

# INPLASY PROTOCOL

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**Conflicts of interest:**  
None declared.

## INTRODUCTION

**Review question / Objective:** P: patients with non-malignant or pre-malignant pancreatic lesions; I: Robotic central pancreatectomy or enucleation; C: Open central pancreatectomy or enucleation; O: Operative outcomes.

## Robotic Versus Open Parenchyma-Sparing Pancreatectomy for Non-Malignant and Pre-Malignant Pancreatic Lesions

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**Review question / Objective:** P: patients with non-malignant or pre-malignant pancreatic lesions; I: Robotic central pancreatectomy or enucleation; C: Open central pancreatectomy or enucleation; O: Operative outcomes.  
**Condition being studied:** Non-malignant and pre-malignant pancreatic lesions including mucinous cystic neoplasms, serous cystic neoplasms, intraductal papillary mucinous neoplasms and solid pseudo-papillary tumors.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 14 January 2023 and was last updated on 14 January 2023 (registration number INPLASY202310040).

**Rationale:** Central pancreatectomy and pancreatic enucleation are reliable interventions for non-malignant and some pre-malignant neoplastic lesions. Both surgeries aim at reducing the degree of parenchymal resection. Minimally invasive resections are associated with improved patient outcomes and reduced postoperative morbidity while maintaining optimal patient outcomes. Robotic surgery

particularly allows for better visualization and more accurate resection, thus can further minimize postoperative complications as well increase the degree of parenchymal preservation.

**Condition being studied:** Non-malignant and pre-malignant pancreatic lesions including mucinous cystic neoplasms, serous cystic neoplasms, intraductal papillary mucinous neoplasms and solid pseudo-papillary tumors.

## METHODS

**Participant or population:** Patients with non-malignant or pre-malignant pancreatic lesions undergoing surgery.

**Intervention:** Robotic central pancreatectomy or enucleation.

**Comparator:** Open central pancreatectomy or enucleation.

**Study designs to be included:** Retrospective reviews, prospective reviews, clinical studies, comparative studies, observational studies and clinical trials.

**Eligibility criteria:** Studies will be excluded if (1) less than 5 patients received robotic surgery, (2) studies were published prior to 2001, (3) case reports, (4) guidelines and (5) other systematic reviews. In selected studies, patients who received laparoscopic surgery or patients with pancreatic ductal adenocarcinoma or pseudocysts will be excluded.

**Information sources:** electronic databases: PubMed + Google Scholar + Embase.

**Main outcome(s):** Major postoperative complications (clavien-dindo  $\geq 3$ ); pancreatic fistulas; new-onset endocrine insufficiency including diabetes; new-onset exocrine insufficiency; disease recurrence (if possible).

**Quality assessment / Risk of bias analysis:** The New-Castle Ottawa scale will be used to assess for bias.

**Strategy of data synthesis:** A systematic review will be performed with reporting of data. No statistical analyses will be performed.

**Subgroup analysis:** Subgroup analysis is currently not planned to be performed.

**Sensitivity analysis:** Statistical analysis will not be performed.

**Language restriction:** Papers published in the English language will be included only.

**Country(ies) involved:** USA.

**Keywords:** parenchyma-sparing pancreatectomy; minimally-invasive pancreatectomy; enucleation; central pancreatectomy.

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