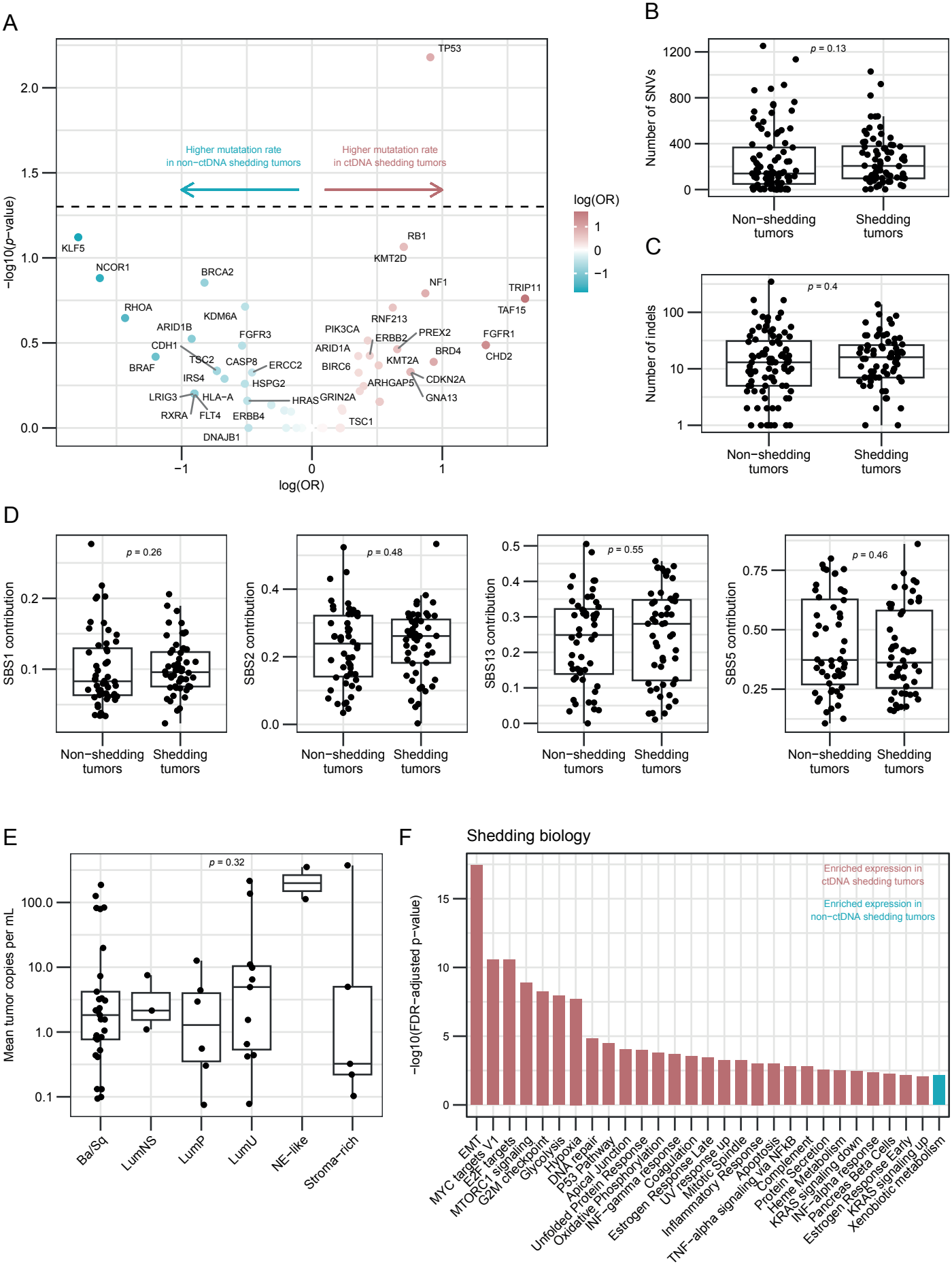
Supplementary Figure 4. Biological characteristics of ctDNA shedding tumors



A, Volcano plot showing mutations associated with either ctDNA shedding or non-shedding tumors. Dashed horizontal line indicates p-values of 0.05 (non-adjusted). Statistical significance was assessed by Fisher's exact test. **B,** Association between single-nucleotide variations (SNVs) and ctDNA status at baseline including both cohorts. **C,** Association between indels and ctDNA status at baseline including both cohorts. **D,** Association between bladder cancer related mutational signatures and ctDNA status at baseline including both cohorts. **E,** Association between mean tumor copies per mL and consensus MIBC classification of primary tumor. **F,** Gene set enrichment analysis of tumors using the Hallmark pathways comparing baseline ctDNA shedding and non-shedding patients from both cohorts. Gene sets are ordered by decreasing *q*-values and only gene sets with *q*-values below 0.01 are shown.