Relations of Pancreas
By Doctor GP
Relations of Pancreas
The picture above gives the surface markings of the pancreas, and also indicates its relation to the stomach which lies above it partially.
Pancreas

Abdominal aorta
Celiac trunk
Common hepatic artery
Gastroduodenal artery
Superior pancreatic artery
Common bile duct
Superior pancreatic-duodenal artery
Accessory pancreatic duct (to lesser duodenal papilla)
Duodenum
Head of pancreas
Pancreatic duct (to greater duodenal papilla) with common bile duct
Anterior branch
Posterior branch

(a) Gross anatomy
• The picture above again indicates its relation to the stomach which lies above it partially

• Clearly one can see that a pancreatic tumor can easily spread to the stomach and might even present as if it is a stomach cancer, whereas the primary tumor is in the pancreas.
• The picture above again indicates its position in the C of the duodenum, and shows its important posterior relations (i.e. the aorta, the inferior vena cava, and the hepatic portal vein.

• The tail of the pancreas is seen in its relationship to the spleen.
Arterial Supply of Pancreas

- Abdominal aorta
- Common hepatic artery
- Gastroduodenal artery
- Proper hepatic artery
- Right gastroepiploic artery
- Posterosuperior pancreaticoduodenal artery
- Anterosuperior pancreaticoduodenal artery
- Posterior pancreaticoduodenal arcade
- Anterior pancreaticoduodenal arcade
- Duodenum
- Prepancreatic arcade
- Vasa recta
- Posteroinferior pancreaticoduodenal artery
- Anteroinferior pancreaticoduodenal artery

- Celiac trunk
- Left gastric artery
- Left gastroepiploic artery
- Splenic artery
- Spleen
- Caudal pancreatic artery
- Great pancreatic artery
- Dorsal pancreatic artery
- Inferior pancreatic artery
- Superior mesenteric artery
- Upper jejunal arteries
Approx 25-27% variation in the arterial vascular anatomy
The variation in the arterial vascular anatomy around the pancreas indicates the additional difficulty that the surgeon has in resection the pancreas............especially since pancreatic cancers present late and have spread all about the surrounding tissues of this rather confined space.

THERE ARE LOTS OF BLOOD VESSELS AROUND THE PANCREAS….making surgery extremely difficult in the scenario of metastatic spread of a pancreatic cancer.

• Below other relations with their abundant vasculature is shown.
EXOCRINE TUMORS

• Adenocarcinomas
• Most common pancreas tumor
• Etiology unknown
• Risk factors
  – Cigaret smoking
  – High intake animal fat and meat
  – Chronic pancreatitis from alcohol most commonly
  – Several hereditary disorders
    • Hereditary pancreatitis
    • Von Hippel-Lindau syndrome
    • Lynch-syndrome
    • Ataxiatelangiectasia
CLINICAL PRESENTATION

• Symptoms:
  • Early non-specific
  • Anorexia
  • Weight loss
  • Abdominal discomfort
  • Nausea
  • Specific symptoms
  • Jaundice
  • Pruritis
  • Moderate pain
  • DM
  • Unexplained attack of pancreatitis
CLINICAL PRESENTATION

• Physical findings
  • Jaundice
  • Enlarged liver
  • Palpable gallbladder (Courvoisier's law)
  • Palpable mass (Big pancreas tumor)
  • Ascites
  • Virchow-Troisier node
  • Blumer shelf
  • Sister Josephs node
  • Wasting
LABORATORY DATA

• LFT (raised ALP, Bili.)
• CA 19-9
• CA 494
RADIOLOGY

• Ultrasound
• CT scan
• MRI
• Cholangiography
  – E.R.C.P.
  – P.T.C.
  – M.R.C.P.
TREATMENT

- Palliation
- Jaundice (pruritis)
- Pain
- Duodenal obstruction
- Curratave
- Resection of the tumor (Whipple procedure / Pancreaticoduodenectomy)
• The picture below really summarizes well why the treatment of pancreatic cancers is so difficult, and why this is such an awful disease. It spreads quickly to many surrounding tissues and by the blood vessels.

• In addition it is very close to three of the largest blood vessels in the body in a rather small area.
Anatomy of the Pancreas