

Liver Imaging Reporting And Data System Category On Magnetic Resonance Imaging Predicts Recurrence Of Intrahepatic Cholangiocarcinoma After Surgery: A Multicenter Study

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Background : We aimed to investigate the preoperative clinical and imaging predictors for recurrence-free survival (RFS) after curative resections of intrahepatic cholangiocarcinoma (iCCA) and to identify the role of the Liver Imaging Reporting and Data System (LI-RADS) category as a predictor in at-risk patients.

Methods : This multicenter, retrospective study included 113 patients who underwent curative surgical resection for a single treatment-naïve iCCA and preoperative contrast-enhanced magnetic resonance imaging (MRI) between January 2008 and June 2021. Imaging features were evaluated using the LI-RADS version 2018. A Cox proportional hazards model was used for multivariable survival analysis. RFS rates were estimated using the Kaplan-Meier method, and differences were compared using the log-rank test.

Results : Ninety-three iCCAs (82.3%) were categorized as LR-M, and 20 iCCAs (17.7%) were categorized as LR-4 or 5. In the multivariable analysis, LR-M category (hazard ratio [HR], 8.035; 95% confidence interval [CI], 1.096–58.931; P = 0.040) and a tumor size of > 3 cm on MRI (HR, 2.690; 95% CI, 1.319–5.487; P = 0.007) were independent predictors associated with worse RFS. The 5-year RFS rate was significantly higher in patients with iCCA categorized as LR-4 or 5 than in those with iCCA categorized as LR-M (94.4% vs. 51.9%, respectively; P = 0.006).

Conclusions : Patients with iCCA categorized as LR-4 or 5 may have a better RFS than those with iCCA categorized as LR-M. The LI-RADS category on MRI may be a prognostic factor in the preoperative evaluation of patients with iCCA.

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