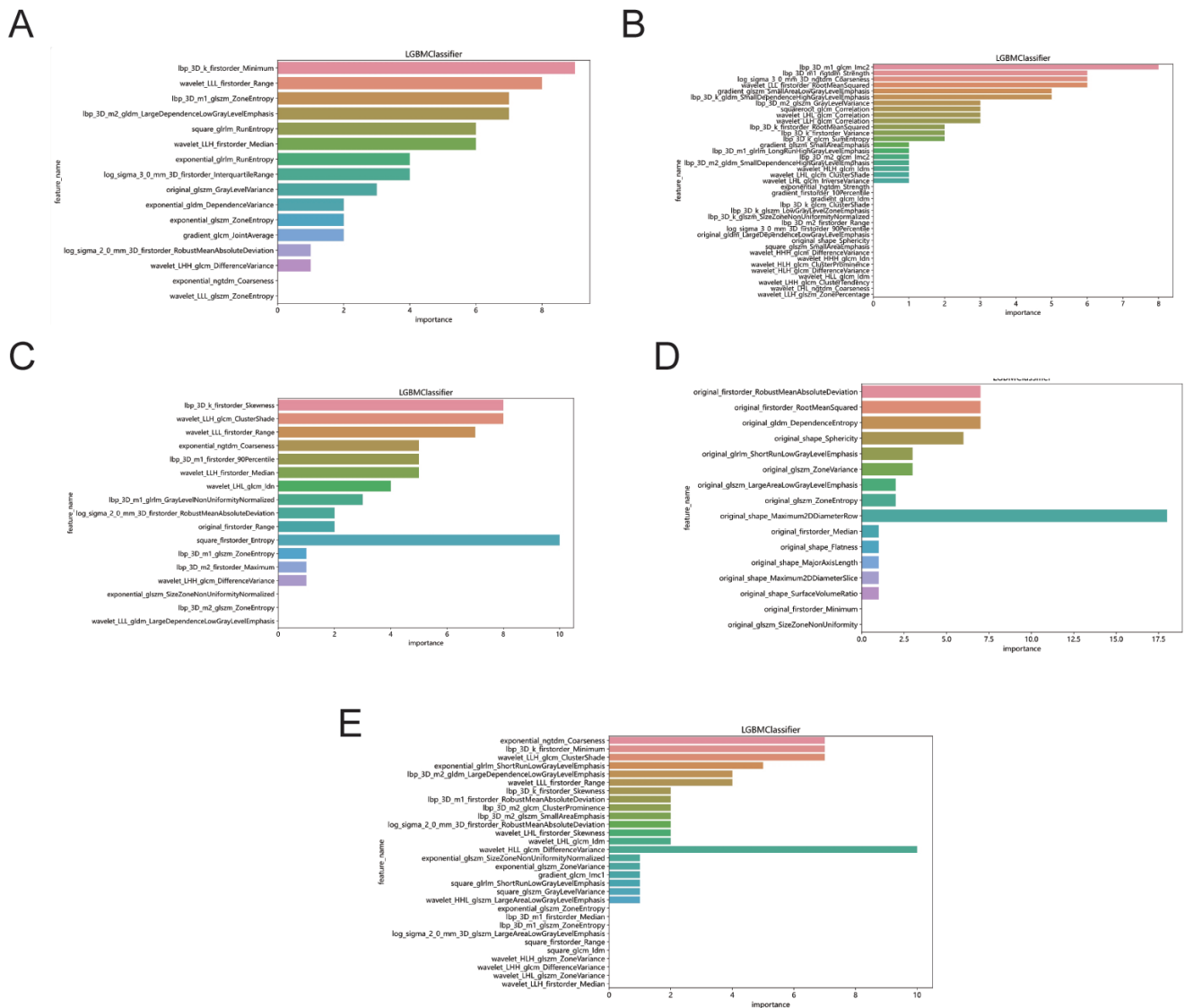


Figure S4 The top important features derived from the LightGBM model based on different DLCT parameters. (A) Conventional; (B) EffectiveZ; (C) ElectronDensity; (D) IodineDensity; (E) VNC. DLCT, dual-layer spectral detector computed tomography; VNC, virtual non-contrast.

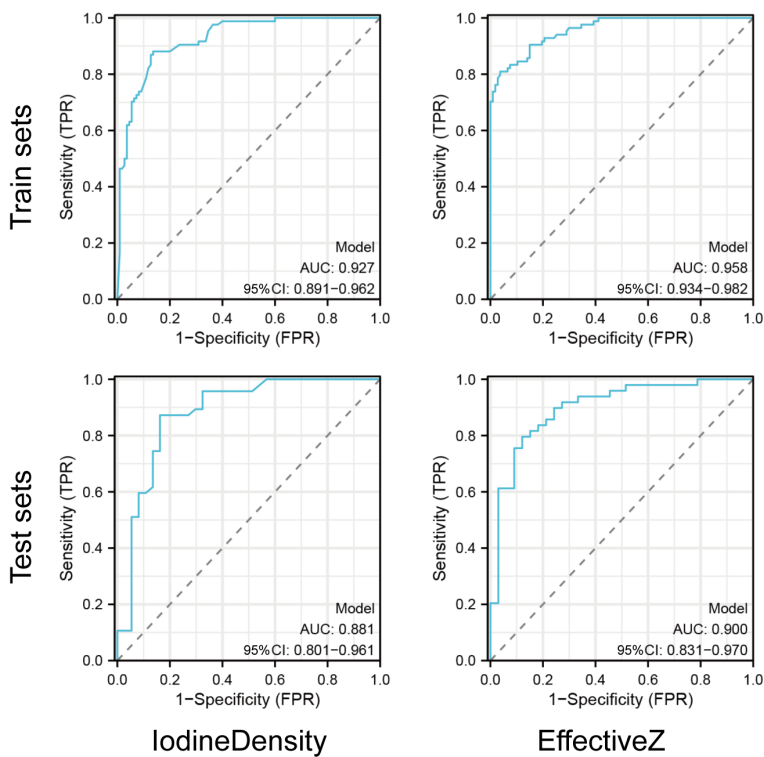
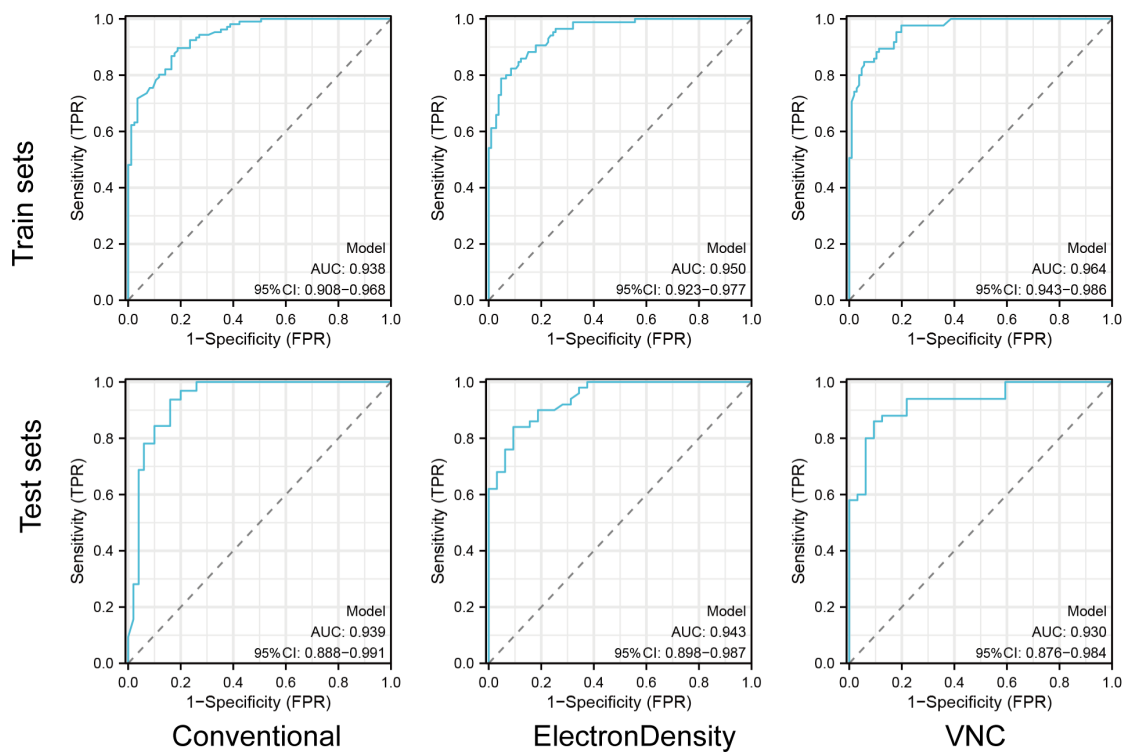


Figure S5 Comparison of ROC curves in other DLCT parameters in the training and test set. ROC, receiver operating characteristic; DLCT, dual-layer spectral detector computed tomography.

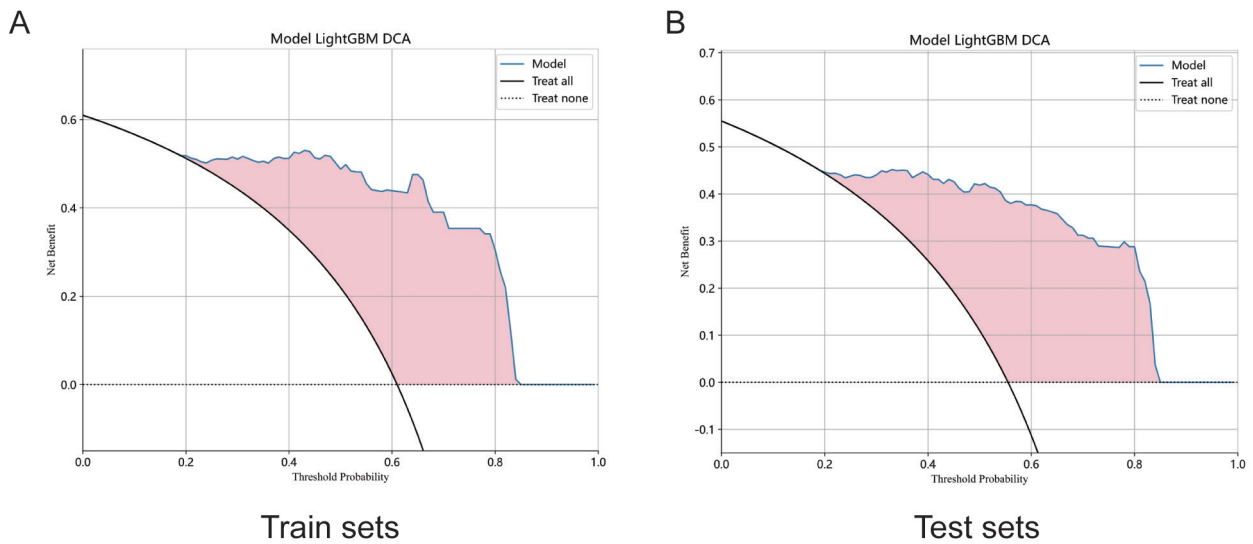


Figure S6 Decision curves of the LightGBM model based on conventional plus ElectronDensity. models in the training (A) and testing (B) cohorts. The values on the y-axis represent net gain and the x-axis represents probability thresholds.

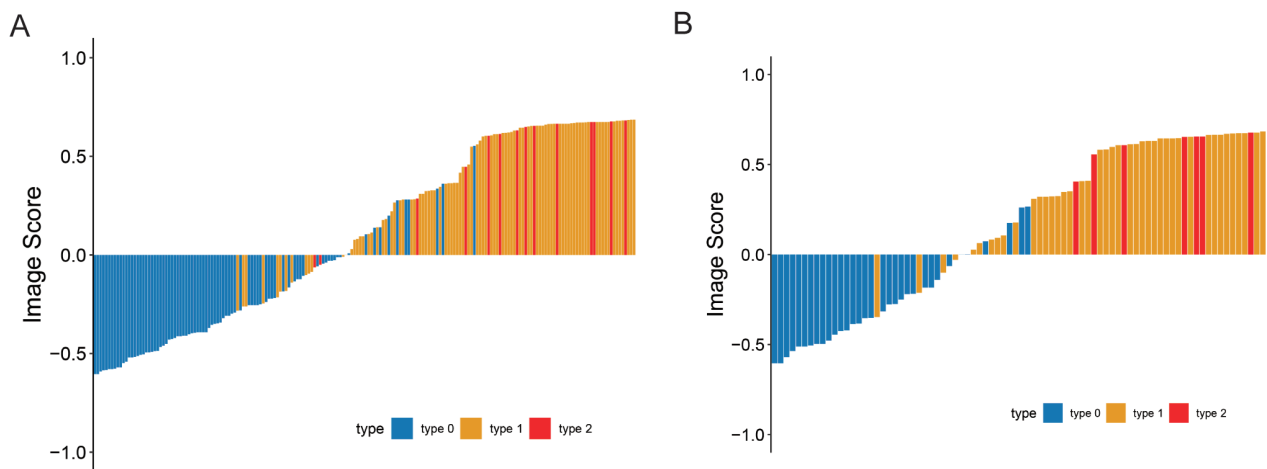


Figure S7 Waterfall plot of the Rad-score showing the predicted probabilities of distinguishing the low high and medium risk for invasiveness of GNNs in the training (A) and test (B) cohorts. Blue = low risk GNNs. Yellow = medium risk GNNs. Red = high risk GNNs. GNNs, ground glass nodules.

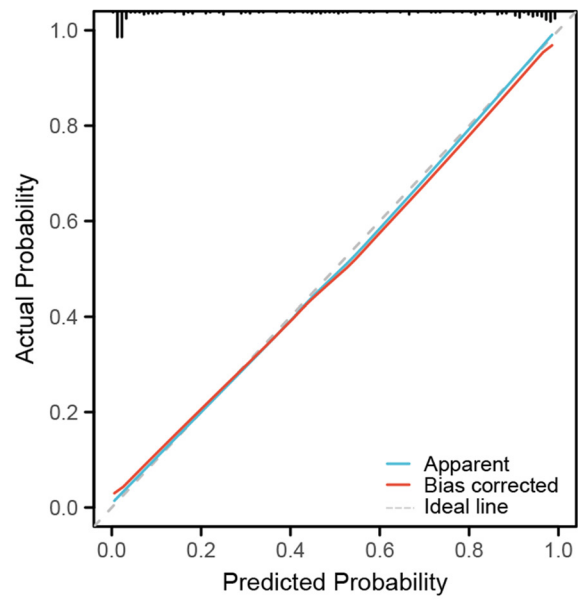


Figure S8 Calibration curve of the nomogram.