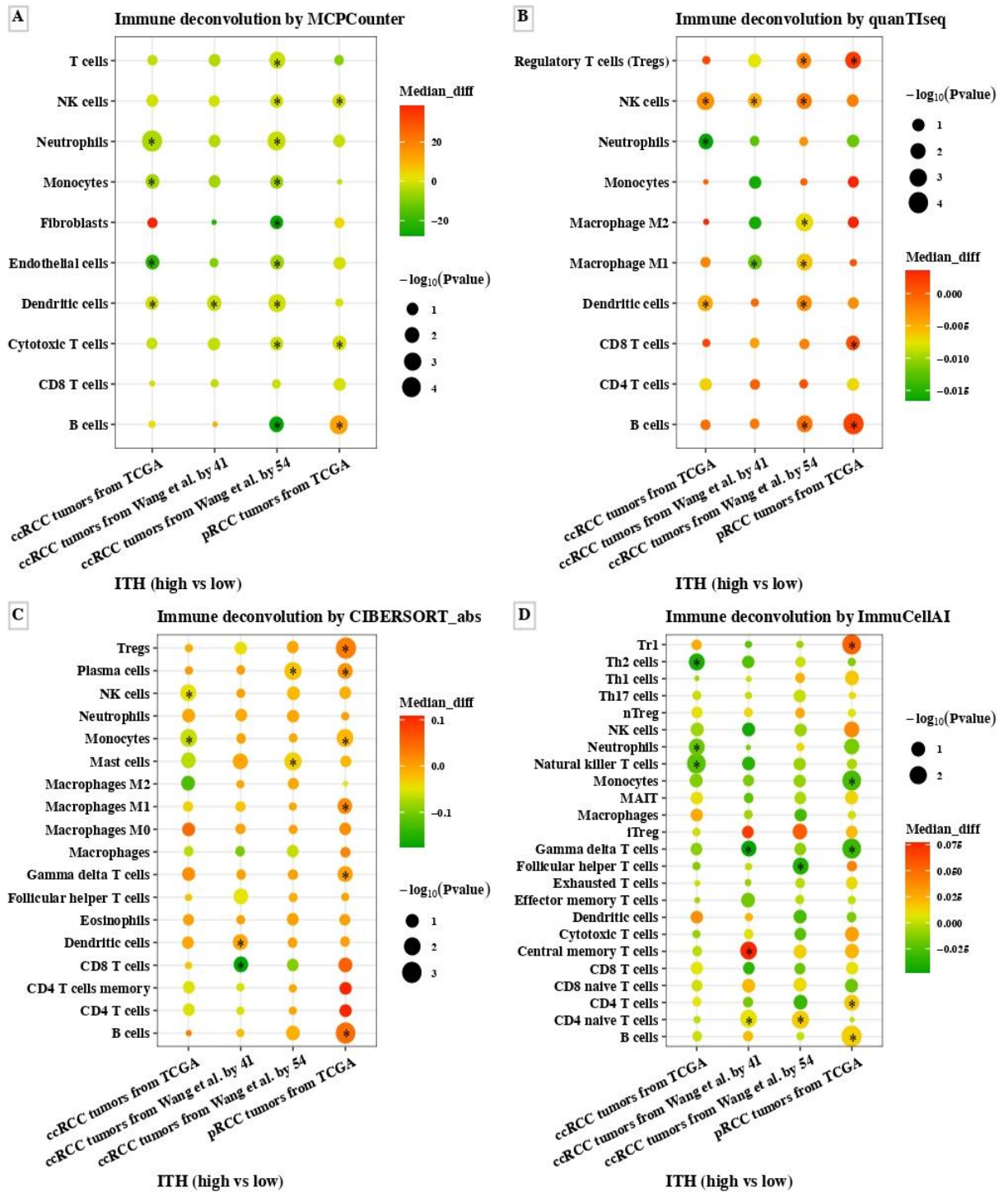
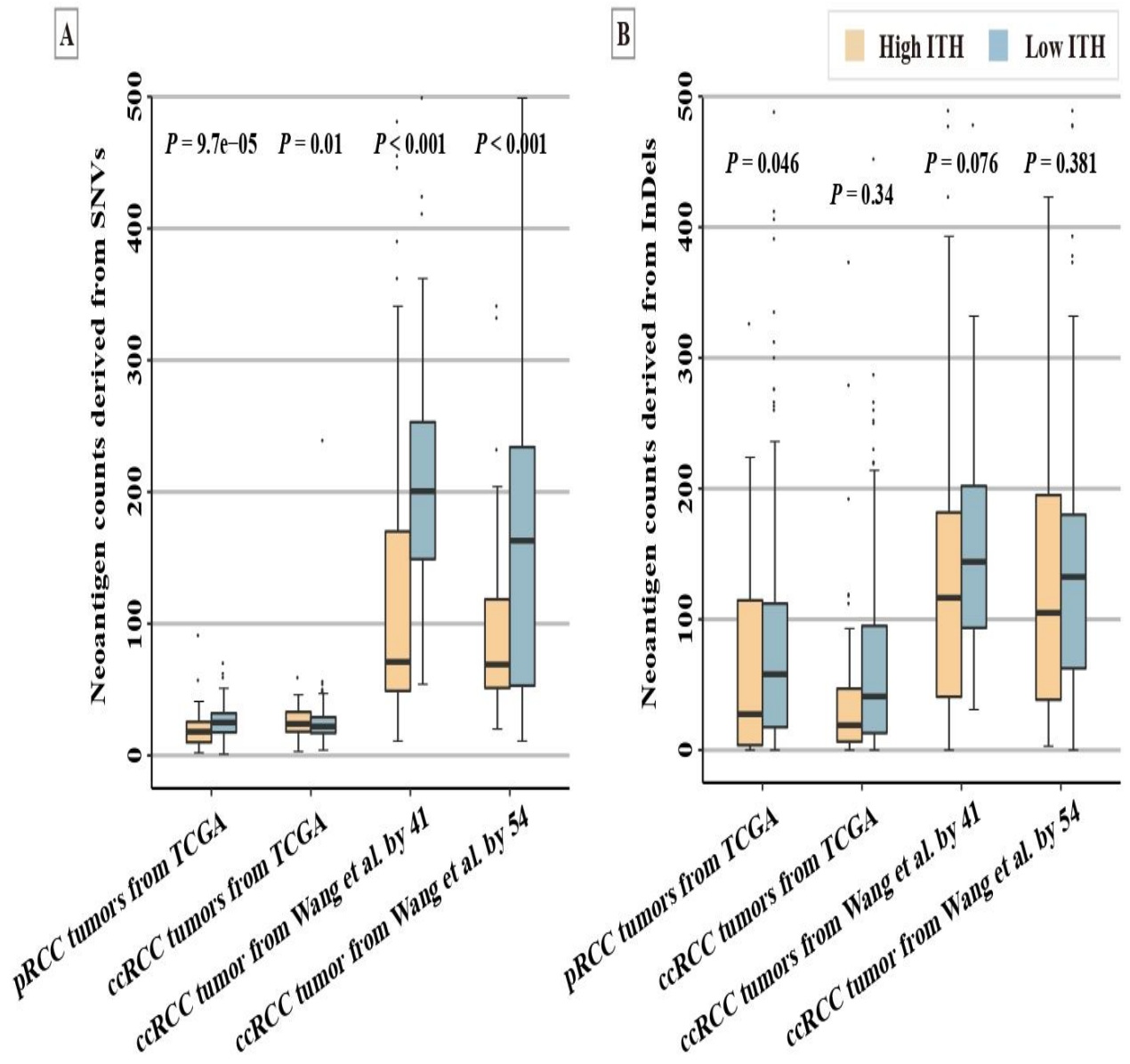


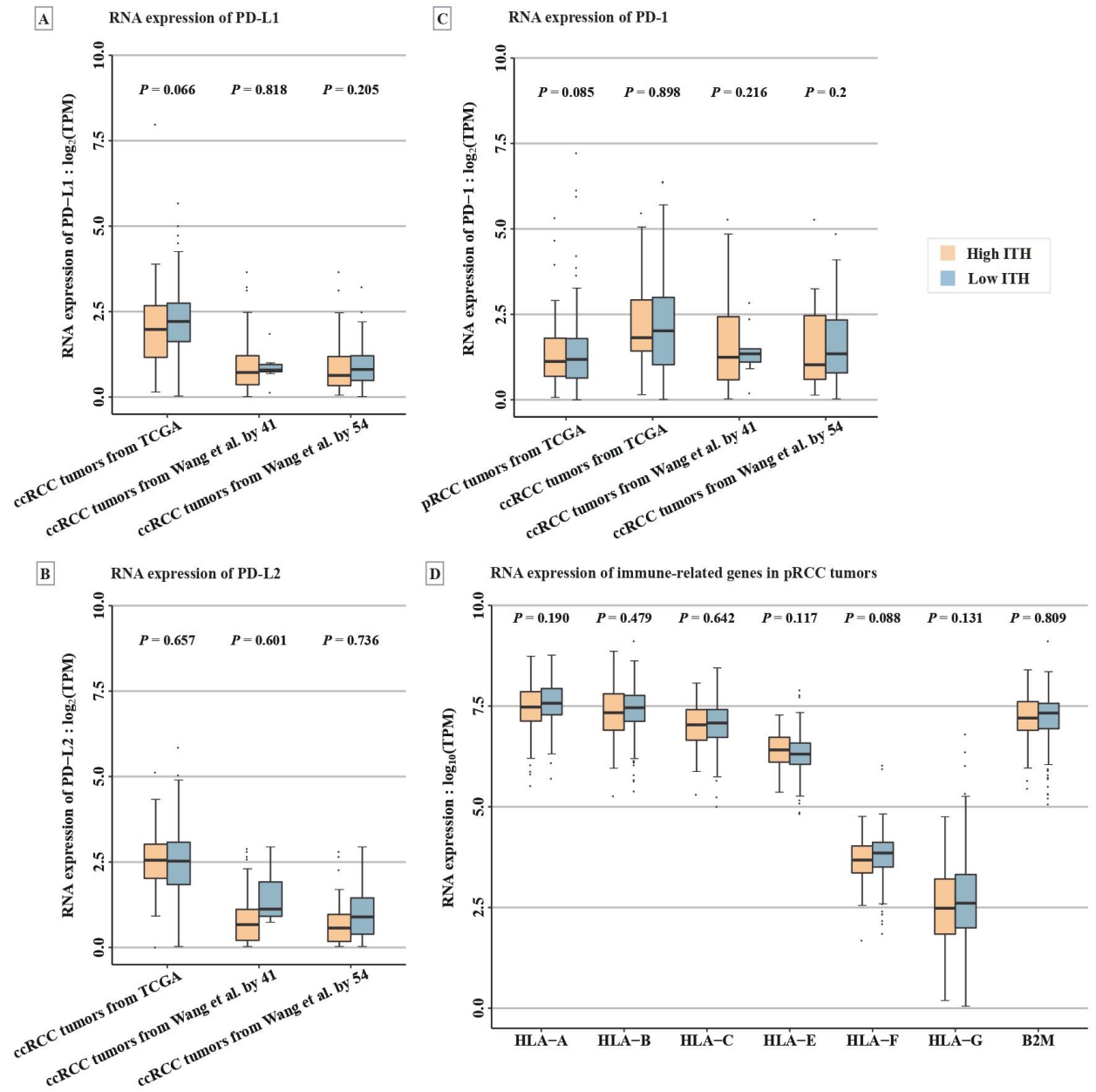
**Figure S1.** MATH score among the samples included in this study (**A**: ccRCC from TCGA, **B**: ccRCC from Wang *et al.*, **C**: metastatic ccRCC from the clinical trial of anti-PD-1 therapy, **D**: pRCC from TCGA).



**Figure S2.** Immune cell infiltration in high- versus low-ITH tumors by four different tools (**A**: MCPCounter, **B**: quanTIseq, **C**: CIBERSORT, **D**: ImmuCellAI).



**Figure S3.** Neoantigen counts derived from SNVs or InDels in high- versus low-ITH tumors (**A**: SNV, **B**: InDel).



**Figure S4.** RNA expression of immune-related genes in high- versus low-ITH tumors (**A**: RNA expression of PD-L1 in ccRCC tumors, **B**: RNA expression of PD-L2 in ccRCC tumors, **C**: RNA expression of PD-1 in ccRCC and pRCC tumors, **D**: RNA expression of HLA class I genes in pRCC tumors.).