

Best Cases of the AIRP

March 3, 2022

**Thank you to RSNA for sponsoring
the pizza party to follow!!**

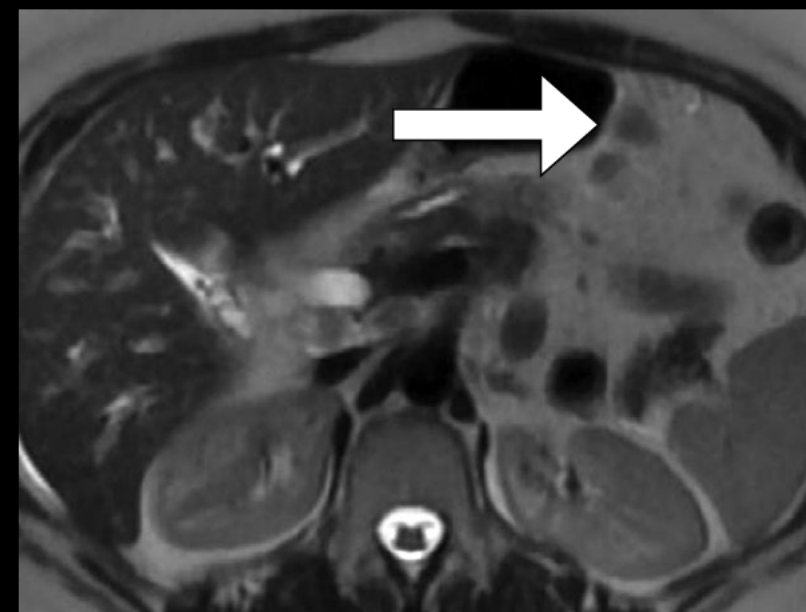
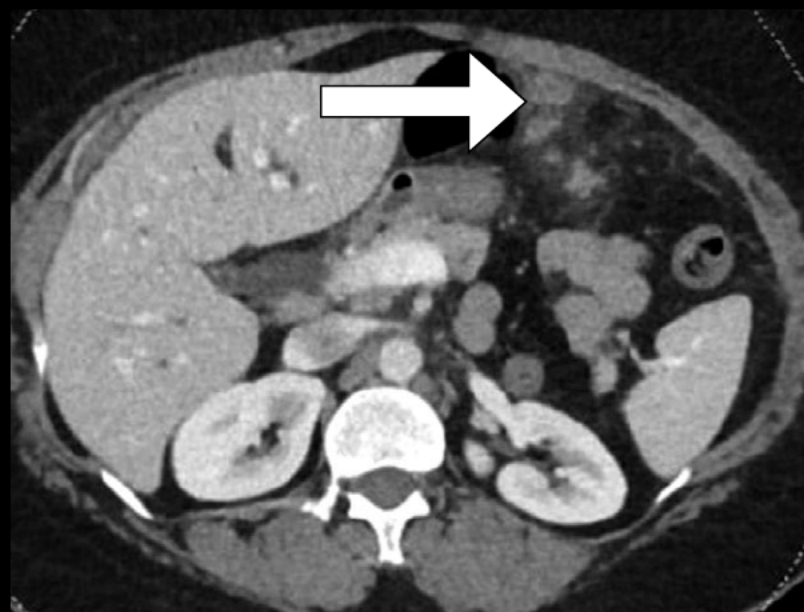
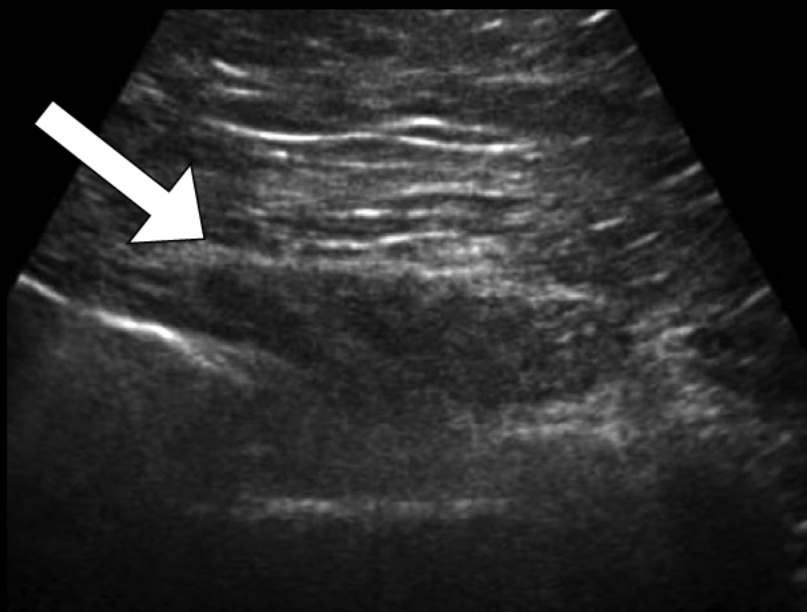
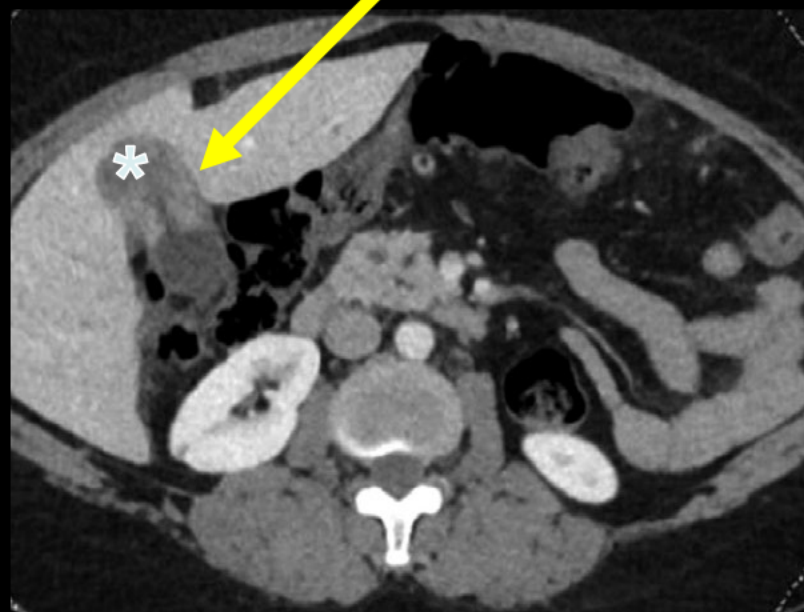
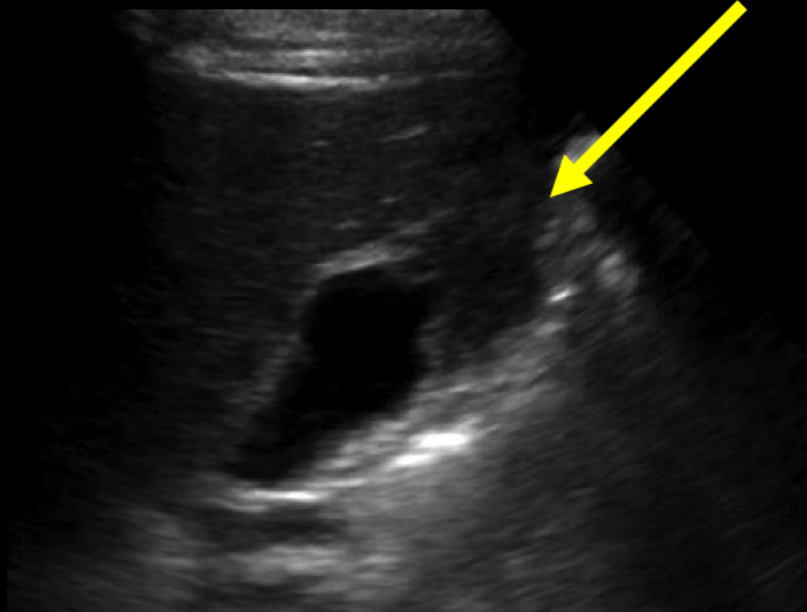
Gastrointestinal Best Case

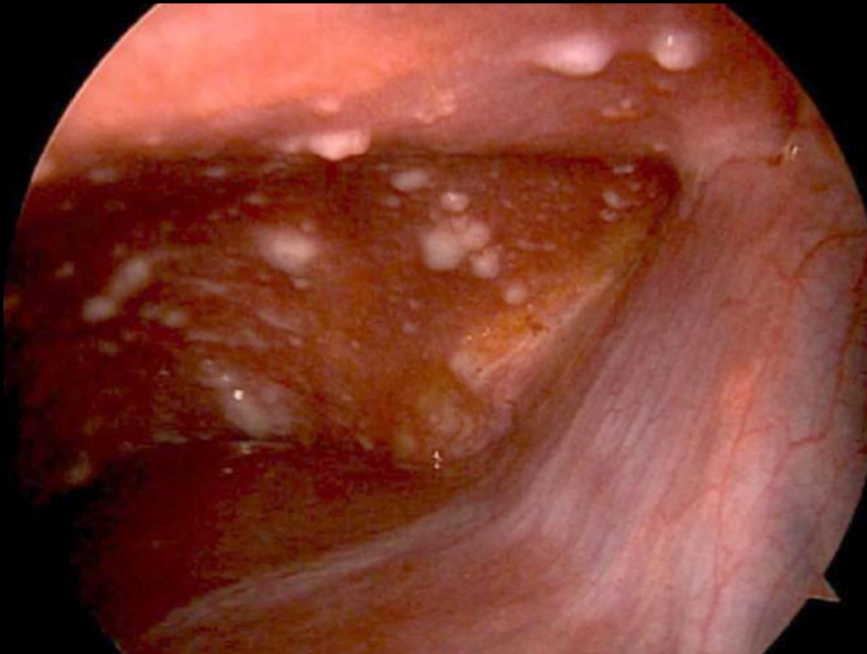
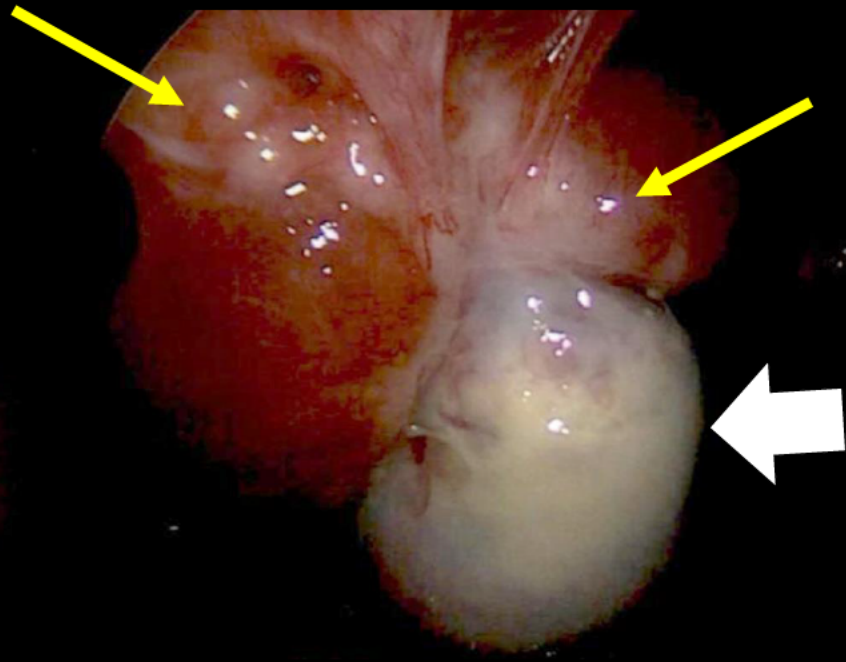
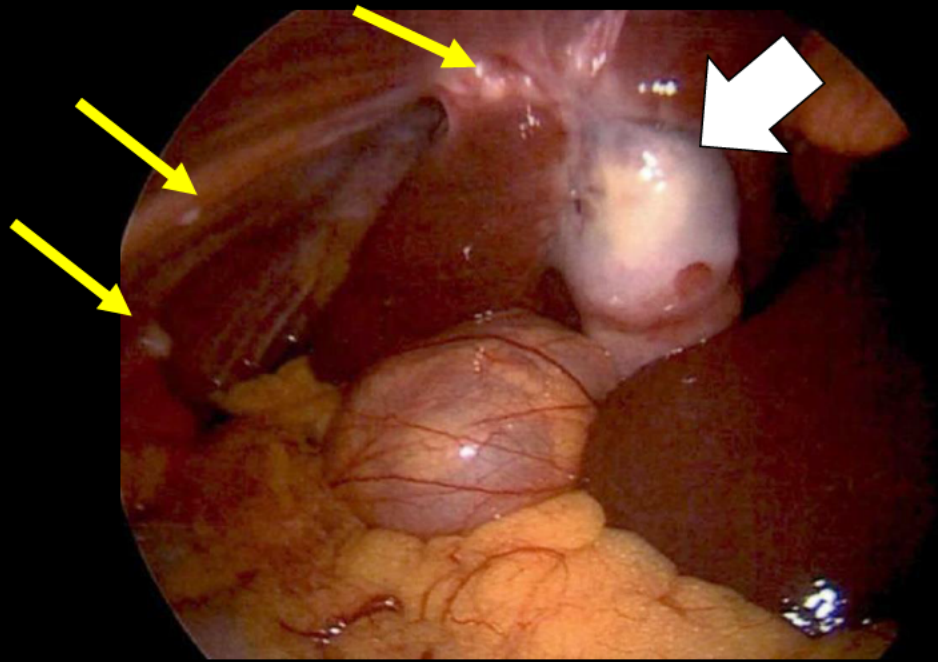


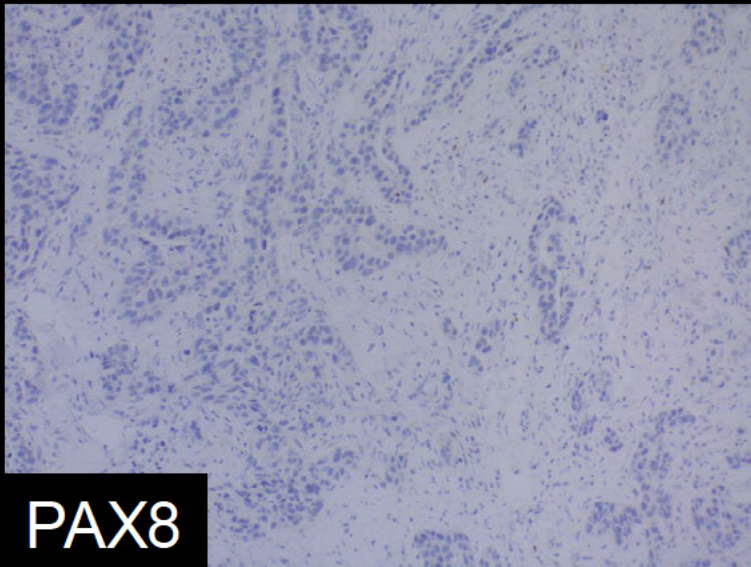
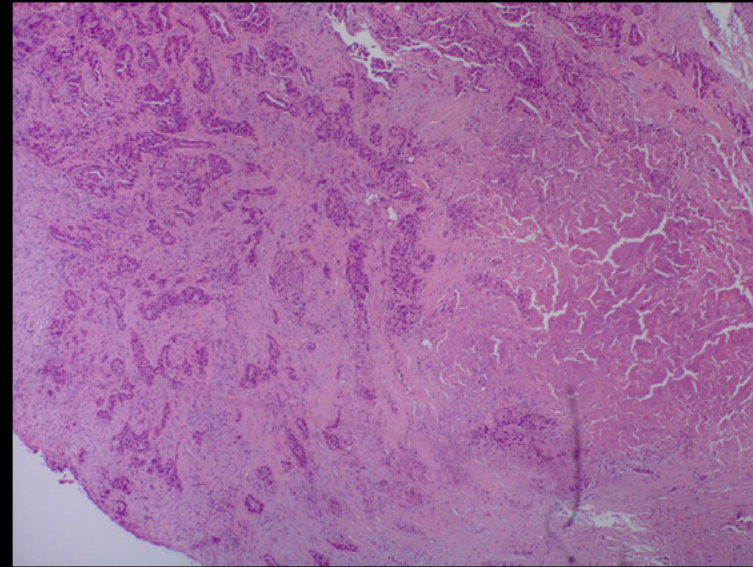
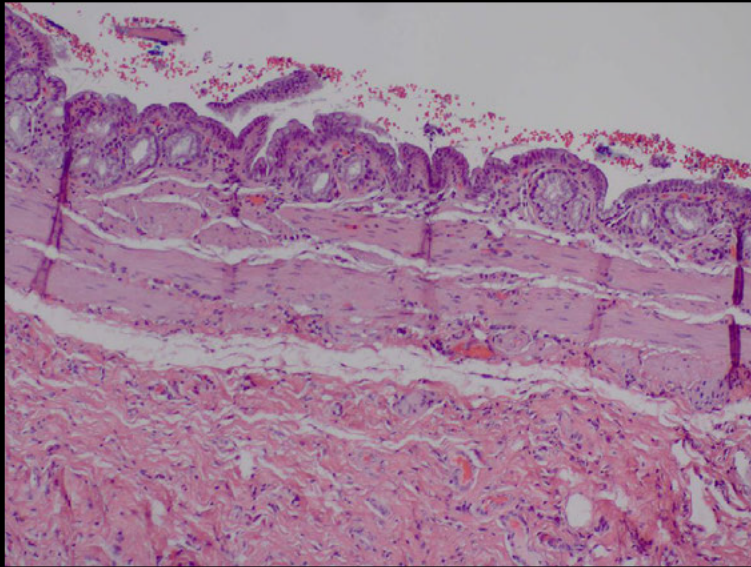
Clinical information

42-year-old female with history of HIV on HAART for the past ten years, latent tuberculosis, latent syphilis, presented to the emergency department with two weeks of right lower quadrant and epigastric abdominal pain, which she rated as 10/10 on the pain scale and described as constant, worsening with meals, and progressive over the 24 hours prior to presentation.

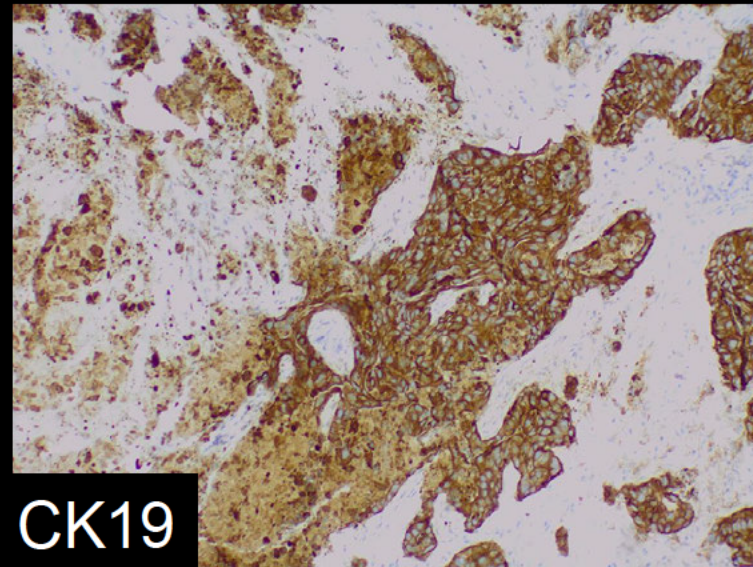




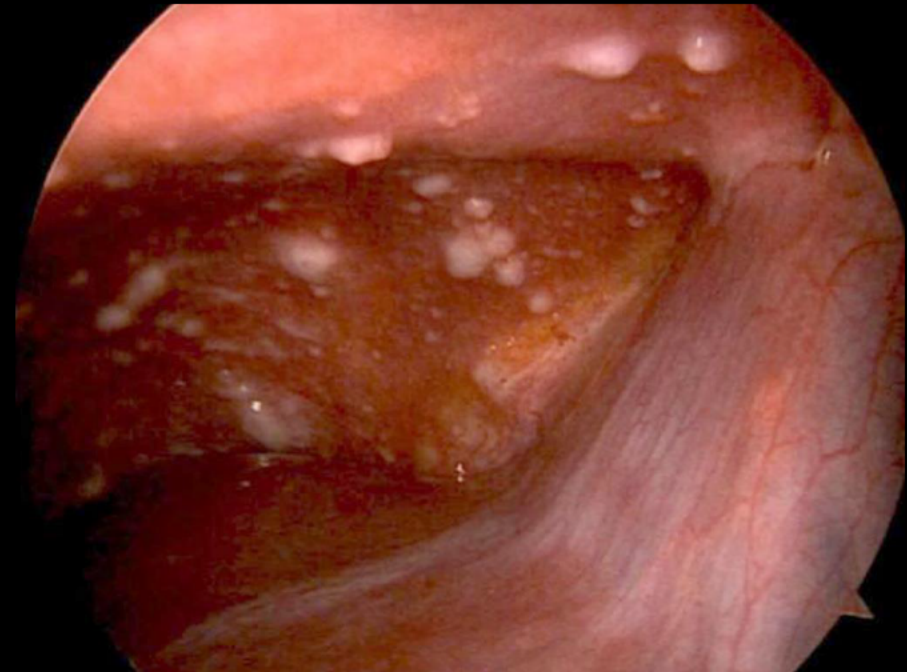
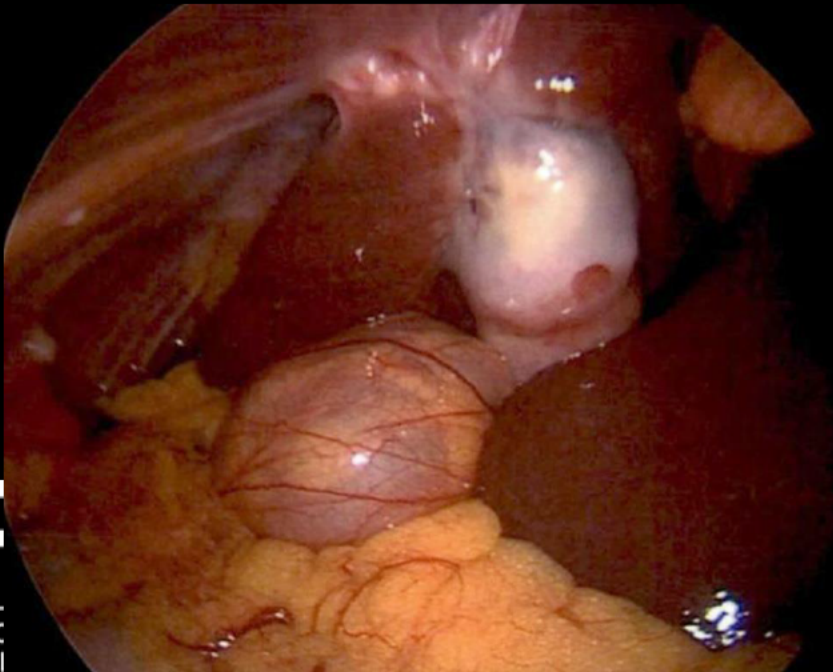
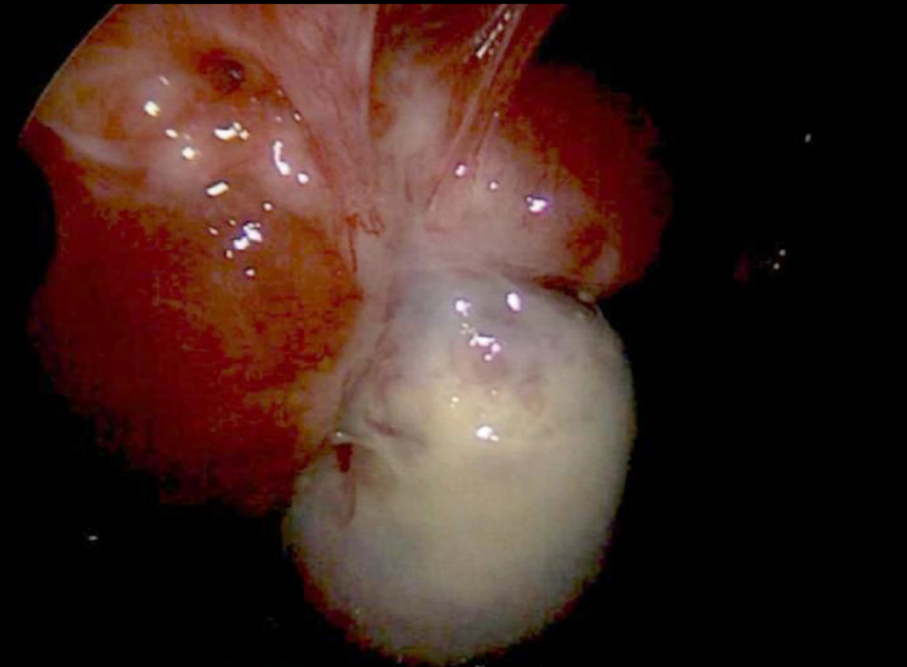
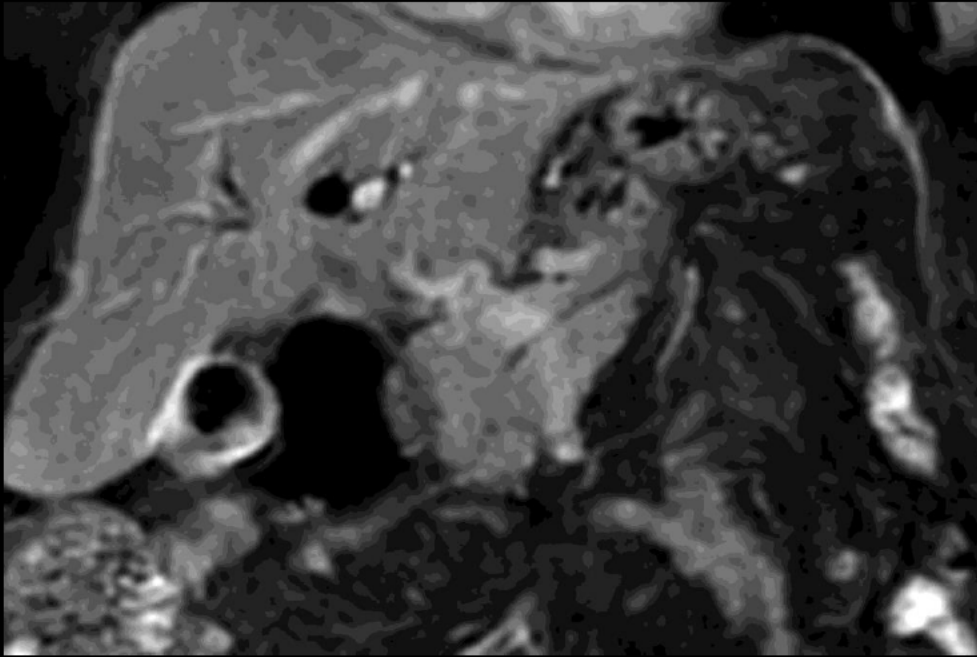




PAX8



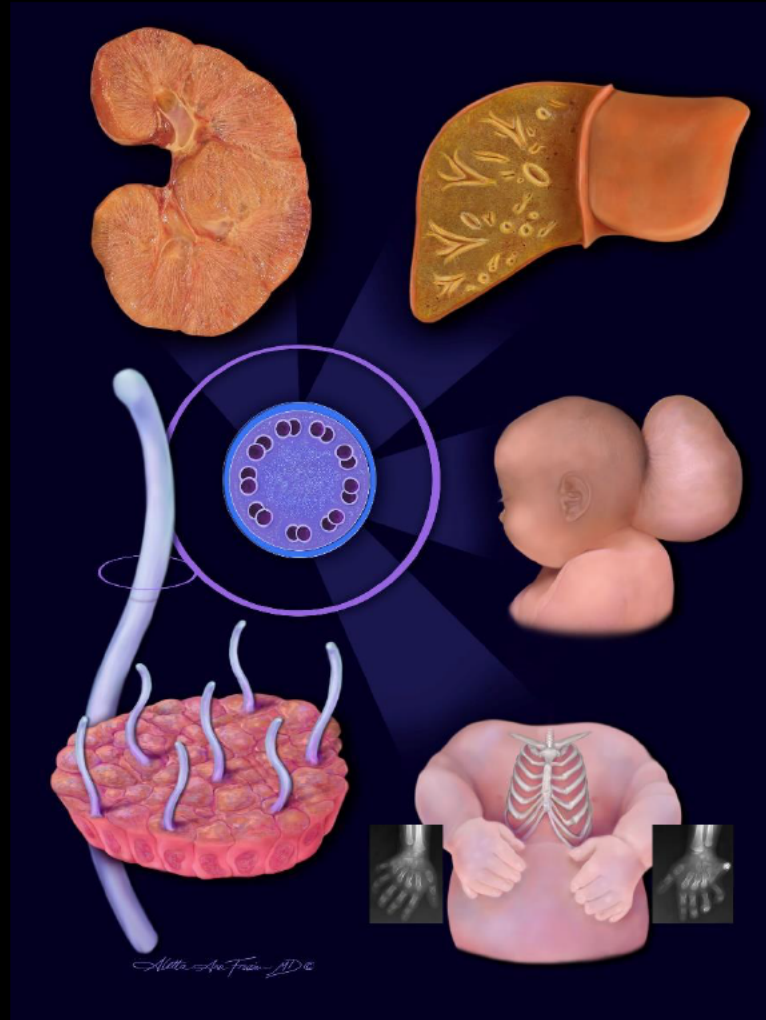
CK19



Gallbladder adenocarcinoma

Aleksandra Augustynowicz
Mount Auburn Hospital
Cambridge, MA

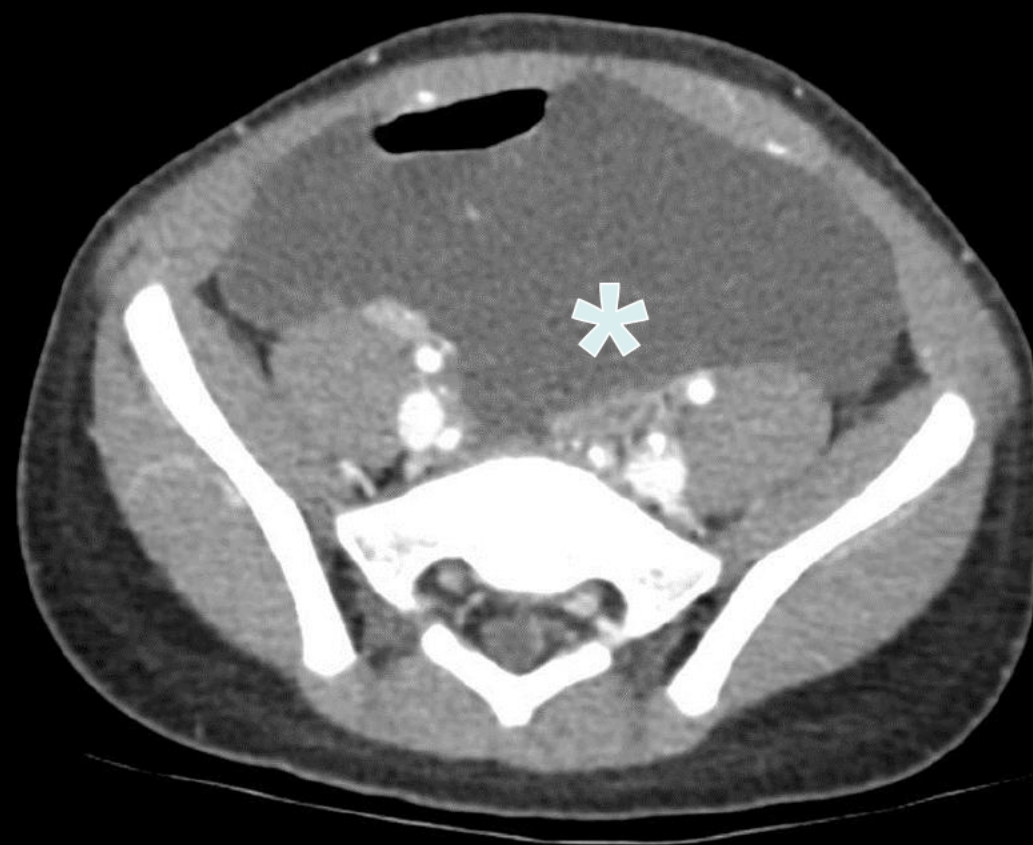
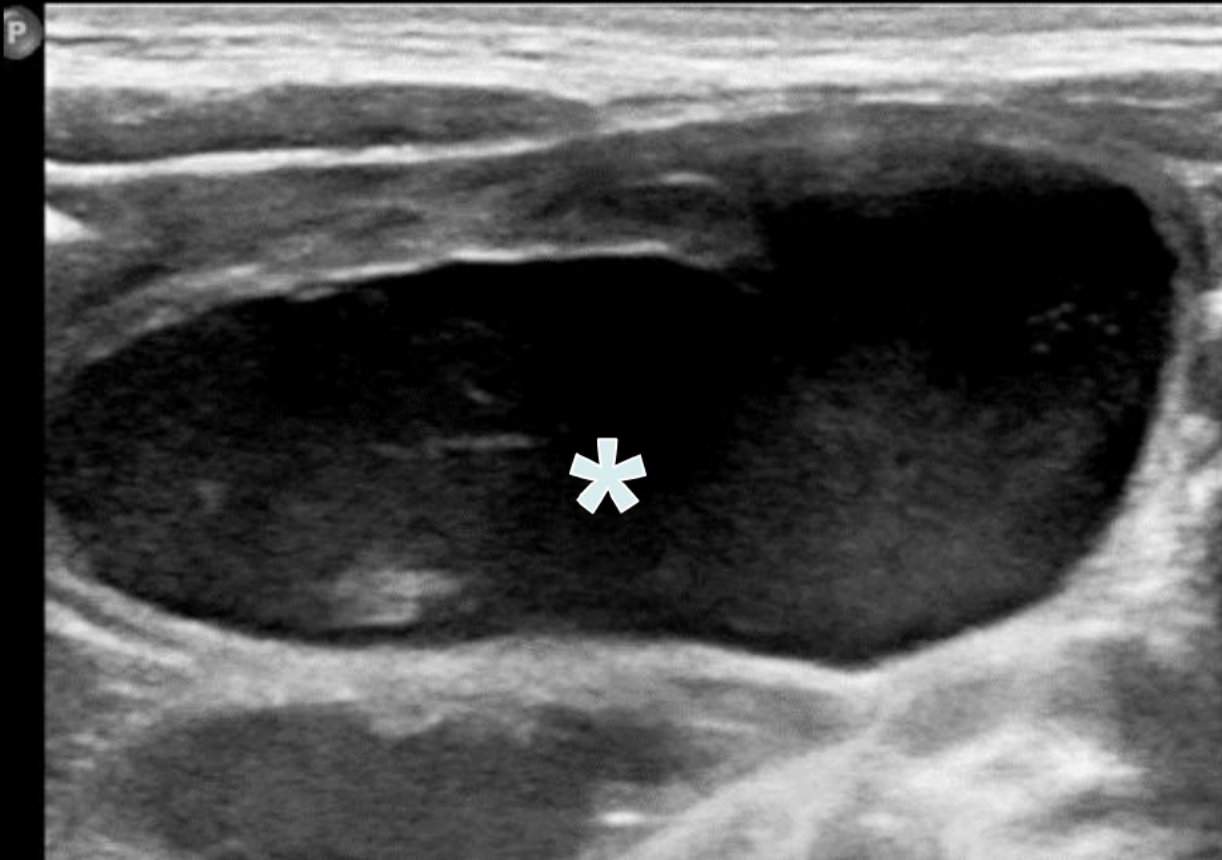
Pediatric Best Case

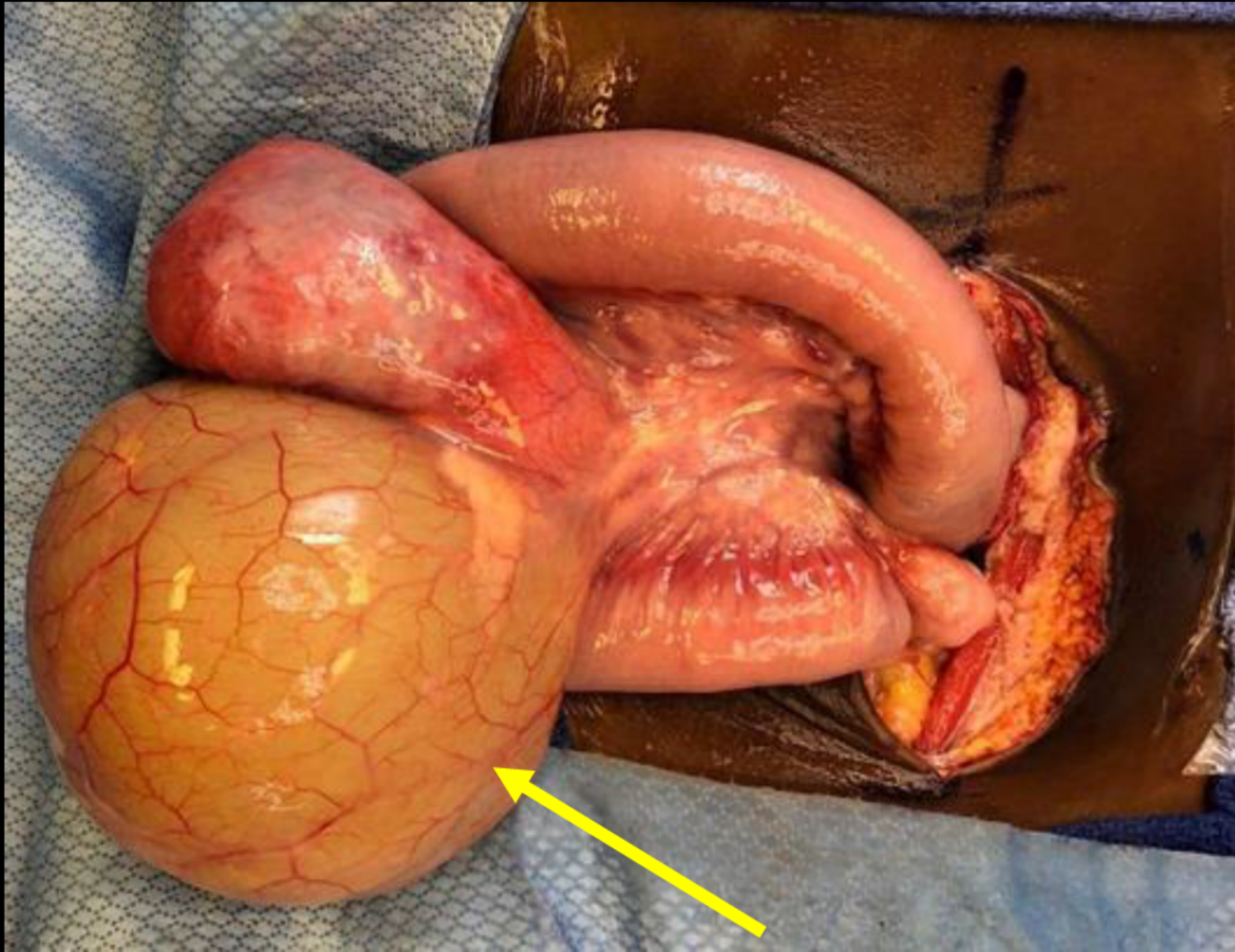


Clinical information

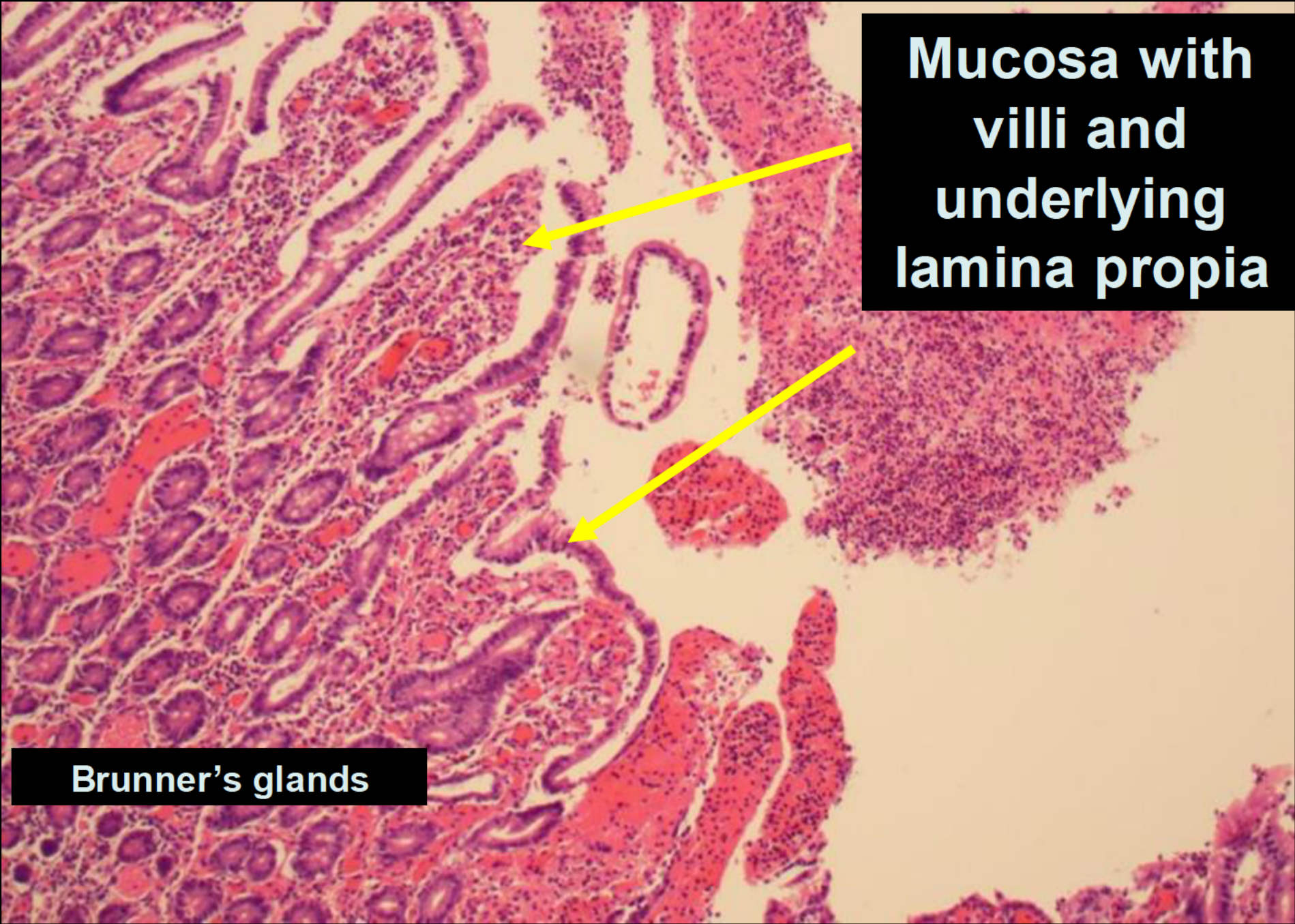
**3-year-old boy who presents with generalized abdominal pain
and multiple episodes of emesis.**

Ultrasound performed to rule out intussusception





**Large cyst
containing
yellow
cloudy fluid**



**Mucosa with
villi and
underlying
lamina propria**

This histological section shows the mucosal lining of the gastrointestinal tract. The upper portion features finger-like projections called villi, which are covered by a simple columnar epithelium. Beneath the villi is the lamina propria, a layer of loose connective tissue. In the lower-left area, there are Brunner's glands, which are mucous-secreting glands characteristic of the duodenum. Two yellow arrows point from the text label to the mucosal layer.

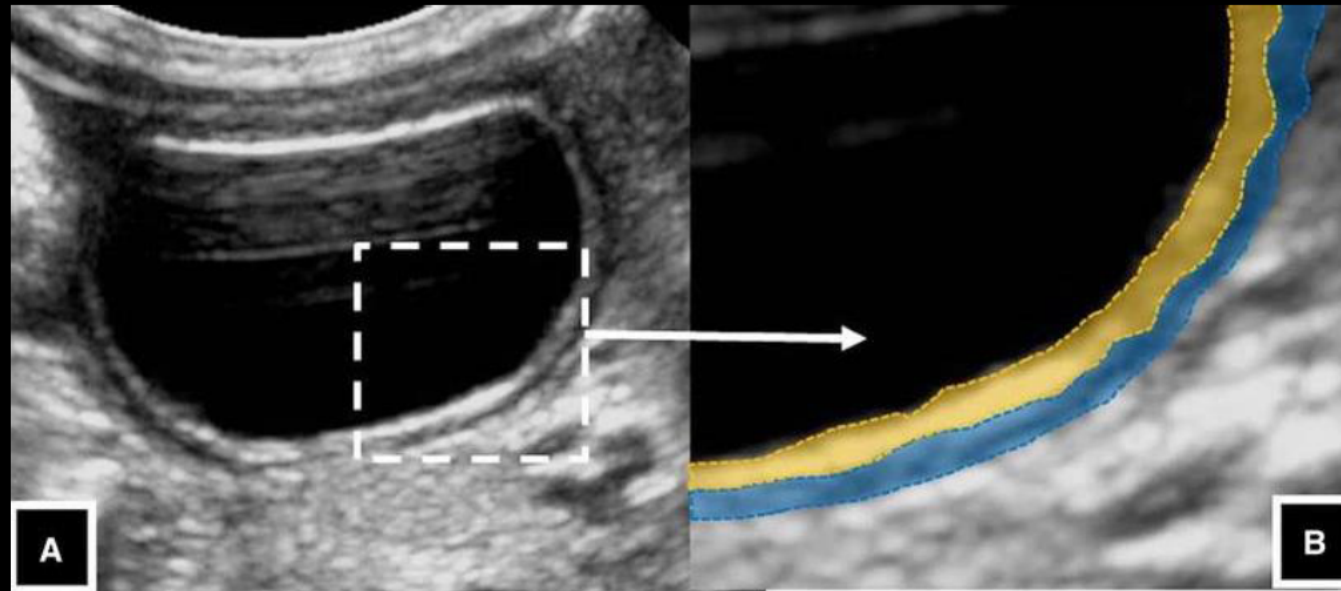
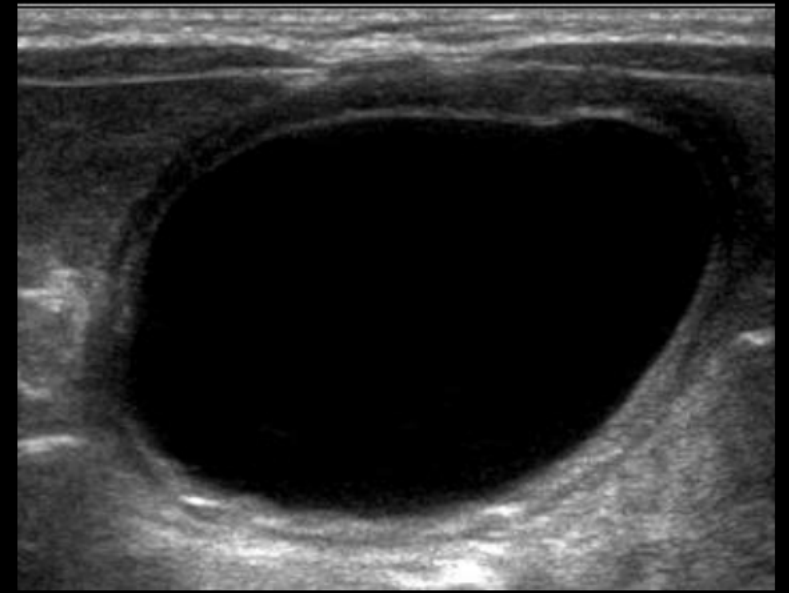
Brunner's glands

AIRPTM

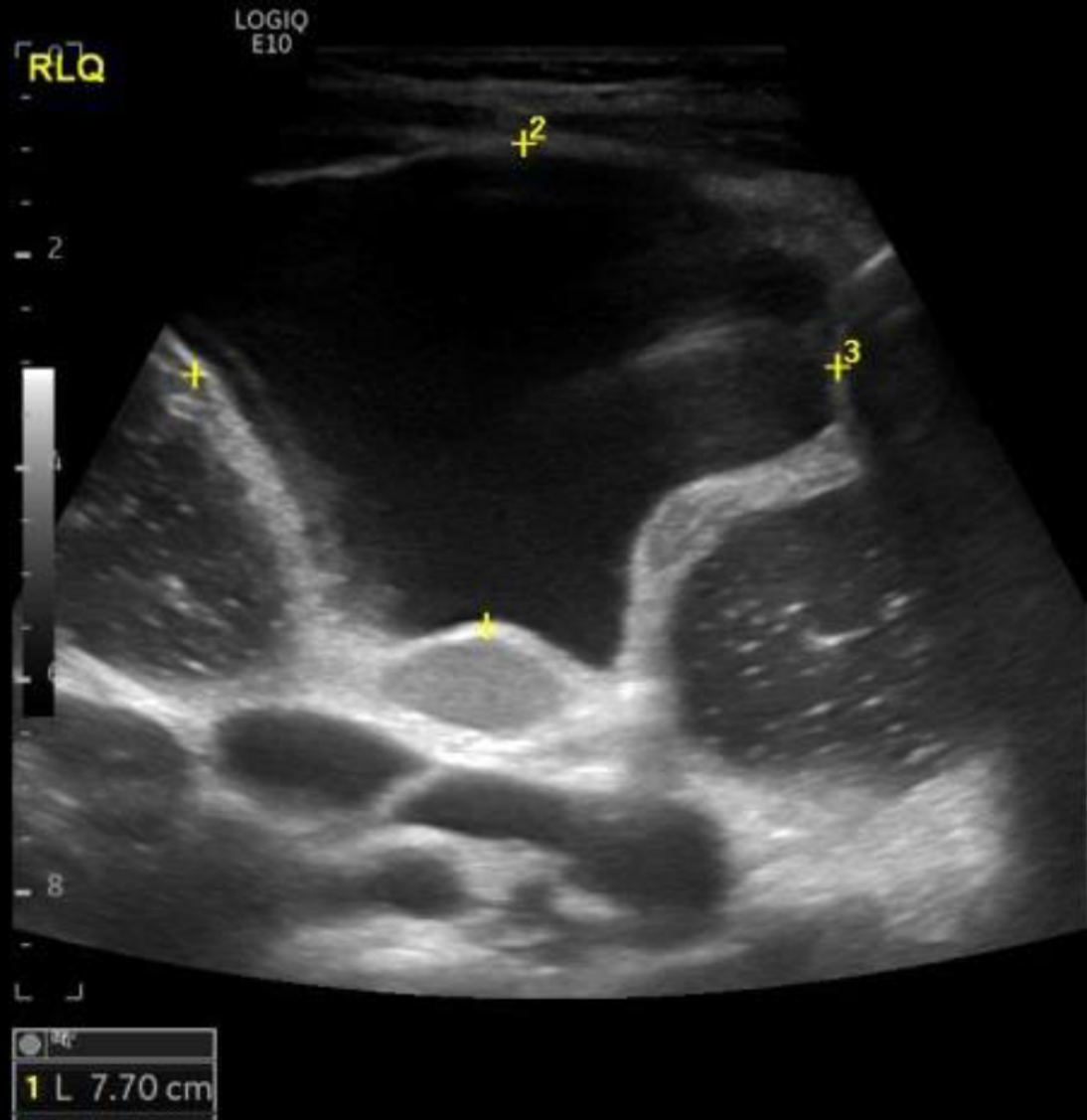
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Ultrasound

- Preferred study
- “Rim” sign – gut signature in the wall

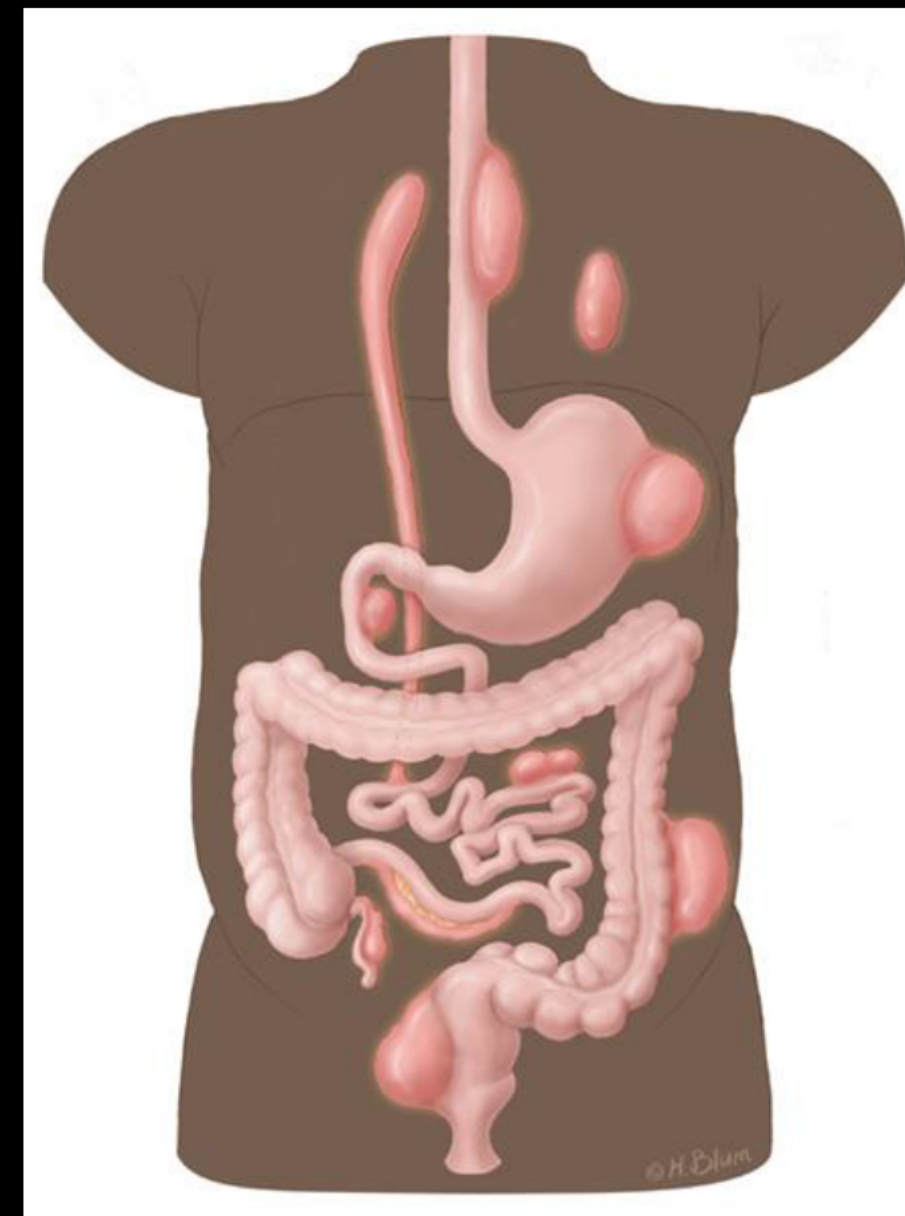


Companion Case: Lymphatic Malformation



Duplication Cyst - Location

- Ileum - 40%
- Thorax - 20
- Jejunum - 10
- Stomach - 10
- Colon - 10
- Multiple - 5



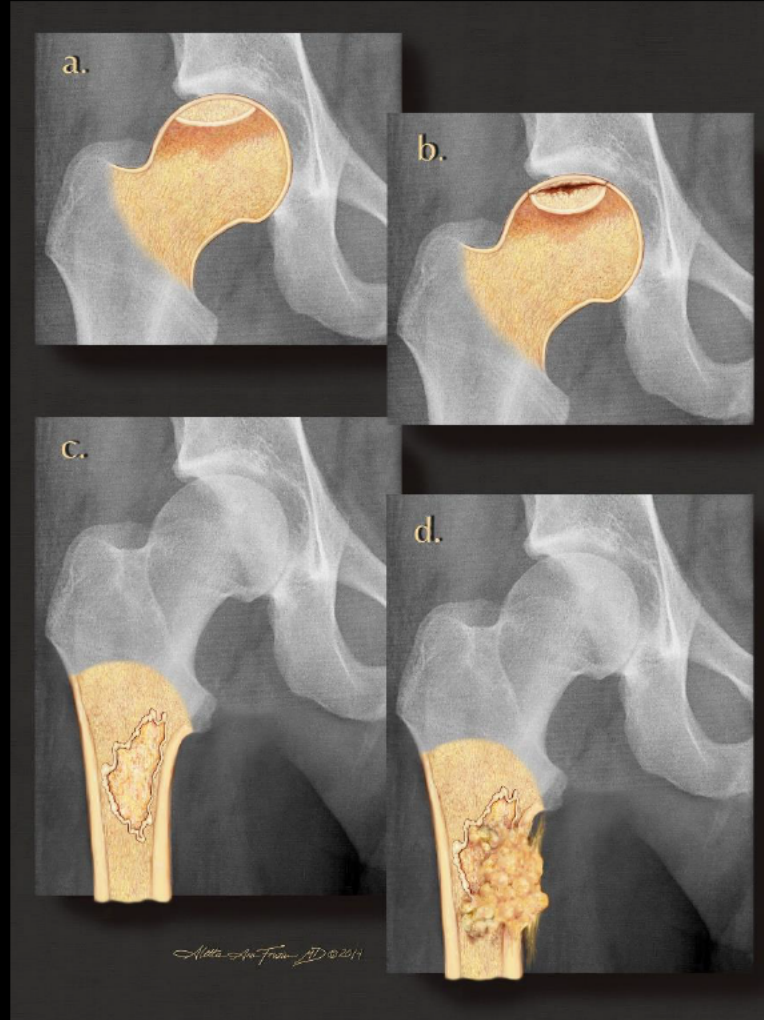
Enteric Duplication Cyst

Raz Davidyan

Albert Einstein College of Medicine

Bronx, NY

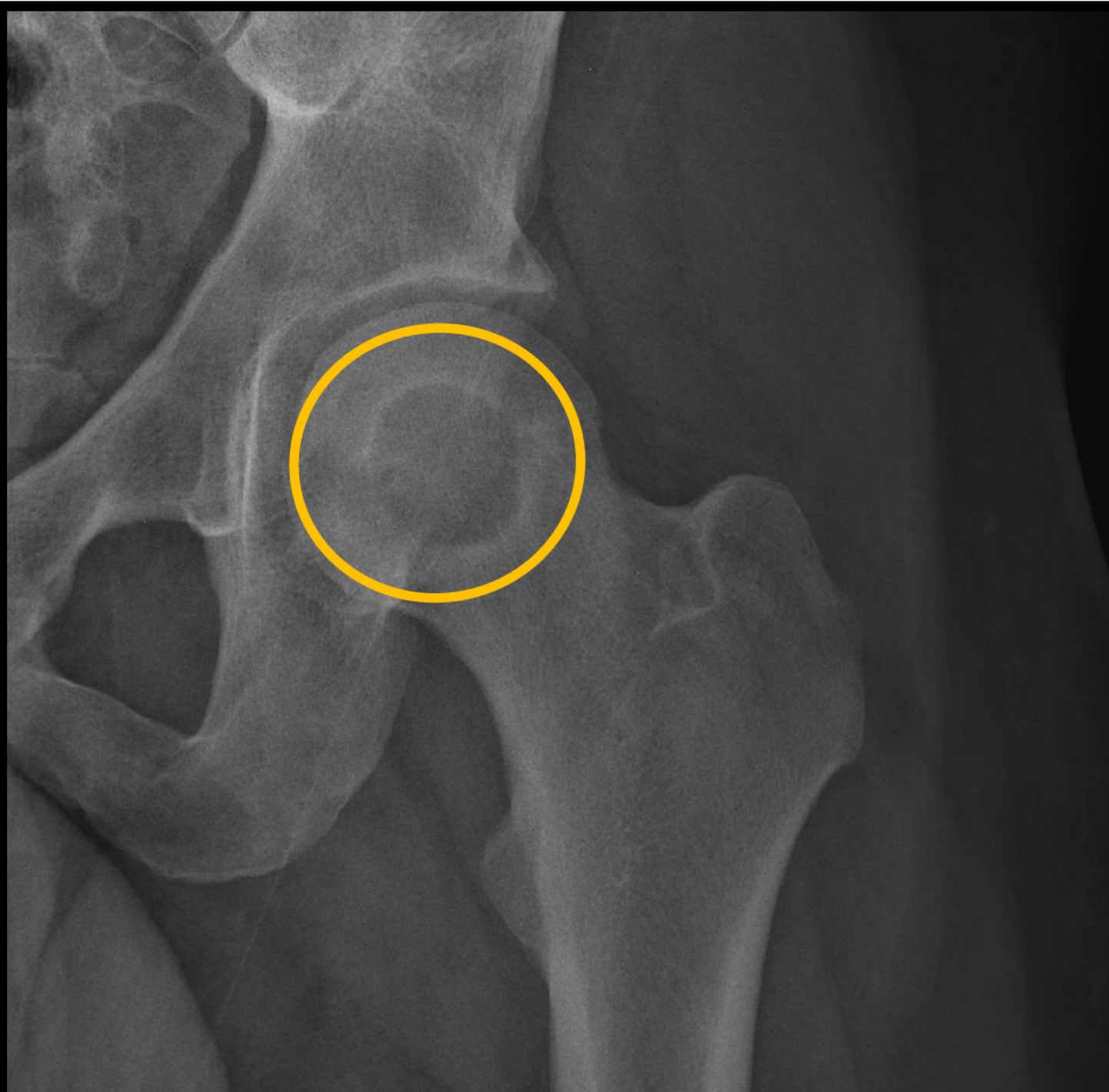
Musculoskeletal Best Case

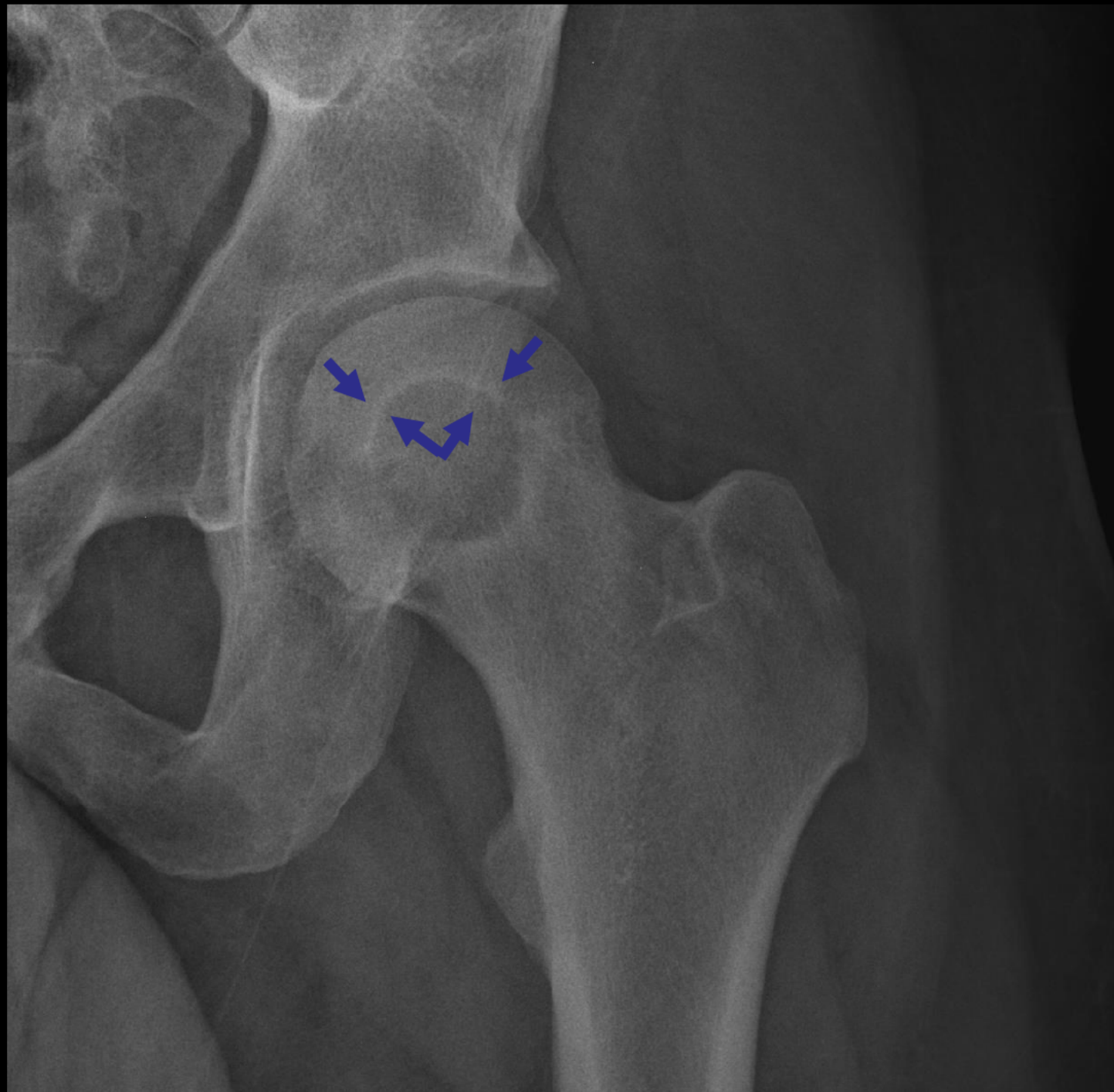


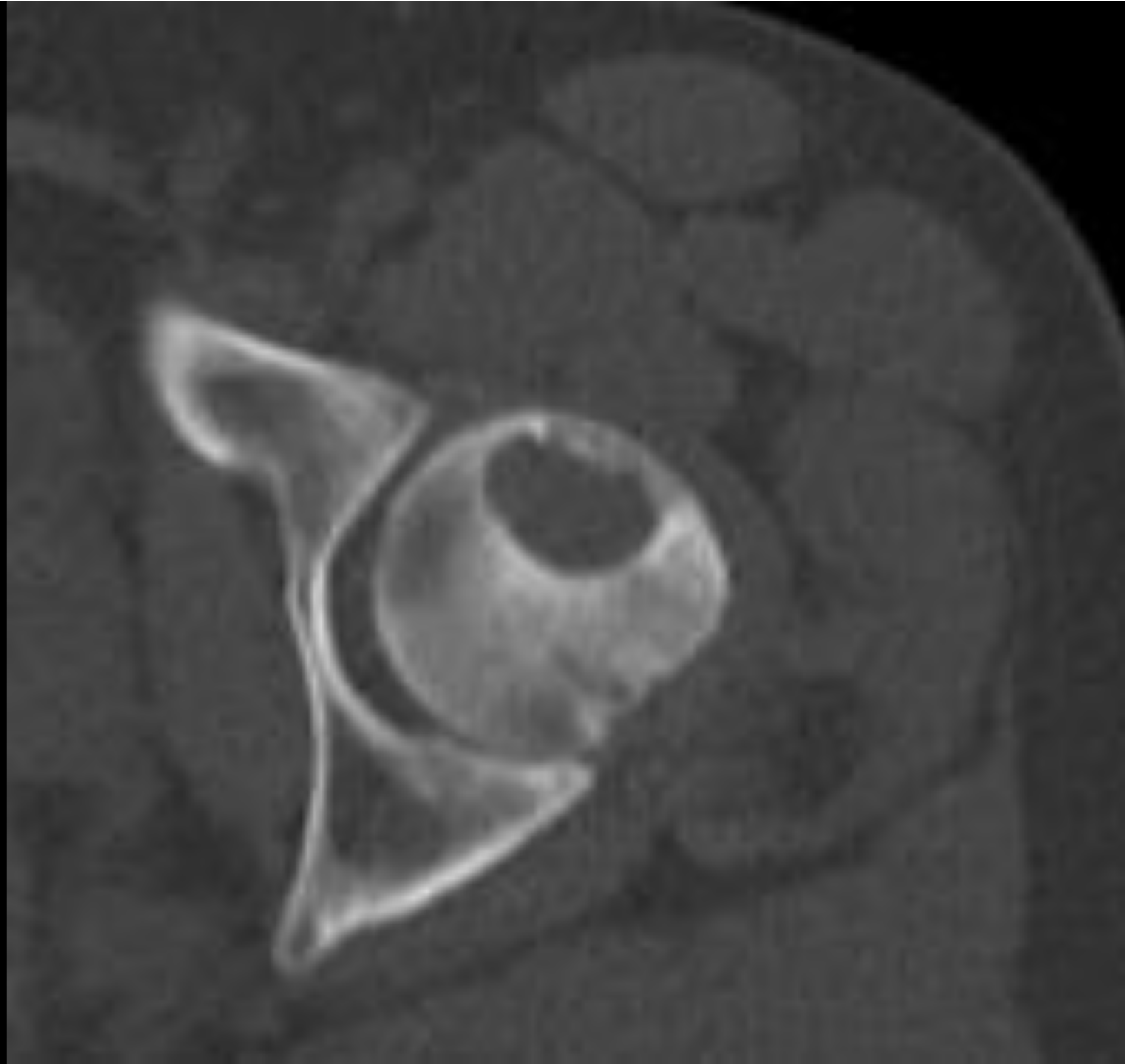
Clinical information

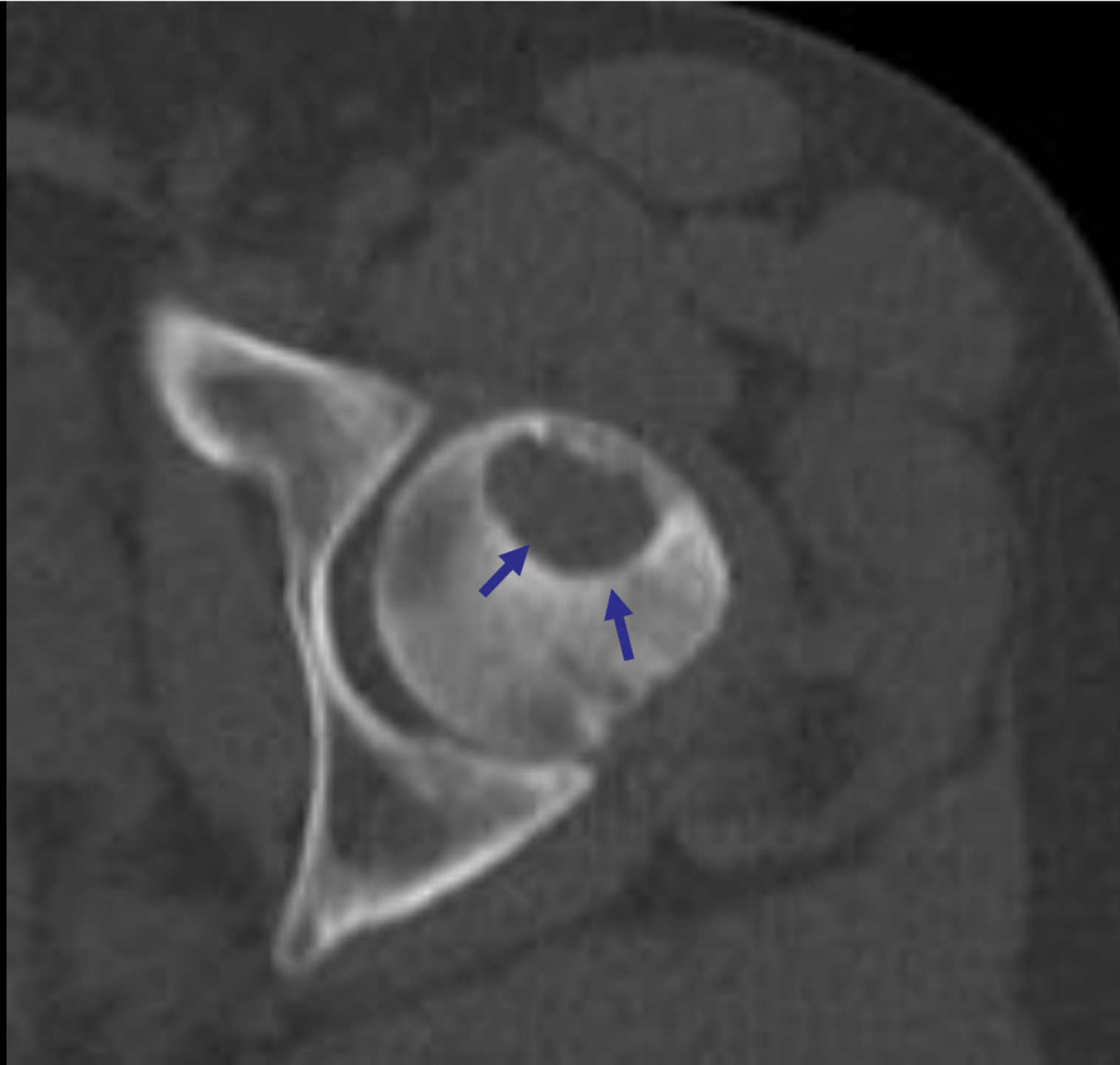
36-year-old male with progressively worsening left hip pain

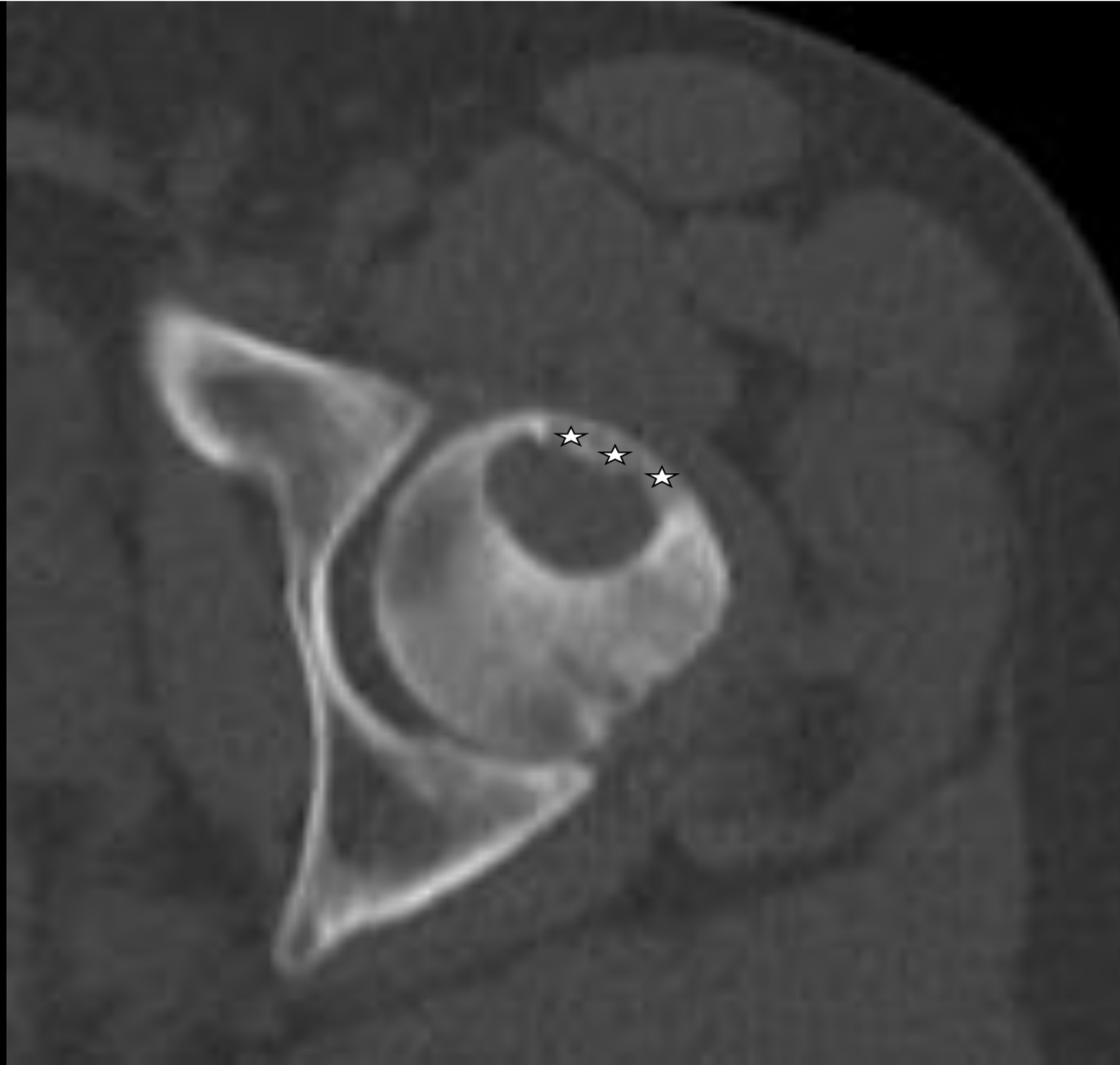




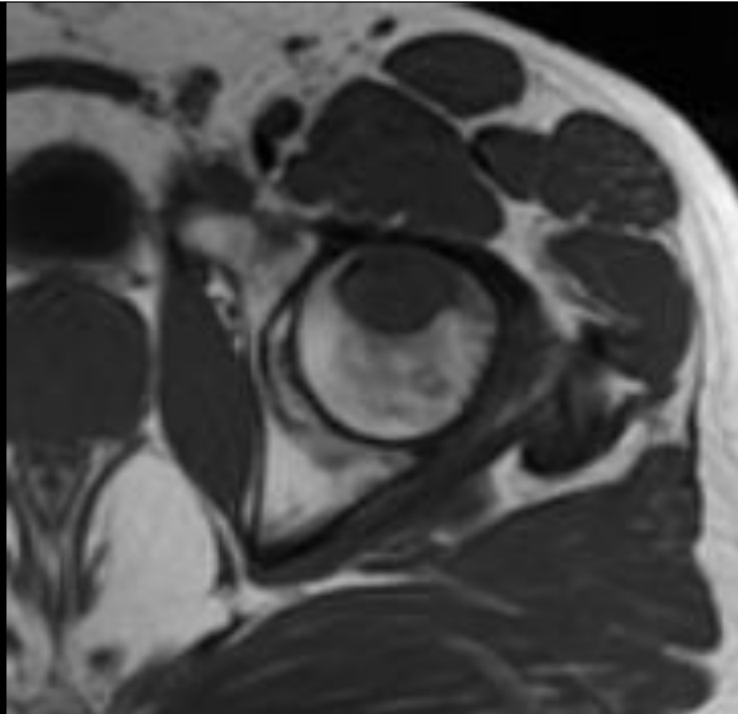




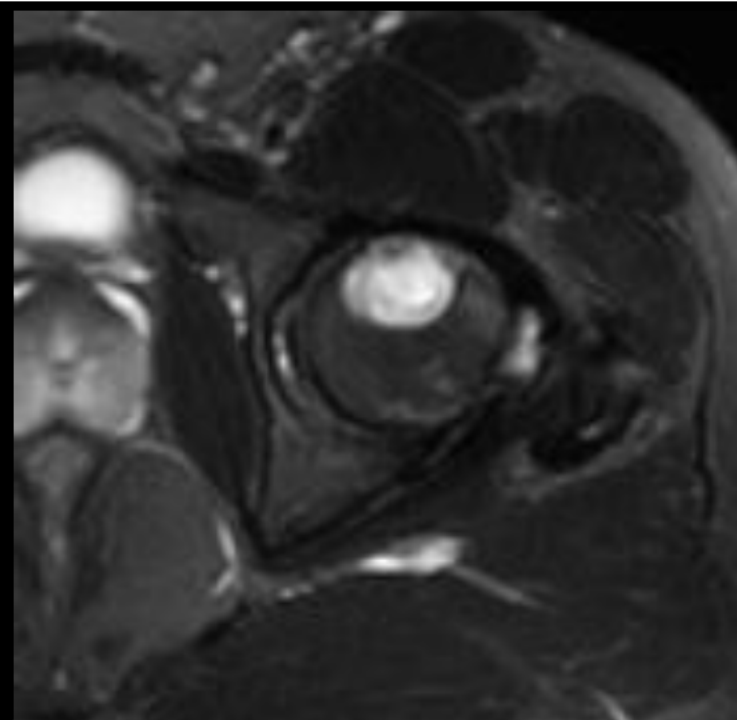




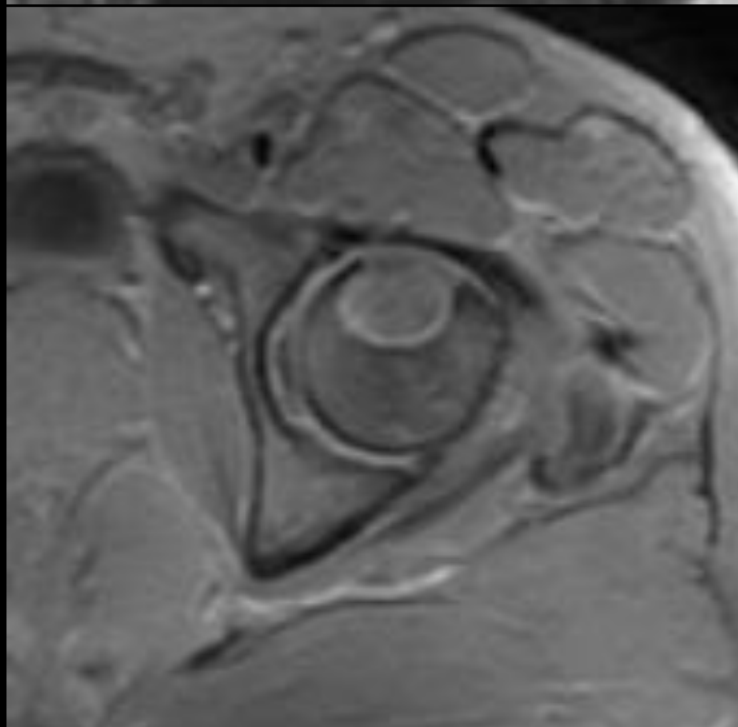
Axial T1



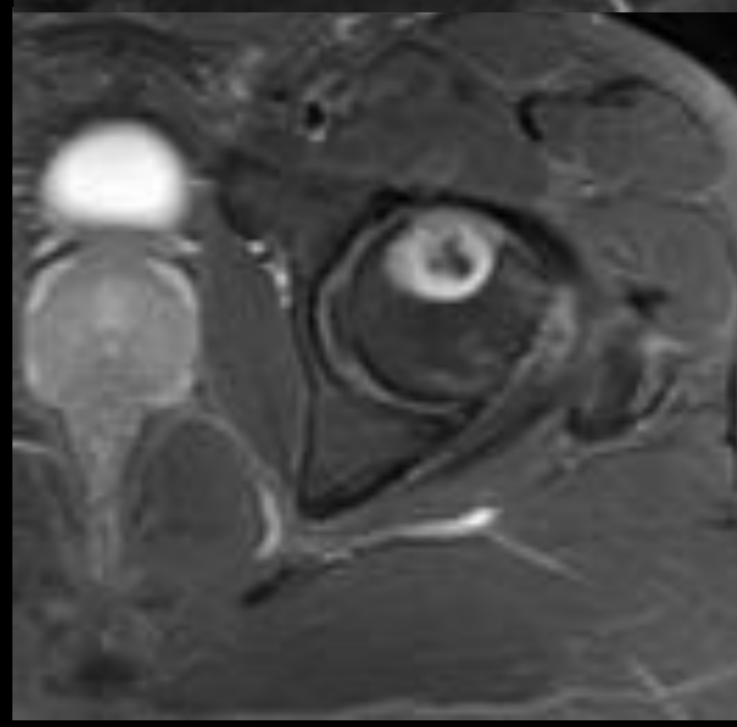
Axial T2FS



Axial T1 FS



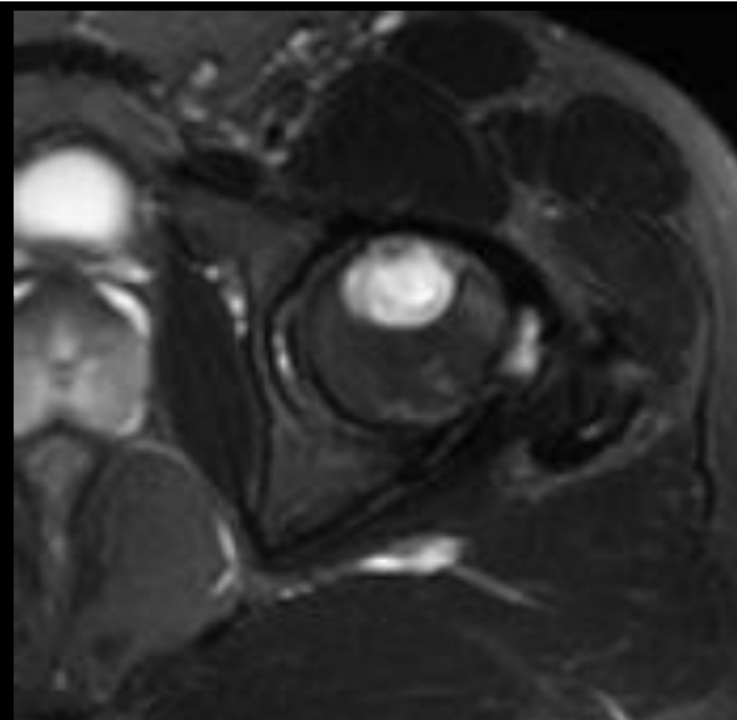
Axial T1 FS post



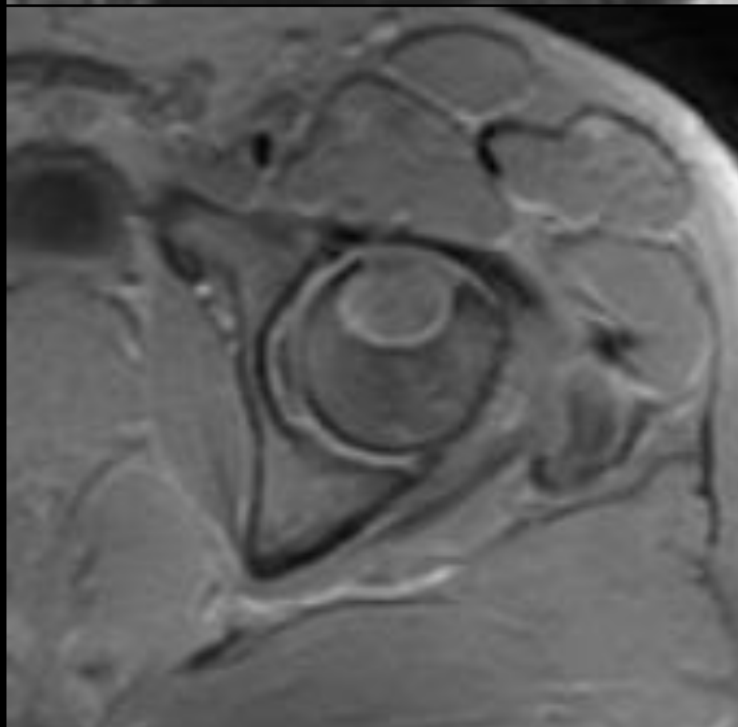
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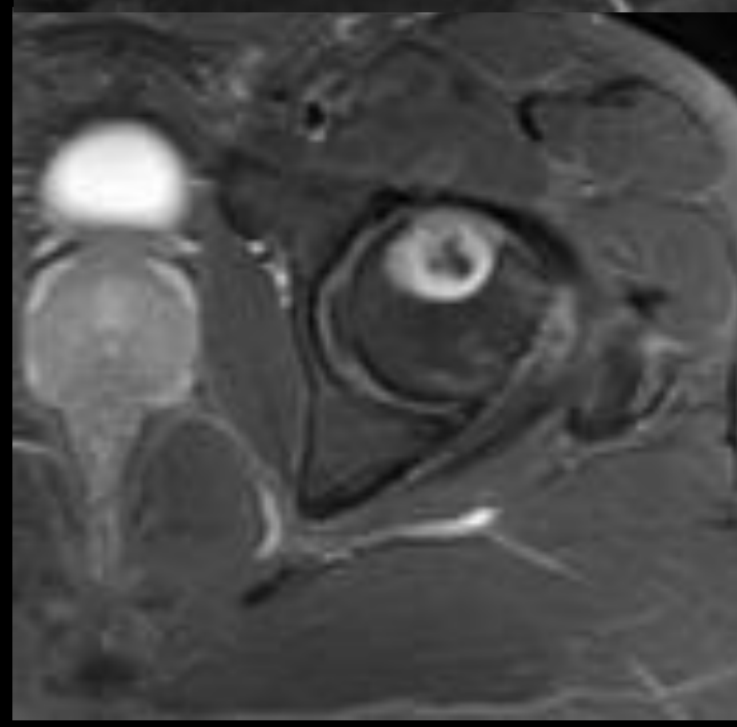
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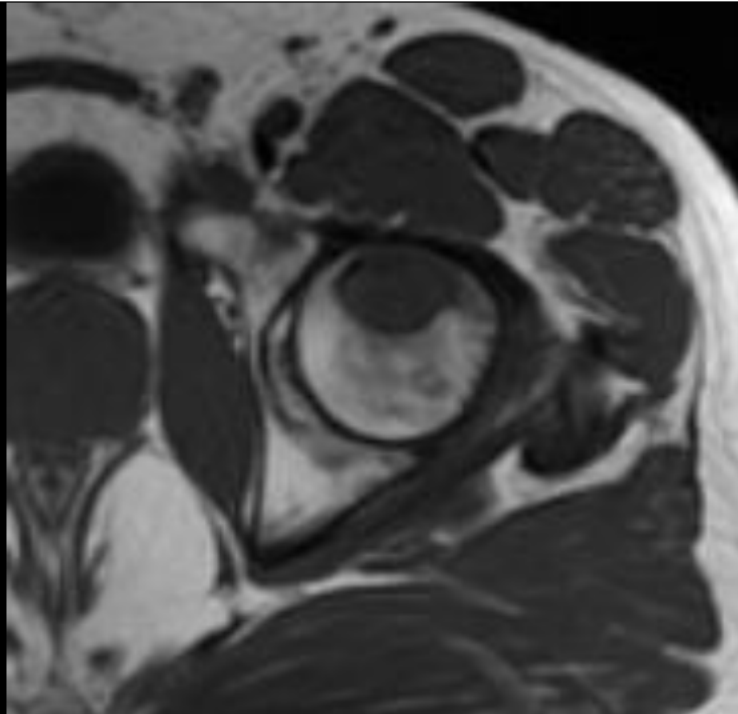
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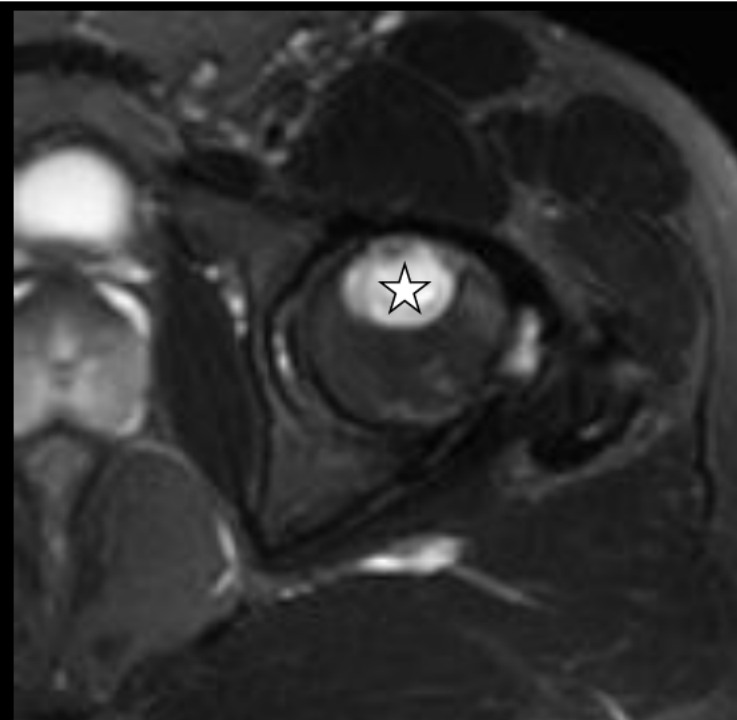
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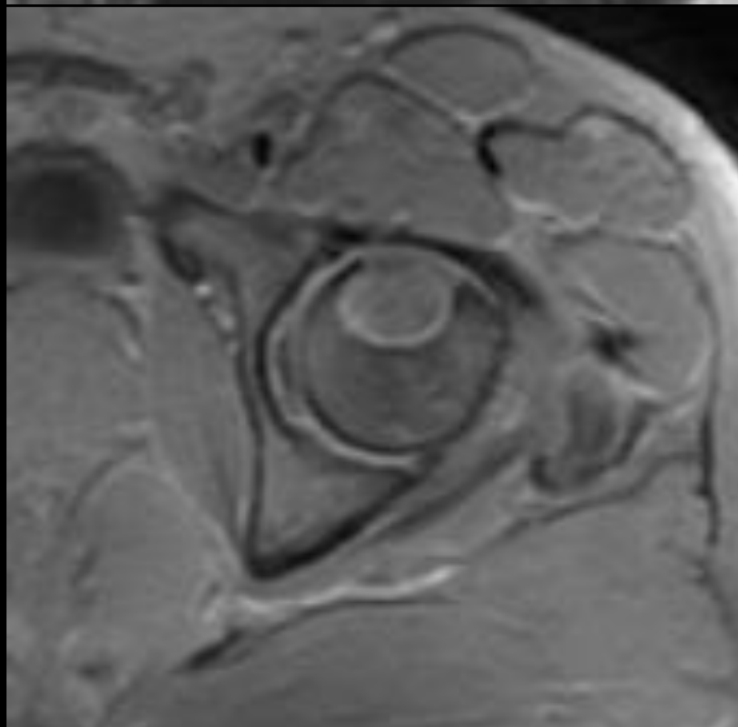
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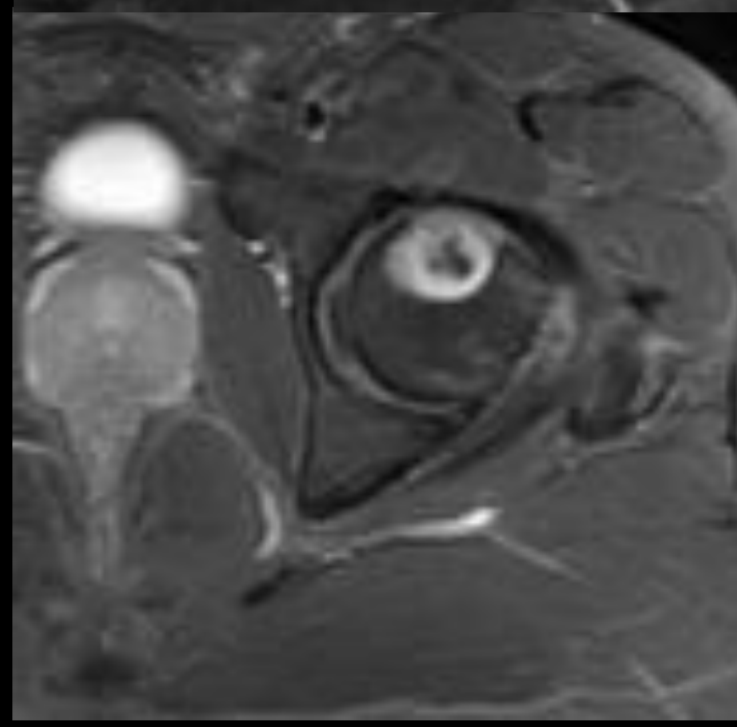
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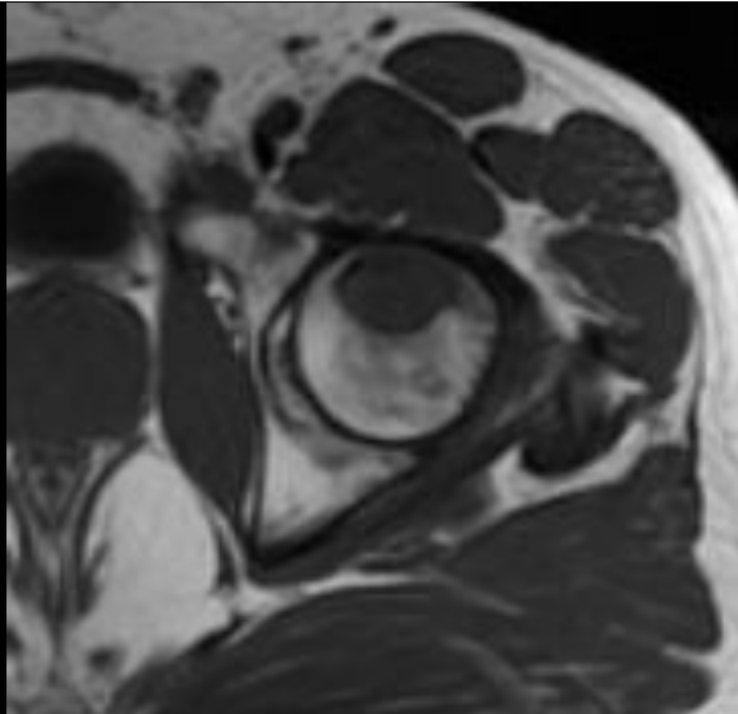
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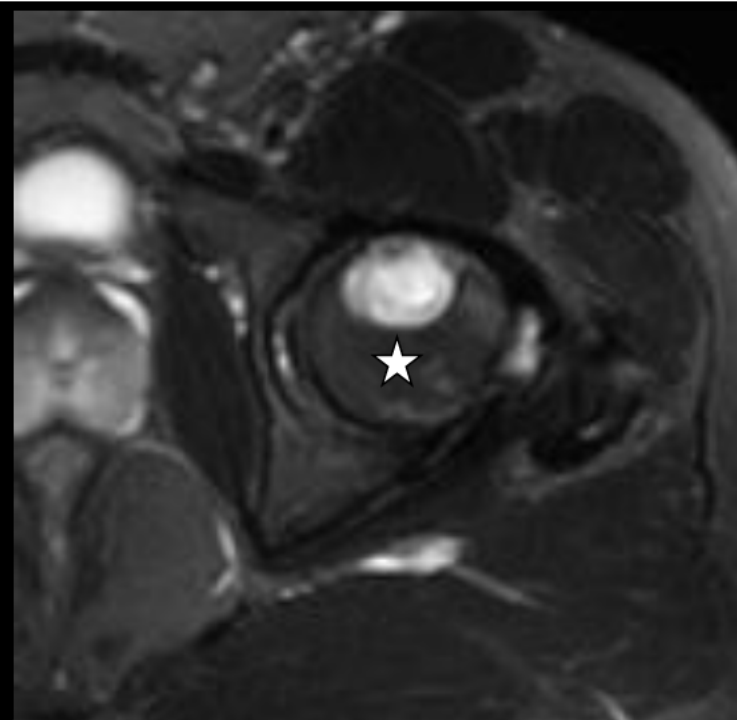
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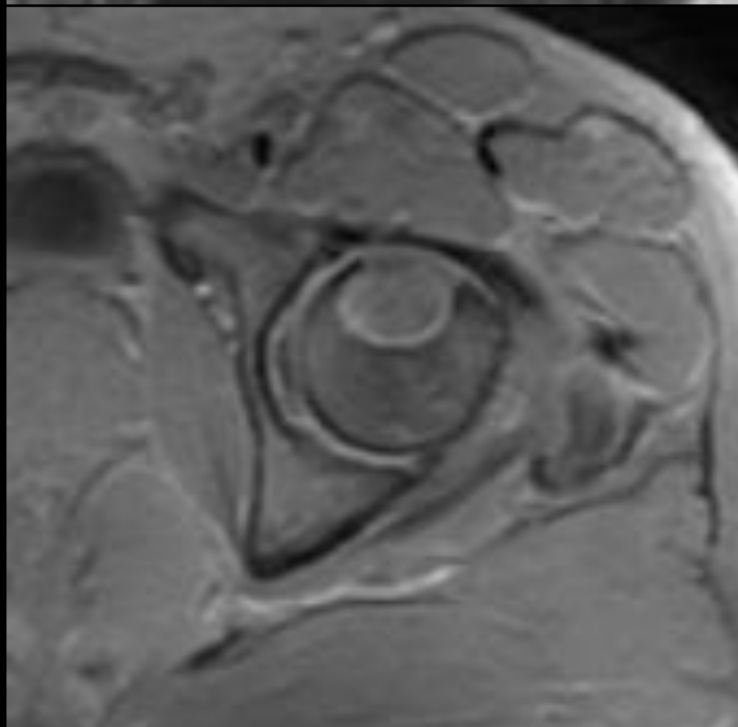
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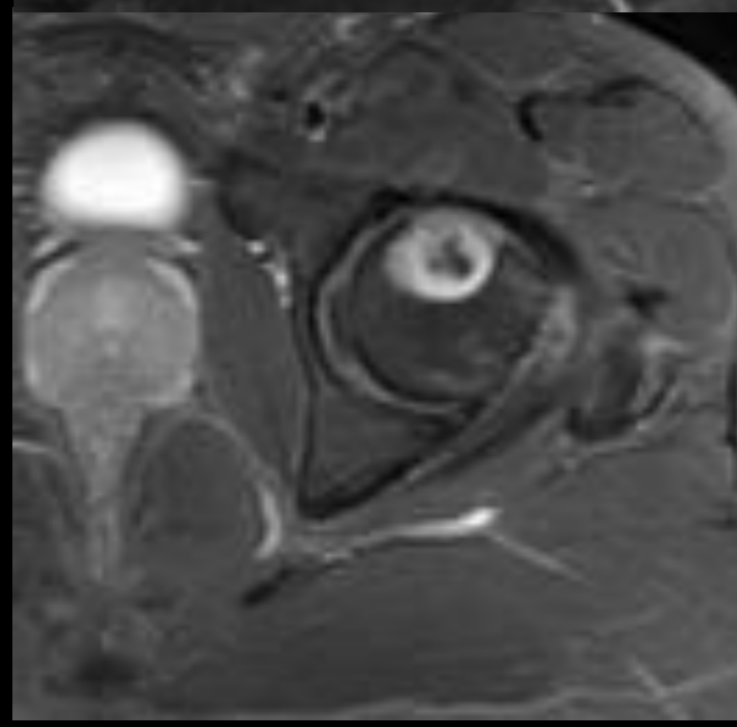
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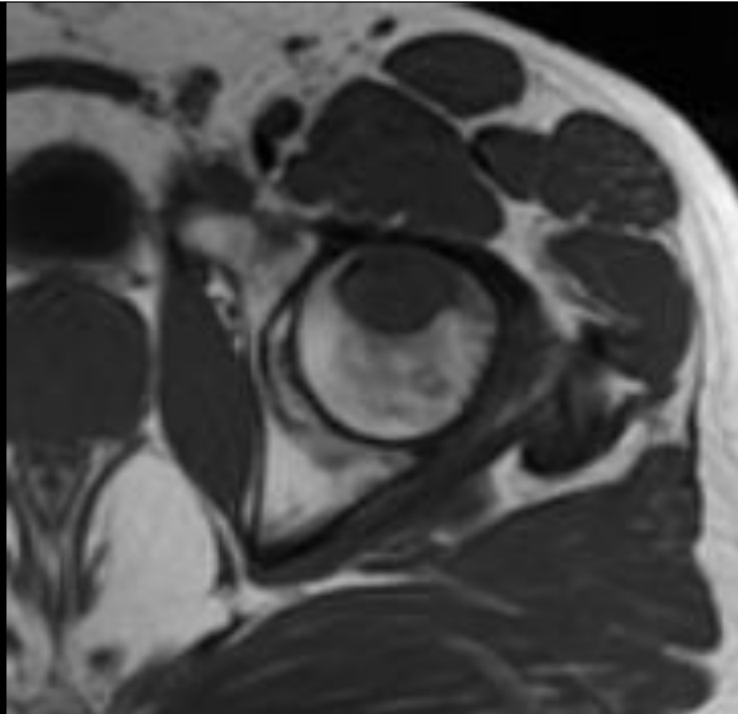
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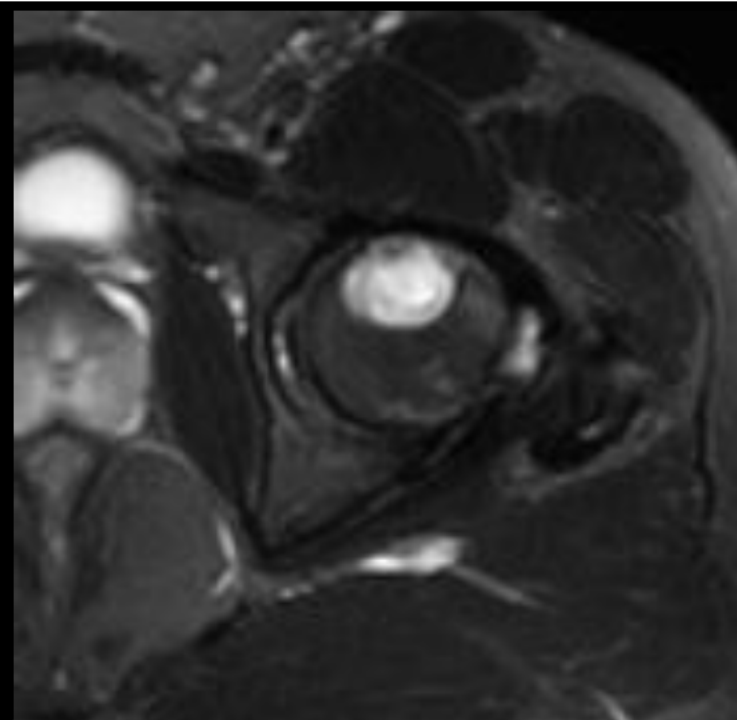
Axial T1 FS post



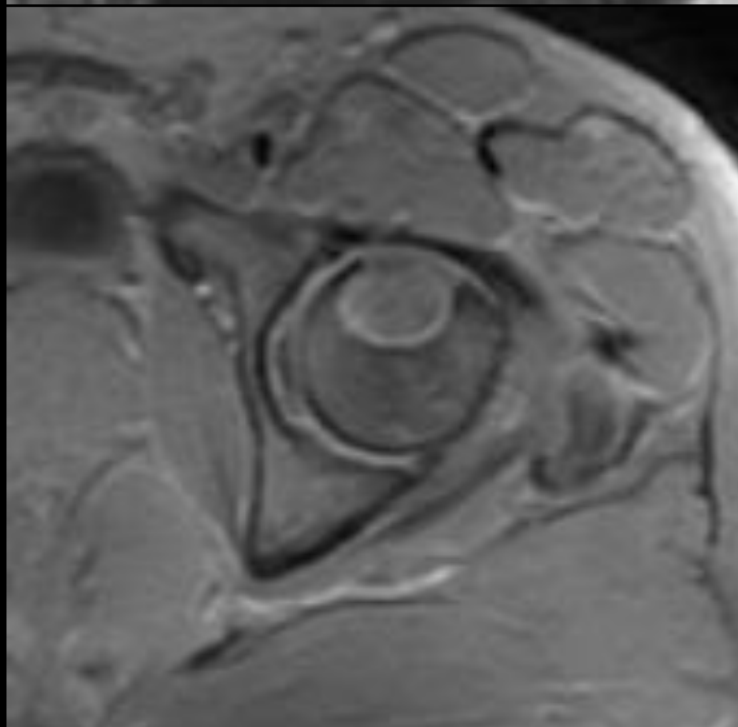
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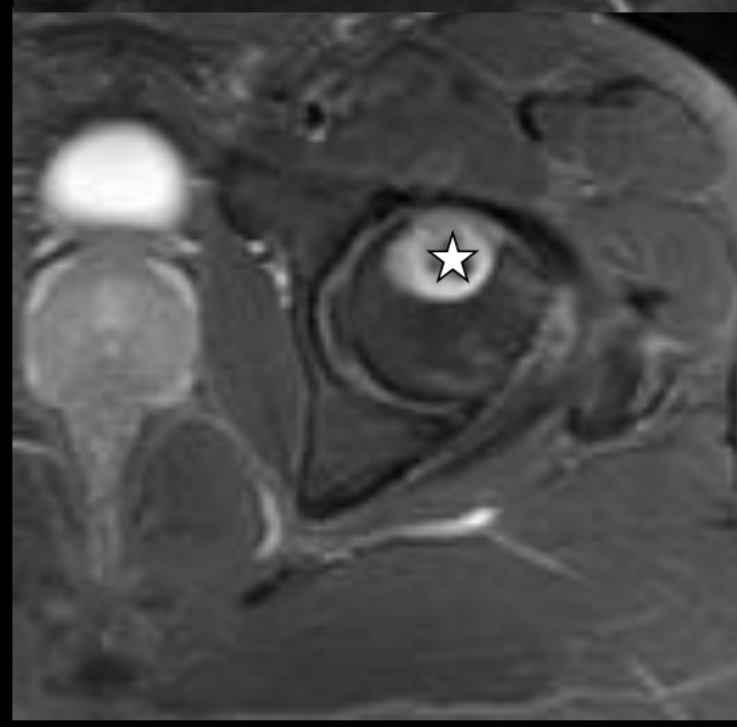
Axial T2FS



Axial T1 FS

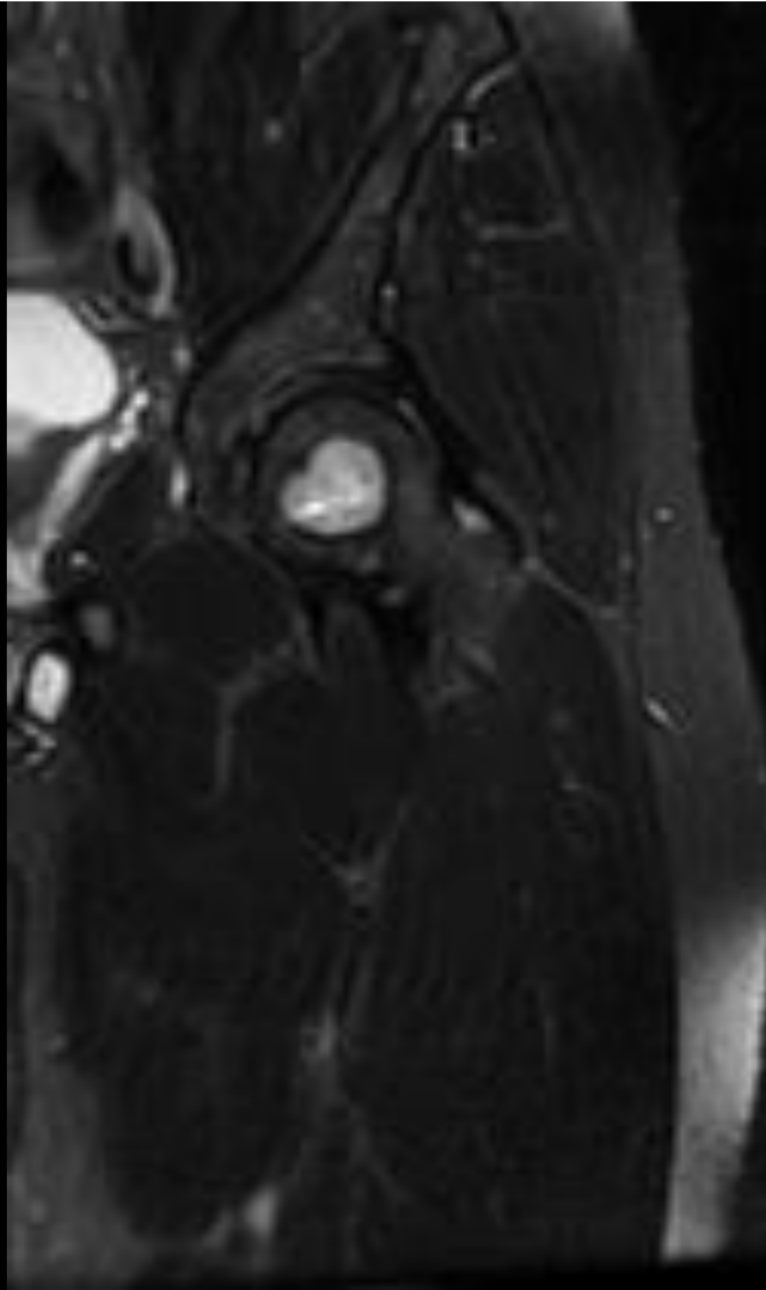


Axial T1 FS post

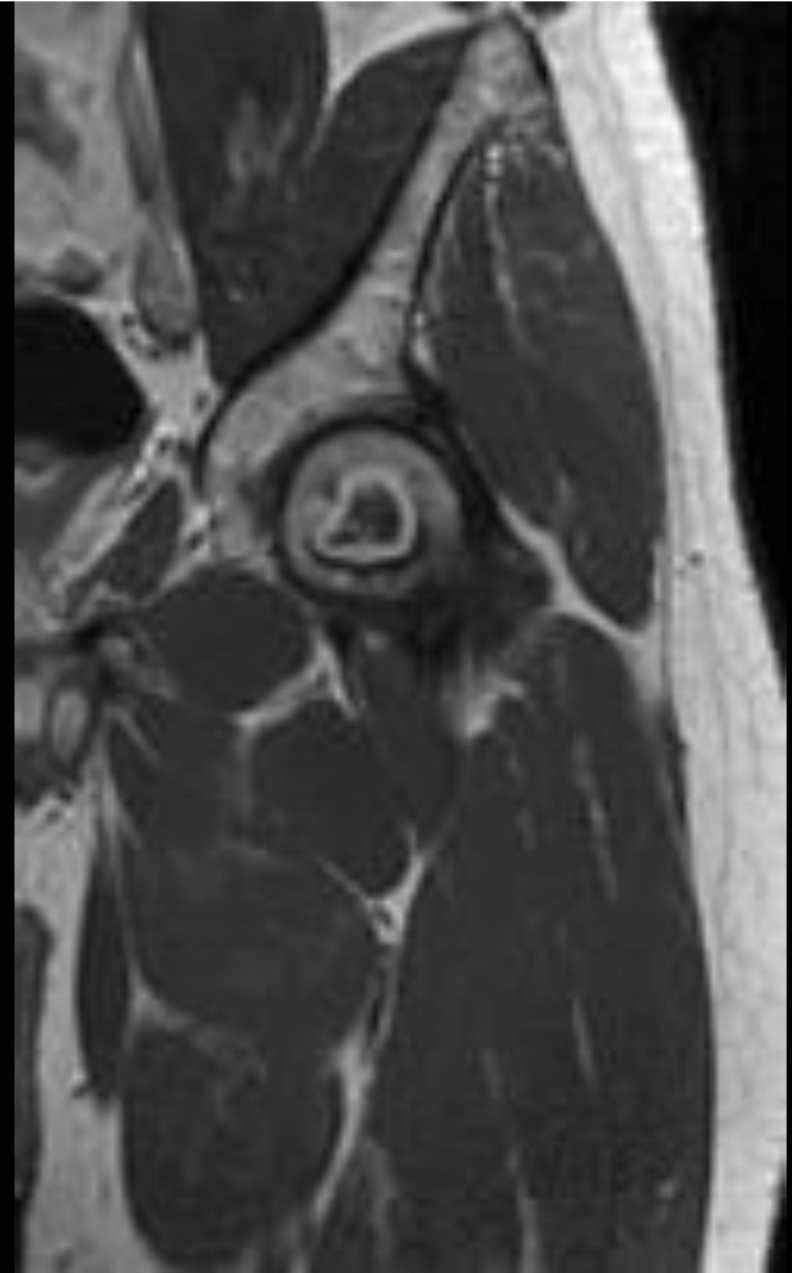




Coronal T1



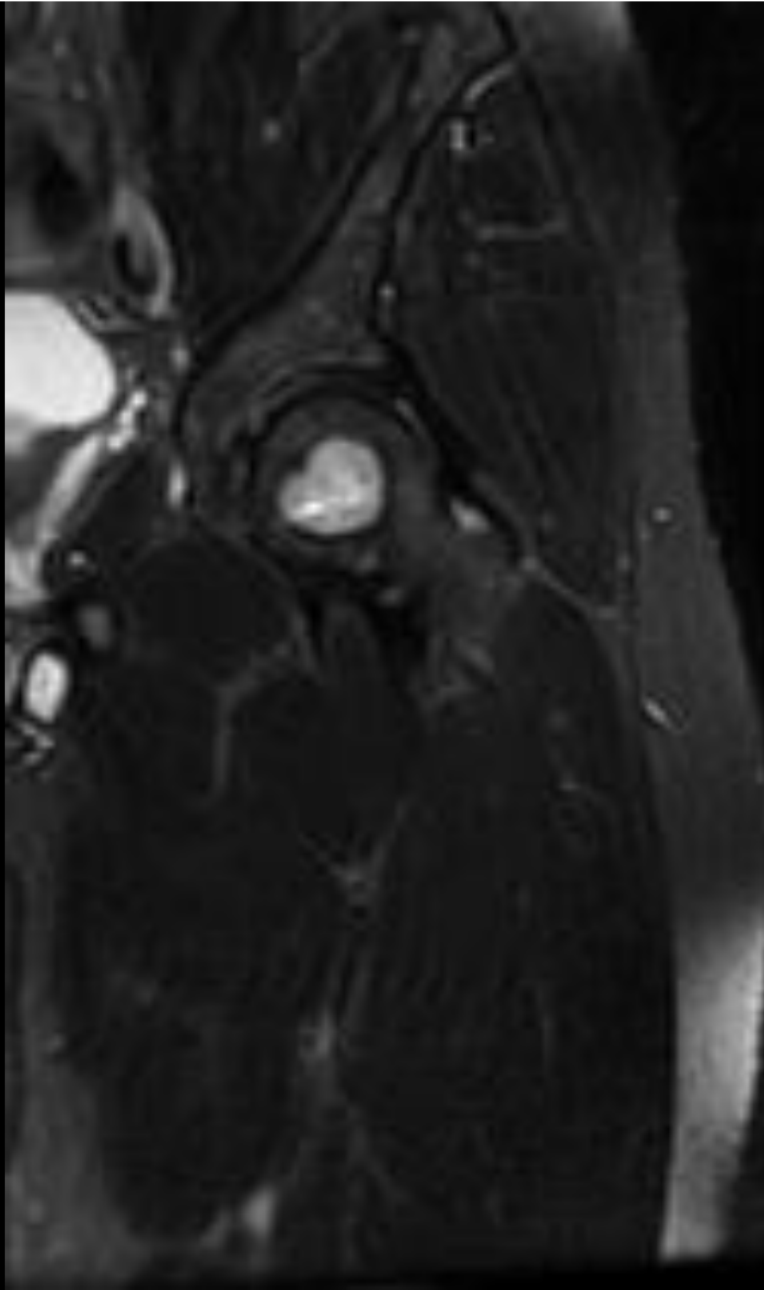
Coronal T2FS



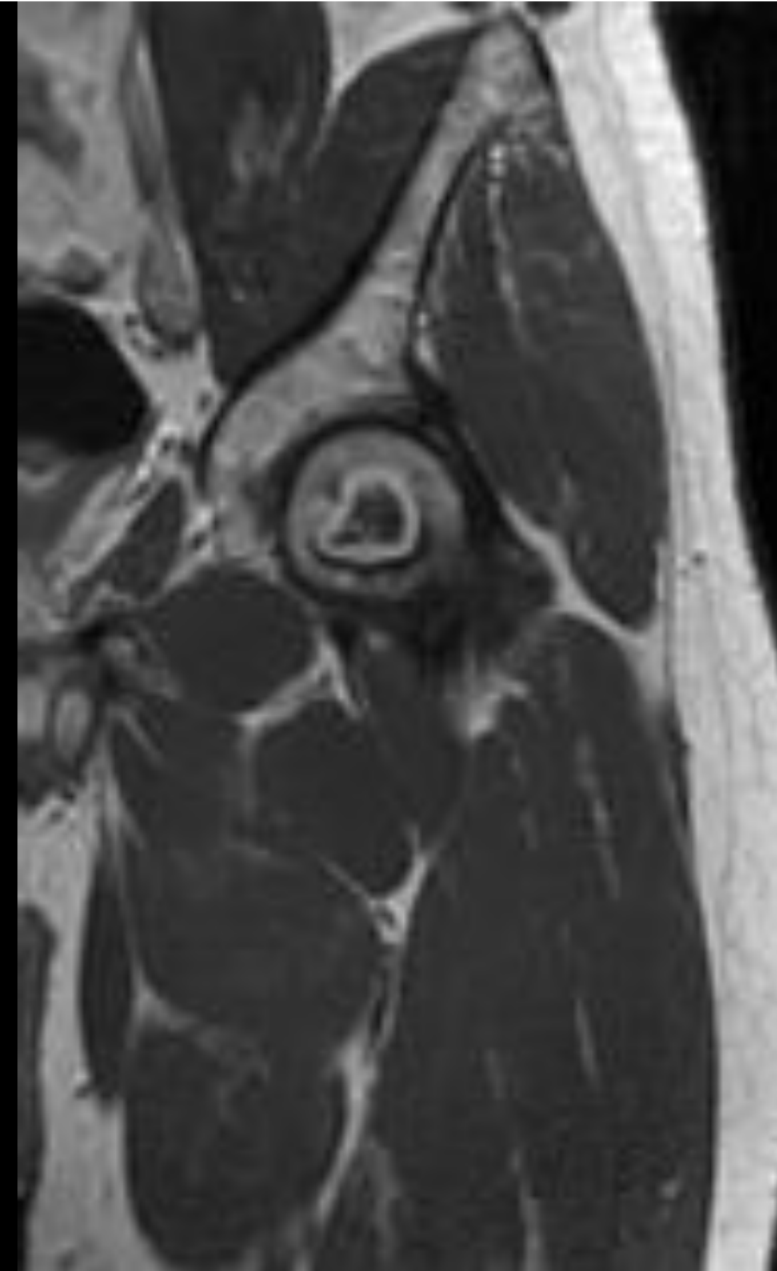
Coronal T1FS +C



Coronal T1



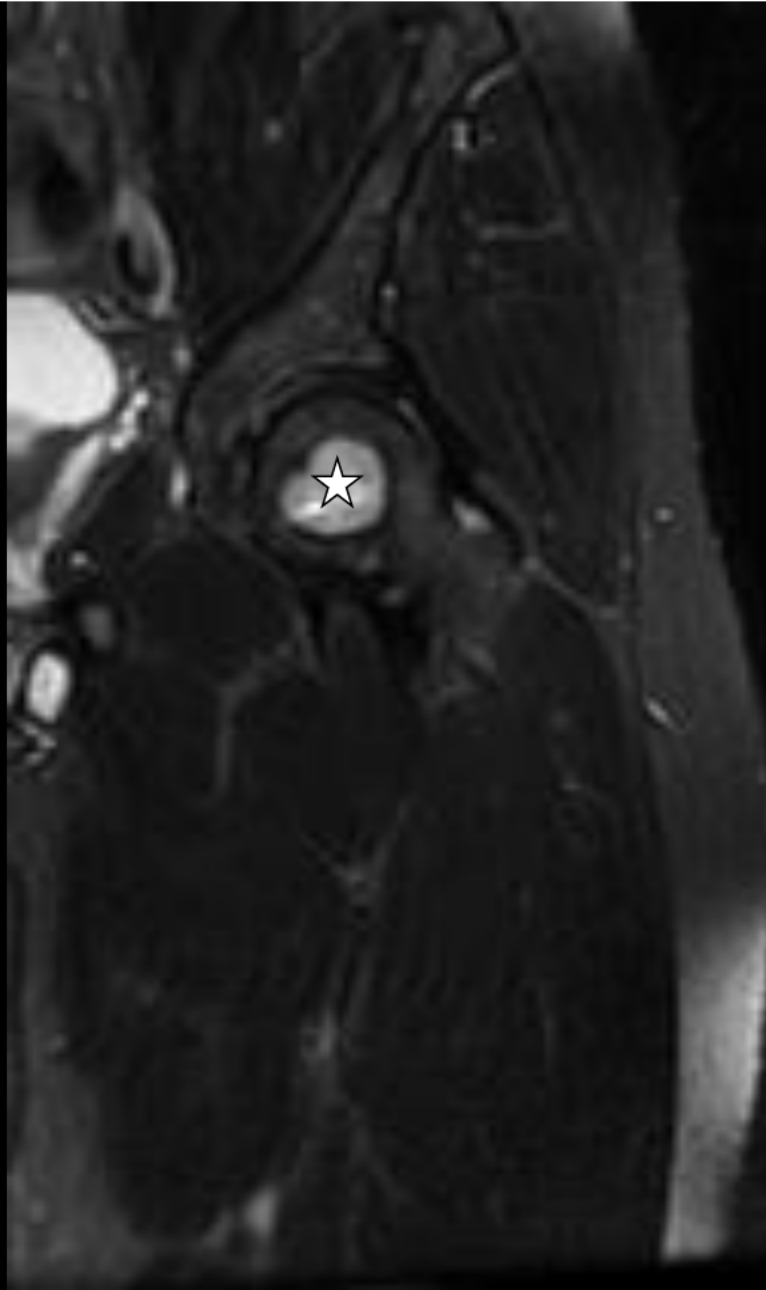
Coronal T2FS



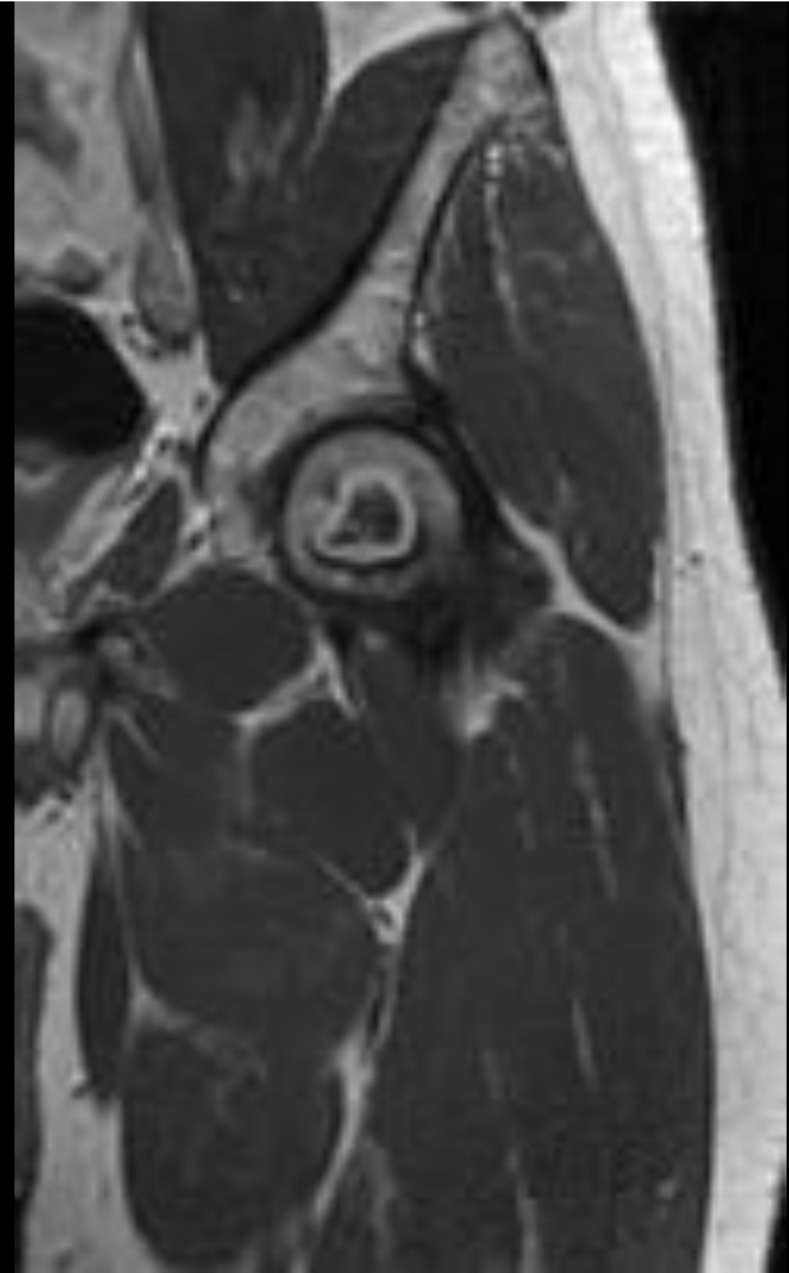
Coronal T1FS +C



Coronal T1



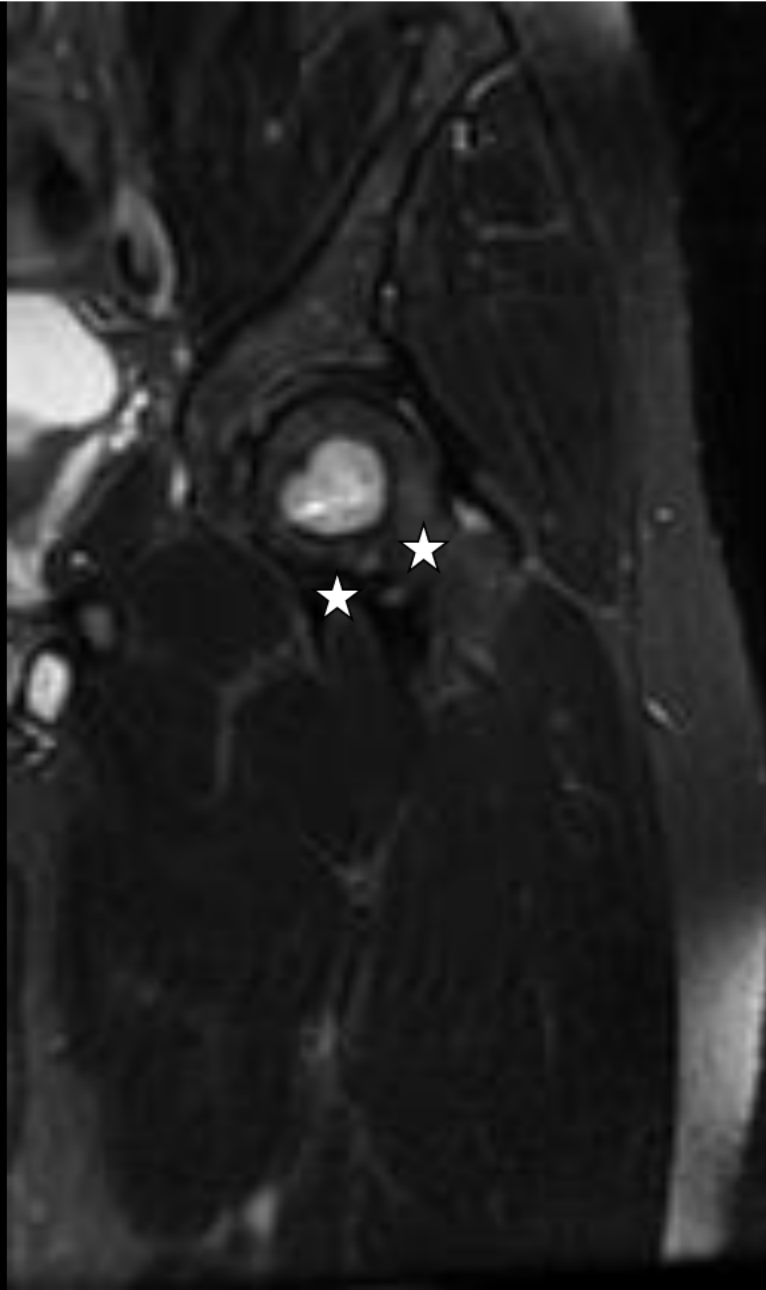
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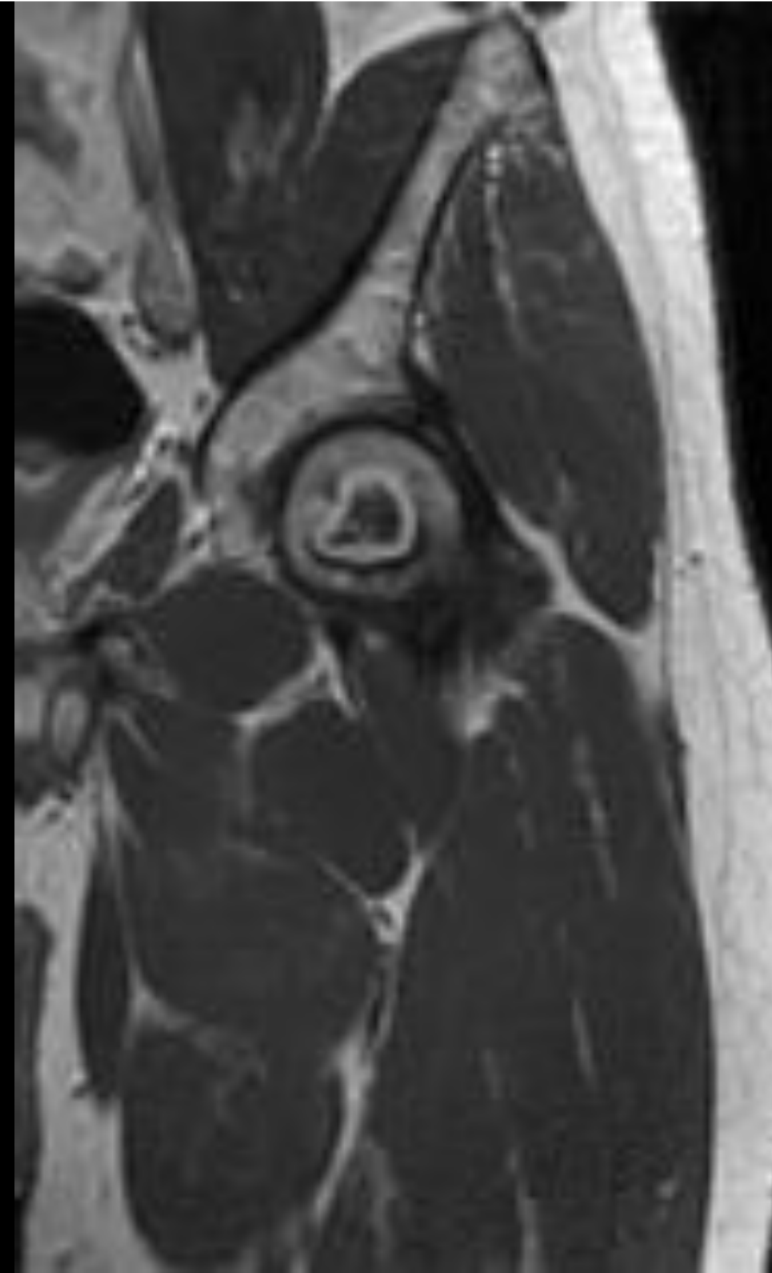
Coronal T1FS +C



Coronal T1



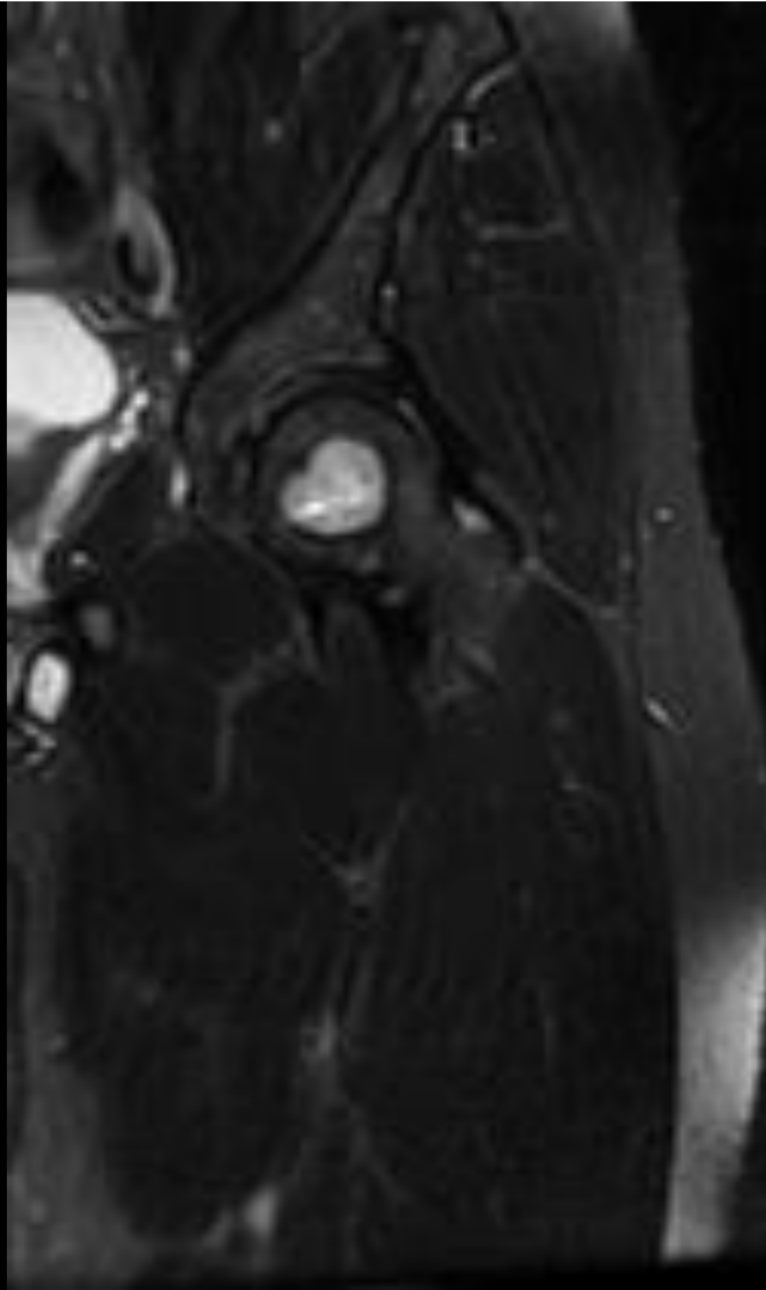
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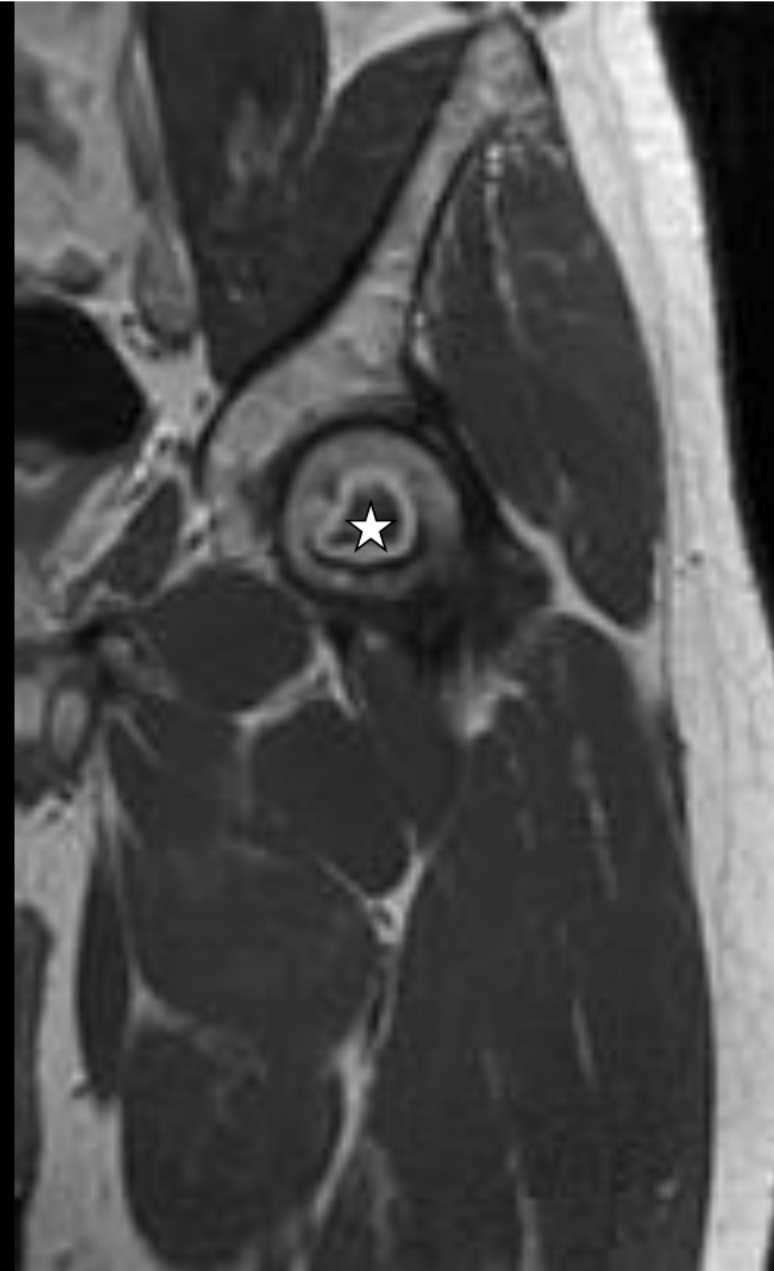
Coronal T1FS +C



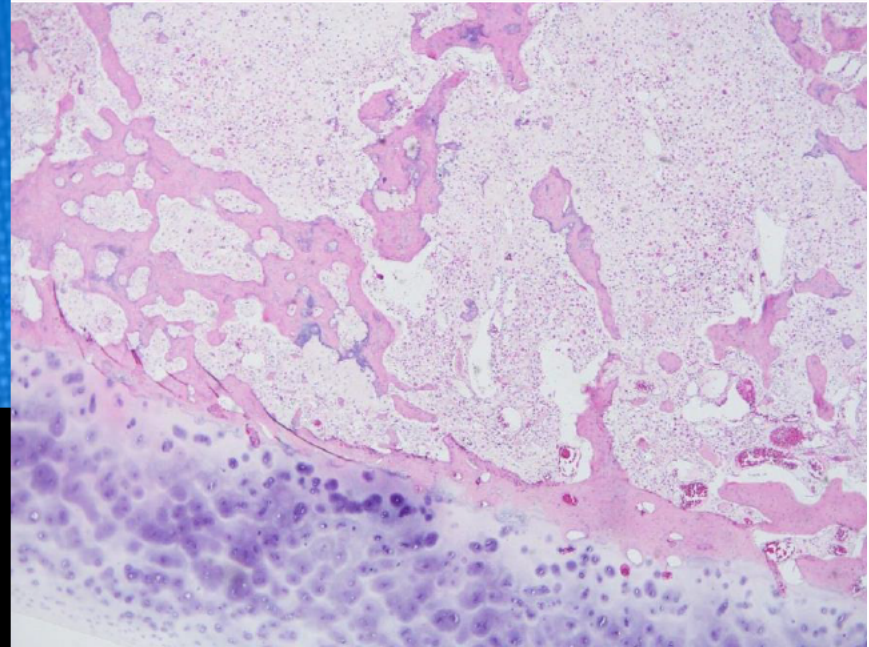
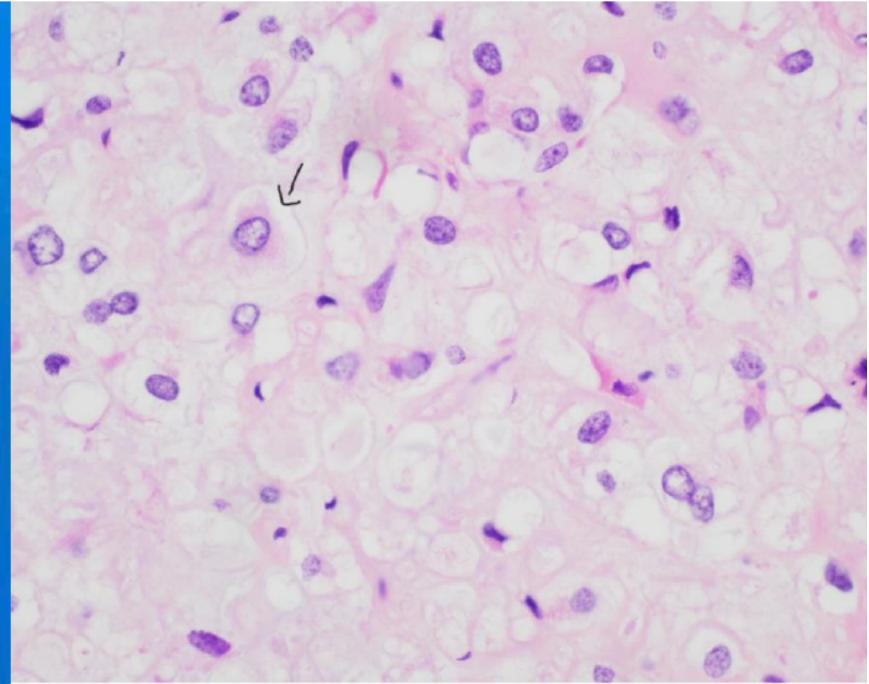
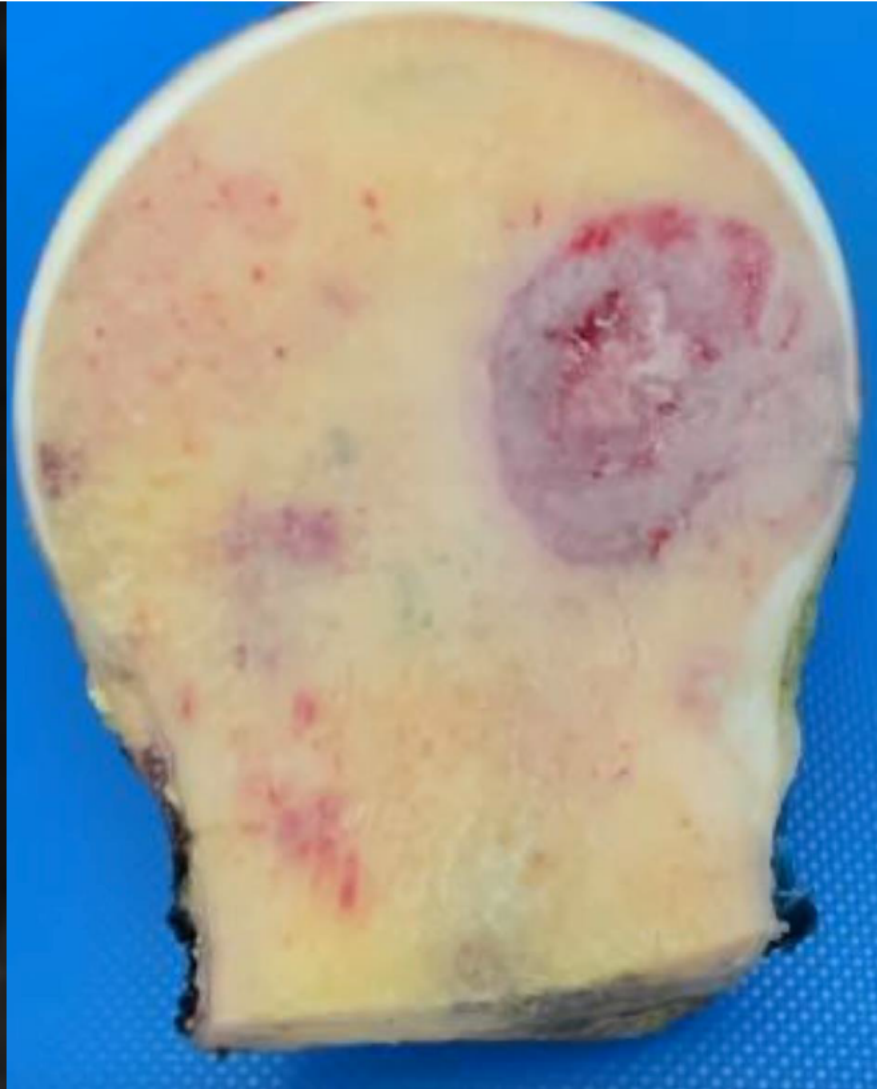
Coronal T1



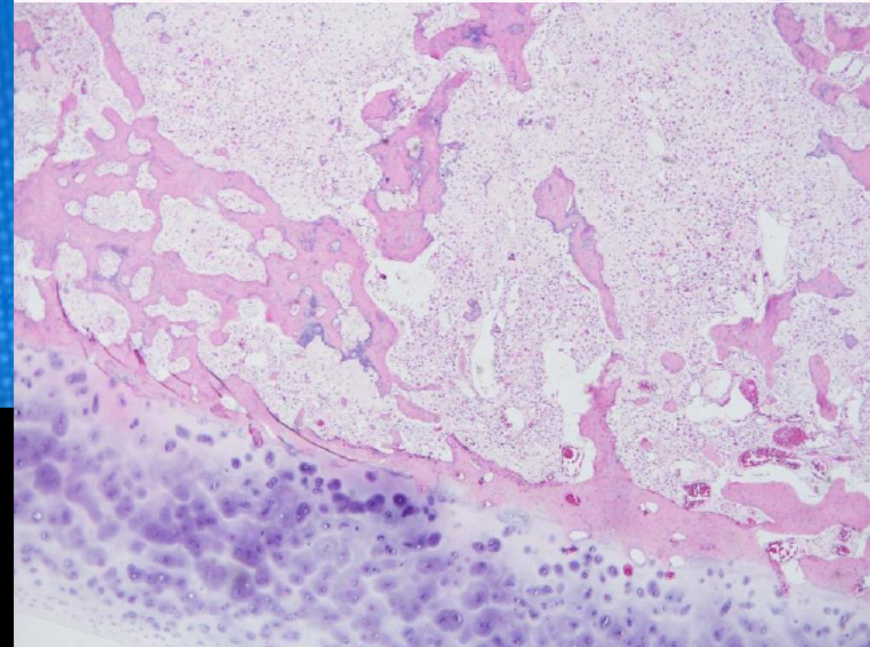
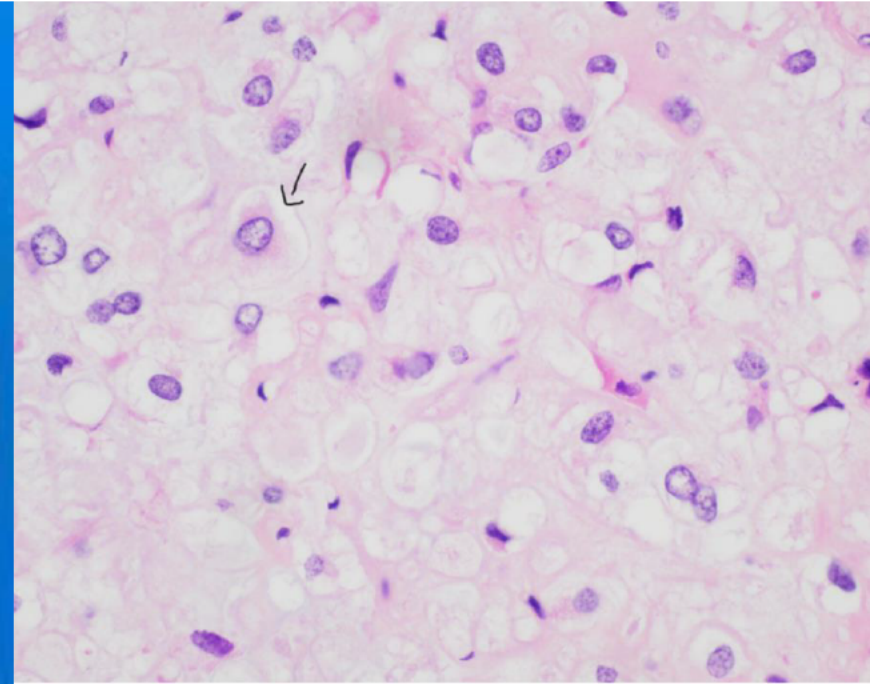
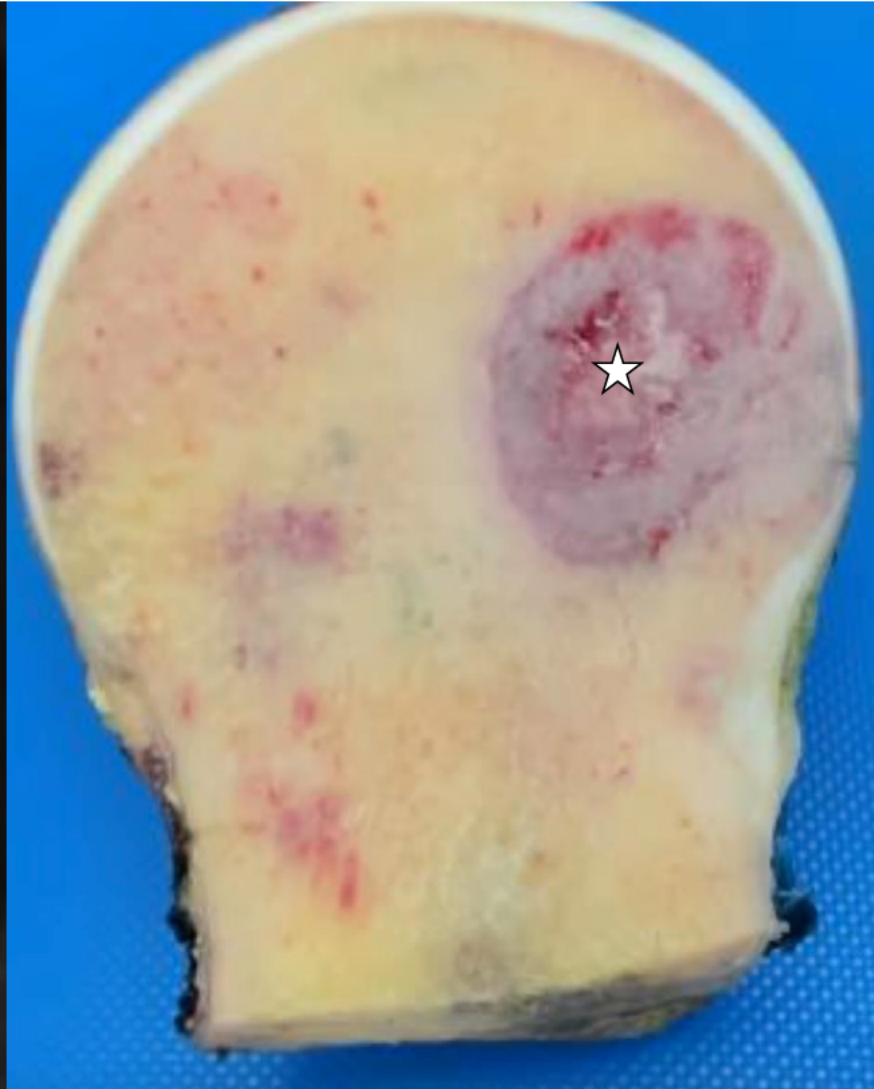
Coronal T2FS



Coronal T1FS +C



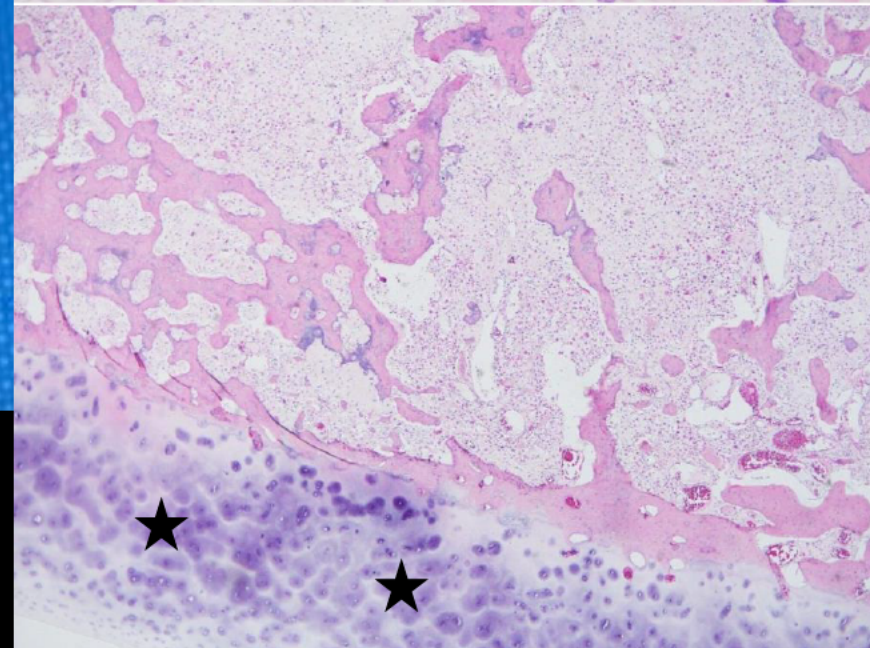
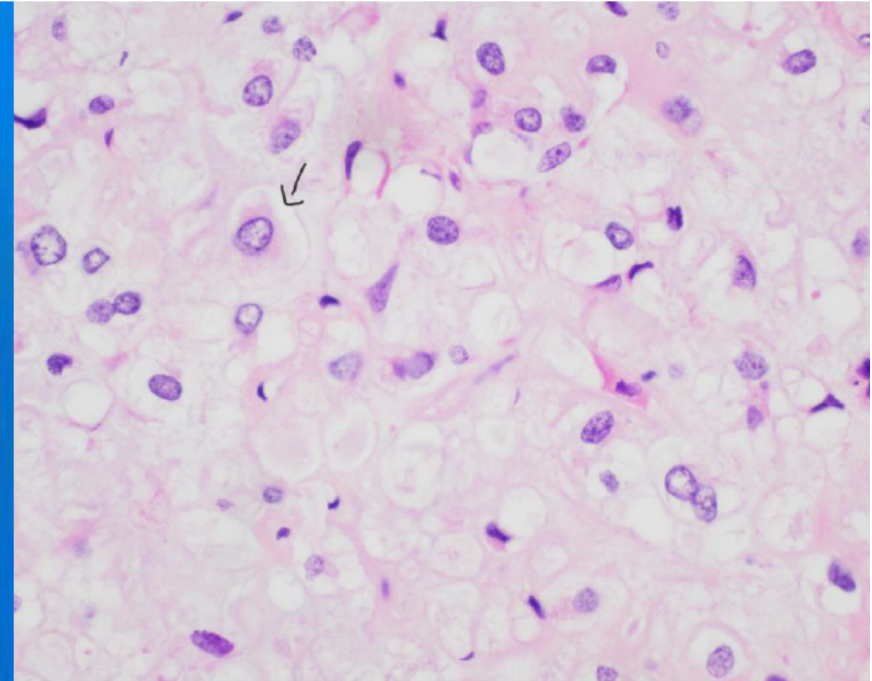
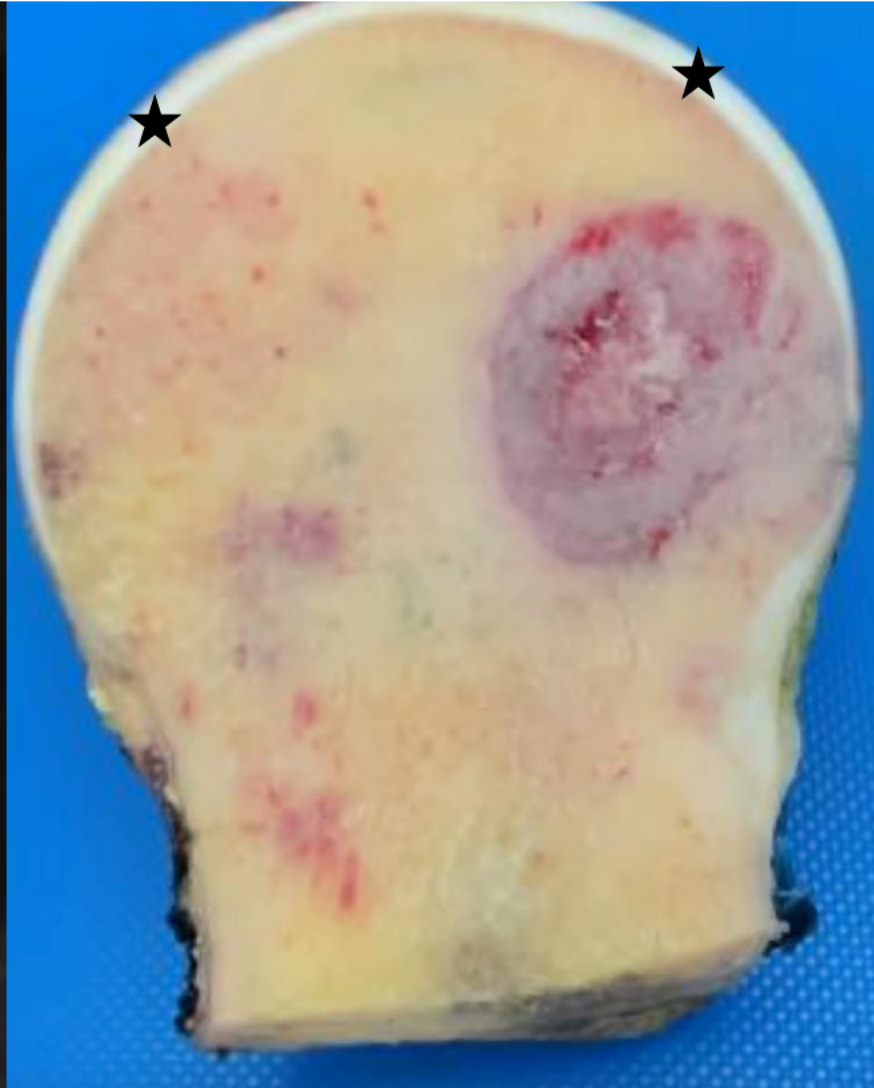
Sagittal T2FS

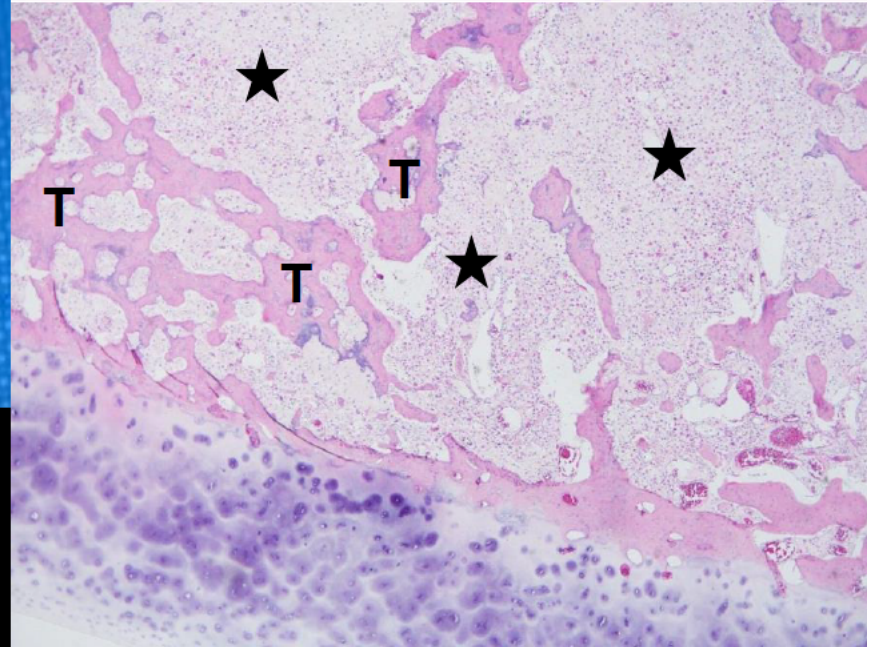
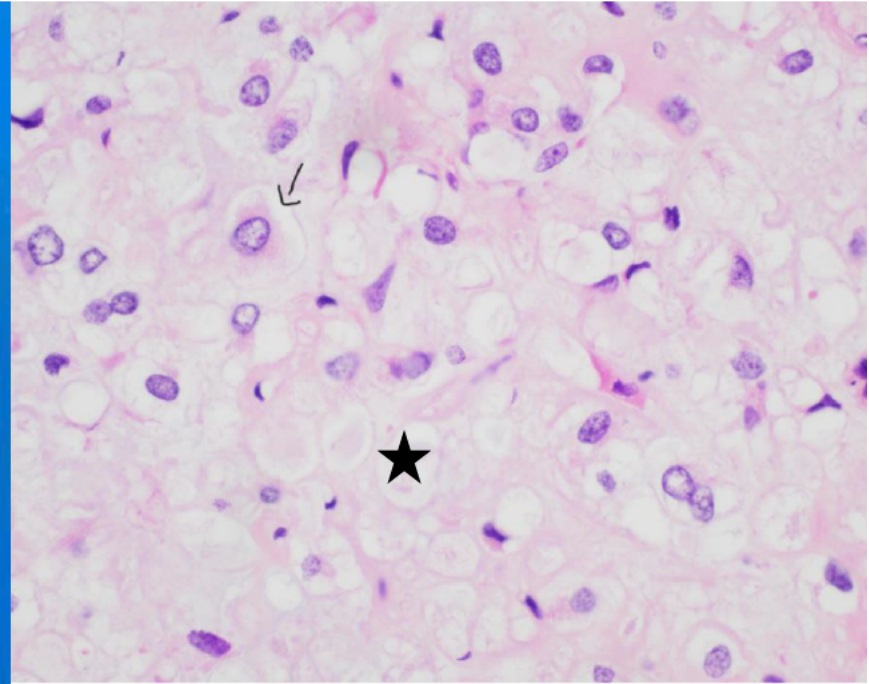
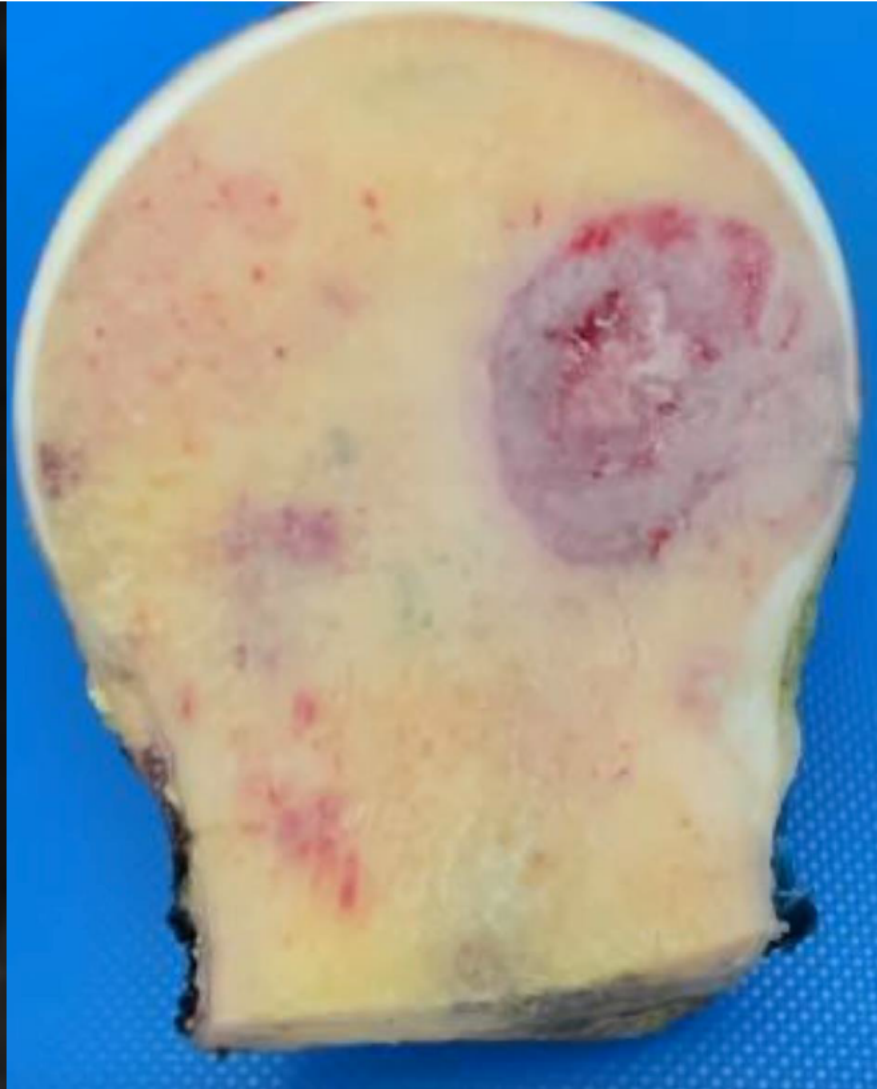


Sagittal T2FS

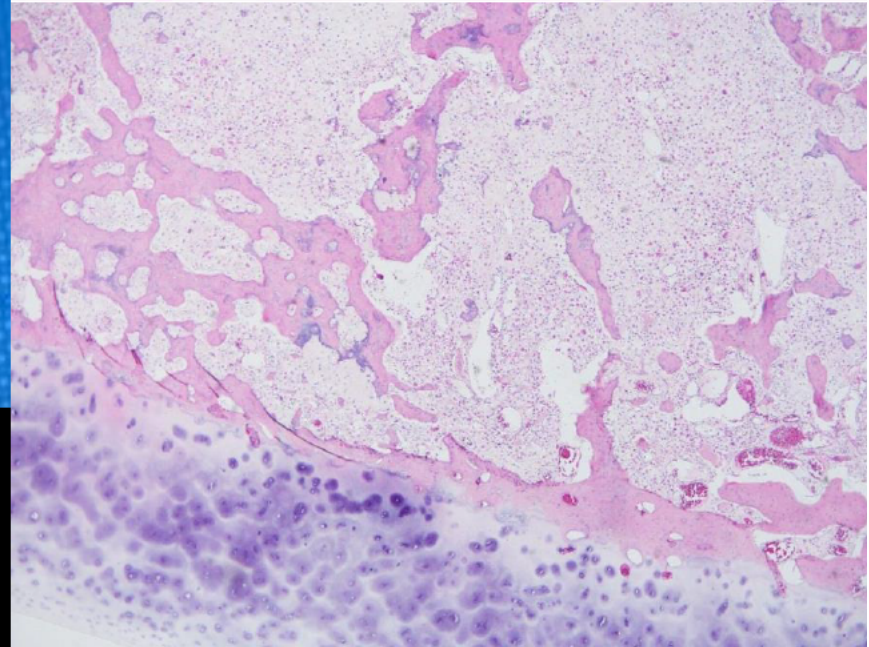
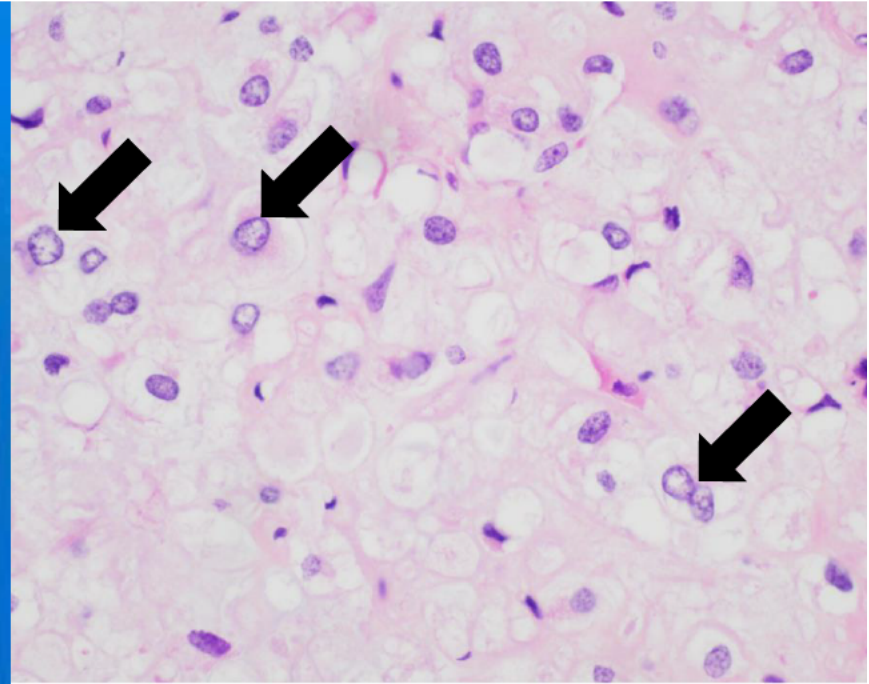
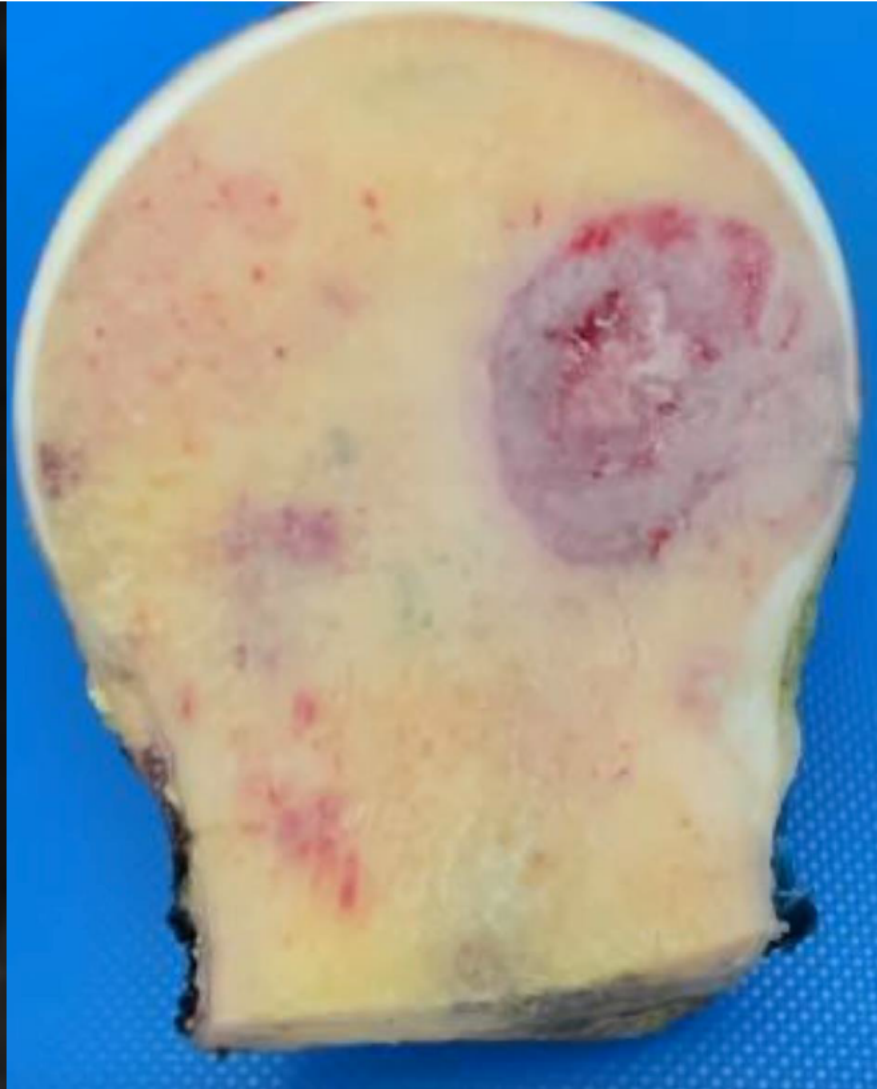


Sagittal T2FS





Sagittal T2FS



Sagittal T2FS

Clear Cell Chondrosarcoma

Salman Zafar

Geisinger Commonwealth School of Medicine

Danville, PA

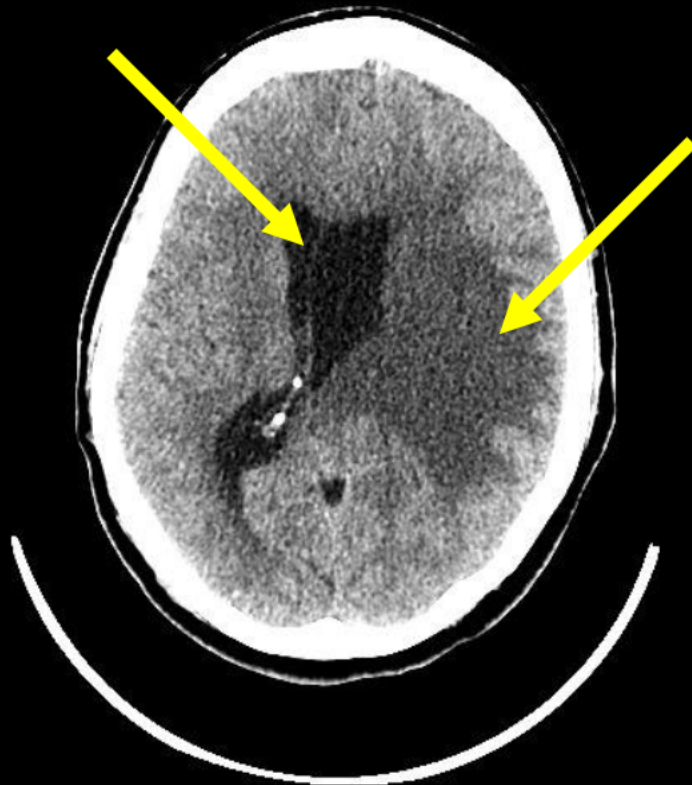


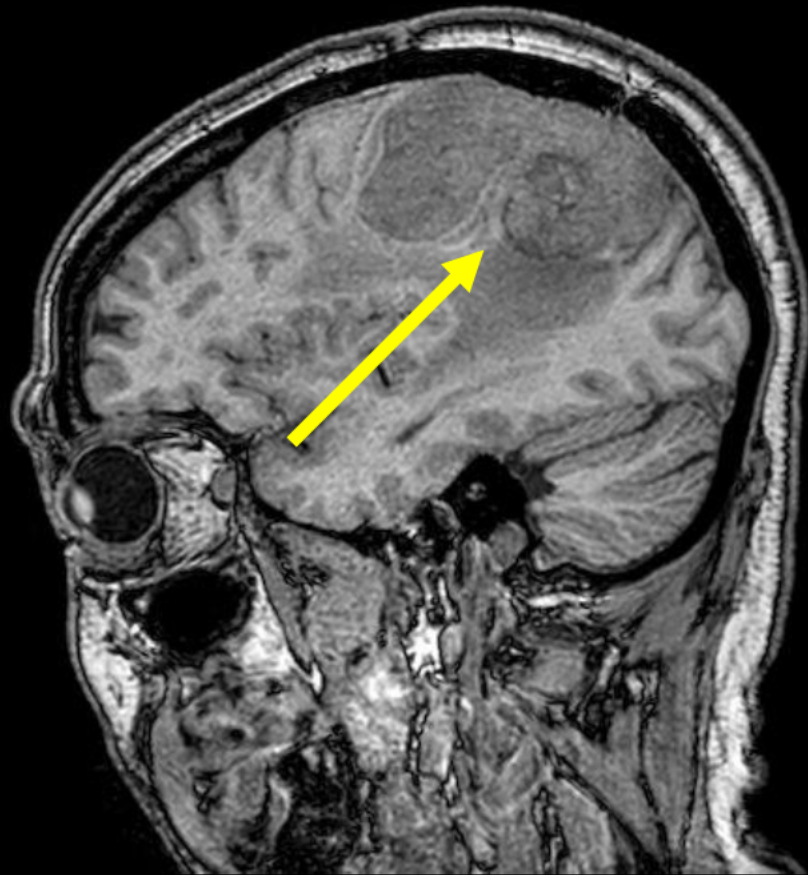
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Neuroradiology Best Case

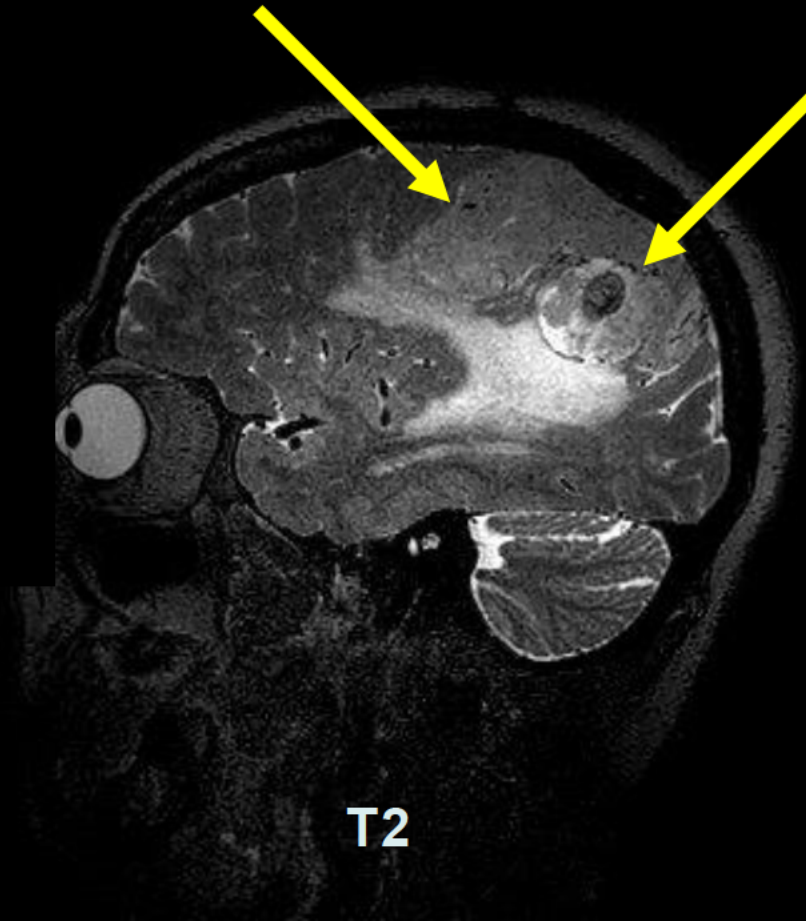


60 y/o F with PMH of L parietal meningioma s/p resection (2008), RCC s/p R nephrectomy (2016), R breast IDC s/p lumpectomy and radiation (2017), presents with cognitive deficits, R hand weakness

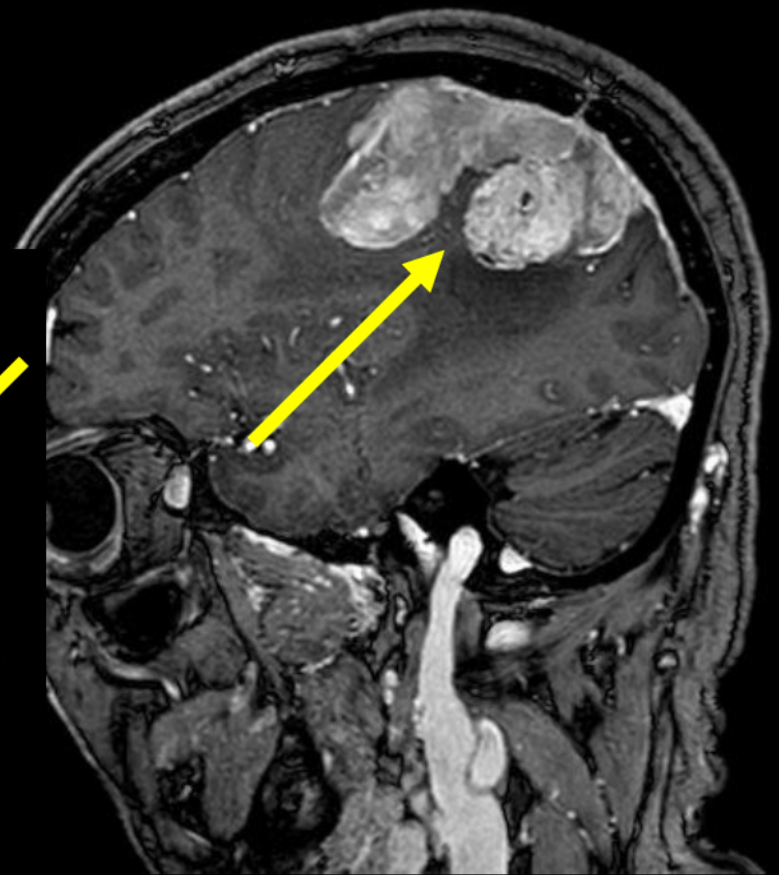




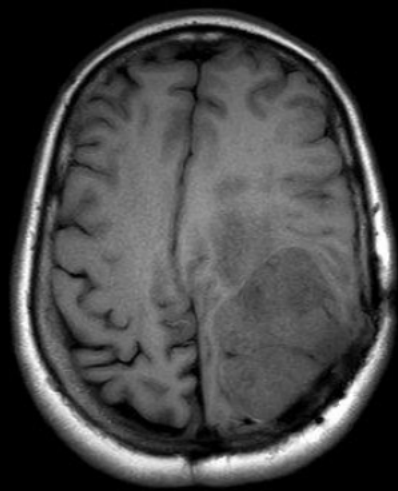
T1



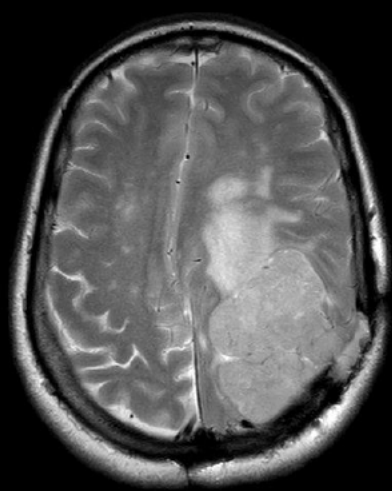
T2



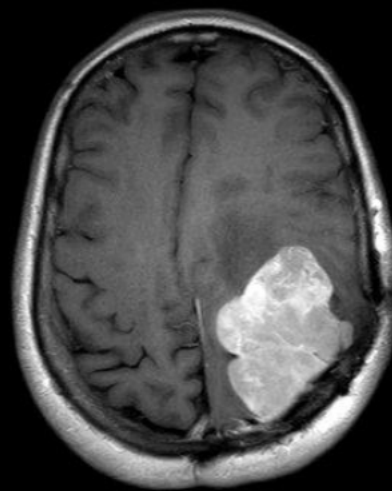
PG



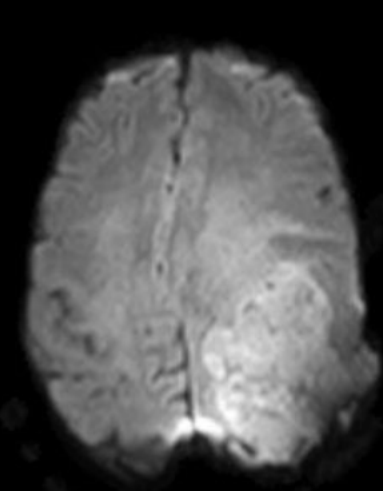
T1



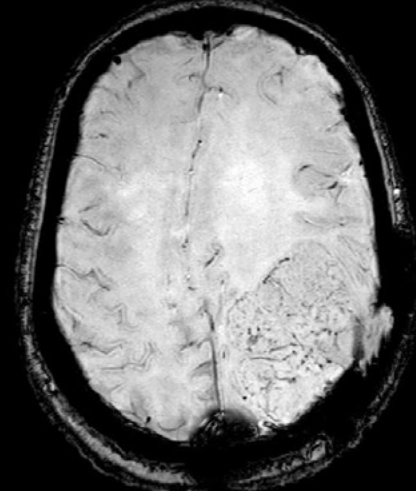
T2



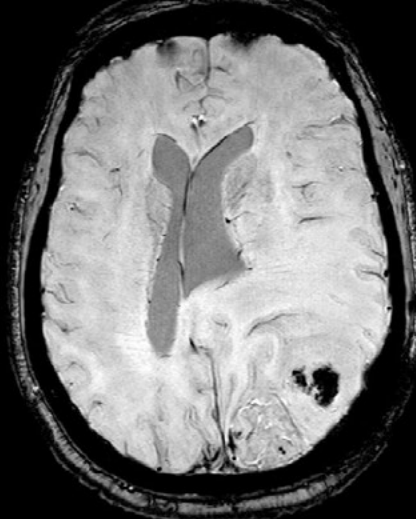
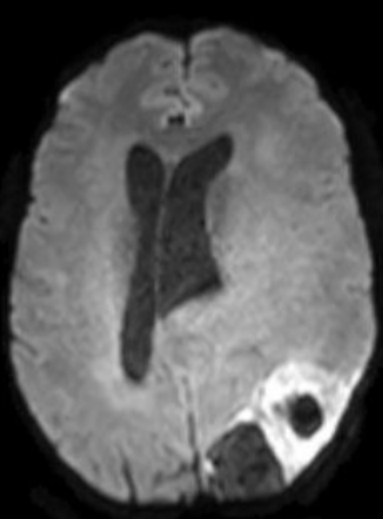
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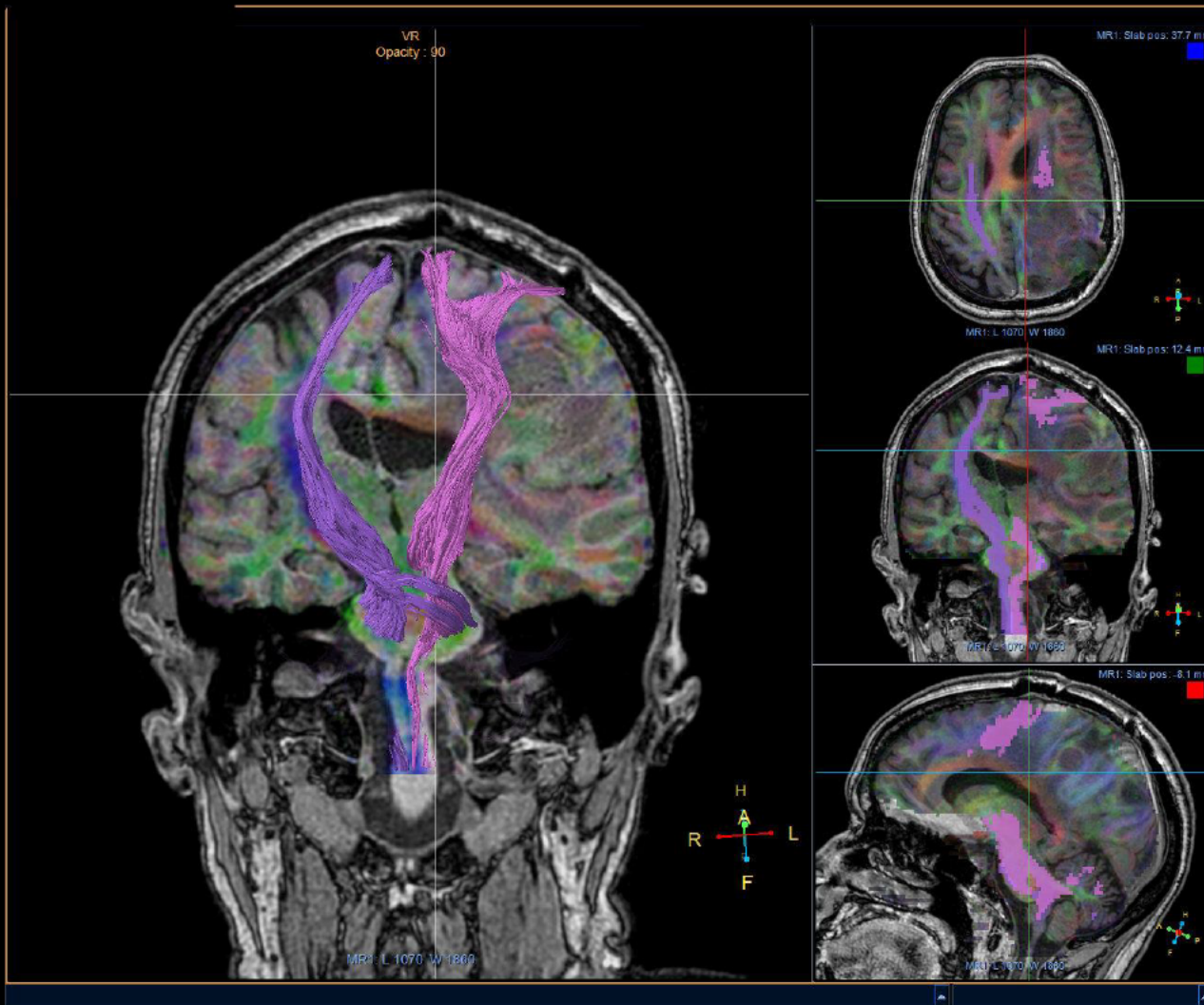
DWI



SWI

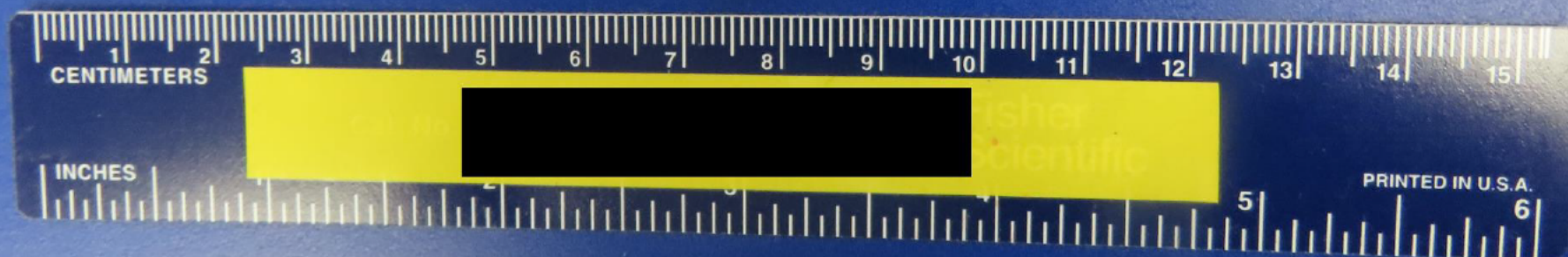


Preoperative evaluation: “Doctor, do you think this is a recurrent meningioma or a dural metastasis?”



more rubbery
component

more bloody
component



AIR

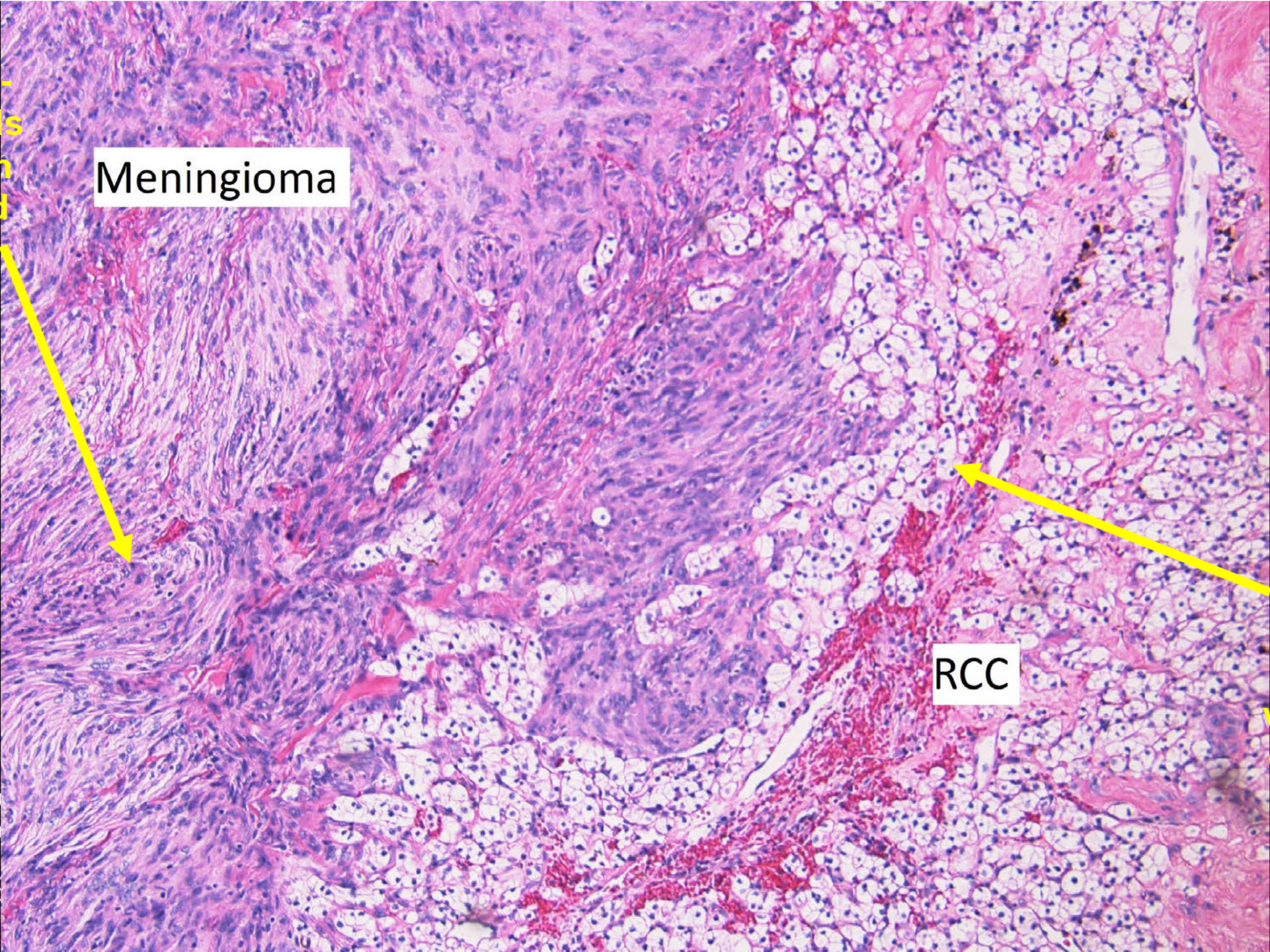
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epithelioid-
spindle cells
arranged in
whorls and
fascicles

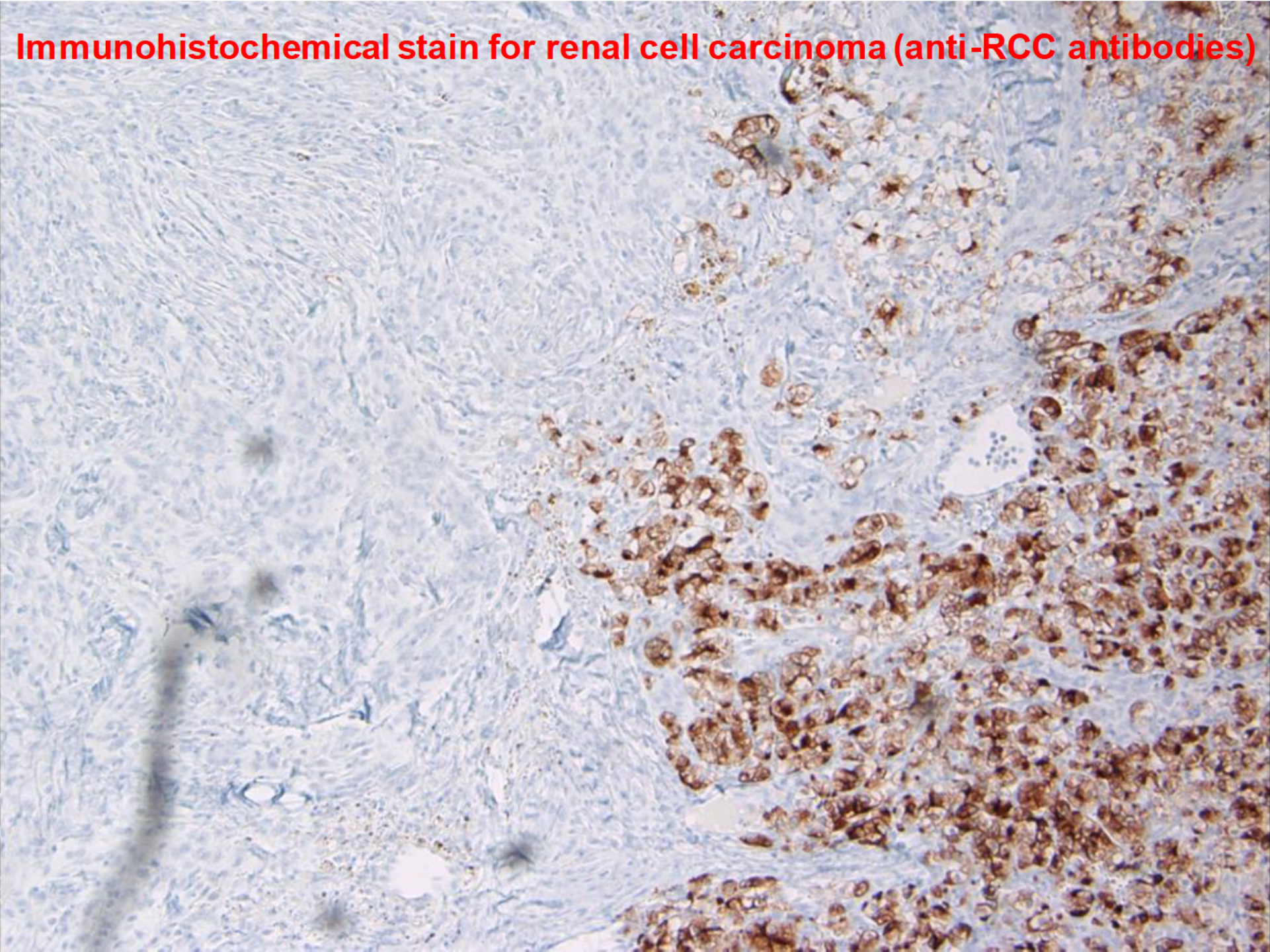
Meningioma

RCC

epithelial
clear cells
with pale
vacuolated
cytoplasm



Immunohistochemical stain for renal cell carcinoma (anti-RCC antibodies)



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Microscopic Description

The intraoperative frozen section diagnosis is confirmed on permanent sections.

Sections of specimen A show a piece of meningioma, predominantly of fibrous type pattern.

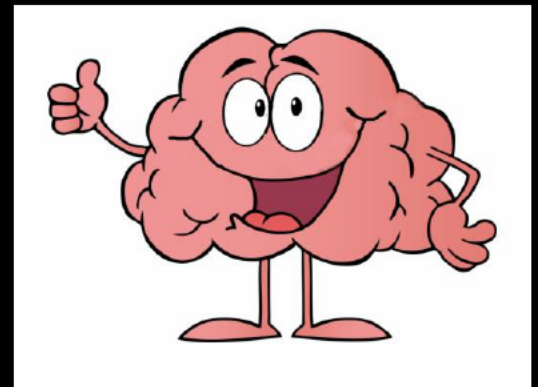
Sections of specimen B shows a collision tumor with a metastatic clear cell carcinoma surrounded by meningioma, with mixed fibrous and meningothelial type growth patterns. Focally, there is crowding of the meningioma cells and mitotic indices of greater than 4 per 10 high fields are identified. The immunostain for proliferation marker Ki67 shows focal hotspots within the meningioma with markedly elevated numbers of labeled cells. Immunohistochemical stains show the clear cell component to be strongly positive for marker RCC. Both the clear cell and meningioma neoplasms are positively stained for epithelial membrane antigen.

Collision tumor of metastatic renal clear cell carcinoma, clear type, into atypical meningioma, WHO grade II

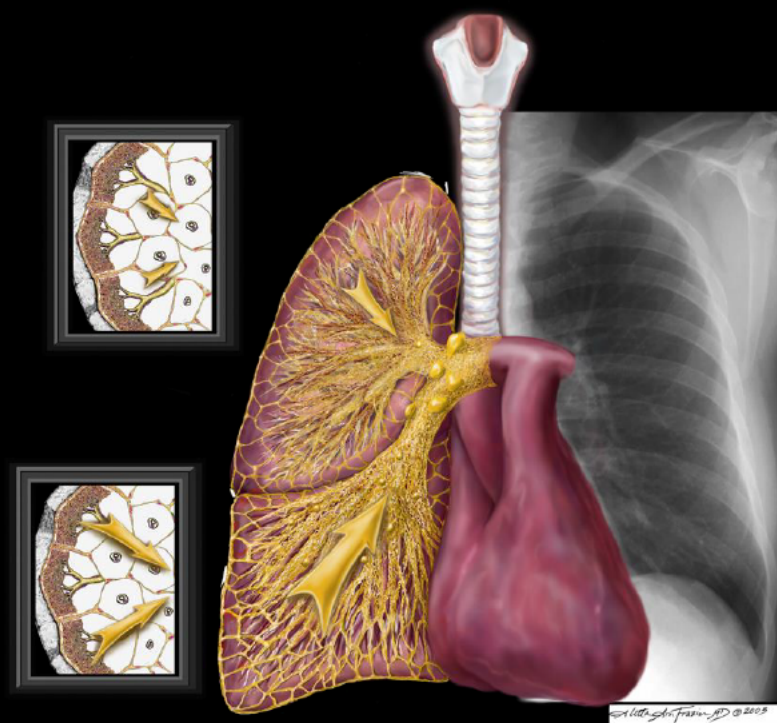
Derek Kim

Montefiore Medical Center

Bronx, New York



Pulmonary and Mediastinal Best Case

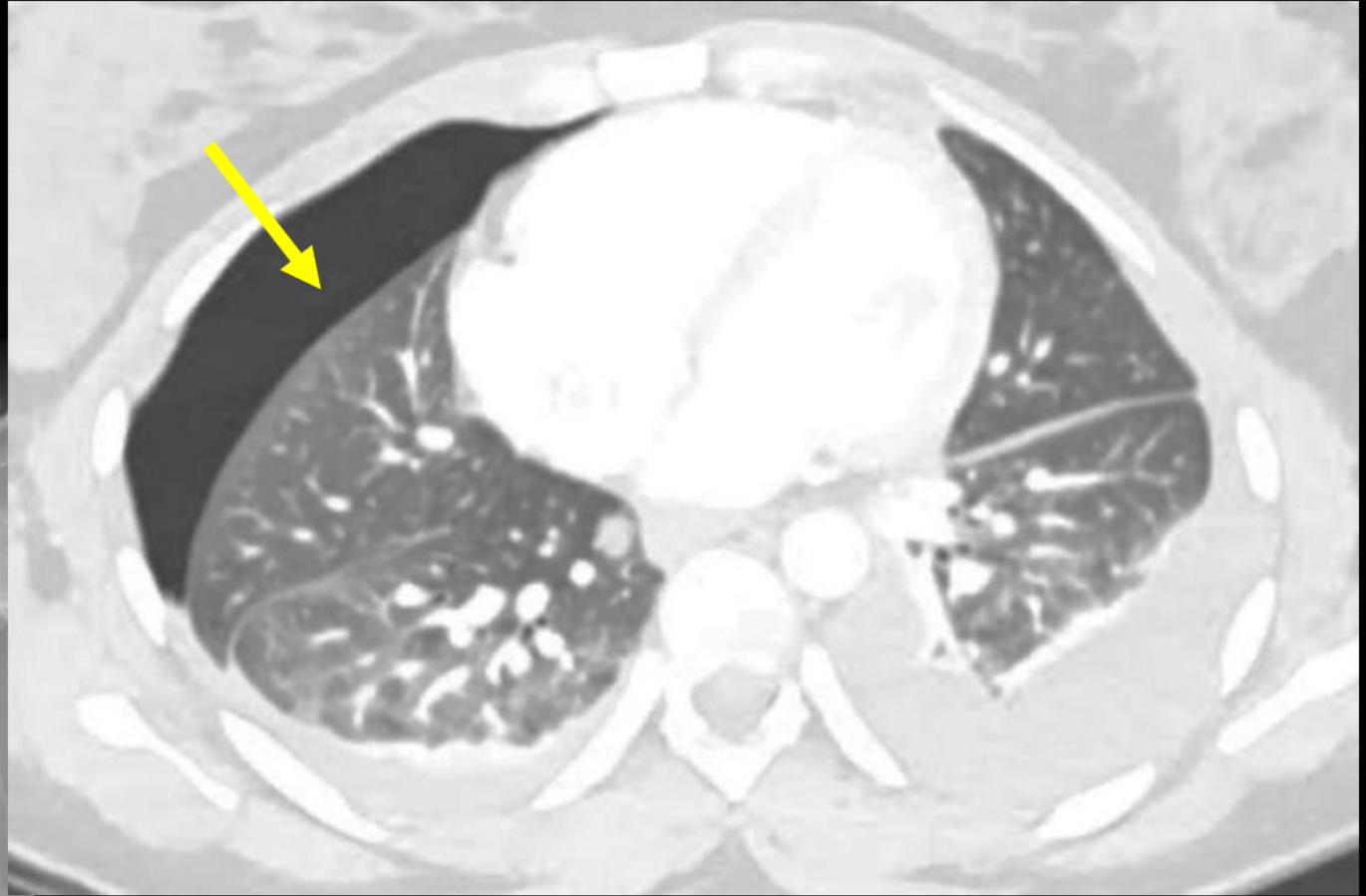
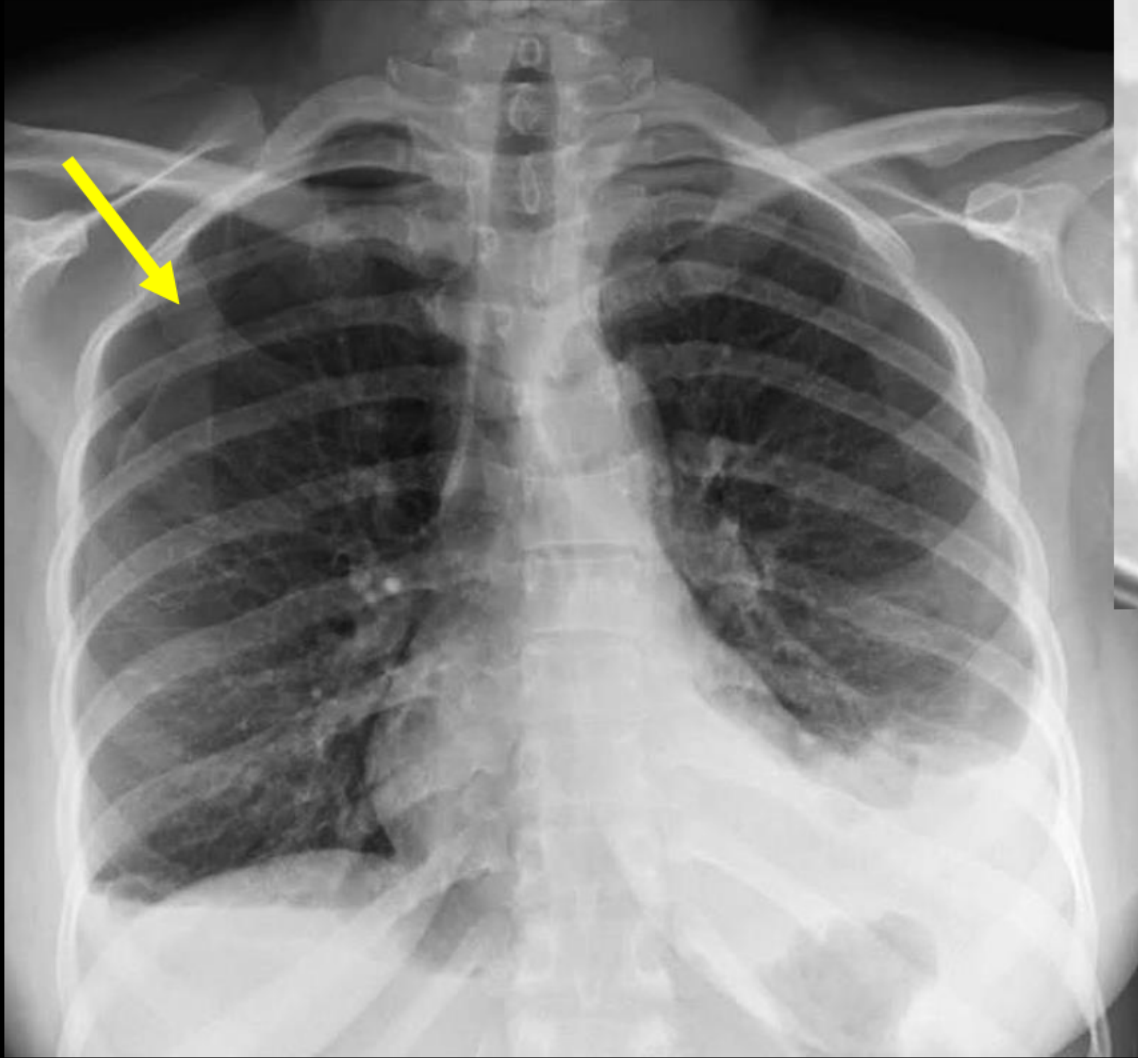


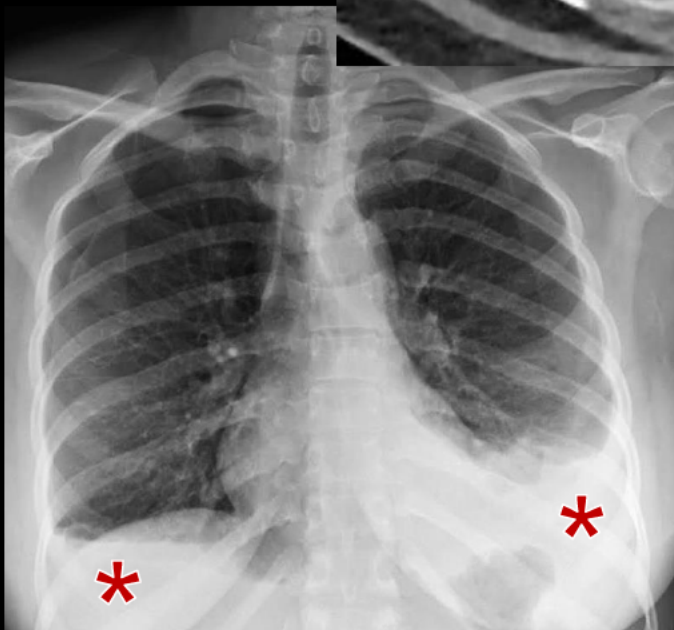
Clinical information

33-year-old female presents with two-day history of chest pain and shortness of breath, accompanied by pleuritic pain.

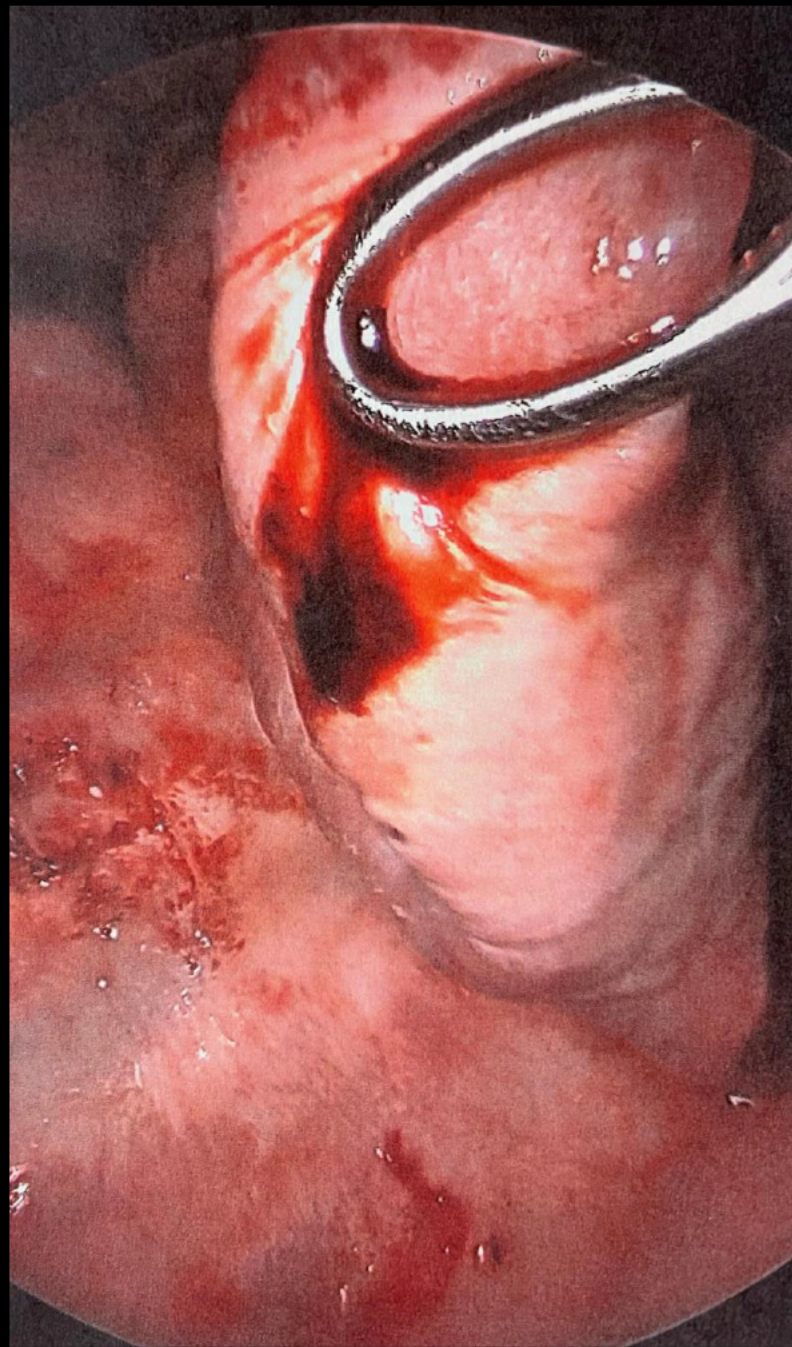


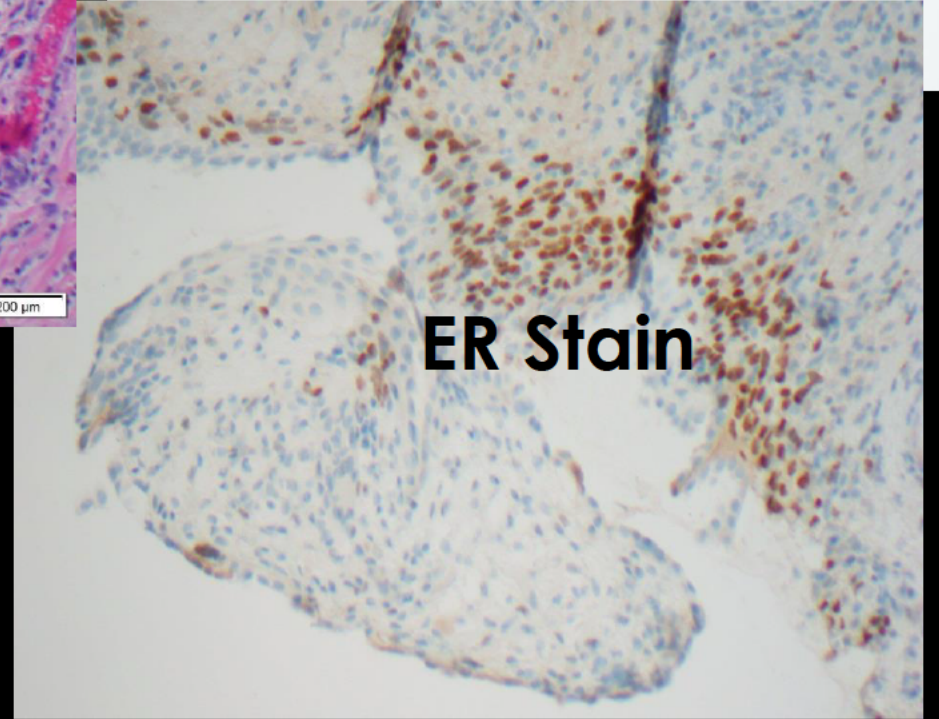
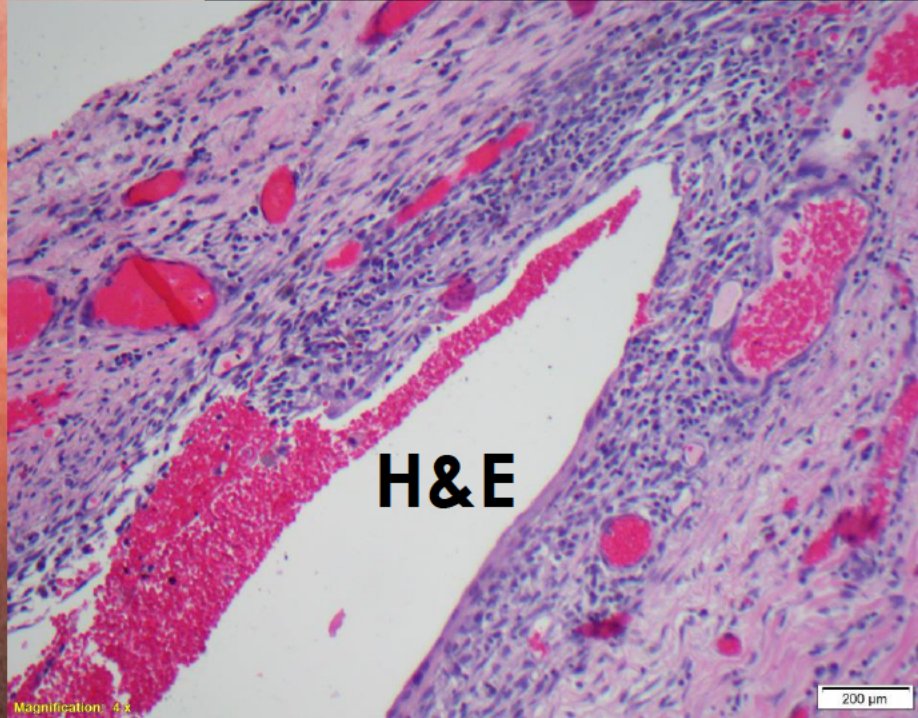
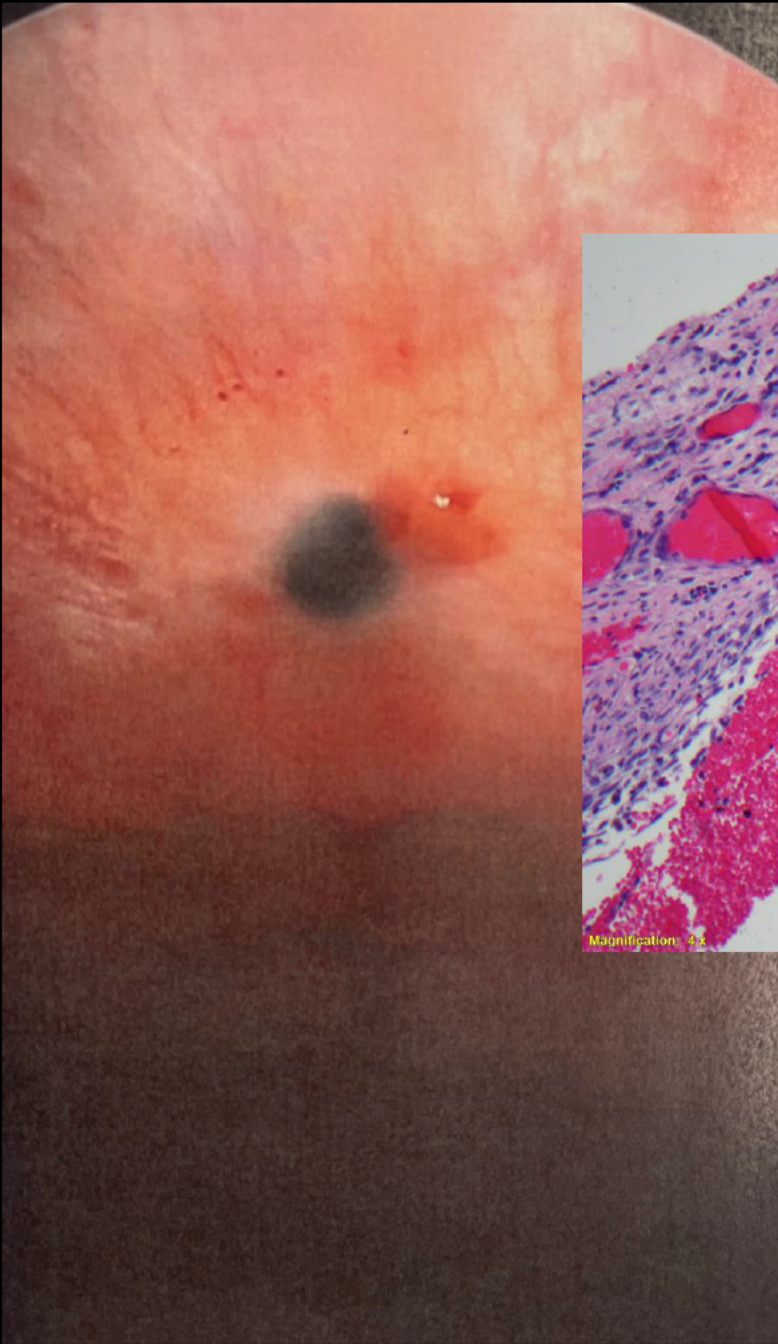


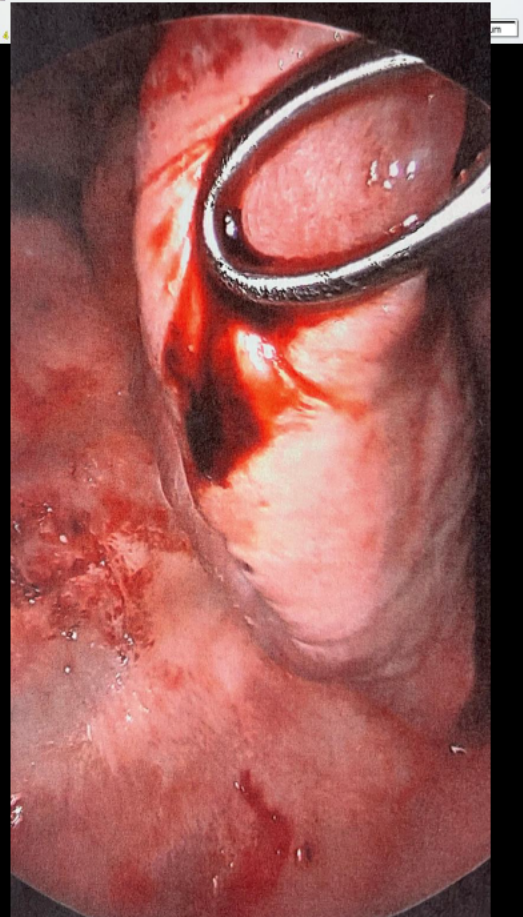
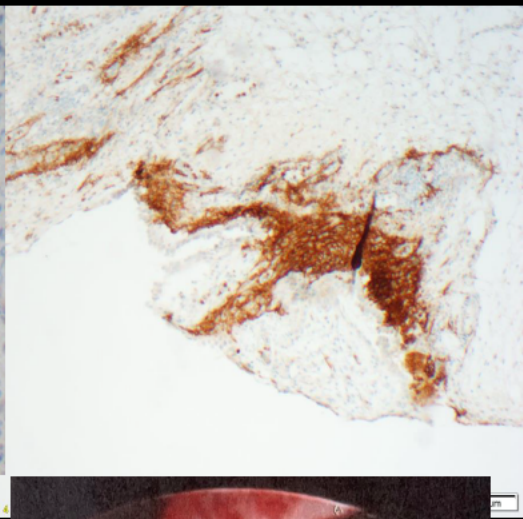
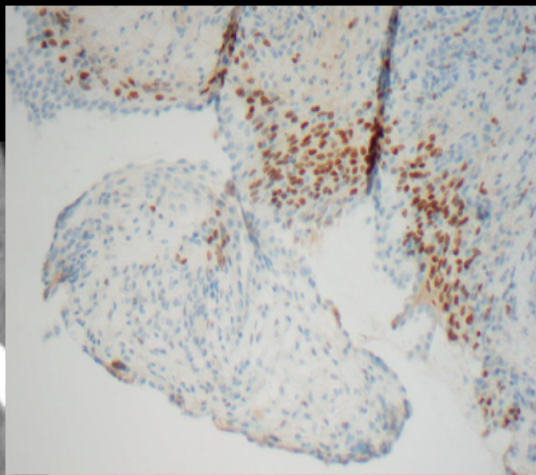












Catamenial Pneumothorax related to Pleural Endometriosis

Kara Demarco M.D.

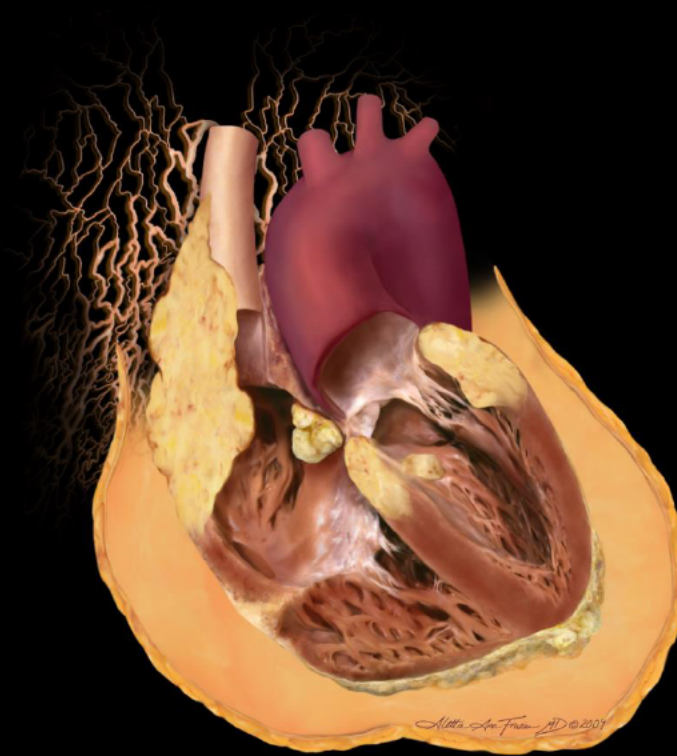
Naval Medical Center Portsmouth

Portsmouth, VA



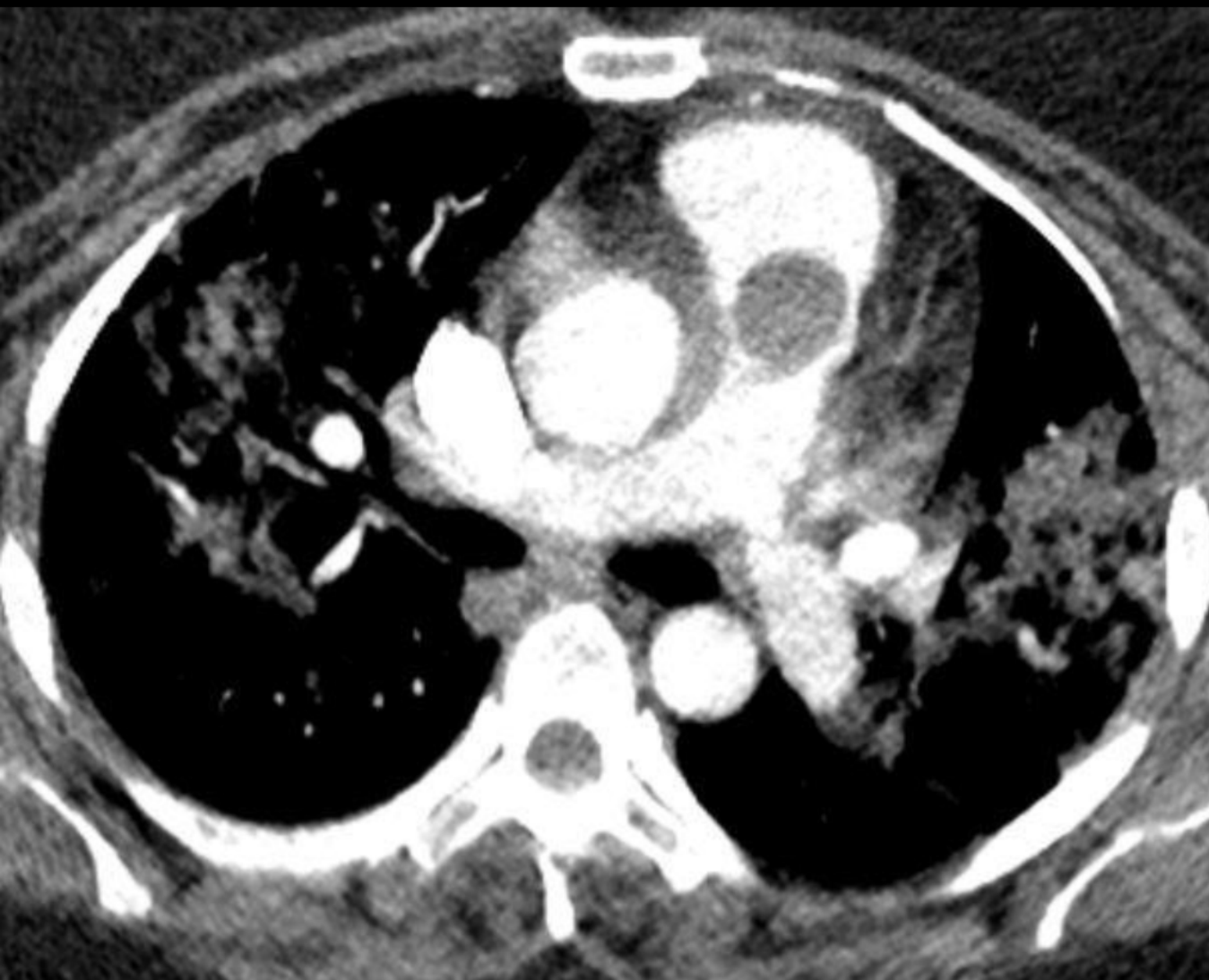
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Cardiovascular Best Case



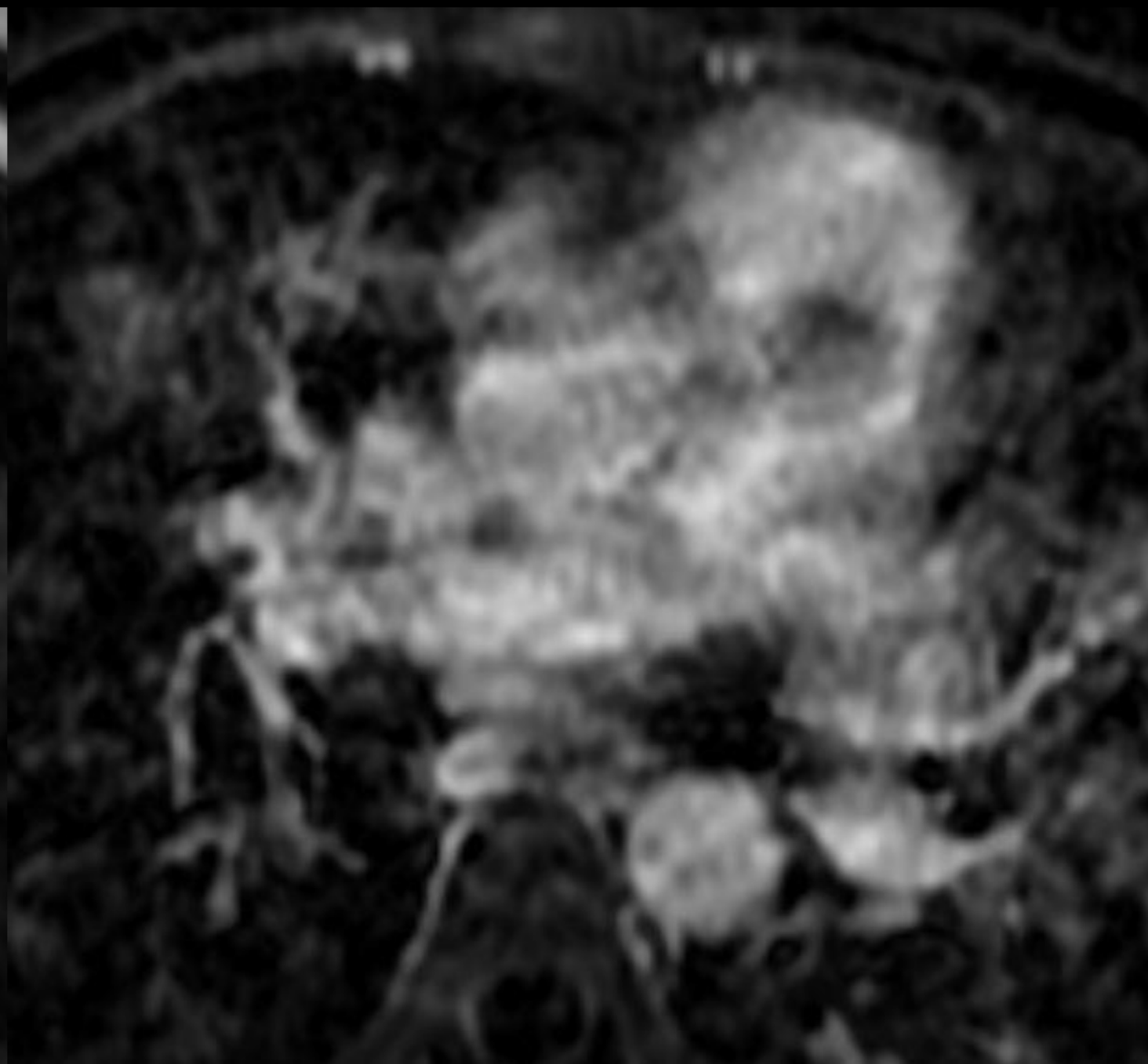
Clinical information

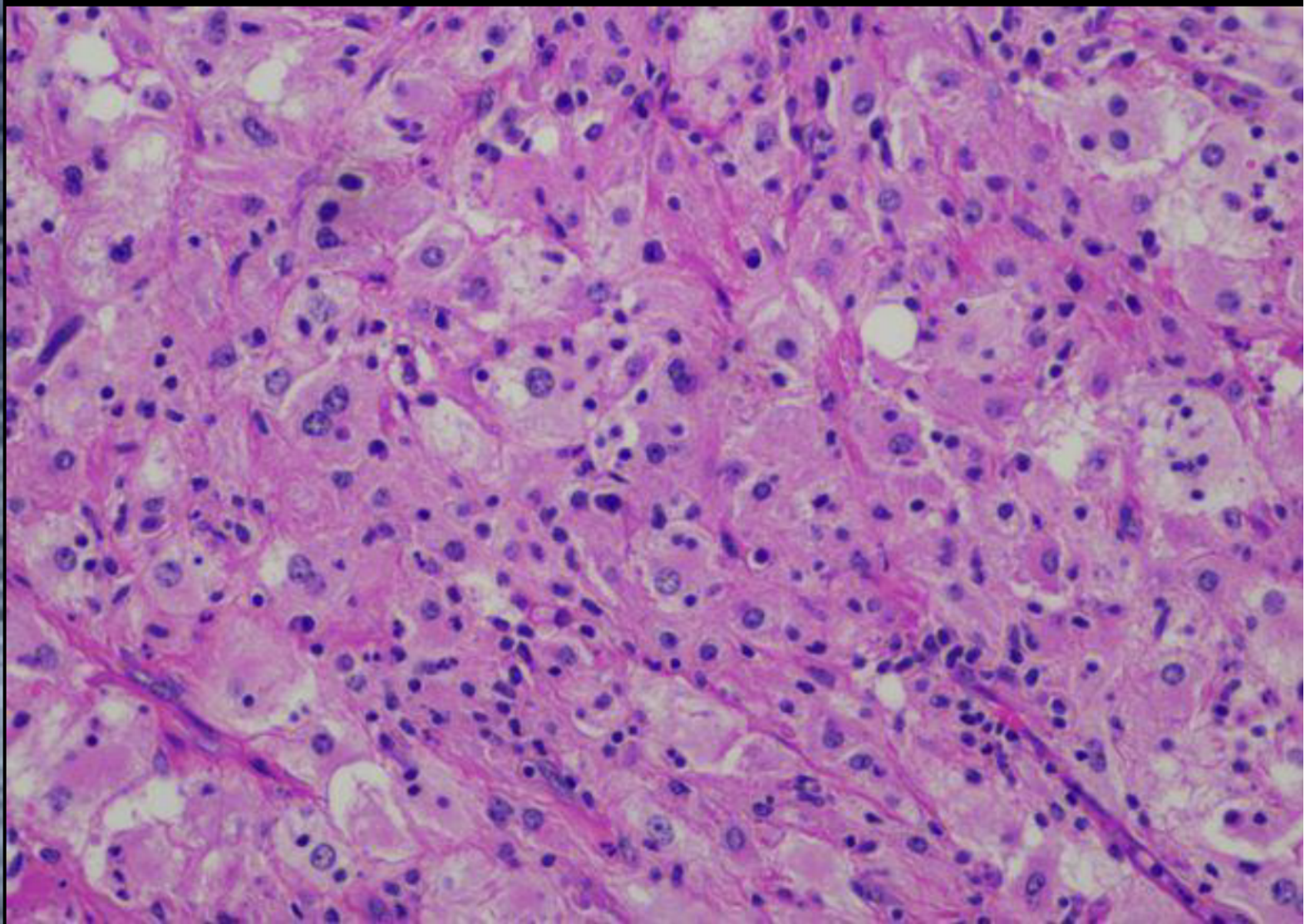
31 year old woman with chest tightness.

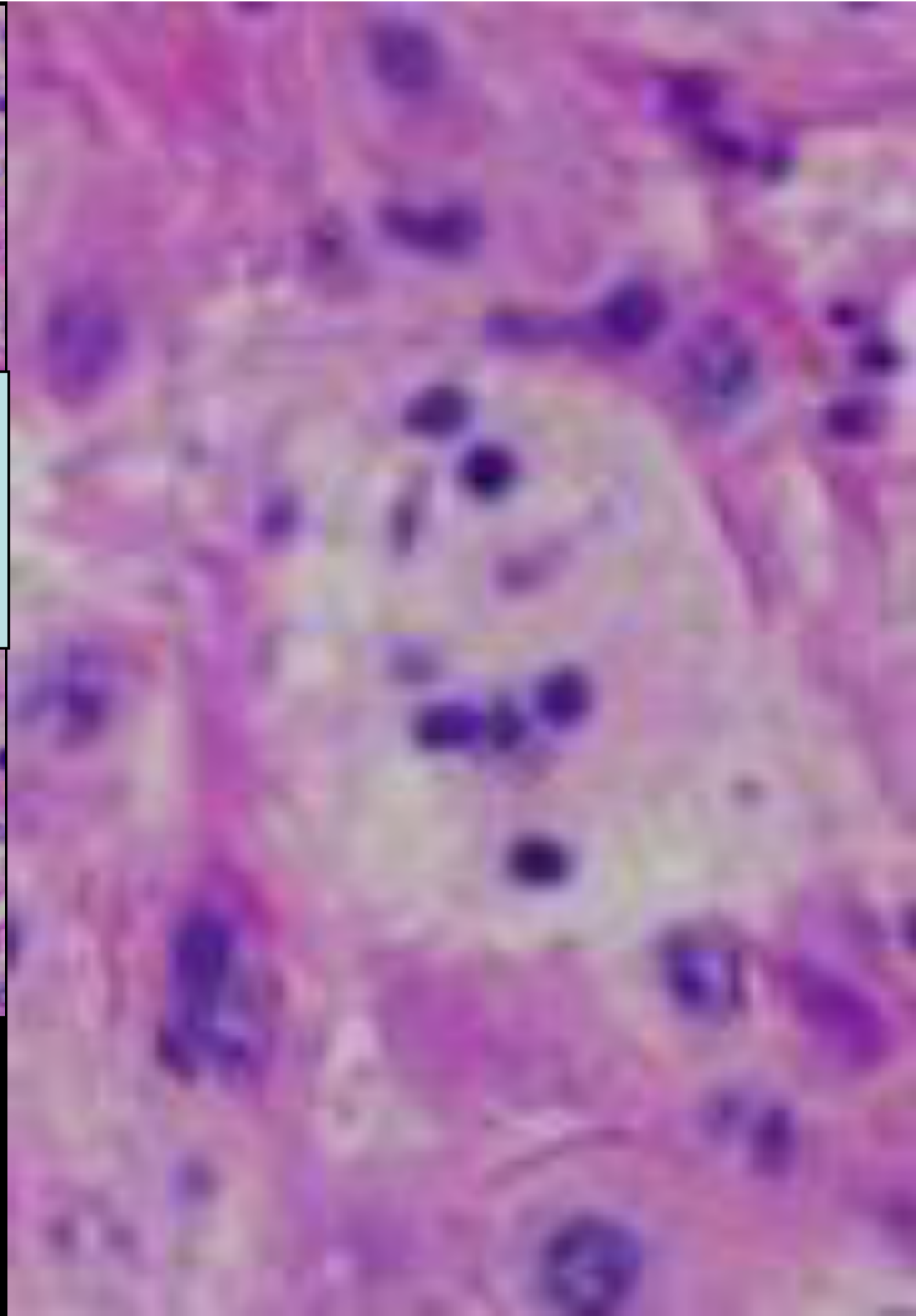
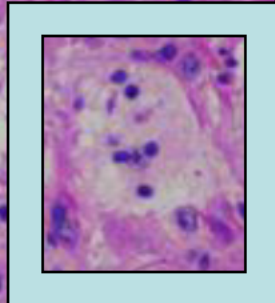
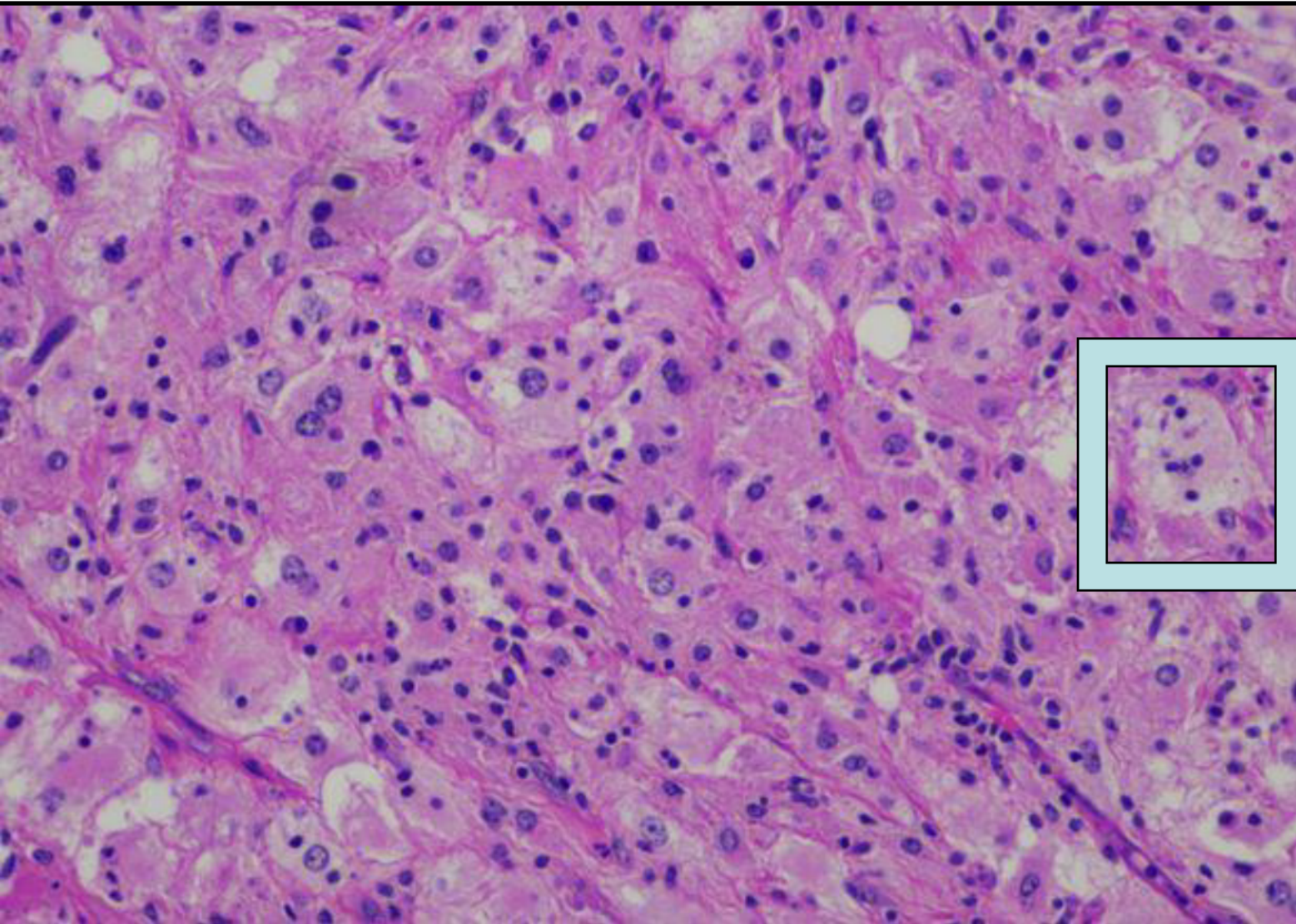


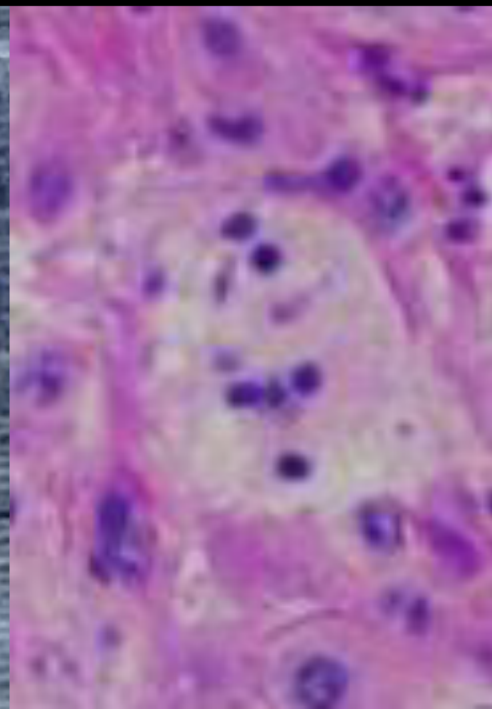
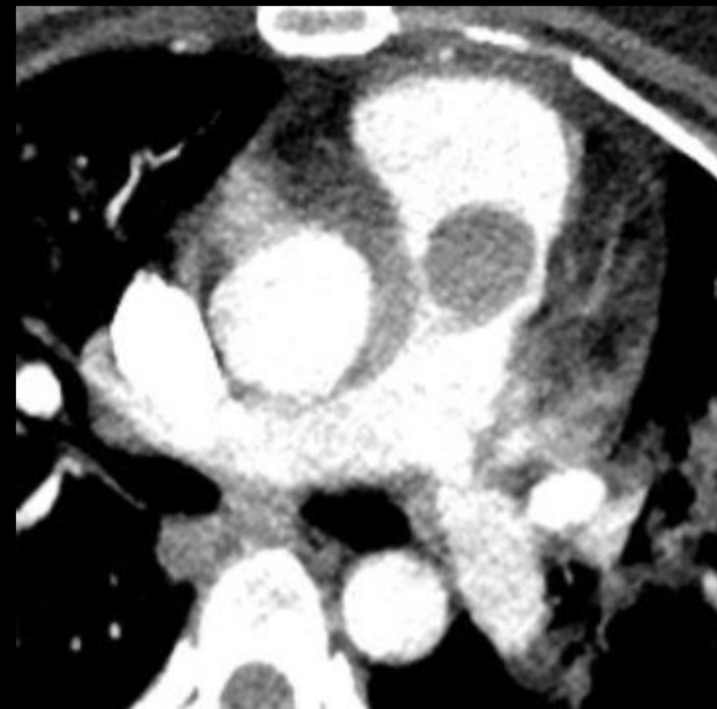
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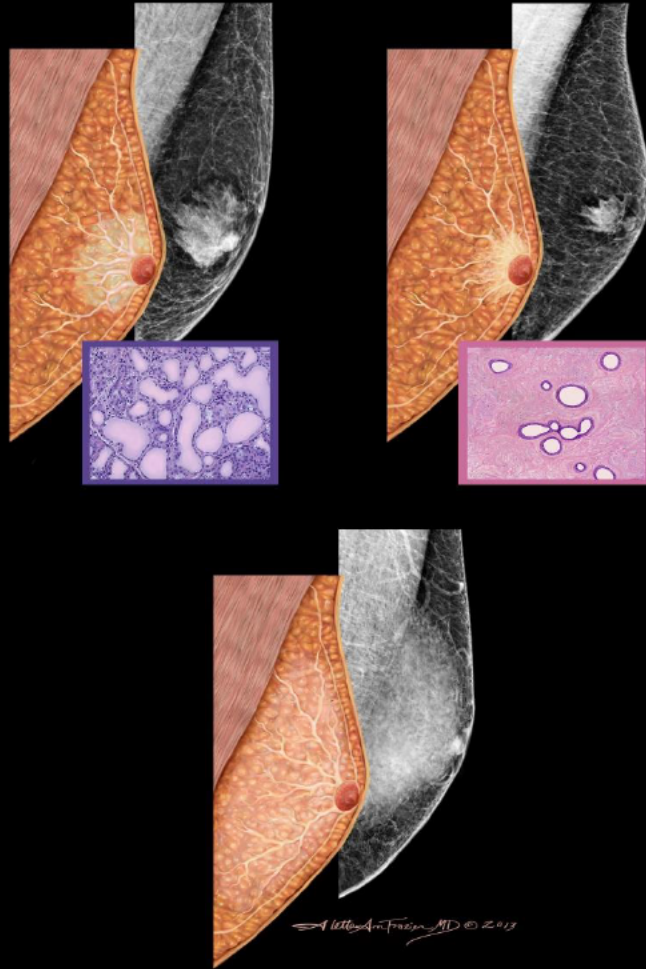




Rosai-Dorfman Disease (33838)

Dr. Ian Leopold
Temple University Hospital
Philadelphia, PA

Breast Best Case

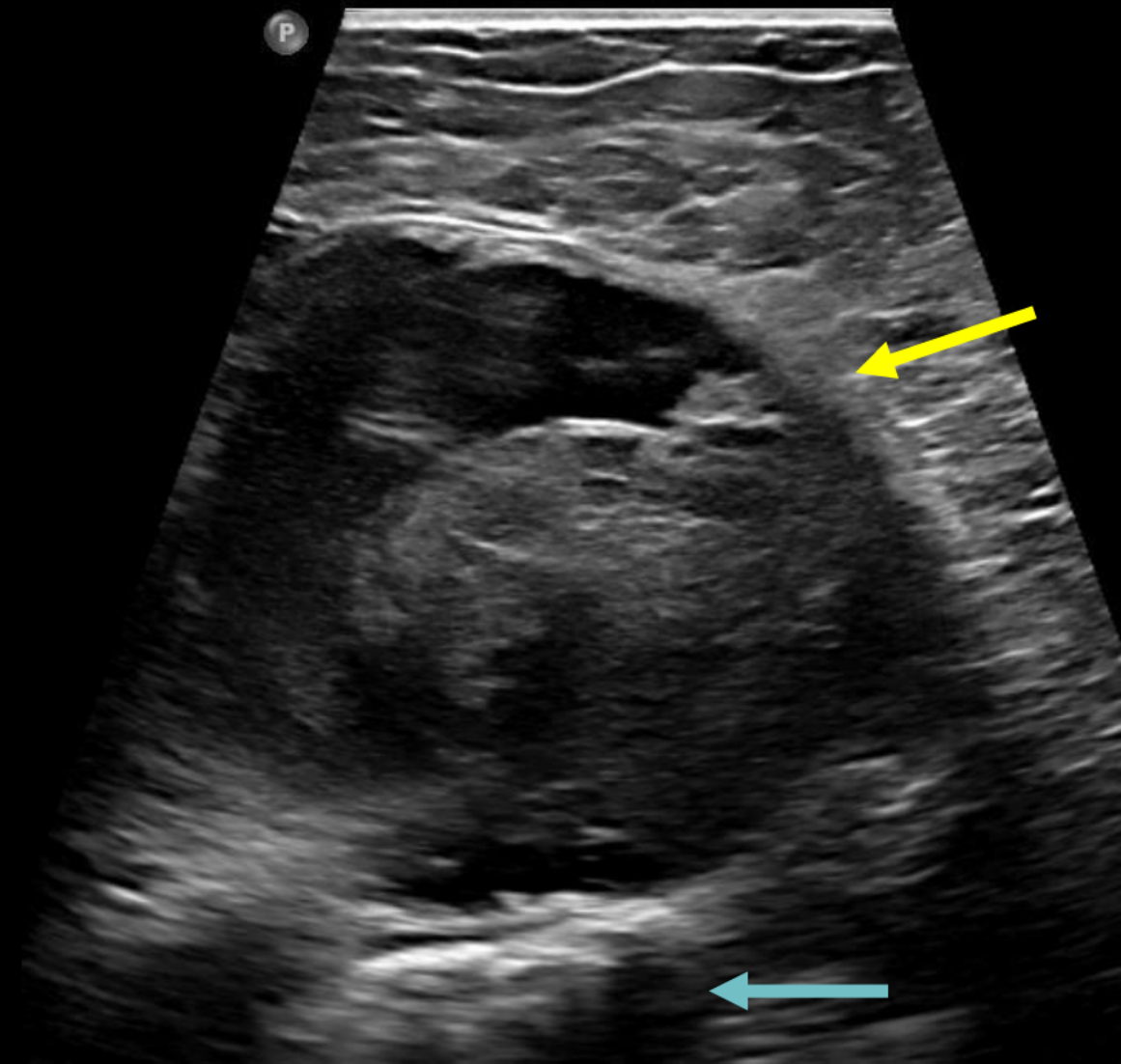
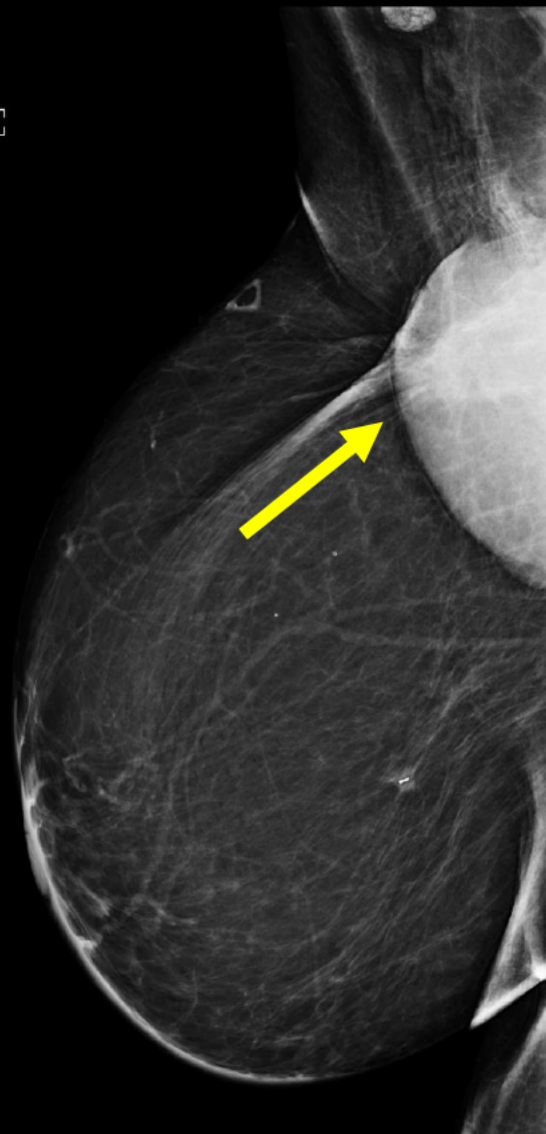


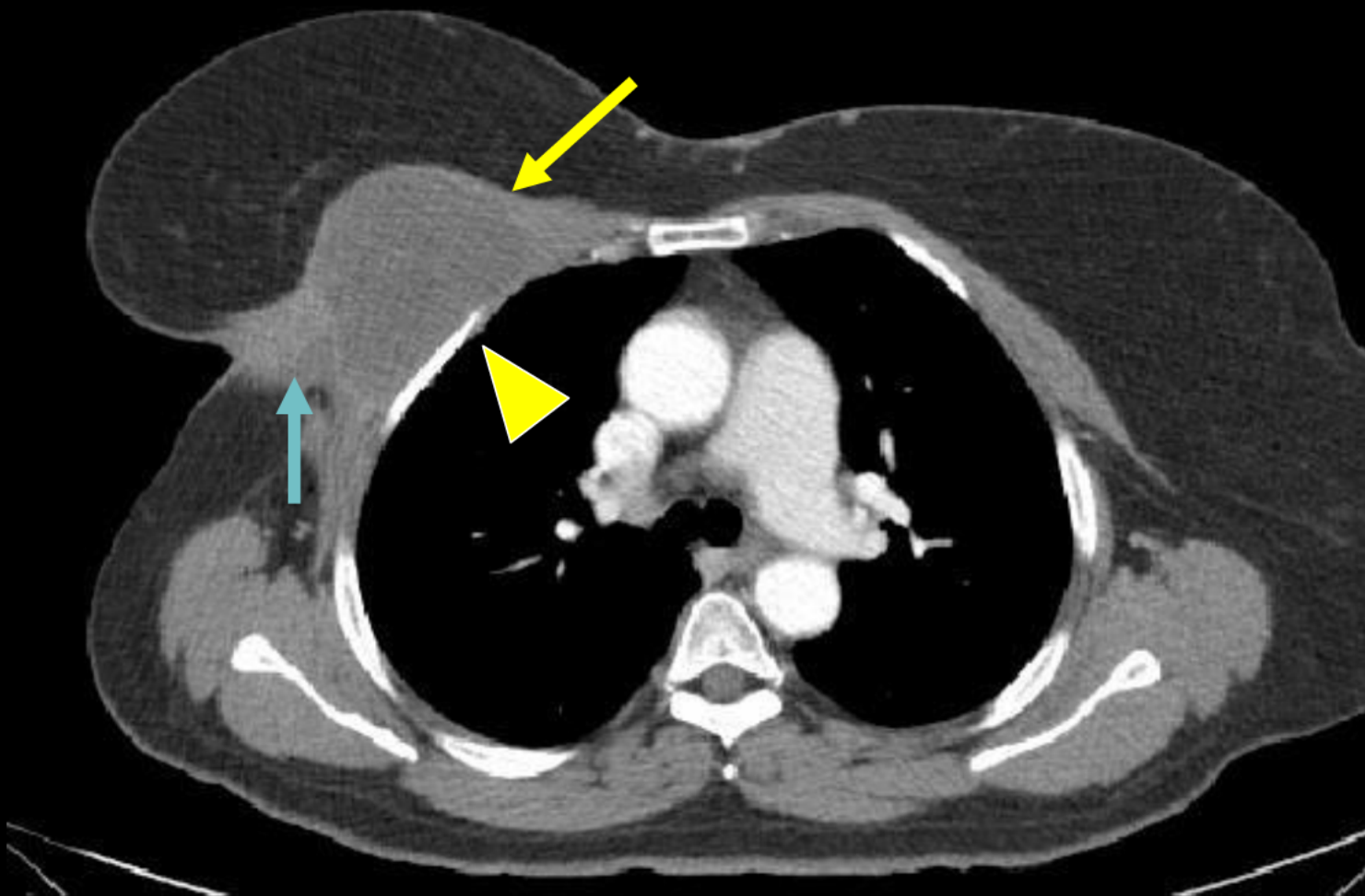
Clinical information

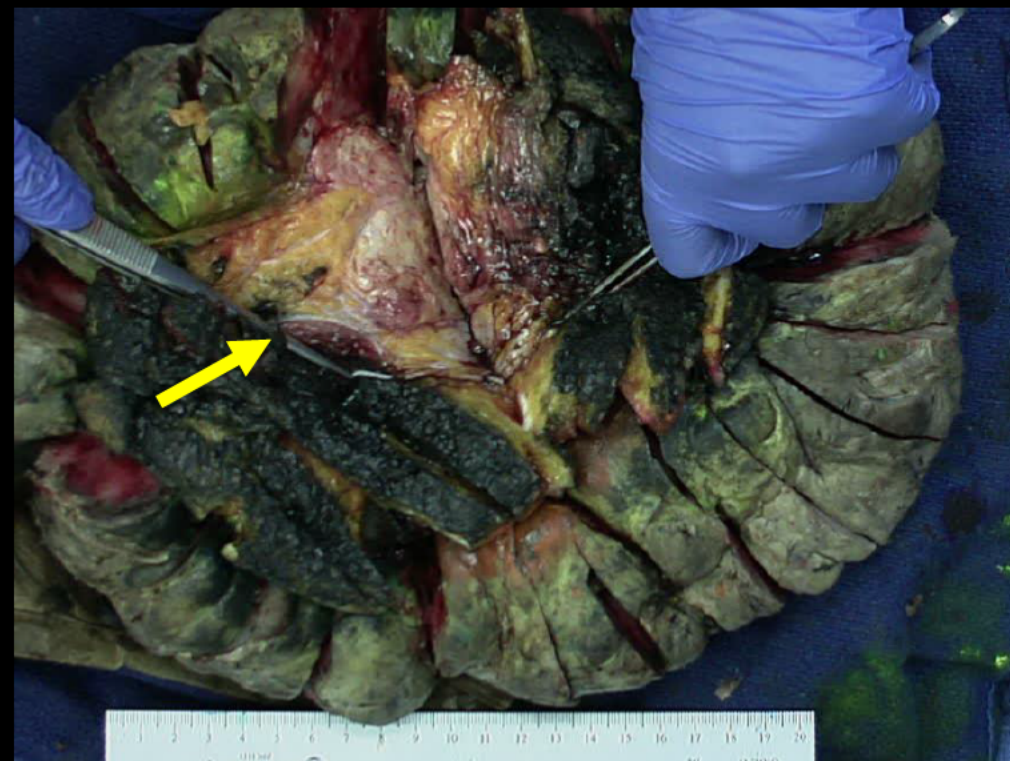
65-year-old female with a right breast mass that had grown rapidly over the past month and had become tender.

Prior history of stage IIB ER+/HER2+ invasive ductal carcinoma 6 years earlier treated with lumpectomy and radiation. Currently taking anastrozole.

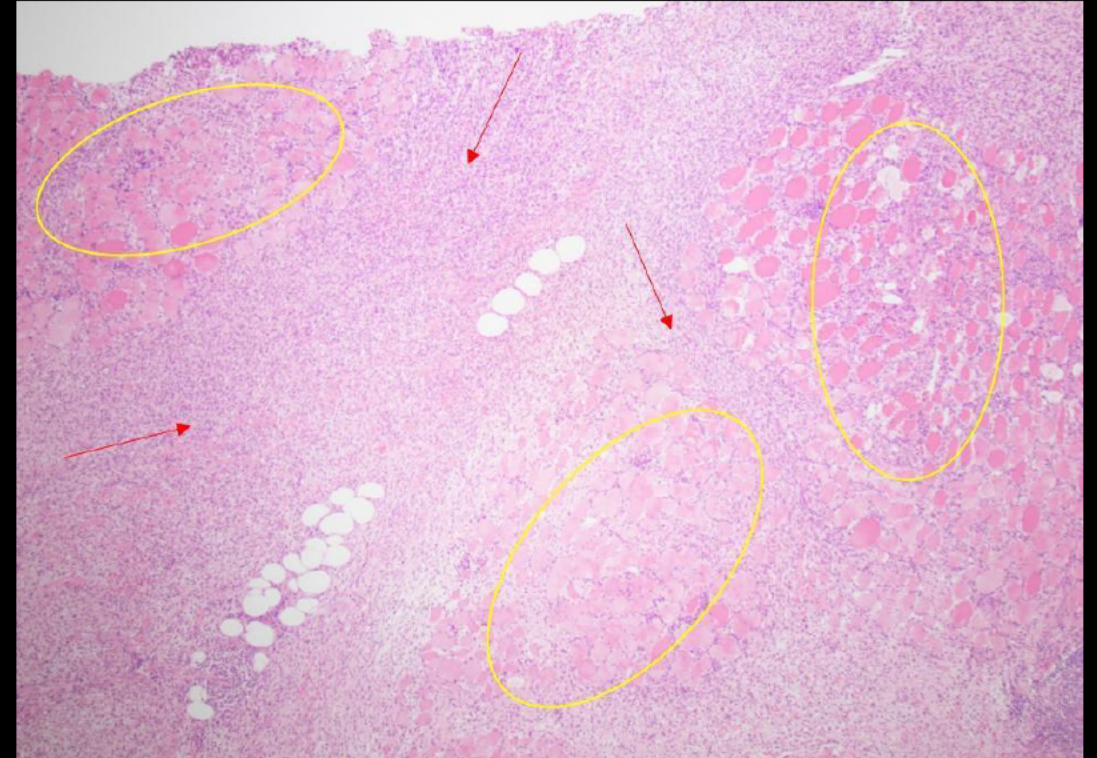
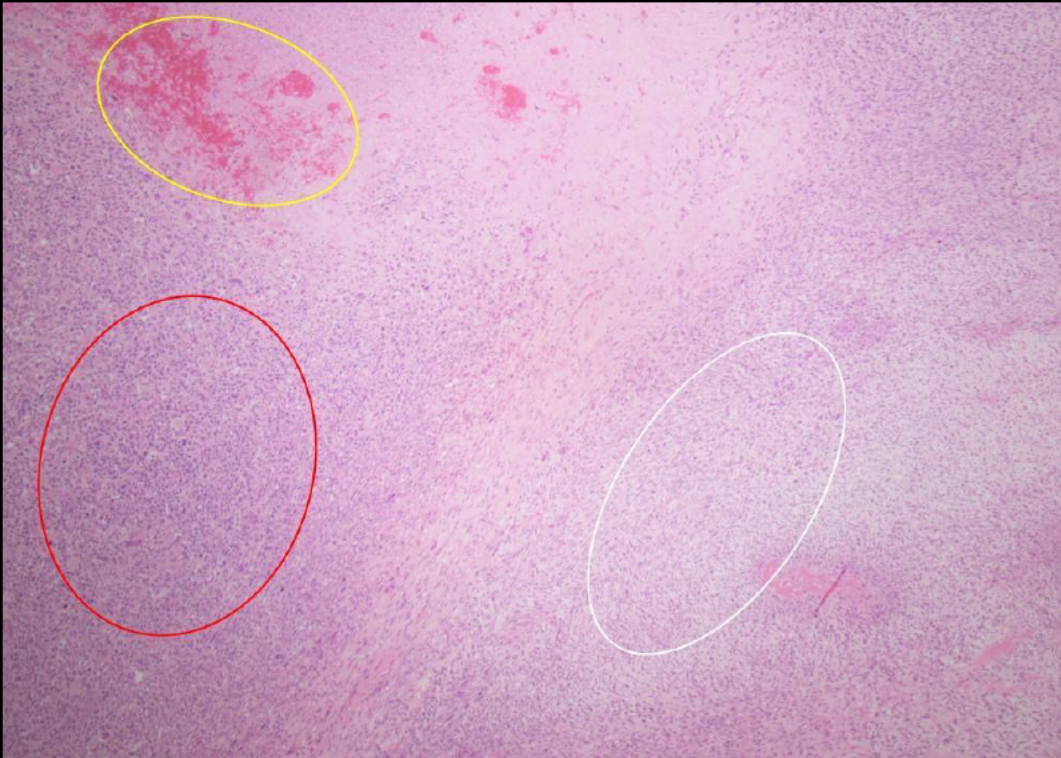
RMLO





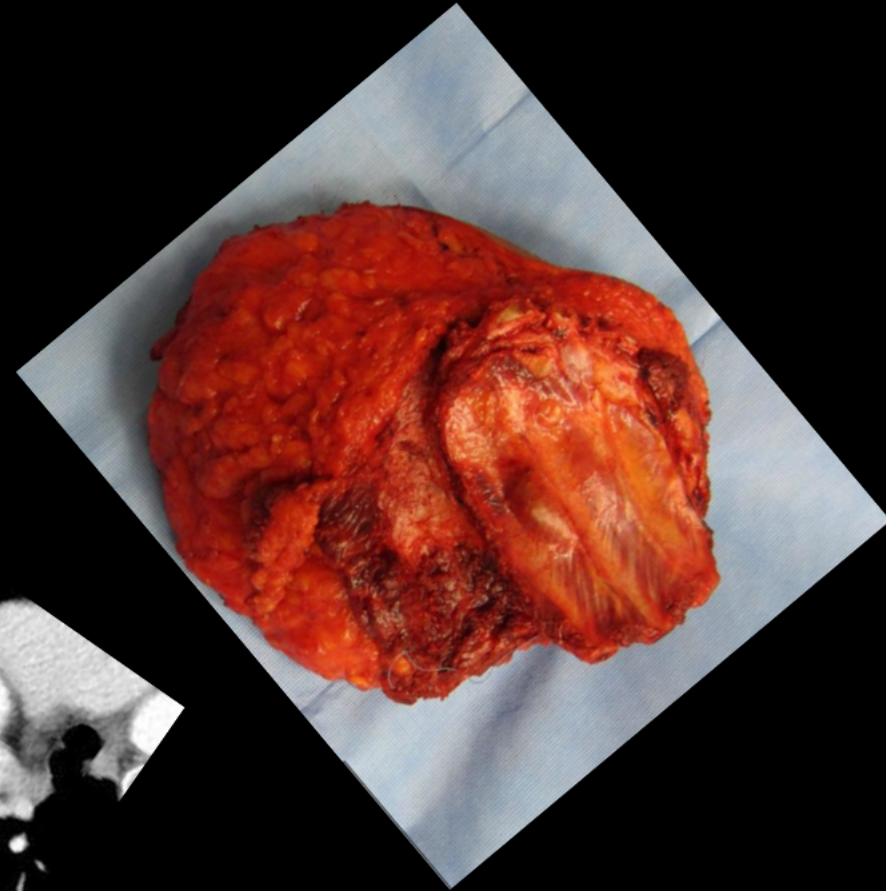
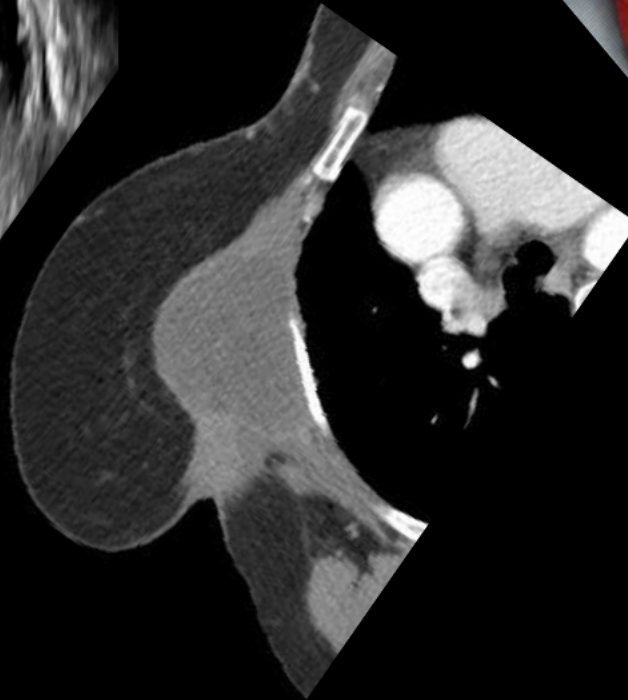
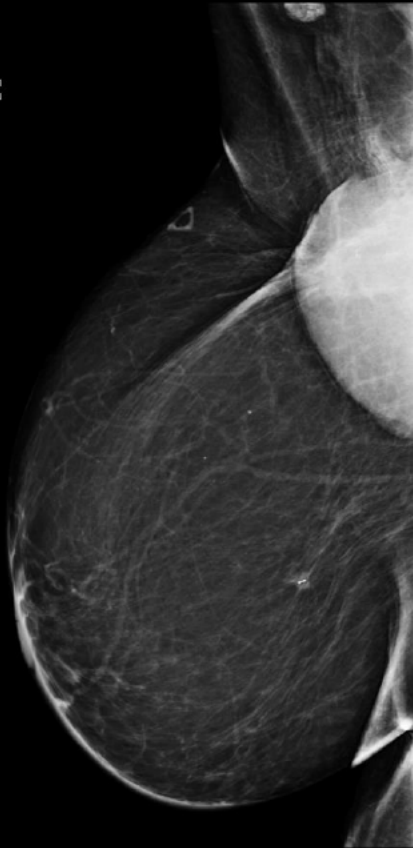


Histology



Rad-Path Correlation

RMLO



Radiation-associated Rhabdomyosarcoma

Faiz Kusumo

Jacobi Medical Center

Bronx, New York



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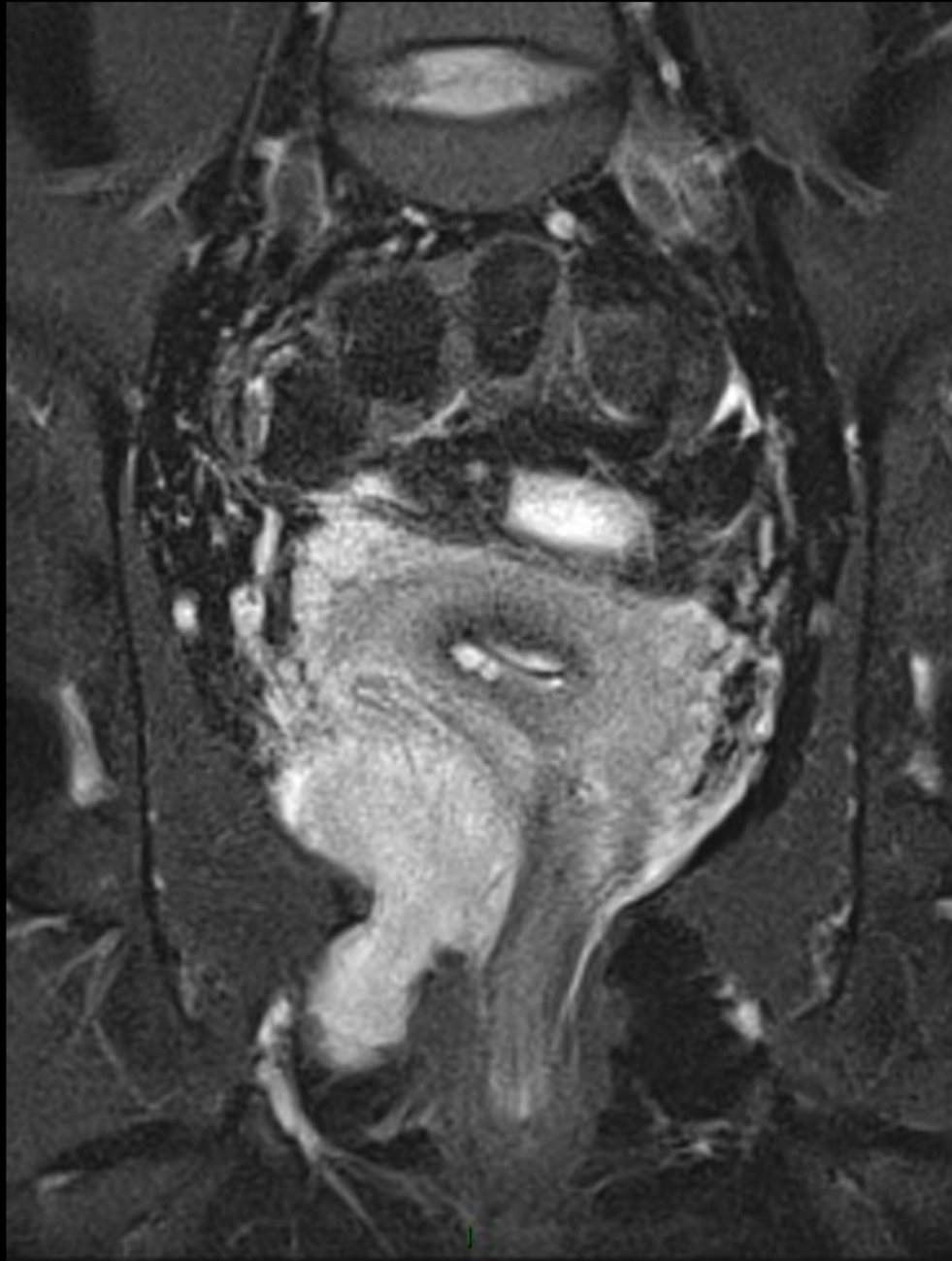
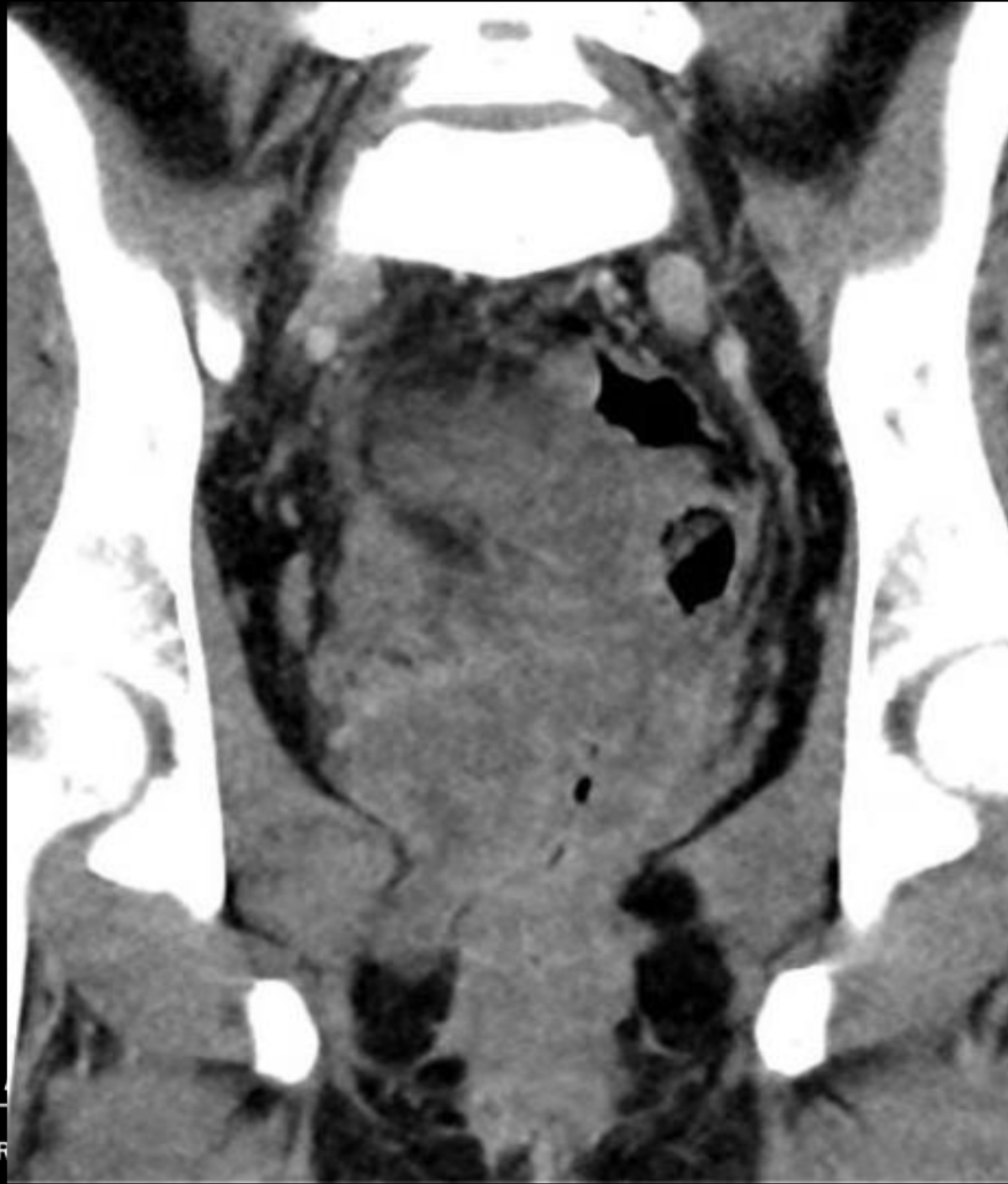
Genitourinary Best Case

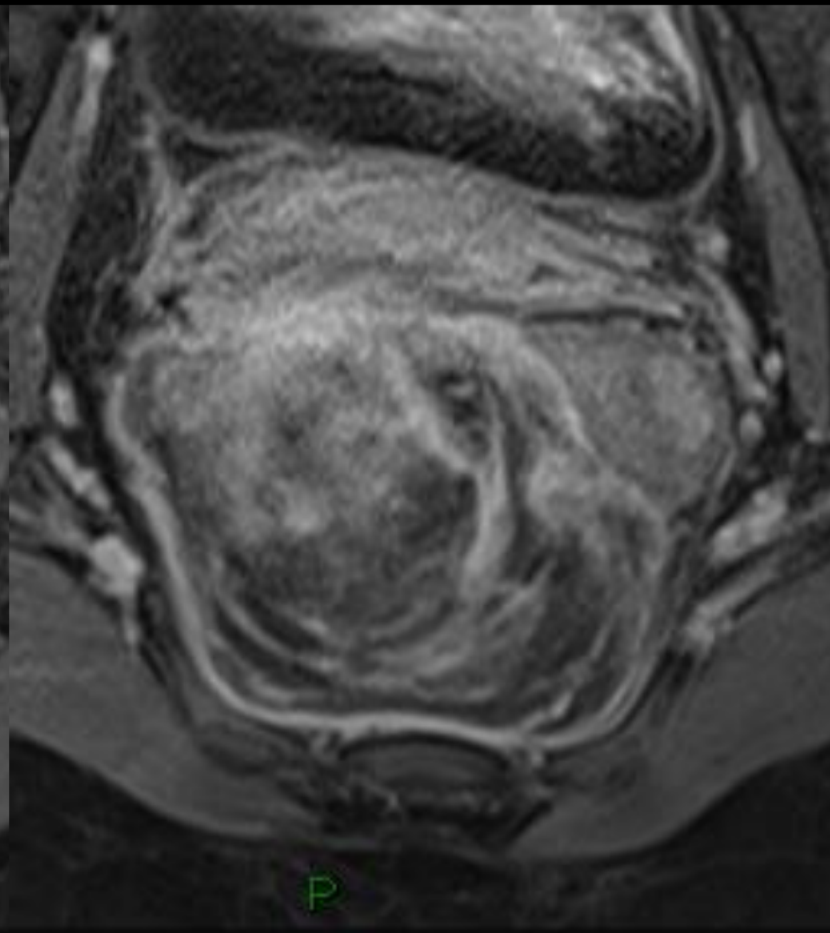
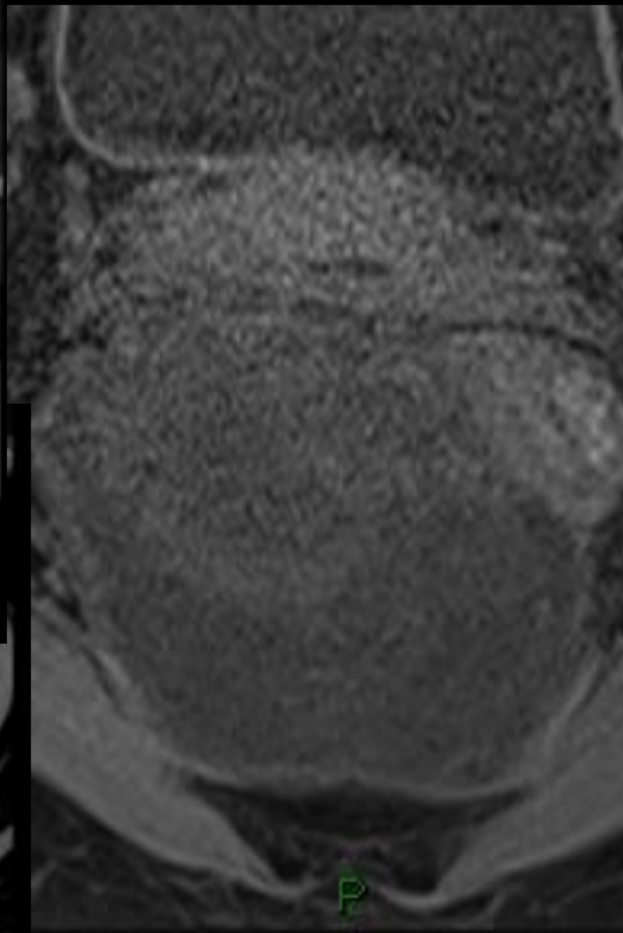
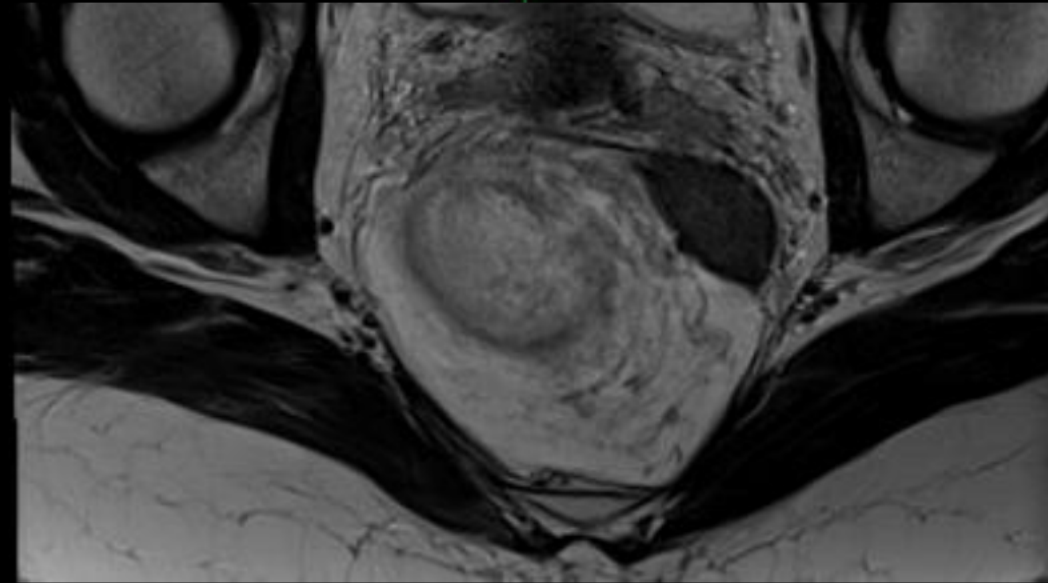
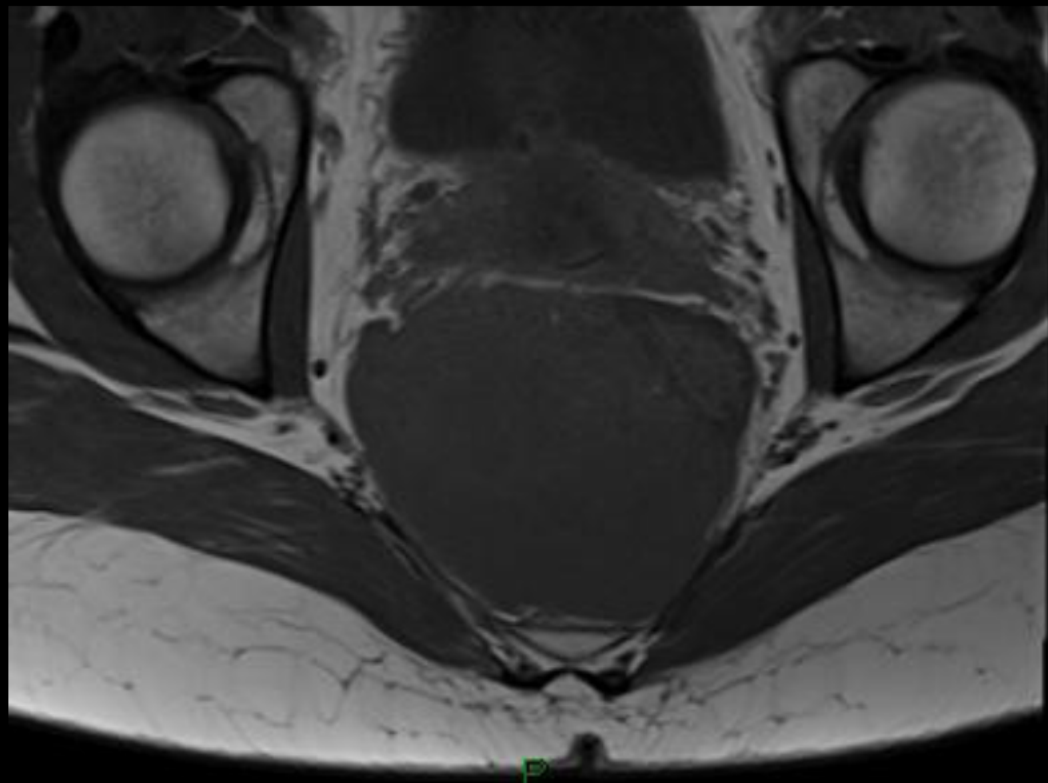


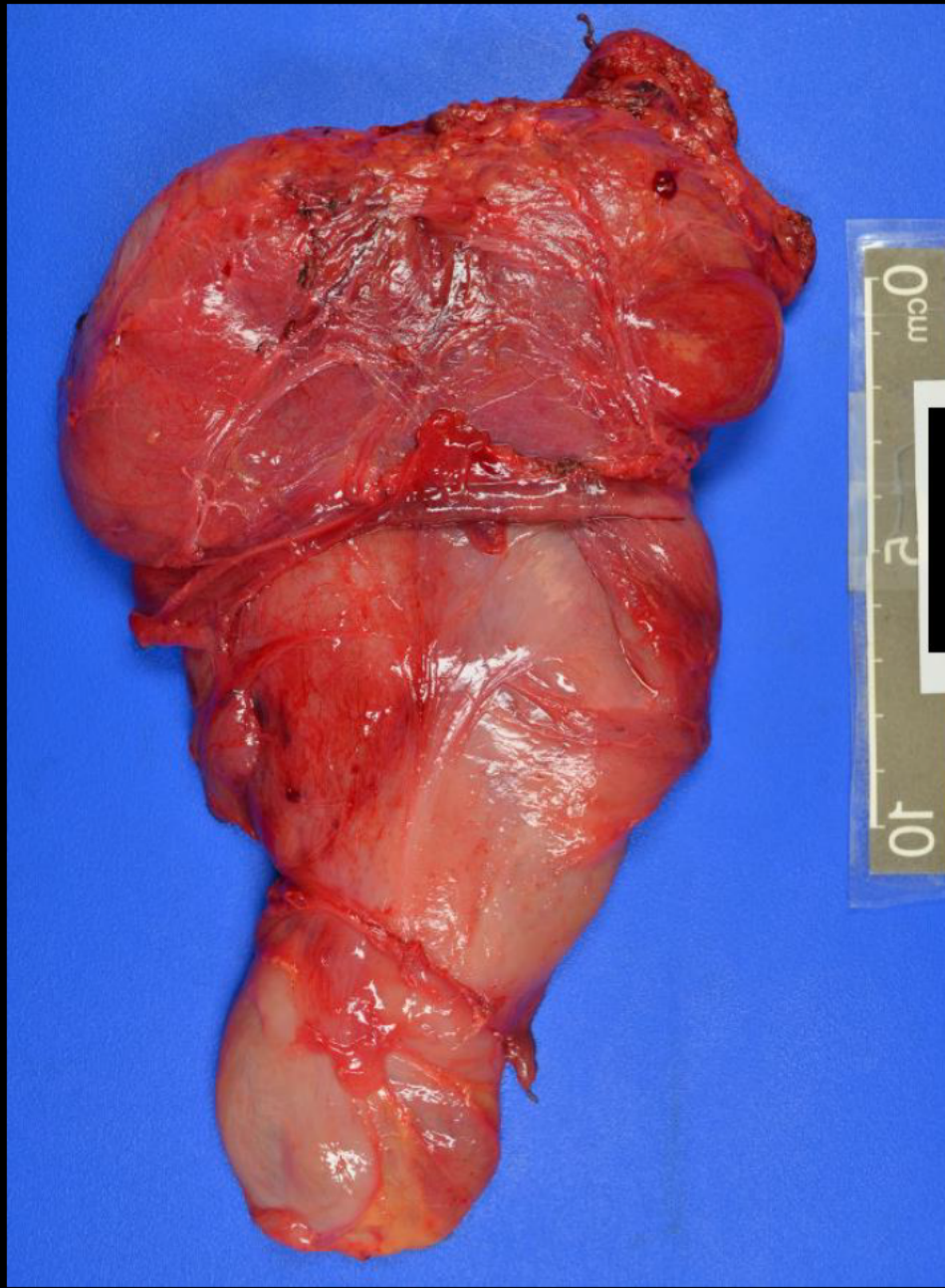
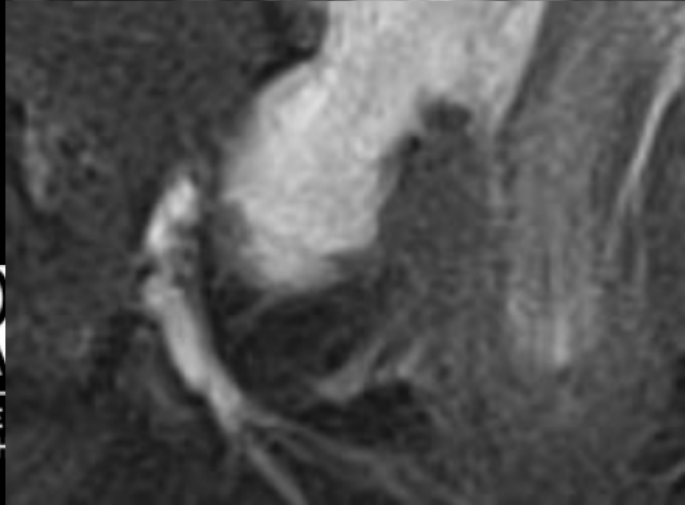
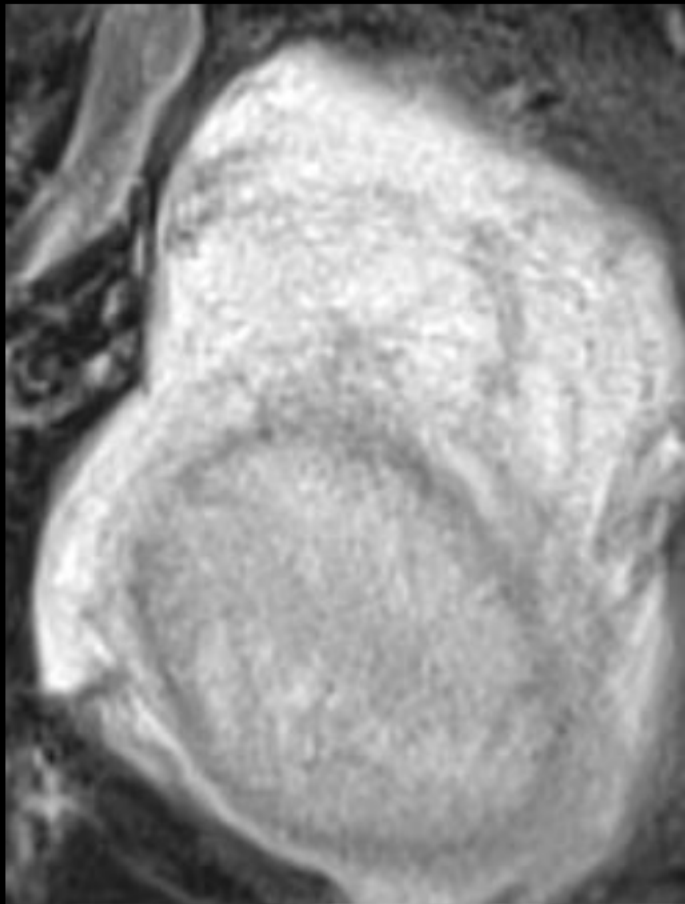
Clinical Information

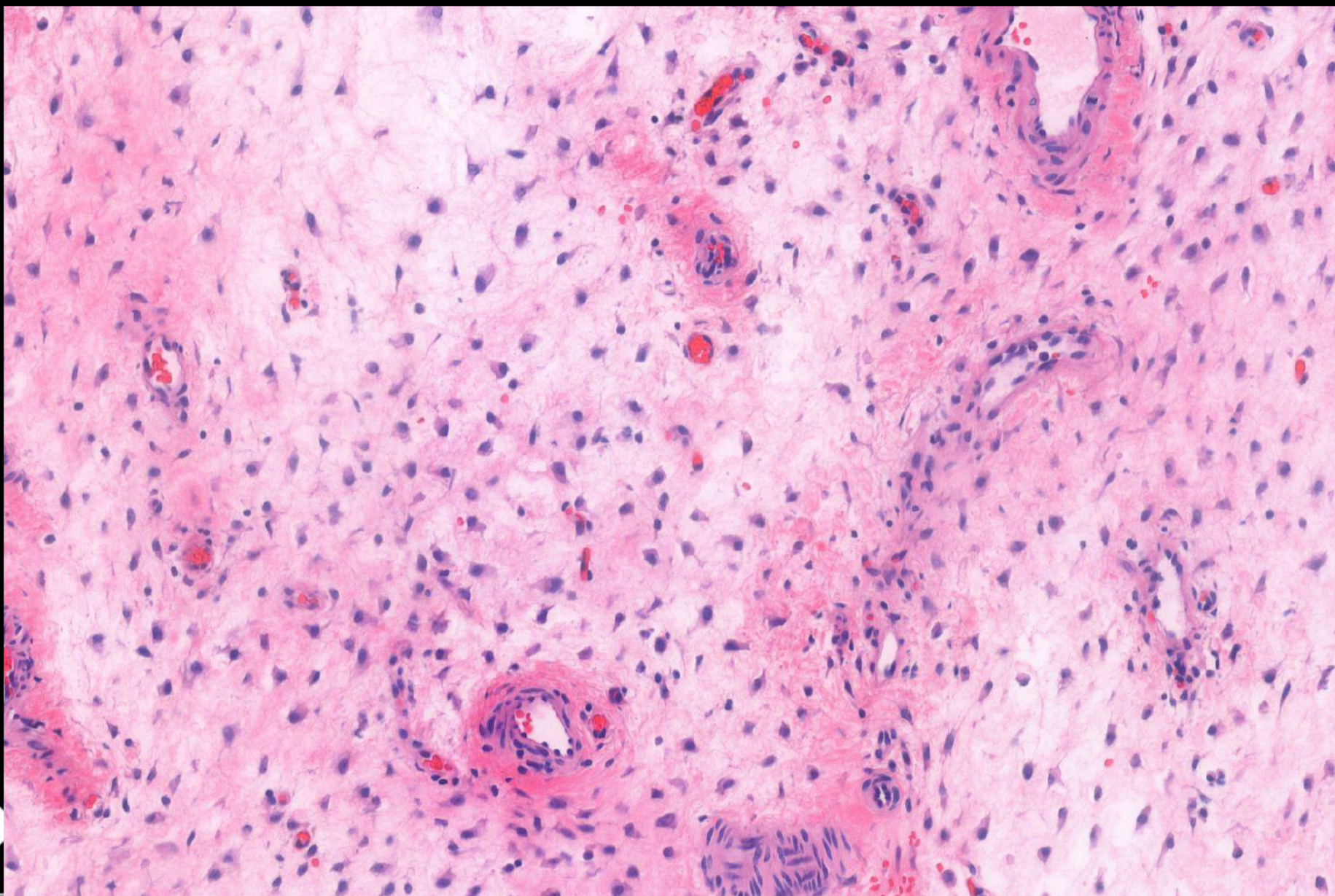
34-year-old otherwise healthy female with history of C-section x 3, laparoscopic cholecystectomy, and periumbilical hernia repair who presented to her OB/GYN with approximately 1 month of right lower quadrant pain after one of her children bumped her abdomen while in the swimming pool. Evaluated by OBGYN with TVUS, followed by CT abdomen/pelvis with contrast, followed by MRI pelvis with contrast prior to referral to colorectal surgery at our institution.





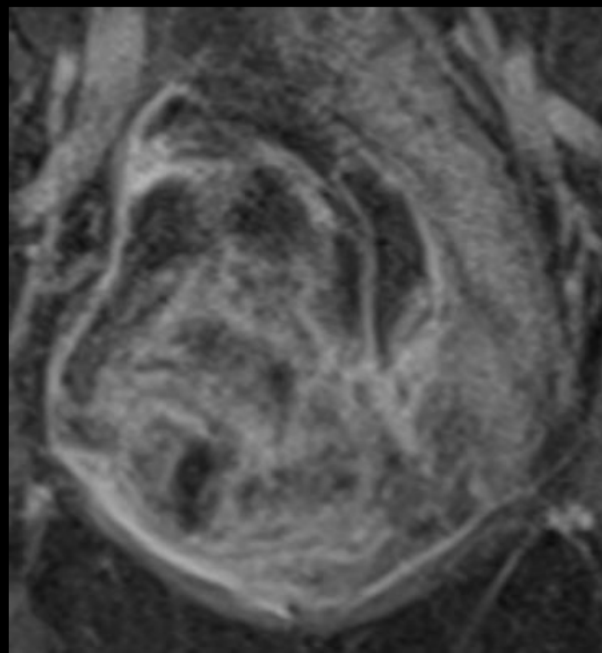
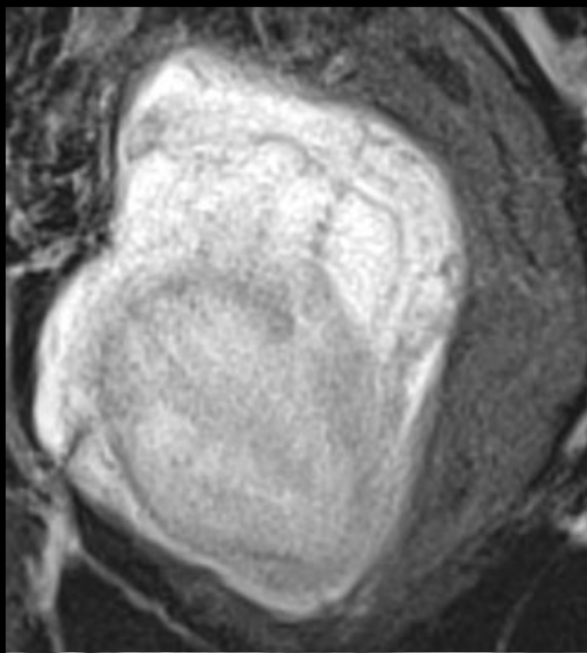






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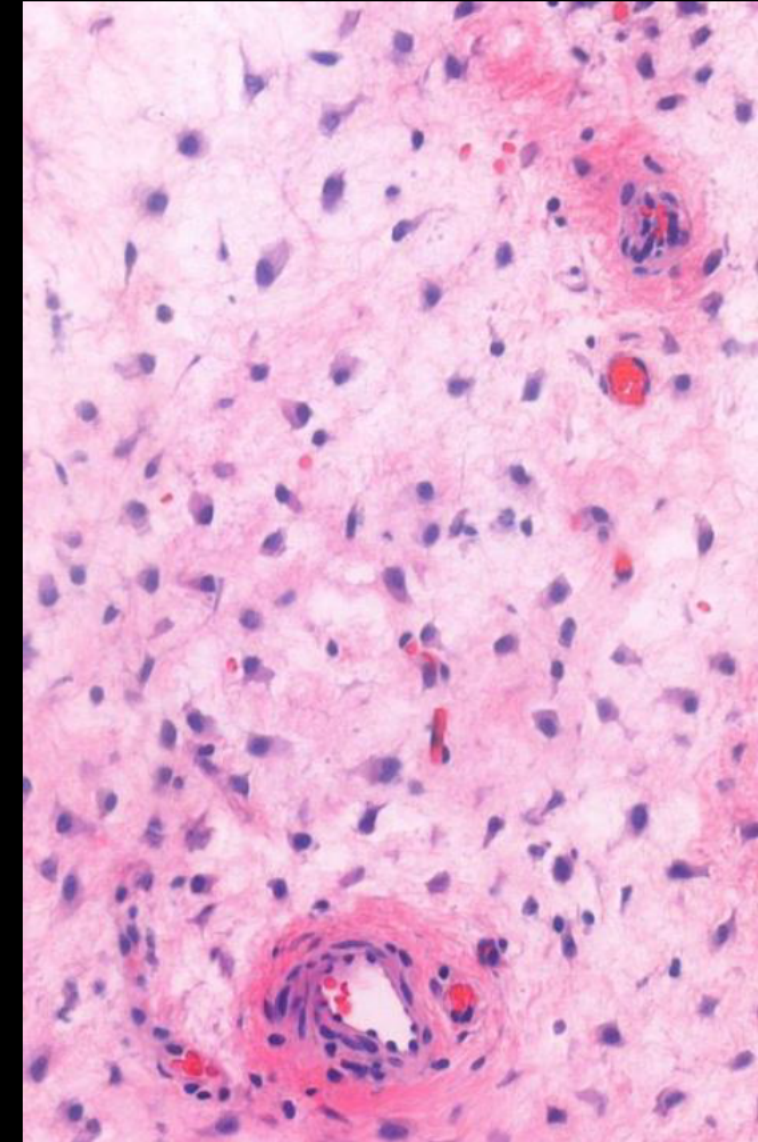
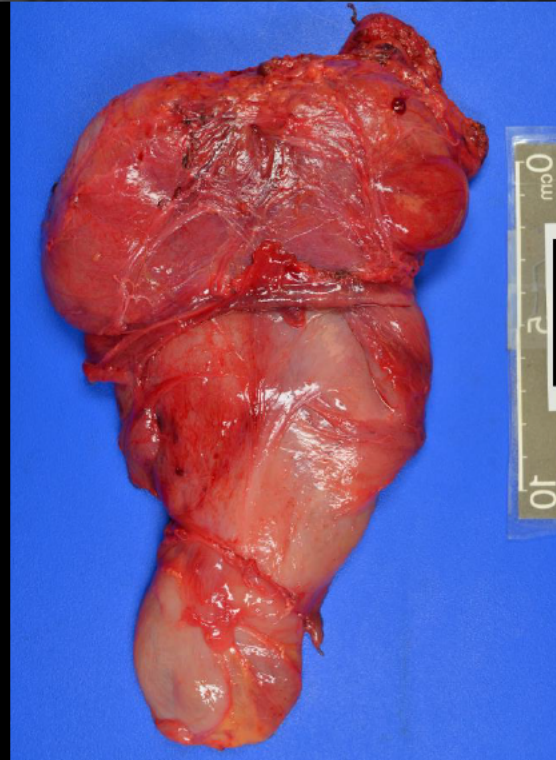
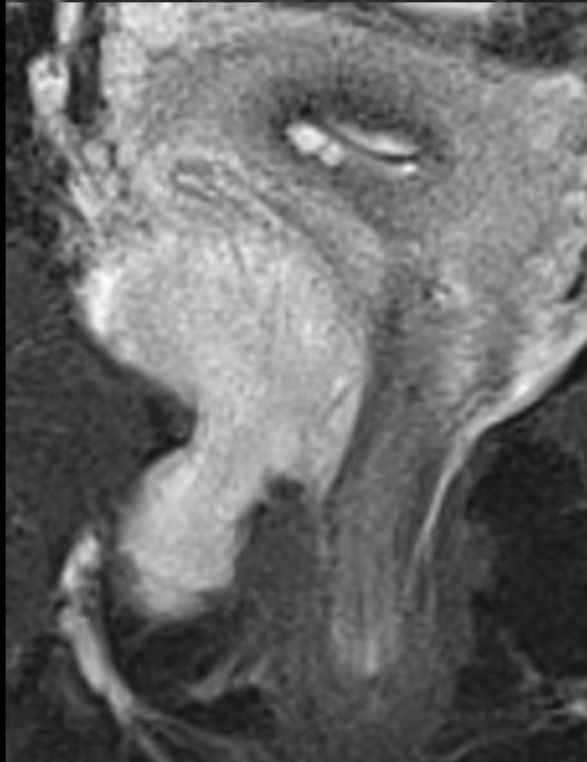
Aggressive Angiomyxoma:

- T2 bright with internal T2 dark fibrovascular bands

- Enhancing fibrovascular bands

- Extension through levator ani musculature

- Spindle to stellate cells with delicate cytoplasmic processes, bland myxoid stroma, variably sized vessels



Aggressive “Deep” Angiomyxoma

Bradford Oliva, MD
University of Iowa
Iowa City, IA

**Many thanks to all of you for
submitting such great cases!**

**From the staff of the
ACR Institute for Radiologic Pathology**