



# Validation of an IGF-CTP scoring system for assessing hepatic reserve in Egyptian patients with hepatocellular carcinoma

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## Abstract:

**Background** The Child-Turcotte-Pugh score (CTP) is the standard tool for hepatic reserve assessment in hepatocellular carcinoma (HCC). Recently, we reported that integrating plasma insulin-like growth factor-1 (IGF-1) level into the CTP score was associated with better patient risk stratification in two U.S. independent cohorts. Our current study aimed to validate the IGF-CTP score in patients who have different demographics and risk factors. **Patients and Methods** We prospectively recruited 100 Egyptian patients and calculated their IGF-CTP score compared to CTP score. C-index was used to compare the prognostic significance of the two scoring systems. Finally, we compared our results with our U.S. cohorts published data. **Results** IGF-CTP score showed significant better patient stratification compared to CTP score in the international validation cohort. Among CTP class A patients, who usually considered for active treatment and clinical trial enrollment, 32.5% were reclassified as IGF-CTP class B with significantly shorter OS than patients reclassified as class A with hazard ratio [HR] = 6.15, 95% confidence interval [CI] = 2.18 -17.37. **Conclusion** IGF-CTP score showed significantly better patient stratification and survival prediction not only in the U.S. population but also in international validation population, who had different demographics and HCC risk factors.

## Keywords:

IGF-1, Child-Pugh, validation, liver reserve, hepatocellular carcinoma

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