Abdominal Mass

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RAD 4001 Diagnostic Radiology
Case from Dr. Sean Burke and Dr. Varaha Tammisetti
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Clinical History

- 48 year old male with no significant PMH presents as transfer from jail with RUQ abdominal pain and nausea for 2 weeks
- Pain is sharp and stabbing, worse with meals
- "No fever", but had been having chills and night sweats for 2-3 weeks
- No diarrhea, constipation, melena, or hematochezia

Physical Exam

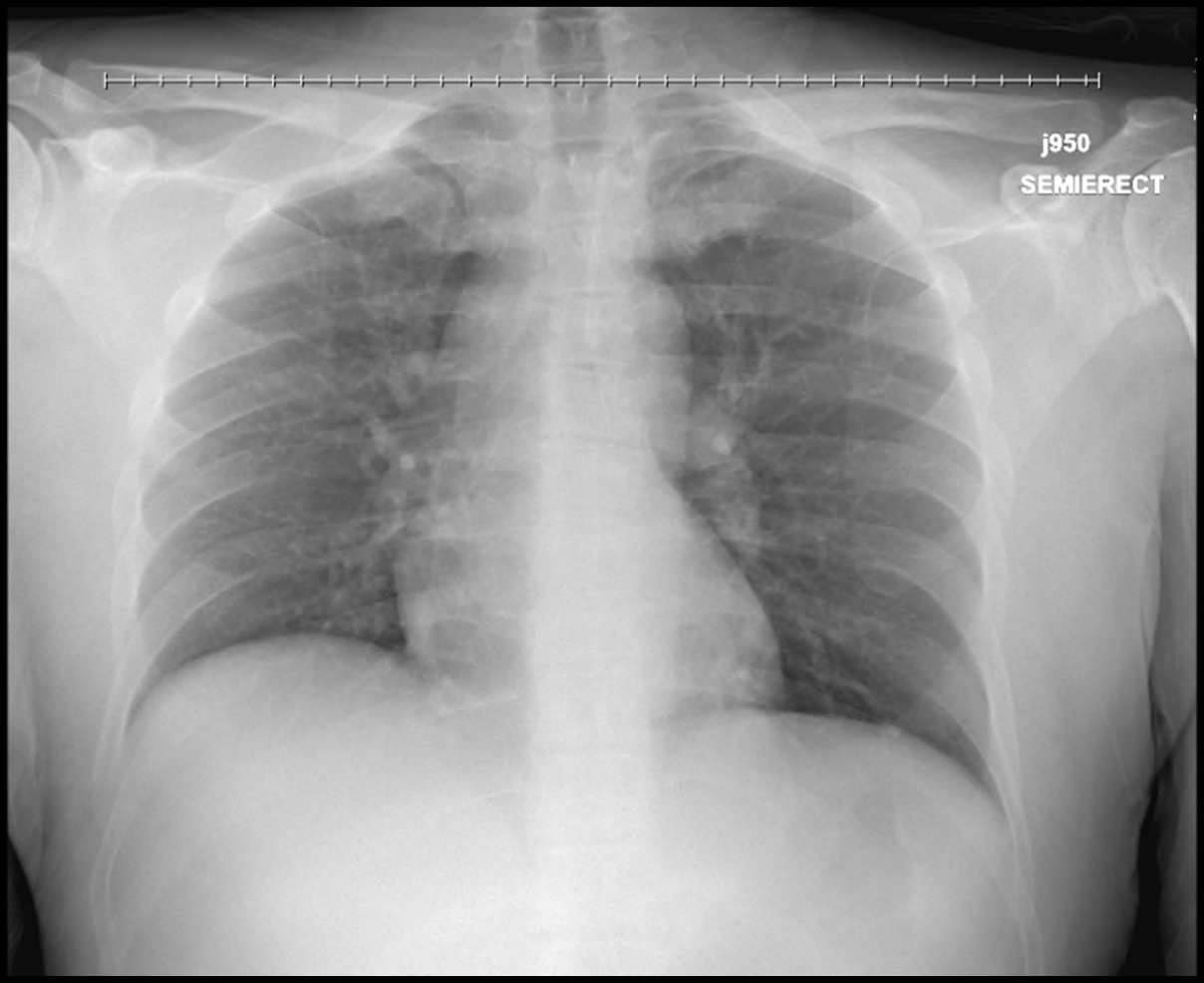
T 39.44
HR 122
BP 137/82
RR 18
SpO2 97% on RA
Ht:
Wt: 99.7 kg

Abd: mildly distended, nontender to palpation

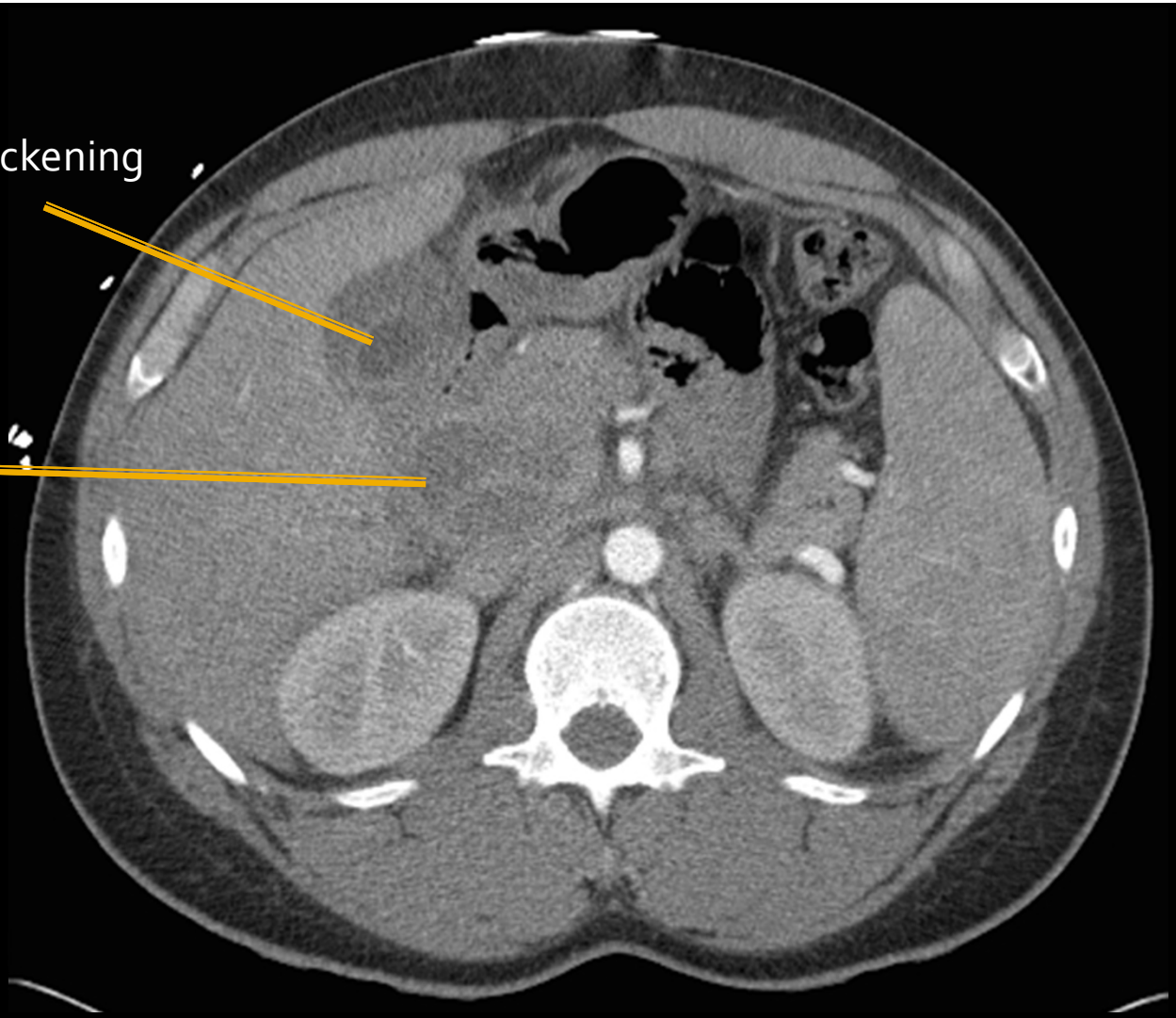
Imaging Performed

- St. Joseph's
  - 9/25 CXR
  - 9/25 CT abdomen and pelvis with contrast
- MHH
  - 9/26 CTA chest with contrast
  - 9/26 CT abdomen dynamic pancreatic protocol (recommended multiphase MRI and MRCP)
  - 9/27: Barium esophagram
  - 10/1: EUS
  - 9/29: Bone survey

CXR 9/25

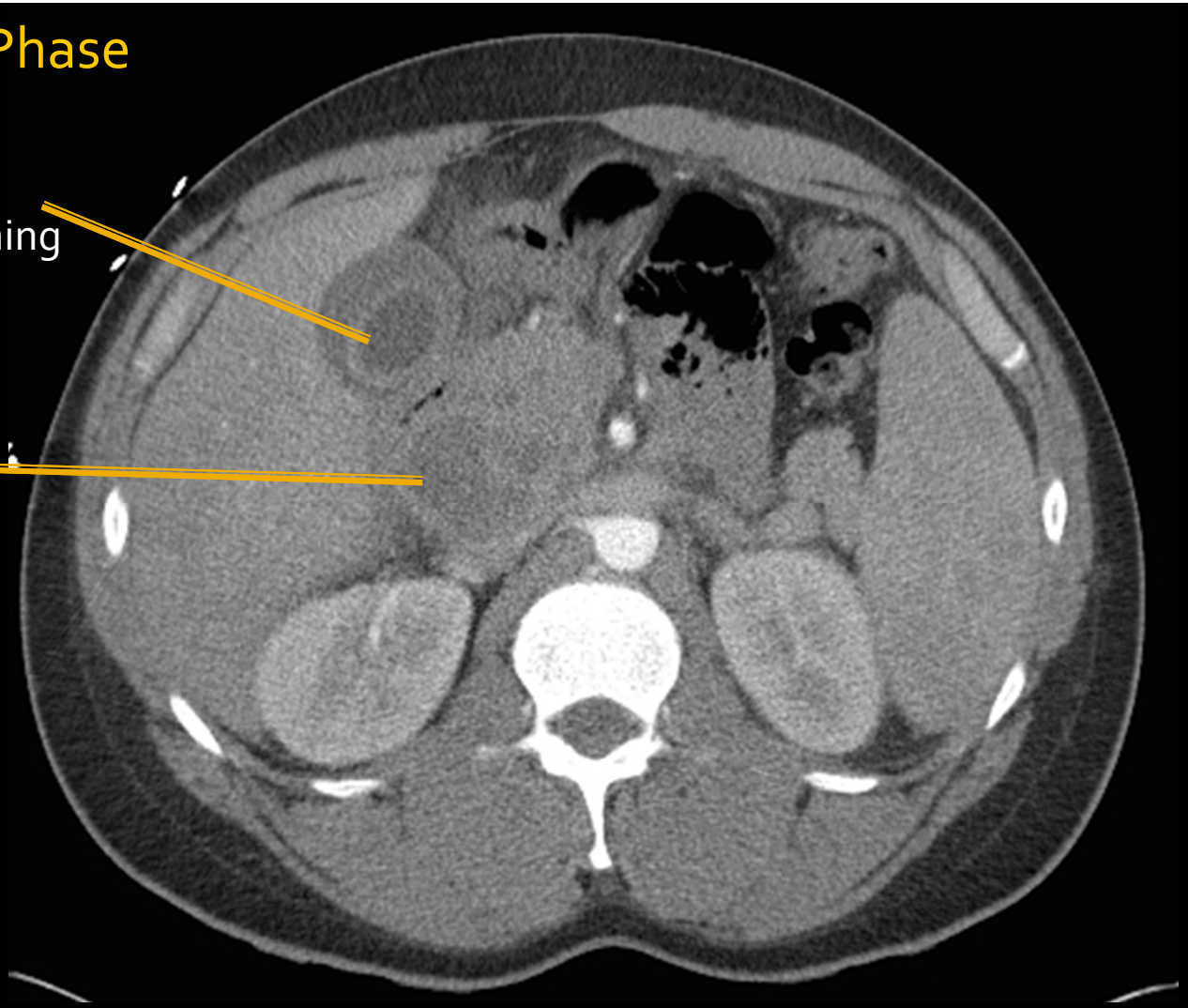


CT Abdomen 9/25 at St. Joseph's



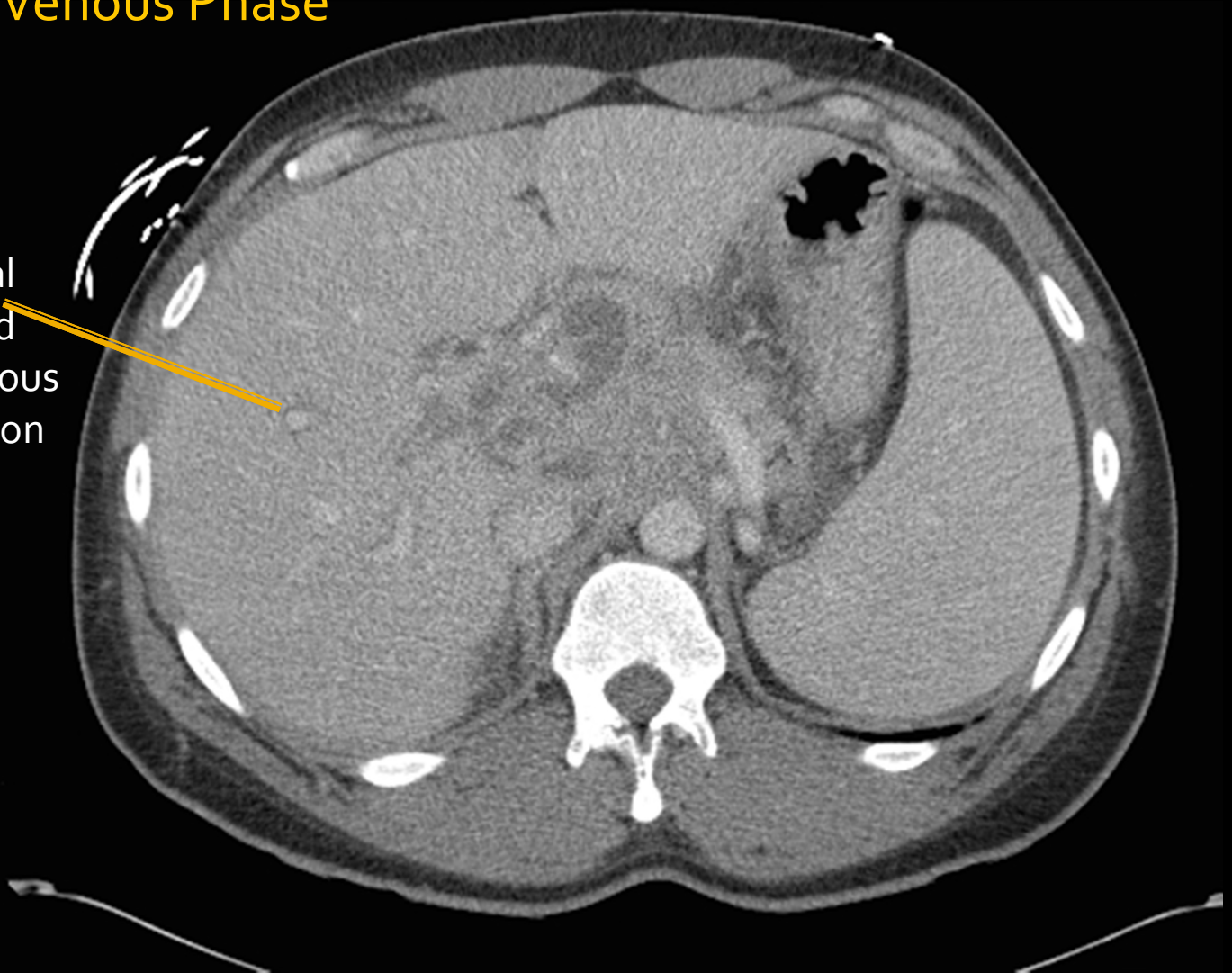
CT Abdomen-Pancreatic 9/26

Arterial Phase

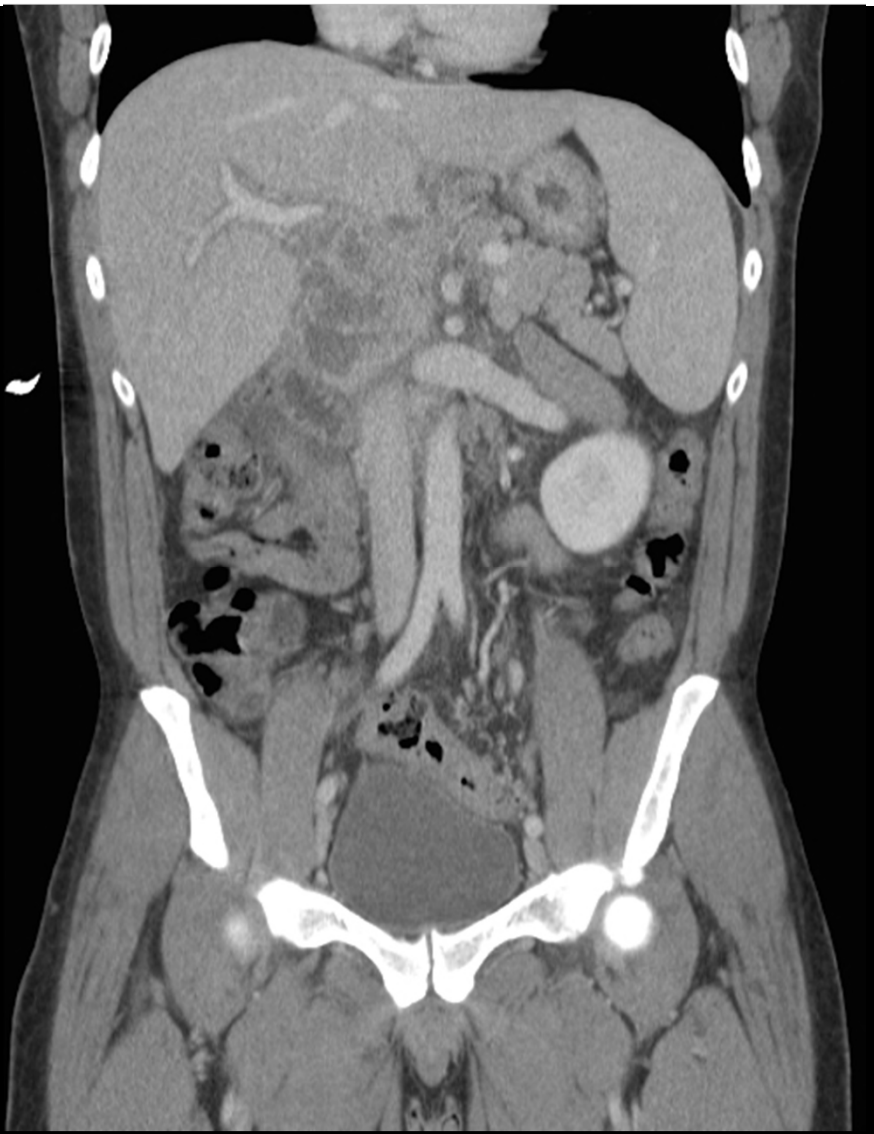


CT Abdomen-Pancreatic 9/26

Portal Venous Phase



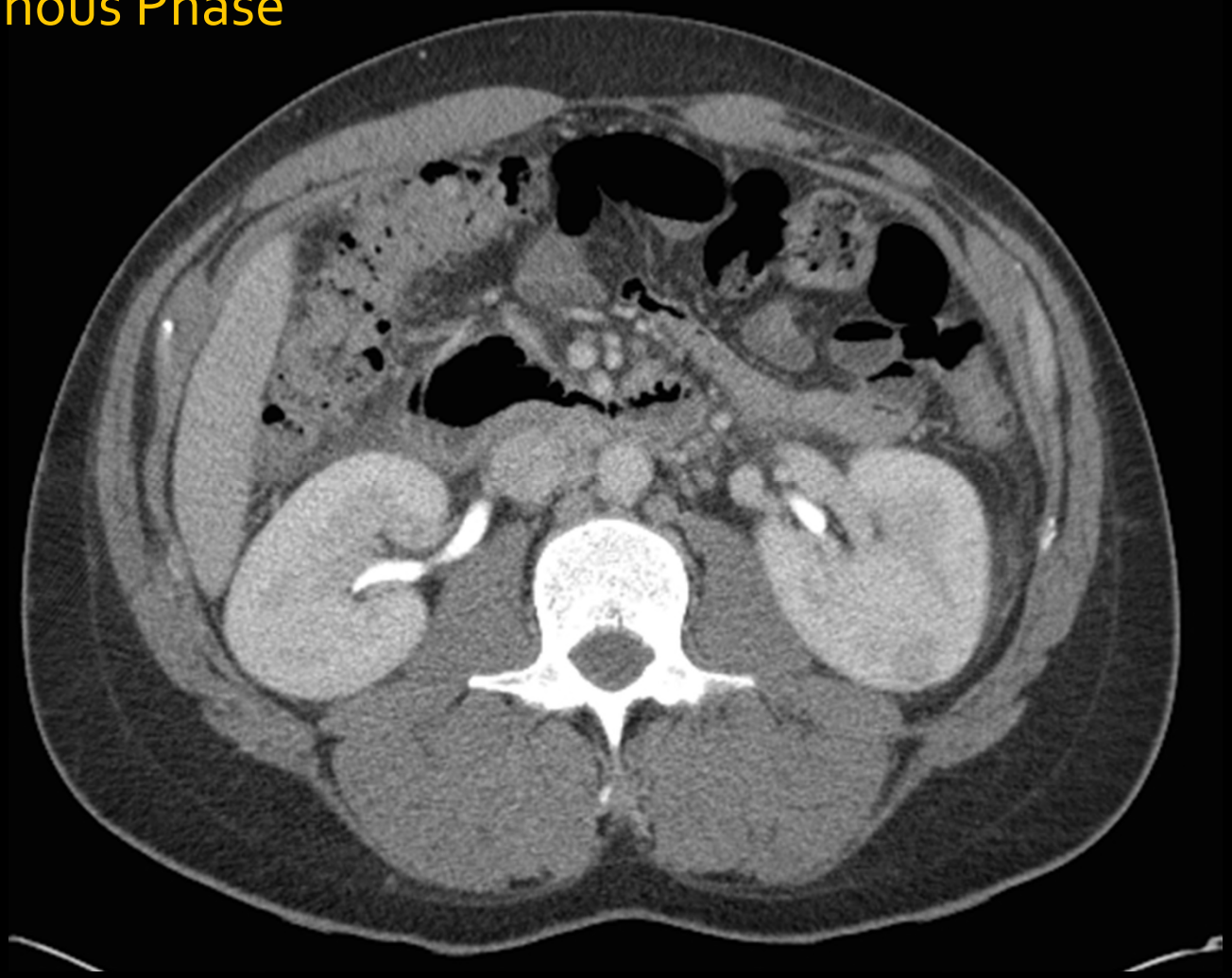
CT Abdomen-Pancreatic 9/26



Portal Venous Phase

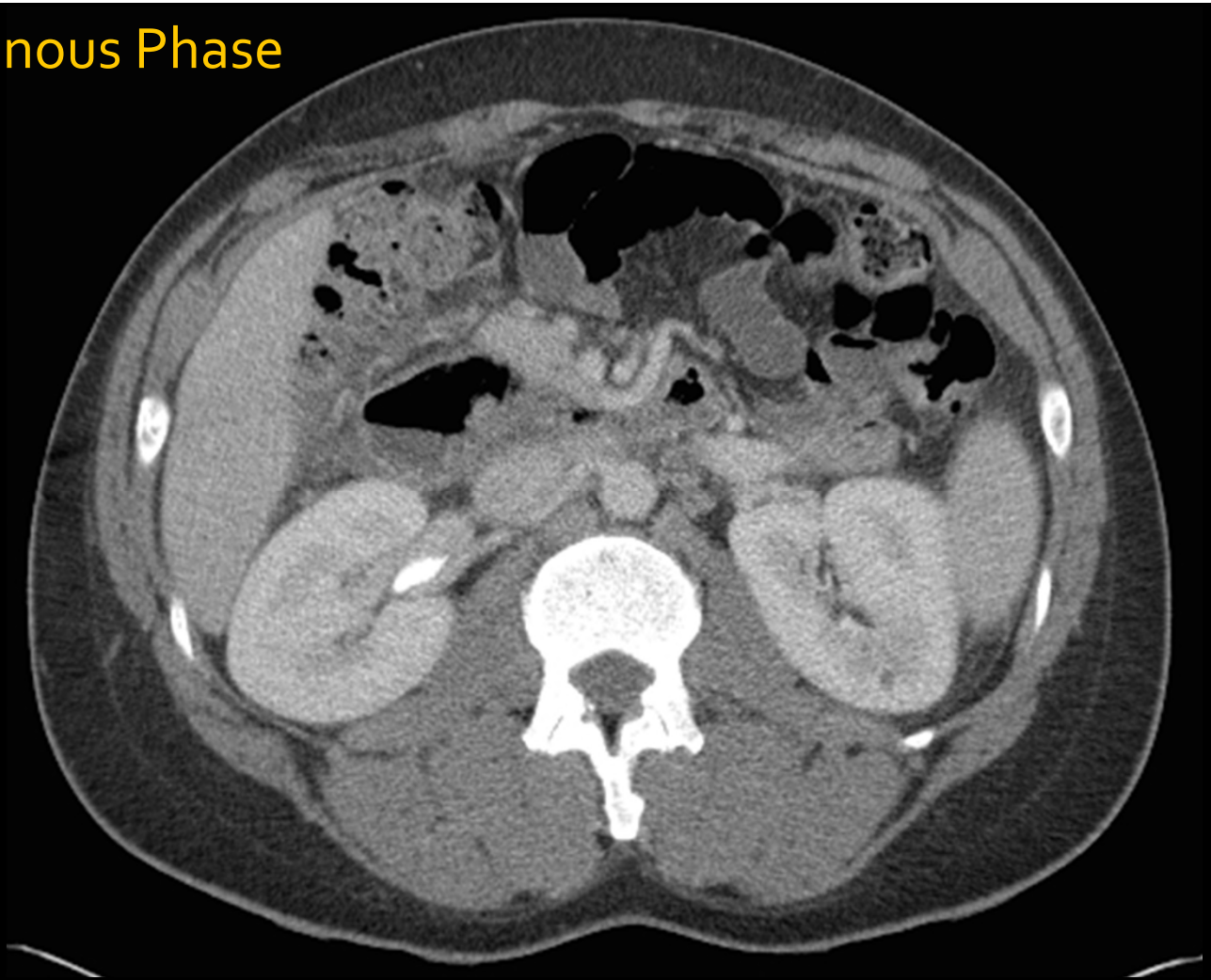
CT Abdomen-Pancreatic 9/26

Portal Venous Phase

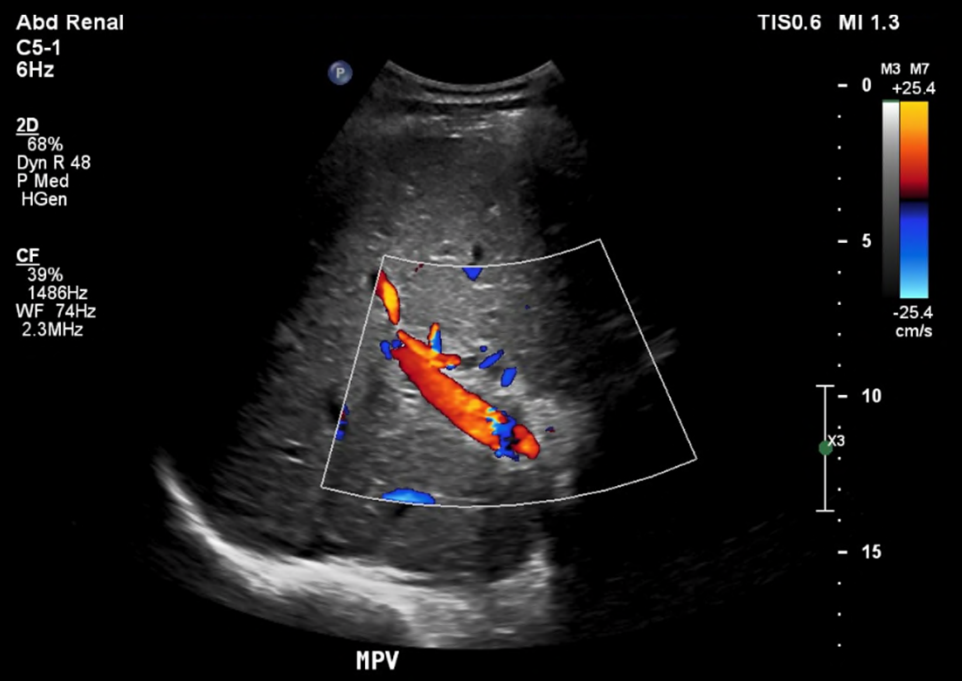


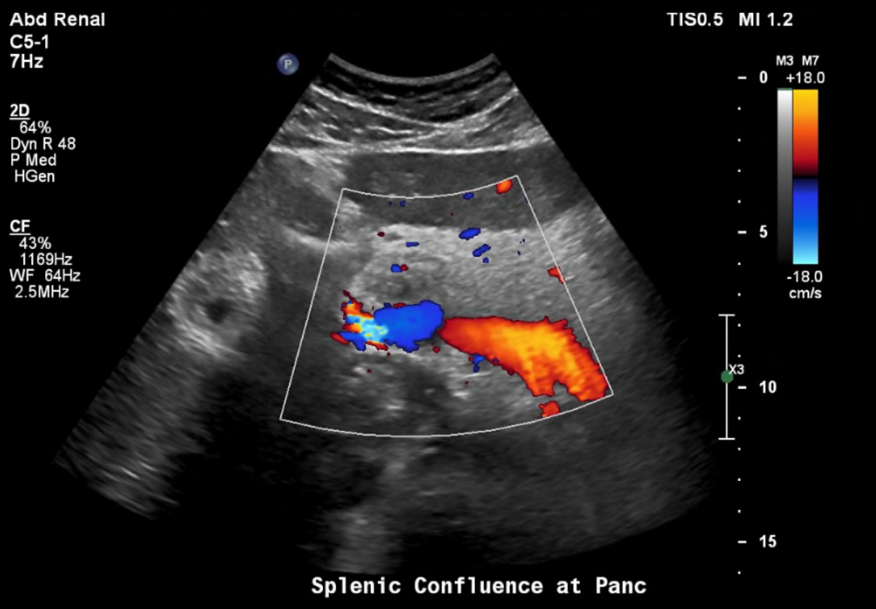
CT Abdomen-Pancreatic 9/26

Portal Venous Phase

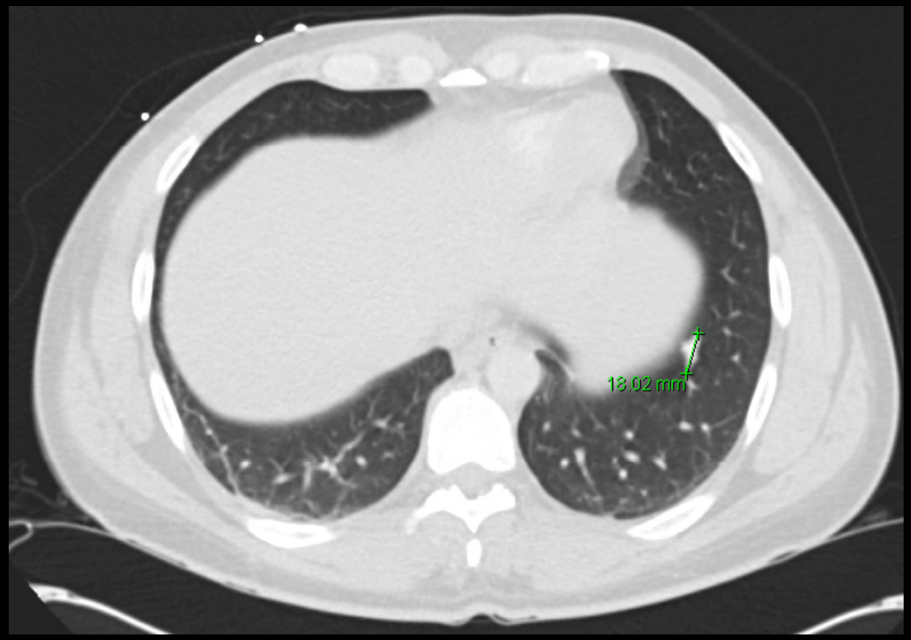


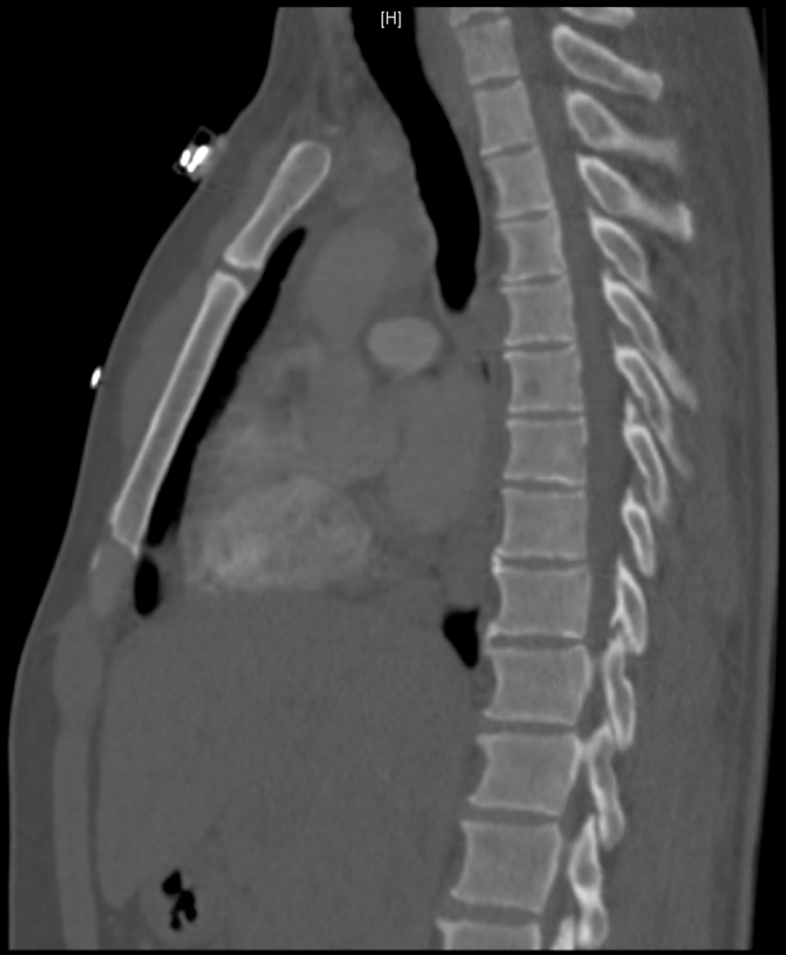
Doppler Ultrasound of Liver 9/26



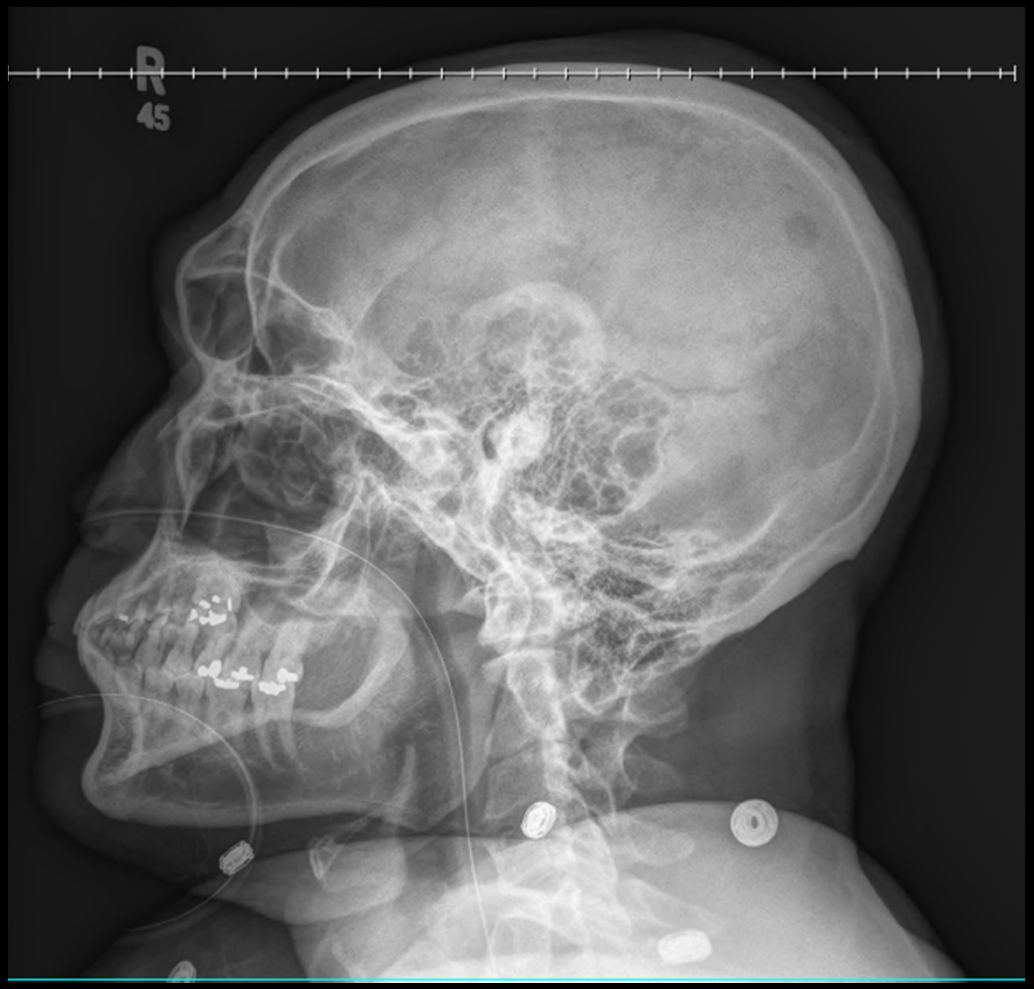


CT-PE 9/26

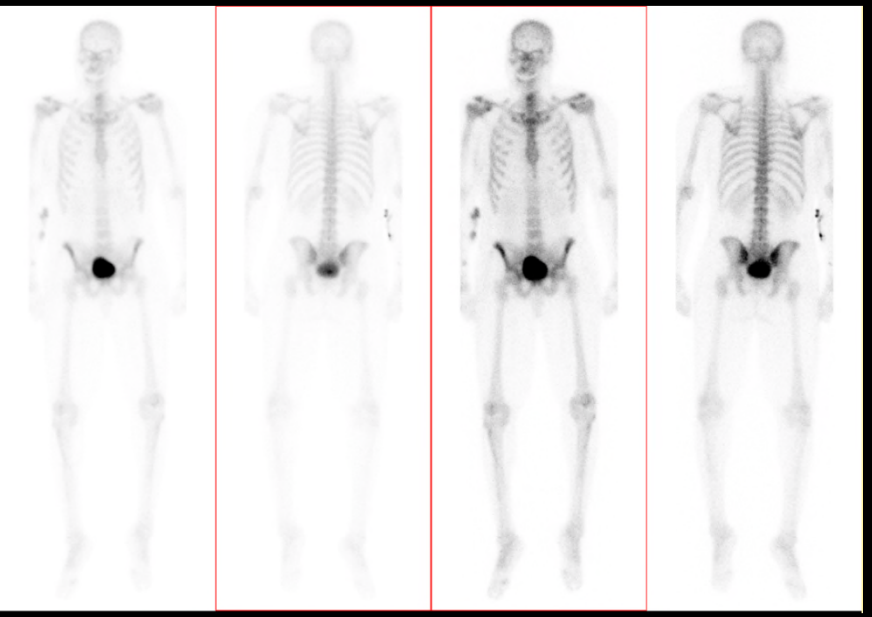


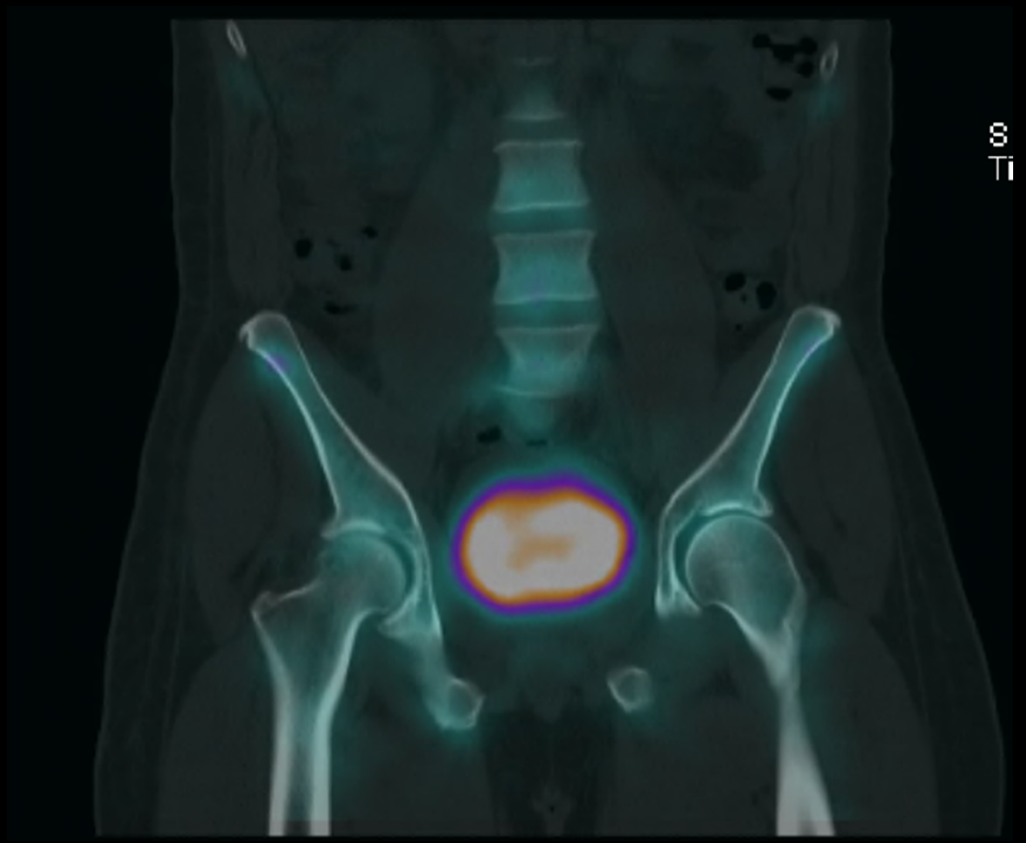


Bone survey



NM Whole Body and SPECT Pelvis



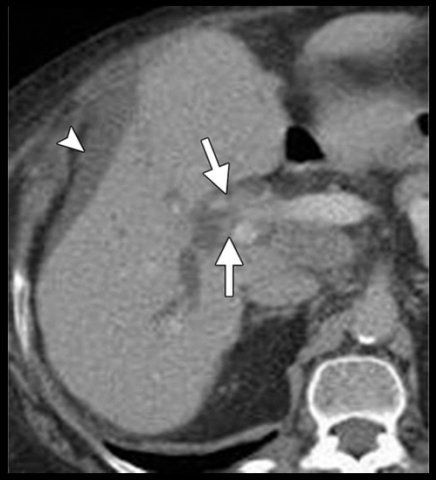


Key Findings

- Necrotic LAD in portacaval and hepatic hilar region extending to gastrohepatic region (8.0 x 5.0 x 7.2 cm)
- Displaces pancreatic head, but no pancreatic or biliary ductal dilation
- Compression of main portal vein
- Colonic diverticulosis
- Diffuse gallbladder wall thickening without CT evidence of gallstones

Differential Diagnosis

- Lymphoma
- Pancreatic head tumor
- Cholangiocarcinoma
- Hepatic tumor
- Infection/abscess



Disease Type and Location
Vascular
Main portal vein
Thrombosis
Stenosis
Aneurysm
Gas
Common hepatic artery
Thrombosis
Stenosis
Aneurysm
Nonvascular
Biliary tree
Cholangiocarcinoma
Intrabiliary metastasis
Benign stricture
Choledochal cyst
Lymphatics, nerves, and connective tissue
Lymph nodes
Benign reactive lymph nodes
Noninfectious inflammatory disease
Infectious disease
Metastasis
Lymphoma
PTLD
Nerves
Schwannoma
Neurofibroma
Neurofibrosarcoma
Connective tissue
Rhabdomyosarcoma
Granulocytic sarcoma

Workup

- Barium esophagram: no esophageal leak
- EGD w/ EUS and FNA
  - Acute inflammatory process with predominantly neutrophils and histiocytes
  - Negative for malignancy, Gram stain, and fungal organism
- d

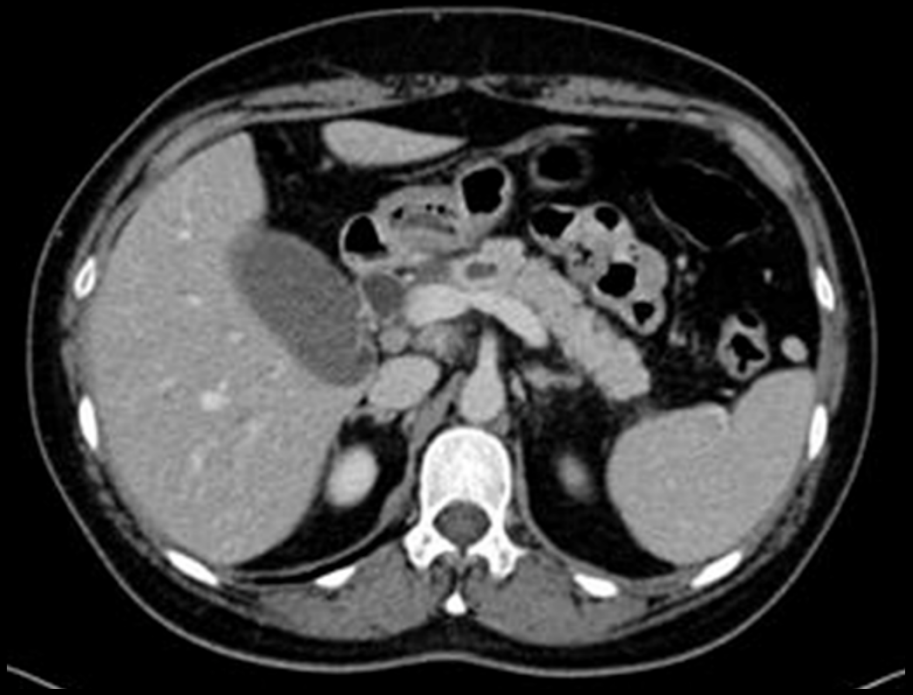
Final Diagnosis: Infection/Abscess

- Infectious features
  - Patient febrile on presentation
- Clinical correlation
  - Febrile patient responding to antibiotics

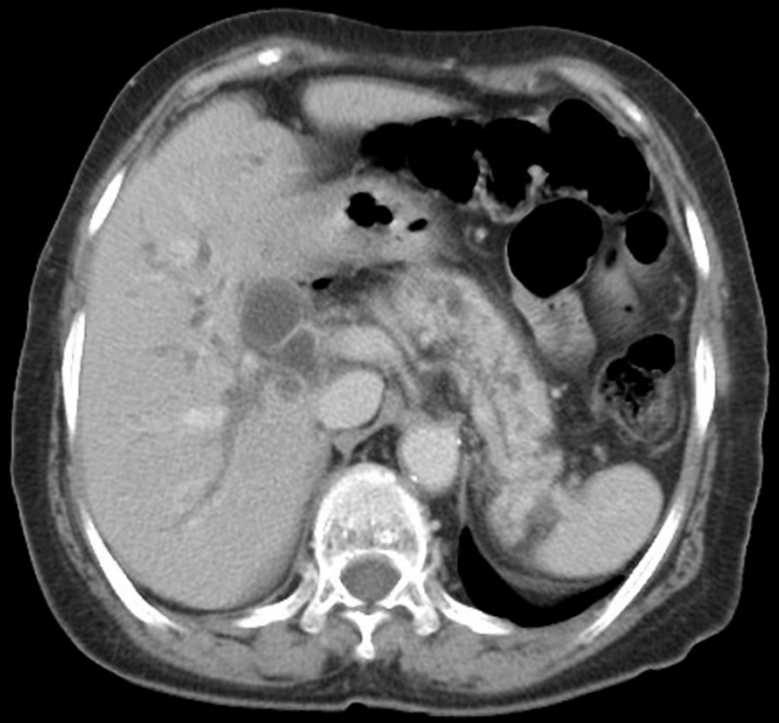
Learning points: Periportal edema vs periductal dilatation

- Periportal edema
  - Periportal halo seen around portal veins on portal venous phase of CT
  - Pancreatic duct is not dilated
  - Causes: CHF, acute hepatitis, LAD
- Periductal dilatation
  - Typically due to obstruction
  - In pancreatic adenocarcinoma, pancreatic duct will also be dilated
  - Other causes: gallstones, strictures, cholangiocarcinoma, Caroli disease

Pancreatic Adenocarcinoma



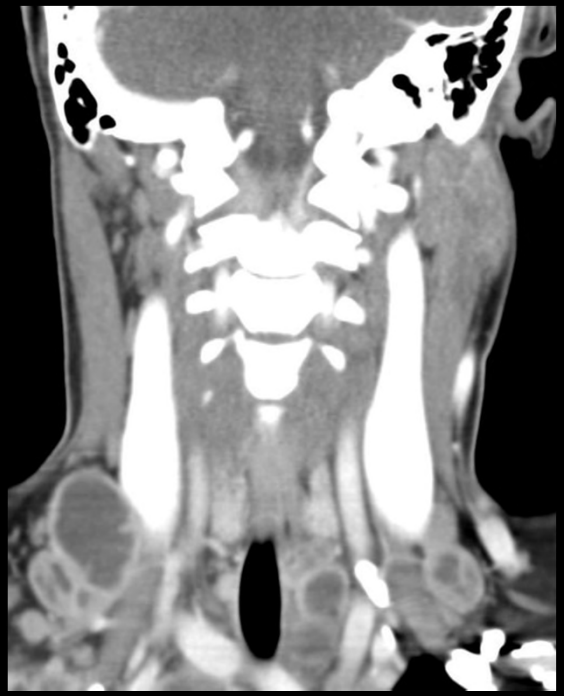
Pancreati ductal carcinoma
Double duct sign



Pancreatic head carcinoma

Discussion—Cystic or necrotic lymph nodes

- Caused by infectious, inflammatory, or malignant processes
  - Squamous cell carcinoma mets
  - Leukemia
  - SLE
  - Bacterial lymphadenitis



Tuberculous adenitis

Plan for our patient

- Cultures negative but clinically stable
- Discharged on antibiotics (levofloxacin and amoxicillin clavulanate)
- Follow-up abdominal CT
- Follow up in 1 month for abscess follow up
- Follow up pulmonary lesions with chest CT in 3 months

References

- Pancreatic Ductal Adenocarcinoma. Radiopedia.
- Cystic Necrotic Lymph Nodes. Radiopedia.
- Imaging of the Porta Hepatis: Spectrum of Disease. Radiographics. RSNA.