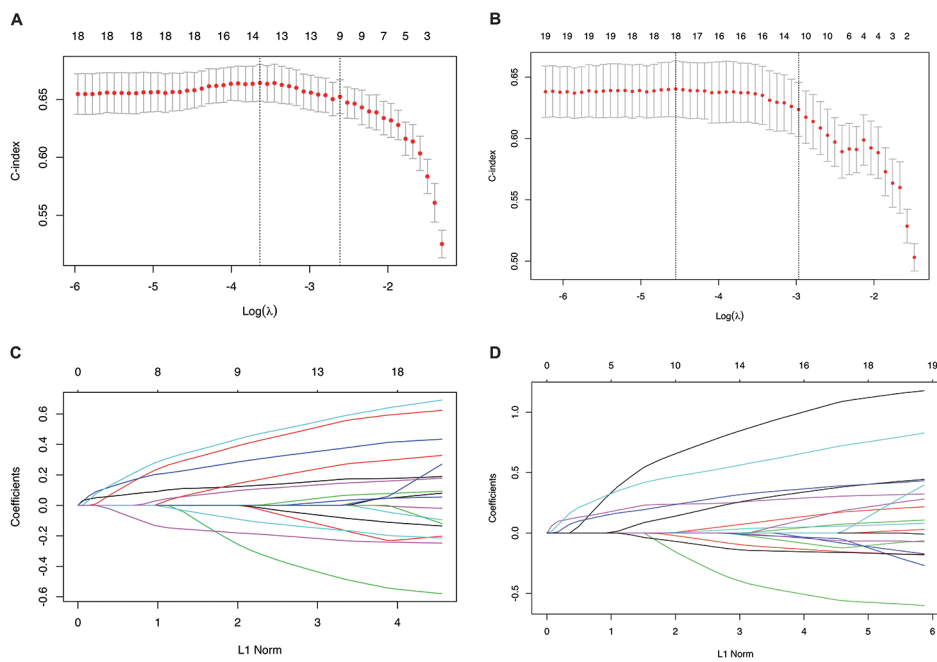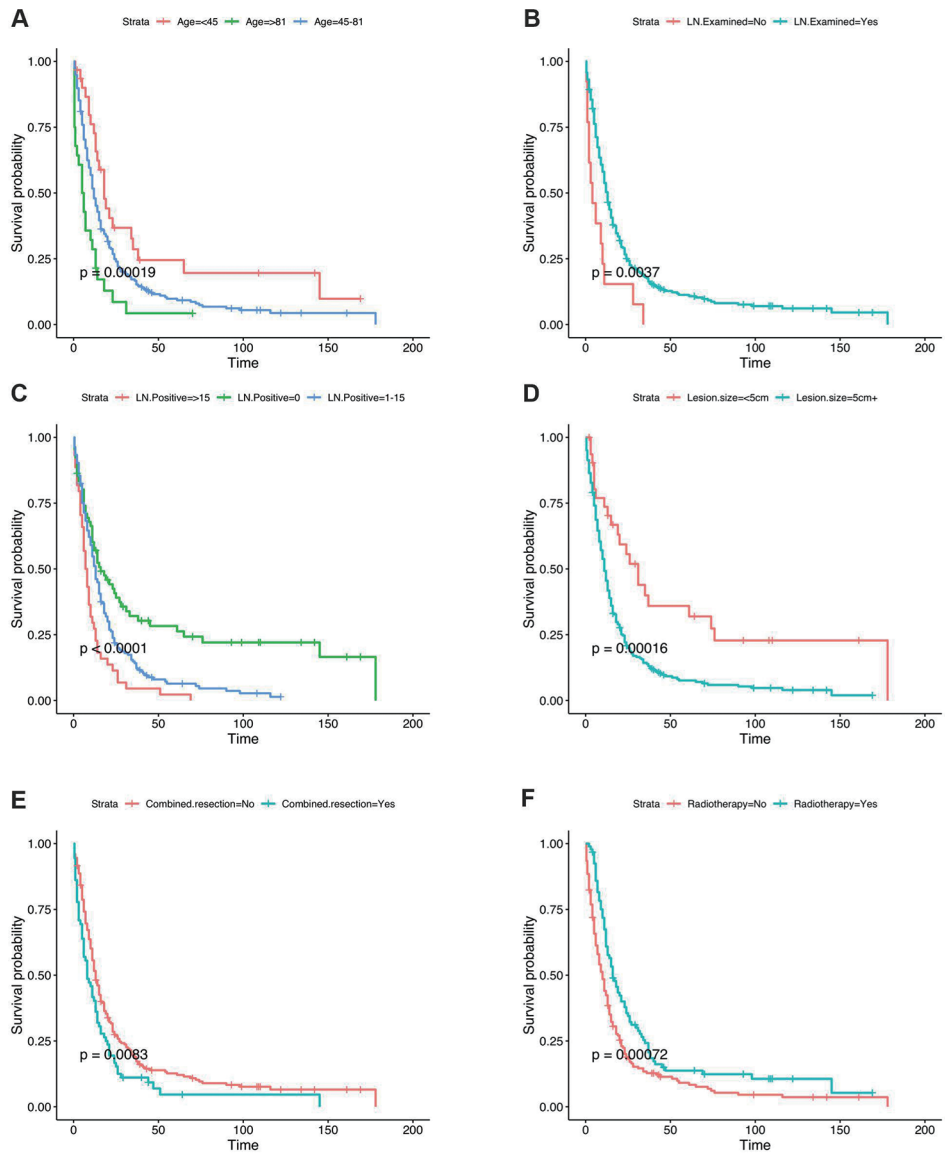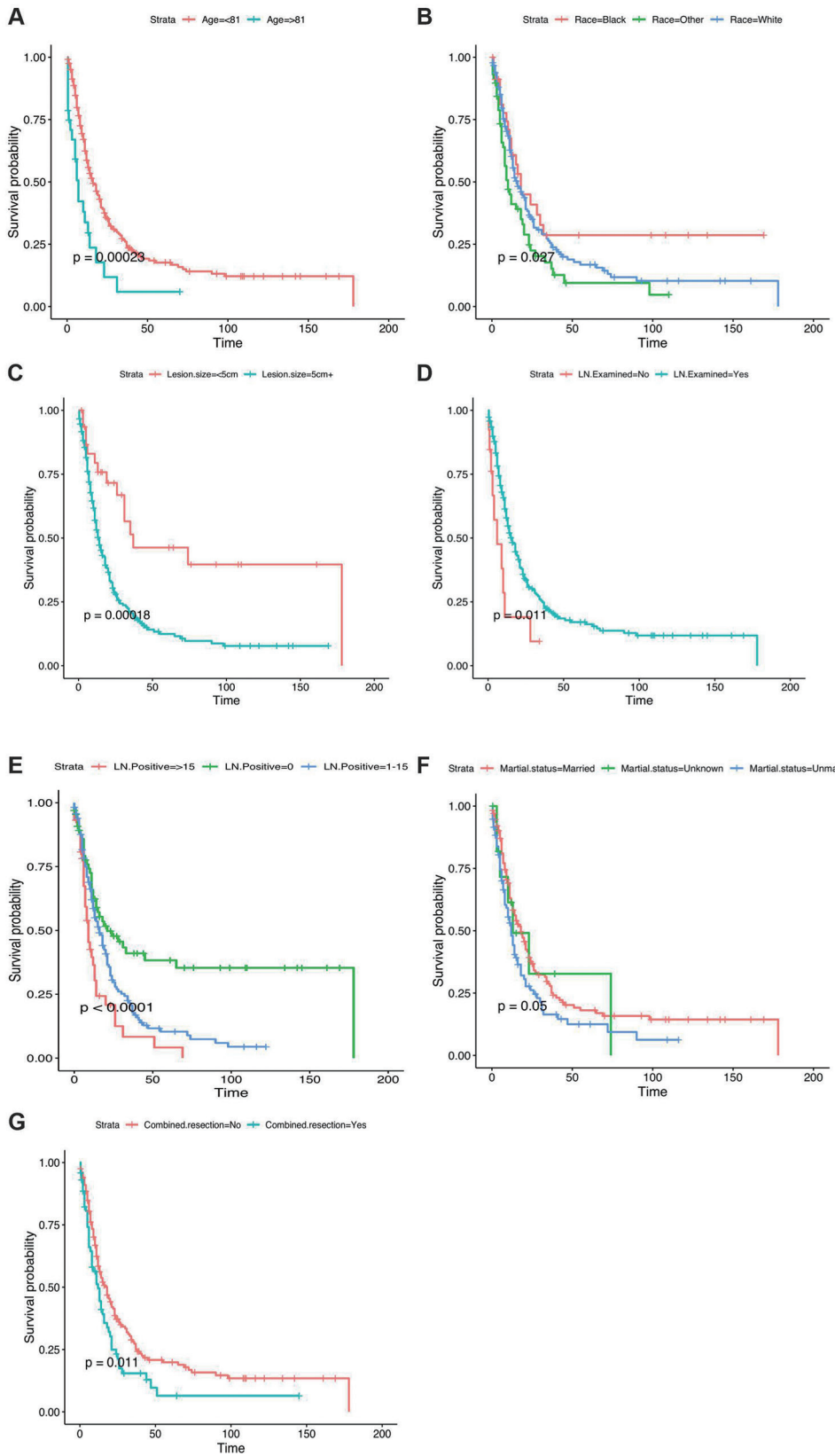**Figure S1** PCA and K-M survival curves indicates that the overall baseline characteristics between cohorts were similar. PCA, principal component analysis; K-M, Kaplan-Meier.
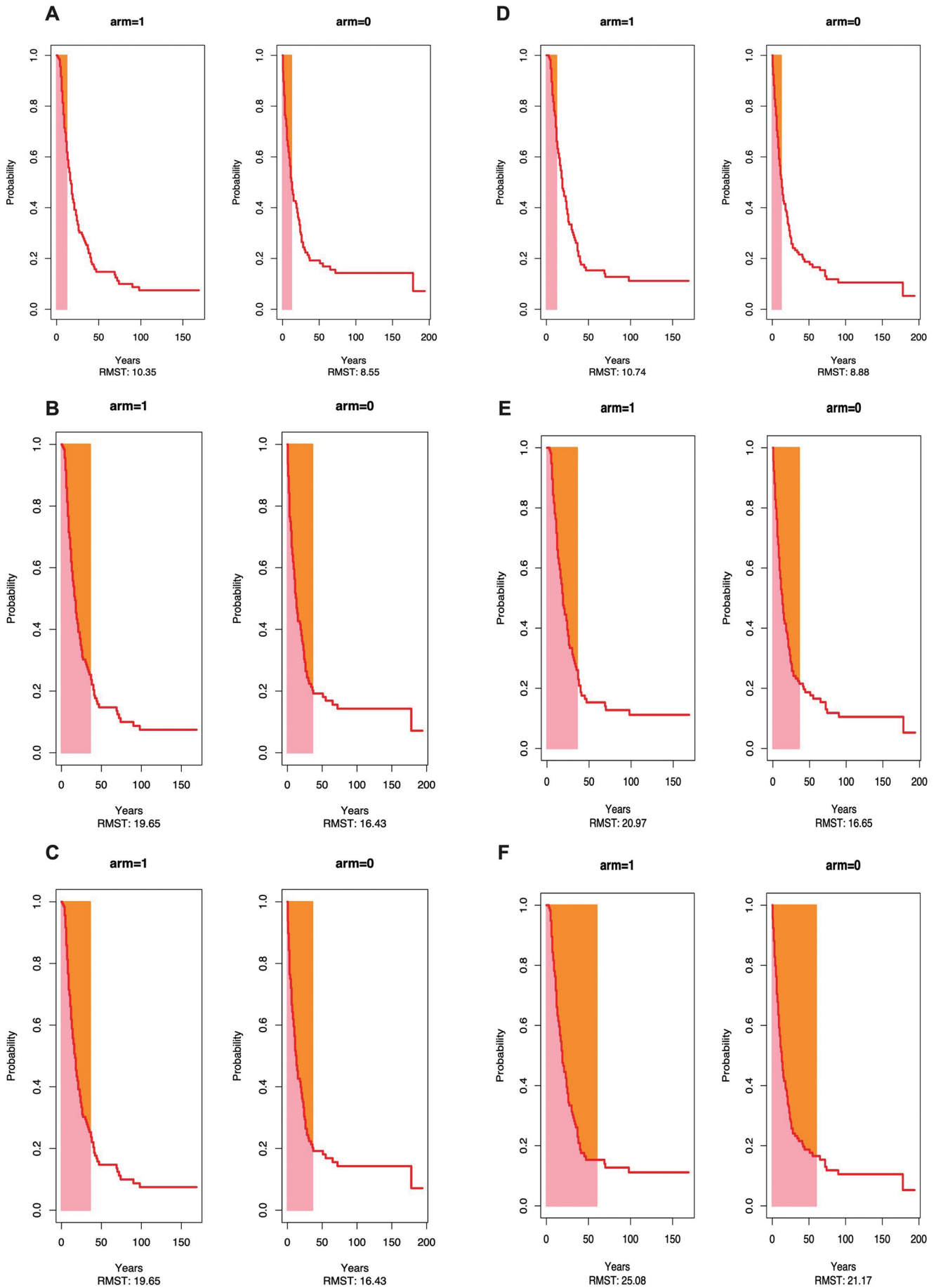

Figure S2 The LASSO regression used to select prognostic factors for OS and CSS. (A) LASSO coefficient for OS; (C) LASSO Cox analysis identified variables for OS; (B) LASSO coefficient profiles of variables for CSS; (D) LASSO Cox analysis identified variables for CSS. LASSO, least absolute shrinkage and selection operator; OS, overall survival; CSS, cancer-specific survival; C-index, concordance index.
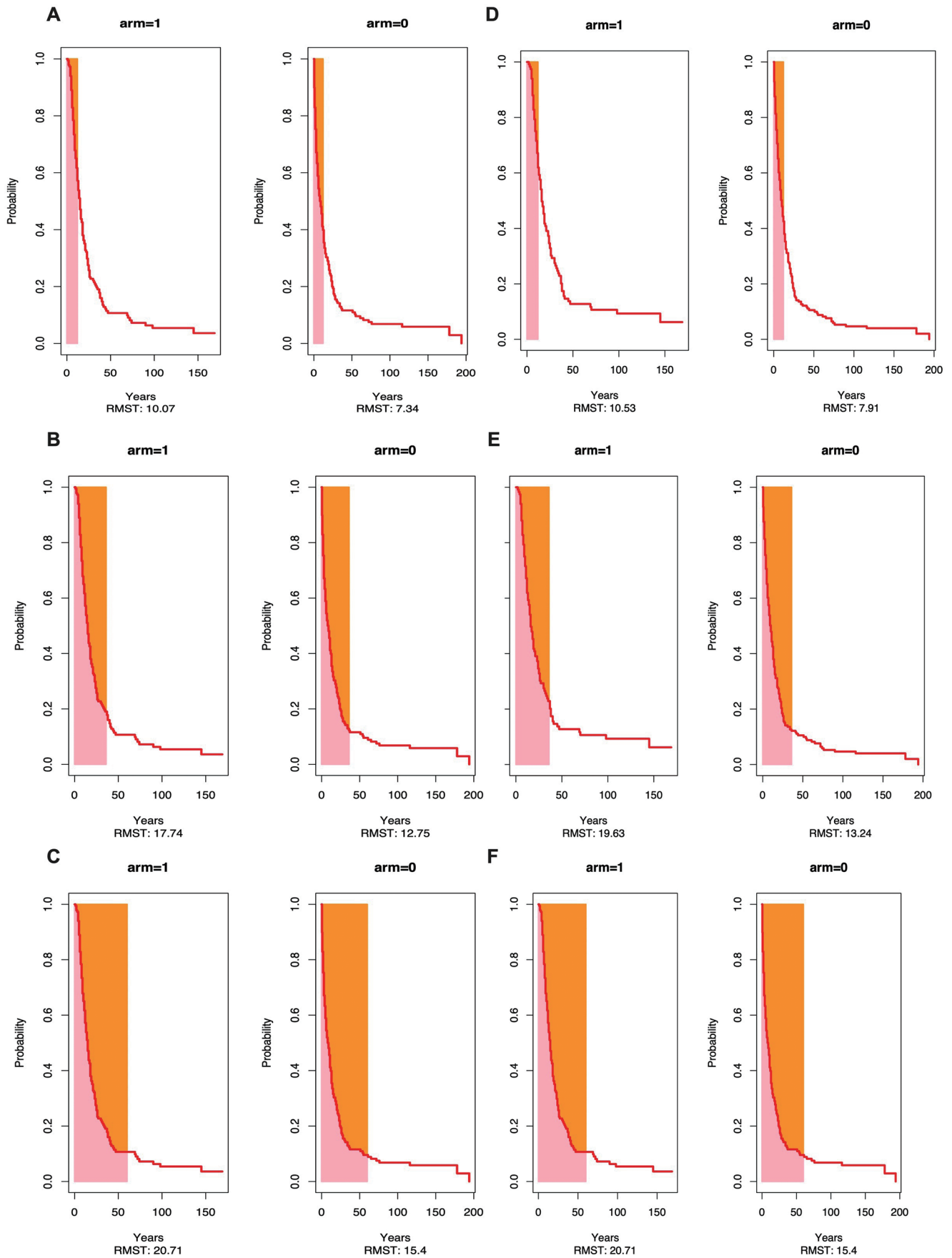
Figure S3 Risk group stratifications within each group for OS model. (A-F) are the OS curves. OS, overall survival; LN, lymph node.

Figure S4 Risk group stratifications within each group for CSS model. (A-G) are the CSS curves. CSS, cancer-specific survival; LN, lymph node.

Figure S5 TRMST analysis was used to analyze the actual therapeutical effect of CT (A-C) and RT (D-F). CSS was used as the endpoint of the study. Arm =1 represents the RT or CT group, while arm =0 represents the non-RT or non-CT group. (A,D) represents 1-year CSS, (B,E) represents 3-year CSS, (C,F) represents 5-year CSS. RMST, restrict mean survival time; CT, chemotherapy; RT, radiotherapy; CSS, cancer-specific survival.

Figure S6 RMST analysis was used to analyze the actual therapeutical effect of CT (A-C) and RT (D-F). OS was used as the endpoint of the study. Arm =1 represents the RT or CT group, while arm =0 represents the non-RT or non-CT group. (A,D) represents 1-year OS, (B,E) represents 3-year OS, (C,F) represents 5-year OS. RMST, restrict mean survival time; CT, chemotherapy; RT, radiotherapy; OS, overall survival.