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**Comment on “Outcomes of curative liver resection for hepatocellular carcinoma in patients with cirrhosis”**

Tang XL *et al*. Comment on “Outcomes of curative liver resection”

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**Abstract**

The present letter to the editor is in response to the research “Outcomes of curative liver resection for hepatocellular carcinoma in patients with cirrhosis” by Elshaarawy *et al* in *World J Gastroenterol* 2021; **13**(5): 424–439. The preoperative assessment of the liver reserve function in hepatocellular carcinoma (HCC) patients with cirrhosis is crucial, and there is no universal consensus on how to assess it. Based on a retrospective study, Elshaarawy *et al* investigated the impact of various classical clinical indicators on liver failure and the prognosis after hepatectomy in HCC patients with cirrhosis. We recommend that we should strive to explore new appraisal indicators, such as the indocyanine green retention rate at 15 min.

**Key Words:** ICG-R15; Hepatectomy; Cirrhosis; Hepatocellular carcinoma

Tang XL, Miao YD, Mi DH. Comment on “Outcomes of curative liver resection for hepatocellular carcinoma in patients with cirrhosis”. *World J Gastrointest Oncol* 2021; In press

**Core Tip:** Inappropriate hepatectomy might result in liver failure and even death for hepatocellular carcinoma (HCC) patients with cirrhosis. The main highlight of our comment is to emphasize the urgency of discovering and confirming new markers before hepatectomy in HCC patients with cirrhosis.

**TO THE EDITOR**

In “Outcomes of curative liver resection for hepatocellular carcinoma in patients with cirrhosis”, Elshaarawy *et al*[1] evaluated many classical predictors for liver failure and the prognosis in cirrhosis patients experiencing a radical resection of hepatocellular carcinoma (HCC) through univariate and multivariate analysis. They discovered that the preoperative model for end-stage liver disease (MELD) score, tumor diameter, length of hospital stays after radical resection of liver cancer, and hospital stay length were meaningful independent predictors of liver decompensation. The preoperative MELD score, various grades of posthepatectomy liver failure, and postoperative HCC recurrence after resection were meaningful independent predictors of the patients’ outcome. This study provides helpful information and is valuable for doctors to enhance the preoperative assessment of HCC patients with cirrhosis. Despite intensely appreciating this work, we believe that the research would have been much more attractive if the writer had adopted the indocyanine green retention rate at 15 min (ICG-R15). For more details about this viewpoint, we look forward to an assessment and a communication with the writers.

With the dramatic advancement of surgical techniques, the procedures of hepatectomy are getting progressively radical. Inappropriate surgery might result in liver failure and even death. It is worthwhile for surgeons to concentrate on identifying the meaningful markers of postoperative liver decompensation and the prognosis. In recent years, the ICG-R15 has gained expanded attention in assessing liver function and has been widely employed for the preoperative assessment of hepatic functional reserve. Thus, it is more attractive if the writer can further strengthen the relevant study.

Indocyanine green retention (ICG) is specifically absorbed by hepatocytes after injection, is secreted by hepatocytes into bile, and is promptly excreted through the biliary tract[2]. ICG has no chemical reaction in the body and is eliminated only through the liver. Therefore, it can be a good way to determine the liver’s functional reserve. The ICG-R15 can vary in reply to the current liver functional anomalies when there are no irregularities in many of the traditional biochemical markers. Hence, it supplies the required standards to prevent surgical trauma, blood loss through the liver, and other complications associated with acute liver failure. Recently, Kokudo *et al*[3] reported that ICG-R15 might improve the clinicians' capability to stratify patients at risk for surgical liver failure. Likewise, in a comparative analysis of 185 patients, Wang *et al*[4] found that the ICG-R15 is more reliable than the MELD score and the Child-Pugh score in indicating hepatic functional reserve before hepatectomy.

A precise assessment of the liver’s functional reserve is very essential for the proper therapy of HCC patients with cirrhosis. A proper therapy is critical to the patient’s recovery. Although no universal consensus is presently available on the assessment of liver functional reserve, we believe that we should vigorously look for more novel and valuable markers to adapt to the advancement of surgical techniques.

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**Footnotes**

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