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Long-term outcomes of ruptured hepatocellular carcinoma: An international multicentric propensity score-matched study

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Objective: Long-term outcomes of patients with ruptured hepatocellular carcinoma (rHCC) remain scant. This study aimed to assess disease-free survival (DFS) and overall survival (OS) after surgical resection of rHCC compared to non-ruptured HCC (nrHCC).
Methods: Patients with rHCC and nrHCC were collected from 8 centers in Europe, Asia, and North America. Resected rHCC patients were

matched 1:1 to patients undergoing surgery for nrHCC using propensity score and nearest-neighbor method (matching criteria: age, tumor size, cirrhosis, Child-Pugh score, Barcelona Clinic Liver Cancer stage, resection status, grade, and microvascular invasion). Survival rates were calculated using Kaplan-Meier method.

Results: A total of 2033 patients were included: 226 rHCC patients (172 operated: 68 with upfront surgery and 104 after embolization) and 1807 nrHCC patients. Median DFS and OS of rHCC patients (all treatments confounded) were 10 months (95% CI 7–13) and 22 months (95% CI 13–31). Prognostic factors for worse OS among rHCC patients were absence of preoperative arterial embolization (HR 2.3, 95% CI 1.2–4.6, p=0.016), cirrhosis Child B/C (HR 2.4, 95% CI 1.1–5.4, p=0.040), and R1/R2 margins (HR 2, 95% CI 1–5, p=0.049). Survivals were similar between Western and Eastern rHCC patients.

After propensity score matching, 106 rHCC patients and 106 nrHCC patients displayed similar characteristics. Patients with rHCC had shorter median DFS (12 months, 95% CI 7–17 vs. 22 months, 95% CI 12–32, p=0.011), but similar median OS compared to nrHCC patients (43 months, 95% CI 21–65 vs. 63 months, 95% CI 21–105, p=0.060).

Conclusion: In this large dataset including Eastern and Western patients, rHCC was associated with shorter DFS compared to nrHCC, while OS was similar.