

Figure legends

Figure s1. Differential expression and enrichment analysis. (A) Principal Component Analysis (Endo vs CD45). (B) Difference Analysis (Endo vs CD45), red: upregulated genes; green: downregulated genes. (C) GO enrichment analysis of differential genes (Endo vs CD45). (D) KEGG enrichment analysis of differential genes (Endo vs CD45). (E) Biological process-related networks (Endo vs CD45). (F) Principal Component Analysis (PanCK vs Endo). (G) Difference Analysis (PanCK vs Endo), red: upregulated genes; green: downregulated genes. (H) GO enrichment analysis of differential genes (PanCK vs Endo). (I) KEGG enrichment analysis of differential genes (PanCK vs Endo). (J) Biological process-related networks (PanCK vs Endo).

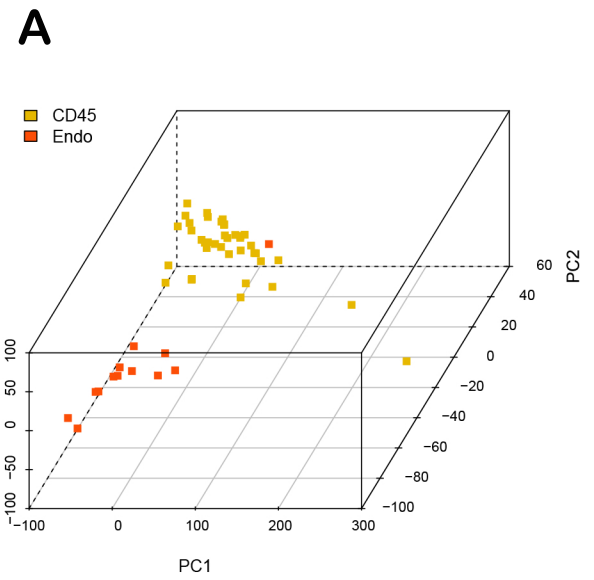
Figure s2. Functional enrichment analysis and PPI network construction. (A) Genes in blue, turquoise and green modules were used for GO enrichment analysis. (B) Genes in blue, turquoise and green modules were used for KEGG enrichment analysis. (C) Genes in blue, turquoise and green modules were used to build the PPI network.

Figure s3. Genes in blue modules were used for survival analysis in PanCK.

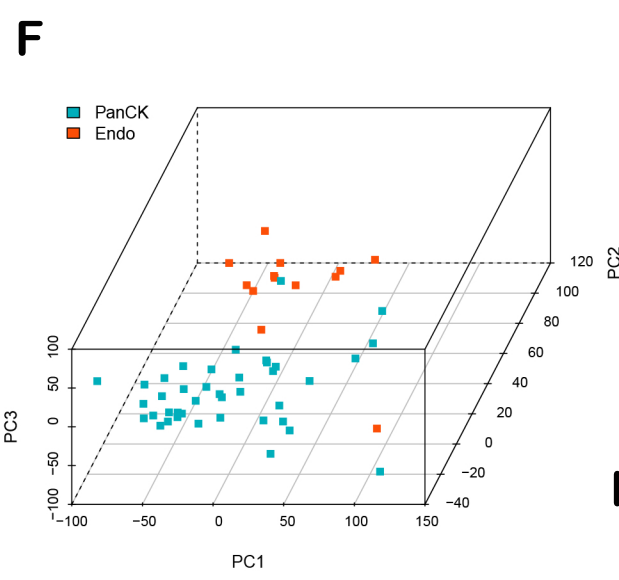
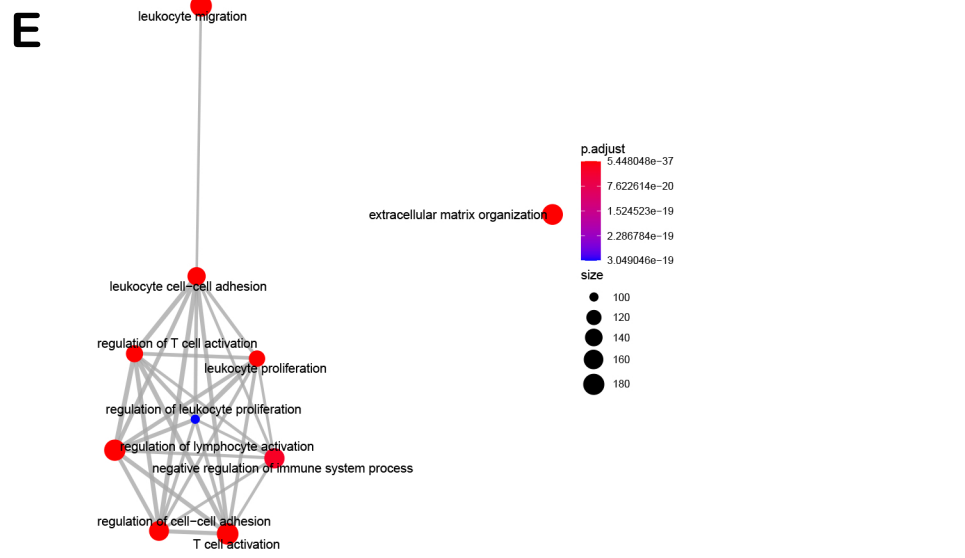
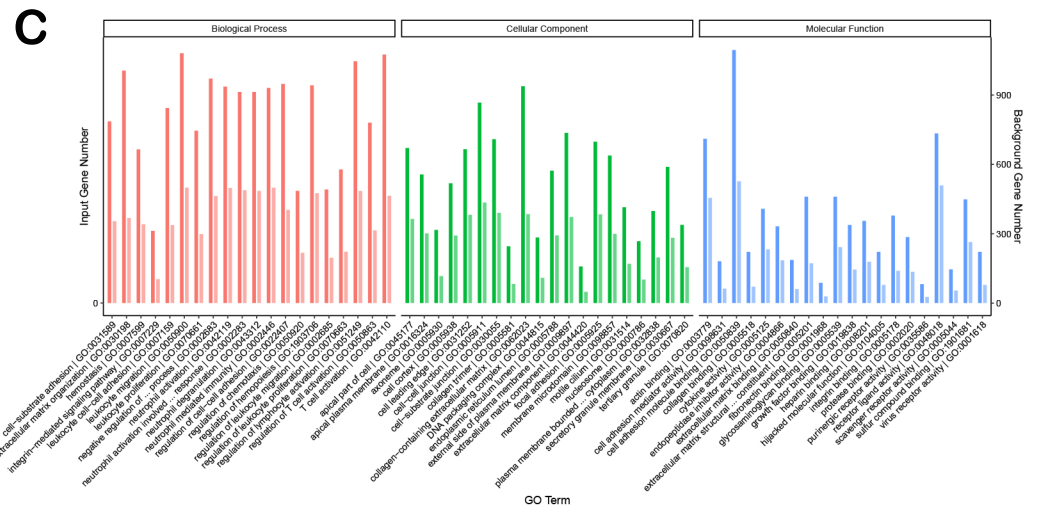
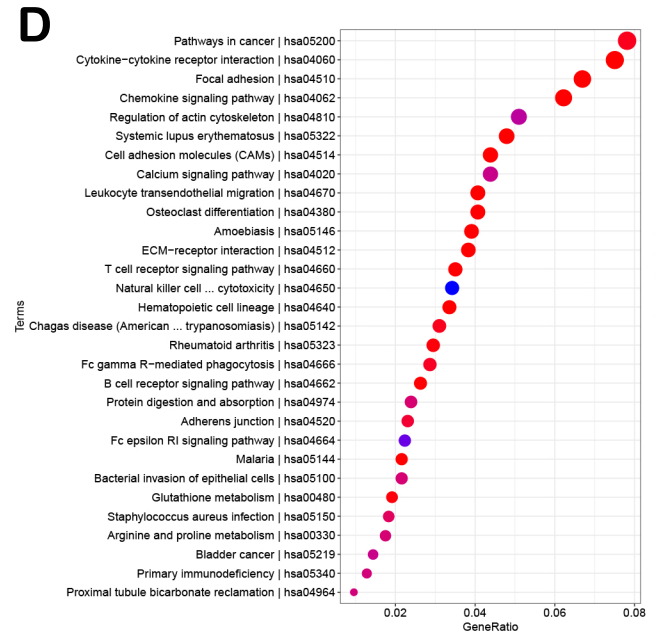
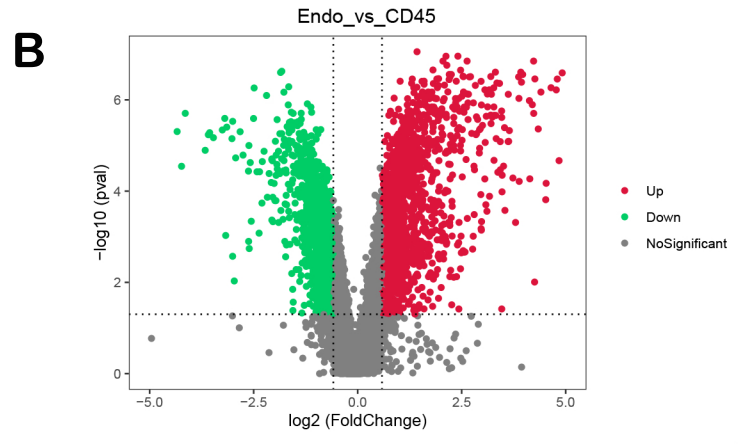
Figure s4. Immune infiltration. (A) Relative levels of immune cells in each ROI. (B) Immune functions differed in three groups.

Figure s5. Differences between immune checkpoint-related genes in the three regions.

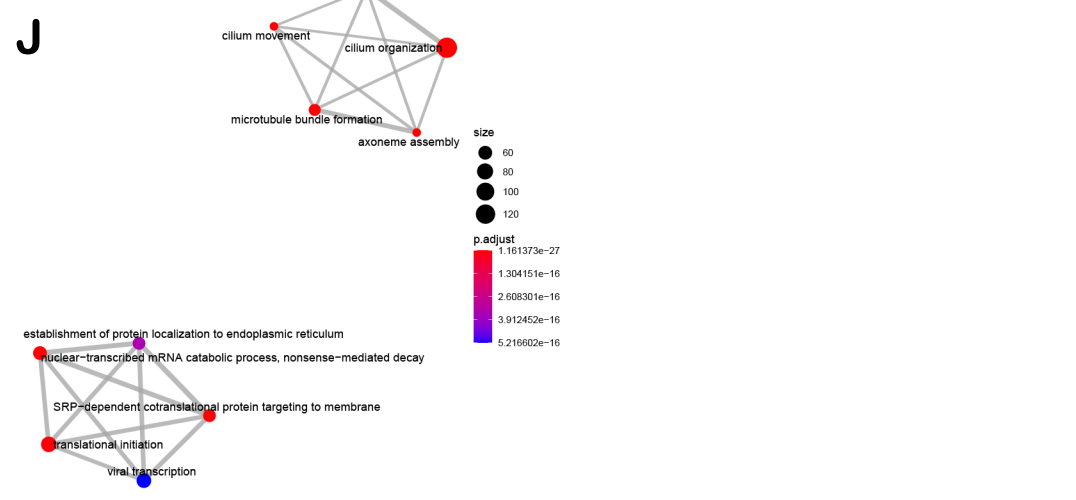
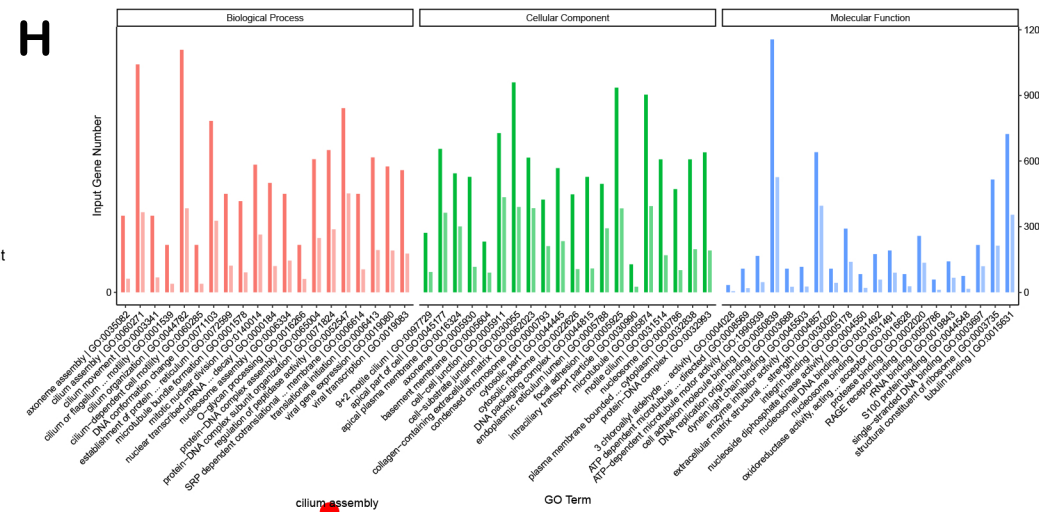
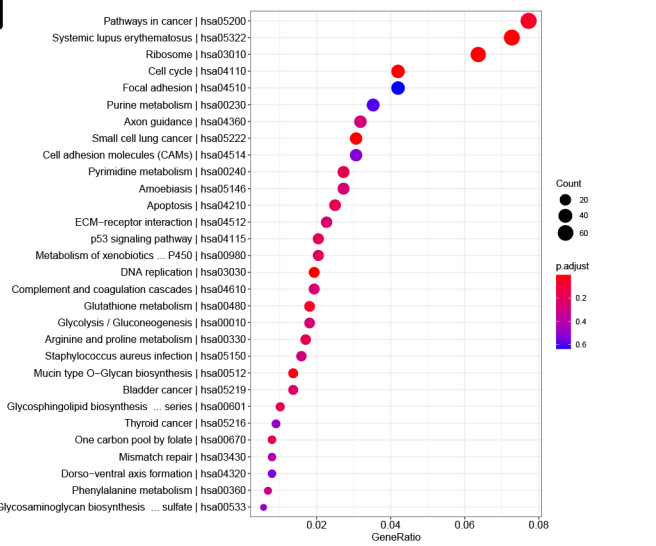
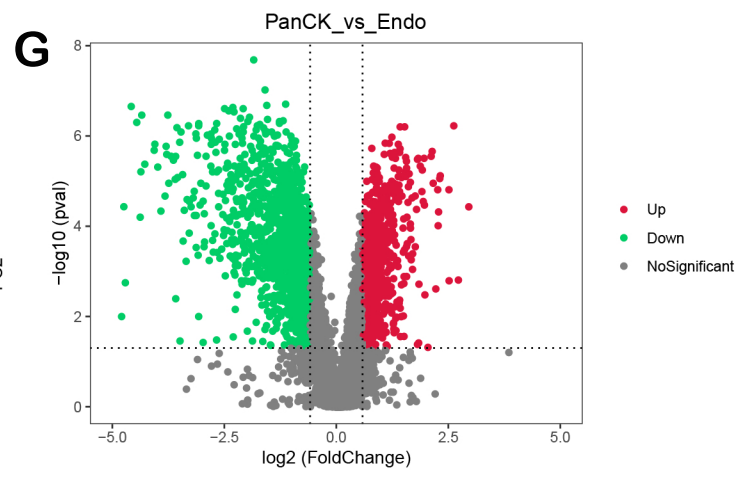
Figure s6. Metabolism-related genes. (A) GSVA enrichment analysis: PanCK vs. Endo and CD45 vs. Endo. (B) 944 metabolic genes, 2514 differential genes (PanCK vs. Endo) and 171 intersecting genes. (C) Univariate Cox regression analysis of 171 intersecting genes in PanCK. (D) Survival analysis of prognostic metabolic genes in PanCK. (E) ROC curves: predicting 2-, 4-, and 5-year survival rates of patients with NPC.



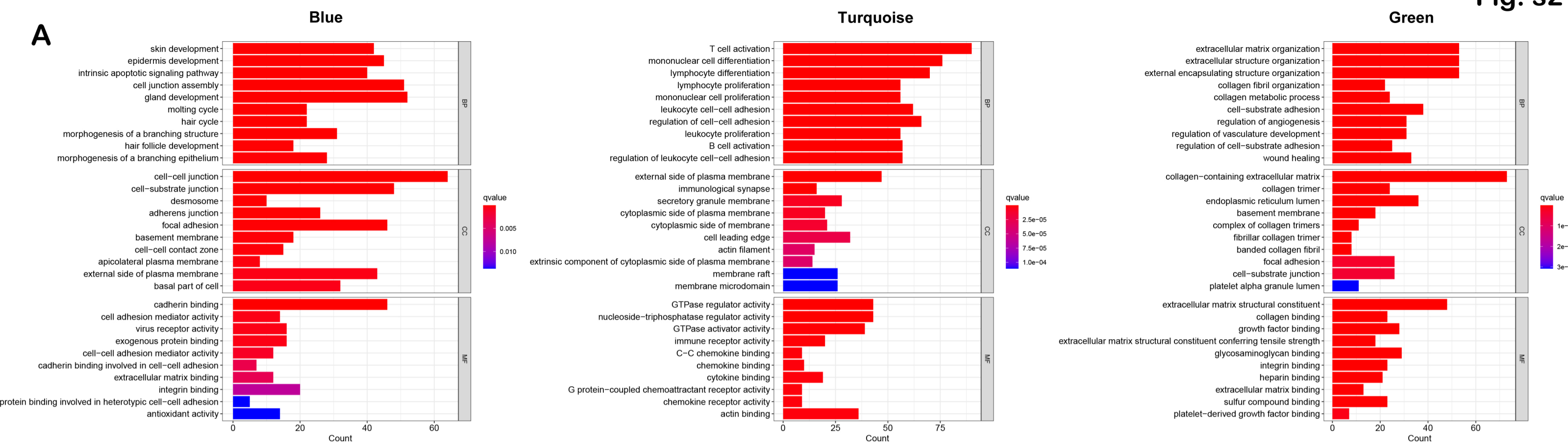
Endo vs CD45



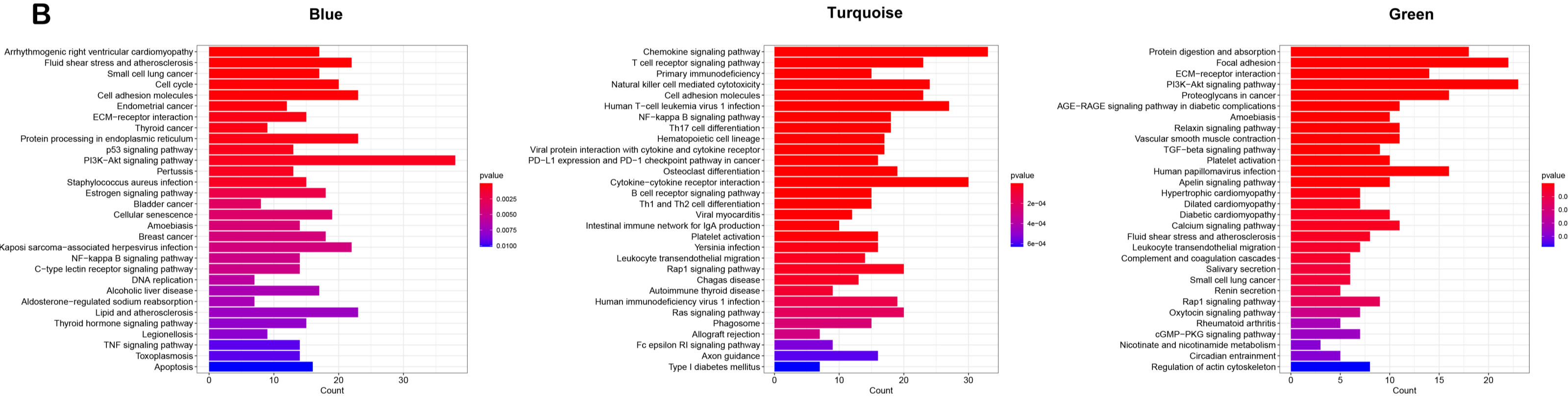
PanCK vs Endo



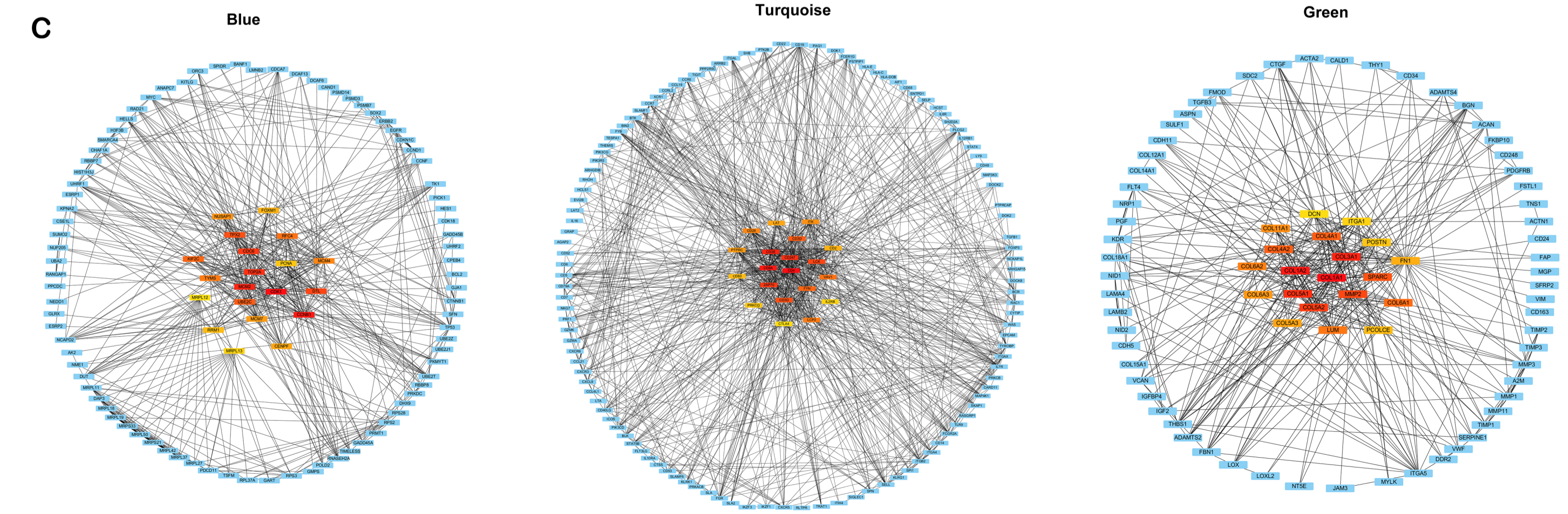
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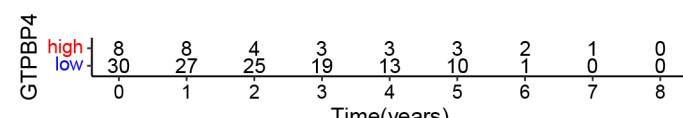
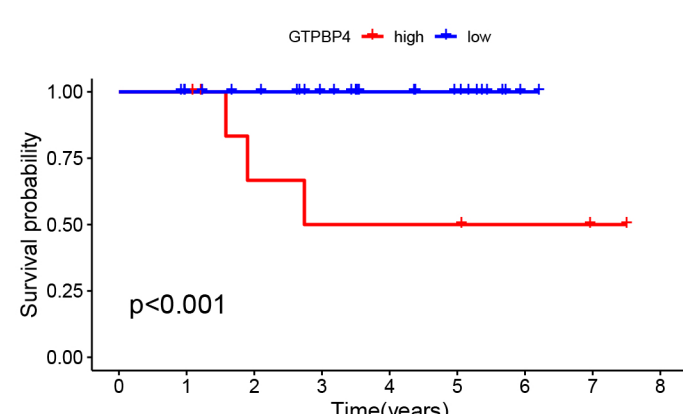
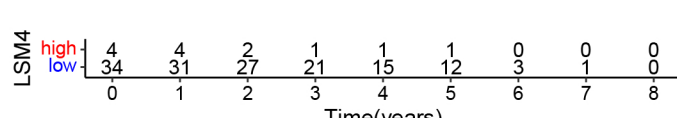
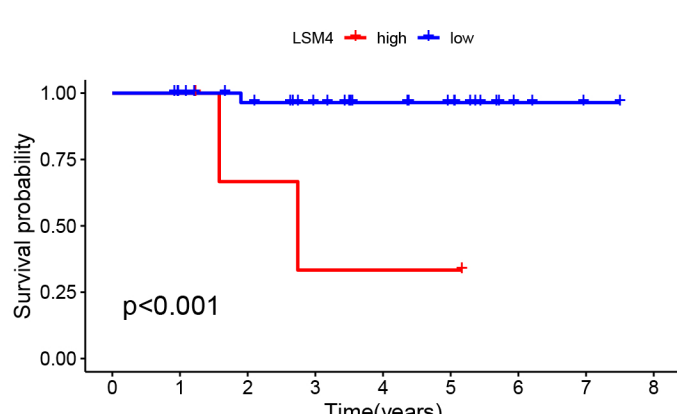
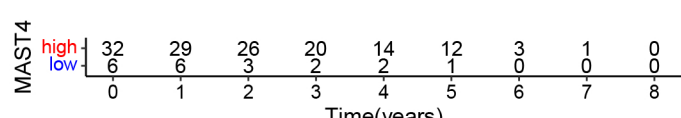
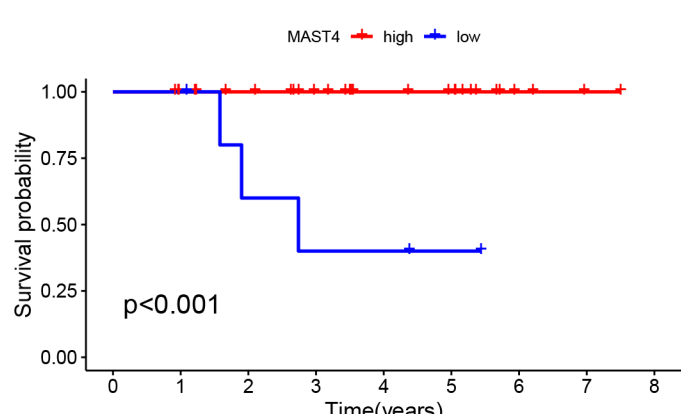
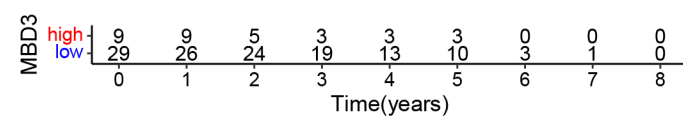
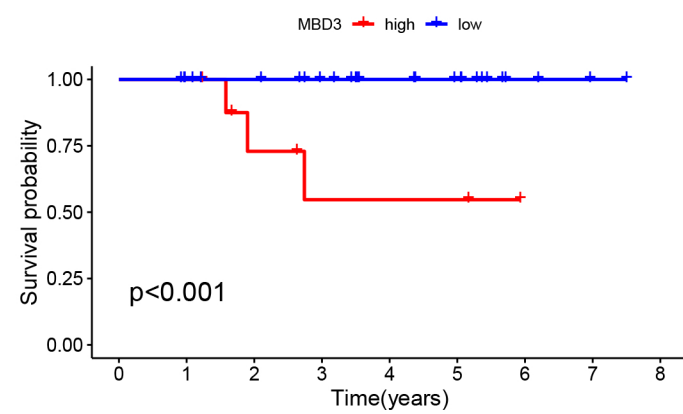
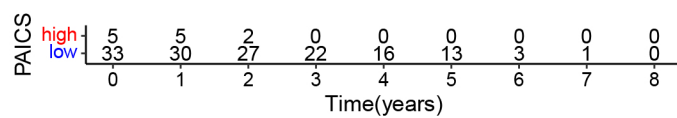
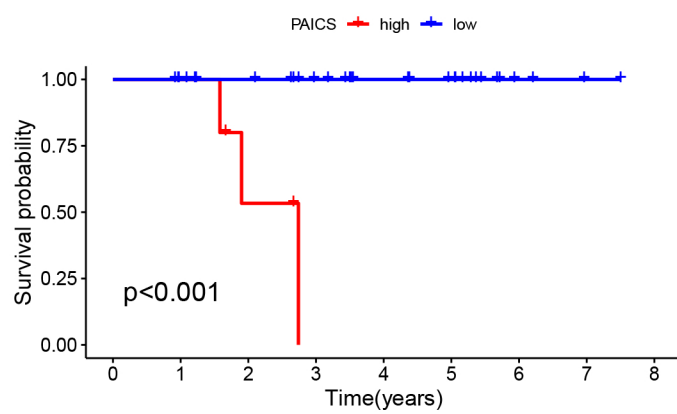
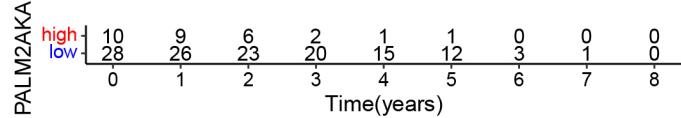
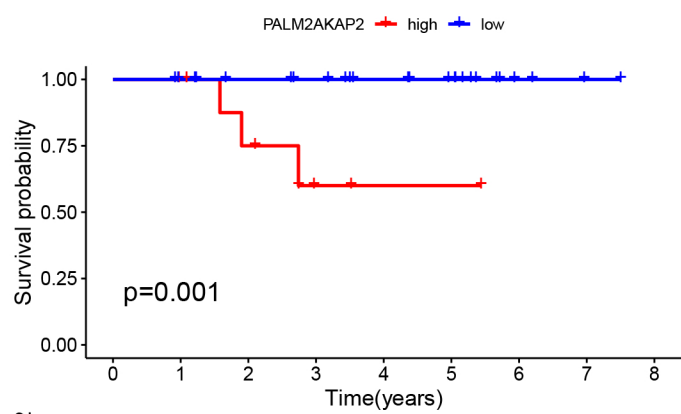
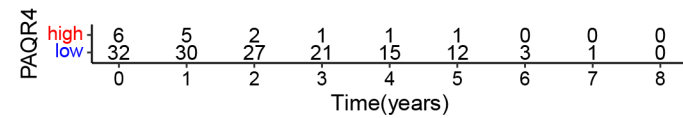
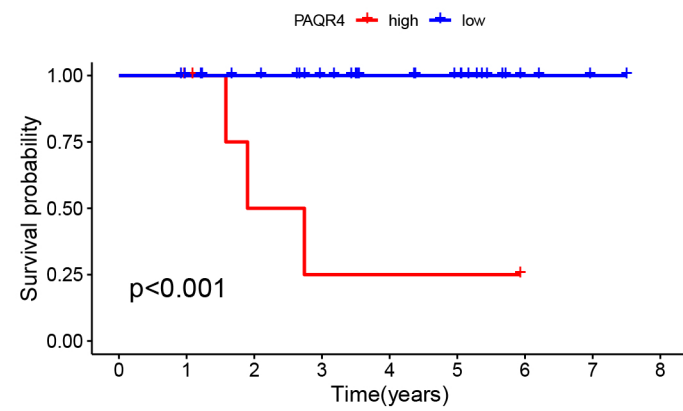
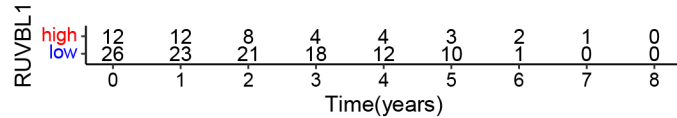
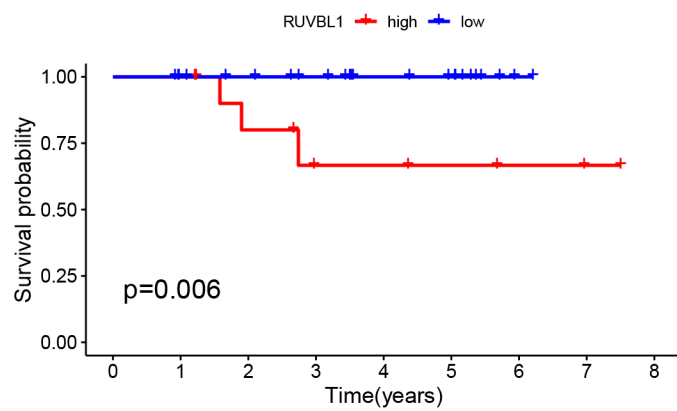
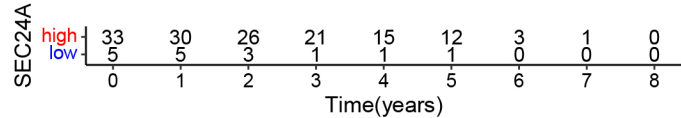
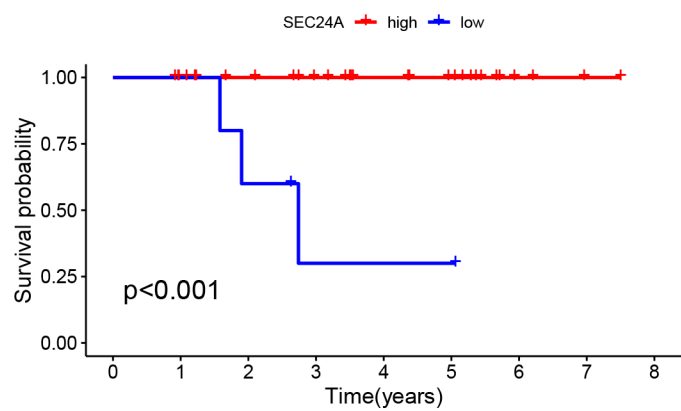
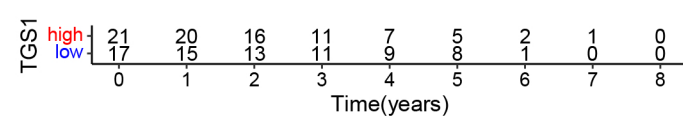
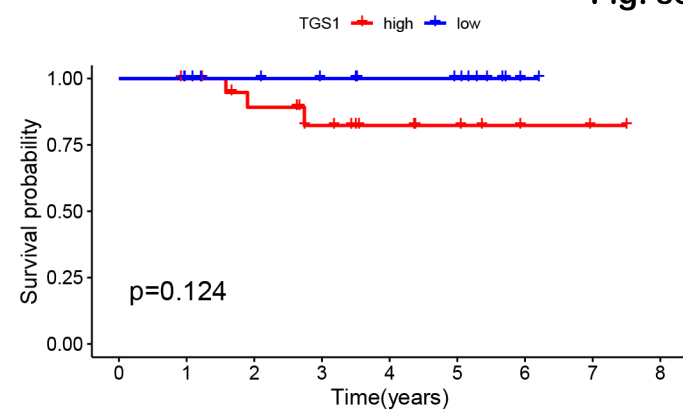
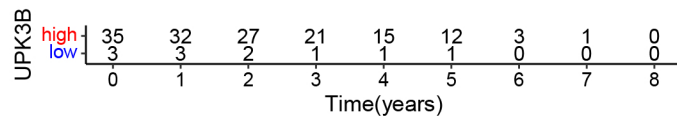
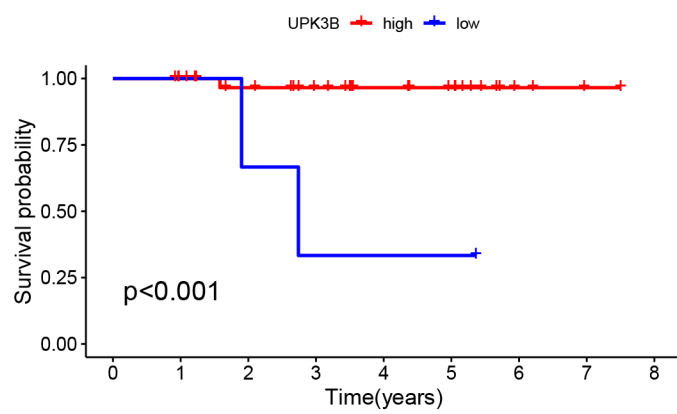
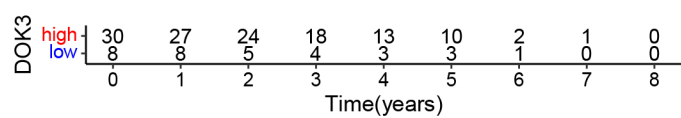
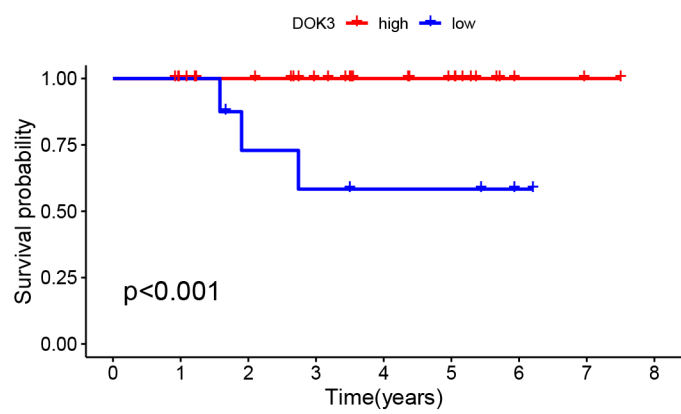


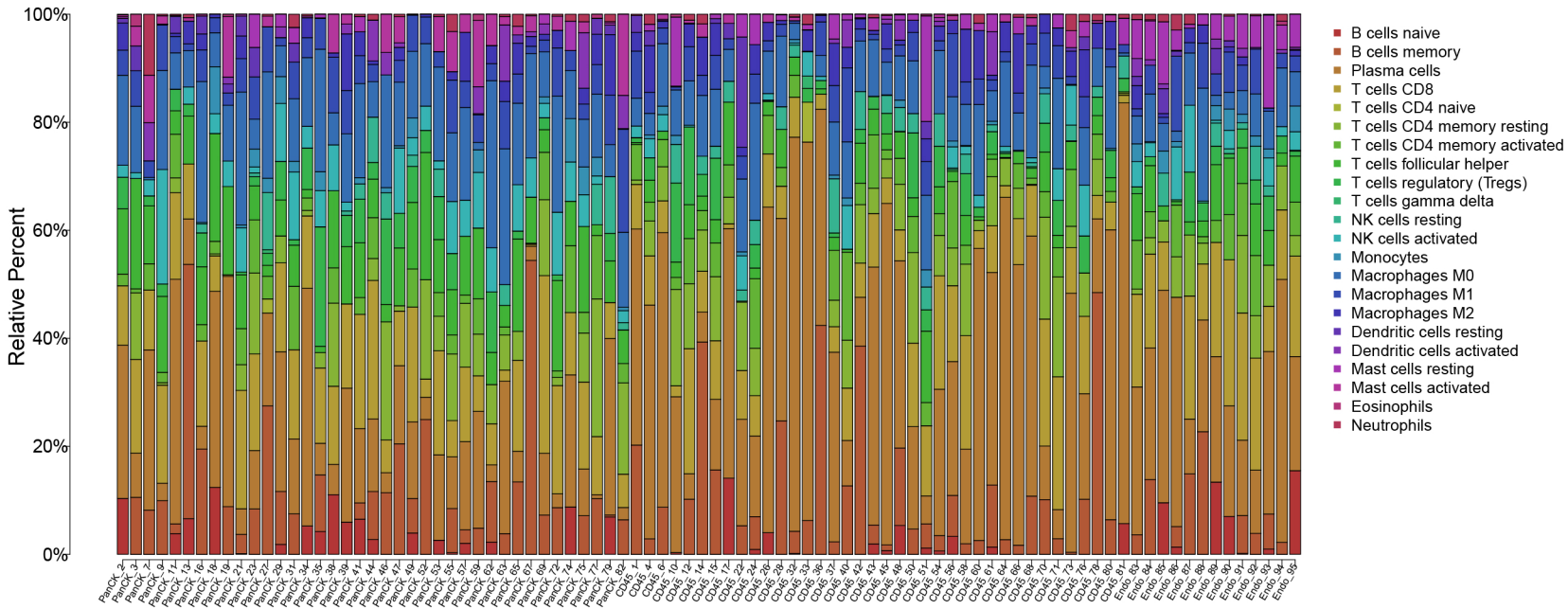
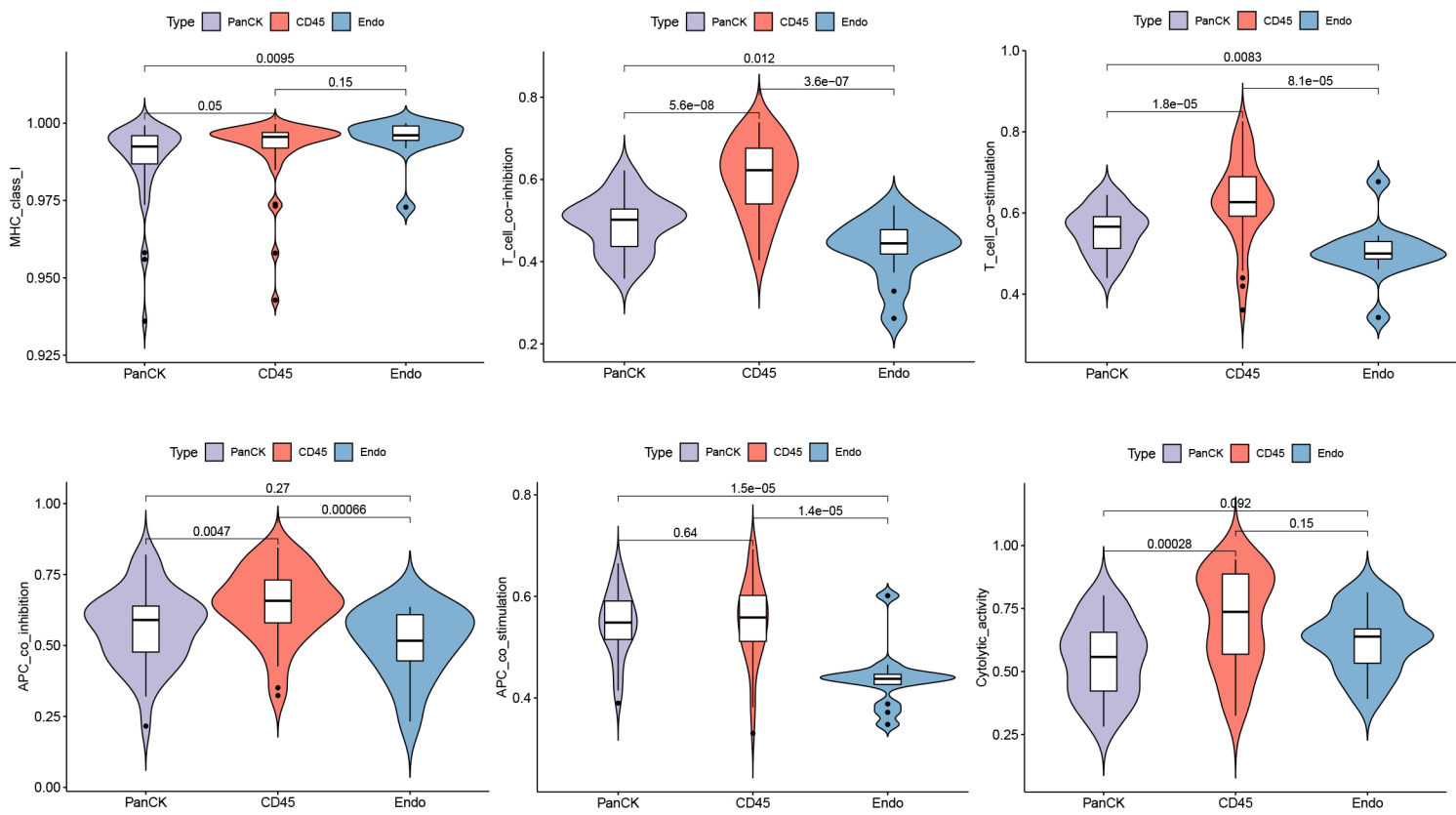
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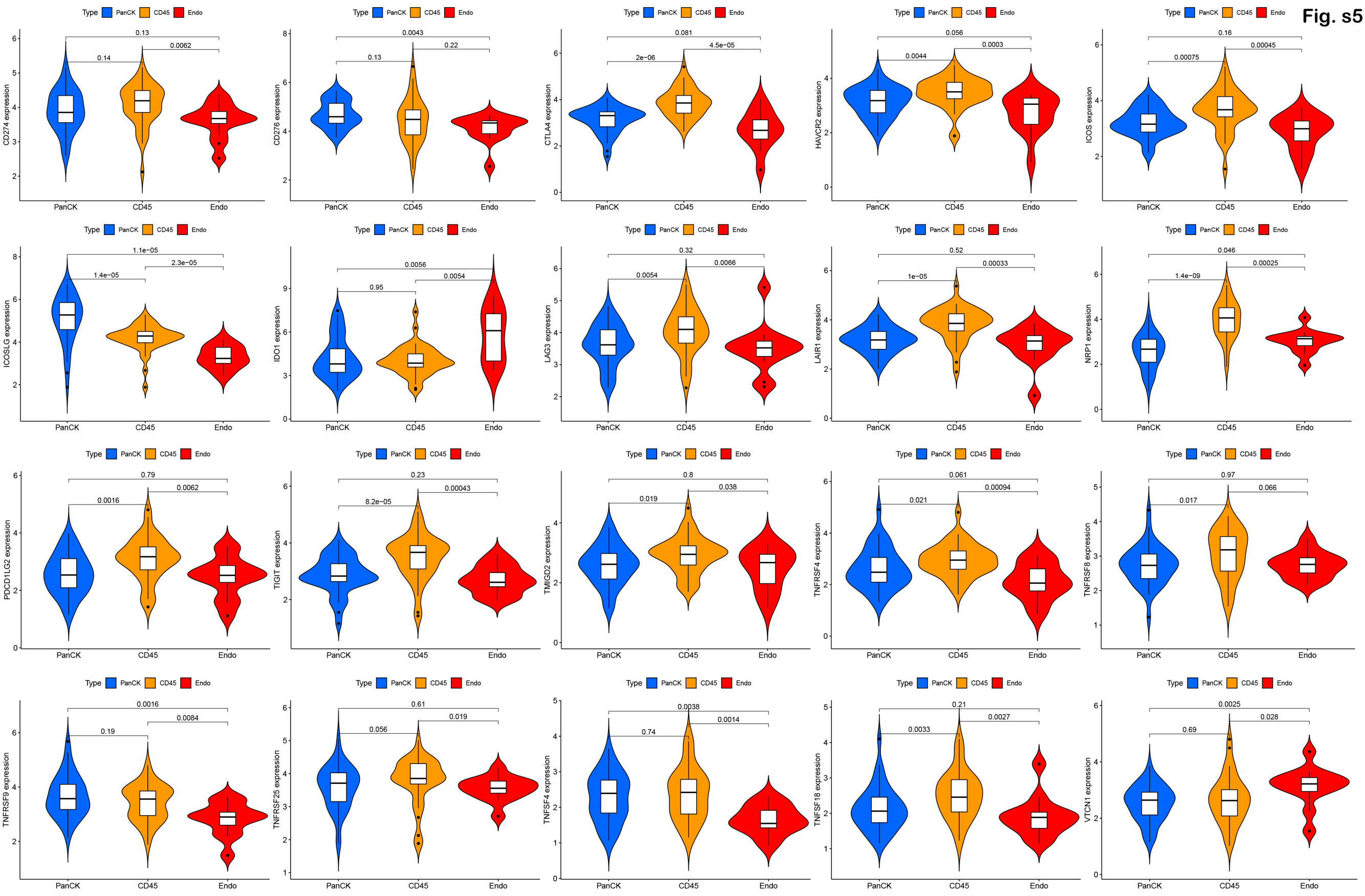


C





A**B**



Supplementary Table 1. Characteristics of NPC samples in the DSP study

Characteristics	No. of samples (41)
Gender(male/female)	30/11
Age (<50/≥50)	29/12
Recurrence (yes/no)	5/36
Survival state (dead/alive)	4/37
Stage	
Stage I	19
Stage II	18
Stage III	1
Stage IV	3
EBER-ISH (-/+)	2/39

Supplementary Table 2. Characteristics of NPC samples in the validation cohort

Characteristics	No. of samples (121)
Gender(male/female)	77/44
Age (<50/≥50)	46/75
Recurrence (yes/no)	52/69
Survival state (dead/alive)	29/92
T	
T1	45
T2	44
T3	29
T4	3
N	
N0	84
N1	35
N2	2
M	
M0	102
M1	19
EBV-VCA (+)	121