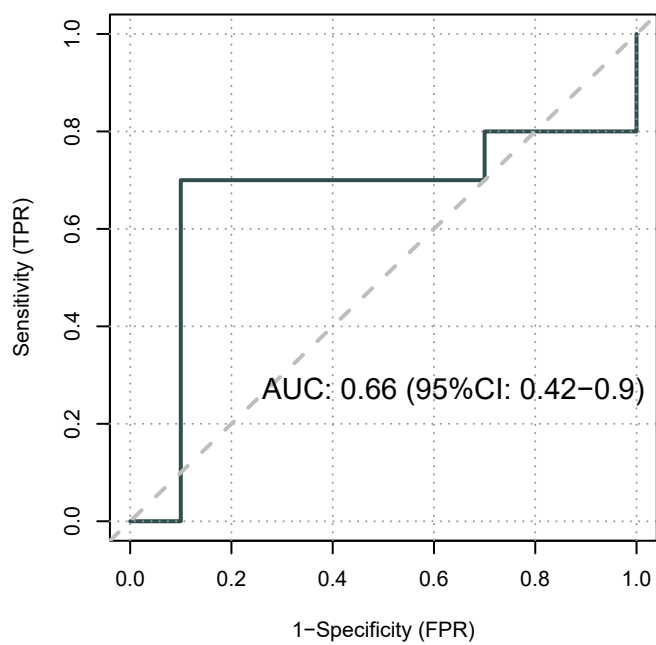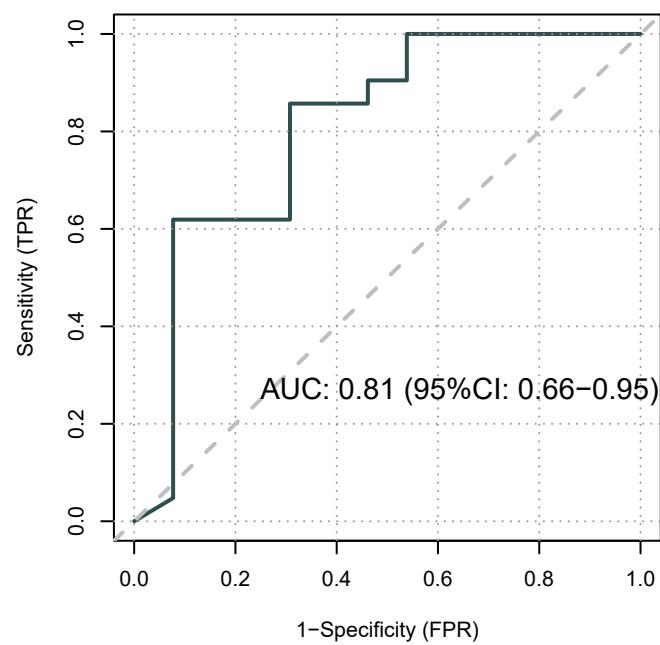**Figure S1. Boxplots depicting the correlation of immune cells infiltration with Stem.Sig and TMB.** (Mann-Whitney U test; ns, not significant; *P < 0.05, **P < 0.01, ***P < 0.001, ****P < 0.0001)

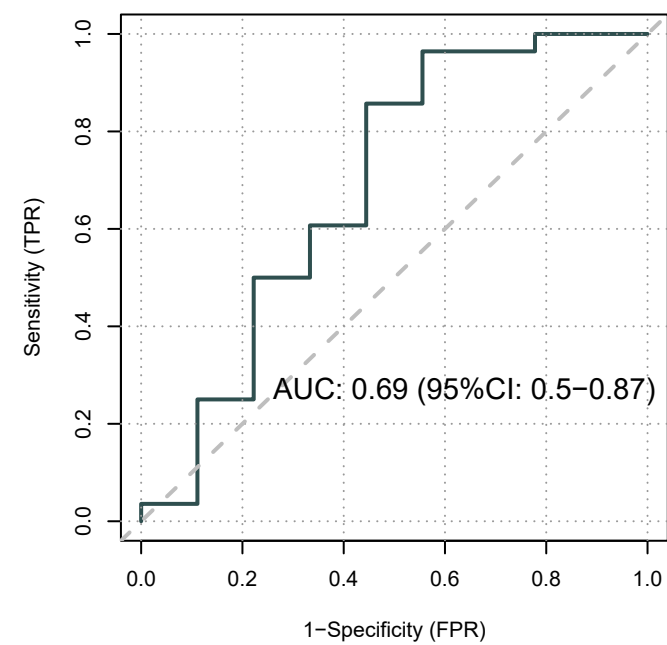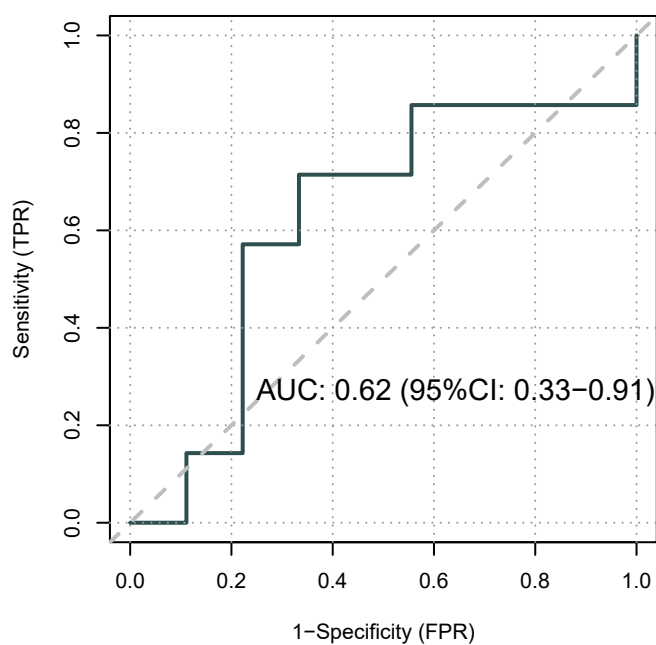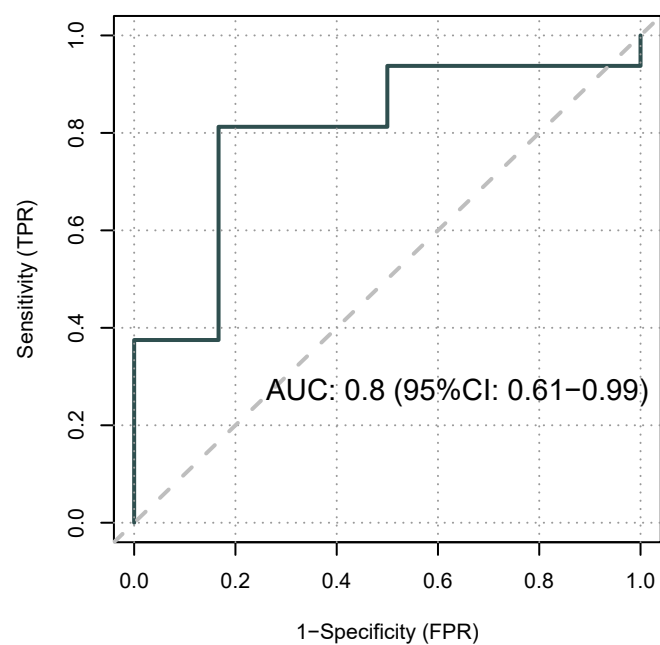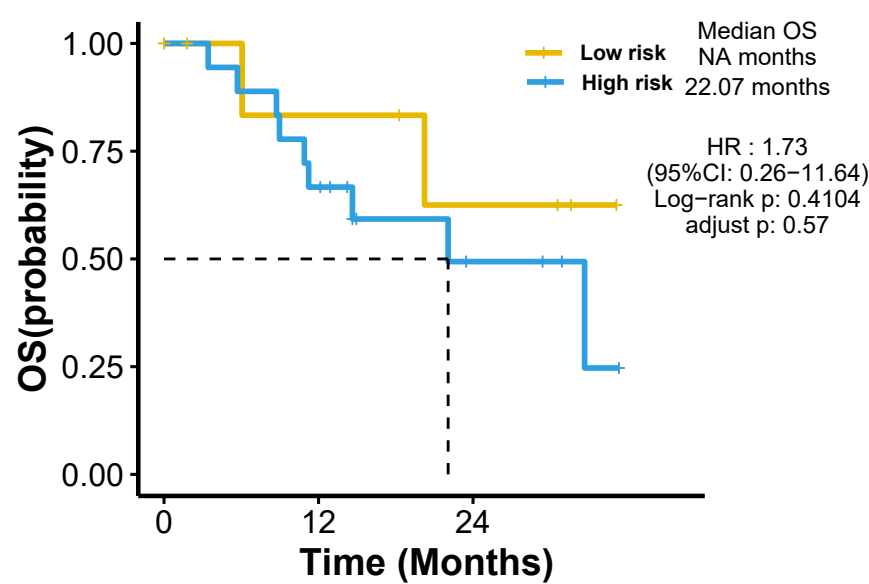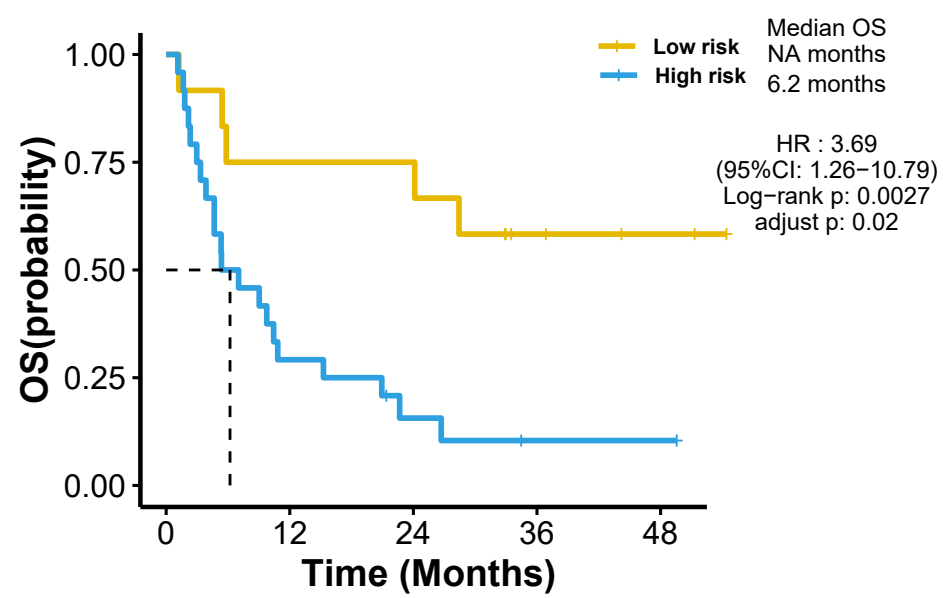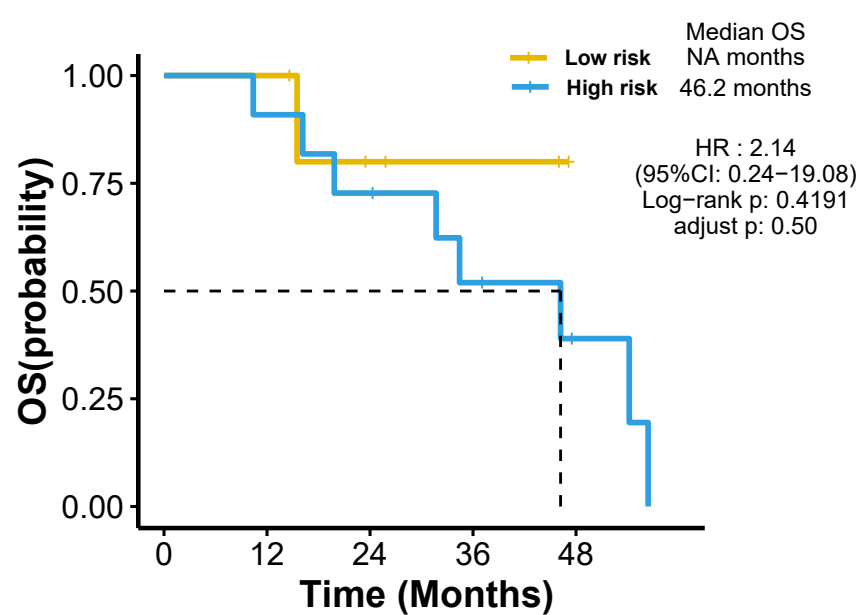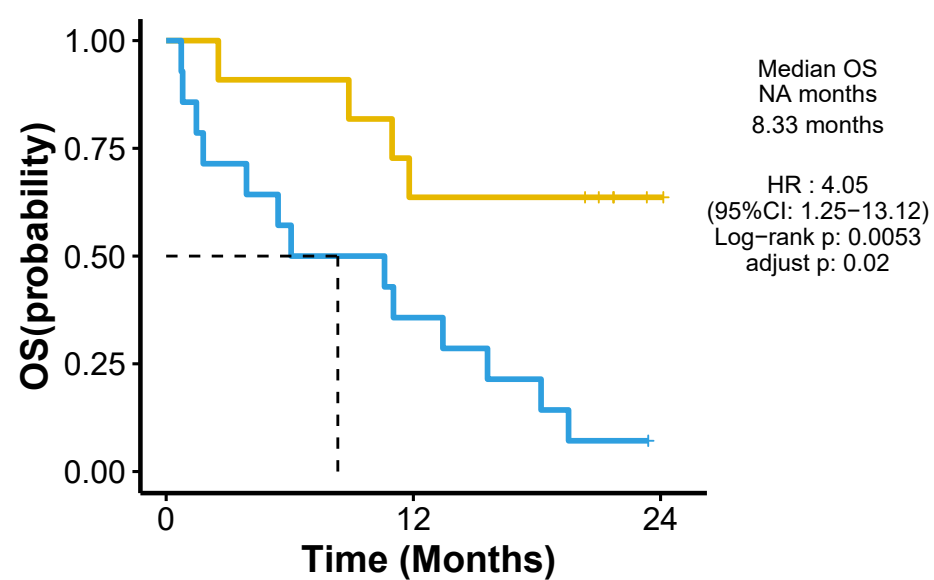**Figure S2. Subgroup analysis of testing set.** A. ROC depicting the performance of Stem.Sig individual testing cohort. B. Kaplan-Meier survival plots of individual testing cohort.
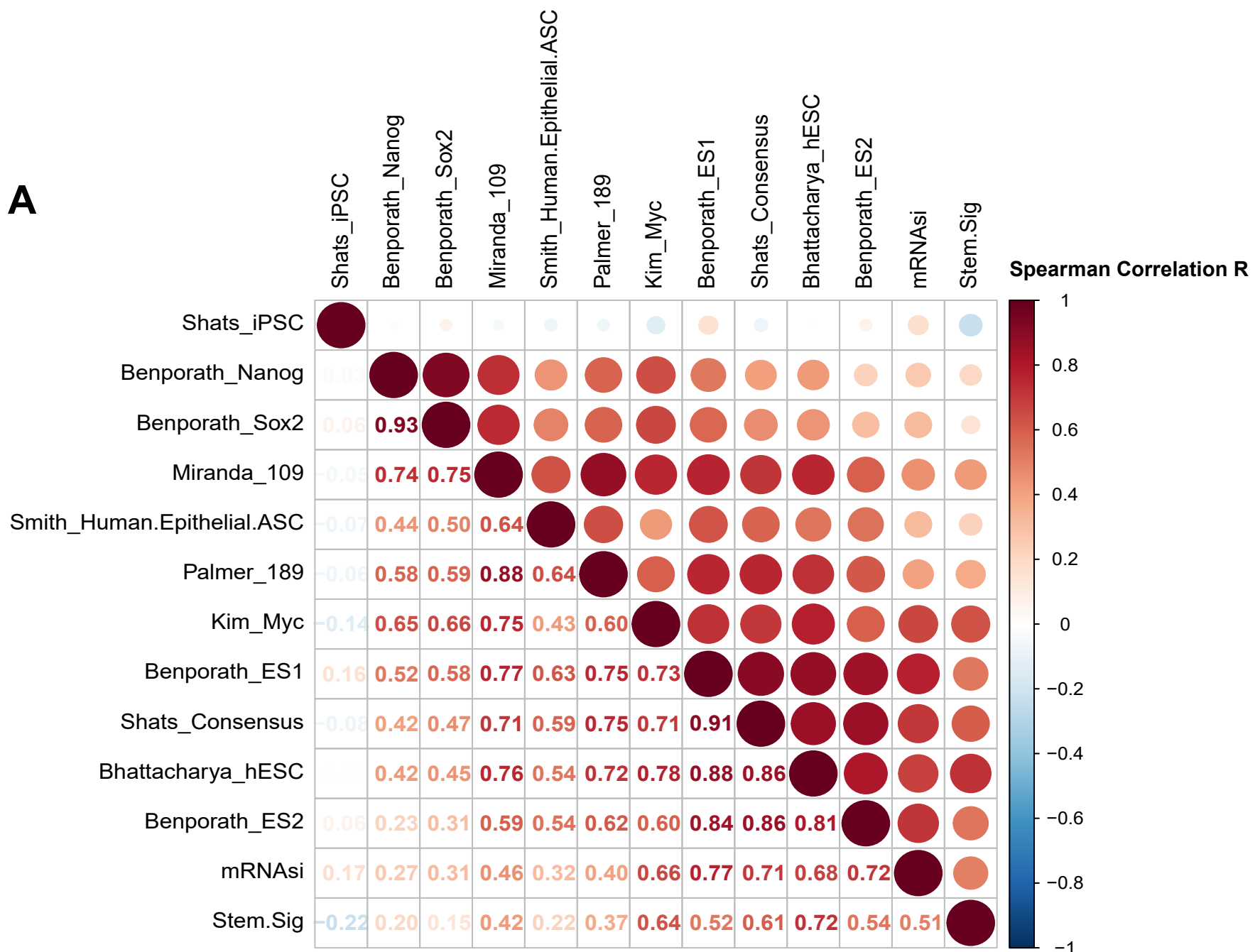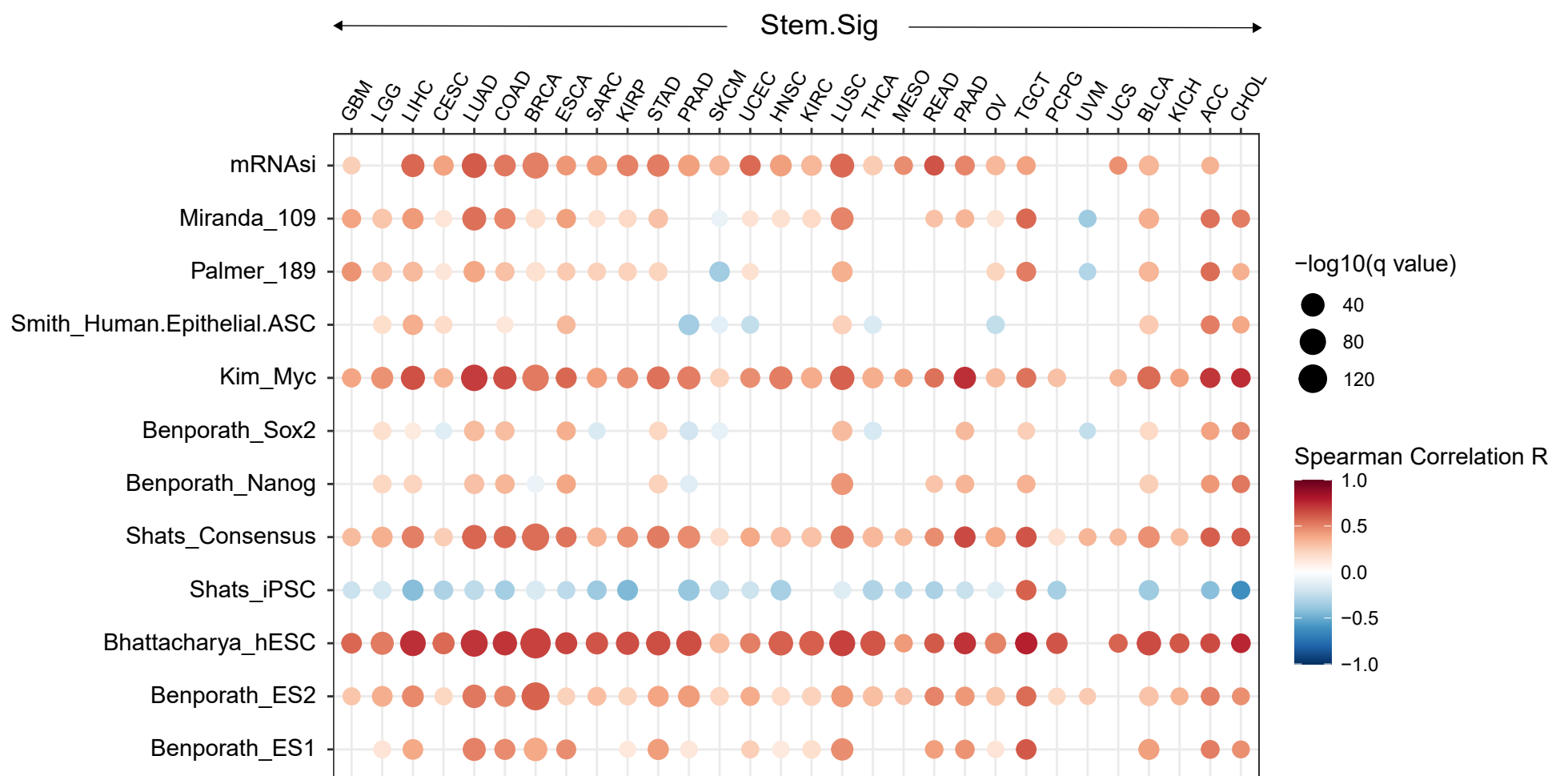
Figure S3. Correlation plot of Stem.Sig and other stemness signatures. Stem.Sig positively associated with all stemness signatures except Shats_iPSC, which does not show significantly positive correlation with any other stemness signature[1–6].
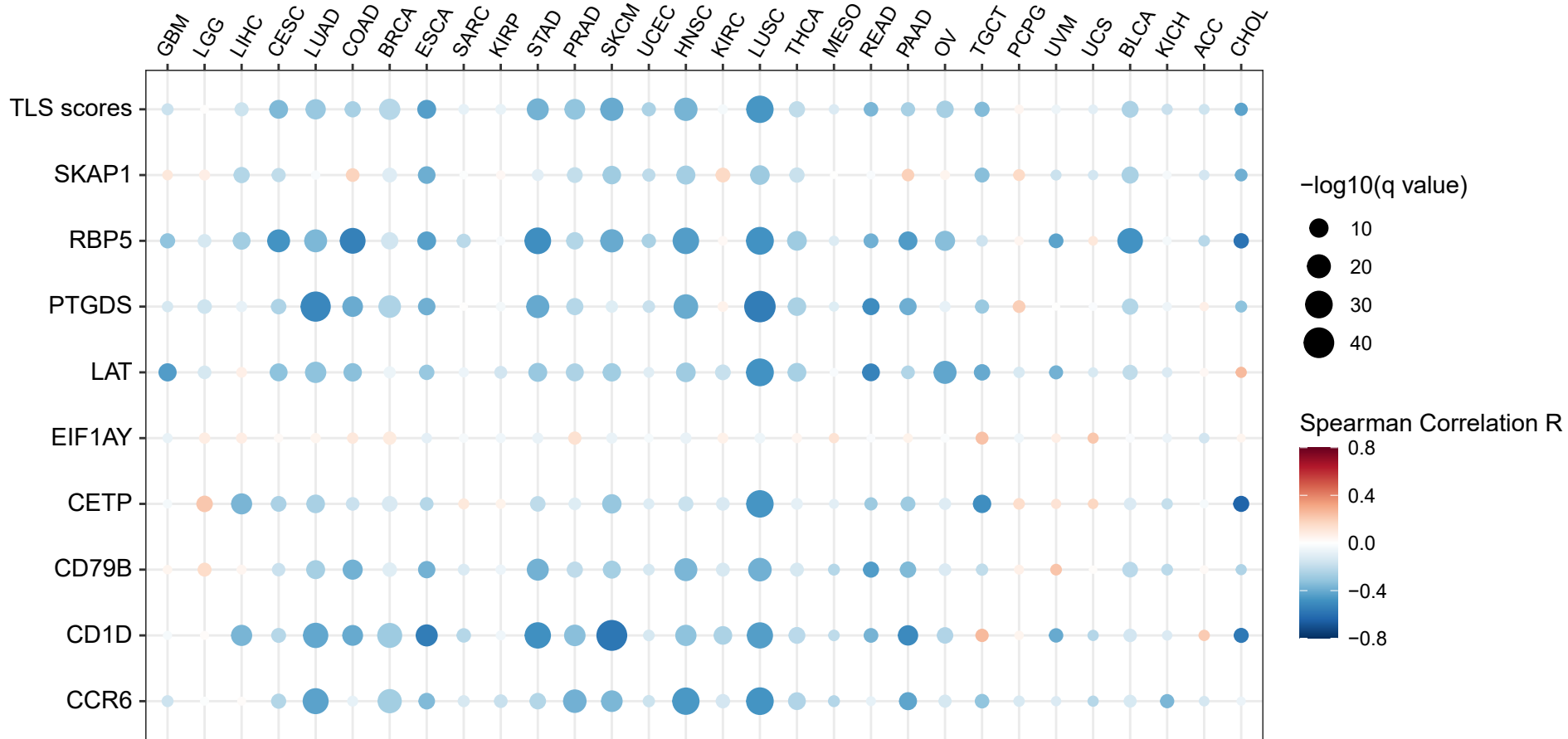
Figure S4. Association Stem.Sig and expression level of TLS-related genes. TLS score was calculated as the mean gene expression of TLS-related genes.

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