



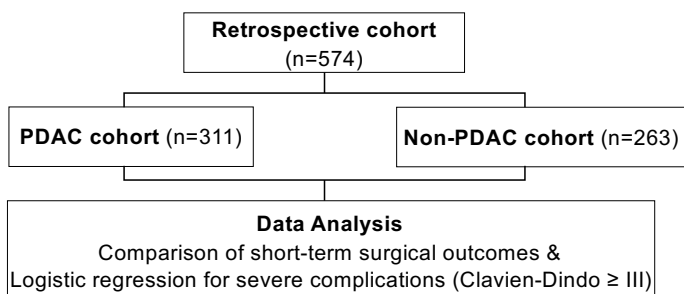
Higher Risk of Severe Complications in Non-PDAC Patients After Laparoscopic Pancreatoduodenectomy: A Retrospective Cohort Study

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Introduction

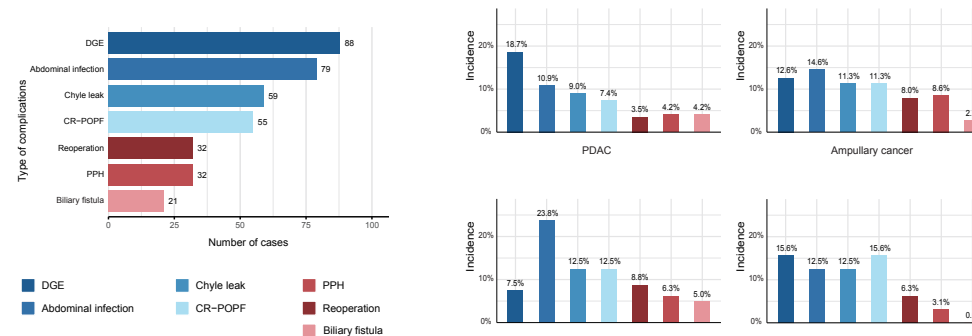
Laparoscopic Pancreatoduodenectomy (LPD) is a technically demanding but oncologically sound alternative to open surgery for periampullary malignancies. Periampullary cancers are a heterogeneous group, including pancreatic ductal adenocarcinoma (PDAC), ampullary, distal cholangiocarcinoma, and duodenal carcinoma, with distinct biological behaviors and anatomical risks. Existing literature often aggregates these subtypes, masking potential differences in early surgical outcomes and complication profiles. This study aims to compare short-term outcomes between PDAC and non-PDAC cohorts undergoing LPD, and identify independent risk factors for severe postoperative complications to facilitate tailored perioperative management.

Methods



Results

- **Distinct Profiles:** Compared to PDAC, non-PDAC tumors presented with higher rates of soft pancreatic texture ($p<0.001$) despite smaller tumor size and lower venous resection requirements ($p<0.001$).
- **Short-Term Outcomes:** Non-PDAC patients experienced significantly higher major morbidity (16.7% vs. 10.9%, $p=0.043$), driven primarily by increased rates of CR-POPF, abdominal infection, and reoperation.
- **Independent Predictors:** Multivariable analysis identified age ≥ 65 years, prolonged operative time, and non-PDAC pathology (OR 1.66, $p=0.044$) as independent risk factors for severe complications, whereas pylorus preservation offered a protective effect (OR 0.46, $p=0.006$).



Postoperative complication profiles of patients undergoing LPD for periampullary cancers. Left, overall distribution of complications in the entire cohort. Right, complication-specific rates stratified by pathological subtype: PDAC, ampullary cancer, distal cholangiocarcinoma, and duodenal carcinoma.