



Fig. S1. Overview of the construction and validation of immune-related gene pairs signature (IRGPI). Four datasets were included in this study. TCGA dataset was used for training cohort, and GSE13898, GSE19417, GSE53625 were merged to the meta-validation cohort. The training cohort was used to build an IRGPI. The IRGPI was verified on the meta-validation cohort and independent validation cohorts.