

## Relevance of the tumor site in node metastasis for intrahepatic cholangiocarcinoma

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**Lecture** : Introduction: No definitive conclusion has been made regarding the role of lymphadenectomy in treatment of intrahepatic cholangiocarcinoma (IHCC). Aim of this study is to investigate the rate of lymph node metastasis (LNM) in peripherally located IHCC, and to evaluate clinical implication of lymphadenectomy based on tumor distance from hilum.

Methods: Clinical data of IHCC patients from 10 tertiary hospitals who underwent liver resection and lymphadenectomy were collected retrospectively. Distance between the 2nd confluence of portal vein and tumor (D) was measured three-dimensionally from computed tomography images. Primary outcome was rate of LNM according to D. Secondary outcomes were oncologic outcomes based on nodal status according to D.

Results: Total 124 patients were enrolled. Mean D was  $3.1 \pm 2.6$  cm. LNM rate was significantly higher when D was less than 5cm (44.6% vs 24.1%,  $p=0.050$ ). Risk factors significantly associated with LN metastasis were serum CEA level  $> 5$  ng/mL ( $p=0.034$ ), perineural invasion ( $p=0.037$ ), and D less than 5cm ( $p=0.047$ ). Right-sided tumors did not show significantly different LNM rate according to D. Overall survival rate of N0 and N1 patients with  $D < 5$ cm was 39.0% and 12.7% with  $p=0.004$ . Recurrence free survival rate of N0 and N1 patients with  $D < 5$ cm was 28.6% and 8.8% with  $p=0.004$ . Overall survival rate of N0 and N1 patients with  $D > 5$ cm was 27.7% and 50.0% with  $p=0.448$ . Recurrence free survival rate of N0 and N1 patients with  $D > 5$ cm was 30.2% and 0.0% with  $p=0.030$ .

Conclusions: Though D shorter than 5 cm was an independent factor for LN metastasis in IHCC patients, LN metastasis rate in cases with D longer than 5cm was 24.1% and is high enough to rationalize routine lymphadenectomy.