29 year old woman with 2 months of abdominal pain and fullness, during which time she also reported a 10 pound weight loss

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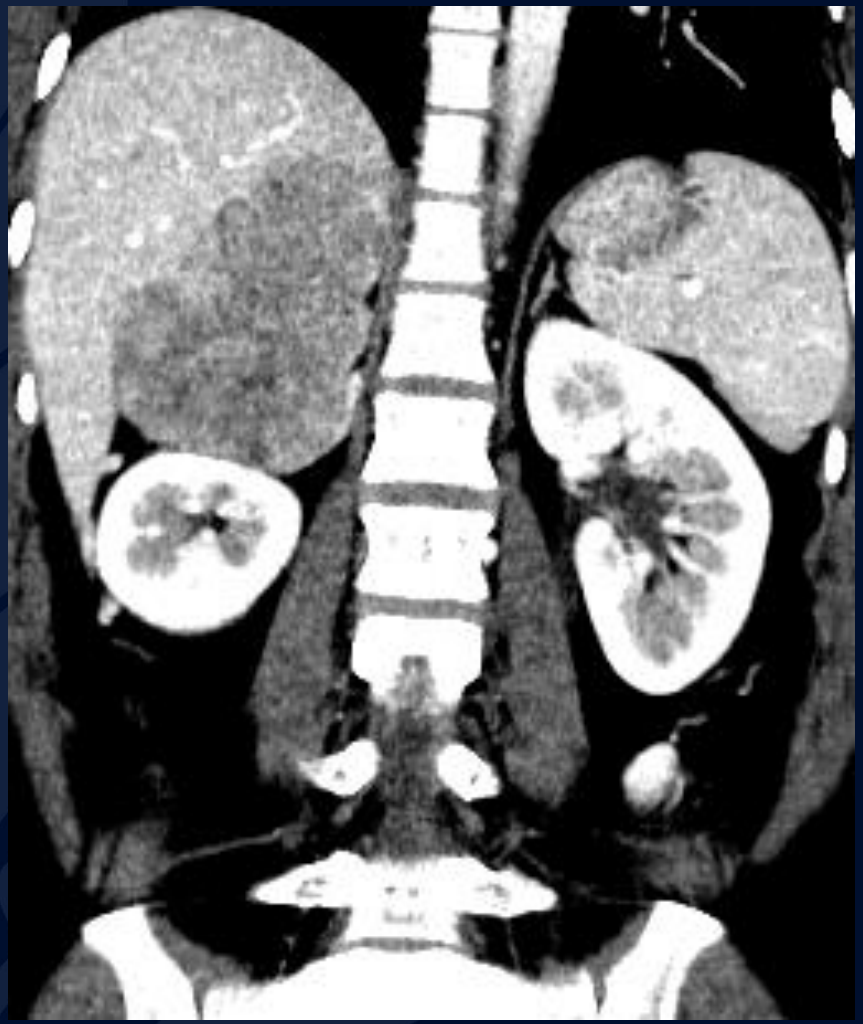

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Right adrenocortical carcinoma with invasion into the liver

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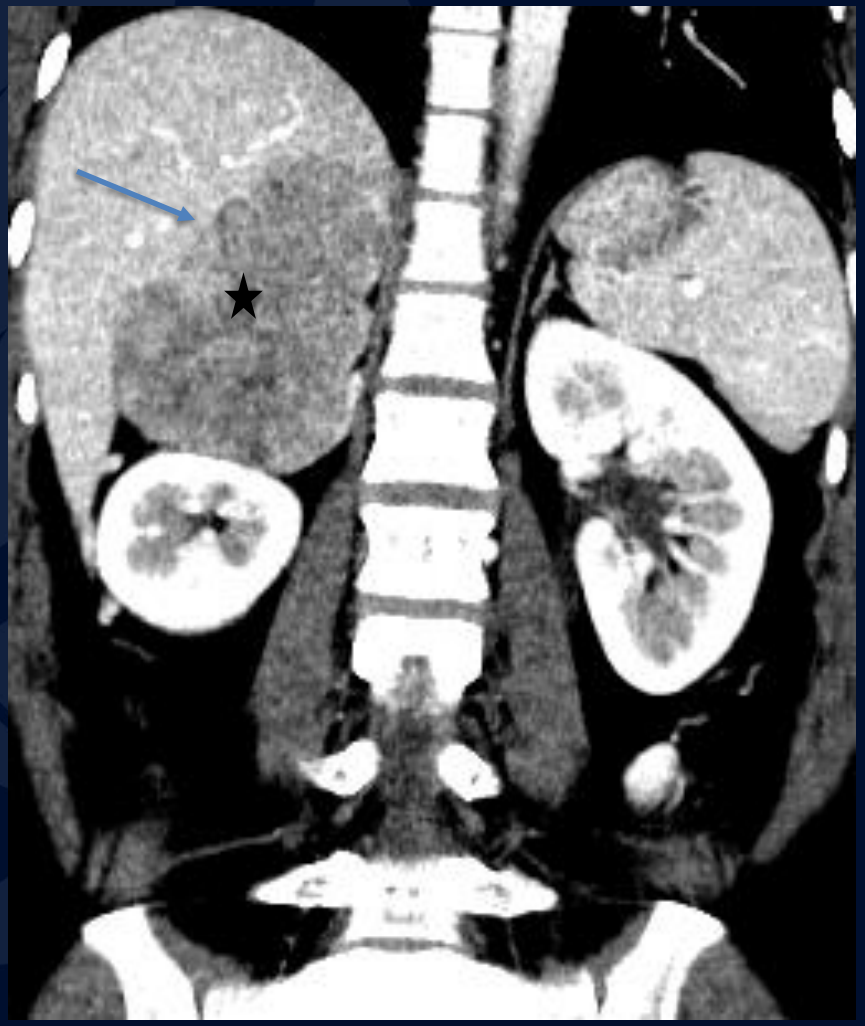
CT abdomen and pelvis with IV contrast



Coronal CECT of the abdomen shows a heterogenous right adrenal mass (star), which invades the liver (arrow) and exerts mass effect on the right kidney, but is clearly separated

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Adrenocortical Carcinoma

- Rare and usually fatal tumor
- Bimodal distribution in the first and fourth decade of life
- Can be functional or non-functional
  - May produce cortisol, androgens, estrogens, aldosterone or mixed pattern
- Only 30% are confined to the adrenal gland on diagnosis due to late diagnosis
  - Most commonly spreads to local periadrenal tissue, lymph nodes, lungs, liver and bone
- Tumor size is the best indicator of prognosis
  - Other prognostic factors include presence of mets and completeness of surgical resection
- Surgery is the mainstay of treatment
- Mitotane chemotherapy also plays a major role in treatment

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Imaging Findings

- CT
  - Almost always >10 HU
  - Large, irregularly shaped
  - Central calcifications in 30% of cases
  - Variable enhancement due to areas of necrosis and hemorrhage, slow washout
  - Hepatic metastases are hypervascular, best seen on arterial phase
- MRI
  - Heterogeneous signal intensity due to areas of hemorrhage and necrosis
  - Avid enhancement with slow washout
  - Better than CT in identifying extent of IVC invasion
- Ultrasound
  - Homogeneous lesion if small
  - Heterogeneous lesion if large due to areas of necrosis, hemorrhage

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