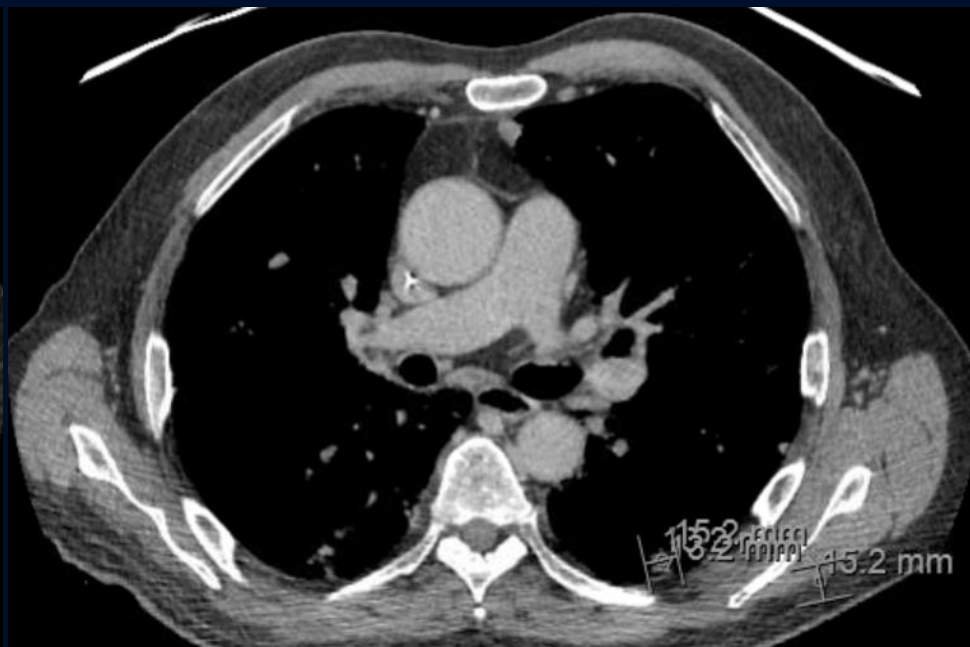


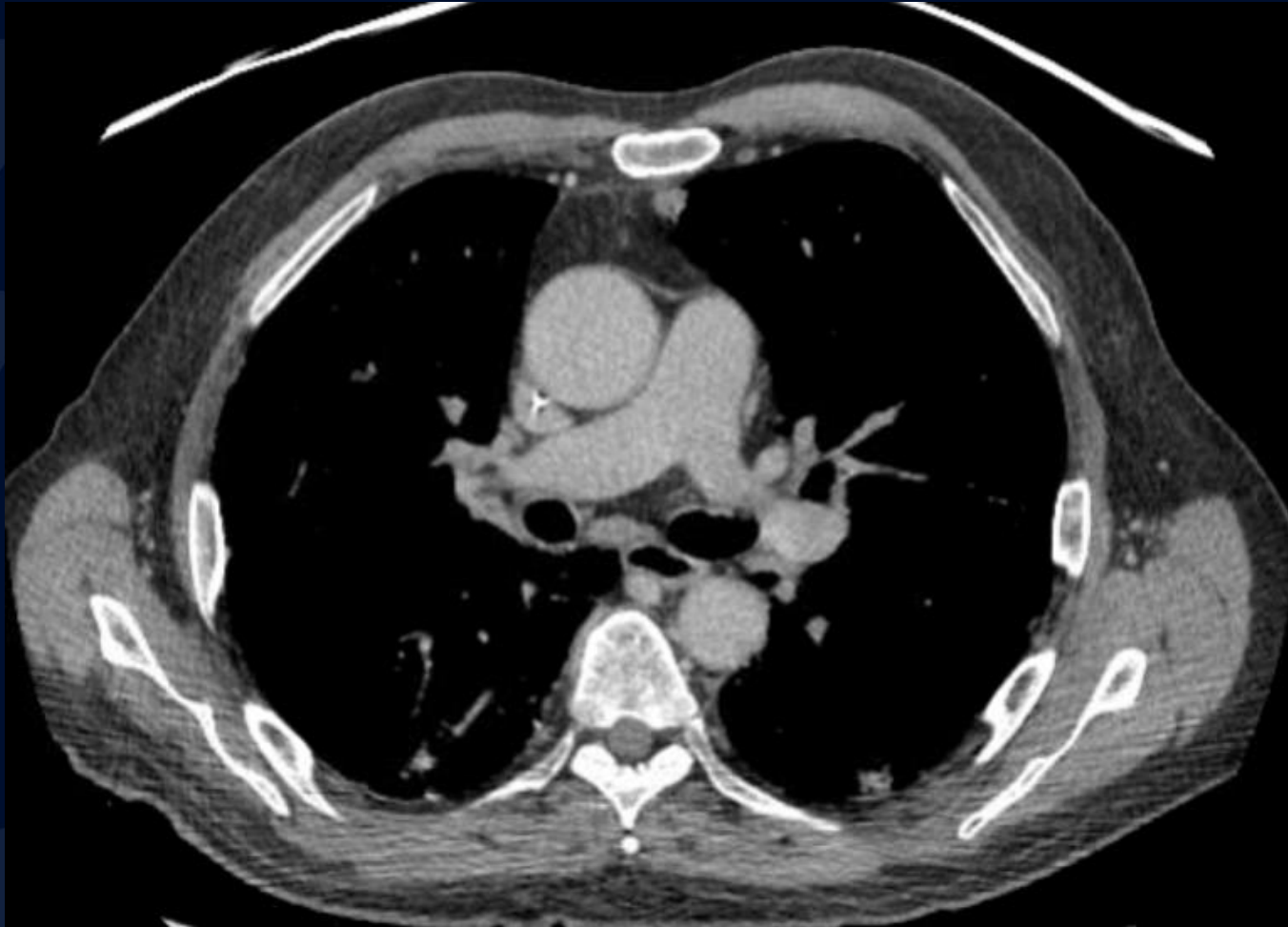
70-year-old man with a 2-month  
history of painless jaundice,  
pruritis, and scleral icterus

Kaitlyn Petitpas, MS3

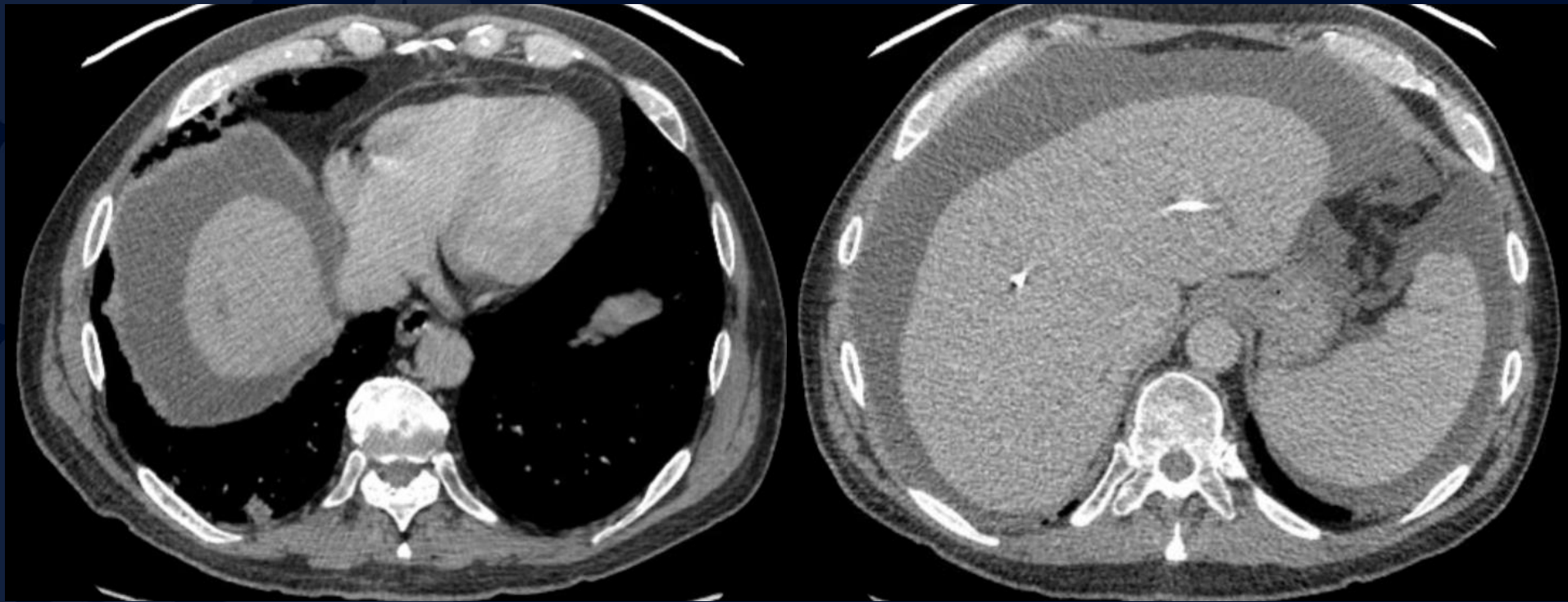
# CT with Oral Contrast



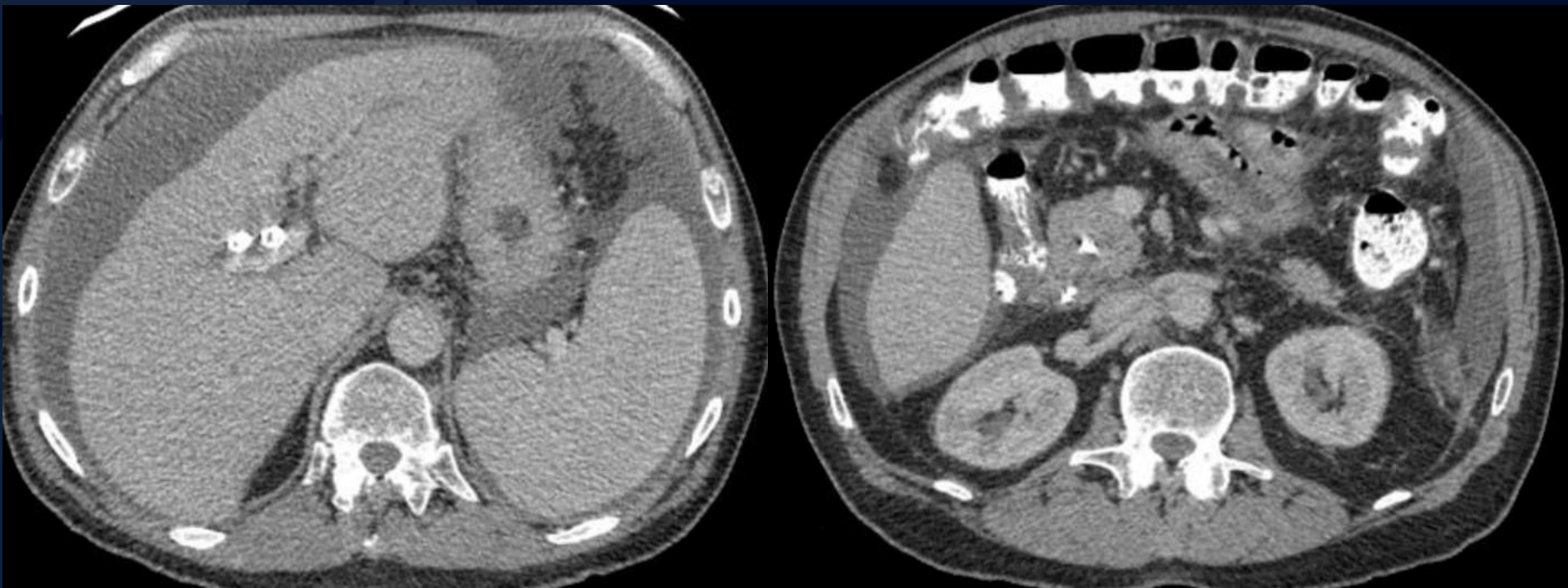
# CT with Oral Contrast



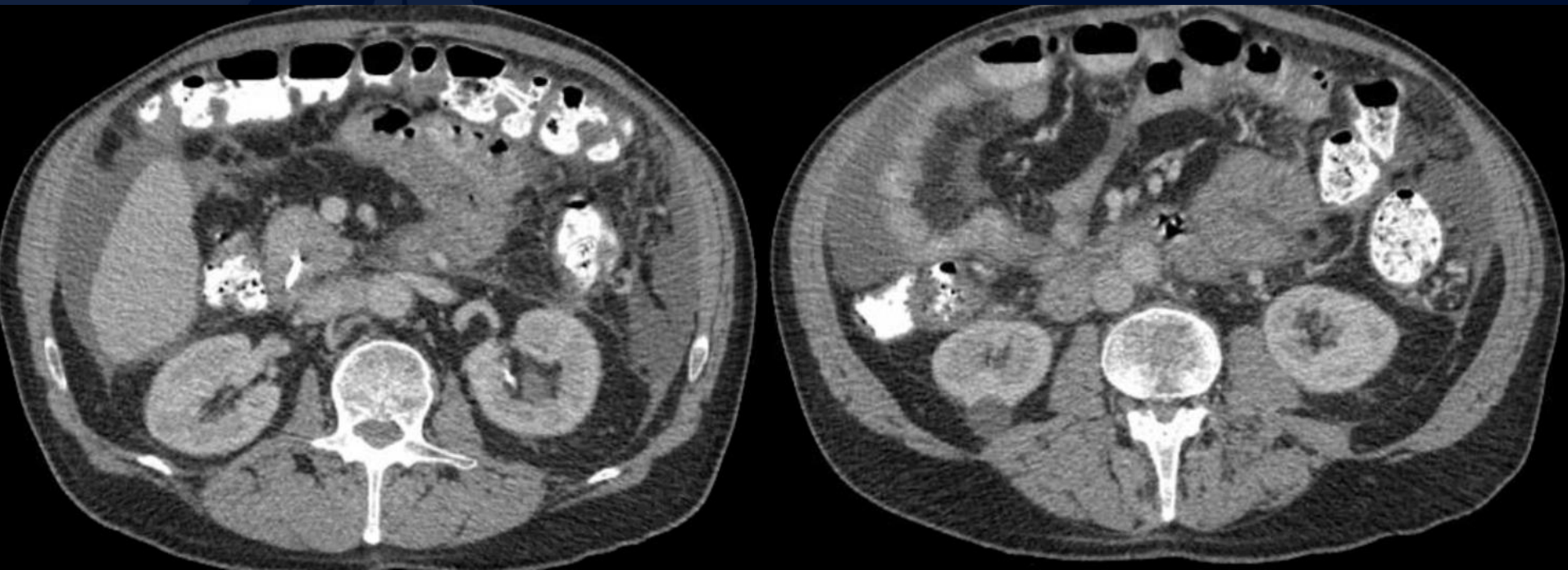
# CT with Oral Contrast



# CT with Oral Contrast



# CT with Oral Contrast



A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. It features detailed vein patterns and a lobed edge.

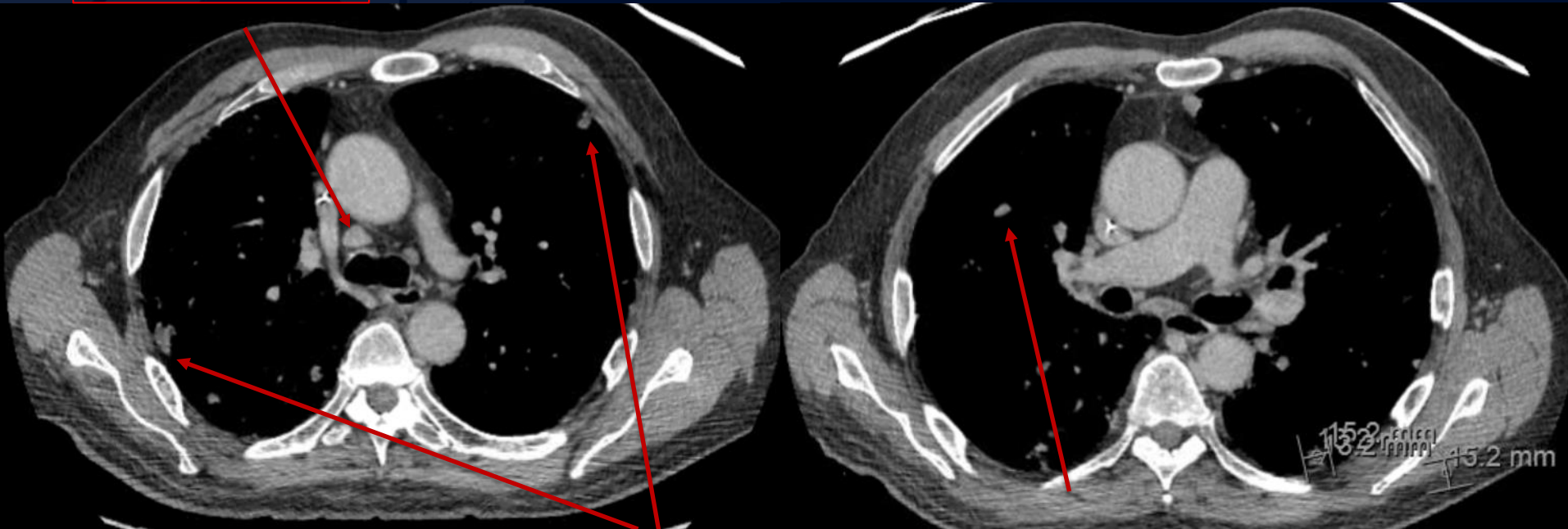
?

# Metastatic Pancreatic Adenocarcinoma



# CT with Oral Contrast

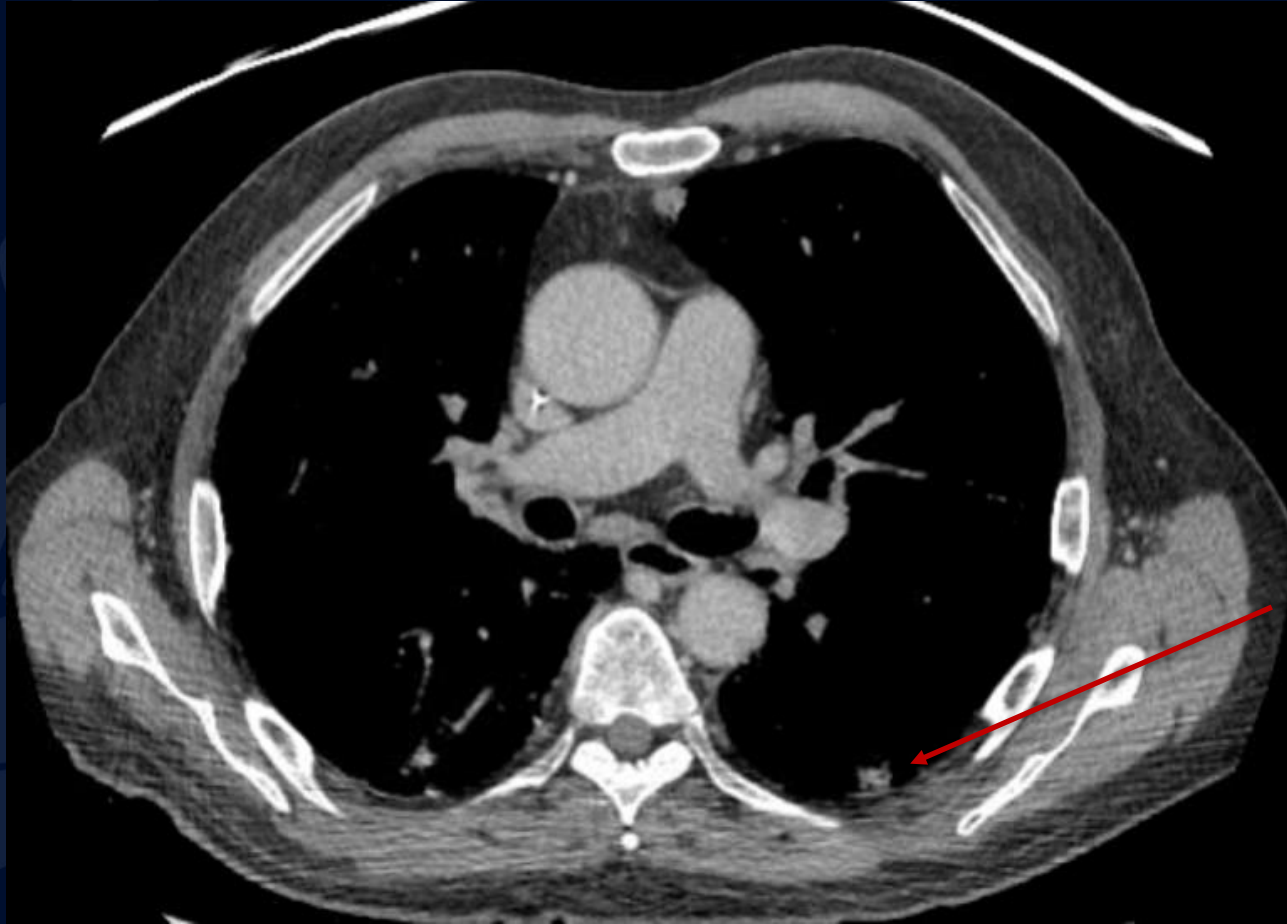
Precarinal  
lymphadenopathy



Subpleural nodules

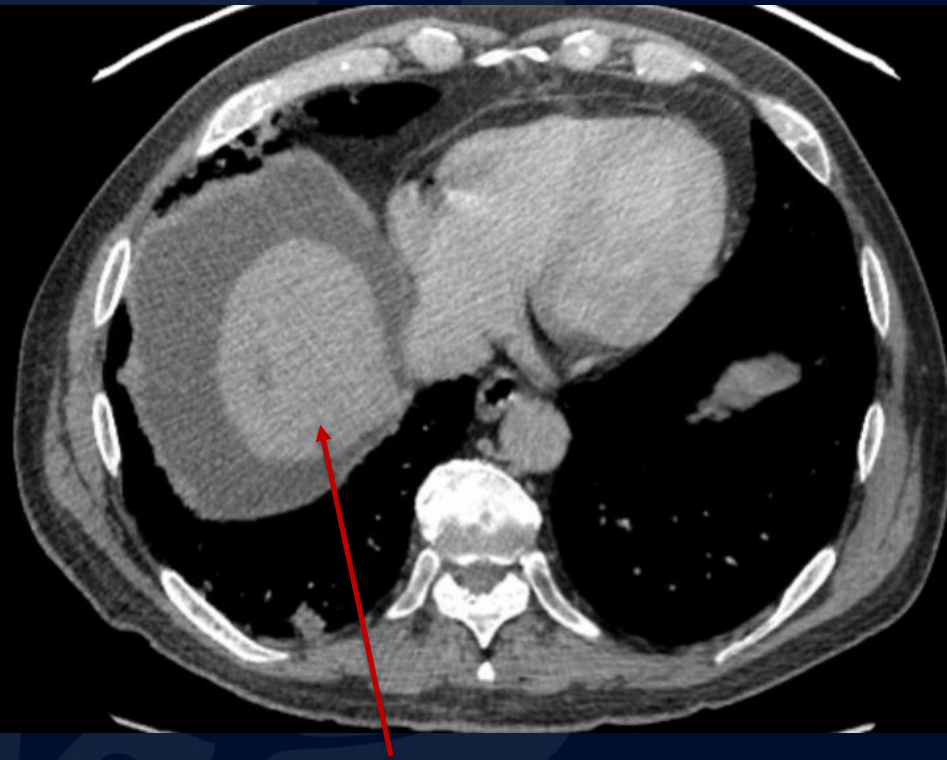
Right upper lobe nodule

# CT with Oral Contrast



Subpleural  
nodule

# CT with Oral Contrast



Subtle ill-defined hypodense liver lesion

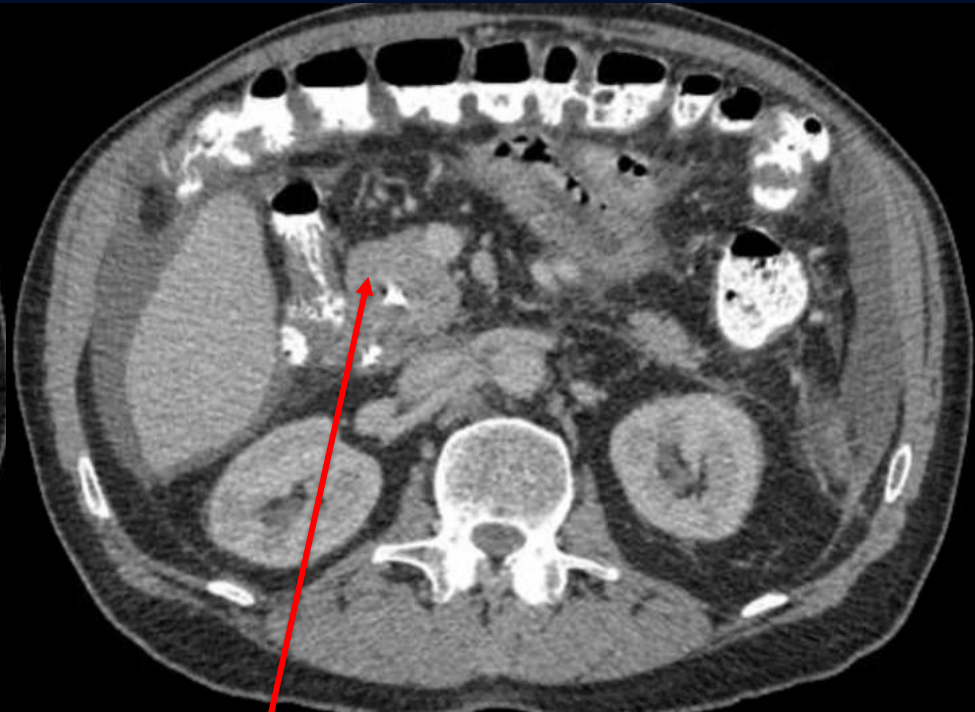


Ascites

# CT with Oral Contrast



Biliary stents; no intrahepatic biliary duct dilatation



Hypodense mass in the pancreatic head

# Pancreatic Adenocarcinoma

Malignancy arising from ductal epithelium of the exocrine pancreas

- Most common malignant tumor of exocrine pancreas
- Accounts for >95% of pancreatic malignancies
- 60% in pancreatic head, 20% in body, 15% are diffuse, 5% in tail
- Often asymptomatic early in disease course resulting in late presentation
- Most common symptoms are jaundice, weight loss, abdominal pain, back pain
- Poor prognosis
  - Only potentially curative treatment is complete surgical resection with negative surgical margins
    - Only 15-20% of patients are surgical candidates at presentation; 5-year survival after surgery is 20%
    - Without surgery, 5-year survival is < 5%; median survival of 3.5 months
- CT
  - 97% sensitivity for detecting pancreatic cancer
  - Excellent in determining unresectability
  - Less effective in determining resectability as many tumors found to be “resectable” on CT are actually unresectable at surgery
  - Best modality for determining vascular invasion

# Imaging Findings

## Ultrasound

- Hypoechoic mass with minimal internal color doppler flow vascularity
- Biliary dilation and pancreatic ductal dilation upstream from tumor
- Double duct sign

## Endoscopic Ultrasound

- Findings similar to those seen on conventional ultrasound
- Can help guide biopsy of pancreatic mass

## CT

- Poorly margined, hypodense mass often with extensive surrounding desmoplastic reaction
- 5% are isodense to normal pancreatic parenchyma , requiring attention to secondary signs of tumor
  - Pancreatic duct and CBD obstruction with abrupt ductal cutoff at the site of obstruction
  - Pancreatic parenchymal atrophy upstream from mass
  - Abnormal contour of pancreas with loss of normal fatty lobulation and texture
  - Soft tissue infiltration involving adjacent vessels and organs
- Enhance poorly compared to adjacent normal pancreatic tissue, thus appear hypoattenuating on arterial phase scans and often become isoattenuating on delayed scans

## MR

- T1: hypointense
- T1C+: Slower enhancement than the normal pancreas, therefore dynamic injection with fat saturation arterial imaging is recommended
- T2 / flair: variable intensity, depends on degree of reactive desmoplastic reaction
- MRCP: double duct sign

# References

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Fernandez-del Castillo C, Tanabe KK, Howell DA, et al. Clinical manifestations, diagnosis, and staging of exocrine pancreatic cancer. UpToDate. June 08, 2022. [https://www-uptodate-com.online.uhc.edu/contents/clinical-manifestations-diagnosis-and-staging-of-exocrine-pancreatic-cancer?search=pancreatic%20adenocarcinoma&source=search\\_result&selectedTitle=1~150&usage\\_type=default&display\\_rank=1#H31](https://www-uptodate-com.online.uhc.edu/contents/clinical-manifestations-diagnosis-and-staging-of-exocrine-pancreatic-cancer?search=pancreatic%20adenocarcinoma&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1#H31)

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<https://app.statdx.com/document/pancreatic-ductal-carcinoma/e3b28958-fd46-4c1b-8697-1229cf6d0f91>