

## **Large solitary hepatocellular carcinomas treated with transarterial chemoembolization: in which BCLC stage patients should be allocated?**

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**Purpose:** Categorization and management according to the BCLC staging system of patients with large ( $\geq 5$  cm) solitary hepatocellular carcinoma (LSHCC) remains a controversial topic in the literature. We aim to investigate which BCLC stage better translates clinical outcomes of patients with LSHCC initially enrolled to TACE treatment strategy. **Methods:** A single institution retrospective analysis was performed between February 2004 and November 2010. 56 patients (median age 73 years-old, range: 43–88; 38(67.8%) male, 54 (96.5%) Child-Pugh A) without macrovascular invasion or metastasis were included. Mean lesion diameter was 9 cm (range, 5-19). Median number of TACE sessions was 1.8 (range, 1-7). TACE regimens consisted of oil-TACE (39 patients, 69 sessions) and drug-eluting beads (DEB)-TACE (17 patients, 32 sessions). Imaging response assessment was performed using mRECIST. Overall survival (OS), 1-, 3-, and 5-year OS rates were estimated using Kaplan-Meier method. OS in regards performance status (PS), tumor burden (up to or more than 25% of estimated liver volume) were done using a log-rank test. **Results:** Median study follow-up was 55.2 months (range: 10.8-102). Imaging response assessment was available in 54 patients and showed 8 CR, 43 PR and 3 SD. Median OS for all patients was 26.4 (95% CI: 22 - 33) months. 13 patients who had TACE were subsequently considered surgical candidates and undergone liver resection showing median OS, 1-, 3-, and 5-year OS rates of 57.2 months, 85%, 54%, and 46%, respectively. The remaining 43 patients were deemed inoperable and received TACE alone (33 patients) or combined with other therapies (n= 10. Sorafenib= 4; Y90= 3; ablation= 2; radiotherapy= 1) and had a median OS, 1-, 3-, and 5-year OS rates were 22.5 months, 84%, 21%, and 2.3%, respectively. Median OS was not significantly different between inoperable patients with PS 0 or 1 (24.2 versus 21.9 months, respectively, p= 0.81) or with tumor burden  $\leq$  or  $>$ 25% of the liver volume (22.3 versus 26.2 months, respectively, p= 0.90). **Conclusions:** TACE is a reasonable treatment strategy in patients with LSHCCs not eligible to surgical resection with median OS rates comparable with BCLC stage B irrespective of PS 0 or 1, tumor burden. Patients who undergone TACE followed by liver resection have OS rates comparable to BCLC A stage.