

## Oral Presentation VII

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### Different Risk Factors for Early and Late Recurrence of Hepatocellular Carcinoma after Living Donor Liver Transplantation

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**Research Purpose:** This study was designed to investigate whether early and late recurrences of hepatocellular carcinoma were associated with different risk factors after living donor liver transplantation.

**Materials and Methods:** From Feb 1999 to Dec 2009, 170 patients who received living donor liver transplantation for hepatocellular carcinoma were reviewed. Hepatocellular carcinoma recurrences were classified into early ( $\leq 6$  months) and late ( $> 6$  months) recurrences. Each groups were compared by demographics, tumor, and histopathological characteristics for their prognostic significance by logistic regression analysis.

**Results:** Early and late recurrences developed in 19 patients and 19 patients, respectively. In univariate analysis, age, pre-operative serum alpha-fetoprotein (AFP), pre-operative TACE Hx, pre-operative PET detection, Milan criteria, histology, total tumor size, microvascular invasion were found to be the risk factors in the early recurrence. Multivariate analysis between the early recurrence group and the control group showed that Milan criteria, pre-operative TACE Hx, pre-operative PET detection, microvascular invasion were independent risk factors for early recurrence. Whereas, pre-operative serum alpha-fetoprotein (AFP), pre-operative PET detection, Milan criteria, histology, total tumor size, microvascular invasion were risk factors for late recurrence in univariate analysis. Multivariate analysis between the late recurrence group and the control group showed that histology and Milan criteria were the significant risk factors for late recurrence.

**Conclusions:** Different risk factors were associated with early and late recurrences of HCC after living

donor liver transplantation. This study suggests that different screening and adjuvant therapy strategies may be needed according to these risk factors.

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### Predictive Factors Affecting Early Hepatocellular Carcinoma Recurrence in Adult Liver Transplantation for Hepatocellular Carcinoma

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**Research Purpose:** Liver transplantation (LT) is regarded as an effective treatment for hepatocellular carcinoma (HCC). However, some patients experience early recurrence ( $< 1$  year) and subsequently died due to rapid progression of the disease. We investigated predictive factors affecting early HCC recurrence (EHR) in patients who underwent adult LT for HCC.

**Materials and Methods:** From January 2005 to February 2011, 196 adult patients underwent LT for HCC in National Cancer Center. Among these, 32 patients (16.3%) who suffered recurrence were retrospectively reviewed. Univariate and multivariate analyses were performed to analyze factors affecting EHR.

**Results:** On univariate analysis, positivity of pre-transplant 18 F-FDG PET, microvascular invasion and histologic grade III/IV tumor were significant predictive factors affecting EHR after LT. The independent predictive factors affecting EHR by multivariate analysis were microvascular invasion [hazard ratio (HR)=36.0] and histologic grade III/IV tumor (HR=34.4).

**Conclusions:** The patients who are reported post-transplant pathologic findings such as microvascular invasion and histologic grade III/IV tumor should be focused on the detection for HCC recurrence in the early period following LT for HCC.