



# Robotic Lateral Pancreaticojejunostomy (Modified Puestow) for Chronic Pancreatitis

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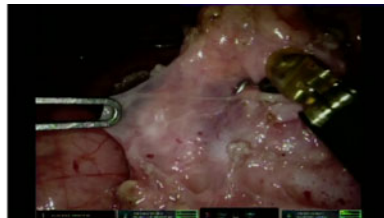
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**Introduction**

- Patients with chronic pancreatitis commonly suffer from chronic pain and decreased endocrine/exocrine function
- Management
  - Lifestyle modifications (diet, alcohol/smoking cessation)
  - Pain control (medical, endoscopic, and surgical interventions)
- Surgery reserved for complications and pain refractory to medical and endoscopic management
- Randomized control trials demonstrated improved outcomes with surgery

Department of Surgery Penn State Health



**Post-Operative Course**

- Long-term follow-up:
  - Reported a mild episode of pancreatitis requiring supportive care
  - Post-operative CT at 8 months showed resolution of pancreatic tail dilation

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## Abstract

**Introduction:** Patients with chronic pancreatitis may suffer from debilitating pain, rendering them dependent on narcotics.<sup>1</sup> In a single-institution review of 219 patients, 51% had opioid prescriptions with an average of 78 morphine milligram equivalents (MME) daily.<sup>2</sup> Surgery is often considered after more conservative approaches fail, but randomized controlled trials show improved long-term outcomes with earlier surgical intervention<sup>3–5</sup> and surgery for appropriate candidates may be offered based on multidisciplinary discussion. Minimally invasive surgery may be especially beneficial in these patients by reducing postoperative pain and expediting recovery. A robotic lateral pancreaticojejunostomy (modified Puestow) for chronic pancreatitis is presented in this video.

**Materials and Methods:** The patient is a 39-year-old female with a history of alcohol-related pancreatitis and tobacco abuse, with abdominal pain requiring up to 92 MME daily. Imaging revealed dilation of the pancreatic duct to 11 mm, intraductal stones, and disease limited to the pancreatic body and tail. The patient had no evidence of exocrine insufficiency preoperatively. She underwent initial evaluation for endoscopic management by gastroenterology and was referred for surgical management after multidisciplinary discussion. Given the dilation of the duct predominantly throughout the body and tail, the consensus was that surgery would likely yield optimal long-term benefits. The patient successfully abstained from alcohol and tobacco prior to proceeding with surgery. The procedure began by mobilizing the pancreas and using intraoperative ultrasound to localize and create a longitudinal ductotomy. Stones and debris were extracted, and the ductotomy was extended to encompass the extent of the dilated duct. Reconstruction was performed with a retrocolic Roux limb. The jejunostomy was created in a stapled fashion and the pancreaticojejunostomy was

created using self-retaining barbed sutures. The inferior portion of the anastomosis was created in two layers consisting of an outer layer securing pancreatic parenchyma to seromuscular jejunum and an inner duct-to-mucosa layer. The superior aspect was created similarly but in a Connell fashion.

**Results:** The patient did well postoperatively and was discharged on hospital day 5. At her 2-week follow-up visit, she was noted to have decreased narcotic use to 15 MME per day. She continued to do well on her reduced pain medication dose at 16 months postoperatively and has had one episode of recurrent pancreatitis. Radiologic improvement was observed as well in terms of resolution of ductal dilatation and reduction in pancreatic head calcifications.

**Conclusions:** This video highlights the benefits of a robotic surgical approach for chronic pancreatitis. The stereoscopic visualization assists with the difficult dissection in the setting of prior pancreatitis and the wristed instruments provide improved dexterity to create the pancreaticojejunostomy. Additionally, the minimally invasive approach allows for excellent postoperative recovery for the patient and can contribute to decreased opioid use. Due to the uncommon use of the Puestow procedure and even fewer cases being performed minimally invasively, case series are limited.

*All authors report no commercial associations during the last 3 years that may create a conflict of interest in connection with the video.*

Authors have received and archived patient consent for video recording/publication in advance of video recording of procedure.

Runtime of video: 9 mins 59 secs

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**Keywords:** lateral pancreaticojejunostomy, chronic pancreatitis, Puestow

## Cite this video

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