Pancreatic Cysts

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Advanced Therapeutic Endoscopy

Presenter Disclosure

- **Faculty:** Erin Wishart

- **Relationships with financial sponsors:**
  - **No disclosures**

Case # 1

- VB is a 62 F
- CT chest to investigate worsening asthma which found a 4 cm cyst in tail of pancreas which found a 4 cm cyst in the tail of the pancreas

History

- Left flank pressure radiating to her back which last 1-2 days at a time, positional (worse laying on that side) and worse in evenings
- Prior idiopathic pancreatitis

Case #1

- PMHX: fibromyalgia, asthma, hypertension, diabetes, prior bladder sling procedure, pancreatitis 2012
- Meds: paroxetine, amlodipine, Metformin, Symbicort, Atrovent nasal spray, salbutamol, Pulmicort, multivitamin, omega-3, vitamin C, vitamin D, biotin, Ducosat
- She has no known drug allergies.
- SHX: She does not smoke or use marijuana. She does drink alcohol occasionally.
- FHx: Her mom had colon cancer in her 60s and she is followed closely by general surgery for colonoscopies every 5 years

Case #1

- What is the most likely cause?
- How should you manage this cyst?

Case # 2

- DM is a 60 F who had an ultrasound for reasons she can’t
  - 3 x 3.5 cm cystic lesion in the pancreatic body, normal duct size
- Asymptomatic

Case # 2

- PMHx: No prior pancreatitis. Frequent headaches. Prior tubal ligation, exploratory laparoscopy for possible endometriosis, colonoscopy.
- Meds: nil
- Allergies: nil
- FHx: no pancreatic Ca
- SHx: no EtOH, smoking or recreational drugs

Case #2

- What is the most likely type of cyst?
- How should you manage this cyst?

Case #3

- AA is a 71 M who presented with pancreatitis
- CT completed that hospitalization showed a cyst in the tail of the pancreas measuring greater than 1 cm in size, no PD dilation, no solid component.

- History: Recovered from pancreatitis after 2 weeks and had no further pain, stable weight

Case #3

- PMHx: end-stage kidney disease on home peritoneal dialysis nightly, hypertension, insulin-dependent diabetes
- Medication: Amphojel, pantoprazole, atorvastatin, Replavite, iron, vitamin D, amlodipine, insulin
- He has no known drug allergies.
- He does not smoke, use marijuana or drink alcohol.
- No family history of pancreatic cancers

Case #3

- What is the most likely type of cyst?
- How should you manage this cyst?

Why talk about cysts?

- Common:
  - Incidental finding with prevalence rates ranging from 2-49% in the literature
  - 10-20% of patients over 60

How they present

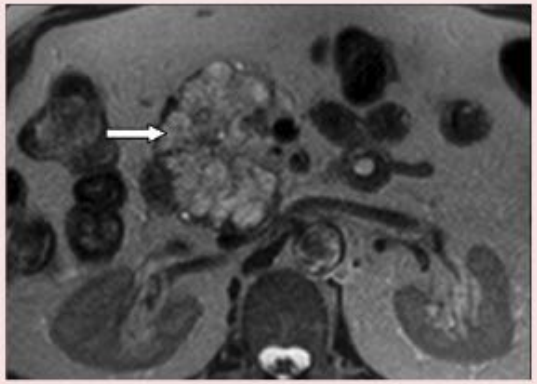
- ***Asymptomatic

- Rarer presentation:
  - Abdominal pain – epigastric radiating to back
  - Nausea
  - Weight loss
  - Early satiety

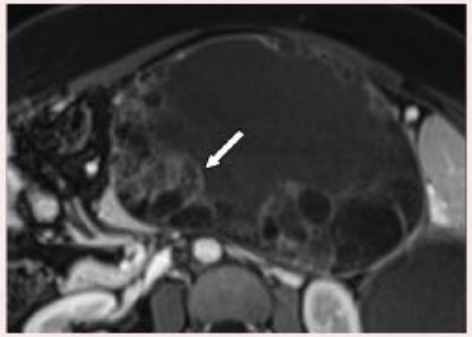
Initial Work-up

- History – prior pancreatitis, abdominal pain, weight loss, family history of Pancreatic Ca
- Bloodwork – liver enzymes and lipase
- Imaging – CT, MRCP or EUS

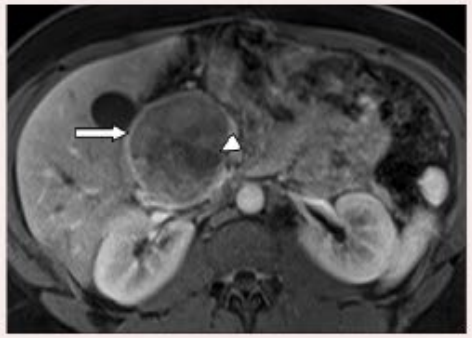
MRCP



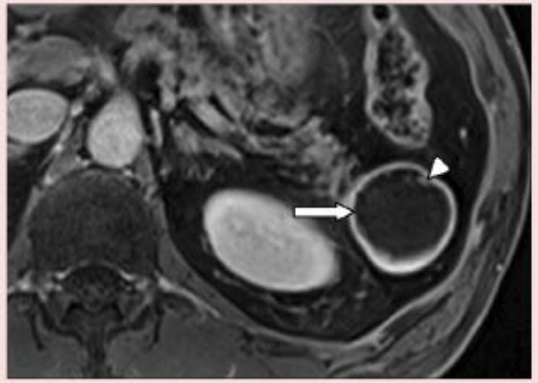
Serous cystadenoma



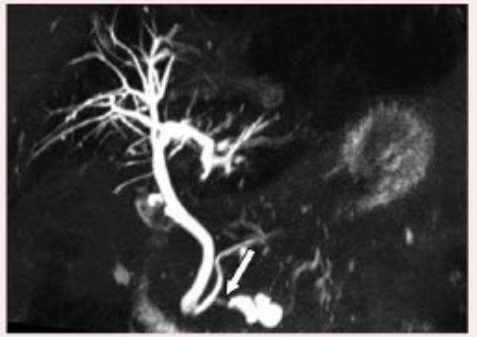
Mucinous cystic neoplasm



Solid pseudopapillary neoplasm



Cystic pancreatic neuroendocrine tumor

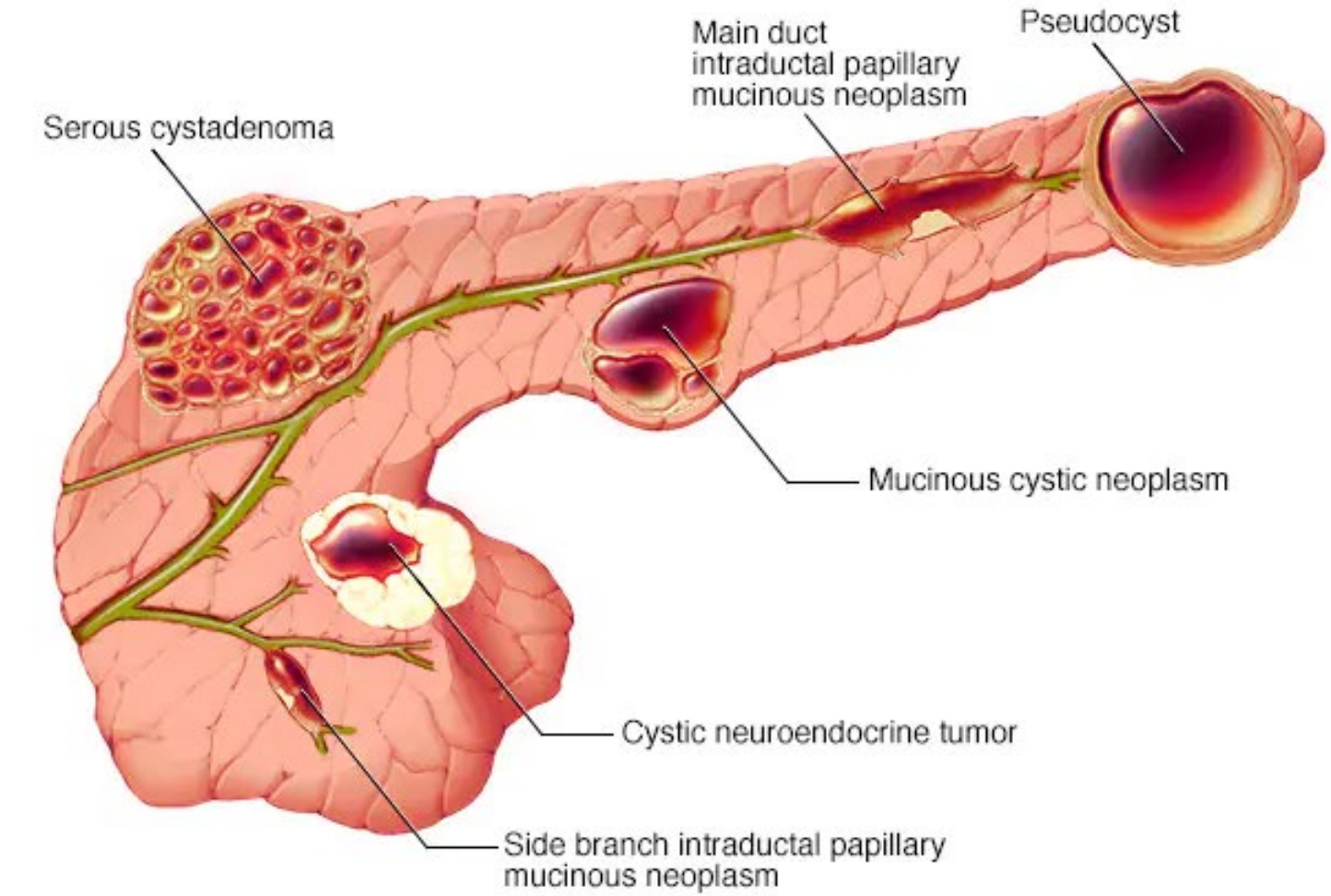


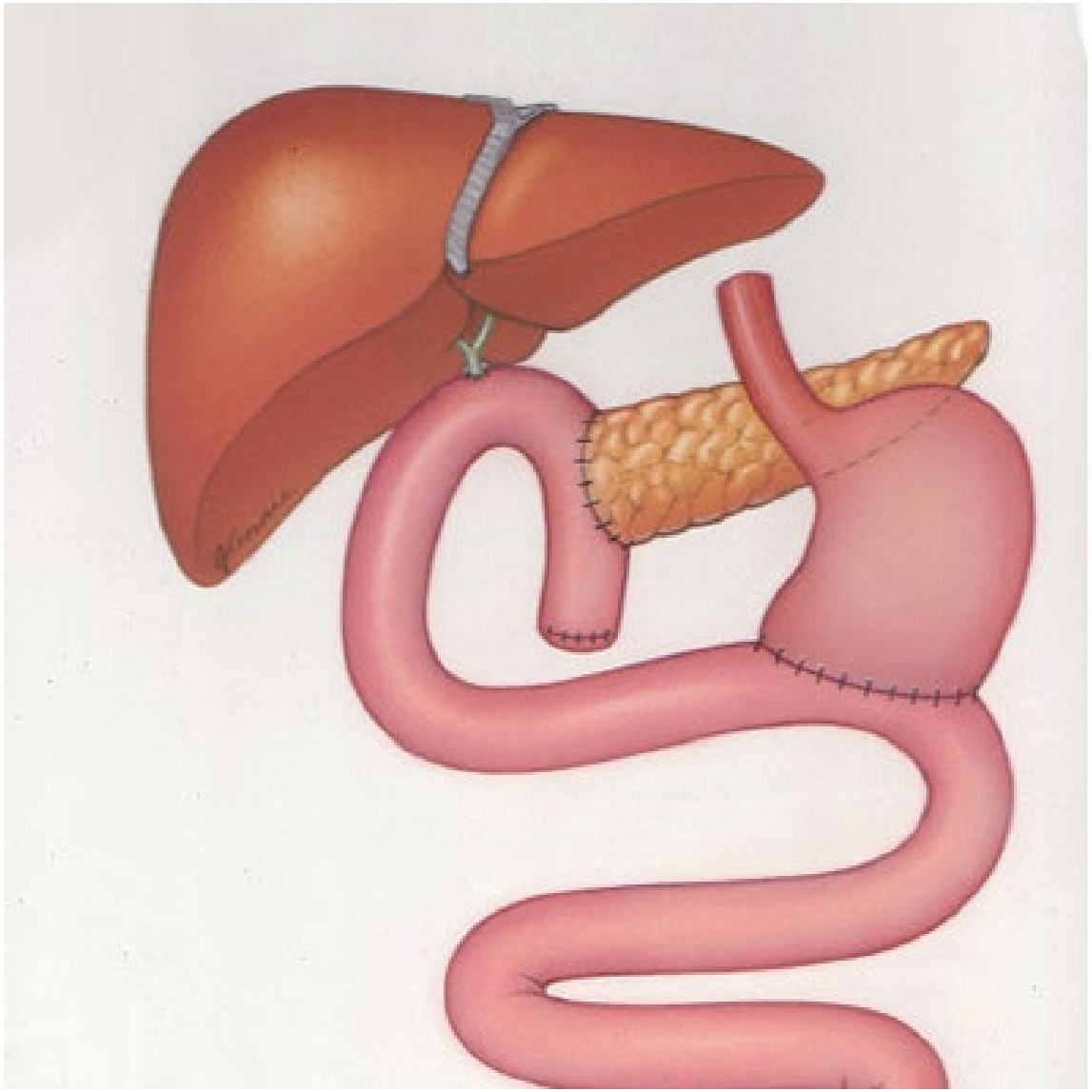
Branch-duct IPMN

Main-duct IPMN

IPMN; intraductal papillary mucinous neoplasm

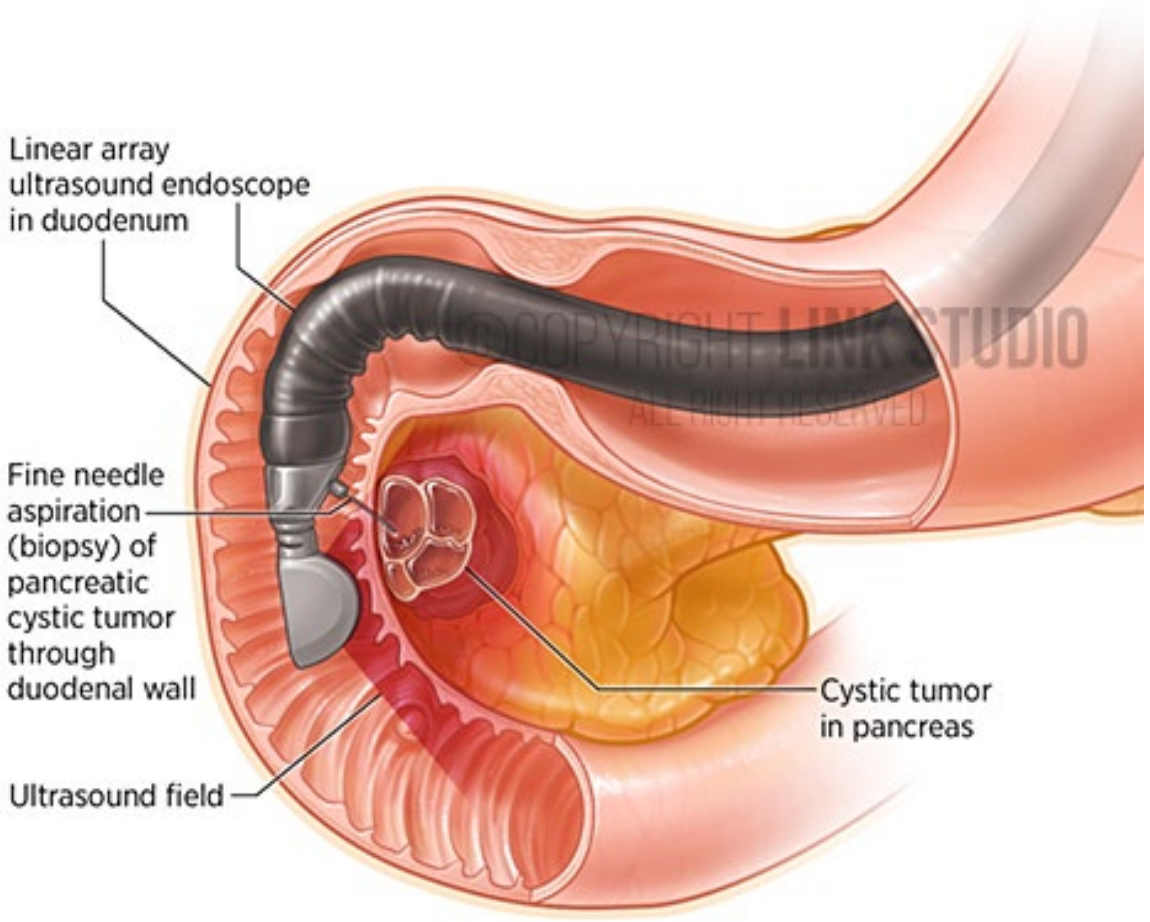
Types of Cysts





Who to refer directly to surgery?

- Cysts with RED FLAGS
  - PD dilation > 1 cm
  - Enhancing solid components
  - Jaundice



Who to refer for EUS?

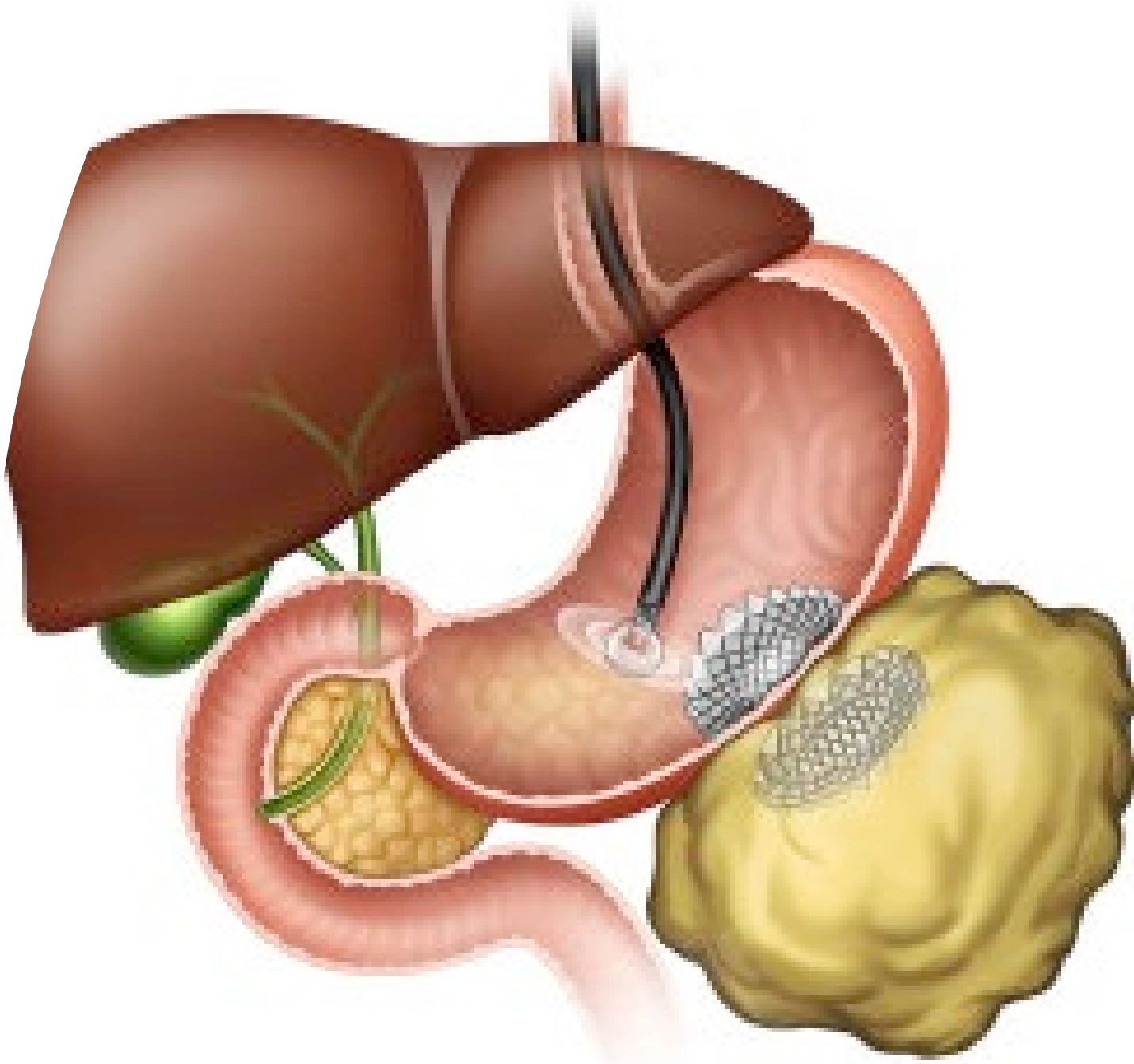
- Worrisome features:
  - Pancreatitis
  - PD dilation (5-9mm)
  - Abrupt PD caliber change with upstream atrophy
  - Non-enhancing mural nodules
  - Size > 3 cm

	Serocystadenoma	IPMN	MCN	Pancreatic Pseudocyst
CEA	Low	High	High	Low
Lipase	Low	High	Low	Low

- Also typically send for cytology (tend to be low yield), and FNA of solid component

FNA analysis

Management: Pseudocysts



Who to surveille?

- No worrisome features
- > 0.5 cm

How we surveille?

Recommendations from Canadian Association of Radiologists

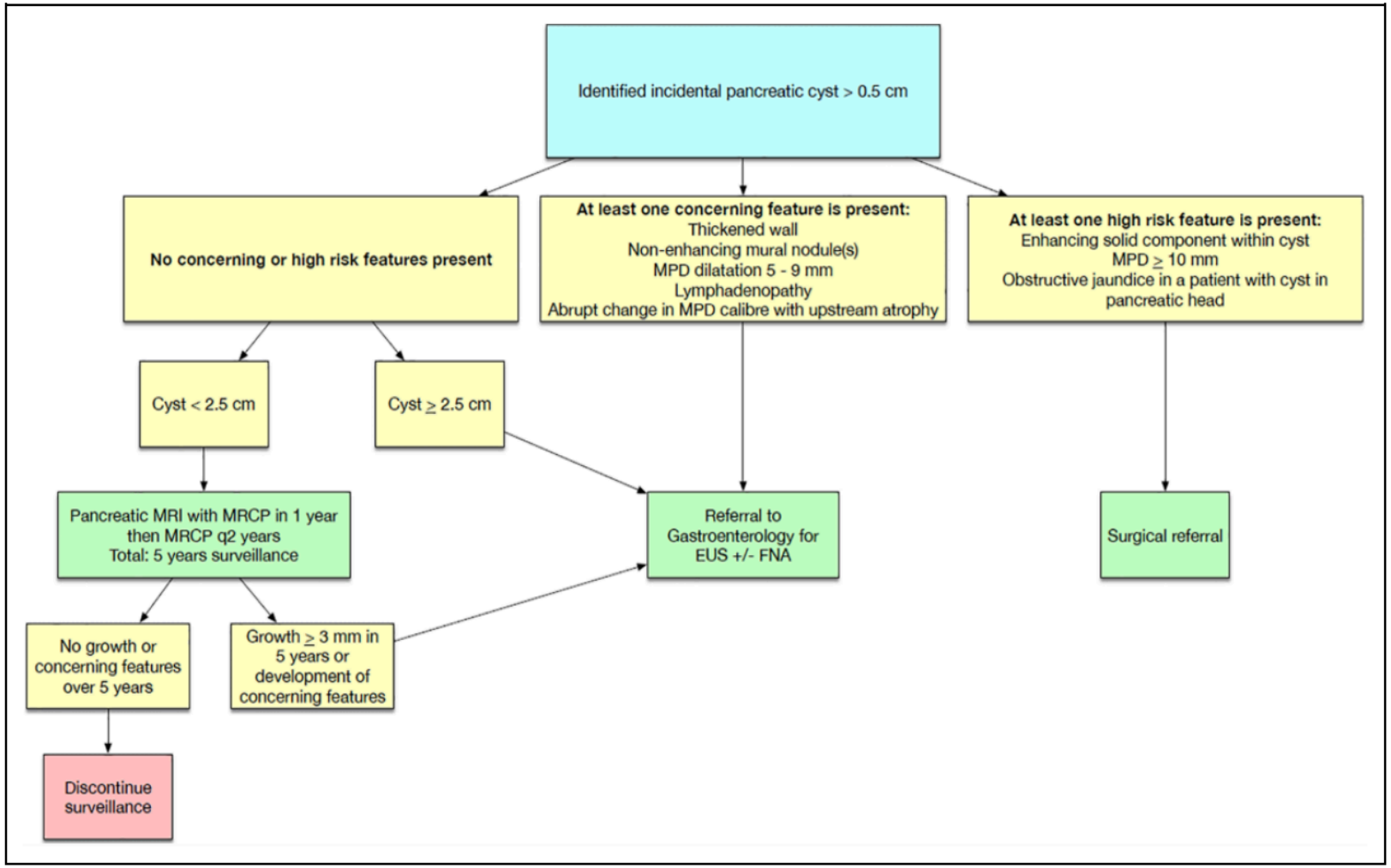


Figure 3. Flowchart for simple pancreatic cyst > 0.5-2.4 cm, age 50-75 years.

Who you can stop following?

- Pancreatic pseudocysts
- Serous cystadenoma
- Simple cysts
- Cysts < 0.5cm

Case # 1 – 62 F with prior pancreatitis

- An EUS with FNA was completed due to the enlarging size
  - 3.9 x 3.4 cm unilocular cyst with debris in the bottom identified in pancreas tail

- CEA – 8
- Lipase – greater than 3000
- Cytology - Macrophages and acellular debris, consistent with cyst contents.

Case # 1 - Conclusion

- Dx – pancreatic pseudocyst. Sx not attributable to the cyst.

- Plan – no further surveillence

Case #2 – 60 F with asymptomatic cyst

- MRI June 21, 2022 shows a 3 x 3.5 cm cystic lesion in the pancreatic body. There is some internal septations noted. Pancreatic duct is normal in calibre. There is no solid components noted. They do note growth from

- EUS-FNA performed
  - 3.4 x 3.5 cm cyst, 3 locules, no PD connection, PD 3 mm, no solid components
  - Cytology: cyst content with no malignancy
  - Lipase 94
  - CEA < 0.5

Case #2 - Conclusion

- Dx - Serous cystadenoma

- Plan – no further surveillence

Case # 3 – 71 M with pancreatits

- EUS FNA is performed
  - 33 x 29 mm multiloculated cystic lesion clearly connected to PD
  - No main PD dilation
  - No solid component

- Cytology
  - Rare benign glandular cells and macrophages, consistent with cystic contents. No malignancy.
  - CEA 5300
  - Lipase 7

Case #3 - Conclusion

- Dx – side branch IPMN

- No high risk features and his high surgical risk – following by surveillance (first MRI still pending)

Take home points

- Pancreatic cysts are common finding
- Mostly asymptomatic
- Multidisciplinary approach – radiology, GI and HPB surgery
- Red flags: PD dilation > 1 cm, size > 3 cm, jaundice & solid components