Topic : Liver

DEVELOPMENT AND VALIDATION OF A LABORATORY RISK SCORE (APASL SCORE) TO PREDICT LONG-TERM SURVIVAL AFTER HEPATECTOMY FOR HEPATOCELLULAR CARCINOMA: A MULTICENTER ANALYSIS

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Background : To develop and validate a novel, purely laboratory-based risk score (APASL score) for predicting long-term survival outcomes after hepatectomy for hepatocellular carcinoma (HCC). Accurate prediction of long-term survival after hepatectomy for HCC is crucial for surgical decision-making and patient counseling. Existing staging systems that incorporate tumor characteristics may not be available preoperatively. A risk score based solely on preoperative laboratory parameters could provide valuable prognostic information.

Methods : From a multicenter database, patients who underwent hepatectomy for initially-diagnosed HCC were included. The APASL score was developed to predict long-term overall survival using five preoperative laboratory variables: alphafetoprotein (AFP), platelet count (PLT), albumin (ALB), aspartate aminotransferase (AST), and bilirubin (BIL). The score was validated in an independent cohort.

Results : The development cohort included 1,286 patients from 9 hospitals, and the validation cohort included 469 patients from another 2 hospitals. The APASL score demonstrated excellent discriminatory ability, with c-indices of 0.812 and 0.783 in the development and validation cohorts, respectively. The score outperformed traditional staging systems, including TNM, BCLC, CLIP, and Milan criteria. Higher APASL scores were associated with significantly worse overall survival (P<0.001). The higher APASL scores remained an independent prognostic factor in multivariate analysis (hazard ratio: 2.154, 95% confidence interval: 1.782-2.609, p<0.001).

Conclusions : The APASL score is a simple, accurate, and purely laboratory-based tool for predicting long-term survival after hepatectomy for HCC. It can facilitate preoperative risk stratification and patient counseling, without the need for tumor characteristics that may only be available postoperatively.

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