Radiology Elective Presentation

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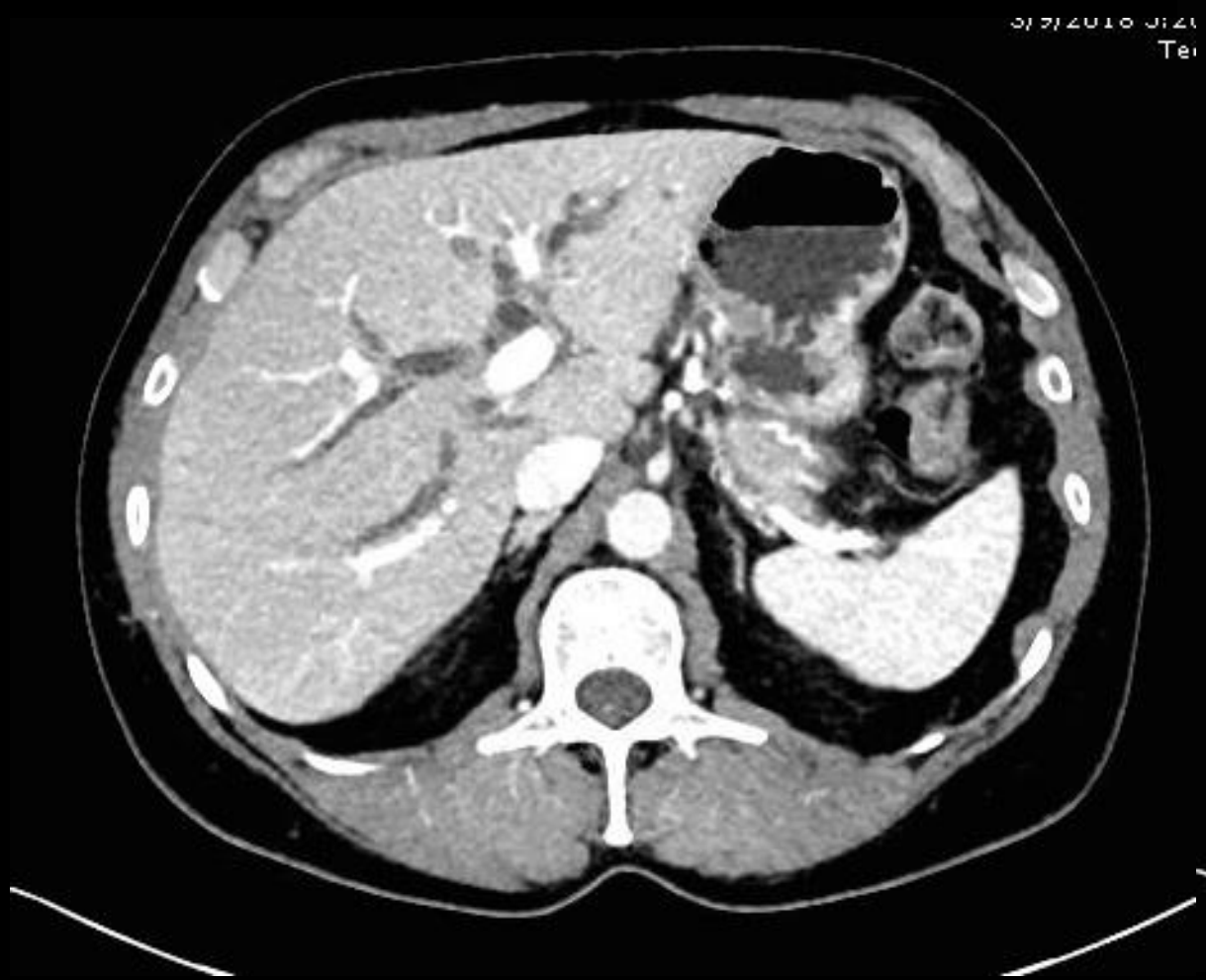
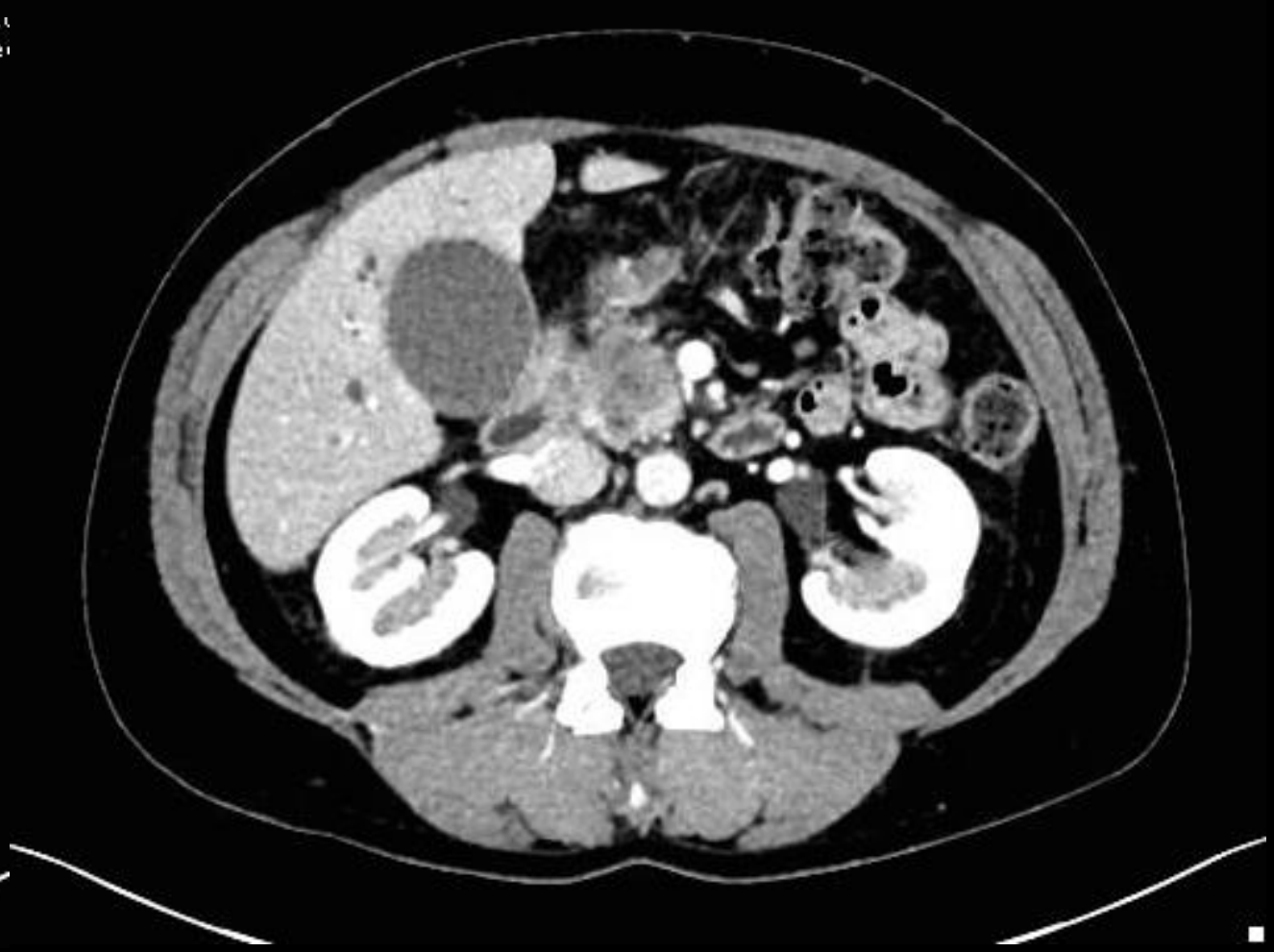
3/22/18

Case

60 y.o male w/ episodes of loose and lighter color stool as well as a 7 lb weight loss over the last few months.





Pancreatic Ductal Adenocarcinoma

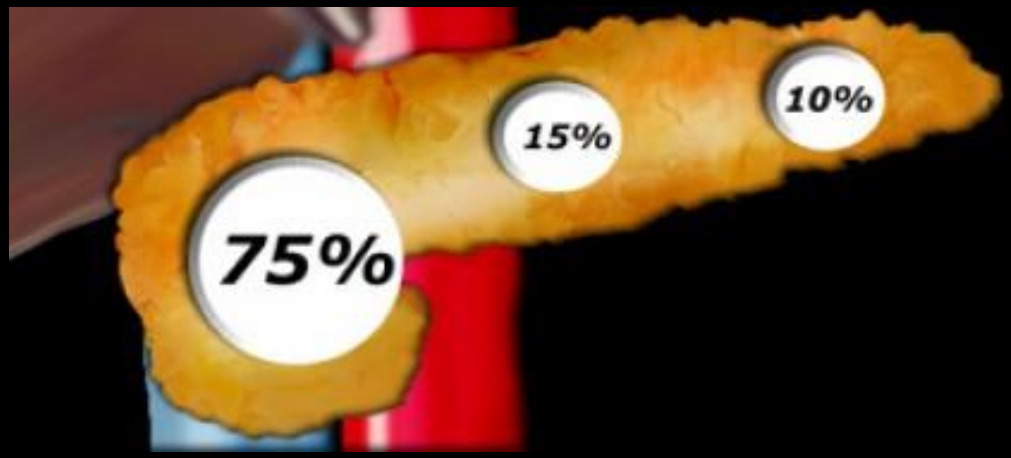
Pancreatic Ductal Adenocarcinoma

- Makes up the vast majority (~90%) of all pancreatic neoplasms.
- Majority of cases occur in males after 60 years old.
- **Risk Factors:** smoking, obesity, protein/fat-rich diet, family history.
- **Clinical Presentation:** courvoisier's gallbladder, new onset of diabetes, lipase hypersecretion syndrome.

- Most tumors are not resectable at diagnosis.
- Recurrence after resection of stage I and II very likely; doubling of survival from 5% to 10% in operated patients at 5 years.
- At 12 months following the diagnosis, almost a quarter of the patients will have died.

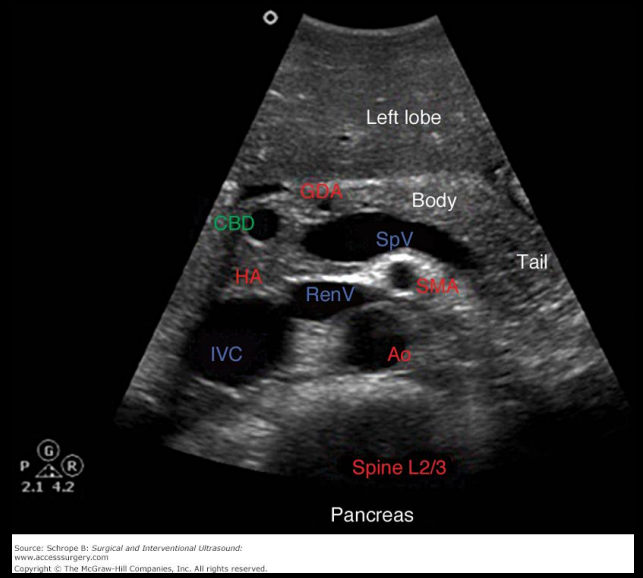
Pancreatic Ductal Adenocarcinoma

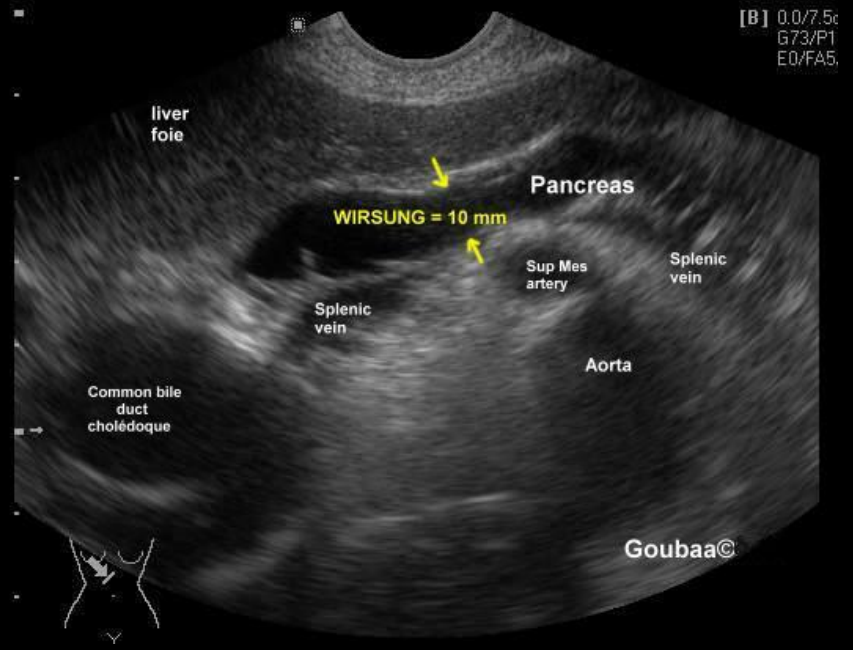
- Common location
  - Head of the pancreas (75%).
  - Body (15%) and tail (10%).

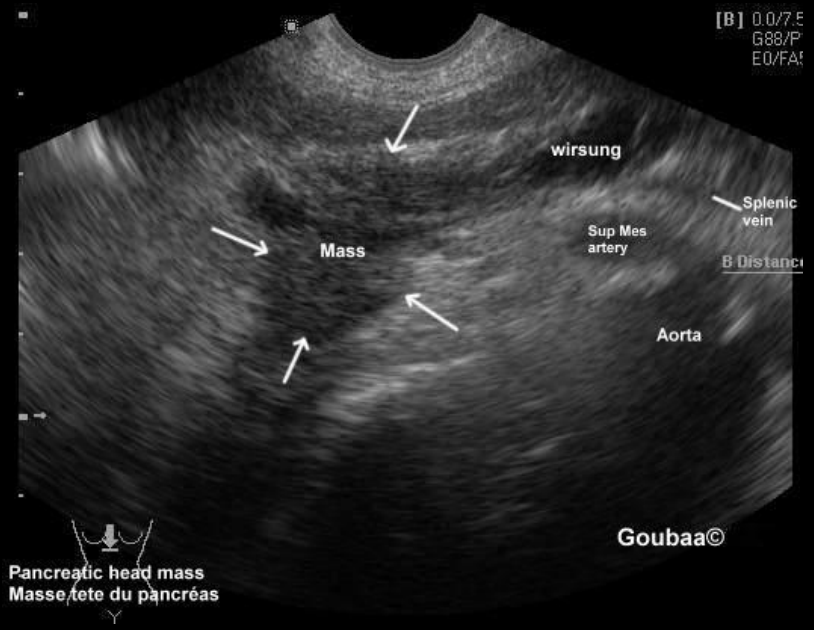


- Pancreatic head carcinoma are usually > 3 cm. Tumors in the body and tail are usually larger at diagnosis because present late with symptoms. These tumors are usually irresectable.

Ultrasound





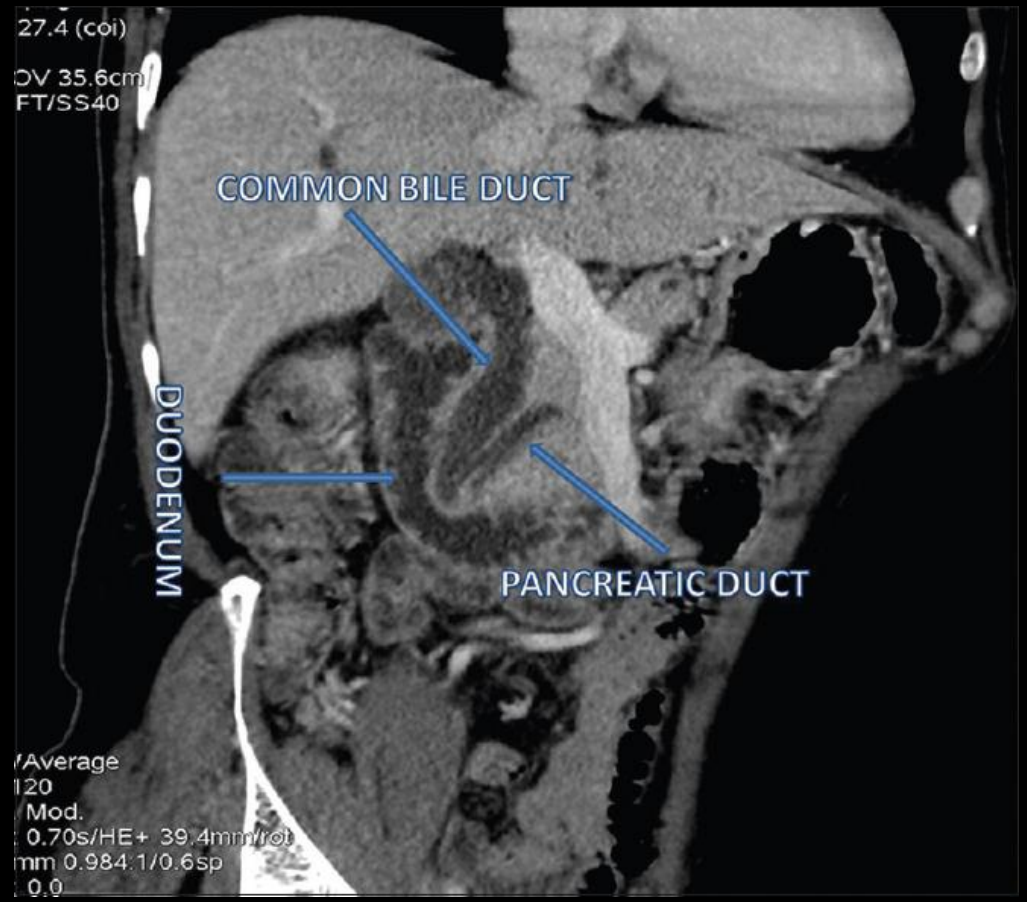


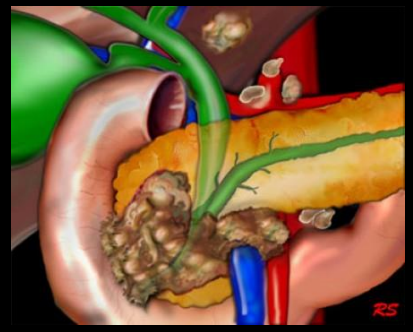
- Non-specific findings
- Hypoechoic mass
- Double duct sign may be seen
  - simultaneous dilatation of the common bile and pancreatic ducts.
- US can determine the level of obstruction in most cases (sensitivity >90%).

Schrope, B. Surgical and Interventional Ultrasound

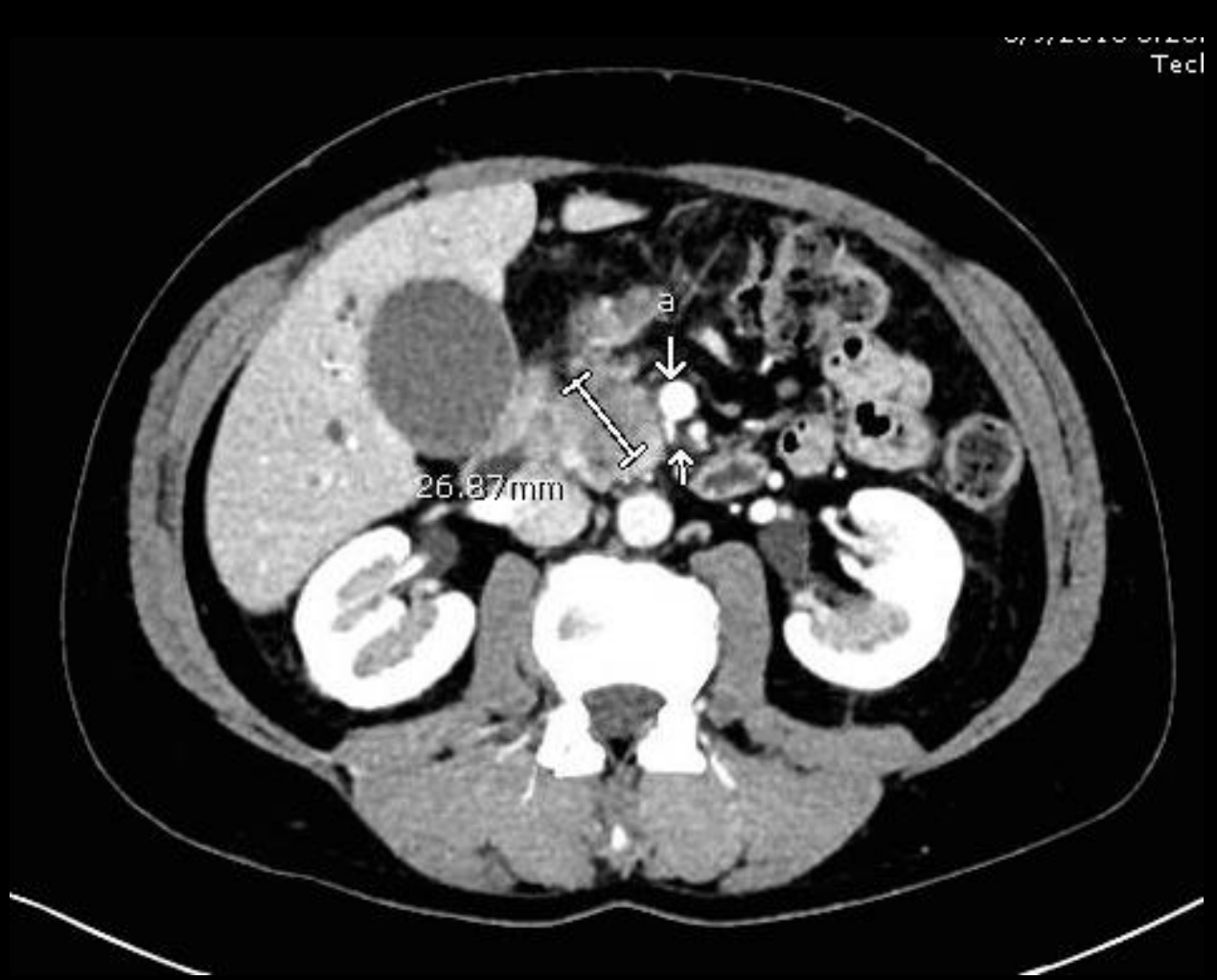
CT

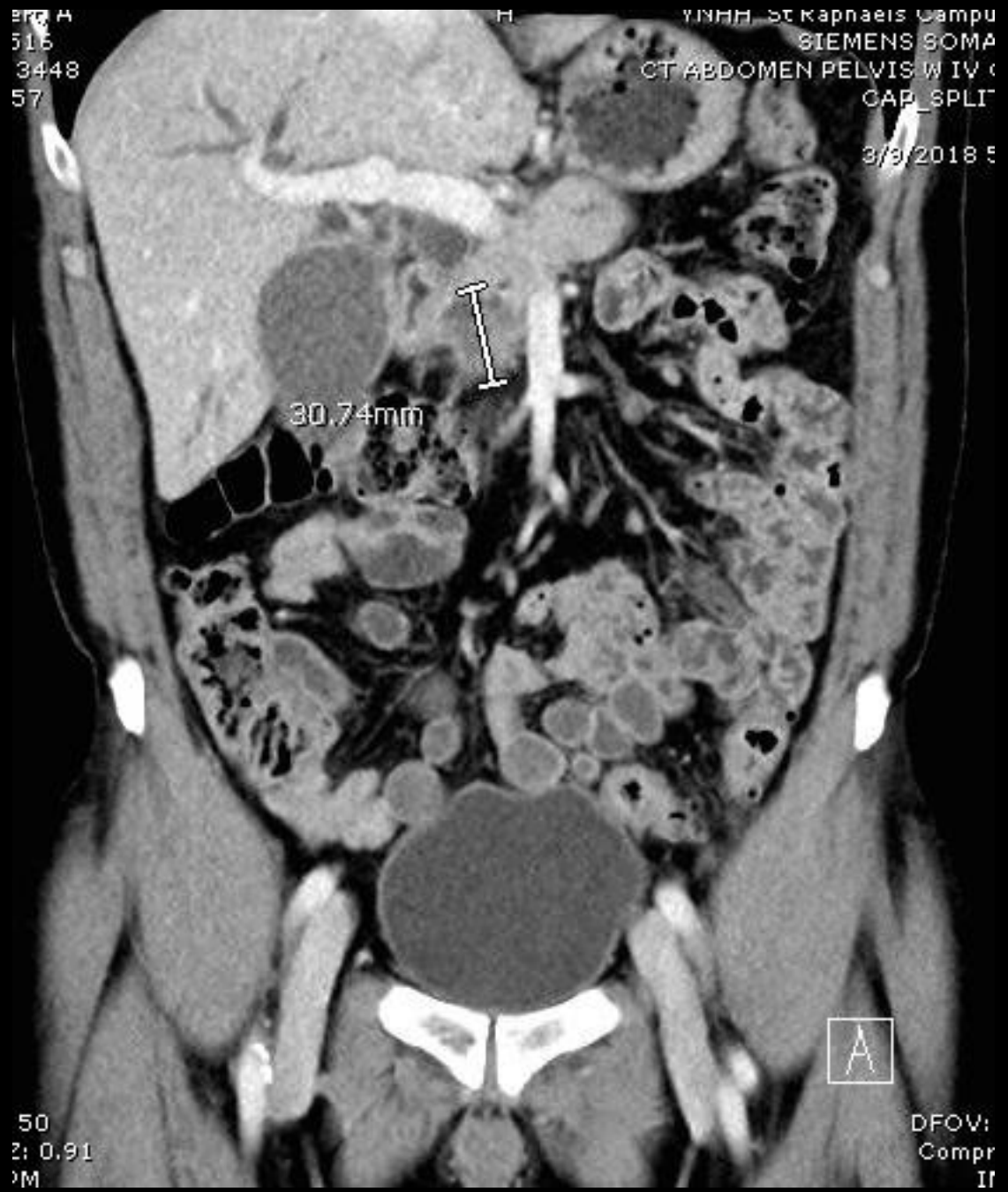
- Poorly defined masses with extensive surrounding desmoplastic reaction.
- Enhance poorly compared to adjacent normal pancreatic tissue and thus appear hypodense on arterial phase scans in 75-90% of cases.
- Double duct sign may be seen.



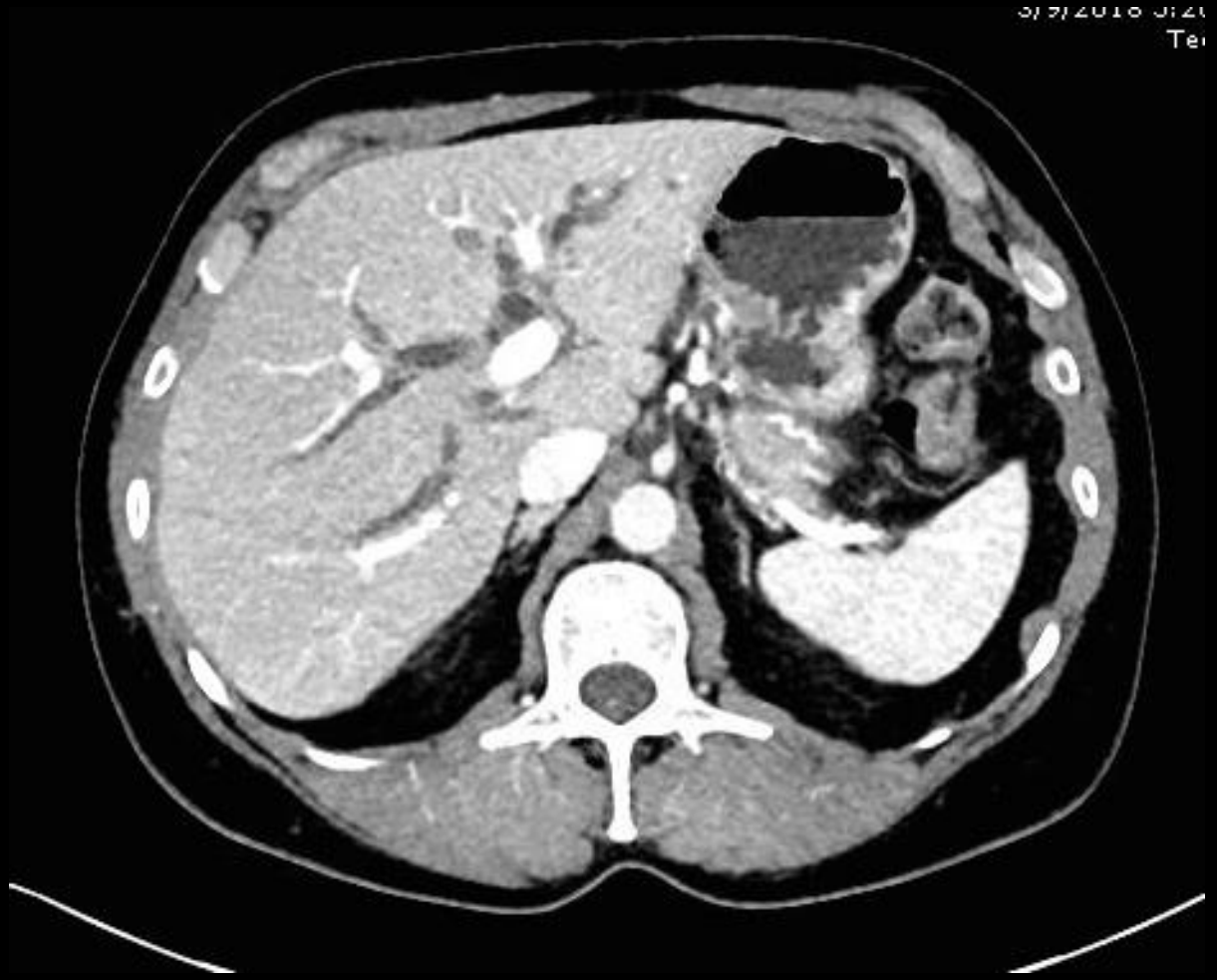


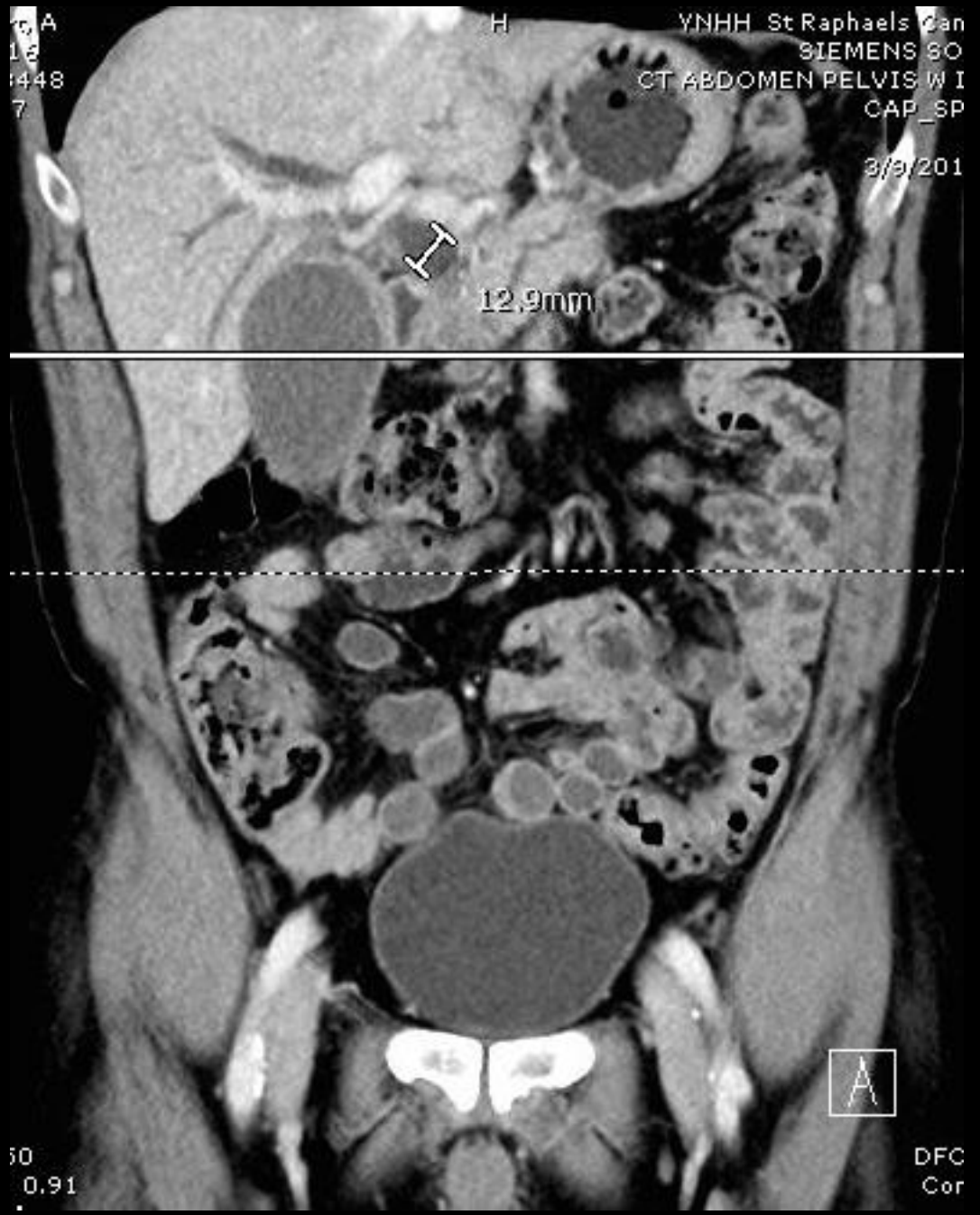
Sharma B, Raina S, Sharma N, Sharma R. Double duct sign. CHRISMED J Health Res 2016;3:303-4





Hypoattenuating 2.7 x 2.5cm mass at the pancreatic head



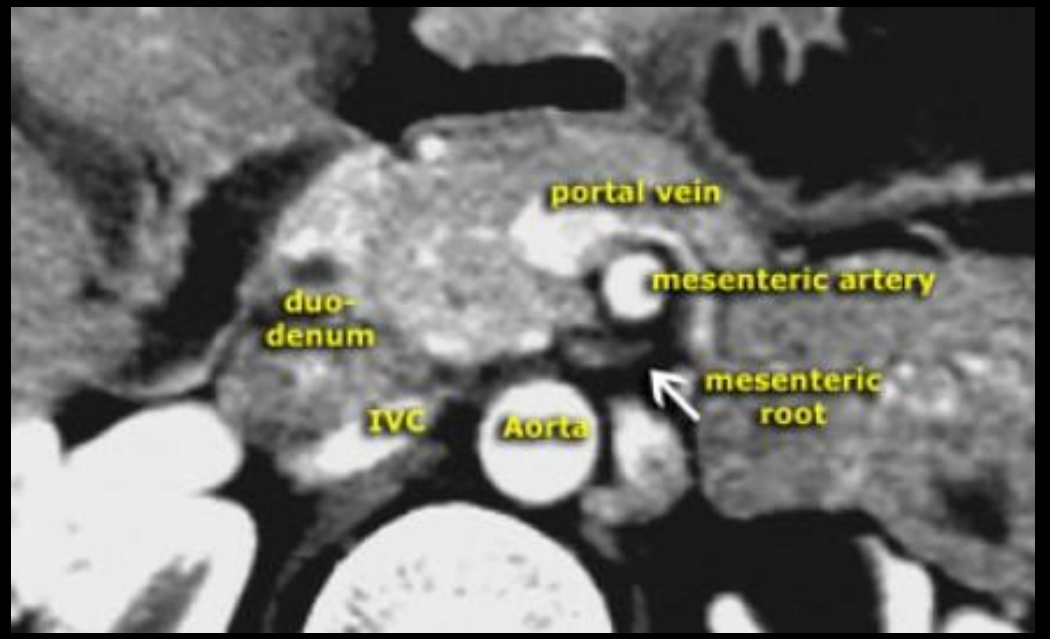


The common bile duct measures up to 1.3 cm

Mean diameter of normal common duct is 4 mm
> **7 mm** symptoms due to gallstones, pancreatitis, tumor.

Tumor spread

- CT correlates well with surgical findings in predicting unresectability.
- The most important feature to assess locally is the relationship of the tumor to surrounding vessels (SMA).
- If the tumor surrounds a vessel by more than 180 degrees, then it is deemed T4 disease and is unresectable .



http://www.radiologyassistant.nl

Cancer Res Treat. 2018 Feb 5. doi: 10.4143/crt.2017.404. [Epub ahead of print]

Incremental Role of Pancreatic Magnetic Resonance Imaging after Staging Computed Tomography to Evaluate Patients with Pancreatic Ductal Adenocarcinoma.

Kim HJ[1], Park MS[1], Lee JY[1], Han K[2], Chung YE[1], Choi JY[1], Kim MJ[1], Kang CM[3].

MRI to standard staging CT can be recommended for surgical candidates of PDA

- CT + MR and CT only (2005 – 2012)
  - Staging was changed from resectable on CT to unresectable state on MRI in 14.4% patients
  - The overall survival and recurrence-free survival rates were not significantly different between the two groups
  - The median time to liver metastases after curative surgery in the CT+MR group (9.9 months) was significantly longer than that in the CT group (4.2 months)

Patient Follow up

- Underwent ERCP due to rising bilirubin. Bile duct stenosis was treated with stent. The common hepatic duct and intrahepatic bile ducts were noted to be dilated.
- Staging: T2N0M0 -> resectable
- Currently neoadjuvant therapy

Thank you