Estimating Surgical Outcomes for Hepatocellular Carcinoma

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Hepatocellular carcinoma (HCC) remains a problematic, common gastrointestinal malignancy. Short- and long-term outcomes are suboptimal as the cancer and underlying cirrhosis present two significant clinical challenges. Just with the presence of cirrhosis, patients have a chronic illness with a median survival that ranges from 2 years in decompensated cases up to 12 years in those with compensated liver disease.¹ The addition of malignancy to the cirrhosis presents a lethal combination and the worldwide burden of HCC is estimated to exceed 1 million deaths by 2030.² In the United States, the HCC mortality rate increased by 43% from 2000 to 2016 with 5-year survival only marginally better than pancreas cancer.³ These grim statistics highlight a major knowledge gap in every facet related to the diagnosis and treatment of liver cancer.

Because liver transplantation and organ allocation are supply limited, surgical resection is recommended for those with minimal cirrhosis, portal hypertension, and suitable candidates (small lesions < 3 cm).⁴ Liver resection for HCC has evolved significantly over the past 20 years, making it a much safer procedure when performed in the proper context with adequate patient selection.⁵ Cirrhosis is a well-known risk factor for serious postoperative complications, including hemorrhage, bile leak, post-hepatectomy liver failure, and death. Improved understanding and preoperative risk estimation is critical to minimize postoperative complications. Various strategies have been studied to help guide liver resection and to improve long-term outcomes.⁶ In the report by Haruki et al.,⁷ the authors investigate the association between rapid turnover proteins and HCC surgical outcomes. The rapid protein turnover score >2 was significantly associated with worse survival.

These data and conclusions must be interpreted carefully. Validation in a larger, external data set is needed before widespread adoption. However, at present this paper provides hypothesis-generating ideas, and the use of this novel, noninvasive scoring system may aid clinicians in the preoperative estimation of surgical risk. The nutritional impact of advanced cirrhosis and HCC has long been established as ascites, hypoalbuminemia, and cachexia negatively impact quality of life. For those patients with marginal cirrhosis, use of this type of scoring system may help to identify those patients at-risk for poor outcomes and/or complication. The rapid turnover protein score may prove useful once confirmed as a predictor of surgical outcome following resection of hepatocellular carcinoma.

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