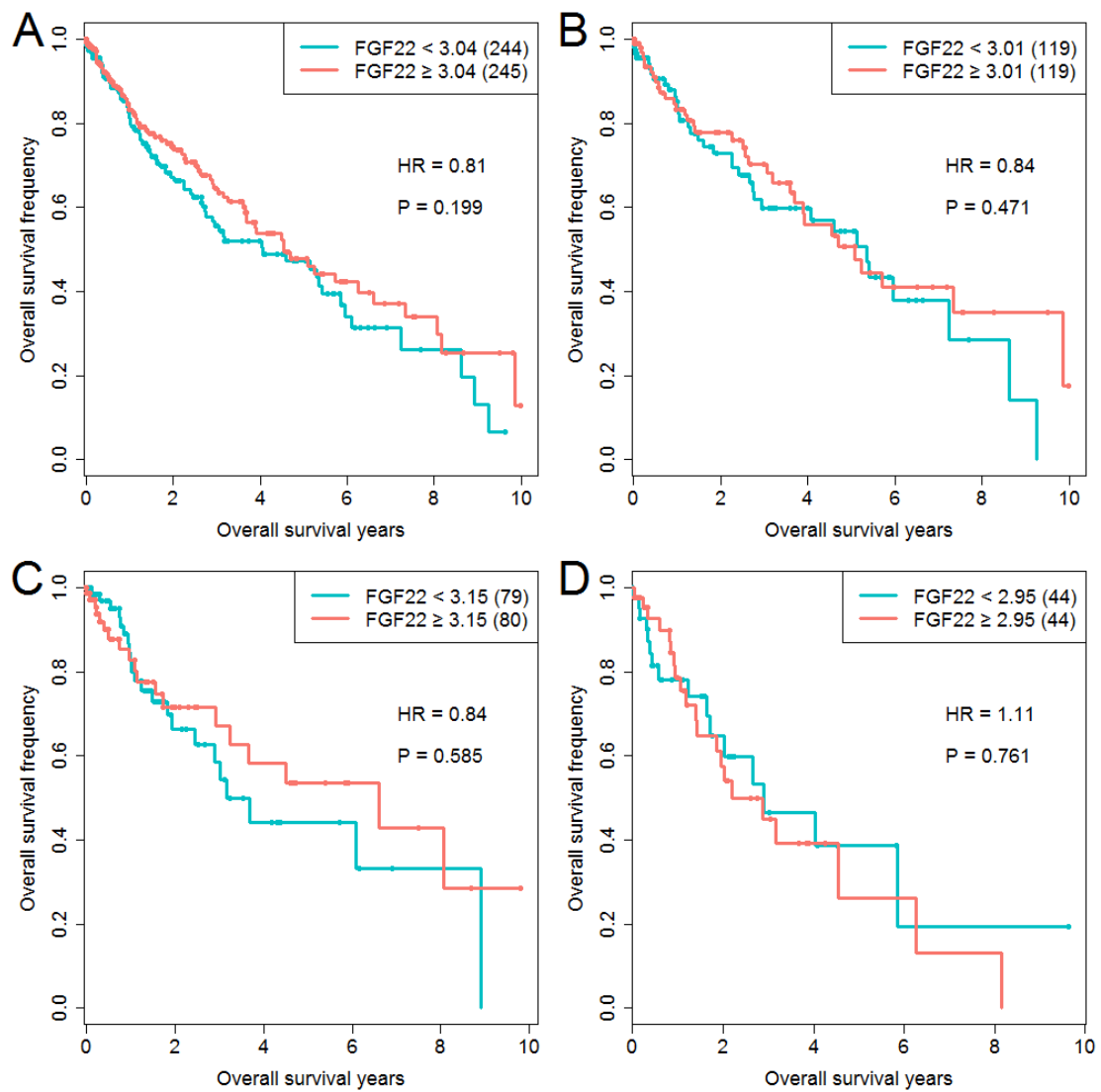
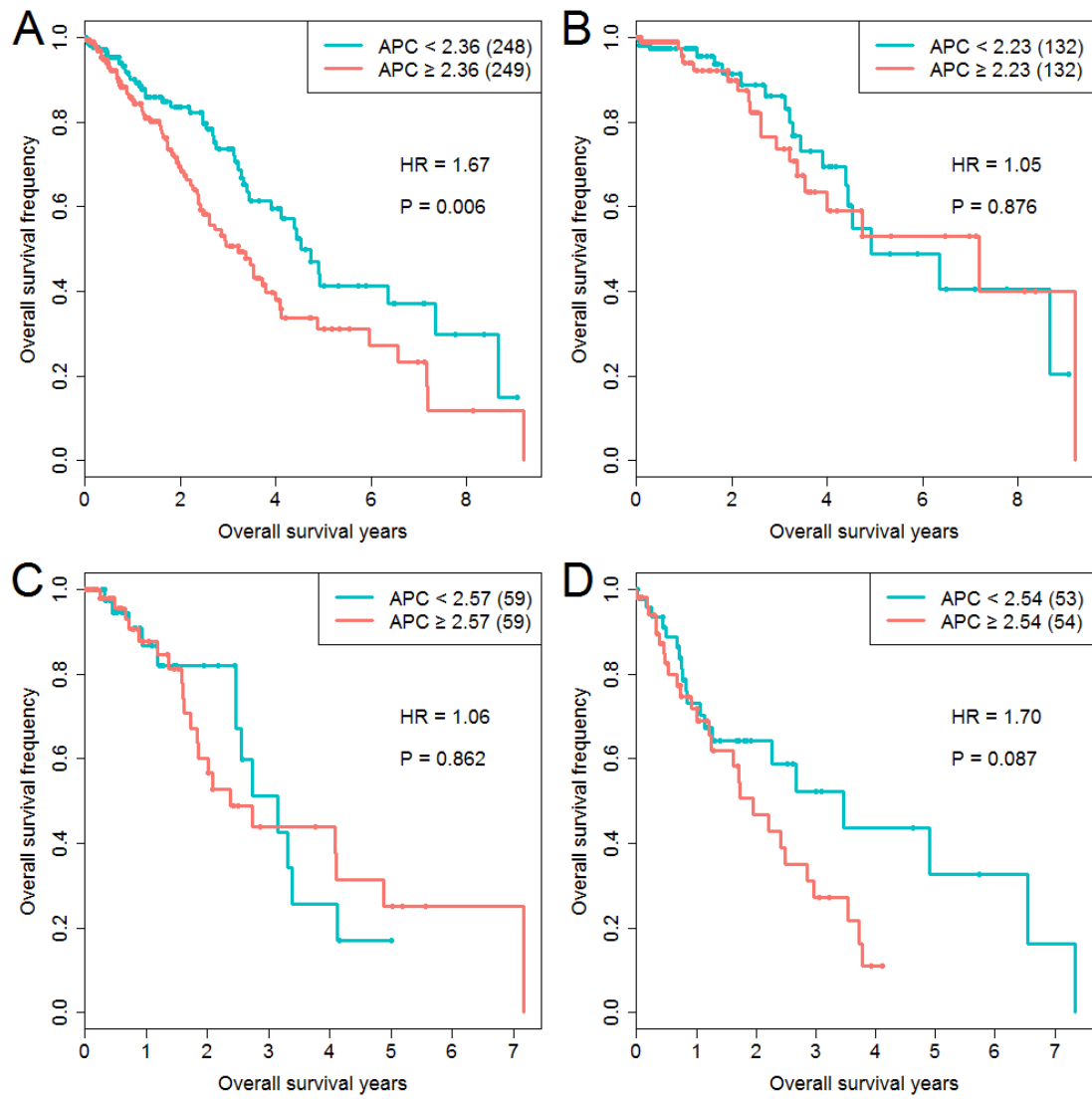


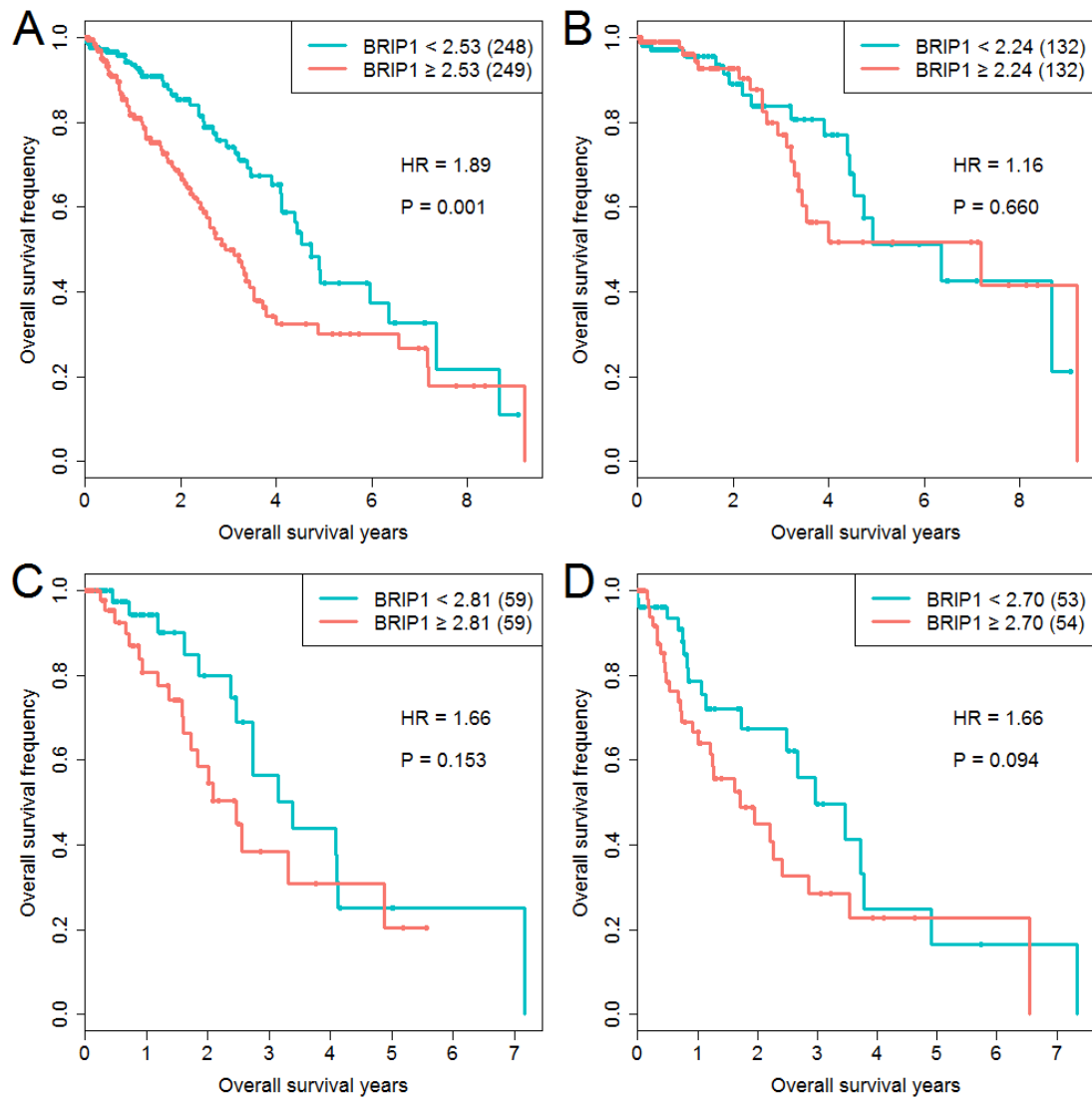
**Supplementary Figure 1.** Differential expression analysis of samples in stage III, stage IV and combined stage III and IV. (A) Number of up- and down-regulated genes in different stages. (B) Venn diagram of deregulated genes in different stages.



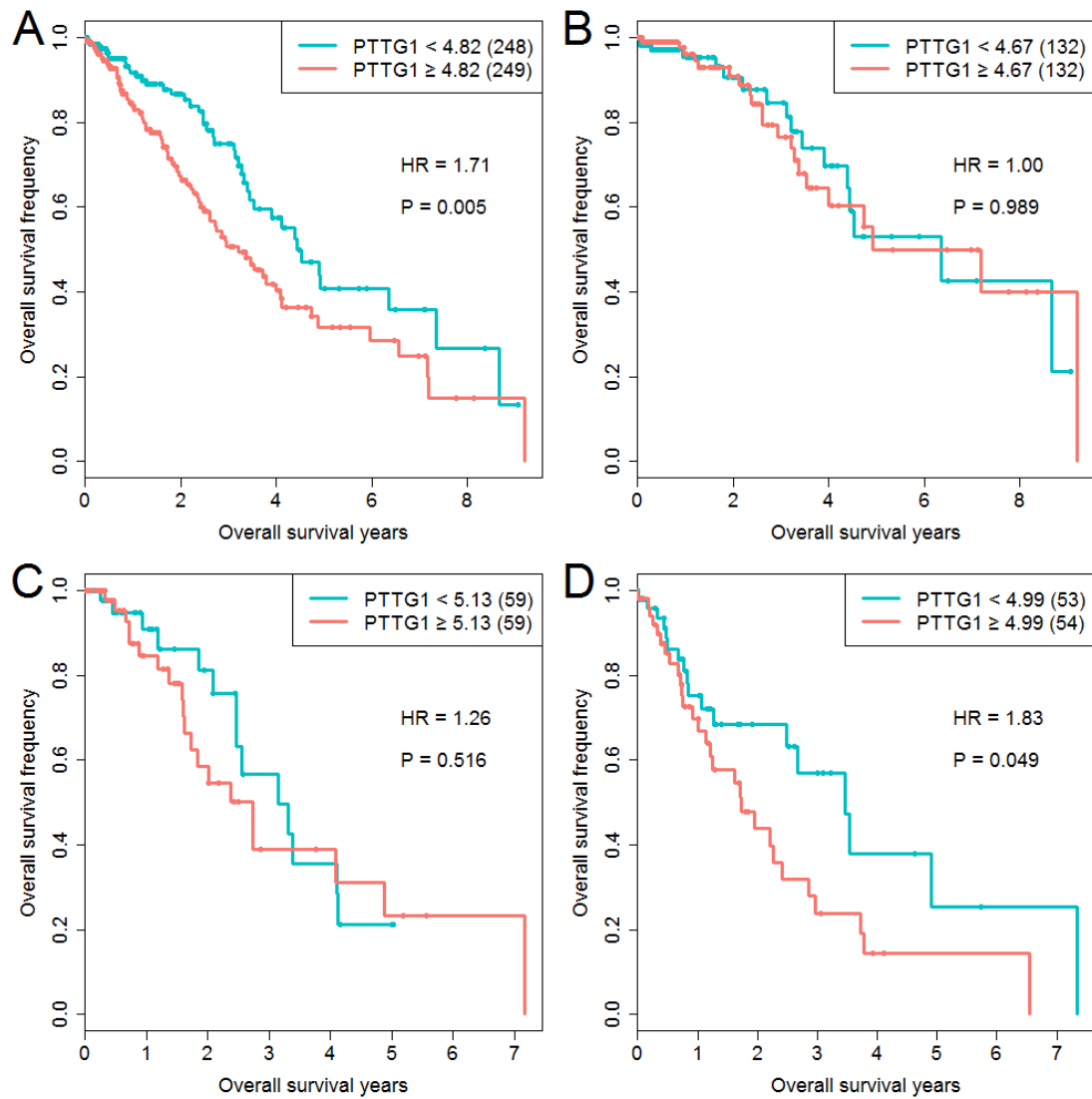
**Supplementary Figure 2.** Effect of FGF22 on LUSC patients' overall survival. (A) Total patients. (B) Patients in stage I. (C) Patients in stage II. (D) Patients in stage III and stage IV.



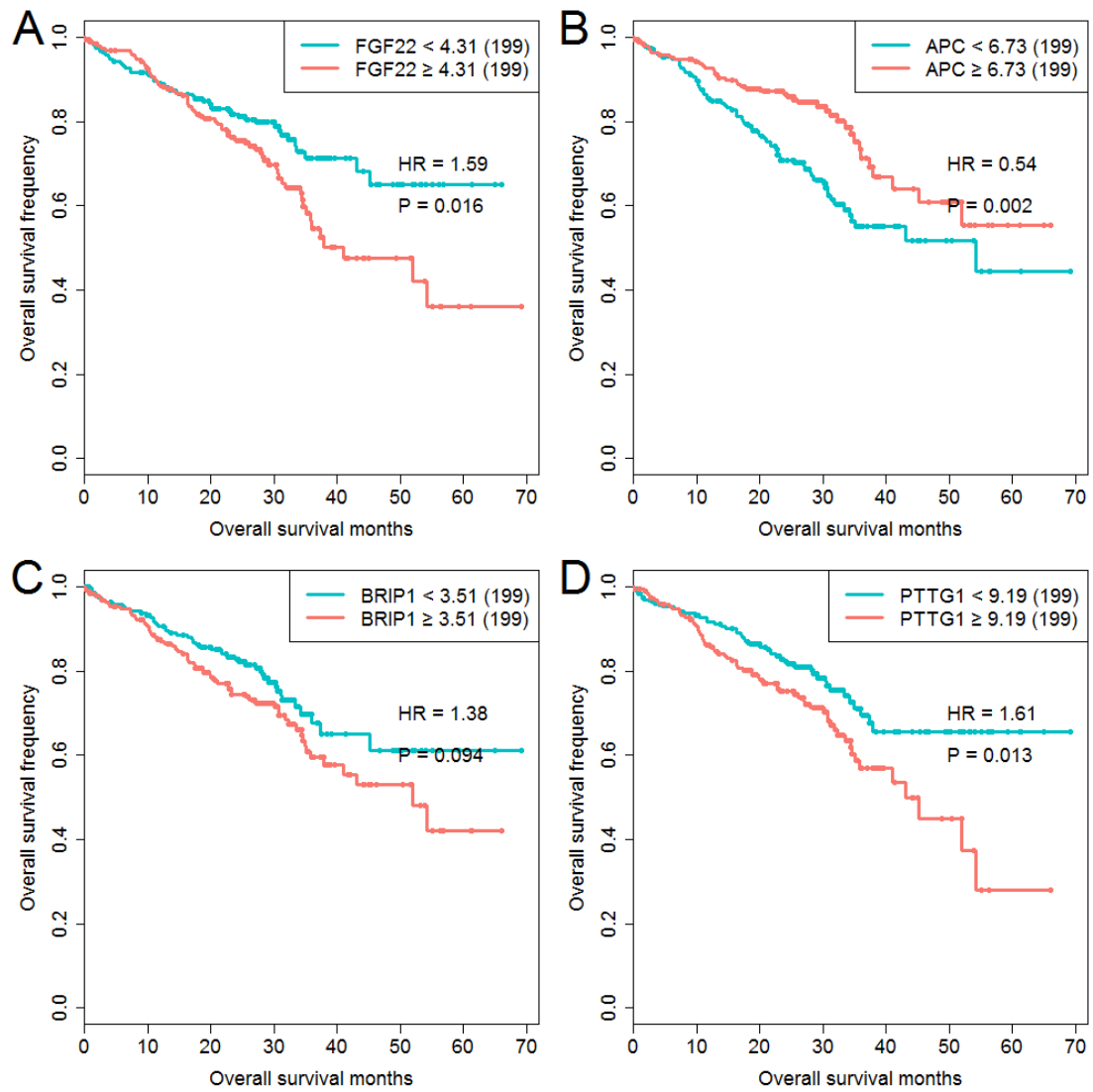
**Supplementary Figure 3.** Effect of APC on LUAD patients' overall survival. (A) Total patients. (B) Patients in stage I. (C) Patients in stage II. (D) Patients in stage III and stage IV.



**Supplementary Figure 4.** Effect of BRIP1 on LUAD patients' overall survival. (A) Total patients. (B) Patients in stage I. (C) Patients in stage II. (D) Patients in stage III and stage IV.



**Supplementary Figure 5.** Effect of PTTG1 on LUAD patients' overall survival. (A) Total patients. (B) Patients in stage I. (C) Patients in stage II. (D) Patients in stage III and stage IV.



**Supplementary Figure 6.** Validation of FGF22, APC, BRIP1 and PTTG1 on LUAD patients' overall survival. (A) Effect of FGF22 on patients' overall survival. (B) Effect of APC on patients' overall survival. (B) Effect of BRIP1 on patients' overall survival. (B) Effect of PTTG1 on patients' overall survival.