

## Prognostic value of site-specific extra-hepatic disease in hepatocellular carcinoma: a SEER database analysis.

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### Abstract

**BACKGROUND:** We the prognostic value of site-specific extra-hepatic disease in hepatocellular carcinoma (HCC) patients registered within the surveillance, epidemiology and end results (SEER) database.

**METHODS:** SEER database (2010-2013) has been queried through SEER\*Stat program to determine the prognosis of advanced HCC patients according to the site of extra-hepatic disease. Survival analysis has been conducted through Kaplan Meier analysis.

**RESULTS:** A total of 4396 patients with stage IV HCC were identified in the period from 2010-2013 and they were included into this analysis. Patients with isolated regional lymph node involvement have better outcomes compared to patients with any other site of extra-hepatic disease ( $P < 0.0001$  for both endpoints). Among patients with distant metastases, patients with bone metastases have better outcomes compared to patients with lung metastases ( $P < 0.0001$  for both endpoints). Multivariate analysis revealed that younger age, normal alpha fetoprotein, single site of extra-hepatic disease, local treatment to the primary tumor and surgery to the metastatic disease were associated with better overall survival and liver cancer-specific survival.

**CONCLUSION:** Within the limits of the current SEER analysis, HCC patients with isolated lung metastases seem to have worse outcomes compared to patients with isolated bone or regional nodal metastases..

**KEYWORDS:** Liver cancer; bone metastases; hepatocellular carcinoma; lung metastases; nodal metastases