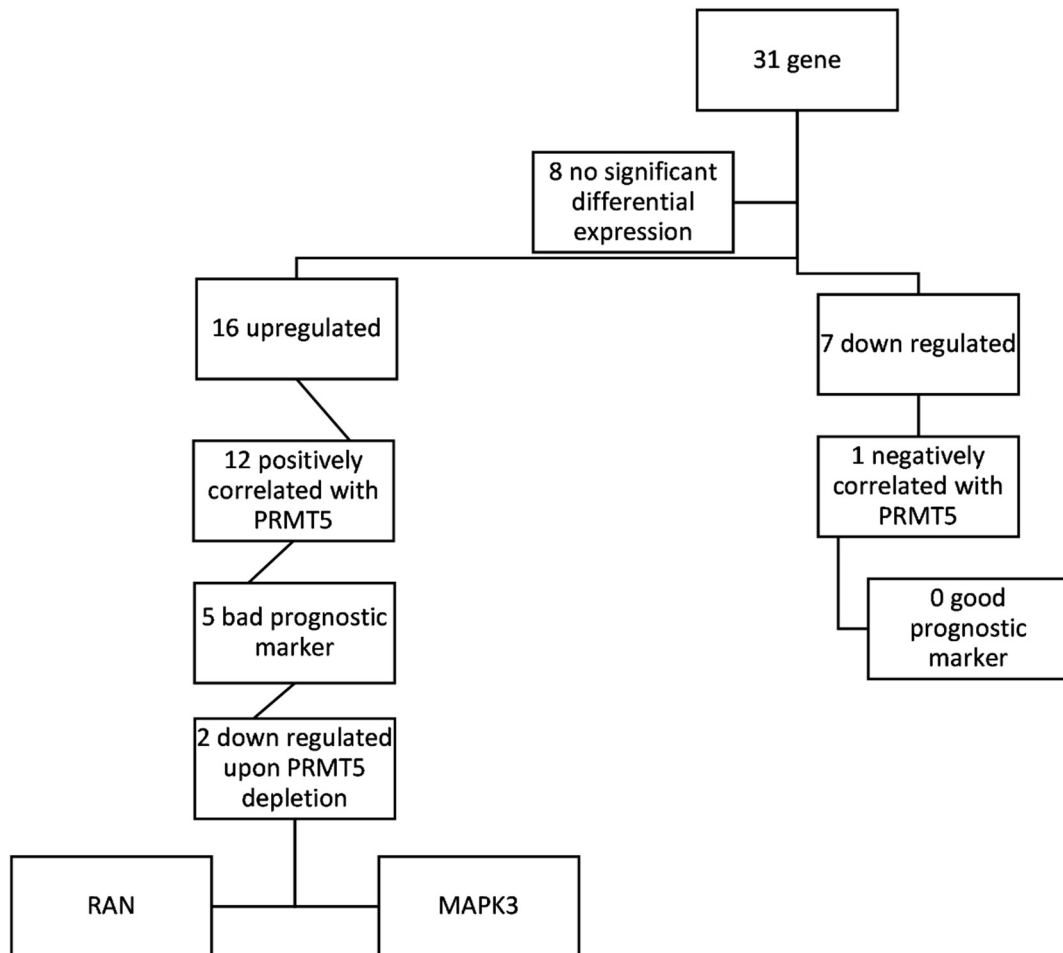
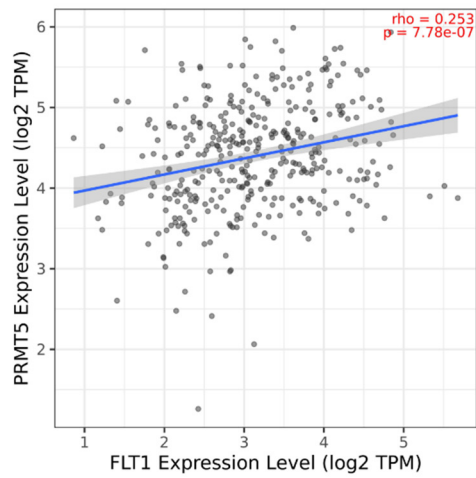


**Supplementary Fig. 1:** PRMT5 expression positively correlates with HIF1 $\alpha$  signaling pathway. IPA visual diagram of the HIF1 $\alpha$  pathway illustrates the location and predicted changes in the pathway molecules in the HHJ-7 cell line upon PRMT5 knockdown. Differentially expressed genes are marked purple. Green color refers to decrease expression while red color refers to increased expression. Molecular activity variations are highlighted orange for activation and blue for inhibition.



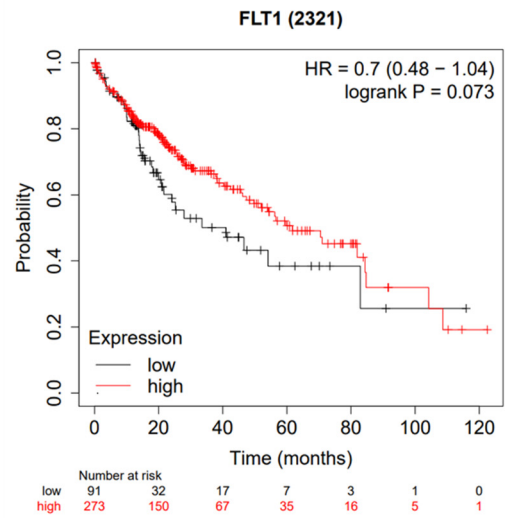
**Supplementary Fig. 2:** filtration criteria of HIF1 $\alpha$  signaling pathway genes controlled by PRMT5 expression to identify potential biomarkers.

a)

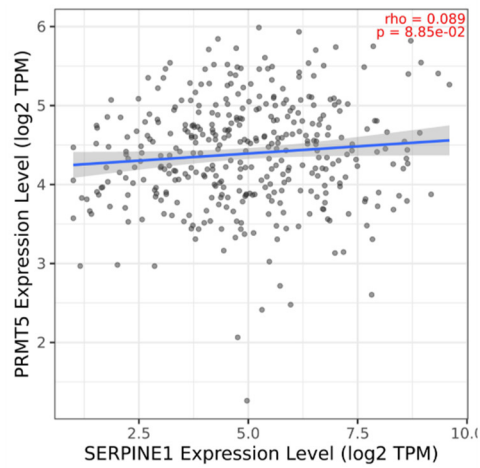


b)

## Overall survival (OS)

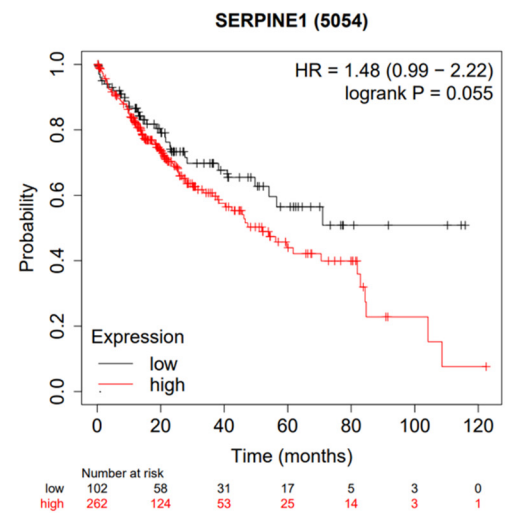


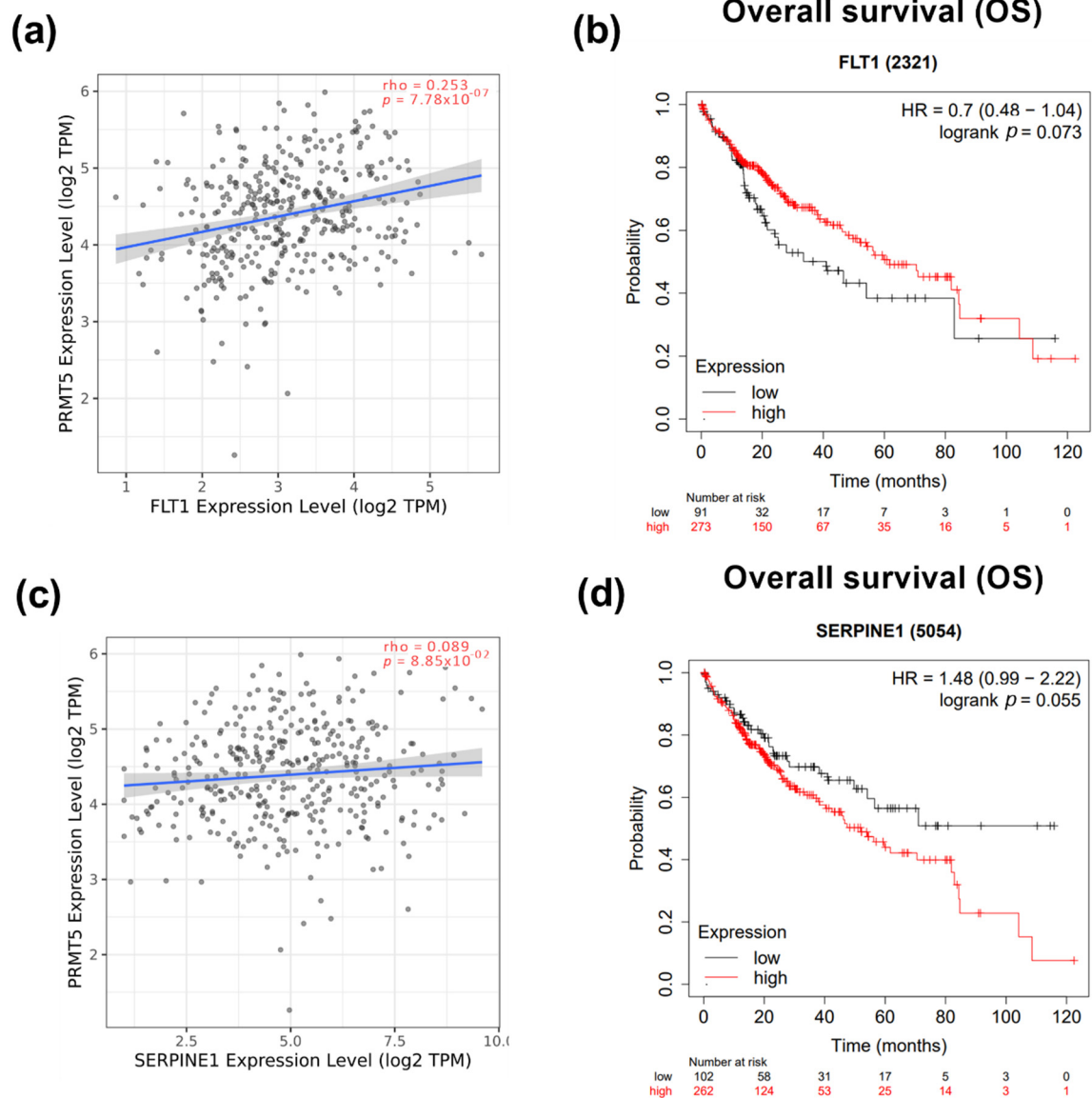
c)



d)

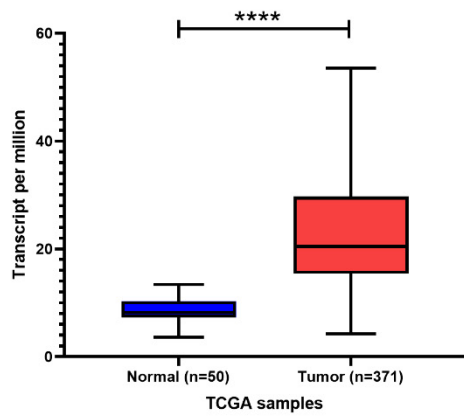
## Overall survival (OS)



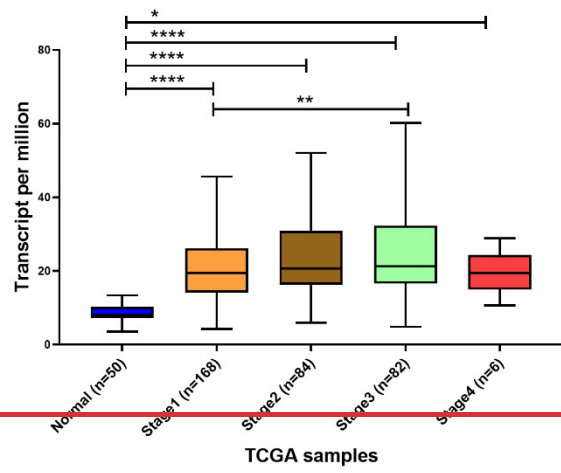


**Supplementary Fig. 3:** Correlation of angiogenesis related genes expression vs. PRMT5 expression and patient survival in HCC. **(a)** Spearman's rank correlation coefficient of PRMT5 versus FLT1 expression **(b)** FLT1 expression versus overall patient survival (OS) **(c)** Spearman's rank correlation coefficient of PRMT5 versus SERPINE1 expression **(d)** SERPINE1 expression versus overall patient survival (OS).

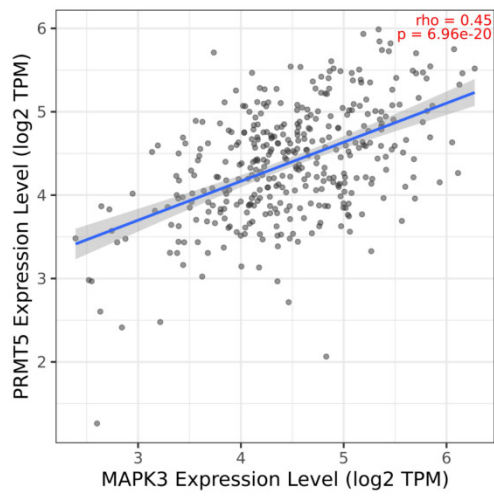
**a)** Expression of MAPK3 in LIHC based on Sample type



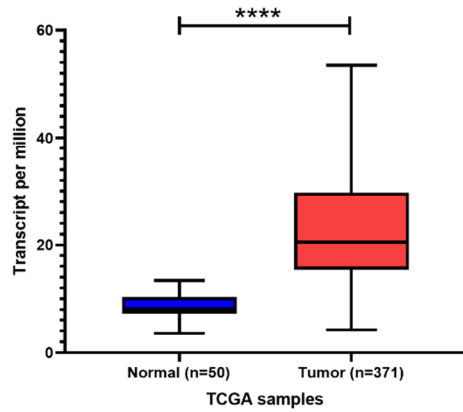
**b)** Expression of MAPK3 in LIHC based on individual cancer stage



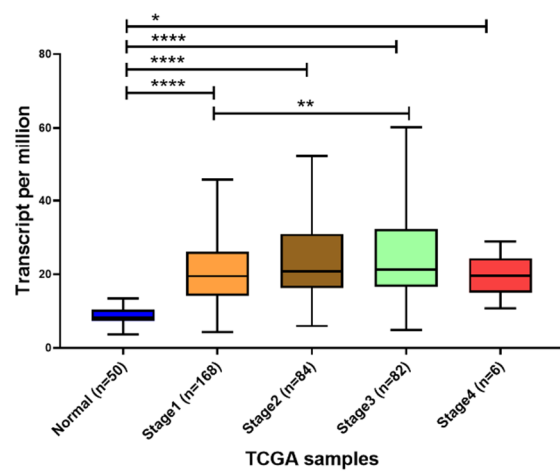
**c)**



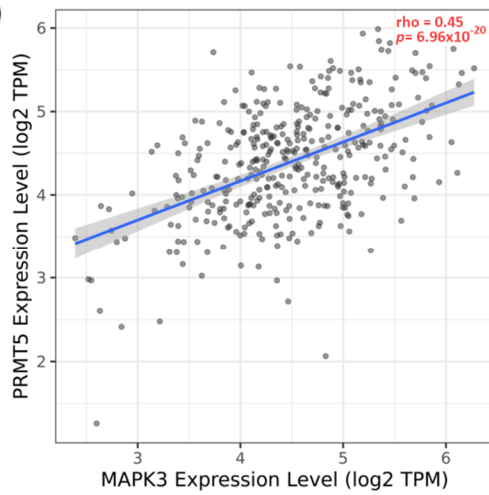
**(a)** Expression of MAPK3 in LIHC based on Sample type



**(b)** Expression of MAPK3 in LIHC based on individual cancer stage

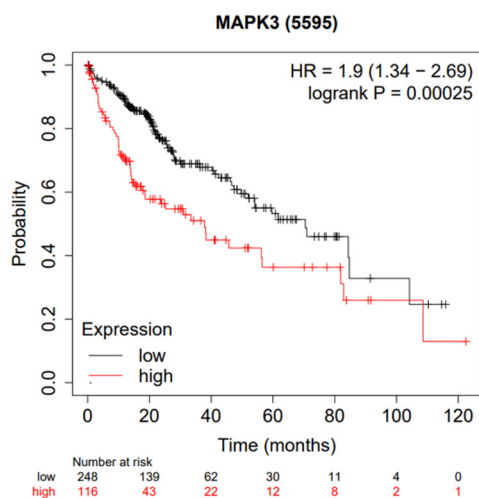


**(c)**

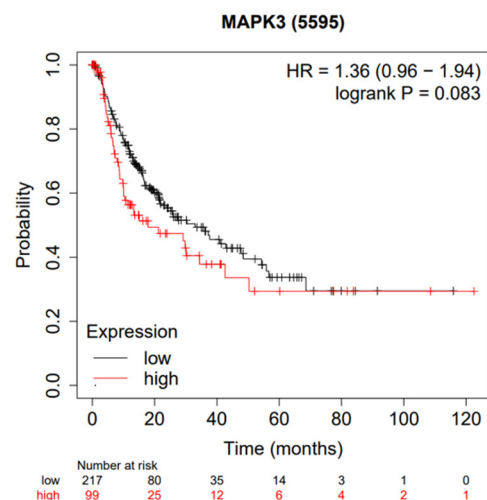


**Supplementary Fig. 4:** Expression and correlation of MAPK3 vs. PRMT5 in HCC. **(a)** MAPK3 expression in HCC compared to normal tissue counterpart. **(b)** MAPK3 expression in different stages of HCC compared to normal tissue counterpart. **(c)** Spearman's rank correlation coefficient of PRMT5 expression and MAPK3.

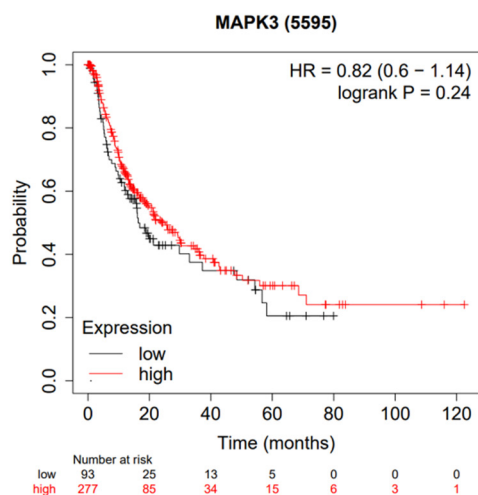
**a) Overall survival (OS)**



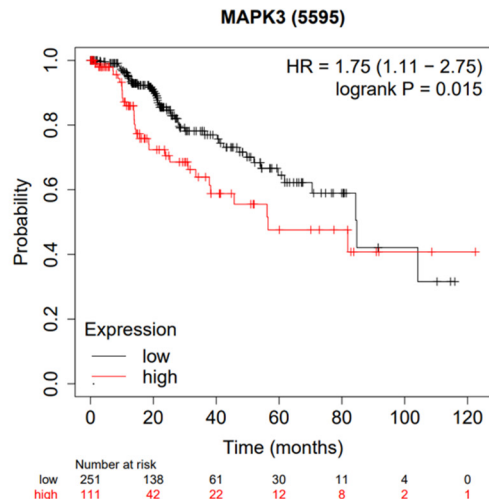
**b) Relapse-free survival (RFS)**



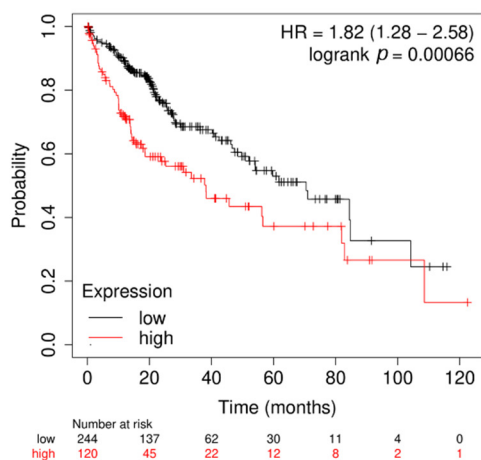
**c) Progression-free survival (PFS)**



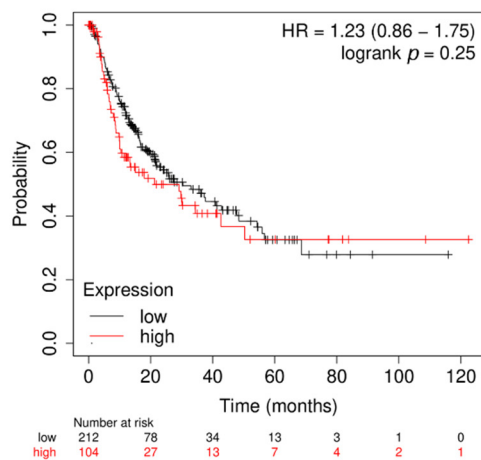
**d) Disease-specific survival (DSS)**



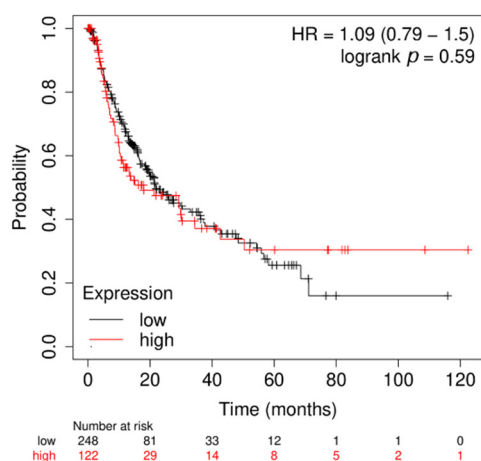
**(a) Overall survival (OS)**



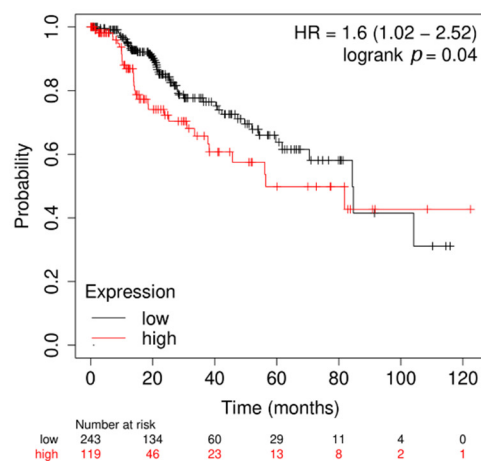
**(b) Relapse-free survival (RFS)**



**(c) Progression-free survival (PFS)**



**(d) Disease-specific survival (DSS)**



**Supplementary Fig. 5:** Correlational analysis of MAPK3 expression versus HCC patient survival. **(a)** MAPK3 expression versus overall patient survival (OS). **(b)** MAPK3 expression versus relapse-free survival (RFS). **(c)** MAPK3 expression versus progression-free survival (PFS). **(d)** MAPK3 expression versus disease-specific survival (DSS).