

## **Intraductal Papillary Mucinous Neoplasms of the Pancreas with Concurrent Pancreatic and Periapillary Neoplasms**

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**Context** Intraductal papillary mucinous neoplasms (IPMN) have been reported to be associated with concurrent pancreatic ductal adenocarcinoma (PDAC) in about 8% of resected branch duct lesions. In addition other pancreatic and periampullary tumors are occasionally diagnosed with IPMN.

**Objective** To describe the incidence, clinico-pathological characteristics and prognosis of concurrent pancreatic/periampullary neoplasms from two tertiary referral centers. **Methods** All pancreatic resections performed at the Massachusetts General Hospital, USA, and the Negrar Hospital, Italy, were analyzed to identify patients with IPMN and concurrent pancreatic/periampullary neoplasms. **Results** Two-thousands and 762 patients underwent pancreatic surgery from January 2000 to December 2012. Sixteen percent (n=441) had pathologically confirmed IPMN and 11% of them (n=50) had synchronous other pancreatic neoplasm. Sixty-two percent of them were PDAC, followed by neuroendocrine neoplasms (10%), ampullary carcinoma (10%), mucinous and

serous cystic neoplasms. In 82%, both lesions were found in the same pancreatic region, mainly in the pancreatic head. Among all patients with synchronous neoplasms, 66% harbored branch duct IPMN, 28% combined IPMN and 6% main duct IPMN, 11% IPMN with high-grade dysplasia, and 4% invasive carcinoma. The median age of patients with concurrent pancreatic neoplasms was 71 years. Abdominal pain and/or jaundice were the leading symptoms in half of patients. Thirty-four percent of patients had a positive history for other extra-pancreatic neoplasms. The median survival time was 15 months (95% CI: 11-19 months) in patients with concurrent PDAC vs. 23 months (95% CI: 0-46 months) in patients with other synchronous malignant neoplasms. **Conclusion** IPMN, mainly BD-IPMN, are associated with PDAC in about 7% of patients and account for 62% of all concurrent pancreatic/periampullary neoplasms. Other synchronous neoplasms may be found sporadically with IPMN.