

Diagnosis and Management of Chronic Pancreatitis

Luciano Vargas, MD



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MEDICAL CENTER

DISCLOSURE DECLARATION

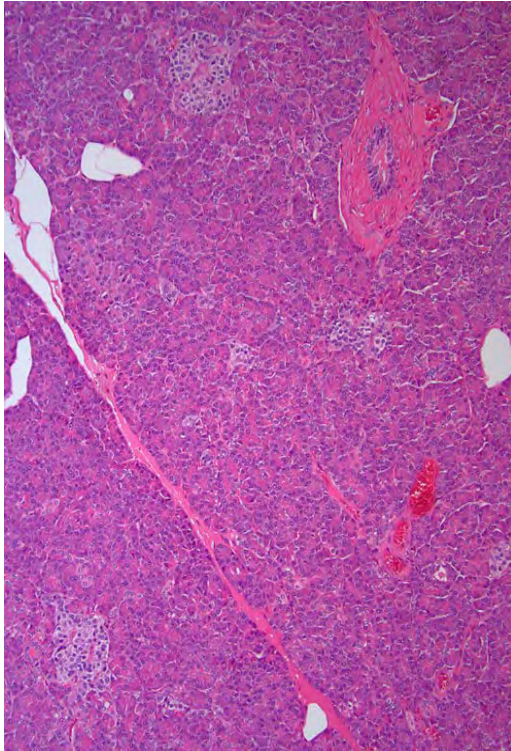
Update on the Diagnosis and Management of **Chronic Pancreatitis**

- Have No Conflict of Interest to Disclose.

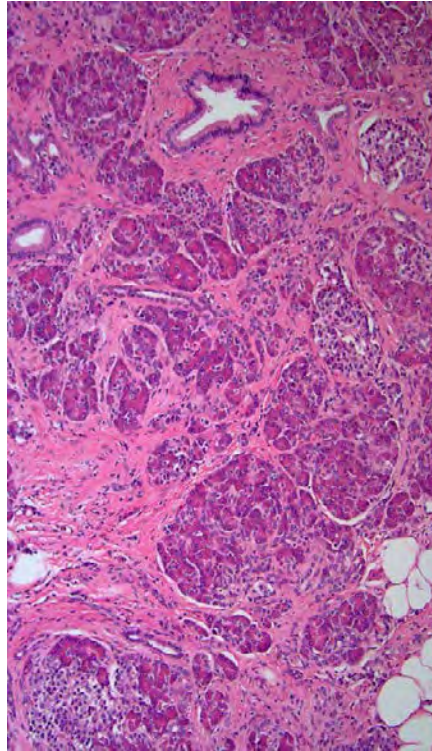
Definition of Chronic Pancreatitis

- **Chronic pancreatitis is a continuing inflammatory disease of the pancreas characterized by *irreversible morphologic changes that typically cause pain and/or permanent loss of function.***

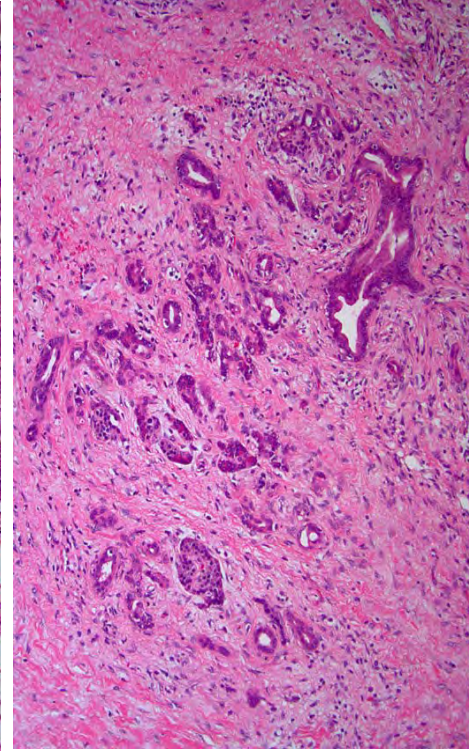
Histological Features in CP



Normal Pancreas



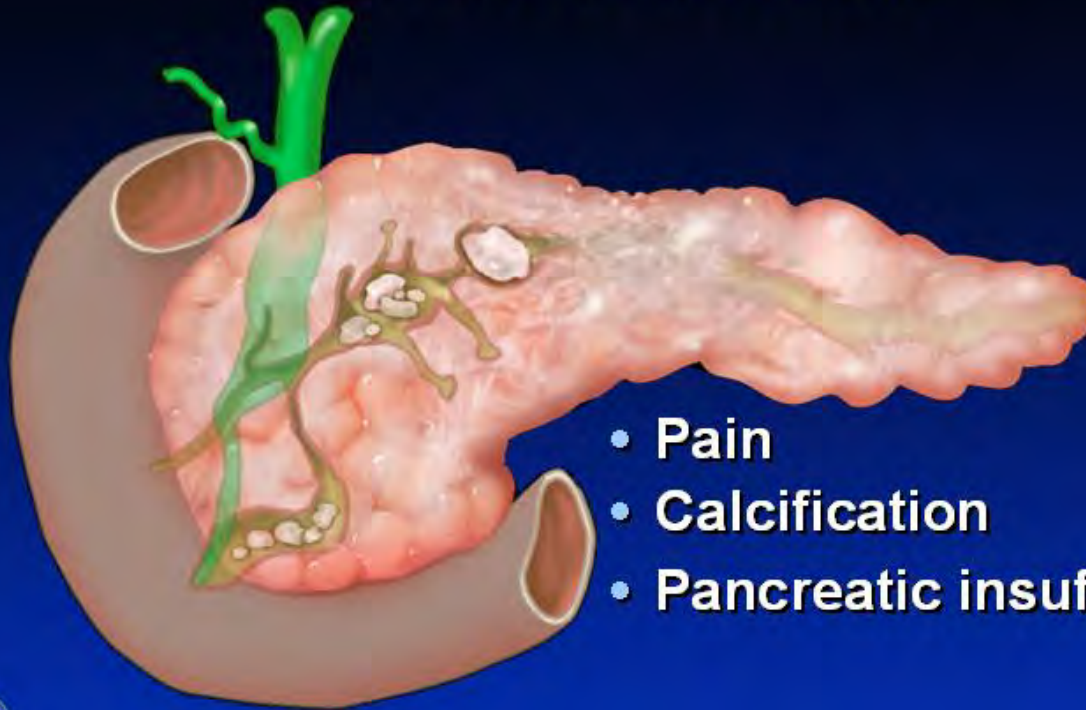
Mild- Moderate



Severe CP

Clinical features of CP

Chronic Pancreatitis

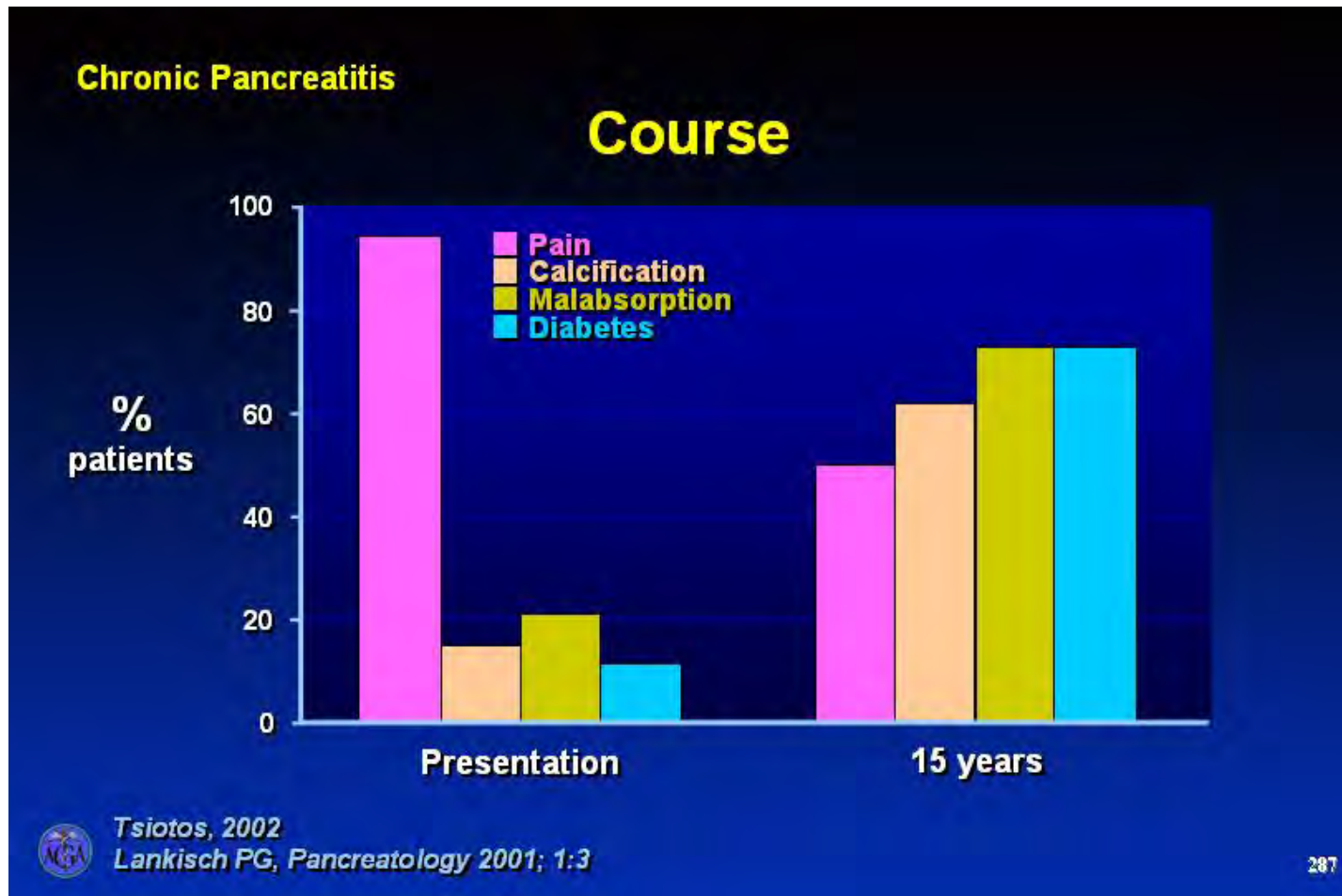


- Pain
- Calcification
- Pancreatic insufficiency



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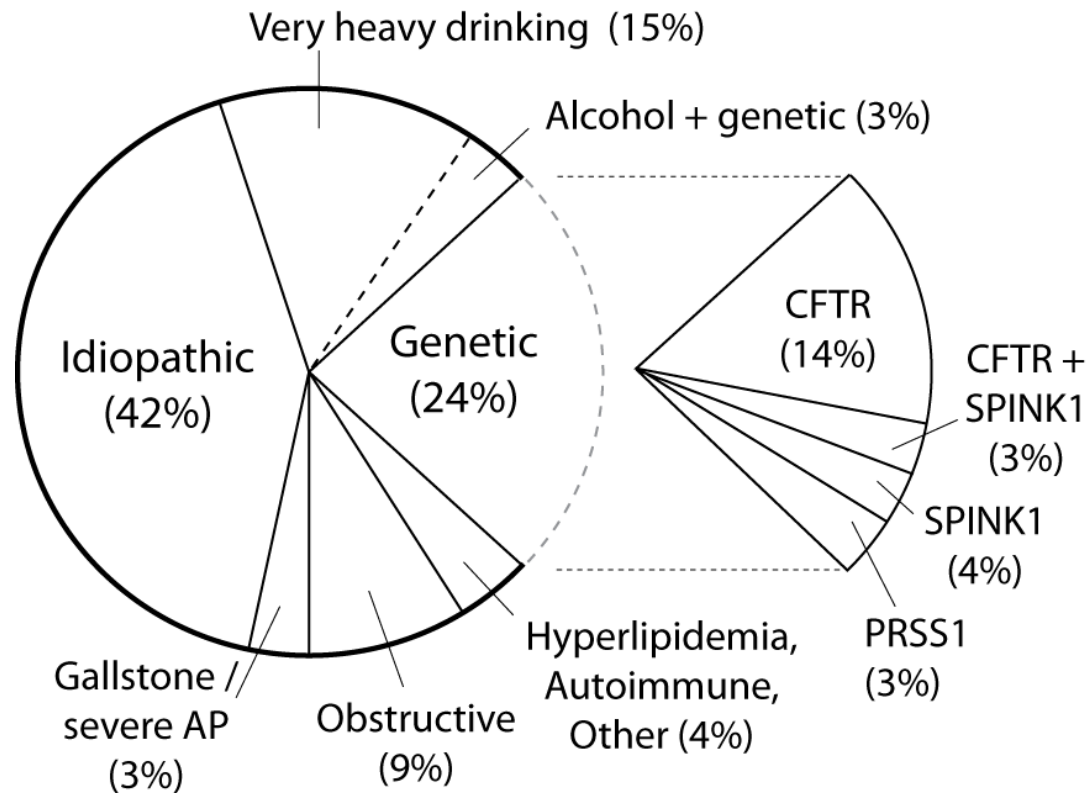
Clinical Features



Incidence and Prevalence

- Difficult to specify
 - Variable diagnostic criteria
- Incidence
 - **Worldwide:** 1.6 to 23 per 100,000 people
 - **US:** 5 to 12 per 100,000

Etiologies of CP (current)



Whitcomb DC. Going MAD: Development of a "Matrix Academic Division" to Facilitate Translating Research to Personalized Medicine. Academic Medicine 2011

Diagnosis of CP

- Requires demonstration of irreversible damage



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Diagnosis of CP

- Gold standard is histology:
 - Difficult to obtain sample, not routine
- Imaging Tests (Morphologic assessment)
- Tests of Pancreatic function:
 - Hormonal stimulation (secretin): Peak bicarbonate <80 meq/L
 - Serum trypsinogen (trypsin) → less than 20 ng/ml
 - Stool Elastase : < 200 ug/g stool is abnormal

Imaging for CP

- Plain Film: diffuse pancreatic calcifications can be seen in advanced disease.
- Abdominal Ultrasound: Limited usefulness in CP.
- CT, MRI/MRCP: Different reports of diagnostic accuracy. ?? Issue of “minimal change CP”
- EUS

Endoscopic Ultrasound

- Highly detailed examination of pancreatic parenchyma and the pancreatic duct, overcomes some of the limitation of transabdominal U/S.
- Diagnosis of CP on EUS is based on certain sonographic features.
- EUS is highly accurate. EUS score of > 5 criteria is highly specific for chronic pancreatitis, where a near normal score (0-2) essentially rules out chronic pancreatitis.



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Management of CP

- Medical Management
 - Pancreatic enzyme replacement:
 - Pain control
 - Analgesics
 - Neuro-modulating agents
 - Appropriate Nutrition
- Endoscopic Management:
 - PD stricture/stone management
 - Celiac plexus block
- Surgical Management



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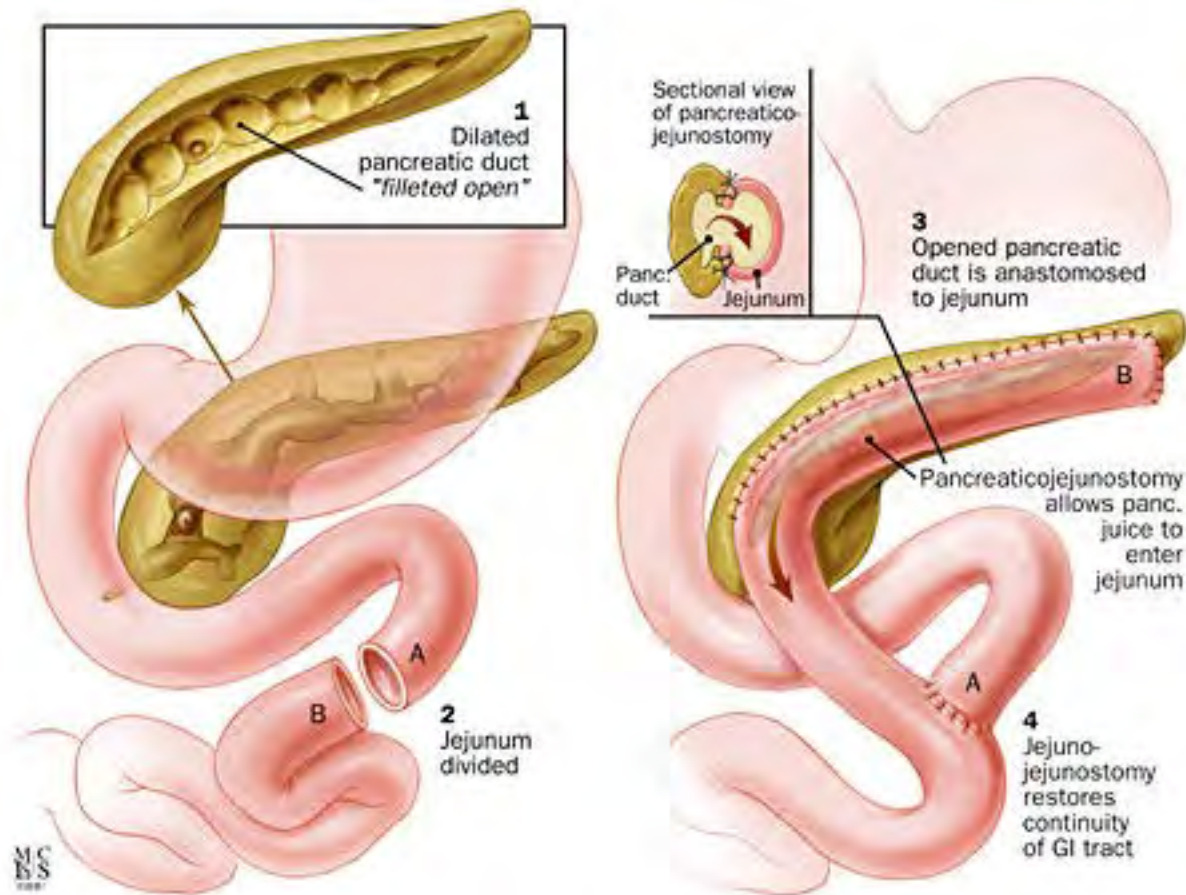


Surgical Management of Chronic Pancreatitis

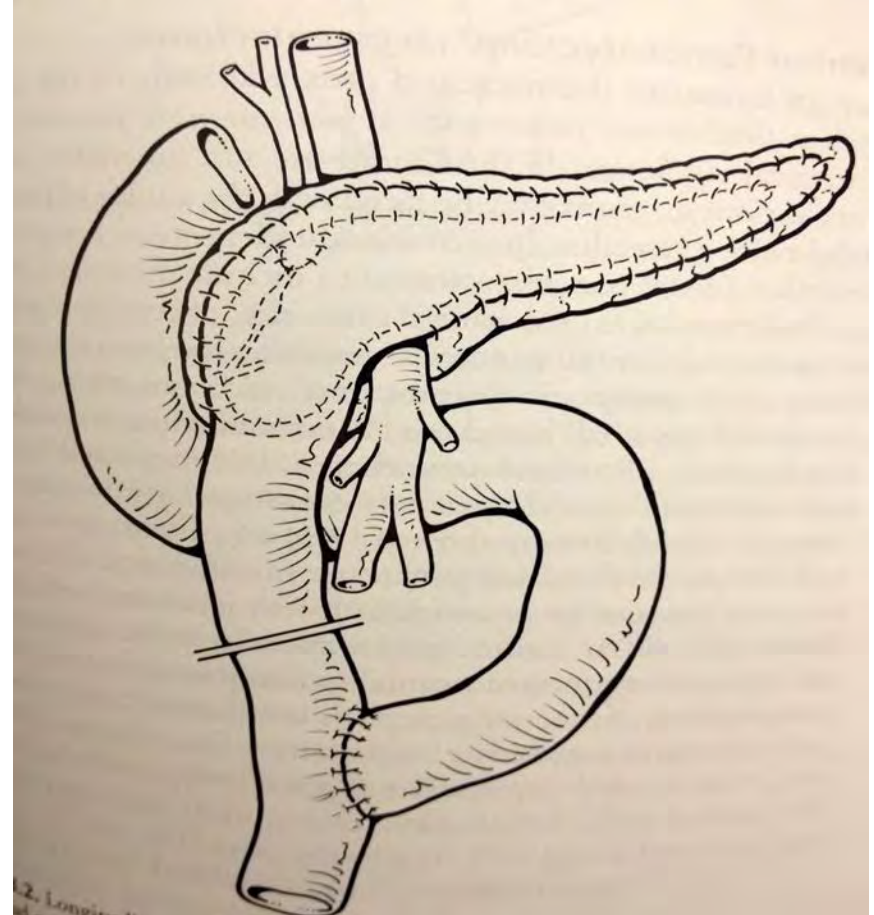
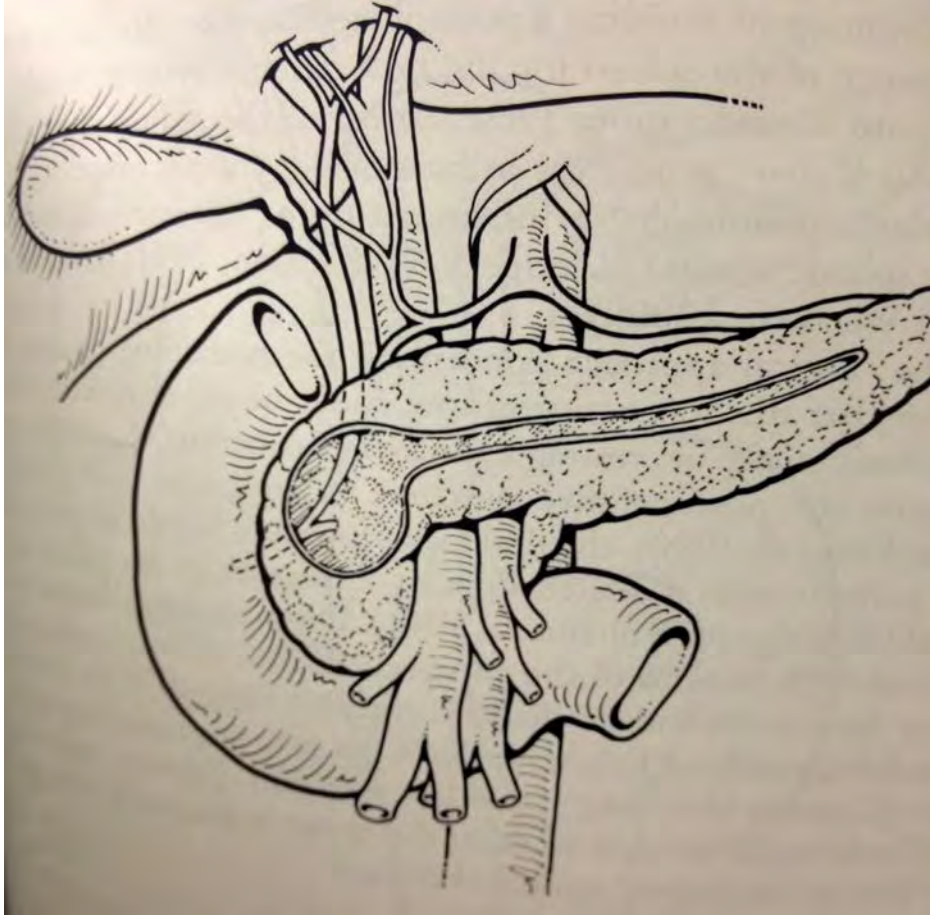
Drainage
Procedures

Resection
Therapy

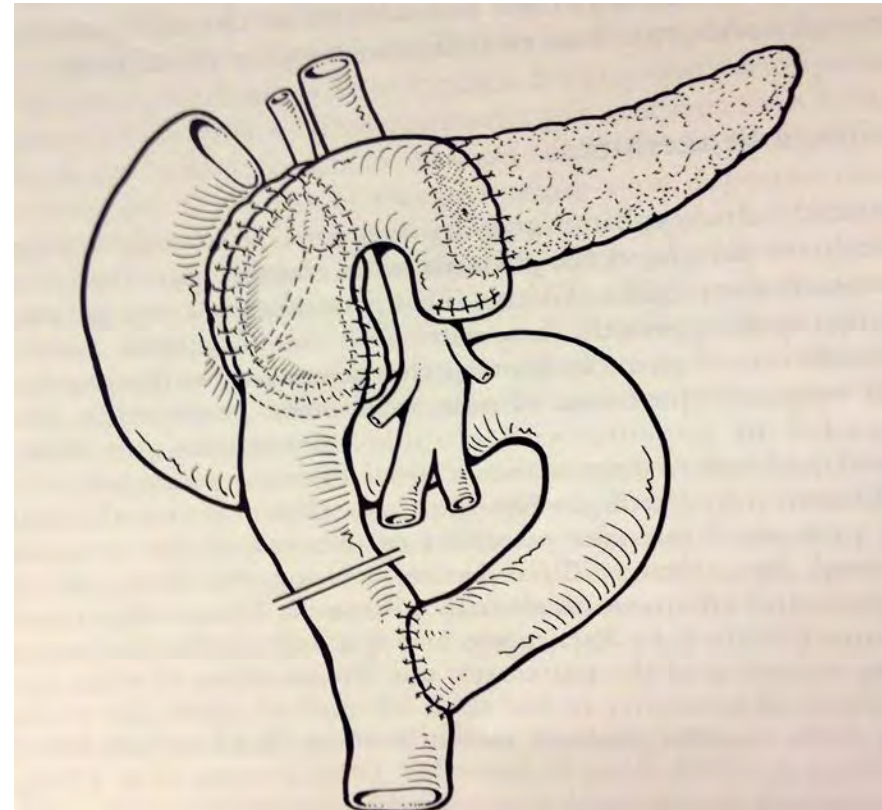
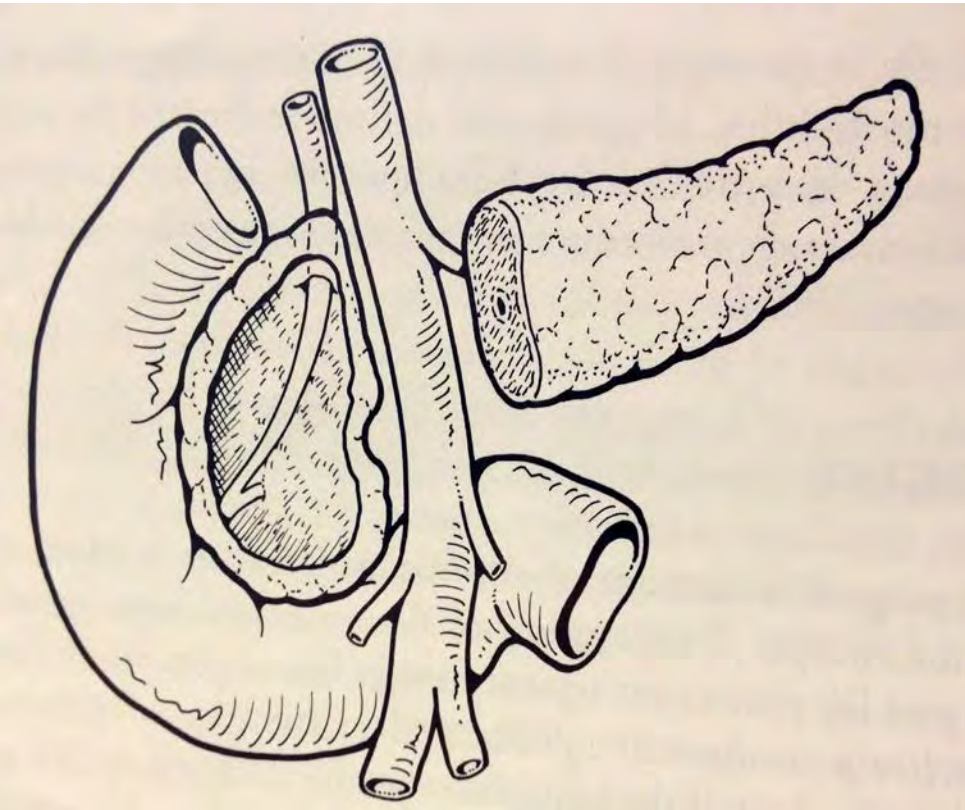
Drainage procedures: Puestow Procedure



Drainage procedures: Frey Procedure

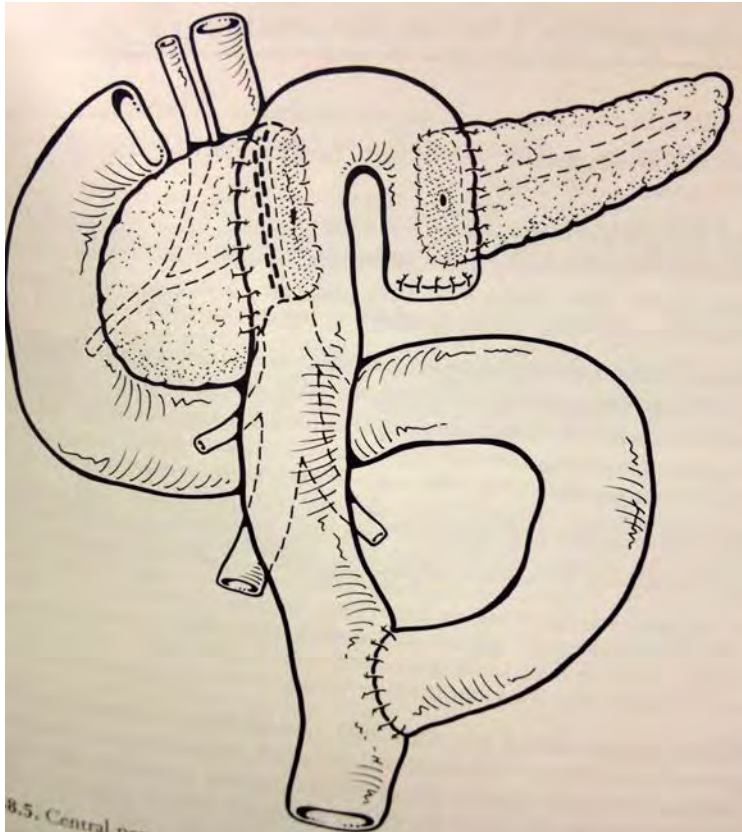


Drainage Procedures: Beger Procedure

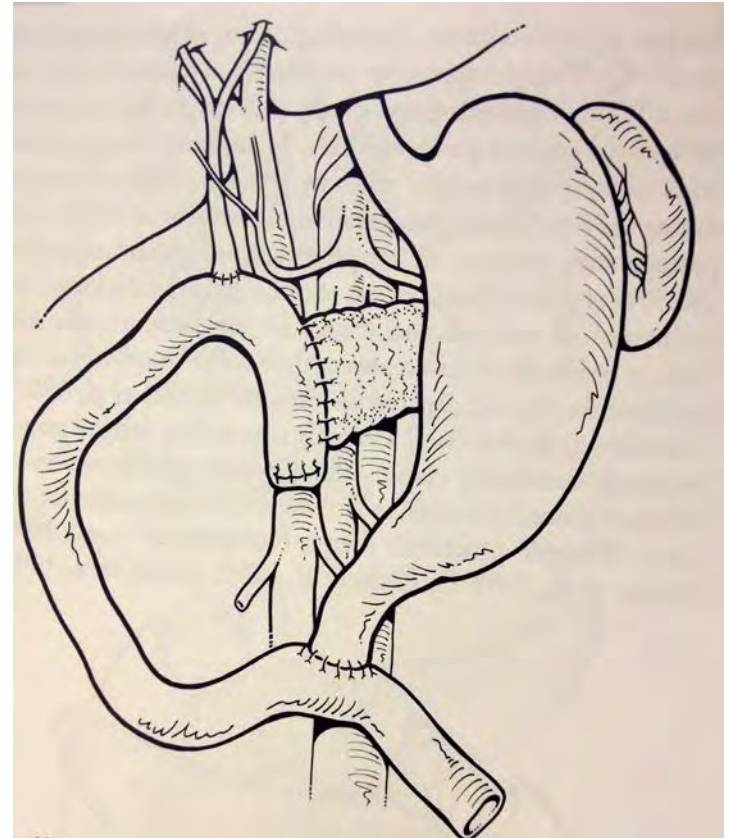


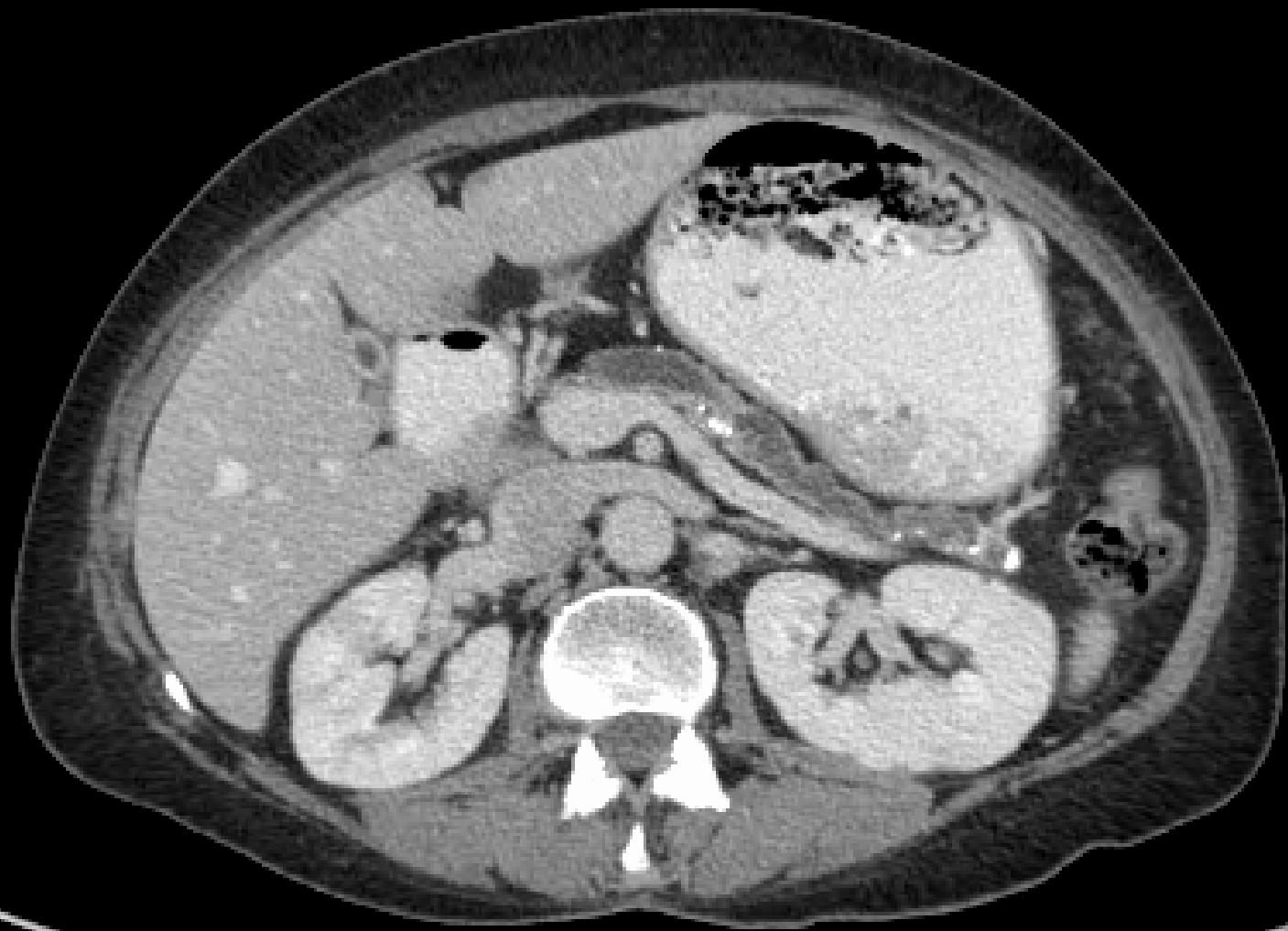
Resection Procedures:

Central Pancreatectomy



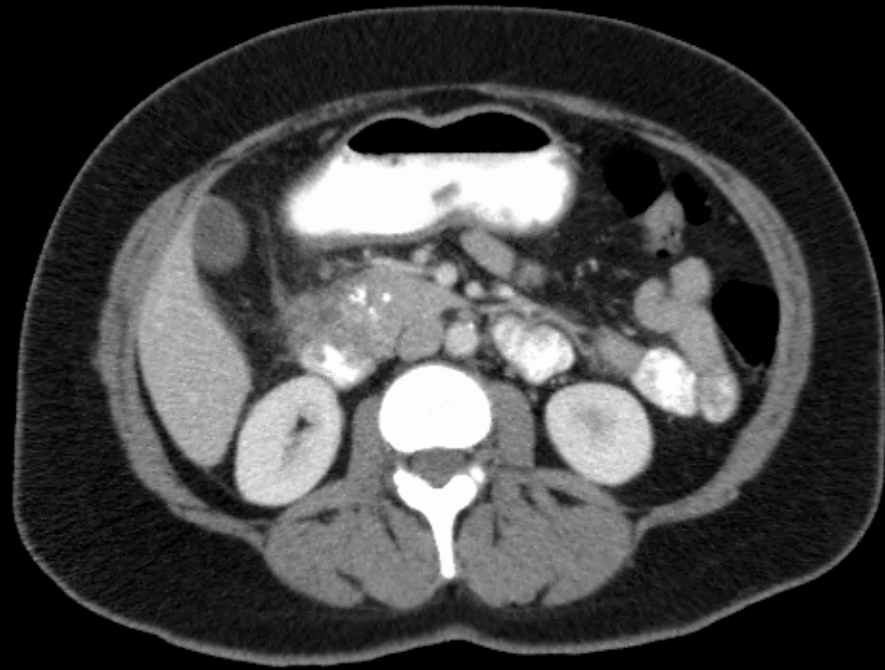
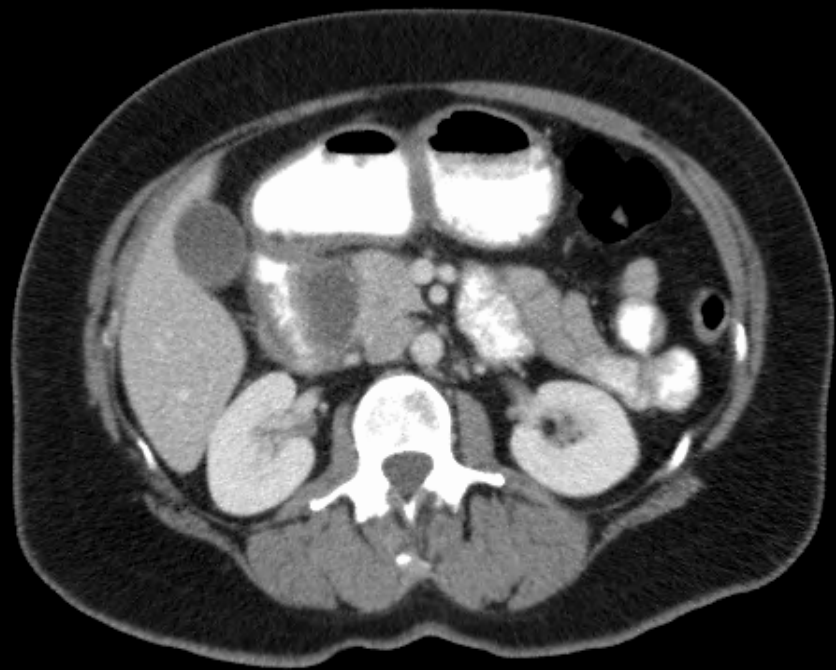
Whipple Procedure





Puestow Procedure





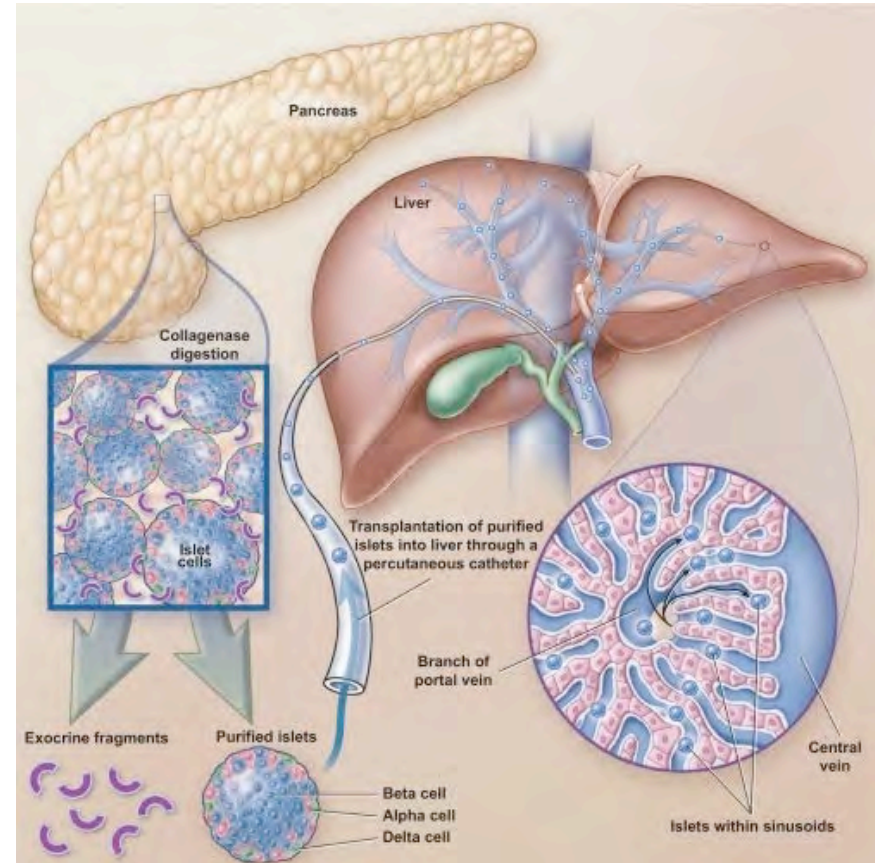
Resection Procedures: Total Pancreatectomy Islet Auto Transplant



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Total Pancreatectomy with Islet Autotransplant (TPIAT) for CP

- Indication for TPIAT same as for TP – debilitating pain/daily narcotics poor QOL
- TPIAT done to prevent DM **OR** minimize labile DM associated with TP
- Pancreas harvested, digested, and islets isolated and infused into portal vein
 - No immunosuppression required



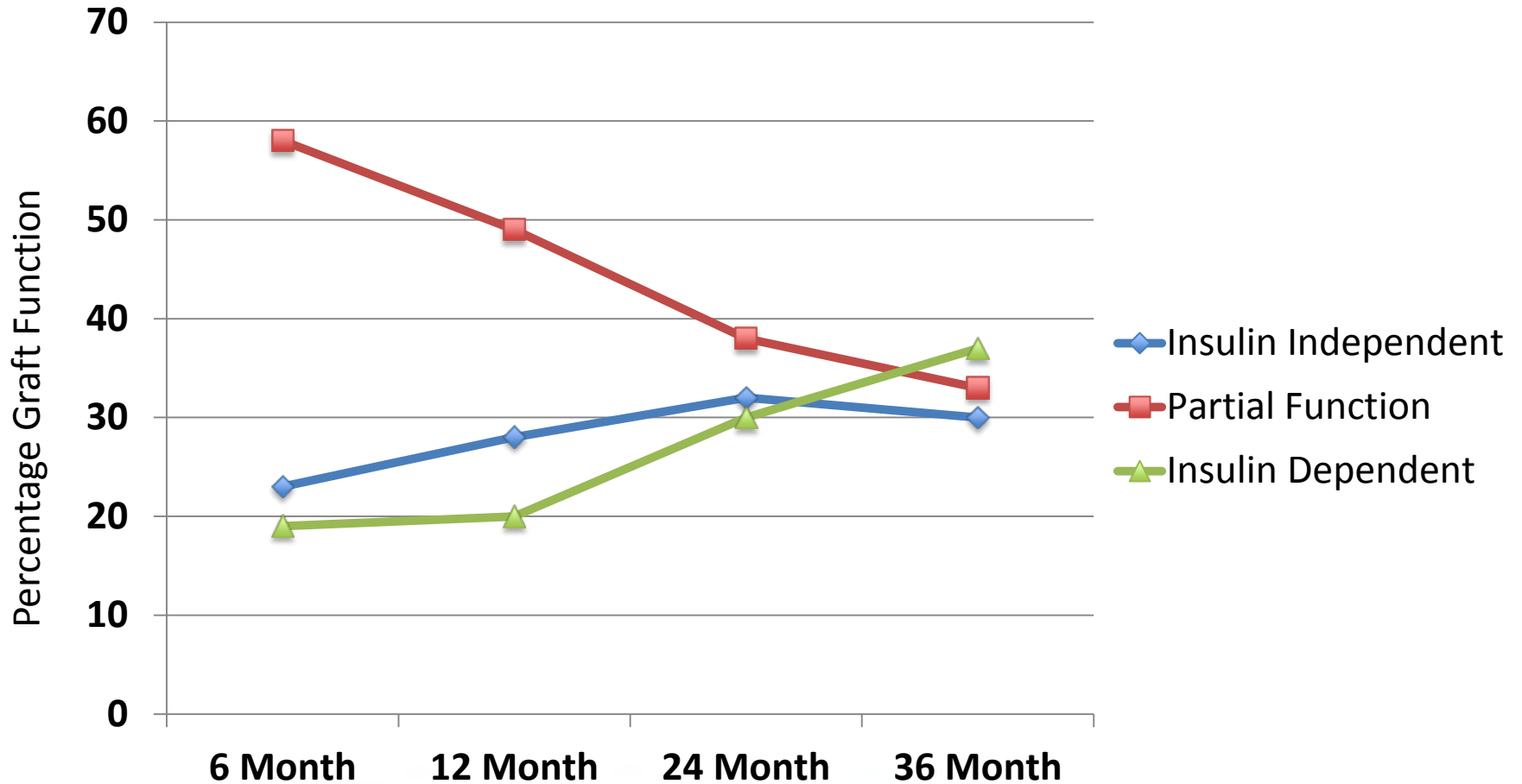
TPIAT: Post-Operative Course

- Islet graft takes several weeks to re-vascularize
 - Graft likely not functioning fully during this time
 - **All patients discharged on SQ insulin**
 - Supplement and protect islet graft
- Insulin weaned as able as graft function improves



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TPIAT Outcomes: Graft Function



Thank You



(402) 559-5008 or Online at: www.nebraskamed.com/pancreasclinic



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