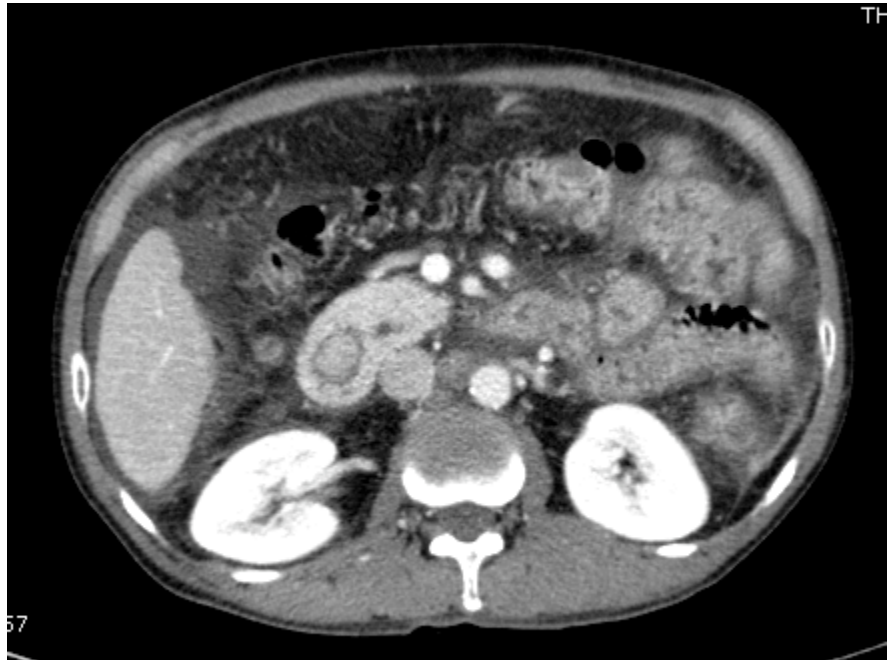
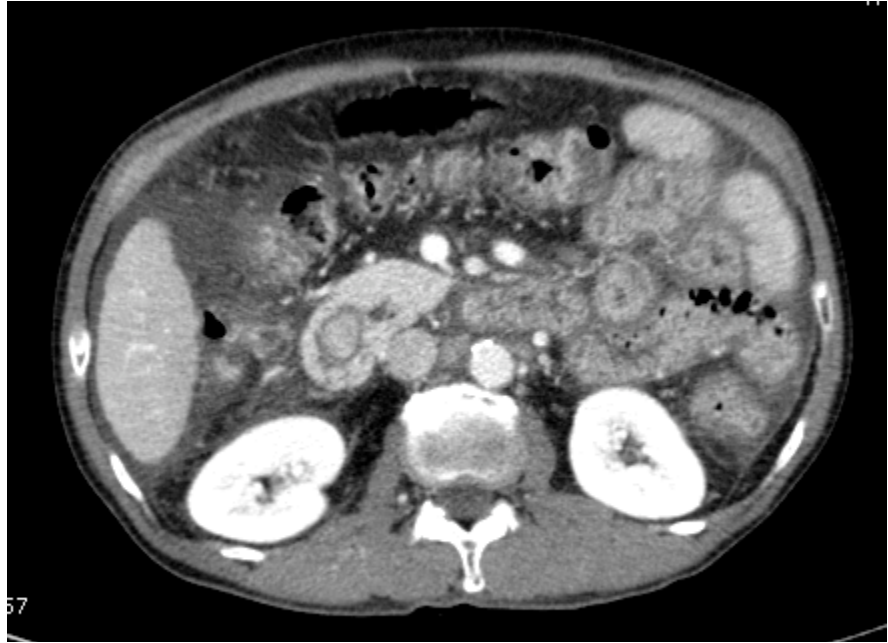


Interesting Cases

Dr. John Mackrell

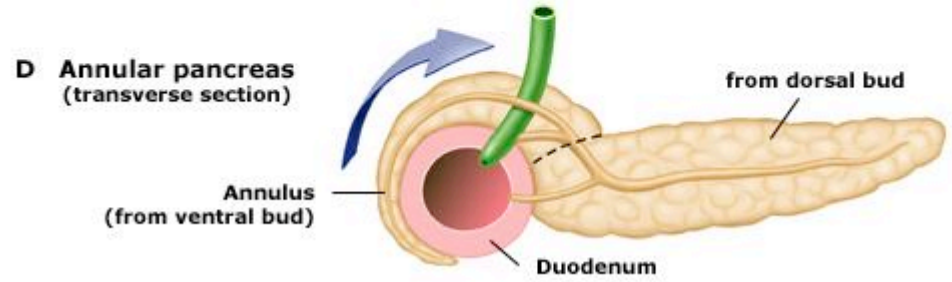
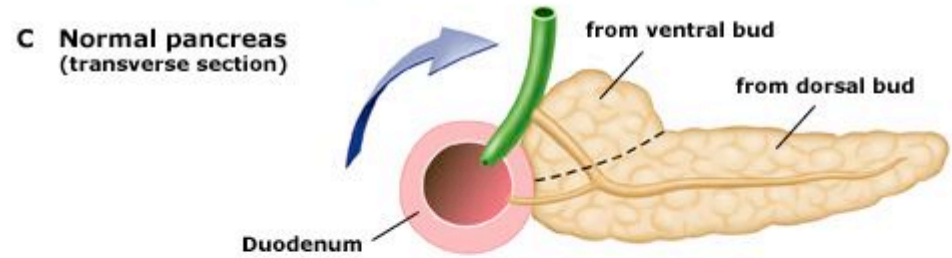
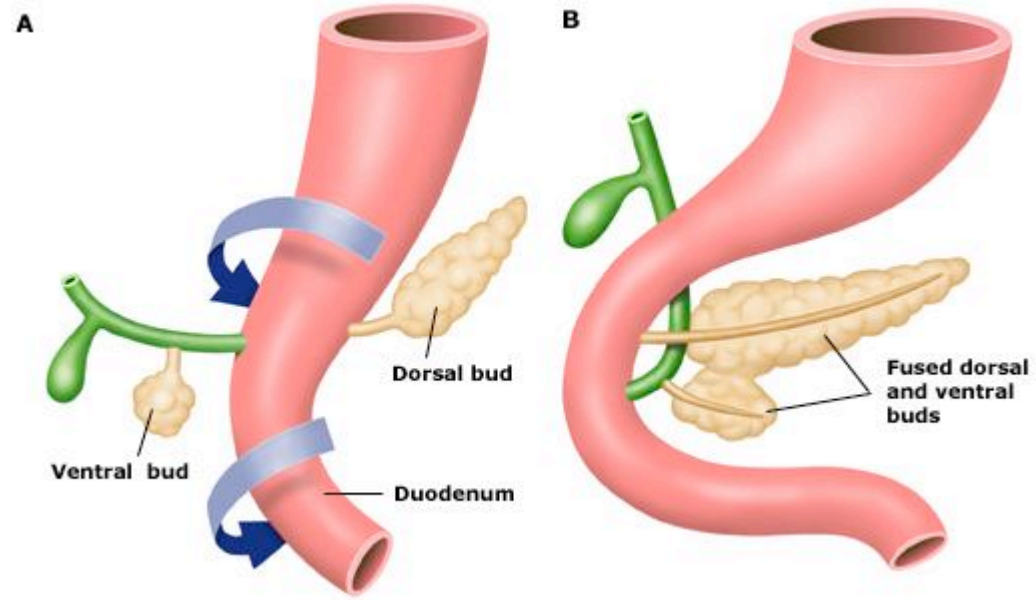


Annular Pancreas

- Background:
 - Rare congenital abnormality characterized by a ring of pancreatic tissue surrounding the descending duodenum
 - Can be partial or complete
 - Only three cases were found in 20,000 autopsies in one study

Embryology

- Pancreas develops from one dorsal and two ventral buds
- By the seventh week, the ventral bud rotates with the gut, passing behind the duodenum and fusing with the dorsal bud
- Ventral bud forms the inferior part of the head of the pancreas and the uncinata process, whereas the dorsal bud becomes the tail and the body



Pathogenesis (Theories)

- Adherence of the ventral bud to the duodenal wall prior to rotation resulting in its persistence and encirclement of the duodenum
- Persistence and enlargement of the left ventral bud
- Hypertrophy and fusion of the ventral and dorsal buds before rotation of the gut resulting in complete encirclement of the duodenum

Clinical Manifestations

- Pediatric:
 - Gastric outlet obstruction, 2-3rds of which present in the neonatal period
 - Associated with polyhydramnios and congenital abnormalities
- Adult:
 - Abdominal pain, postprandial fullness, vomiting, upper GI bleeding, acute or chronic pancreatitis

Annular Pancreas

- Pancreatitis.
 - Cause is unclear.
 - Possibilities include, fibrosis and partial obstruction.
 - Fibrosis most commonly seen in the annulus and adjoining pancreatic head.
 - Impaired flow is another possibility

Annular Pancreas

- Diagnosis.
 - Upper GI, CT, ERCP
 - Surgery remains the gold standard.

Annular Pancreas

- ERCP
 - AP has been classified into six types based on the drainage of the annular duct.
 - Type 1- Annular duct flows directly into the main pancreatic duct (most common)
 - Type 2- Duct of Wirsung encircles the duodenum, but still drains at the major papilla.
 - Type 2-6 are extremely rare