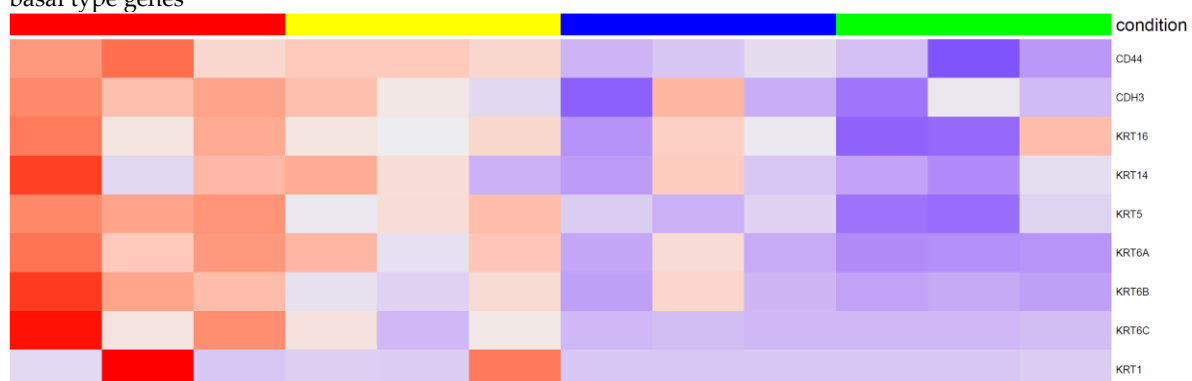
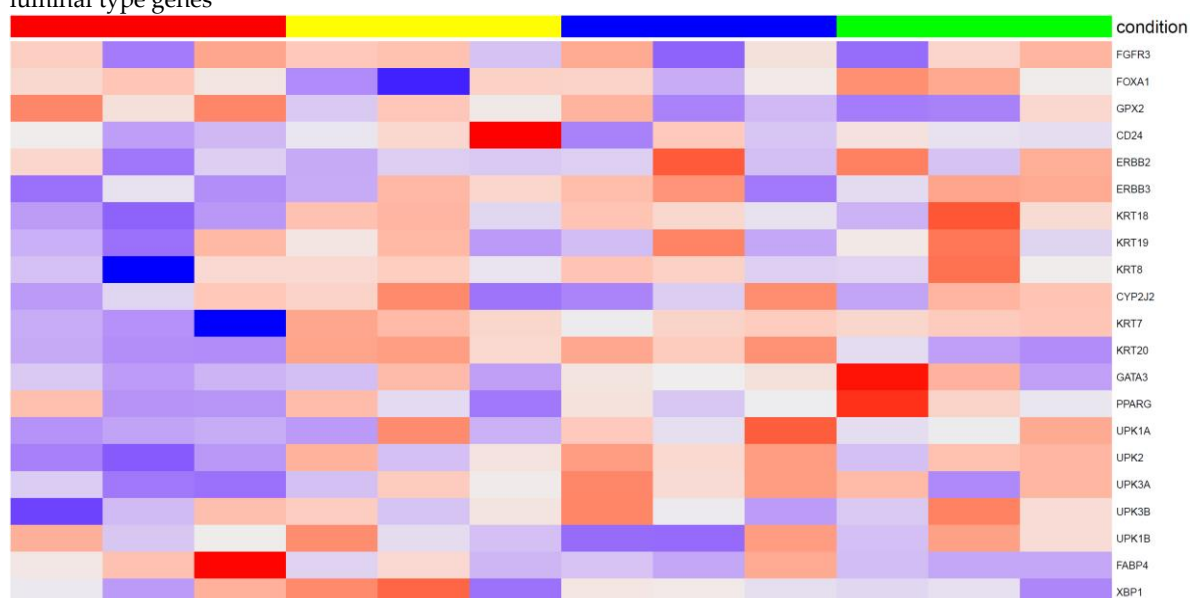


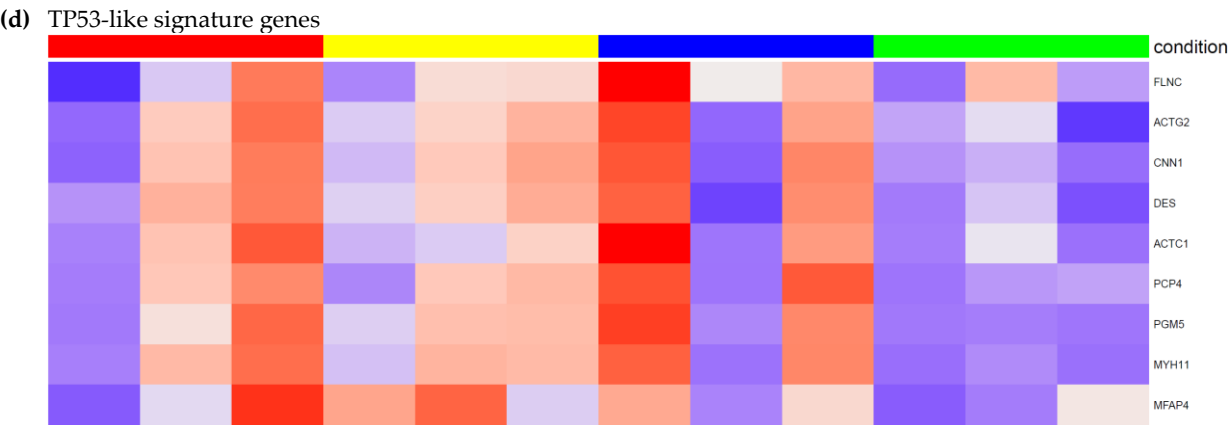
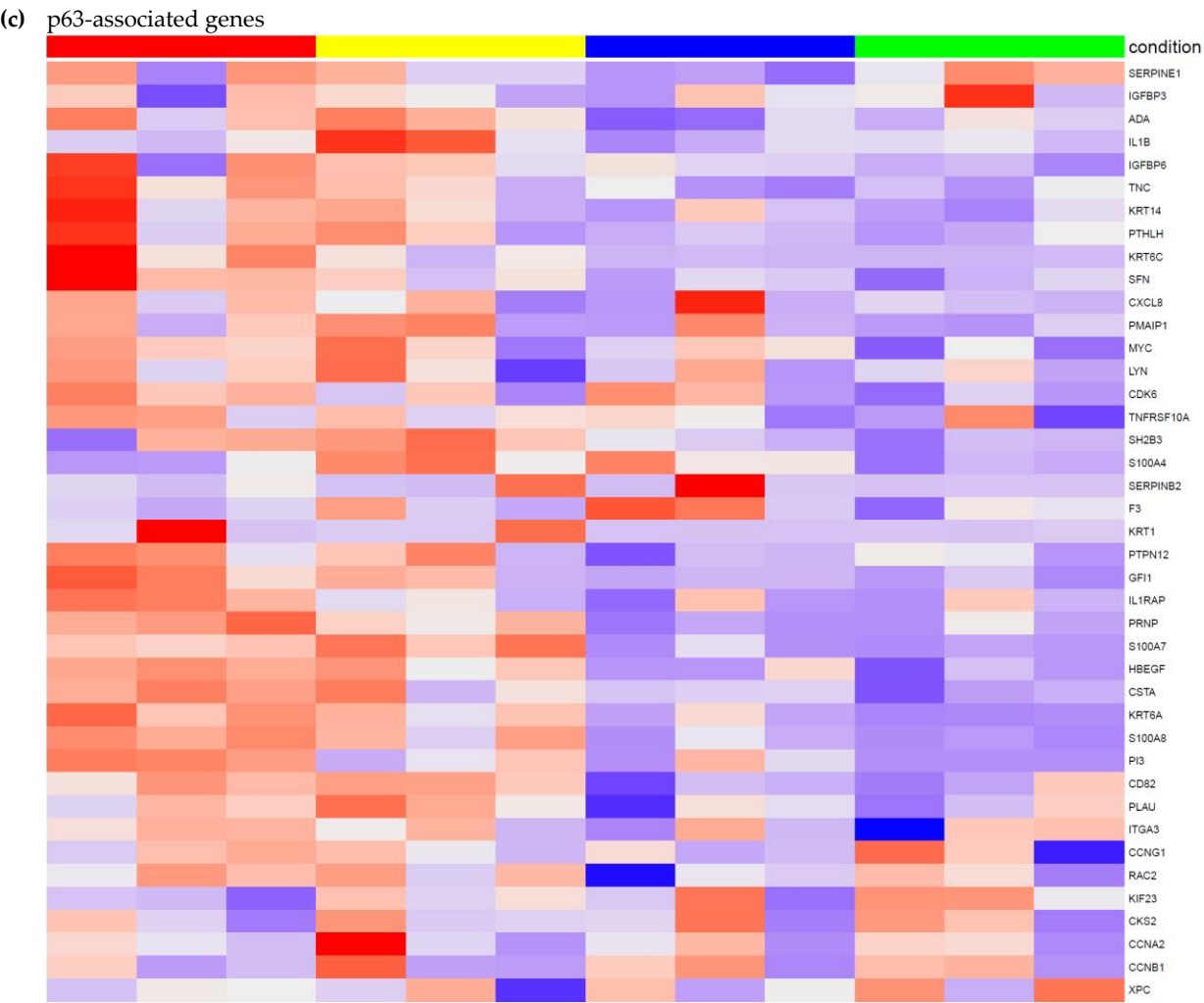


**(a)** basal type genes

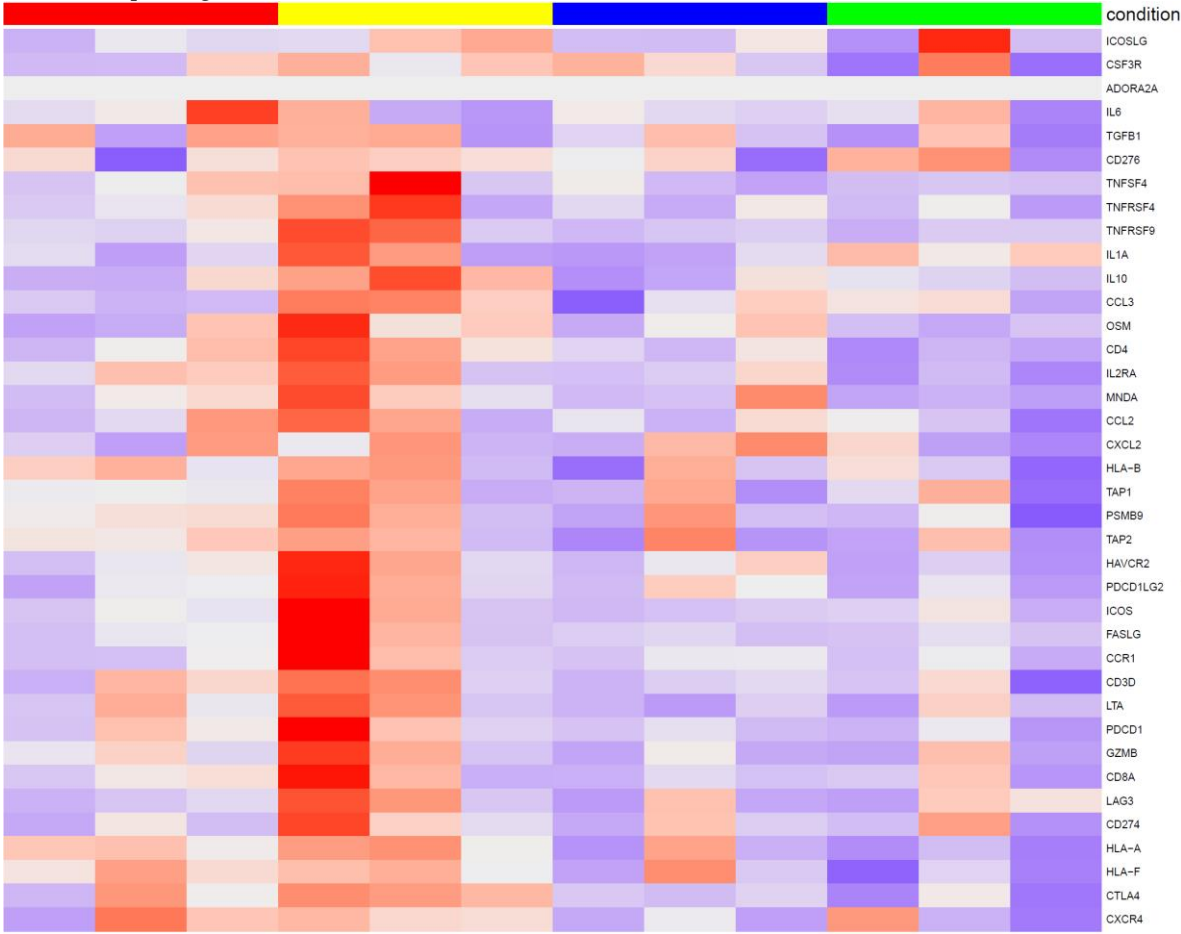


**(b)** luminal type genes

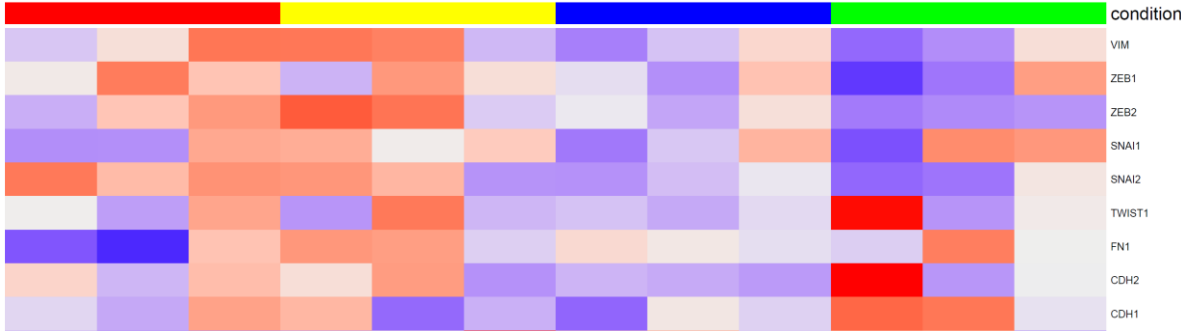




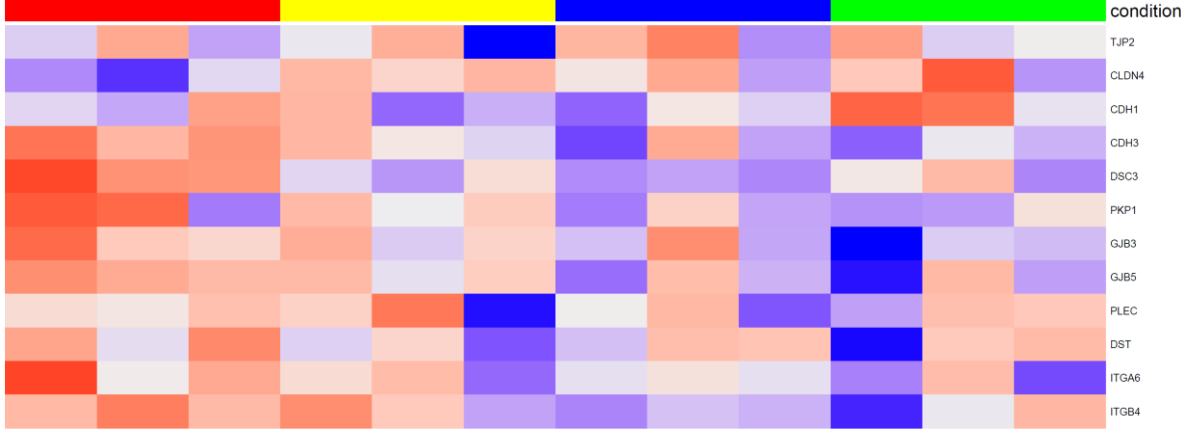
(e) immune response genes



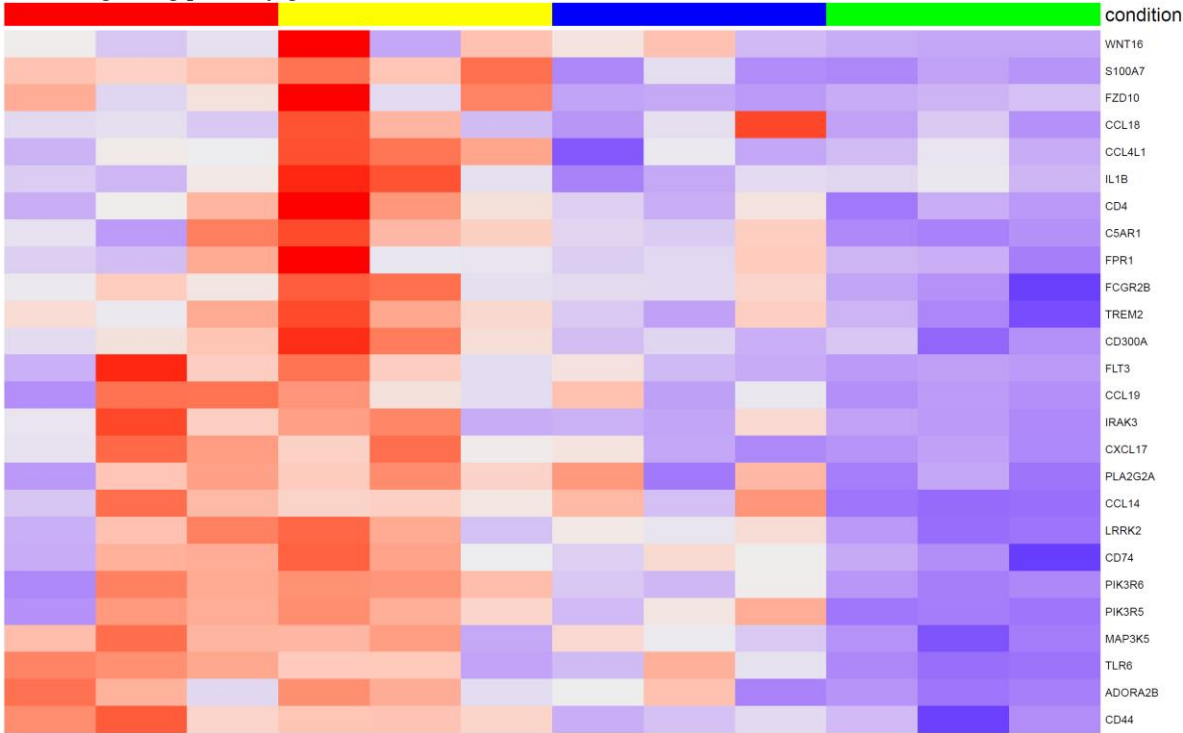
(f) epithelial-mesenchymal transition genes



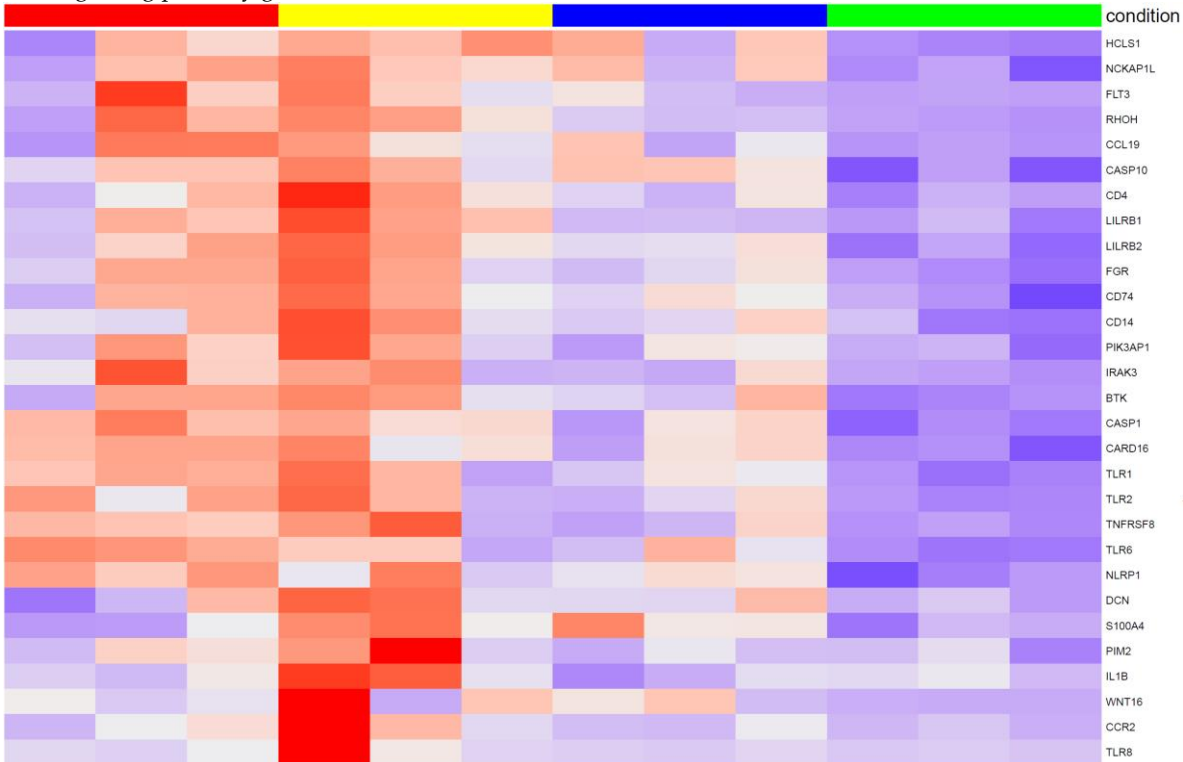
(g) cell adhesion genes



(h) MAPK signaling pathway genes



(i) TNF signaling pathway genes



condition

Basal  
DP  
Luminal  
DN

row Z-score

-4 -2 0 2 4

**Figure S2.** Expression of gene expression signature between four subgroups: **(a)** basal type genes; **(b)** luminal type genes ; **(c)** p63-associated genes; **(d)** TP53-like signature genes; **(e)** immune response genes; **(f)** epithelial-mesenchymal transition genes; **(g)** cell adhesion genes; **(h)** MAPK signaling pathway genes; **(i)** TNF signaling pathway genes.