Robotic vs Laparoscopic Distal Pancreatectomy for Adenocarcinoma Confined to the Pancreas: Is there a Value Advantage of the Robot when the Spleen is not Preserved?

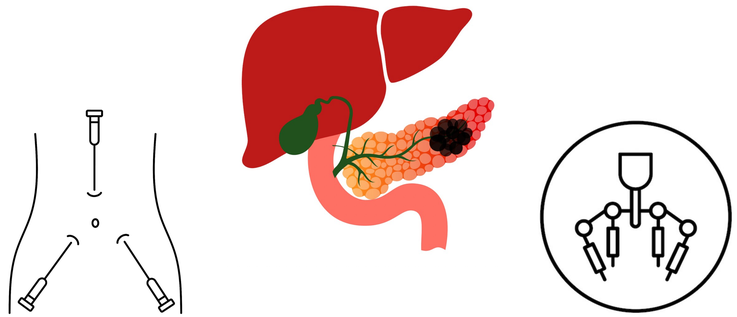
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Introduction

- Laparoscopic distal pancreatectomy (LDP) is the gold standard for benign pancreatic tumors and is a safe and effective treatment for small tumors
- Robotic distal pancreatectomy (RDP) is increasingly being utilized and has been found to have superior outcomes in cases of splenic preservation
- In cases of malignant disease where the spleen is not preserved, the benefits of RDP have not been established
- We sought to investigate whether RDP offers advantage over LDP in malignant disease where splenic preservation is not a goal

Methods:

- Dataset: National Cancer Database (NCDB) 2020
- Selection criteria:
  - Patients with T1-T2 pancreatic tumors (tumors confined to the pancreas)
  - Complete data for comorbidity, stage, tumor size, extension, surgical approach (RDP vs. LDP), hospital stay, 30-90 day mortality, margin status, unplanned readmission, chemotherapy
- Binary logistic regression models used for mortality, conversion to open, margin status, unplanned readmission
- Linear regression models used for hospital stay



RDP is associated with similar lymph node yield and R0 resection rate compared to LDP

RDP is associated with similar hospital stay and unplanned readmission rate compared to LDP

There was no difference in 30 or 90-day mortality between RDP and LDP

These data suggest no increase in surgical value for RDP compared to LDP



Results/Graphs/Data:

- Descriptive statistics of 3,741 patients undergoing laparoscopic distal pancreatectomy and robotic distal pancreatectomy

Descriptive Statistics (N=3,741)	
Age	60.1 years
Sex	
Female	51.3%
Male	48.7%
Stage	
T1	53.4%
T2	46.6%
Surgical Approach	
Laparoscopic	75.6%
Robotic	24.4%

- Outcomes after Laparoscopic Distal Pancreatectomy and Robotic Distal Pancreatectomy

Outcomes after RDP and LDP	Percentage	Odds Ratio	P-value
Rate of conversion to open			
LDP	11.2%	Reference	
RDP	10.6%	0.873	0.431
30-day mortality			
LDP	0.7%	--	
RDP	0.5%	--	0.143
90-day mortality			
LDP	1.3%	--	
RDP	1.0%	--	0.221
Hospital length of stay (days)			
LDP	5.95 days	--	
RDP	5.6 days	--	0.54
Unplanned Readmission			
LDP	7.7%	--	
RDP	8.6%	--	0.81
R1 Margins			
LDP	5.7%	--	
RDP	5.0%	--	0.622