## **Supplementary**

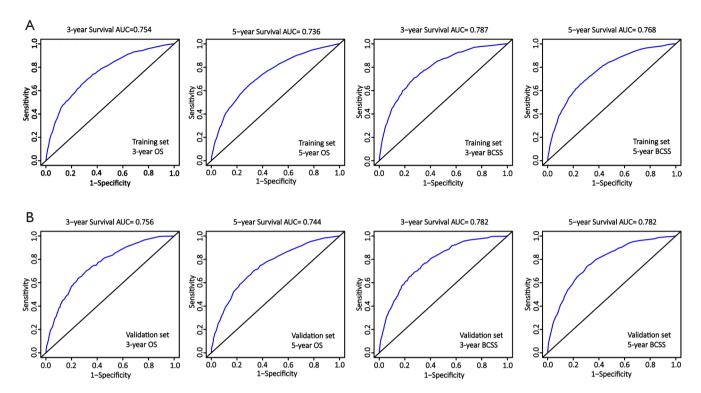


Figure S1 ROC curves for these nomograms in training set (A) and validation set (B). AUC, area under the curve; OS, overall survival; BCSS, breast cancer-specific survival; ROC, receiver operating characteristic.

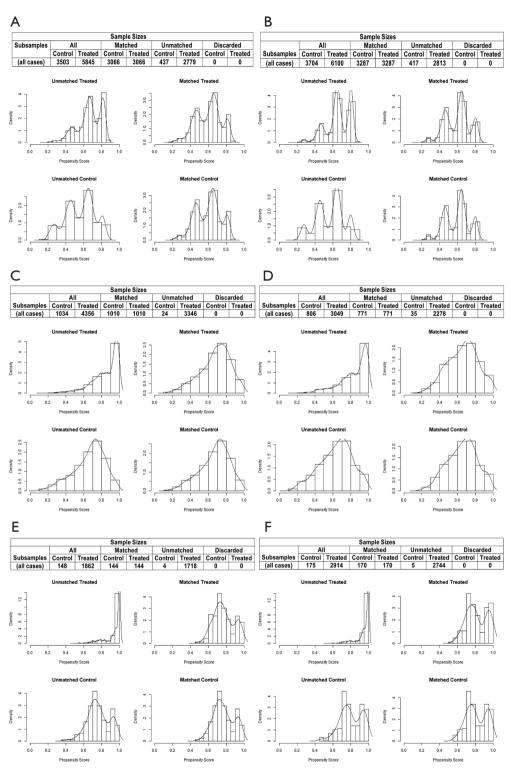


Figure S2 The distribution of propensity scores for paired and unpaired patients of the ALND group from the training set and all the SLNB groups. (A) OS and (B) BCSS of patients with low GMTRL scores, (C) OS and (D) BCSS of patients with moderate GMTRL scores, (E) OS and (F) BCSS of patients with high GMTRL scores. The control group means the SLNB group, and the treated group means the ALND group. GMTRL, grade, marital status, T stage, radiotherapy and lymph node metastasis; OS, overall survival; BCSS, breast cancerspecific survival; ALND, axillary lymph node dissection.

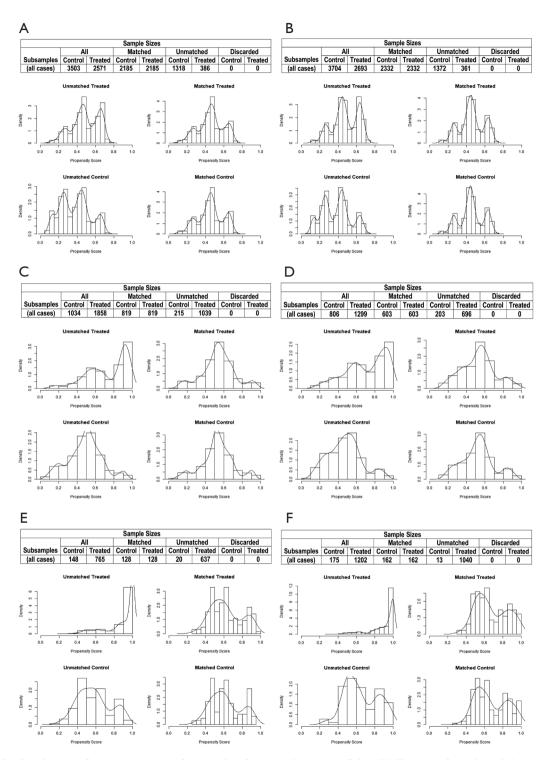


Figure S3 The distribution of propensity scores for paired and unpaired patients of the ALND group from the validation set and all the SLNB groups. (A) OS and (B) BCSS of patients with low GMTRL scores, (C) OS and (D) BCSS of patients with moderate GMTRL scores, (E) OS and (F) BCSS of patients with high GMTRL scores. The control group means the SLNB group, and the treated group means the ALND group. GMTRL, grade, marital status, T stage, radiotherapy and lymph node metastasis; OS, overall survival; BCSS, breast cancerspecific survival; ALND, axillary lymph node dissection.