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Comprehensive Analysis of Expression, Prognostic Value, and Immune Infiltration for LM NB1 in Hepatocellular Carcinoma

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- Hepatocellular carcinoma (HCC) is one of the most aggressive cancers， which serio usly threatens human health. LMNB1 has been linked to the development of several malignancies. Our study aimed to compre hensive analysis of LMNB1 and explore t he underlying mechanism in the developm ent of HCC.

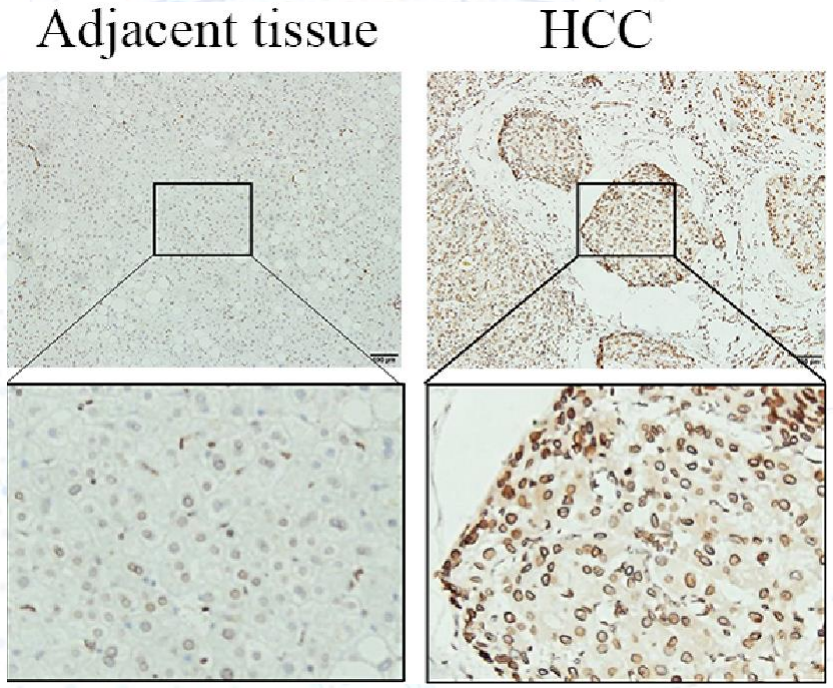

Figure1: Protein localization of LMNB1

Methods

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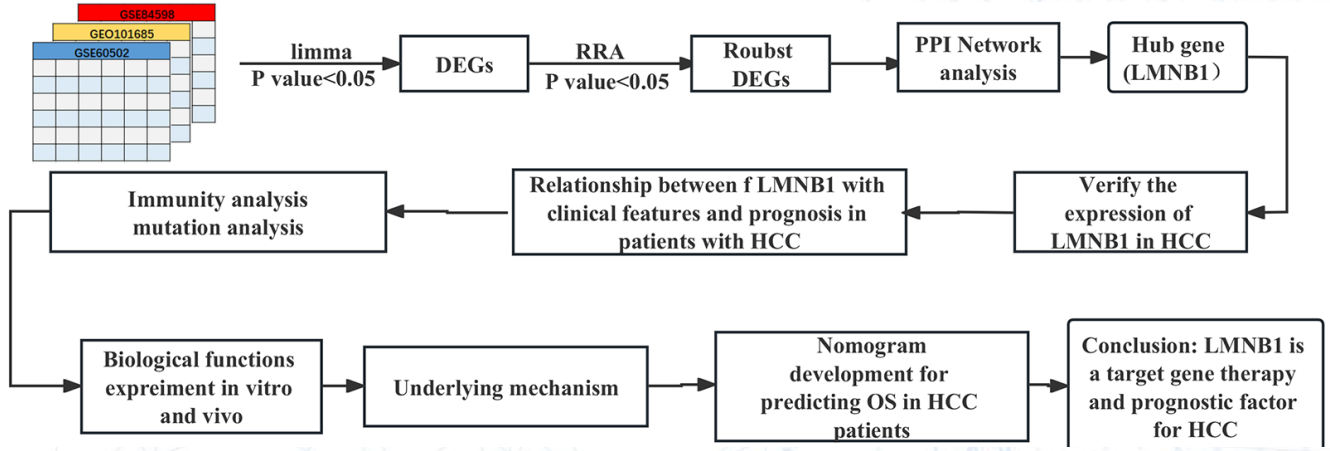

Figure2:The research framework.

- Result：
- LMNB1 was upregulated in HCC tissues and in dicated HCC patients had poor prognosis. The c linicopathological characteristics of HCC patien ts and the expression levels of LMNB1 were sig nificantly correlated. Investigations on somatic mutations in high or low LMNB1 expression su bgroups were also conducted. In samples with a higher expression of the LMNB1 group, TP53 mutations occurred more frequently, which may affect the clinical outcome of HCC patients. Mo reover, immune infiltration analysis demonstrat ed that the Neutrophils and eosinophils were di minished in in the high-LMNB1 expression gro up. Biological function analysis suggested that LMNB1-silencing repressed HCC proliferation and cell migration abilities. Moreover, the funct ional prediction revealed that the LMNB1 may participated in the Wnt/β-catenin pathway. West ern blot also revealed that LMNB1 knockdown reduced the level of tumor progression-promoti ng proteins (such as α-SMA and Cyclin D1) as well as Wnt/β-catenin signaling pathway mark er proteins.

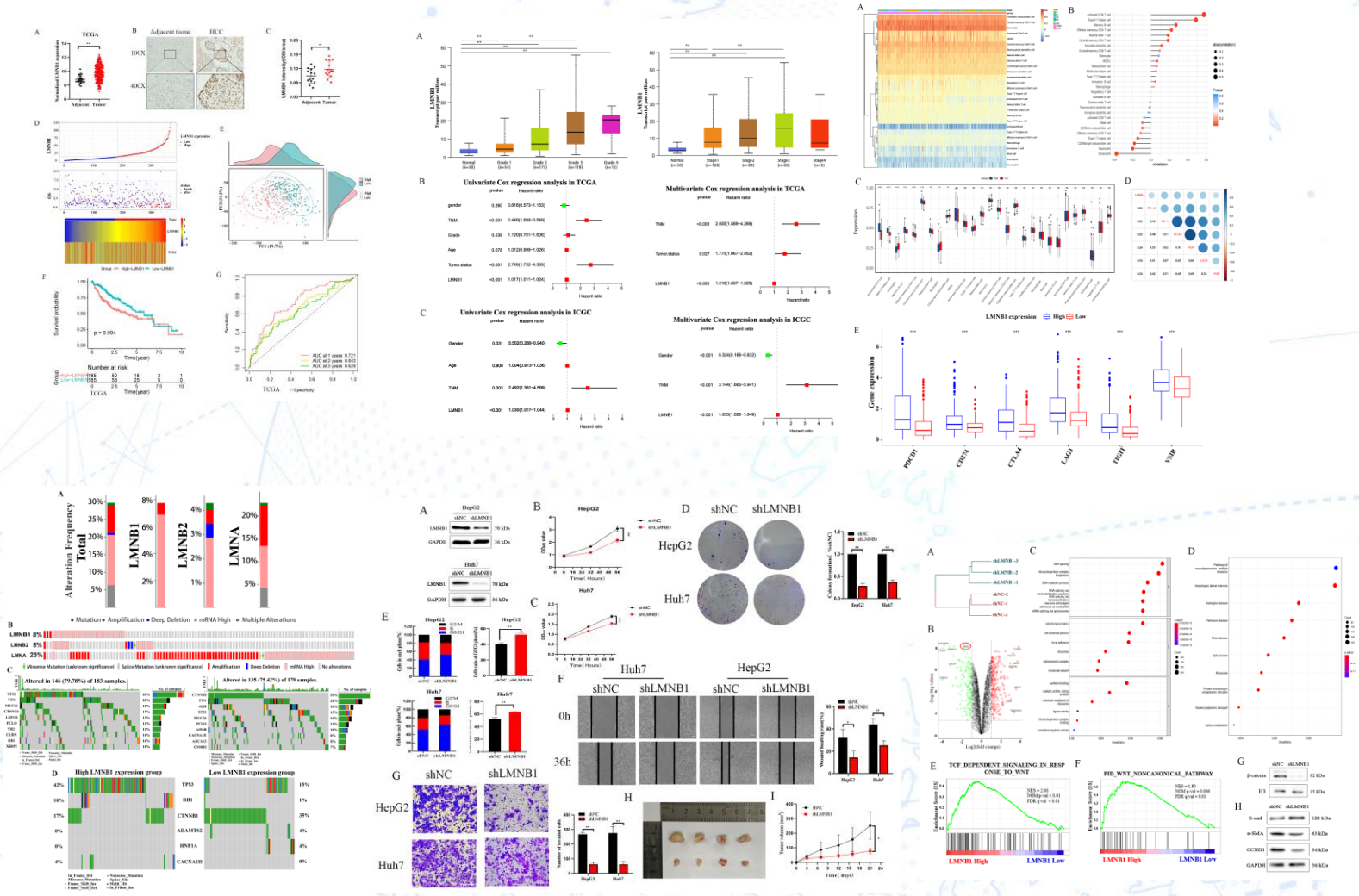

Figure3: Comprehensive Analysis of Expression, Prognostic Value, and Immune Infiltration for LMNB1 in Hepatocellular Carcinoma.

conclusion:

LMNB1 is a novel biomarker and therapeutic target for hepatocellular carcino ma.

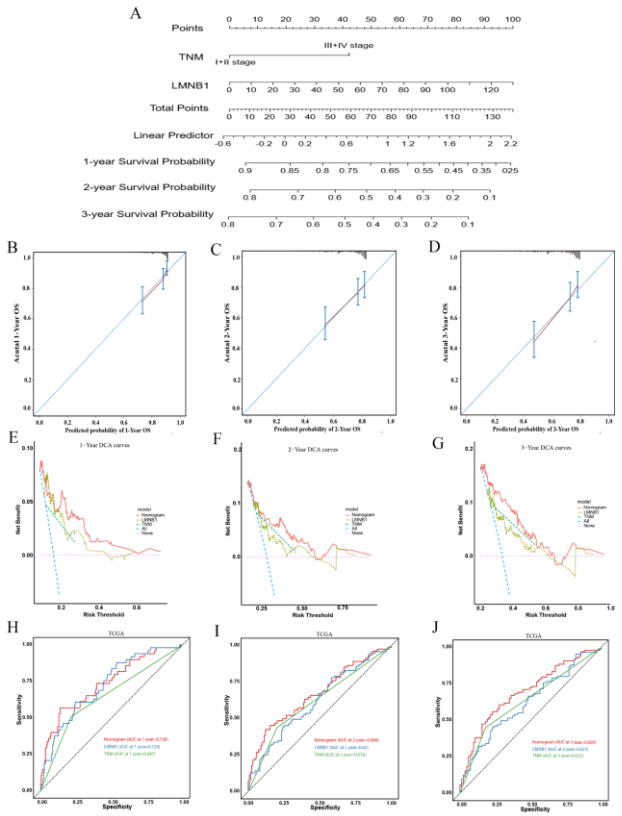

Figure4 Nomogram development for estimate overall survival.