

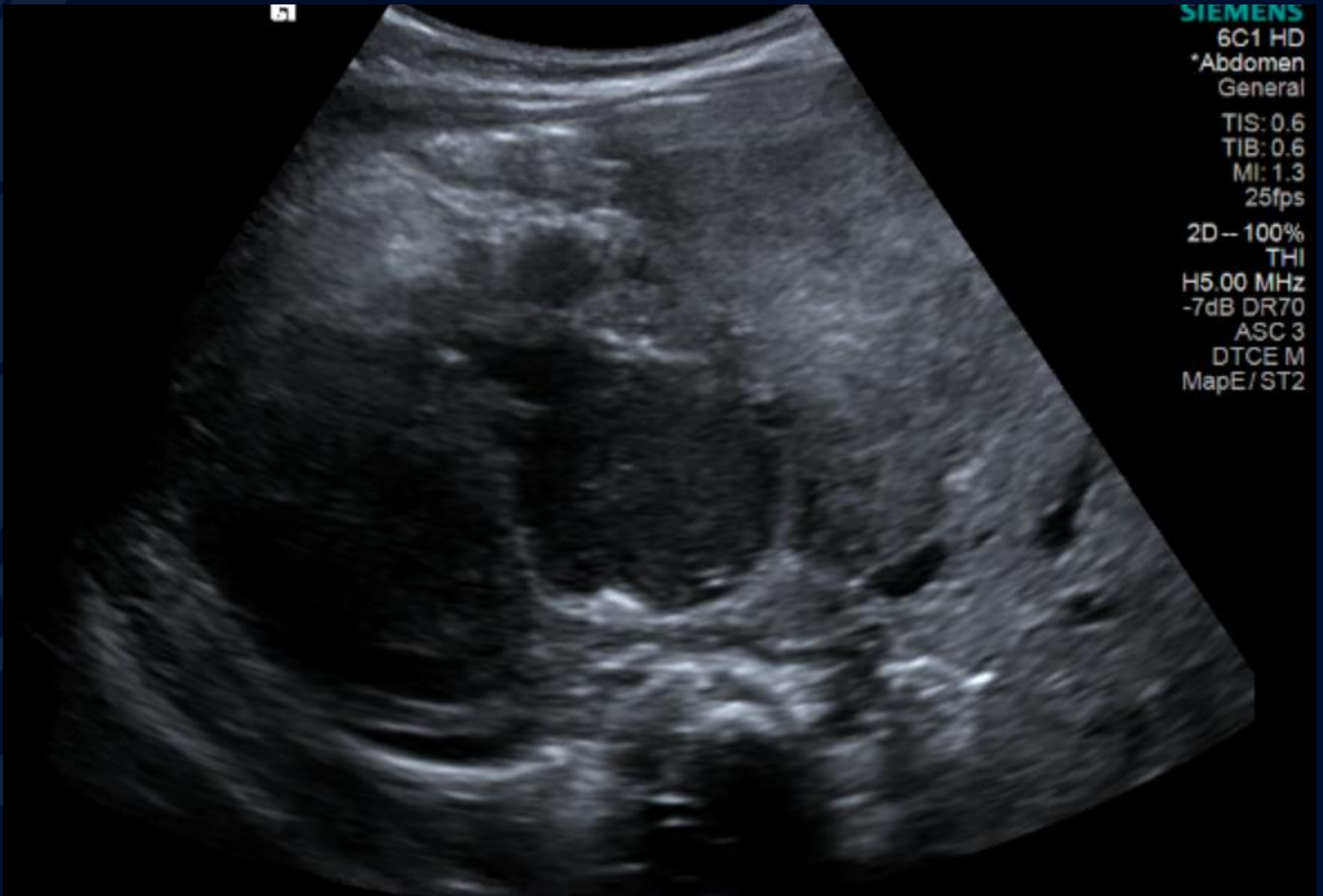
# 21-month-old child with acute right-sided limp

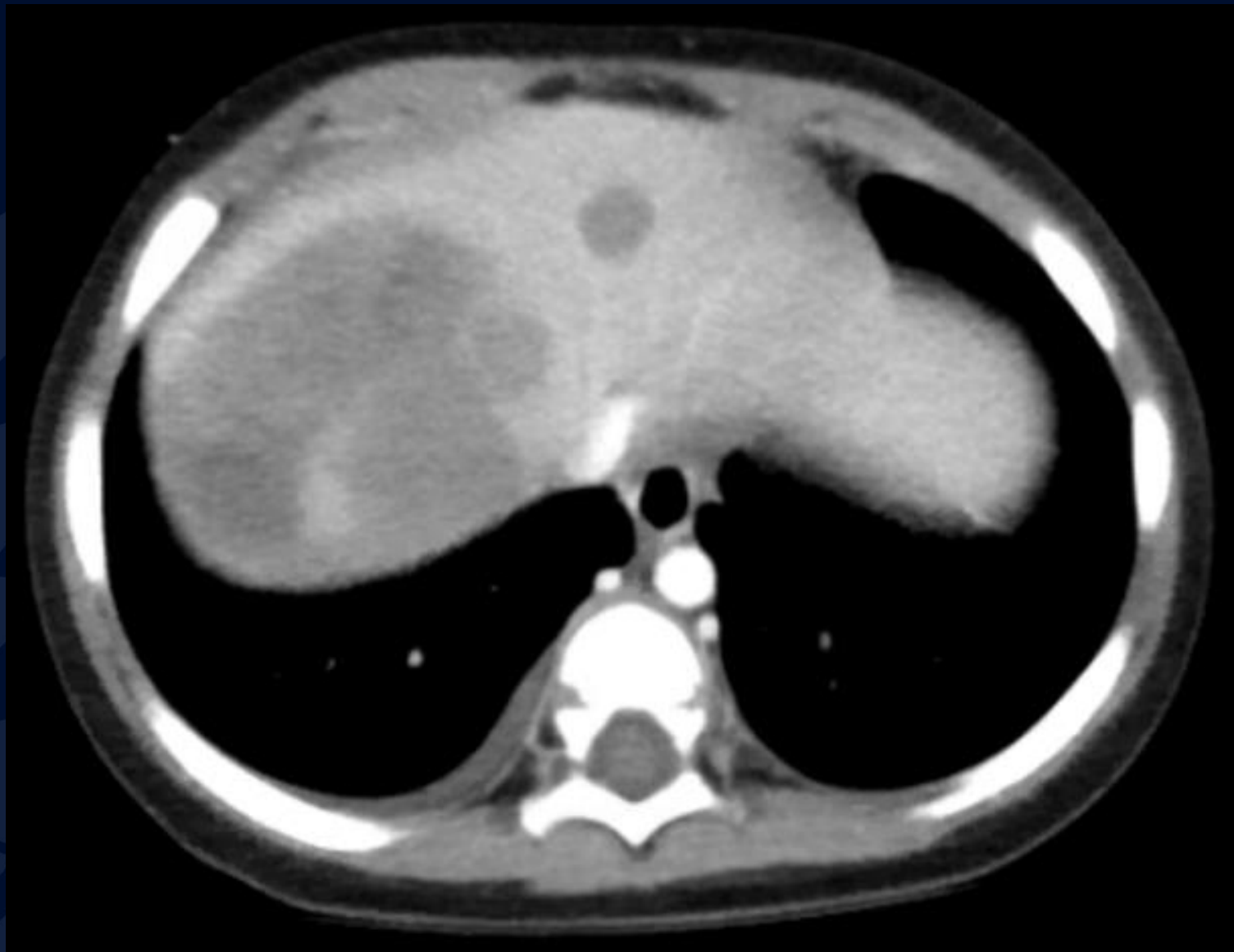
Kiana Akhundzadeh, MS3

# AP / Lateral Radiographs



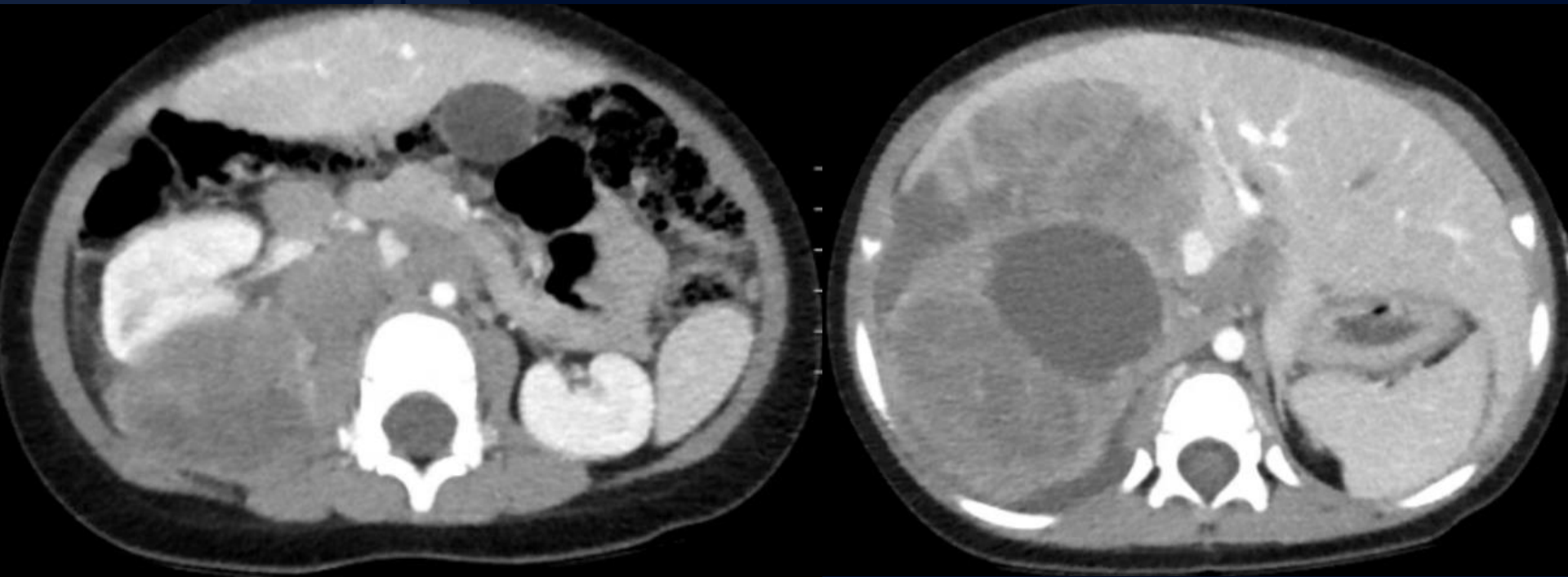
# Abdominal US





CT IV Contrast

# CT IV Contrast





# CT IV Contrast

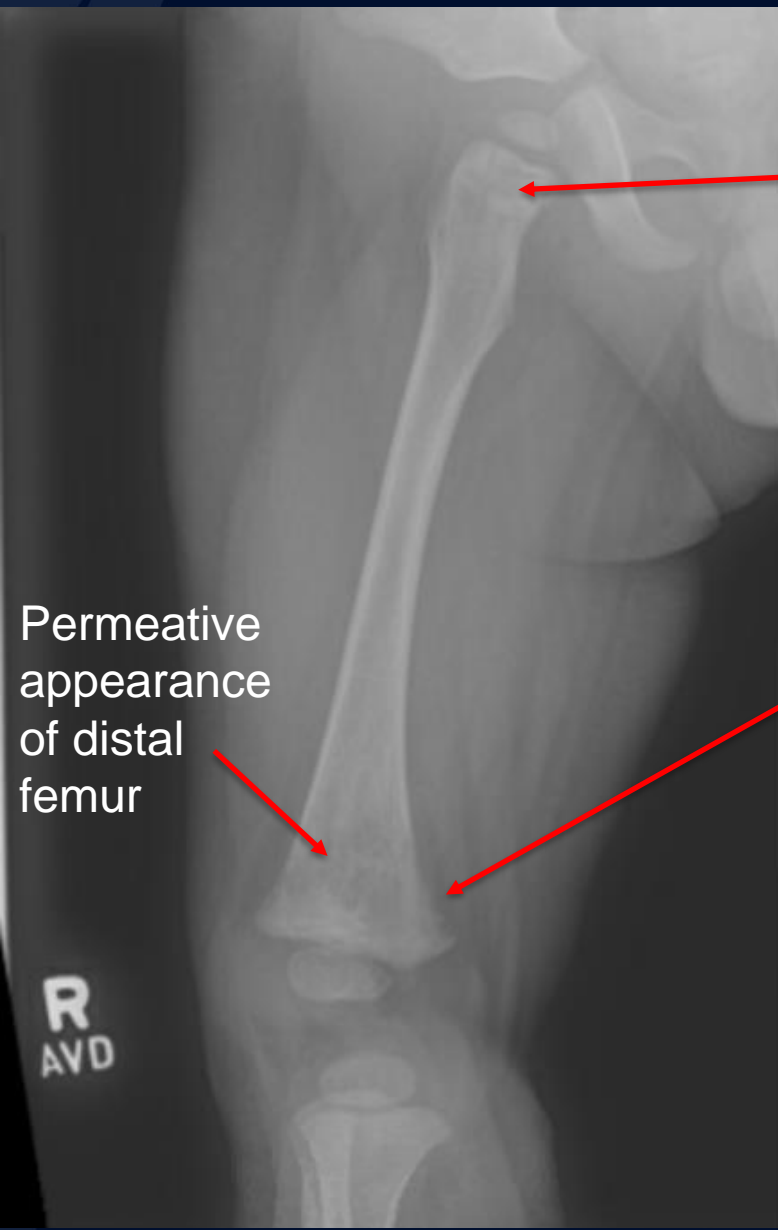
A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. It features detailed vein patterns and a lobed edge.

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# Neuroblastoma

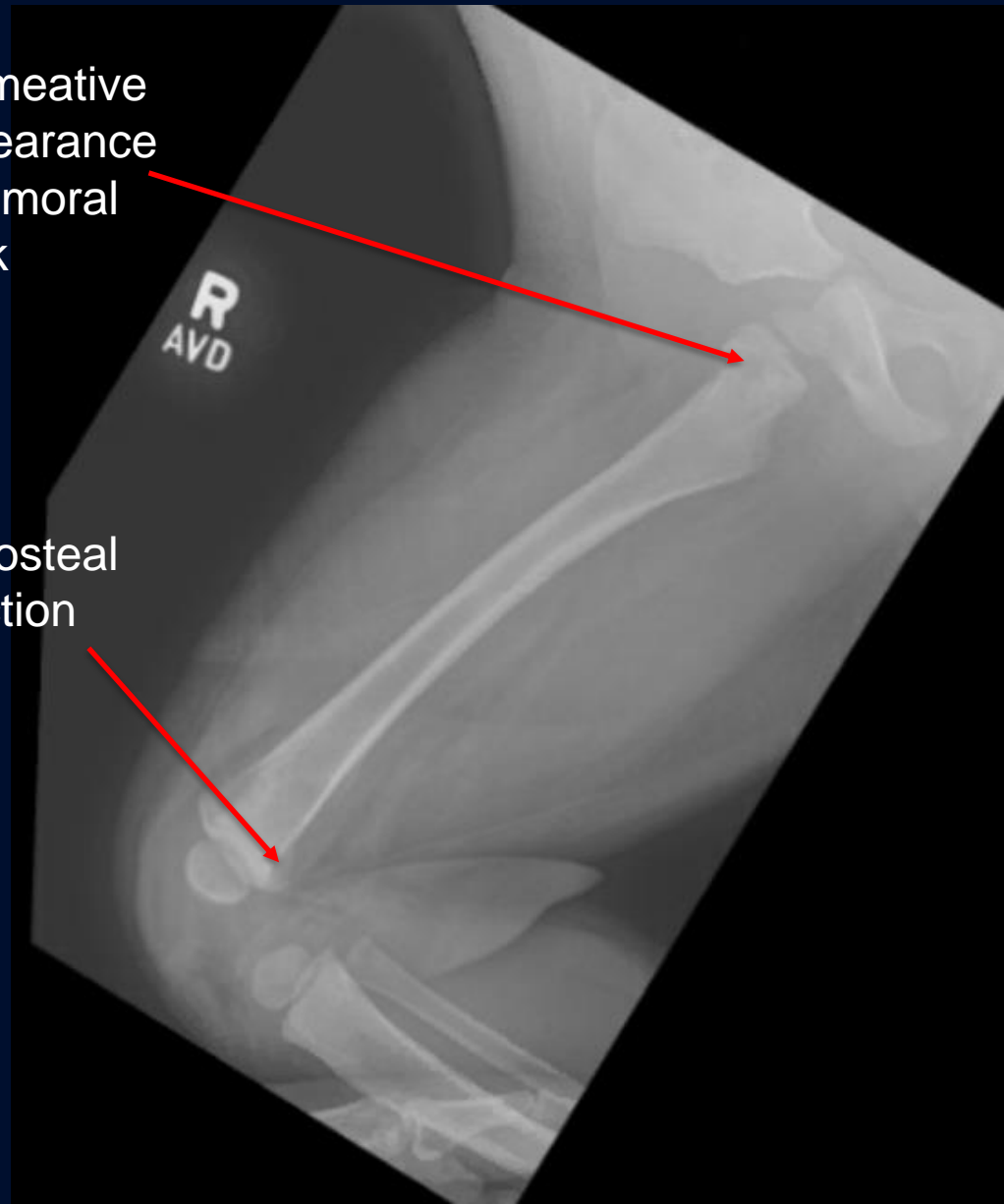


# AP / Lateral Radiographs



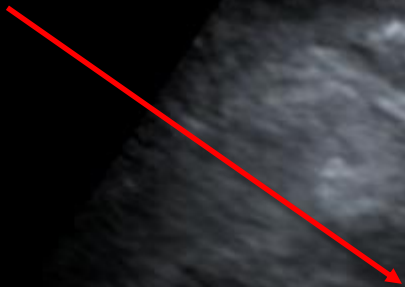
Permeative appearance of femoral neck

Periosteal reaction



# Abdominal US

Heterogeneous  
lesion



Liver

SIEMENS  
6C1 HD  
\*Abdomen  
General  
TIS: 0.6  
TIB: 0.6  
MI: 1.3  
25fps  
2D - 100%  
THI  
H5.00 MHz  
-7dB DR70  
ASC 3  
DTCE M  
MapE/ST2



Heterogeneous  
lesion

CT IV Contrast

# CT IV Contrast

Right kidney displaced  
inferolaterally

IVC displaced anteriorly and  
compressed, but patent

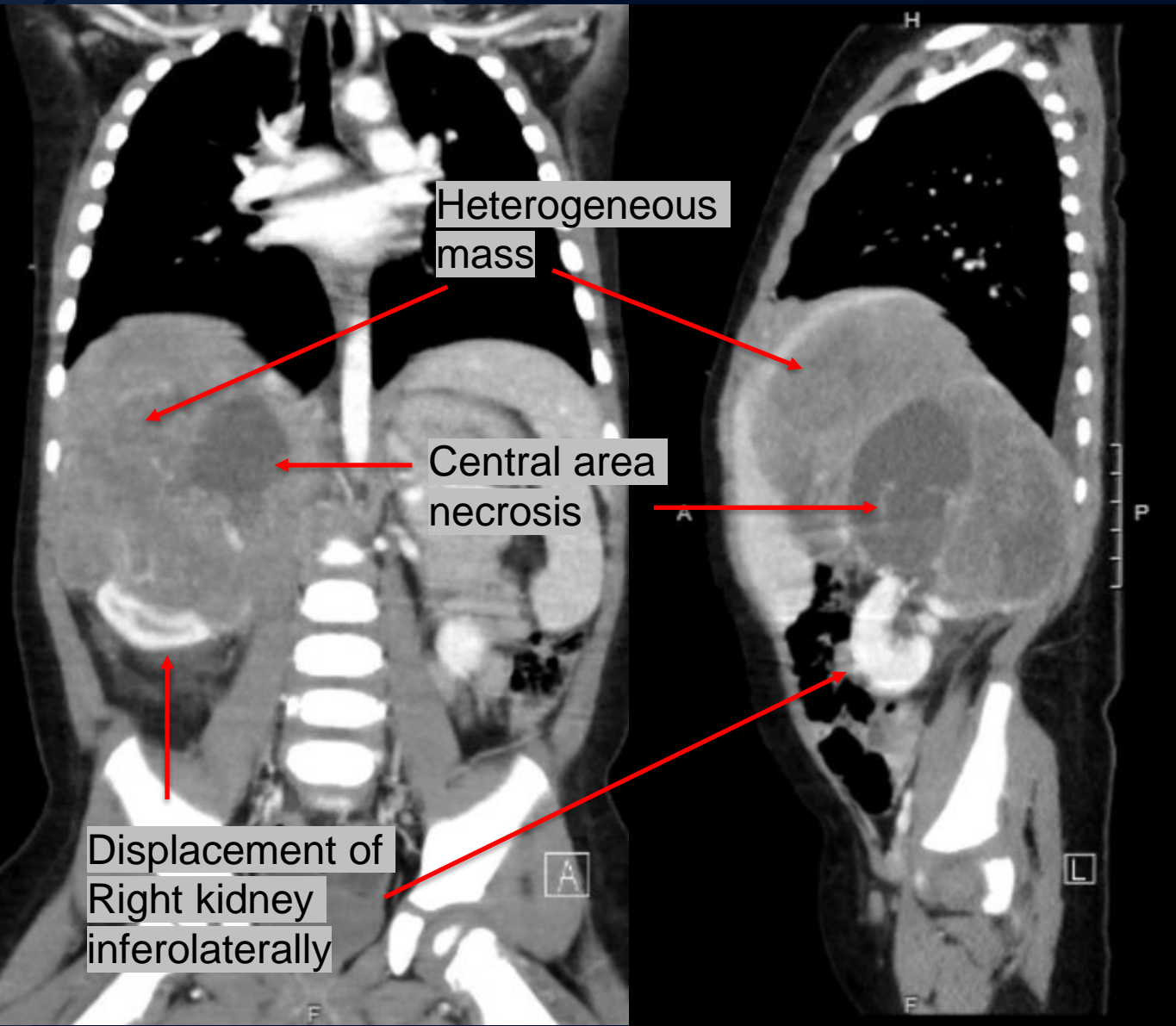


Closely abuts  
posterior chest wall;  
cannot exclude  
invasion

R renal vein compressed  
and displaced anteriorly,  
but patent

Central area of hypoattenuation,  
likely necrosis

# CT Contrast





# Neuroblastoma

- Median age of diagnosis: 17 months
- Can arise anywhere throughout the sympathetic nervous system
  - Primary sites: adrenal gland, abdominal, thoracic, cervical, pelvic sympathetic ganglia
- Metastasizes to lymph nodes, bone marrow, cortical bone, dura, orbits, liver, skin
  - Lymphatic and hematogenous routes
- Can be sporadic (ALK) or transmitted in germline (ALK or PHOX2B genes)
- Presenting symptoms: abdominal mass, abdominal pain, constipation, proptosis, Horner syndrome, periorbital ecchymoses, back pain, bladder dysfunction, systemic symptoms, bone pain, anemia, HTN, limp, etc.
  - Symptoms depend on primary site and metastases

# Imaging Findings

- Plain radiograph: non-specific, intrathoracic soft tissue mass or intra-abdominal mass displacing adjacent organs
  - Bone metastases: ill-defined, lucent (osteolytic), periosteal reaction or metaphyseal lucency
- US: heterogenous mass w/ internal vascularity
  - Area of necrosis that appear as regions of low echogenicity
  - +/- calcification
- CT: heterogenous with potential calcifications
  - Areas of necrosis are low attenuation
  - Adjacent organs usually displaced
  - Lymph node enlargement
- MRI
  - T1: heterogenous and isointense to hypointense
  - T2: heterogeneous + hyperintense; cystic/necrotic areas high intensity

# References

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