The Differential Diagnosis of Pancreatic Mass: The Rule Outs

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Disclosures

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Outline

1. Pancreatic adenocarcinoma- EUS features
2. Subtle EUS clues to suspect Pancreatic cancer
3. Mimics of pancreatic cancer
Pancreatic adenocarcinoma in EUS

- Hypoechoic, Infiltrative
- Not “well-circumscribed”
- CBD and PD dilation
- Tendency to encase vessels
54yo woman with Pancreatic head mass
Tell Tale signs of Pancreatic cancer in EUS

- Pancreatic duct dilation
- CBD dilation
- Double duct sign
- Abrupt cut-off of a dilated main PD
- Upstream pancreatic atrophy
79 yo man p/w jaundice
72yo man p/w 1st episode of acute pancreatitis
What if ..?

- Mass in head without CBD/PD dilatation
- No pancreatic atrophy
- Mass surrounding the vessels but no narrowing
- Extensive bulky lymphadenopathy
Pancreatic cancer mimics

- Autoimmune pancreatitis
- Groove pancreatitis
- Chronic pancreatitis
- Focal steatosis (lipomatosis) in HoP
- Normal gland anatomy
- Lymphoma
- Neuroendocrine tumor
- Splenule
- Serous cystadenoma
- Metastases to pancreas
Autoimmune Pancreatitis (AIP)

- Diffuse gland enlargement with loss of lobular texture ("featureless", sausage gland)
- Type 1 AIP – p/w Jaundice, focal mass
- Halo around the gland
- Non-dilated pancreas duct
- Bile duct stricture
Autoimmune pancreatitis Type-1
Autoimmune pancreatitis Type 2
Groove Pancreatitis

- Rare form of chronic pancreatitis
- Involves the “groove” between
  - head of pancreas
  - common bile duct
  - duodenum
- Can cause CBD/PD stricture with proximal dilatation
- Duodenal obstruction
- More difficult to make a diagnosis
Groove pancreatitis

Lymphoma

- Primary pancreatic lymphoma is very rare
- Secondary lymphomatous involvement of pancreas
  - Focal bulky mass, poor margins
  - Head of pancreas
  - No vascular narrowing
  - No pancreatic duct obstruction
  - Infiltrates all directions - No anatomic boundaries
  - Surrounding lymphadenopathy
Lymphoma
Pancreatic NeuroEndocrine Tumors

- Most are sporadic
- VHL, NF-1, MEN-1, TS

**Functional:** Smaller, present earlier
- Insulinoma, Gastrinoma, VIPoma

**Non-functional:** Larger, symptoms due to mass effect
- Cystic, necrotic and aggressive
PNET – What do I see in EUS

- Well circumscribed
- Very vascular
- Cystic or necrotic– Thick rim
- Rarely obstruct the ducts
- Upstream pancreatic atrophy uncommon
- Can give large lymph nodes
- Calcification
- Invade vasculature– distend vessels
- Liver mets– appear similar to primary
66yom incidental lesion on Prostate cancer screening
59yo under surveillance for pancreas cyst
52yof acute pancreatitis – mass effect
Intra-pancreatic splenule

- MC site - Hilum of spleen
- Next MC site - Tail of pancreas
- Mimic PNET
- Identical echogenicity with spleen
- Tech 99m sulfur colloid scan if doubtful
Metastases to pancreas

- Rare - 2-4%
- Most common primary Renal cell cancer (RCC)
- Hyper vascular tumor – similar to NET
- Present many years after initial RCC

Other primaries:
- Melanoma
- Lung
- Breast
Thank you