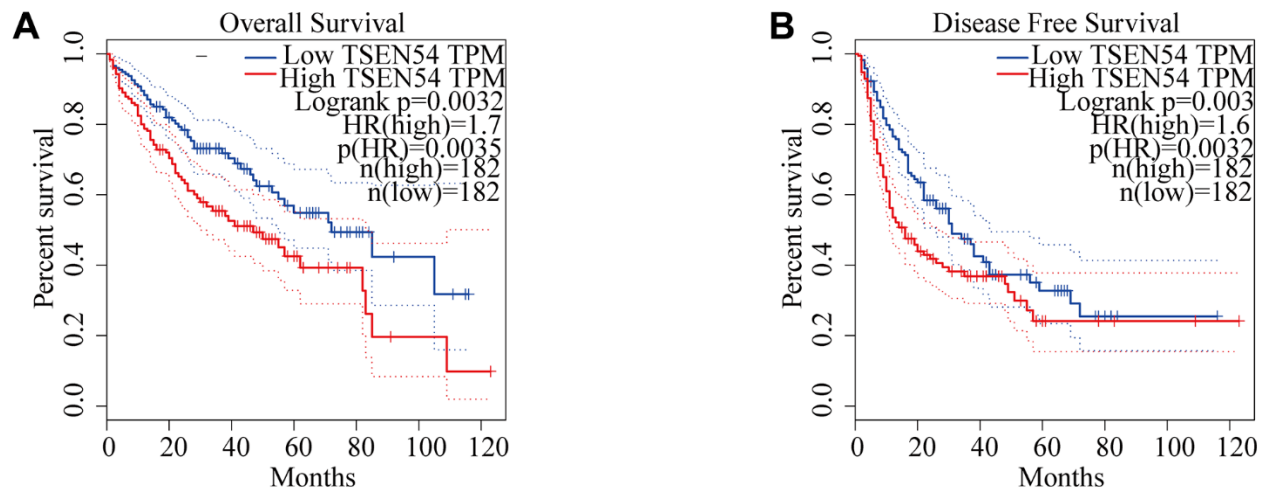
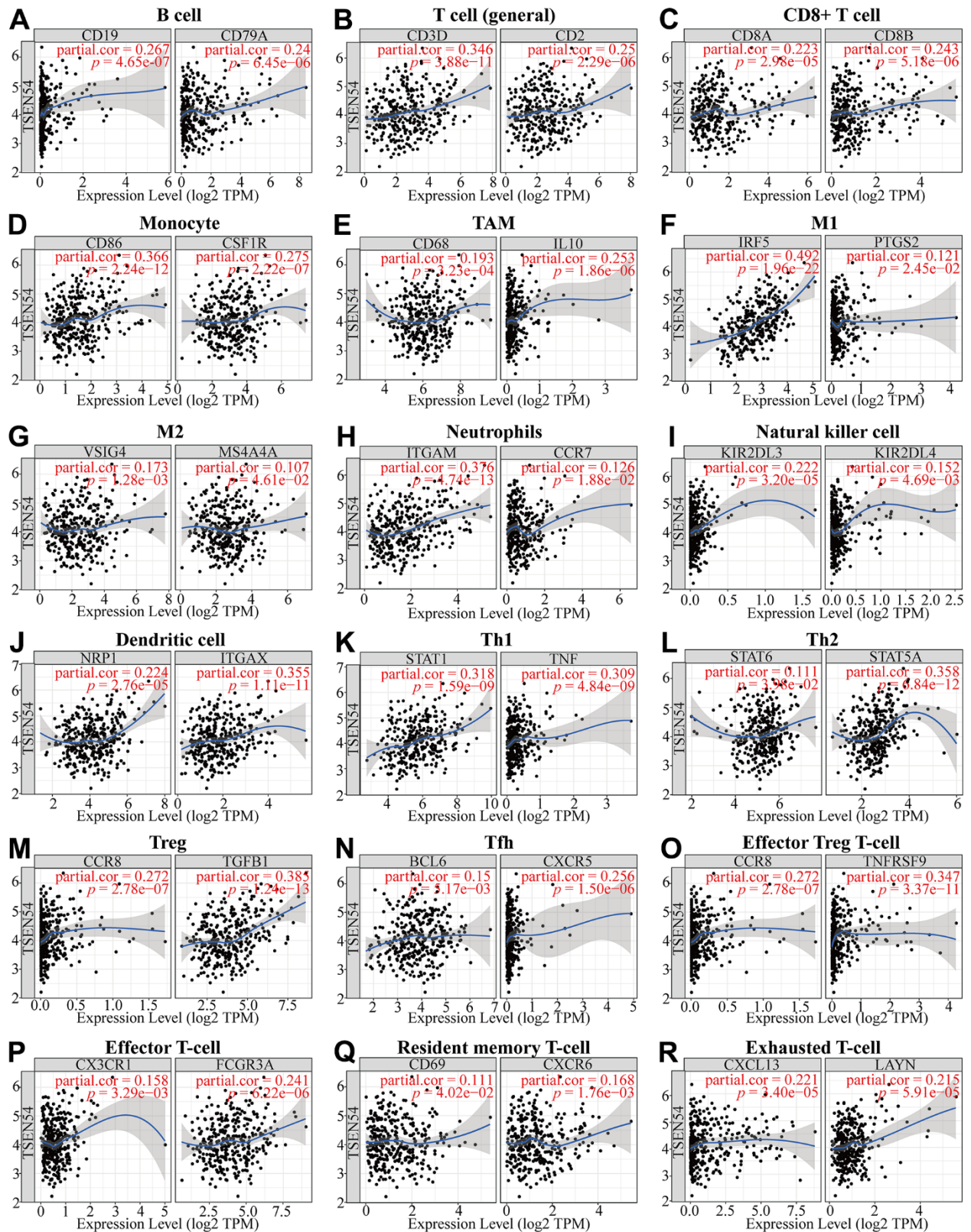


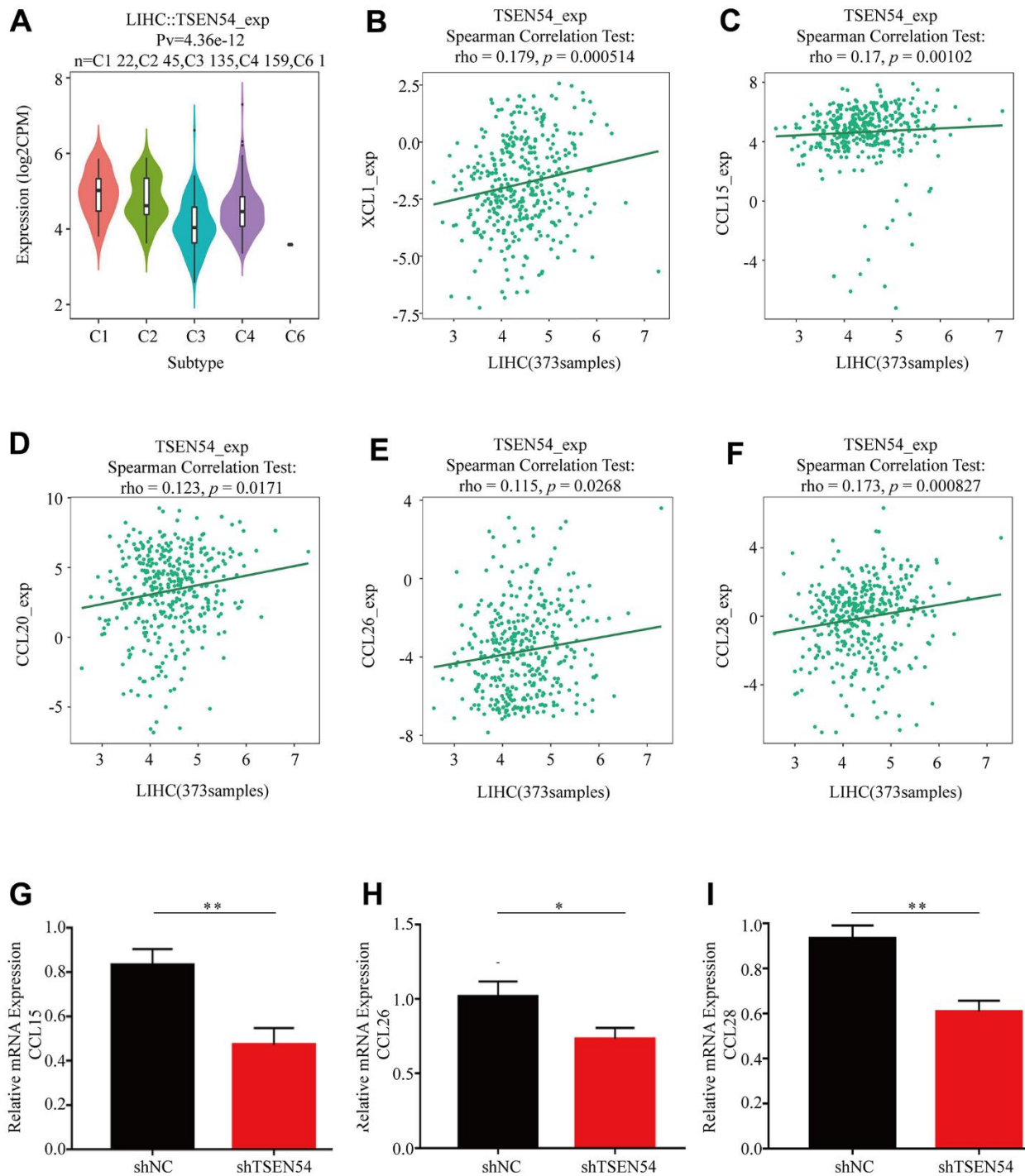
SUPPLEMENTARY FIGURES



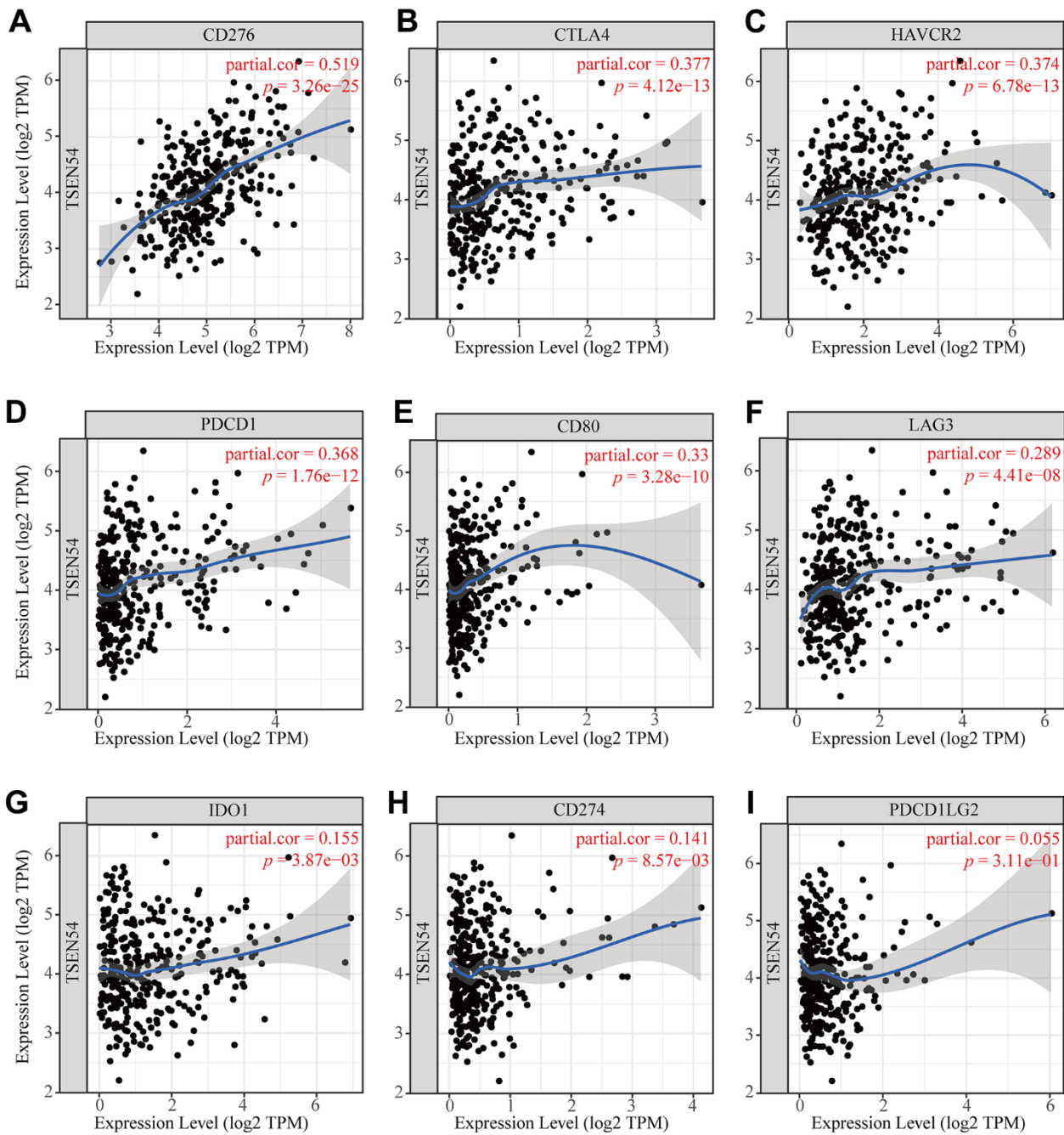
Supplementary Figure 1. Survival curves using the GEPIA website are shown for (A) OS and (B) DFS.



Supplementary Figure 2. Correlations between TSEN54 expression and immune cell markers in HCC. (A) B cell; (B) T cell (general); (C) CD8+ T cell; (D) Monocyte; (E) TAM; (F) M1; (G) M2; (H) Neutrophils; (I) Natural killer cell; (J) Dendritic cell; (K) Th1; (L) Th2; (M) Treg; (N) Tfh; (O) Effector Treg T-cell; (P) Effector T-cell; (Q) Resident memory T-cell; (R) Exhausted T-cell.



Supplementary Figure 3. Association of TSEN54 expression with immune subtypes and chemokines expression in hepatocellular carcinoma. (A) Expression of TSEN54 in different immune subtypes. Association between TSEN54 expression and expression of chemokine (B) XCL1; (C) CCL15; (D) CCL20; (E) CCL26; (F) CCL28. Expression levels of chemokines (G) CCL15; (H) CCL26; (I) CCL28 in HCCLM3 cells undergoing different treatments. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.



Supplementary Figure 4. Correlation between the expression level of TSEN54 and immune checkpoints in HCC. (A) CD276; (B) CTLA4; (C) HAVCR2; (D) PDCD1; (E) CD80; (F) LAG3; (G) IDO1; (H) CD274; (I) PDCD1LG2.