

## Effect of age on the prognosis of intrahepatic cholangiocarcinoma

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**Background :** Intrahepatic cholangiocarcinoma (iCCA) is a subgroup of cholangiocarcinoma and is the second-most-common primary hepatic tumor. Several predictive and prognostic factors have been analyzed; we evaluated the influence of age.

**Methods :** A retrospective analysis of patients treated between 2005 and 2016 at Konkuk University Medical Center. In total, 133 patients with iCCA were identified. The mass-forming, periductal-infiltrating, and intraductal-growth types were included; patients with extrahepatic or hilar-type cholangiocarcinoma were excluded. We defined two groups: a younger group, age < 65 years, and an older group, age ≥ 65 years. Statistical analyses using simple and multiple Cox regression analyses, including the Kaplan-Meier method, were conducted.

**Results :** In total, 114 patients were enrolled. The two groups differed with regard to treatment options such as surgery with adjuvant chemotherapy or palliative chemotherapy ( $p = 0.012$ ,  $p < 0.001$ ). The younger group had significantly longer survival than the older group ( $p = 0.017$ ). In the younger group, patients who received intensive therapy had longer survival than those who did not ( $p < 0.001$ ; HR 3.942; 95% CI 2.053–7.569). Multiple regression analysis indicated that younger age, lower bilirubin, low CA 19-9, and no lymph-node involvement were independent factors for improved survival.

**Conclusions :** : Younger patients and those who underwent intensive treatment had longer survival. The younger the patient, the more treatments received, including palliative chemotherapy.