

Figure S1:

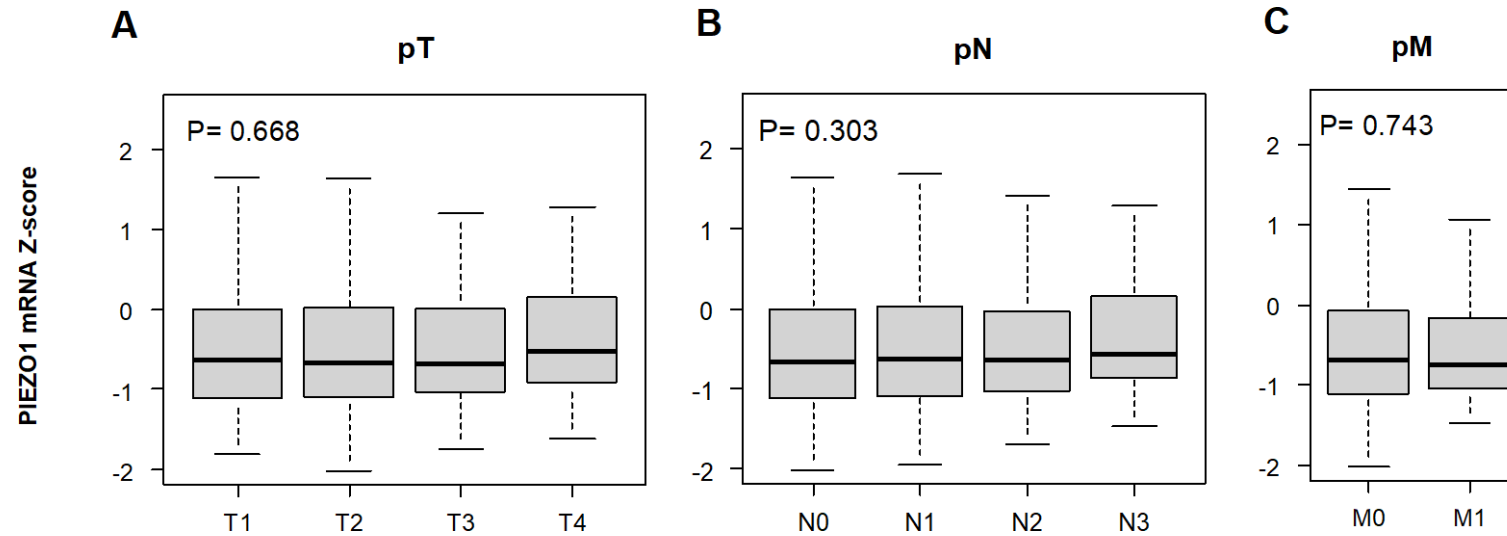


Figure S1: PIEZO1 expression and AJCC TNM stage in TCGA breast cancer cohort. (A) PIEZO1 mRNA expression by tumor size (pT) in TCGA breast cancer cohort. pT1: n=279; pT2: n=633; pT3: n=138; pT4: n=40. **(B)** PIEZO1 mRNA expression by spread of cancer to lymph nodes (pN) in the whole cohort. pN0: n=515, pN1; n=361, pN2; n=120 and pN3; n=77. **(C)** PIEZO1 expression levels by metastasis status (pM). pM0; n=909, pM1; n=22. Continuous value between two groups was compared by Student's t-test, and ANOVA followed by post hoc Tukey was used for comparison of more than two groups.

Figure S2

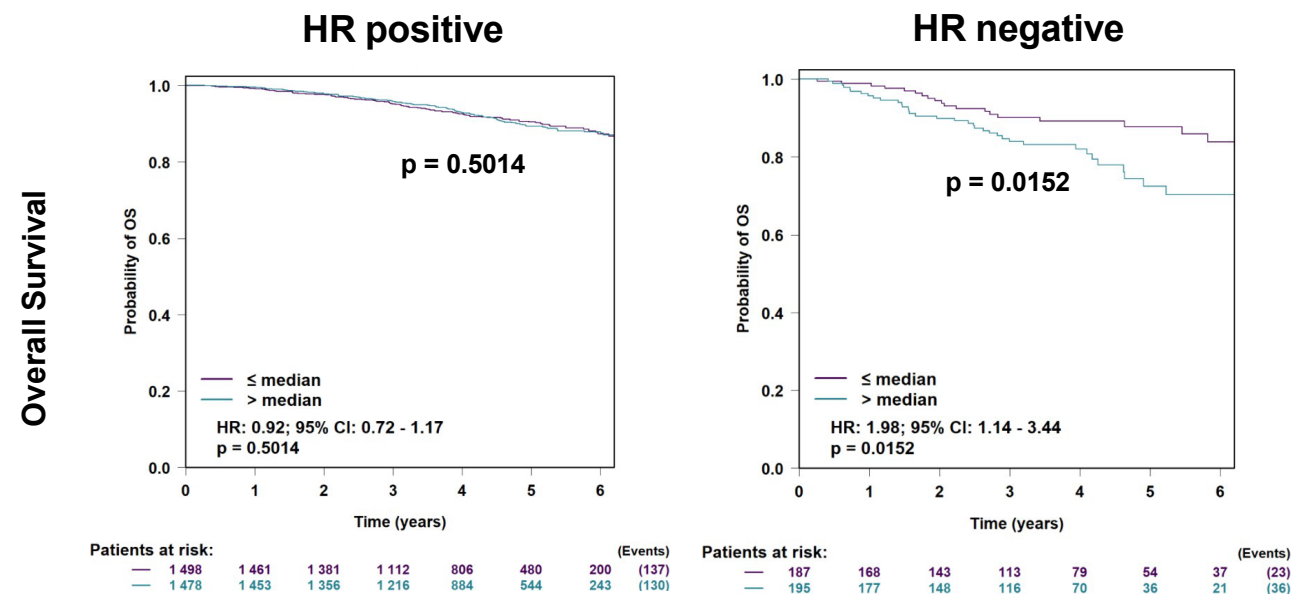


Figure S2: Breast cancer patient survival by PIEZO1 expression in RNA-seq cohorts from bc-GenExMiner. Overall survival by PIEZO1 expression in the HR positive and negative cohorts. Survival difference was estimated by Cox Univariate analysis.

Figure S3

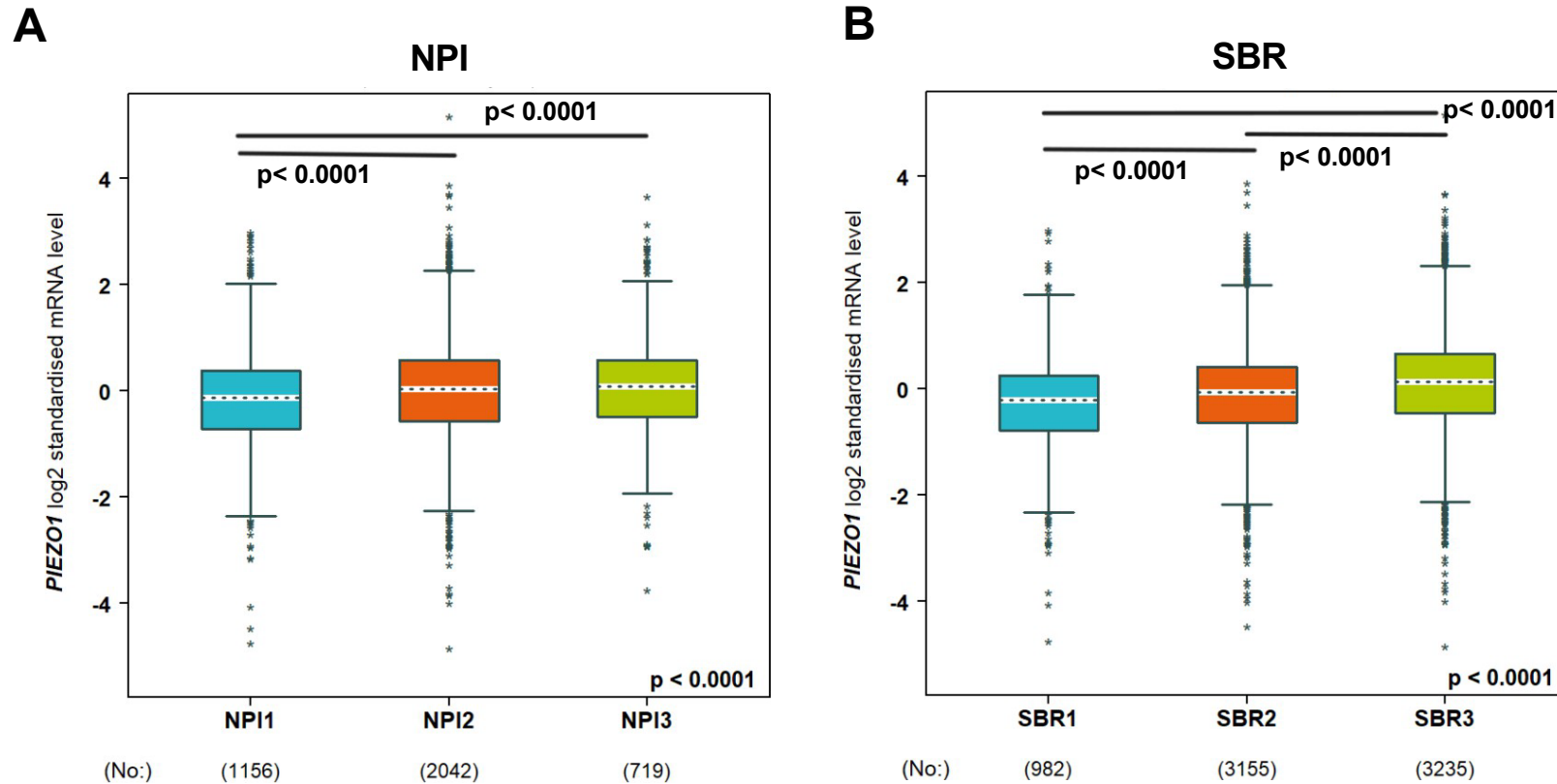


Figure S3: *PIEZO1* expression by clinical prognostic indexes from whole cohort of bc-GenExMiner. (A) *PIEZO1* expression amongst Nottingham Prognostic Index values and (B) amongst Scarff- Bloom-Richardson grade values, based on all DNA microarray data. Dunnett-Tukey-Kramer's test used for statistical analysis.

Figure S4

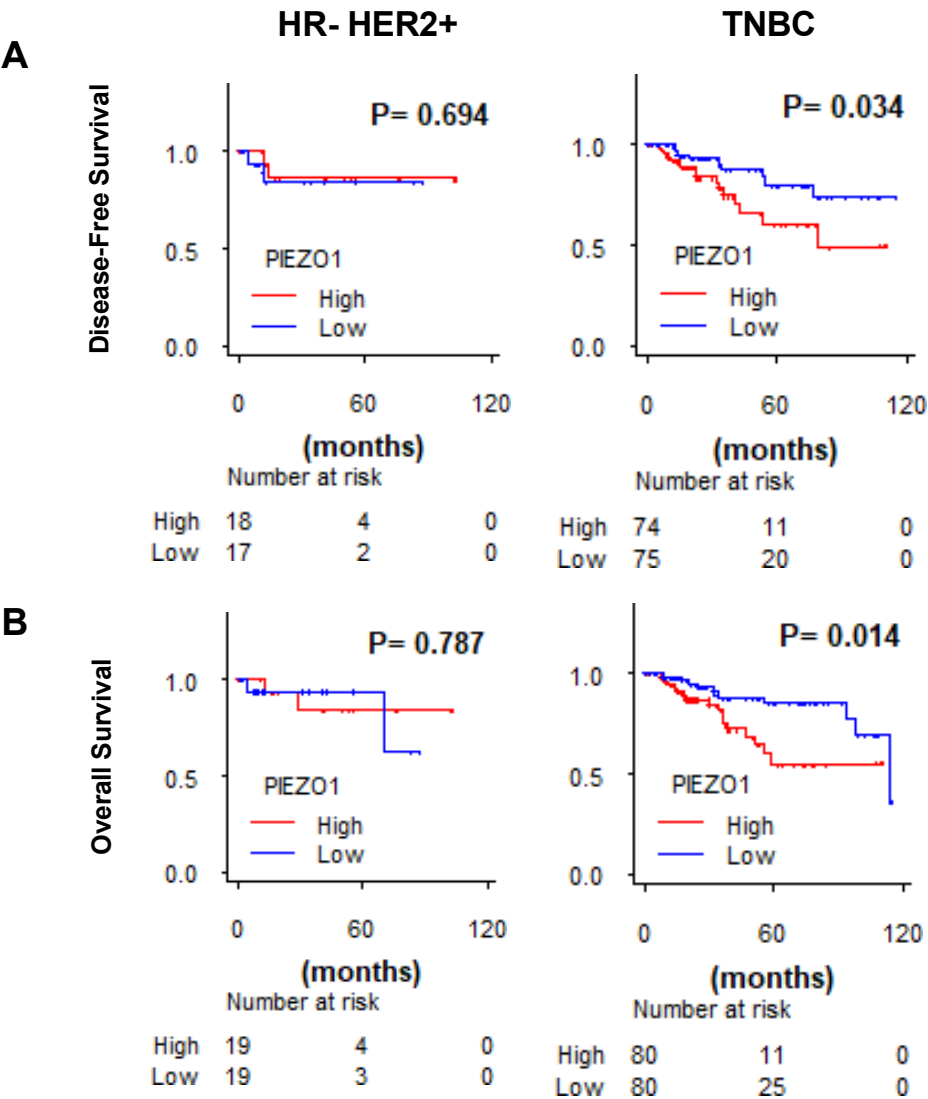


Figure S4: Breast cancer patient survival by PIEZO1 expression in TCGA. (A) Disease-free survival and **(B)** overall survival by PIEZO1 expression in the hormone receptor (HR) negative HER2 positive vs triple negative breast cancer (TNBC) cohorts. Survival difference was estimated by log-rank test.

Figure S5

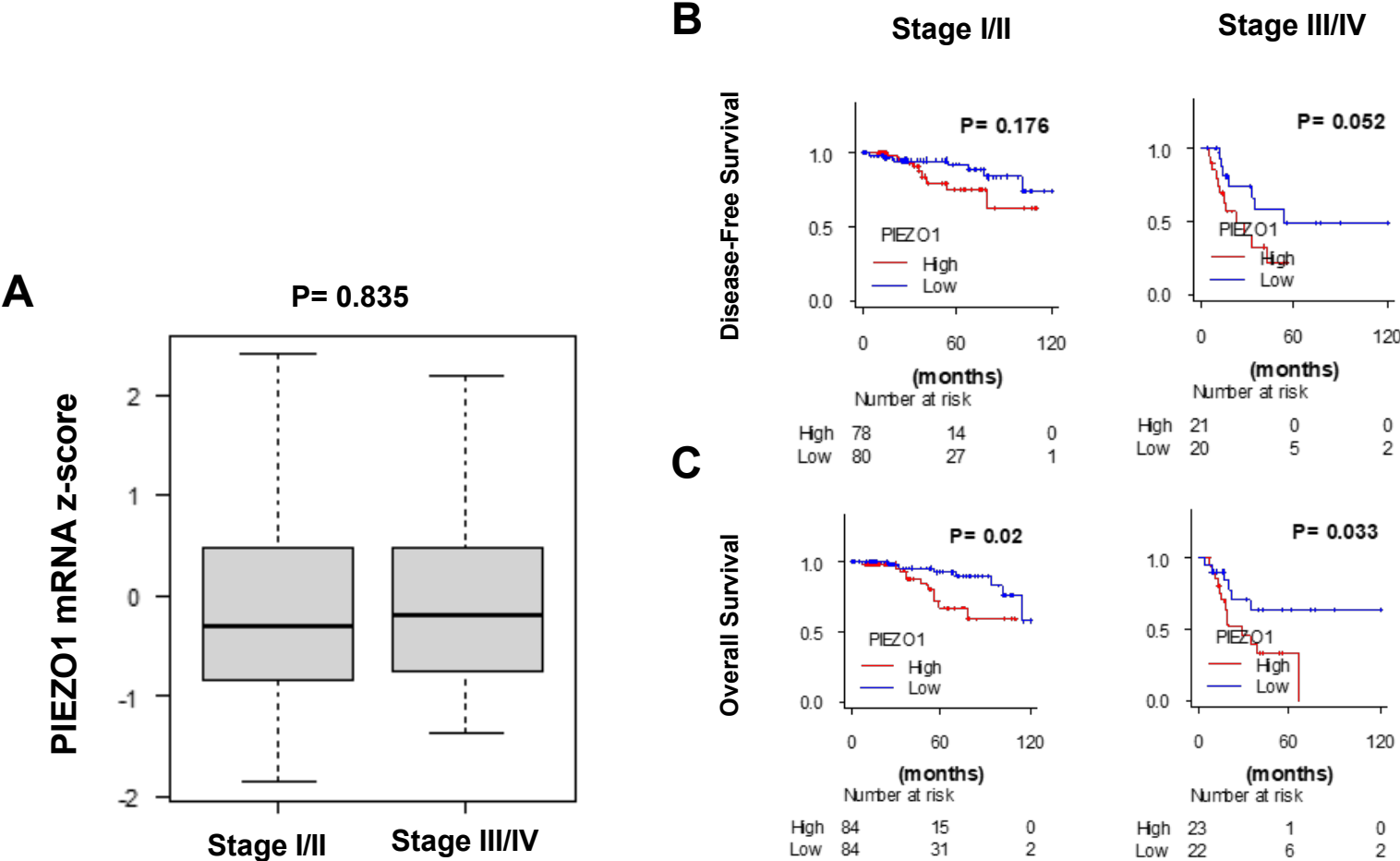


Figure S5: PIEZO1 prognostic value by stage in HR negative breast cancer TCGA cohort. (A) PIEZO1 expression by breast cancer stage. Continuous value between two groups was compared by Student's t-test. **(B)** Disease-free and **(C)** overall survival by PIEZO1 expression by breast cancer stage. Survival difference was estimated by log-rank test.

Figure S6

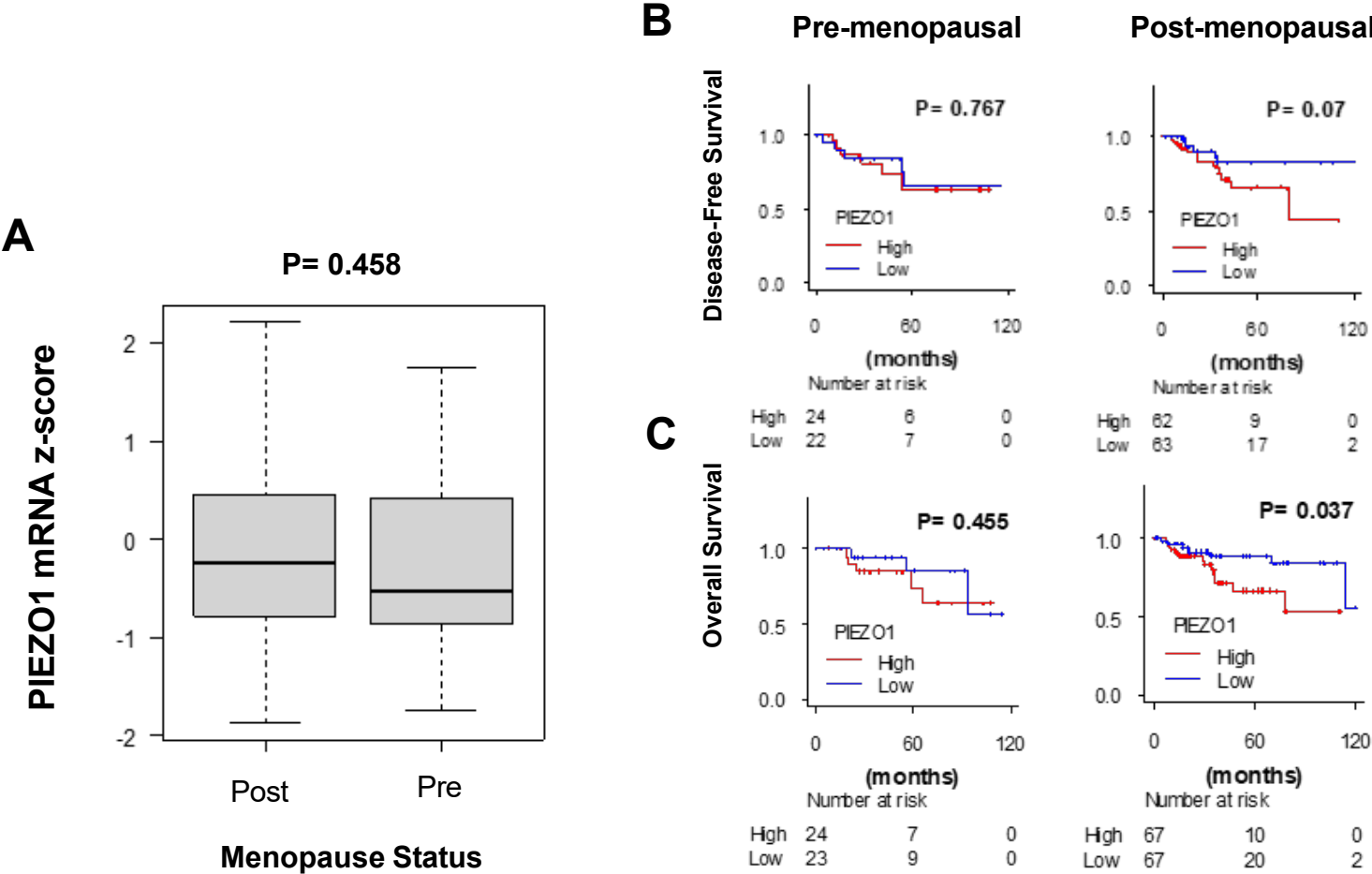


Figure S6: PIEZO1 prognostic value by menopause status in HR negative breast cancer TCGA cohort.
(A) PIEZO1 expression in pre-menopausal vs post-menopausal patients. Continuous value between two groups was compared by Student's t-test. **(B)** Disease-free survival and **(C)** overall survival by PIEZO1 expression by menopause status. Survival difference was estimated by log-rank test.

Figure S7

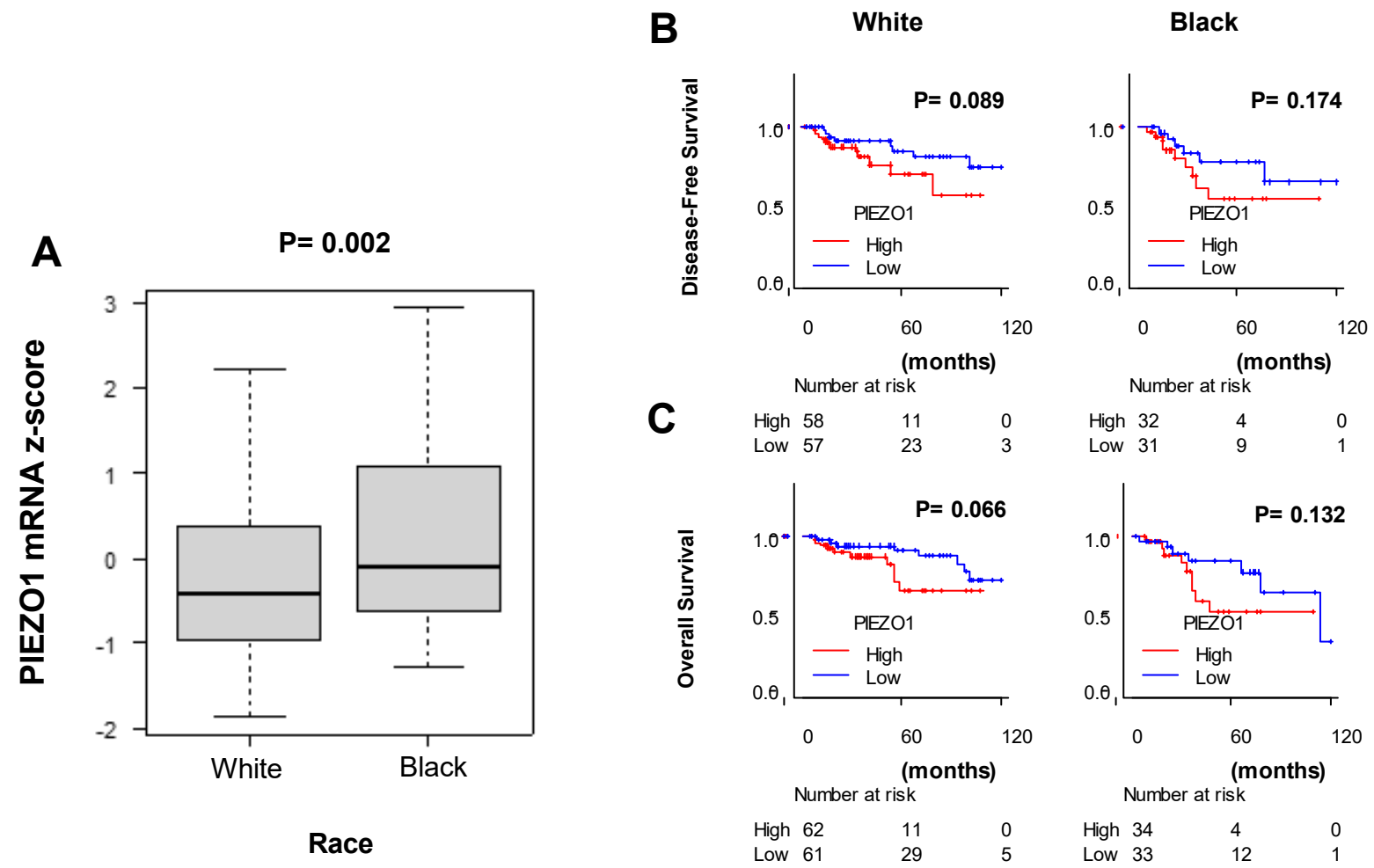


Figure S7: PIEZO1 prognostic value by race in HR negative breast cancer TCGA cohort. (A) PIEZO1 expression in White vs Black patients. Continuous value between two groups was compared by Student's t-test. **(B)** Disease-free survival and **(C)** Overall survival by PIEZO1 expression by race. Survival difference was estimated by log-rank test.

Figure S8:

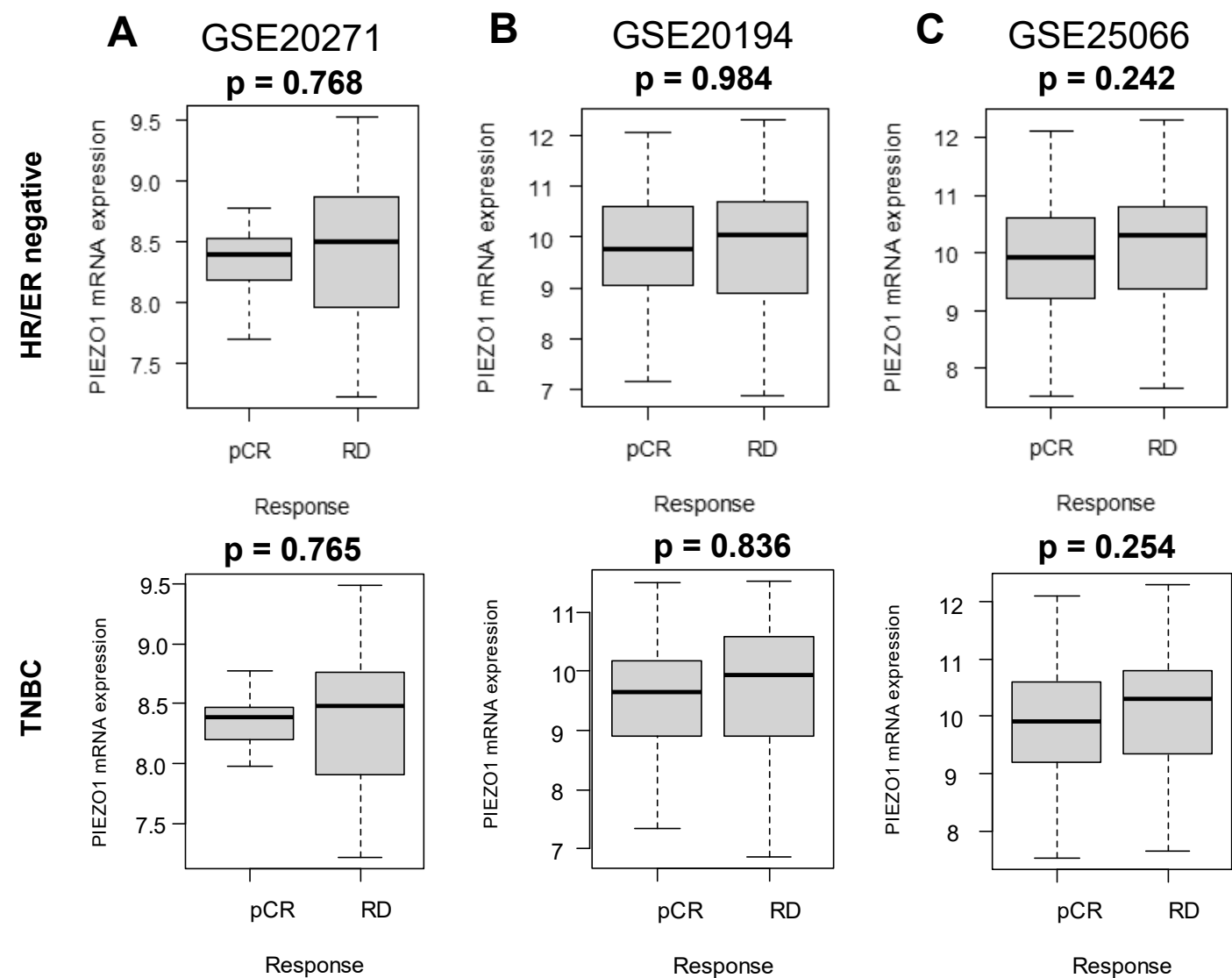


Figure S8: PIEZO1 expression by response to neoadjuvant chemotherapy in breast cancer patients.
(A) PIEZO1 expression in pre-treatment tumor by clinical response (pCR: pathological complete response; RD: residual disease) following neoadjuvant chemotherapy treatment in HR negative tumors and TNBC tumors of GSE20271, (B) HR negative and TNBC of GSE20194, and (C) ER negative and ER negative HER2 negative of GSE25066. Continuous value between two groups was compared by Student's t-test.