Hepatobiliary and Pancreatic Malignancies

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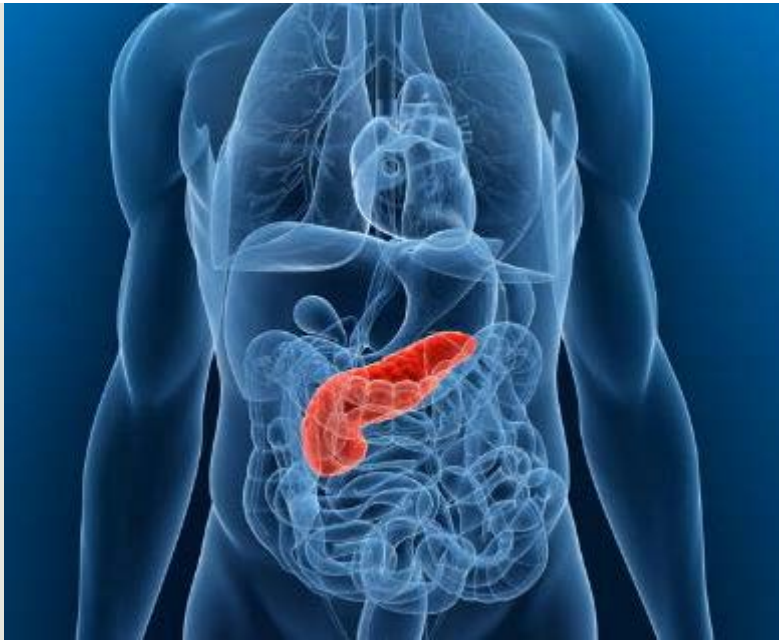


Disclosures

- None to declare

My Practice Profile

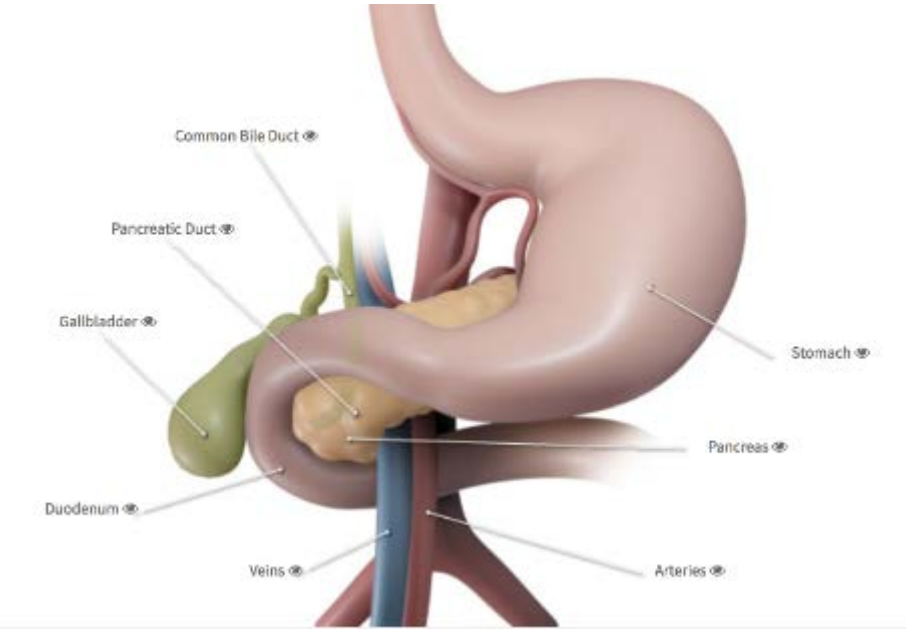
- Surgical Oncology
  - Gastric cancer
  - Colorectal cancer
  - Hepatobiliary cancer
  - Pancreas cancer
  - Soft tissue sarcoma
  - Endocrine tumors (adrenal, thyroid)
- Endoscopy
  - Colonoscopy, gastroscopy
- General Surgery
  - Gallbladder disease
  - Parathyroid disorders
  - Hernia

Pancreas Cancer

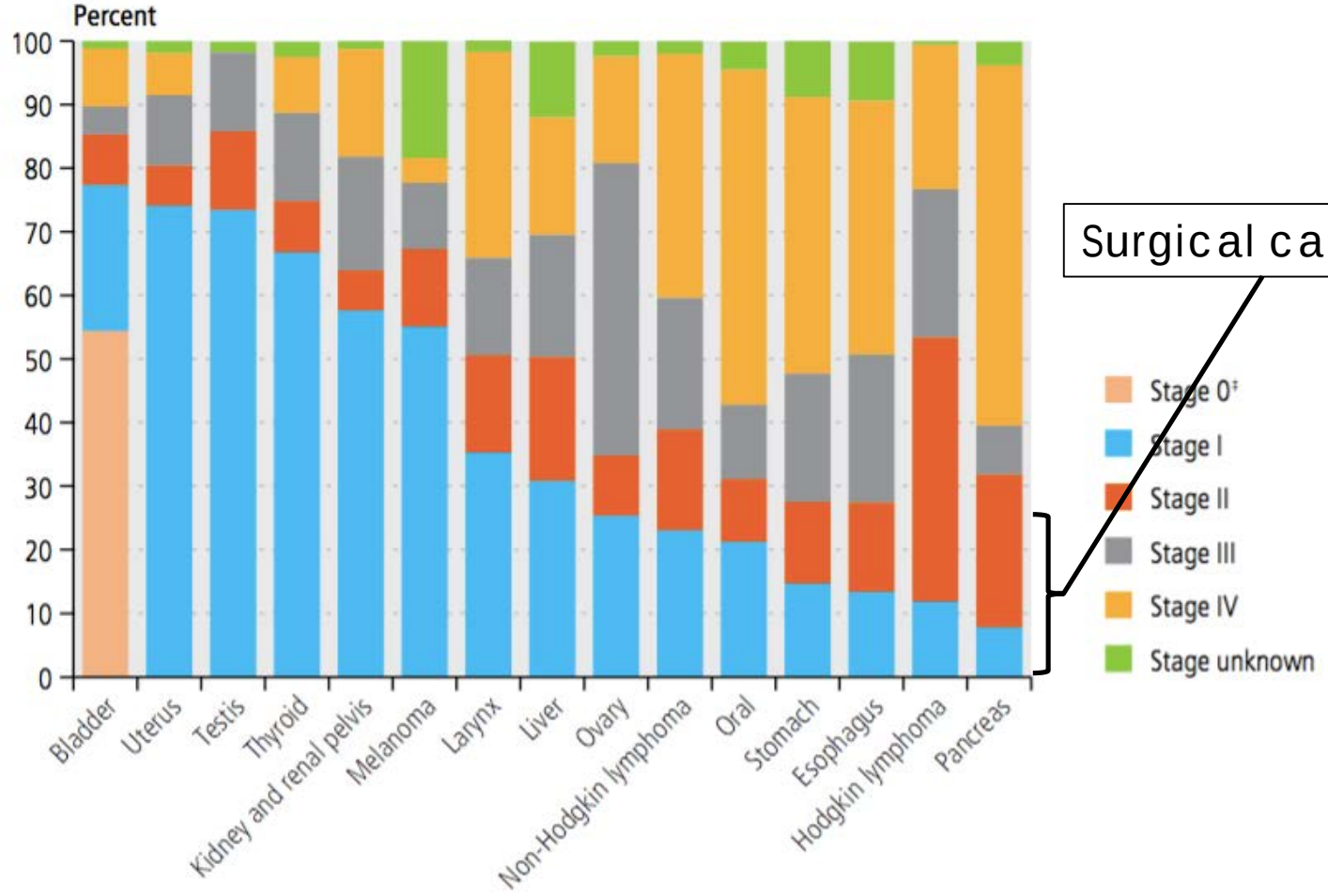
- ~5500 new cases in Canada annually
  - ~4800 deaths annually
- Highly lethal malignancy
  - 12 th most common cancer
  - 4th leading cause of cancer mortality
- 5 year overall net survival ~8%

Pancreas Cancer: Presentation

- Insidious course
- Clinical findings
  - Jaundice
  - Pain
  - Weight loss
- Stage @ presentation
  - Early ~15%
  - Widely metastatic >60%



Pancreas Cancer: Stage at Presentation



Pancreaticoduodenectomy (Whipple)

Credit: Toronto Video Atlas

Pancreas Cancer: Outcomes

- Median overall survival
  - Surgery + chemo — 35-55 months
  - Without surgery — 6-12 months
- 5 year overall survival
  - All stages — ~8%
  - Following resection — ~20%

Screening for Pancreas Cancer

- Selectively offered in high risk groups
  - No evidence of improved survival
- Annual imaging
  - Endoscopic US
  - MRCP
- No role for CA 19-9
- Not indicated in new onset diabetes

High Risk Groups
Peutz-Jeghers
Hereditary Pancreatitis
BRCA1/2
“Familial Pancreas Cancer”
Familial atypical multiple mole and melanoma syndrome

Incidental Imaging Findings

- A modern epidemic
- American College of Radiologists:
  - *"so prone to generating findings not intentionally sought that it is disingenuous to term them 'unanticipated' even if their precise nature cannot be anticipated in advance"*
- Incidence of "incidental" finding 31% on CT
  - 64% underwent further evaluation

Solid pancreas tumors

- Solid pancreas lesions
  - >80% are malignant
  - Most common: pancreatic adenocarcinoma, neuroendocrine tumor
  - Rare: pseudotumor, pancreatitis, metastases

- **All solid pancreas masses should be referred for further evaluation**

Pancreatic Cysts

- Increasing incidence of diagnosis due to cross-sectional imaging
  - ~2-3% of CTs, increase with age, even higher with MR
- Classification:
  1. Pseudocysts (Most common; hx of pancreatitis)
  2. Cystic neoplasms
  3. Non-neoplastic cysts (Exceedingly rare)

Pancreatic Cystic Neoplasms

Subtype	Behaviour	Treatment
Serous cystadenoma	Benign	Nil
Mucinous cystadenoma	Malignant potential	Surgical resection
Intraductal papillary mucinous neoplasm	Malignant potential	High risk: Resection Low risk: Surveillance
Solid pseudopapillary	Malignant potential	Surgical resection

- ***Due to the malignant potential of many cystic neoplasms of the pancreas <u>all</u> require evaluation by a specialist***

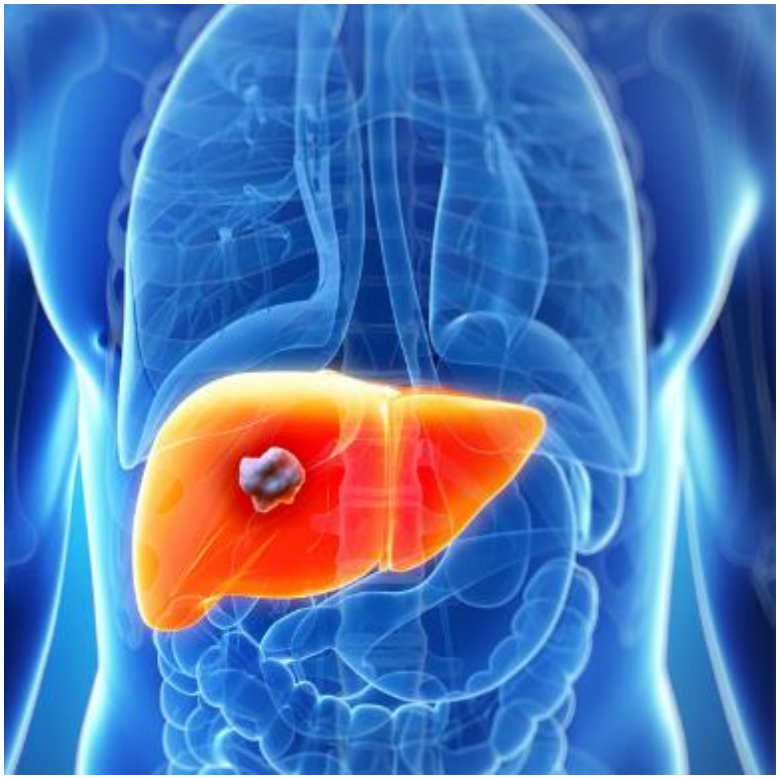
IPMN

- **Intraductal Papillary Mucinous Neoplasm**
- “Pre-malignant” lesions (aka. Polyp of the Pancreas)
- Imaging used to risk stratify likelihood of malignancy
  - MRCP
  - Endoscopic ultrasound
- High-risk features
  - Size > 3 cm, mural nodules, main duct dilation, jaundice

Incidental Pancreas Lesions: Take Home Points

- Incidental pancreas lesions are increasingly common
- Solid pancreas mass is usually sinister – refer to specialist
- Pseudocysts require no management if asymptomatic
- **All** pancreatic cysts (eg. IPMN) require evaluation by a specialist and often require surveillance (regrettably)

Hepatobiliary Tumors



Incidental Gallbladder Findings

- Asymptomatic Cholelithiasis
  - Progression to symptoms ~3-5% per year
  - Prophylactic cholecystectomy not routinely indicated
- Gallbladder polyps
  - Many are “pseudopolyps”
  - Cholecystectomy required for “high risk: (ie. > 1cm)
  - *Require surveillance if not removed*
- Adenomyomatosis
  - Benign finding requiring no treatment

Incidental Liver Findings

- Simple cysts
  - Most common liver abnormality (~5%)
  - Typically asymptomatic (unless enormous, >15 cm)
  - Benign
  - No surveillance and no treatment indicated
- Hemangioma
  - ~4% of population
  - Most common “solid” liver mass
  - Benign
  - Rarely symptomatic
  - No surveillance and no treatment indicated

Liver Masses

Solid	Cystic
Hemangioma	Simple cyst
Metastatic lesion (eg. CRC)	Cystic neoplasm
Hepatocellular carcinoma (HCC)	Abscess
Intrahepatic Cholangiocarcinoma	
Hepatic adenoma	
Focal Nodular Hyperplasia	

Liver Metastases

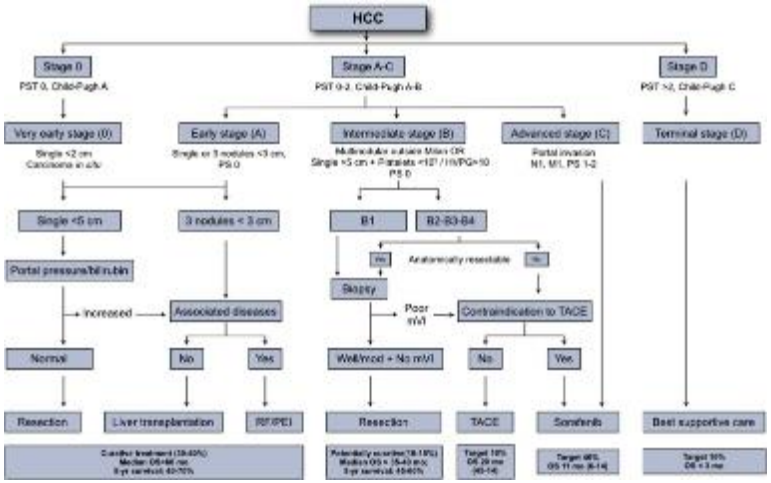
- Most common malignant lesion of the liver
- Origin
  - Colorectal cancer (most common)
  - Neuroendocrine (ie. Carcinoid)
  - Breast, Melanoma, Gastric, Renal cell, etc.
- Curative-intent liver resection can be offered in selected patients
  - “No patient is unresectable until assessed by a liver surgeon”

Hepatocellular Carcinoma

- Most common primary malignancy of the liver
- Typically occurs in context of chronic liver disease
  - Cirrhosis
  - Chronic HBV
- Staging and treatment has to consider BOTH extent of cancer and severity of liver disease

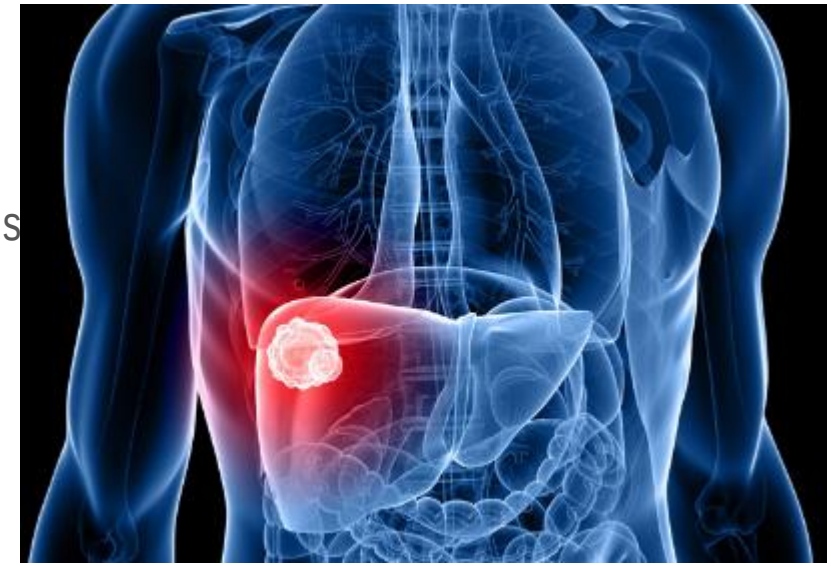
Hepatocellular Carcinoma

- Treatment options
  - Surgery
  - Ablation (radiofrequency, ablation)
  - Arterial therapy (chemoembolisation, radioembolisation)
  - Chemotherapy (sorafenib)
  - Transplantation



Screening for HCC

- High Risk Groups
  - Cirrhosis (Child's A,B)
  - Chronic Hepatitis B
  - Chronic Hepatitis C with liver fibrosis
- Screening
  - Decreased HCC mortality 37%; NNS=430
  - Ultrasound every 6months
  - +/-AFP



1. AASLD Guidelines 2017
2. EASLD Guidelines 2018

Work-up of Liver Mass

- Imaging
  - U/S
  - CT triphasic or MRI
- Laboratory
  - CBC, INR, liver panel
  - Tumor markers (CEA, AFP)
  - Hepatitis serology
- Biopsy
  - Rarely required
  - Diagnosis can almost always be made with imaging
  - Consultation with a surgeon before biopsy advisable
- Multi-disciplinary Tumor Board
  - qWednesday 12 noon @ CSI

Liver Resection

- Only potentially curative option for malignant lesions of liver
- Definition of resectability has evolved considerably
- Morbidity of liver resection has decreased substantially over last 10-20 years
  - Laparoscopic liver resections
  - Parenchymal preservation

Who do I call?

- HPB surgery?
- Gastroenterology?
- Medical Oncology?
- Palliative Care?

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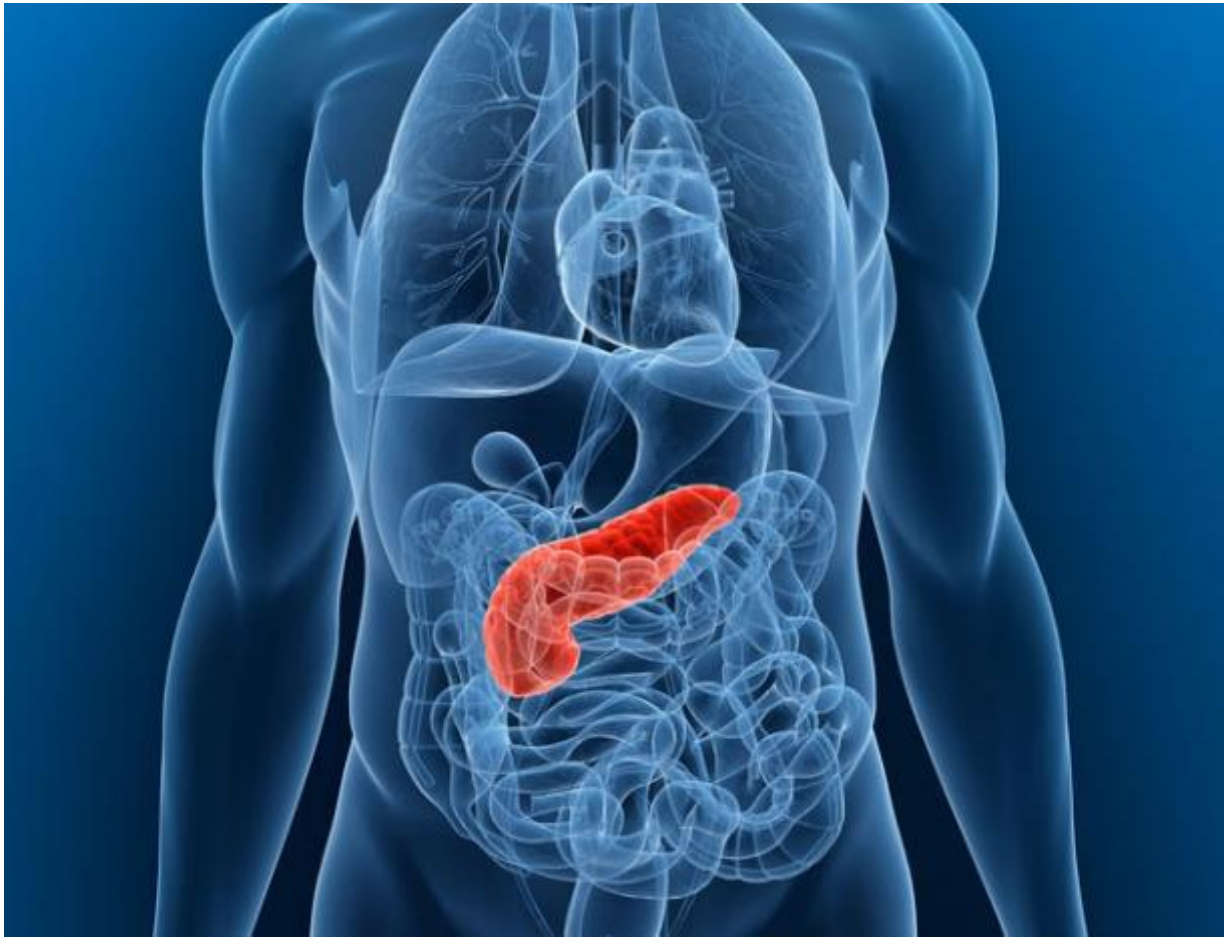
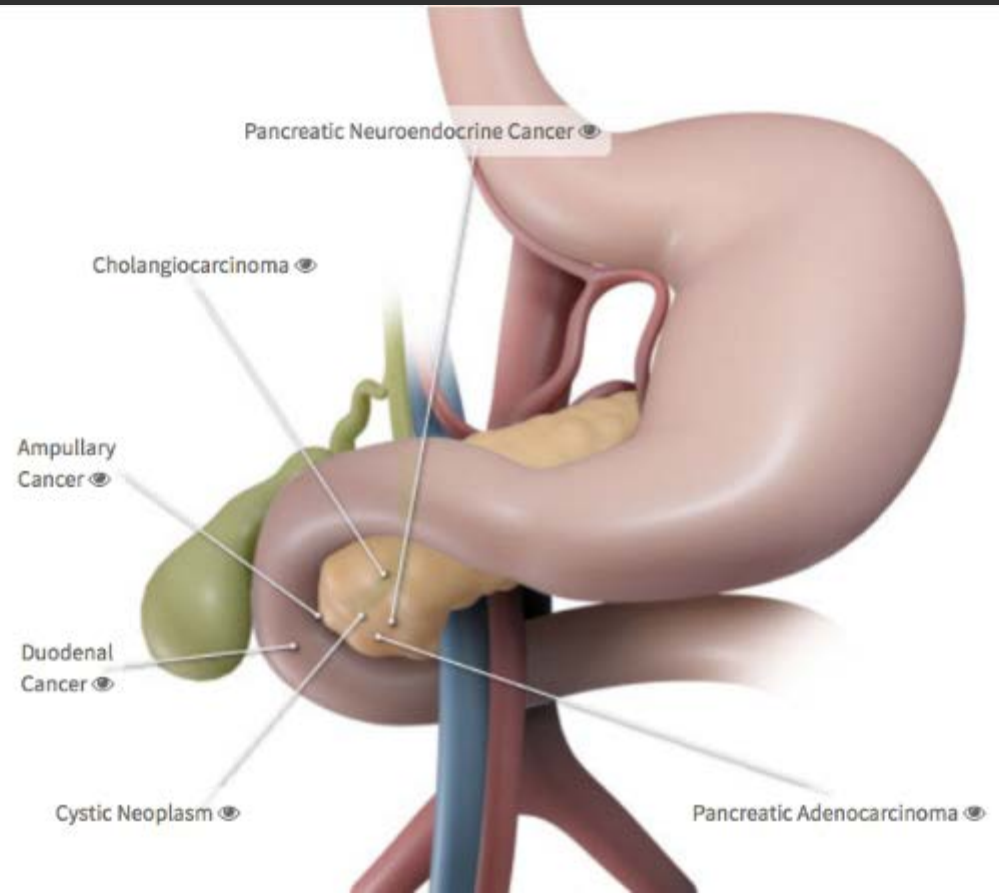
Questions?



Summary

Finding	Recommendation
Adrenal incidentaloma (>1cm)	**All** require functional work-up CT adrenal protocol +/- refer to General Surgeon
Thyroid nodule	U/S TSH Majority > 1 cm require FNA
Liver hemangioma	No follow-up required
Liver cyst (simple)	No follow-up required
Pancreas cyst	**All** require review with a pancreas surgeon
Asymptomatic gallstones	No follow-up required

Peri-ampullary Cancers



Surgical Resection

- Surgery remains the best available treatment for resectable pancreas cancer BUT:
  - Few eligible at diagnosis (<15%)
  - High morbidity (~30-50%)
  - Mortality risk (~3-4%)
  - Poor long term oncologic outcomes (5 yr OS ~15%)