

中文題目：比較門脈和囊微靜脈侵犯對早期肝癌切除預後的影響

英文題目：Comparison of portal and capsular microvascular invasion in the outcomes of early HCC after curative resection

作者：盧威廷<sup>1</sup>，劉婷婷<sup>2</sup>，劉約維<sup>3</sup>，蔡明釗<sup>4</sup>

服務單位：<sup>1</sup> 高雄長庚紀念醫院內科部；<sup>2</sup> 高雄長庚紀念醫院病理科；<sup>3</sup> 高雄長庚紀念醫院一般外科；<sup>4</sup> 高雄長庚紀念醫院胃腸肝膽科

### ***Background:***

Microvascular vascular invasion (MVI) has been demonstrated as a strong risk factor associated with tumor recurrence and poor overall survival (OS) among hepatocellular carcinoma (HCC) patients after resection. There are two types of MVI, including portal vein and capsular vein invasion types. However, little is known about the impact of different types of MVI on HCC recurrence. This study aimed to compare the portal and capsular MVI on HCC recurrence and OS.

### ***Methods:***

Patients with Barcelona Clinic Liver Cancer (BCLC) stage 0 or A HCC who underwent primary resection between January 2001 and June 2016 at Kaohsiung Chang Gung Memorial Hospital were consecutively selected. The types of MVI (portal vein and capsular vein invasion types) were recorded. Factors that influenced overall survival (OS) and recurrence-free survival (RFS) were analyzed using Cox proportional hazards models.

### ***Results:***

Of the 857 eligible patients, 327 (38.2%) had MVI and 530 (61.8%) did not. The cumulative incidence of HCC recurrence was significant higher in the MVI group than the non-MVI group ( $p < 0.001$ ). Of the 327 MVI, 85 (26.0%), 178 (54.4%), and 64 (19.6%) were portal vein, capsular vein, and both-MVI types, respectively. Compared with portal or capsular MVI, patients with both-MVI types had higher proportion of BCLC stage A ( $p < 0.001$ ), capsular invasion ( $p = 0.002$ ), and satellite nodules ( $p < 0.001$ ). In multivariate analysis, diabetes (hazard ratio [HR]: 1.44;  $p = 0.004$ ), liver cirrhosis (HR: 1.63;  $p < 0.001$ ), BCLC stage (HR: 1.59;  $p = 0.004$ ), and both-MVI type (HR: 1.71;  $p = 0.001$ ) were independent risk factors for HCC recurrence. In further stratified analysis, the both-MVI type is associated with extrahepatic recurrence compared with other types.

***Conclusion:***

Among HCC patients after curative resection, concurrent portal and capsular MVI is a risk factor for HCC recurrence in comparison with non-MVI or only portal or capsular MVI.