



# Advances in Gastroenterology & Hepatology Conference

Saturday August 28, 2021  
La Concha Hotel &  
 zoom WEBINAR  
**5 CME Credits**

## Case Report

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8/25/2021

# Case Presentation

- **HPI:** 59 y/o woman presents to the ER 8/12/21 due to post-prandrial abdominal pain, nausea, 25 lb weight loss, dark urine and yellow skin.
- **PMH:** Non-insulin diabetes mellitus II and arterial hypertension
- **MEDS:** Losartan 50mg PO Daily and Metformin 500mg PO Daily
- **Family Hx:** Father died of metastatic cancer of unknown origin
- **Surgical Hx:** Laparoscopic cholecystectomy 6/17/2021
- **Allergies:** Penicillin
- **Social:** Denied smoking and alcohol intake
- Fully independent and functional

# Case Presentation

- **Physical Examination:**

- General: Alert, active, oriented in all spheres, **appreciable jaundice**
- HEENT: Bilateral icteric conjunctiva (not sclera)
- Abdomen: Non-distended, healed surgical laparoscopic scars, epigastric tenderness upon deep palpation

- **Labs:**

- |                         |          |                         |
|-------------------------|----------|-------------------------|
| • WBC's: <b>15.4</b>    | Cr: 0.54 | AST: 189                |
| • HgB: 10.2             | BUN: 10  | ALT: 320                |
| • MCV: 81.1             | Glu: 162 | ALP: <b>926</b>         |
| • PLT Count: <b>723</b> | A1C: 4.9 | Total Bili: <b>25.6</b> |
|                         |          | Lipase: 345             |

# Imaging Studies

- **ABD/US 8/12/2021:**

Impression:

- Status post cholecystectomy
- Dilated common bile duct measuring 1.5cm
- Spleen and pancreas show normal echotexture

- **ABD CT with IV contrast and without PO contrast 8/12/2021**

Impression:

- Dilated common bile duct. Status post cholecystectomy. No evidence of choledocholithiasis. Clinical correlation recommended
- Spleen, pancreas and adrenal glands appear unremarkable
- Colon diverticulosis without evidence of diverticulitis
- Constipation

# Medical Record Review (RETROSCOPE)

- **Recent Events:**

- 6/17/2021: s/p ambulatory laparoscopic cholecystectomy due to symptomatic cholelithiasis- same day discharge
- 7/17/2021- 7/21/2021: Short course admission due to pancreatitis that responded to medical treatment- no complications

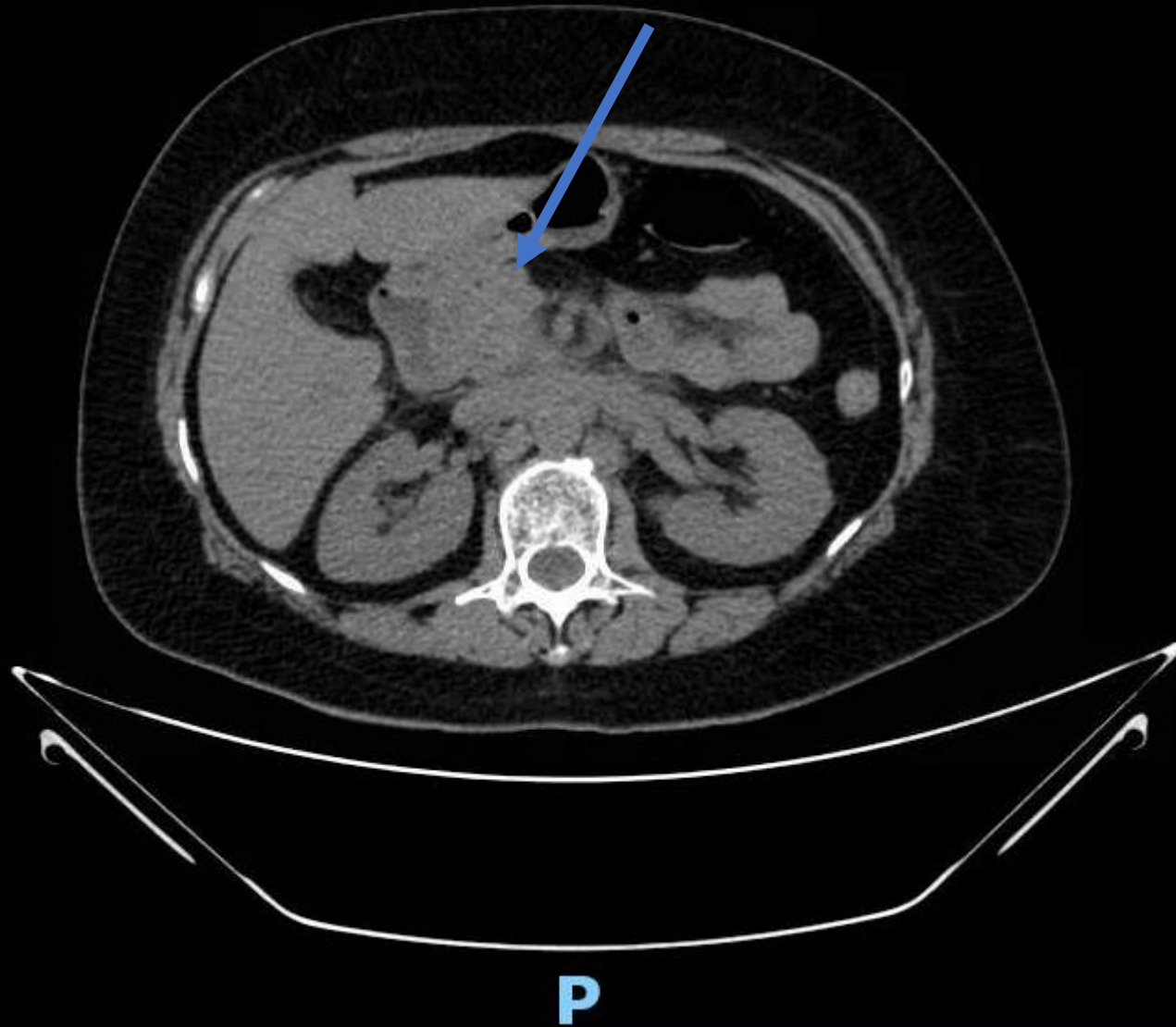
- **Operative Report 6/17/2021:**

- Findings: Small caliber cystic duct, Cholelithiasis and thick gallbladder walls

- **Pathology Report 6/23/2021:**

**Impression:**

Fullness at the pancreatic head with surrounding inflammation and small amount of free fluid with suggest pancreatitis given provided clinical history. An underlying pancreatic head mass is less likely but not ruled out



## TISSUE EXAMINATION REPORT

**PRE-OP DIAGNOSIS:** CHOLELITHIASIS

**PATHOLOGICAL DIAGNOSIS:**

GALLBLADDER ADENOCARCINOMA:

- PROCEDURE: SIMPLE CHOLECYSTECTOMY.
- TUMOR SIZE: 2.0 CM IN GREATEST DIMENSION.
- HISTOLOGIC TYPE: ADENOCARCINOMA, BILIARY TYPE.
- HISTOLOGIC GRADE: G2, MODERATELY DIFFERENTIATED.
- TUMOR EXTENSION: TUMOR INVADES PERIMUSCULAR CONNECTIVE TISSUE AND ADIPOSE TISSUE.
- CYSTIC DUCT MARGIN: UNINVOLVED BY INVASIVE ADENOCARCINOMA.
- DISTANCE OF INVASIVE CARCINOMA FROM MARGIN: 1.7 CM.
- LIVER PARENCHYMAL MARGIN: UNINVOLVED BY INVASIVE ADENOCARCINOMA.
- LYMPHOVASCULAR INVASION: PRESENT.
- PERINEURAL INVASION: PRESENT.
- REGIONAL LYMPH NODES: NO LYMPH NODES FOUND.

pTNM, AJCC 8th Edition: T2a,NX,MX.

**ADDITIONAL PATHOLOGY FINDINGS:**

- CHRONIC CHOLECYSTITIS.
- CHOLELITHIASIS

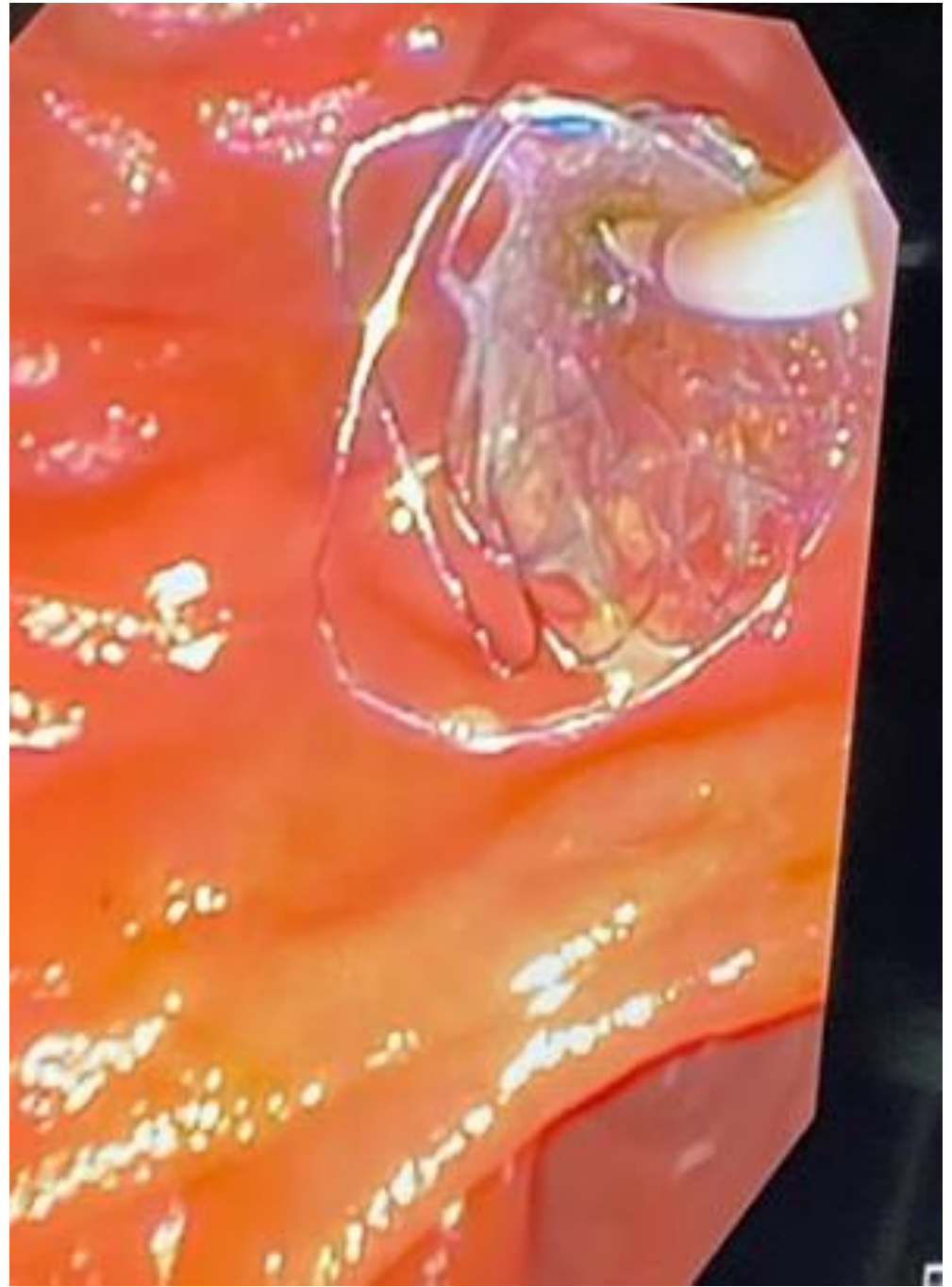
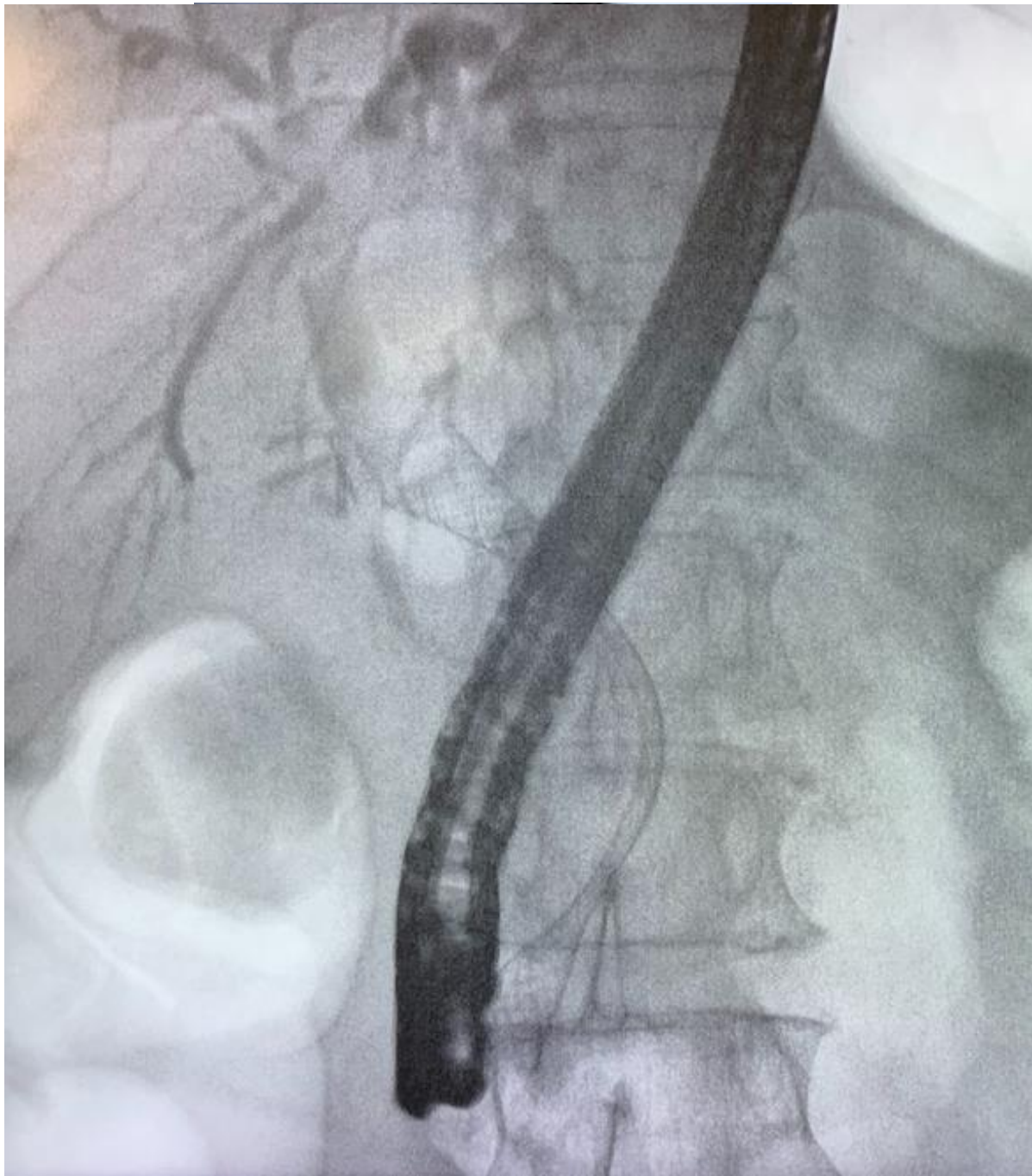
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**SPECIMEN:** GALLBLADDER






Received in formalin, labeled as "GALLBLADDER", gallbladder which measures 12.5 x 4.5 x 4.4 cm. The serosa is purple tan, smooth and glistening with red areas. On section, located at the neck, a firm elevated white mass with granular surface is identified measuring 2 x 2 x 0.6 cm. It is at 1.7 cm from the cystic duct margin. At the rest of the gallbladder, the wall measures 0.2 cm in thickness. The cystic duct margin measures 0.4 cm in diameter. The mucosa is

- **MRI/MRCP without gadolinium 8/16/2021:**
  - Edema within the pancreatic head and mild peripancreatic edema suggestive of acute pancreatitis. Correlation with pancreatic enzymes recommended
  - Status post cholecystectomy with intra and extrahepatic biliary duct dilatation
- **Chest CT with IV Contrast to exclude distant disease 8/17/2021**
  - NO evidence of mediastinal enhancing lesions
  - NO mediastinal, hilar or axillary lymphadenopathy
  - Lung parenchyma shows normal attenuation without focal lesions







**Total Bilirubin**

Collected	Result	Units	Range	Group
08/19/2021 05:00	19.5 H* 	mg/dL	0.1-1.4	
08/17/2021 05:00	26.2 H* 	mg/dL	0.1-1.4	
08/17/2021 05:00	26.7 H* 	mg/dL	0.1-1.4	
08/12/2021 17:00	25.6 H* 	mg/dL	0.1-1.4	
07/18/2021 05:00	1.3	mg/dL	0.2-1.3	
07/17/2021 18:15	1.3	mg/dL	0.2-1.3	
07/17/2021 18:15	1.4 H	mg/dL	0.2-1.3	
06/14/2021 09:59	1.0	mg/dL	0.2-1.3	


**Alkaline Phosphatase**

Collected	Result	Units	Range	Group
08/19/2021 05:00	932 H	U/L	38-126	
08/17/2021 05:00	1143 H	U/L	38-126	
08/17/2021 05:00	982 H	U/L	38-126	
08/12/2021 17:00	926 H	U/L	38-126	
07/18/2021 05:00	112	U/L	38-126	
07/17/2021 18:15	114	U/L	38-126	
07/17/2021 18:15	121	U/L	38-126	
06/14/2021 09:59	118	U/L	38-126	

**Aspartate Amino Transferase (AST)**

Collected	Result	Units	Range	Group
08/19/2021 05:00	153 H	U/L	14-36	
08/17/2021 05:00	243 H	U/L	14-36	
08/17/2021 05:00	241 H	U/L	14-36	
08/12/2021 17:00	189 H	U/L	14-36	
07/18/2021 05:00	28	U/L	14-36	
07/17/2021 18:15	27	U/L	14-36	
07/17/2021 18:15	30	U/L	14-36	
06/14/2021 09:59	64 H	U/L	14-36	

**Aspartate Amino Transferase (AST)**

Collected	Result	Units	Range	Group
08/19/2021 05:00	153 H	U/L	14-36	
08/17/2021 05:00	243 H	U/L	14-36	
08/17/2021 05:00	241 H	U/L	14-36	
08/12/2021 17:00	189 H	U/L	14-36	
07/18/2021 05:00	28	U/L	14-36	
07/17/2021 18:15	27	U/L	14-36	
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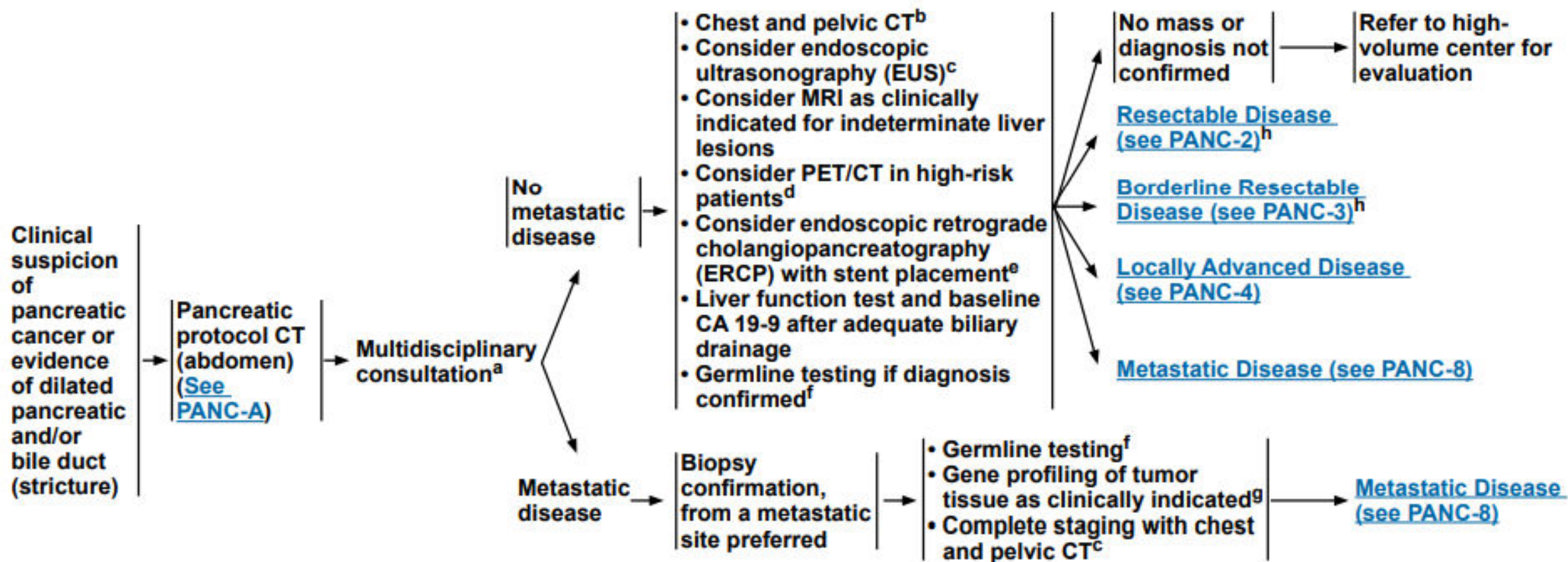
INTRODUCTION

Decisions about diagnostic management and resectability should involve multidisciplinary consultation at a high-volume center with use of appropriate imaging studies.





### CLINICAL PRESENTATION AND WORKUP





### CRITERIA DEFINING RESECTABILITY STATUS AT DIAGNOSIS<sup>a</sup>

- Decisions about resectability status should be made in consensus at multidisciplinary meetings/discussions.

Resectability Status	Arterial	Venous
Resectable	<ul style="list-style-type: none"> <li>• No arterial tumor contact (celiac axis [CA], superior mesenteric artery [SMA], or common hepatic artery [CHA]).</li> </ul>	<ul style="list-style-type: none"> <li>• No tumor contact with the superior mesenteric vein (SMV) or portal vein (PV) or <math>\leq 180^\circ</math> contact without vein contour irregularity.</li> </ul>
Borderline Resectable <sup>b</sup>	<p><u>Pancreatic head/uncinate process:</u></p> <ul style="list-style-type: none"> <li>• Solid tumor contact with CHA without extension to CA or hepatic artery bifurcation allowing for safe and complete resection and reconstruction.</li> <li>• Solid tumor contact with the SMA of <math>\leq 180^\circ</math></li> <li>• Solid tumor contact with variant arterial anatomy (ex: accessory right hepatic artery, replaced right hepatic artery, replaced CHA, and the origin of replaced or accessory artery) and the presence and degree of tumor contact should be noted if present, as it may affect surgical planning.</li> </ul> <p><u>Pancreatic body/tail:</u></p> <ul style="list-style-type: none"> <li>• Solid tumor contact with the CA of <math>\leq 180^\circ</math></li> <li>• Solid tumor contact with the CA of <math>&gt;180^\circ</math> without involvement of the aorta and with intact and uninvolved gastroduodenal artery thereby permitting a modified Appleby procedure (some panel members prefer these criteria to be in the locally advanced category).</li> </ul>	<ul style="list-style-type: none"> <li>• Solid tumor contact with the SMV or PV of <math>&gt;180^\circ</math>, contact of <math>\leq 180^\circ</math> with contour irregularity of the vein or thrombosis of the vein but with suitable vessel proximal and distal to the site of involvement allowing for safe and complete resection and vein reconstruction.</li> <li>• Solid tumor contact with the inferior vena cava (IVC).</li> </ul>
Locally Advanced <sup>b,c</sup>	<p><u>Head/uncinate process:</u></p> <ul style="list-style-type: none"> <li>• Solid tumor contact with SMA <math>&gt;180^\circ</math></li> <li>• Solid tumor contact with the CA <math>&gt;180^\circ</math></li> </ul> <p><u>Pancreatic body/tail:</u></p> <ul style="list-style-type: none"> <li>• Solid tumor contact of <math>&gt;180^\circ</math> with the SMA or CA</li> <li>• Solid tumor contact with the CA and aortic involvement</li> </ul>	<ul style="list-style-type: none"> <li>• Unreconstructible SMV/PV due to tumor involvement or occlusion (can be due to tumor or bland thrombus)</li> </ul>

### PRINCIPLES OF STENT MANAGEMENT

- **Stent placement is not routinely recommended prior to planned surgery; however, a stent may be considered for symptoms of cholangitis/fever or severe symptomatic jaundice (intense pruritus), or if surgery is being delayed for any reason, including neoadjuvant therapy.**
- **ERCP-guided biliary drainage is preferred. If ERCP is not possible, a percutaneous transhepatic cholangiography (PTC) approach may be used.**
- **Stents should be as short as feasible.**
- **Self-expanding metal stents (SEMS) should only be placed if tissue diagnosis is confirmed.**
- **For neoadjuvant therapy, fully covered SEMS are preferred since they can be removed/exchanged.**
- **During ERCP, common bile duct brushings may be done if no prior definitive diagnosis, and an EUS-guided biopsy can be done or repeated.**



# PredicamentS of the Case...

- Is this cancer? If so, what is the primary?
- Are the imaging diagnostic studies used in this sufficient?
- What would be to optimal method of tissue acquisition: EUS, cytologic ERCP brushings (FISH and aneuploidy), IR PERC biopsy ( still used in 2021 for suspected pancreato-biliary malignancy?)
- What is the optimal method for biliary decompression? What type of stent?
- How would you approach this case if you don't have Hepatobiliary surgery available in your hospital?



**GRACIAS!**

*Sirviendo con amor cristiano.*



CENTRO MÉDICO  
**MENONITA**  
CAYEY