Chi-squared test, Fisher's exact test, or Wilcoxon rank sum test were used to analyze the differences between the absence and presence of LNM. When predicting LNM, the sensitivity, specificity, accuracy, positive predictive value (PPV), and negative predictive value (NPV) were evaluated for each factor. Using multivariate logistic regression analysis, ROC was calculated and the AUC was used to compare how effective the parameters were at identifying the risk of LNM; tumor type and desmoplasia were used as compounding factors. Two-sided P-values of <0.05 were considered statistically significant. JMP software (version 9.0.2; SAS Institute, Cary, NV, USA) was used for all statistical calculations.

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