

## **Lung Progression After Resection for Invasive Intraductal Papillary Mucinous Neoplasms (IPMNs) of the Pancreas**

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**Context** IPMNs are intraductal mucin-producing cystic neoplasms of the pancreas. The incidence of these neoplasms is rising and it has been recently reported that IPMNs account for approximately 25% of resected pancreatic neoplasms. It has been described that recurrence of disease is observed in 26-65% of patients resected for invasive IPMN (also named papillary mucinous carcinoma), usually within 3 years from surgery and often in form of distant disease. However, in clinical trials of adjuvant chemotherapy for pancreatic cancer patients with disease free survival as primary end-point, the postoperative work-up included only abdominal evaluation. **Objective** The main aim of our study was to evaluate the pattern of recurrence for patients resected for invasive IPMNs in order to better understand the natural history of disease and to optimize the follow up procedures. **Methods** We retrospectively reviewed clinical data of patients who underwent radical surgical resection for invasive IPMN at University Hospital of Pisa, Italy, and who were

adequately followed up at our institution; for these patients, total body computer tomography (CT) was repeated every 3 to 6 months for the first three years after surgical resection. **Results** Twenty-nine patients (M/F 16/13) progressed after resection for invasive IPMN were identified. Median age was 70 years (range 61-86 years). Disease progression occurred in form of liver metastases for 12 (41%) of them (with liver-only disease in 5 patients), lymph node involvement in 8 (28%), peritoneal carcinosis in 4 (14%), local recurrence in 5 (17%) and finally lung metastases in 14 (48%) patients; for 7 (24%) of these patients lung was the only site of progression. Median overall survival from evidence of metastases was 13.0 months. **Conclusion** We observed a high percentage of lung metastases as first and unique site of progression in patients resected for invasive IPMN. These data suggest the importance to perform chest CT as pre-operative and follow up exam in order to obtain an optimal staging and to early detect lung metastases.