

Best Cases of the AIRP

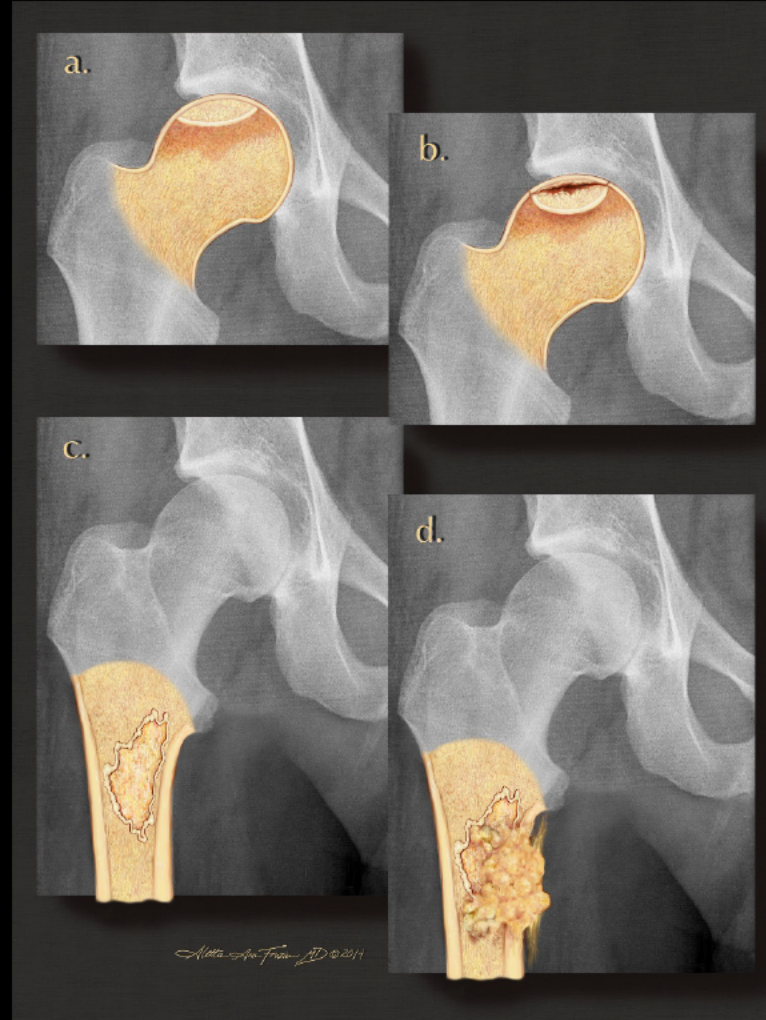
February-March, 2020

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Musculoskeletal Best Case



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CLINICAL INFORMATION

**9-year-old male with knee swelling and mild pain
after hitting during hockey**



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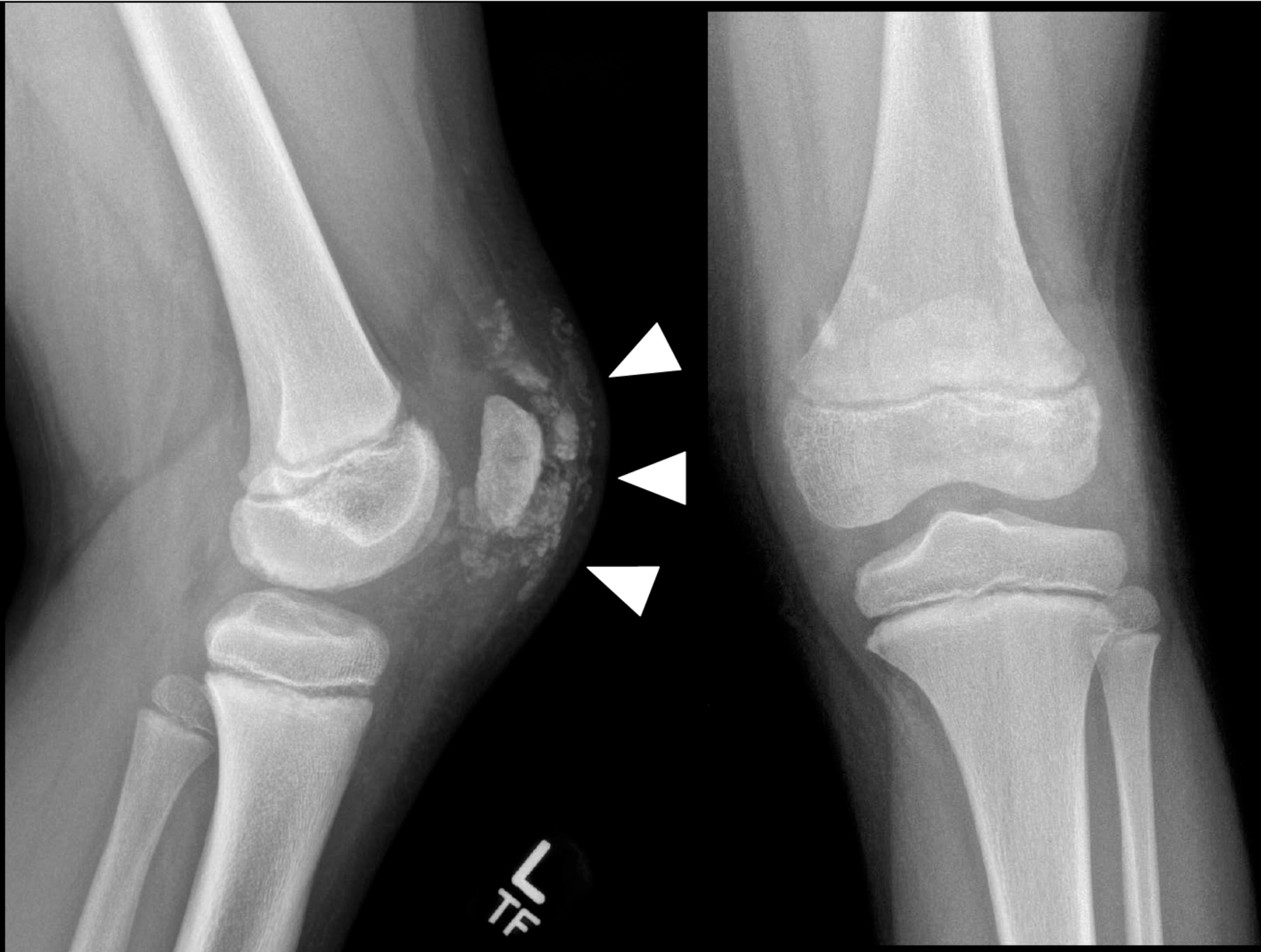
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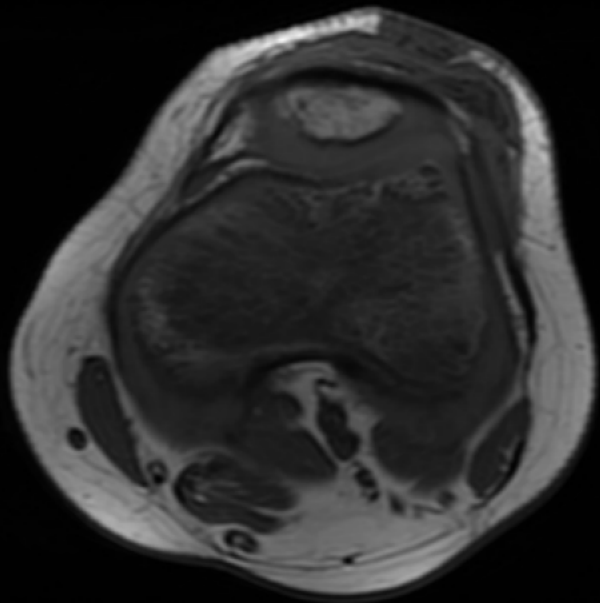


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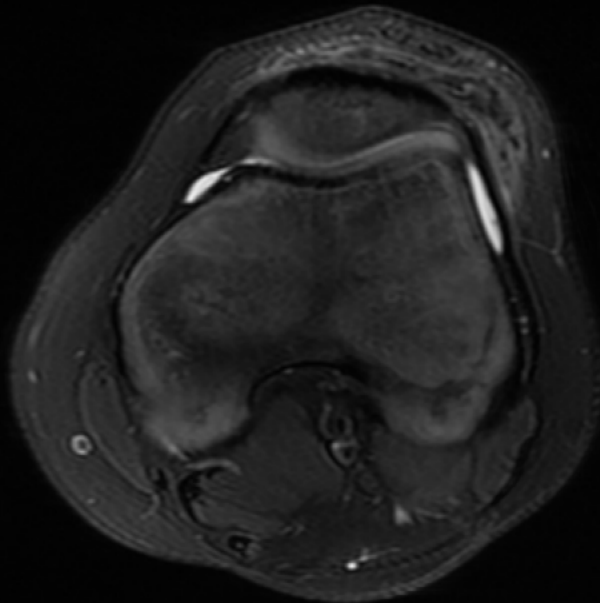
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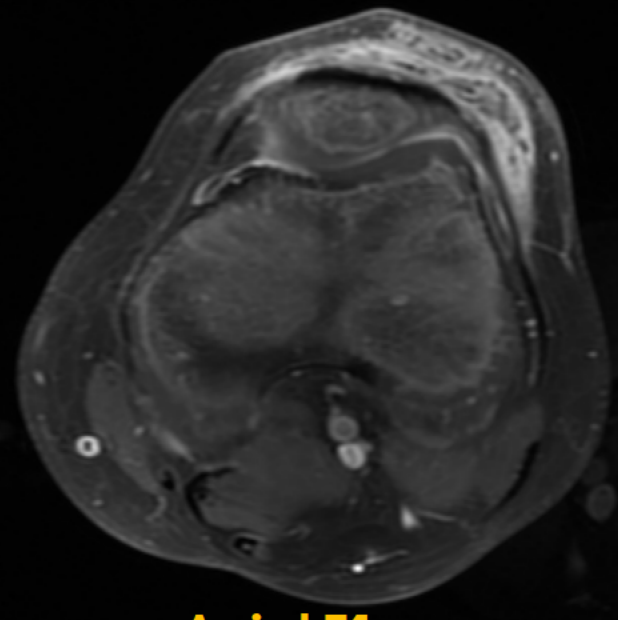




Axial T1



Axial T2FS



Axial T1+c

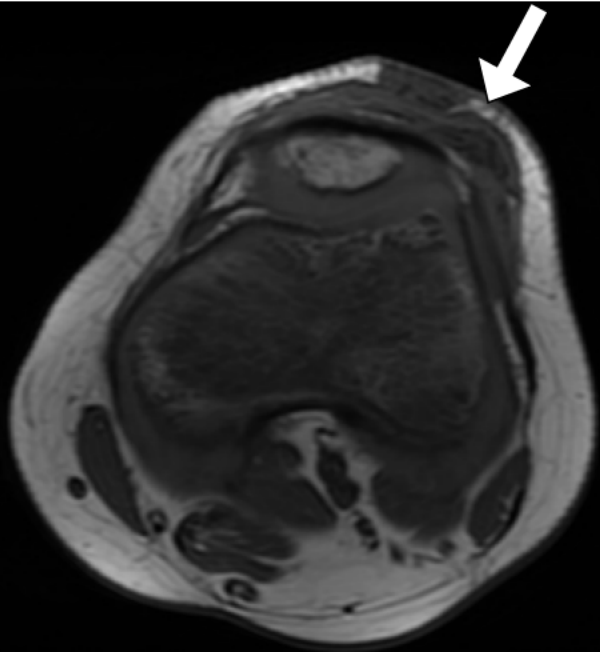


Sagittal T2FS

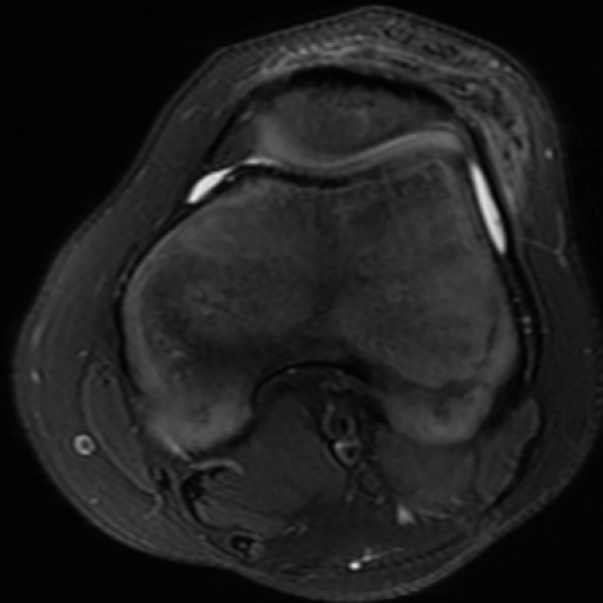
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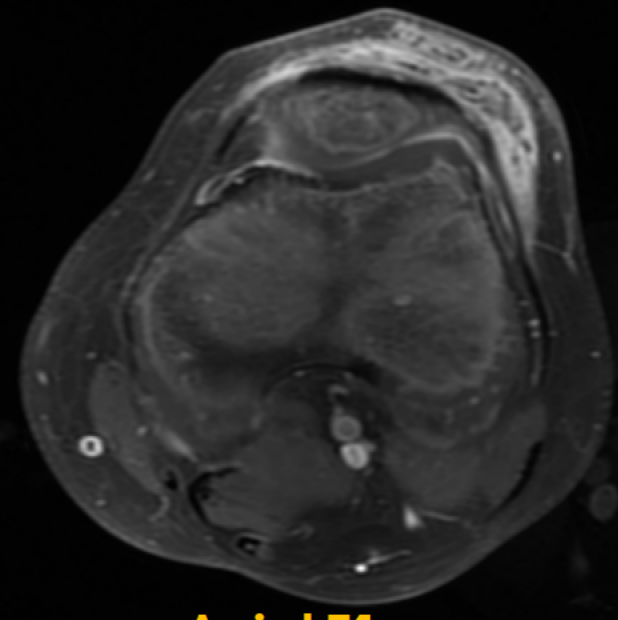
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Axial T1



Axial T2FS



Axial T1+c

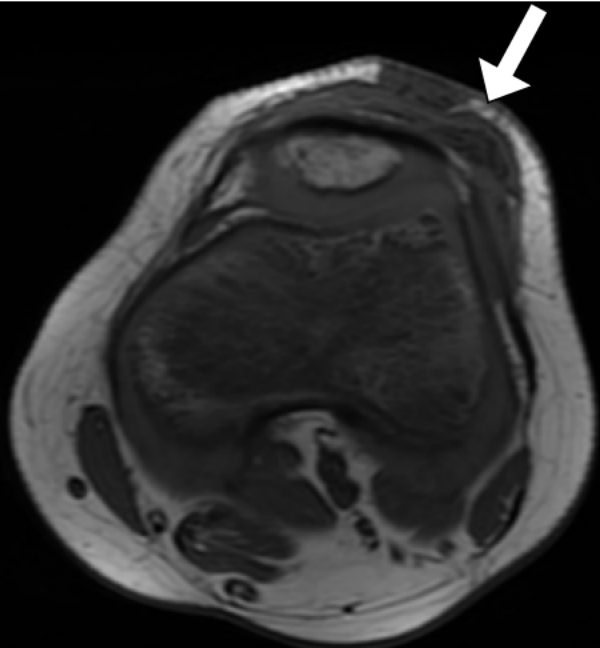


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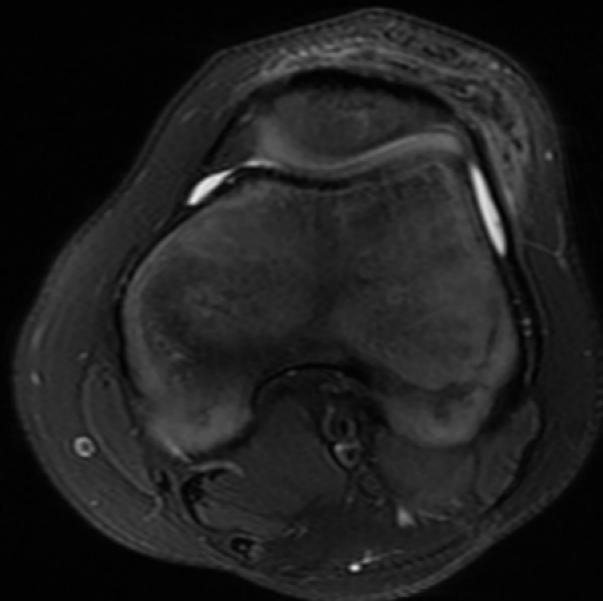
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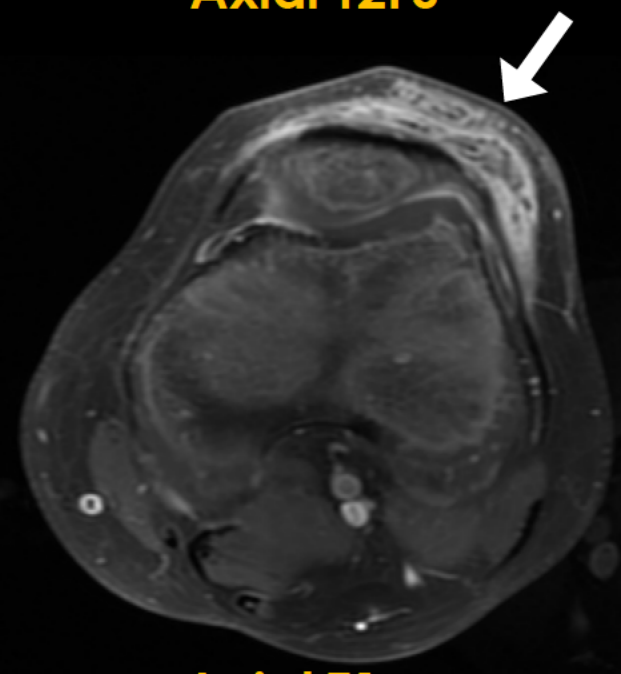
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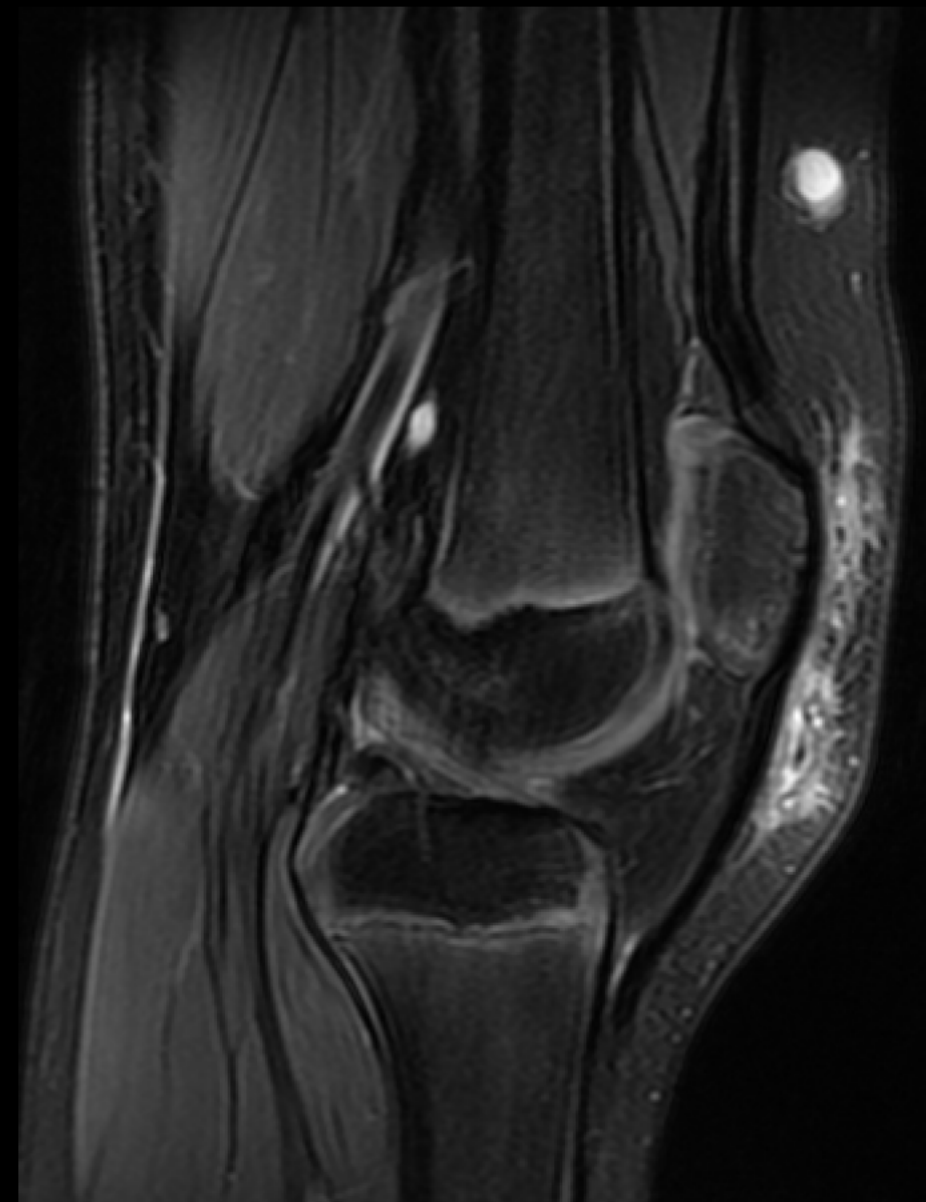
Axial T1



Axial T2FS



Axial T1+c

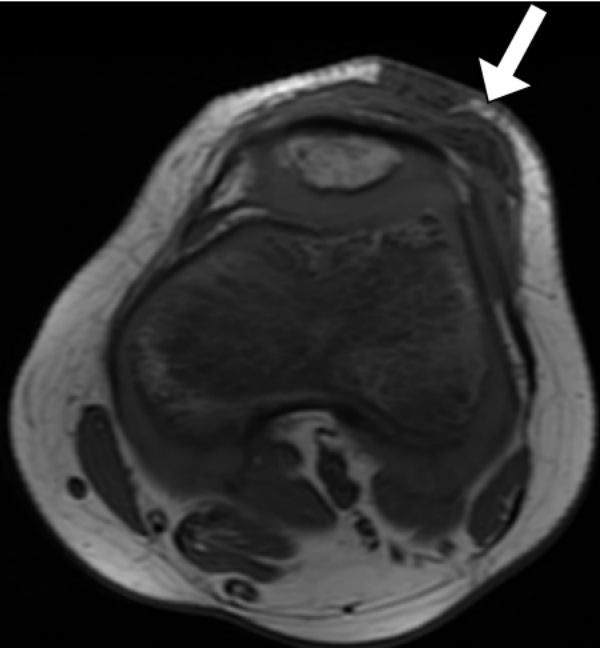


Sagittal T2FS

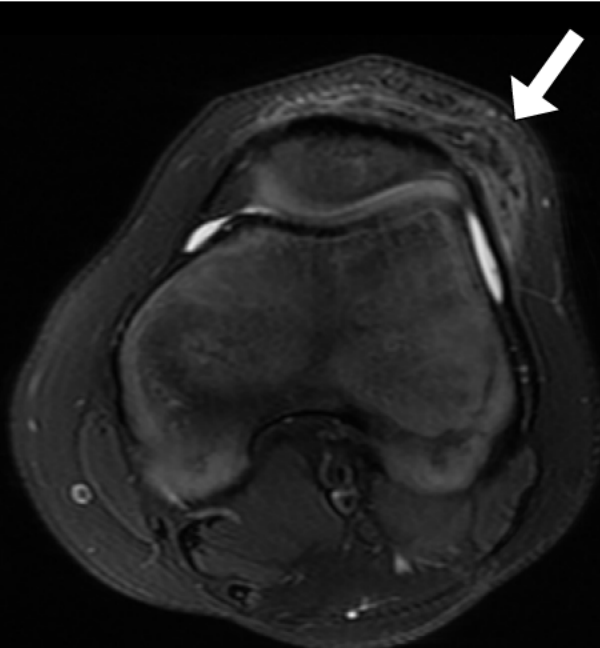
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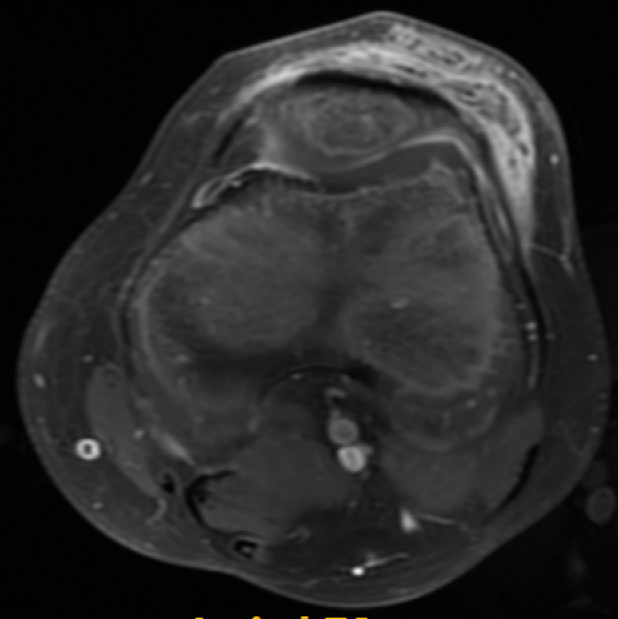
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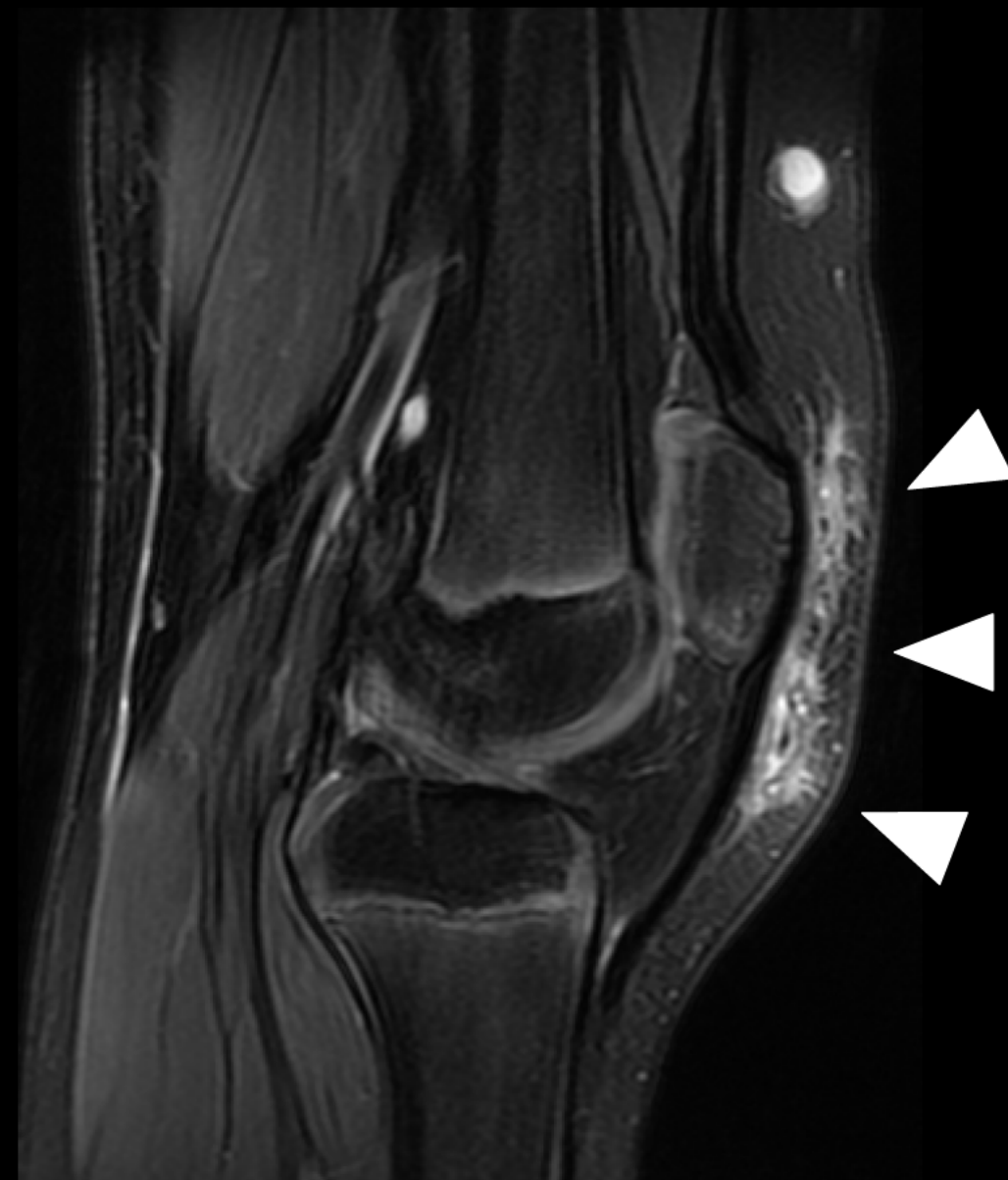
Axial T1



Axial T2FS



Axial T1+c



Sagittal T2FS

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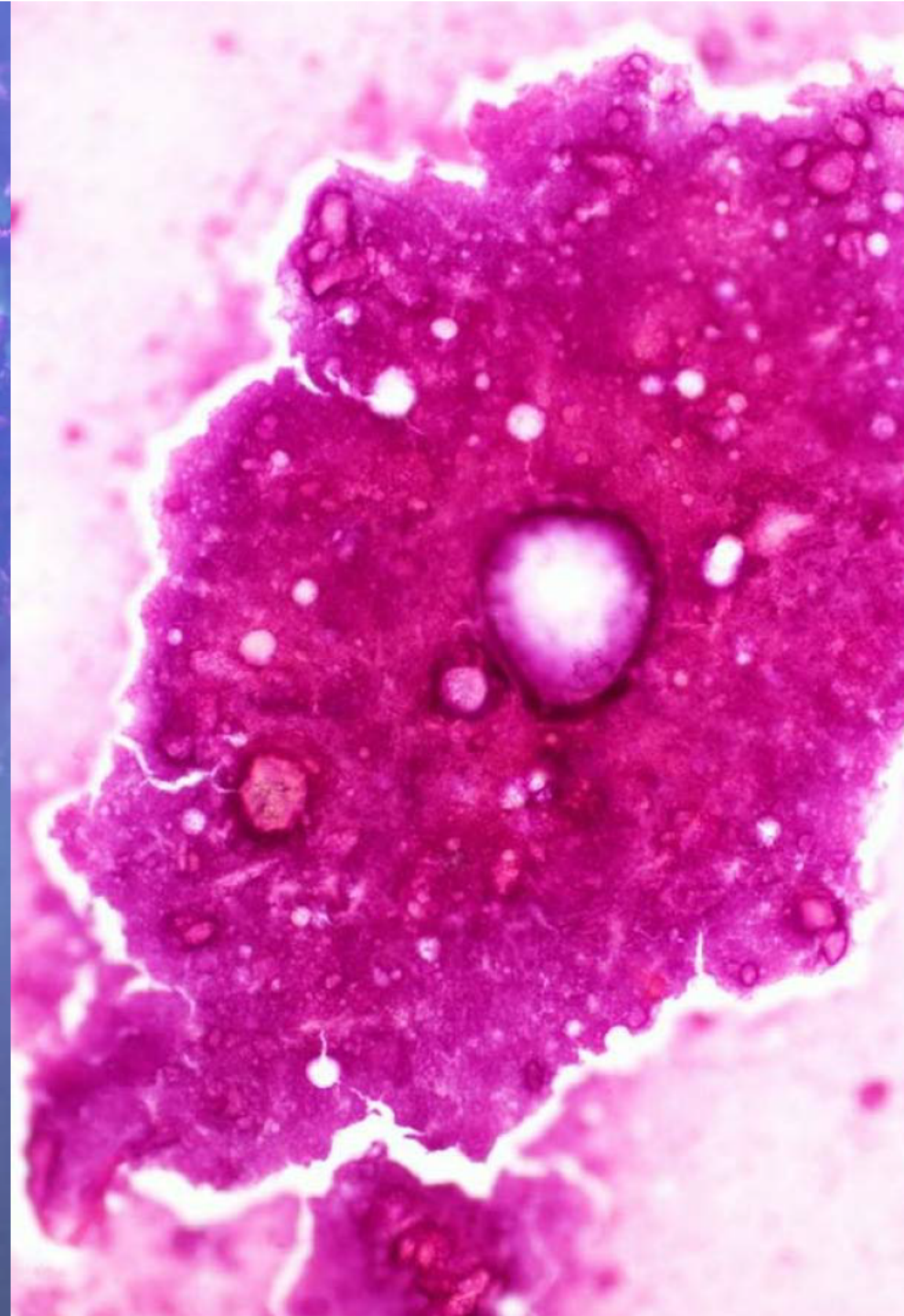
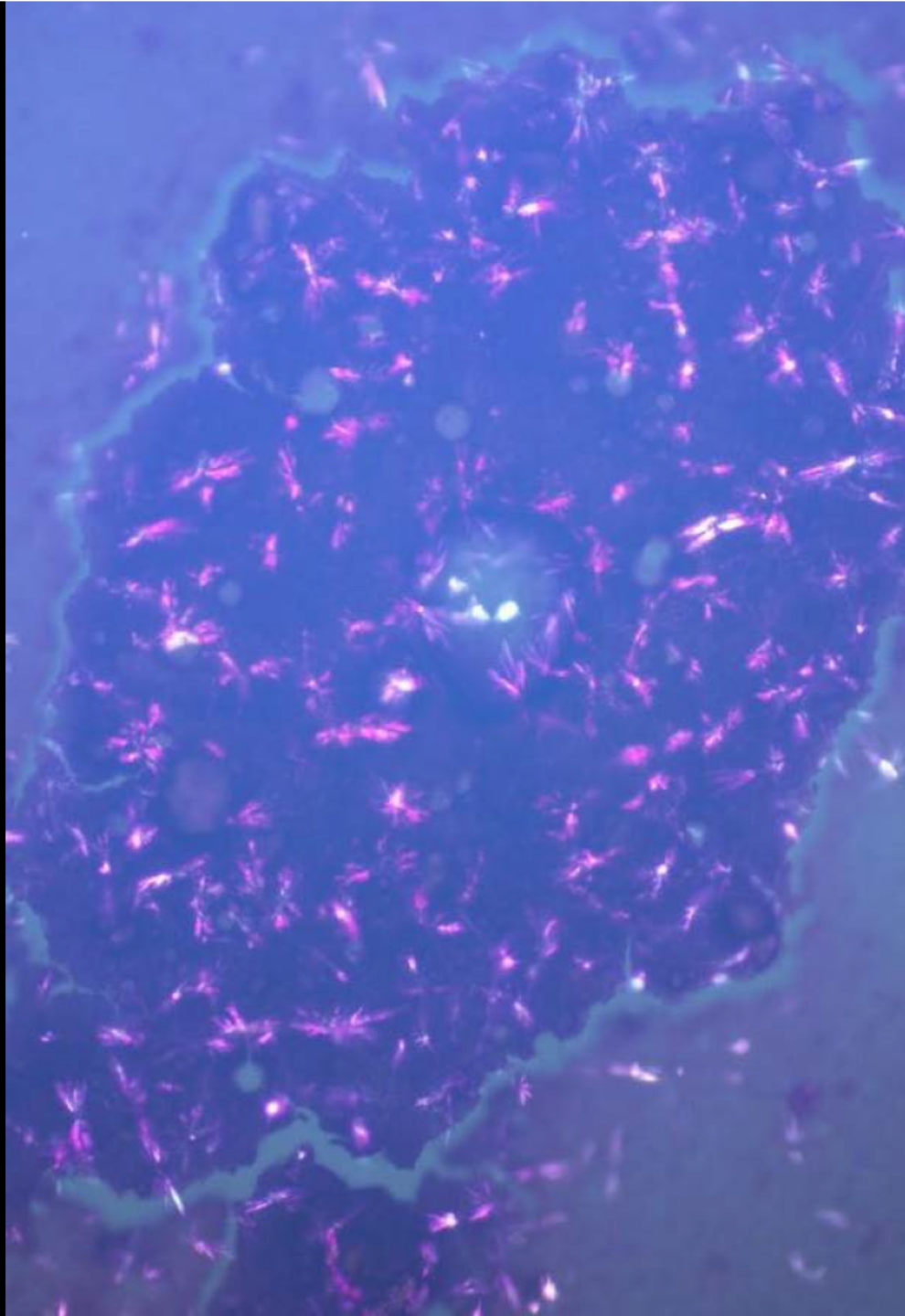
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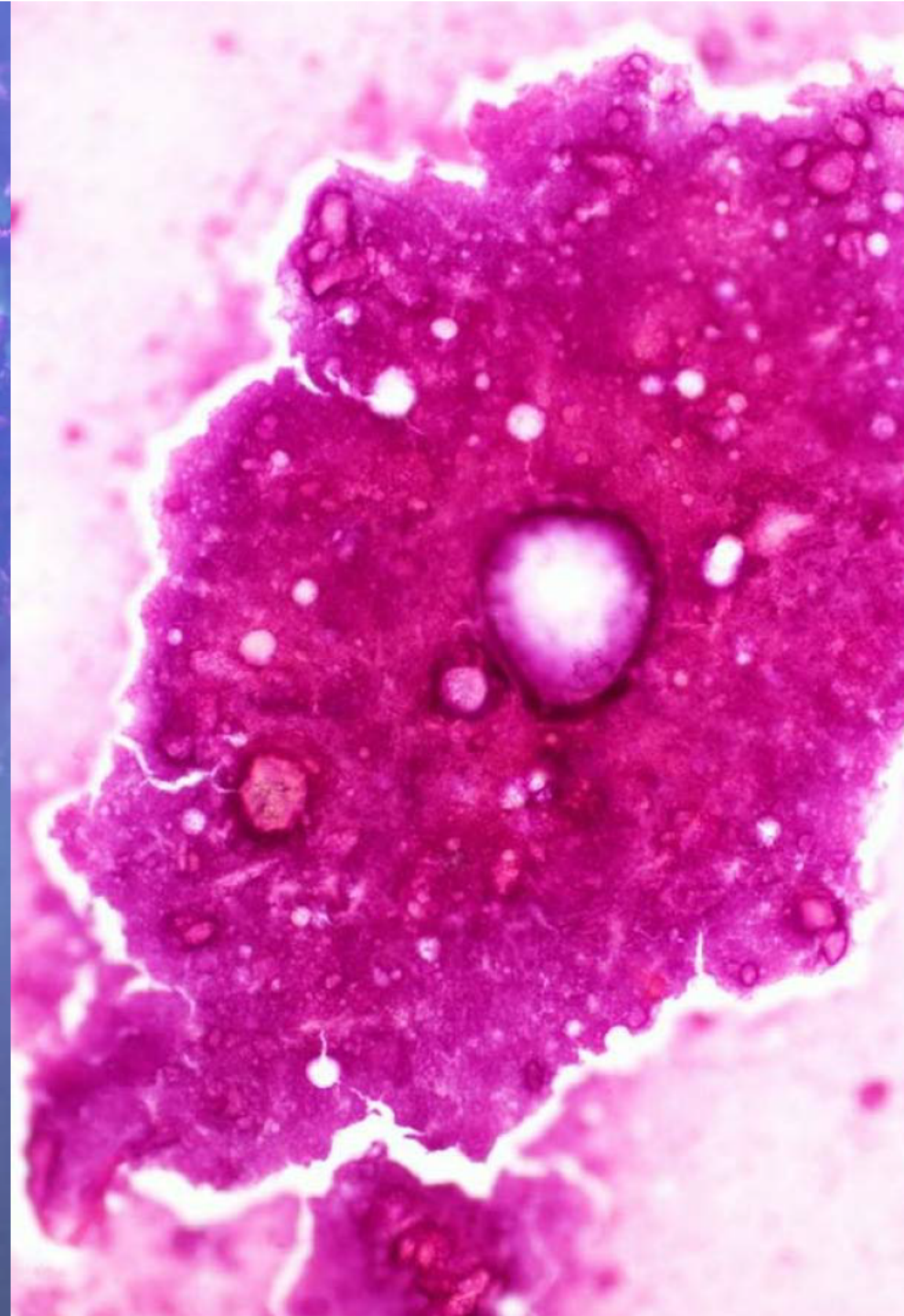
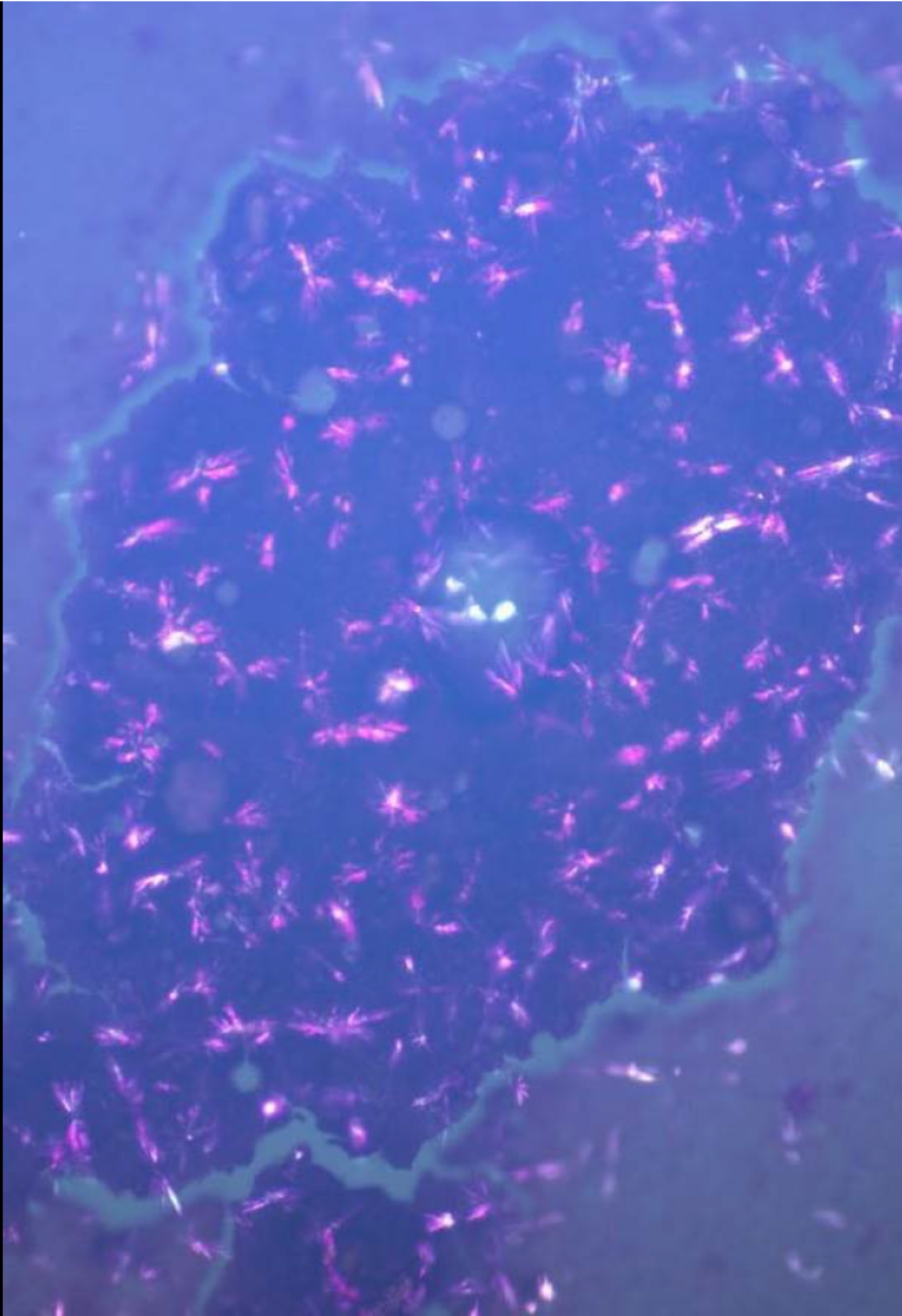




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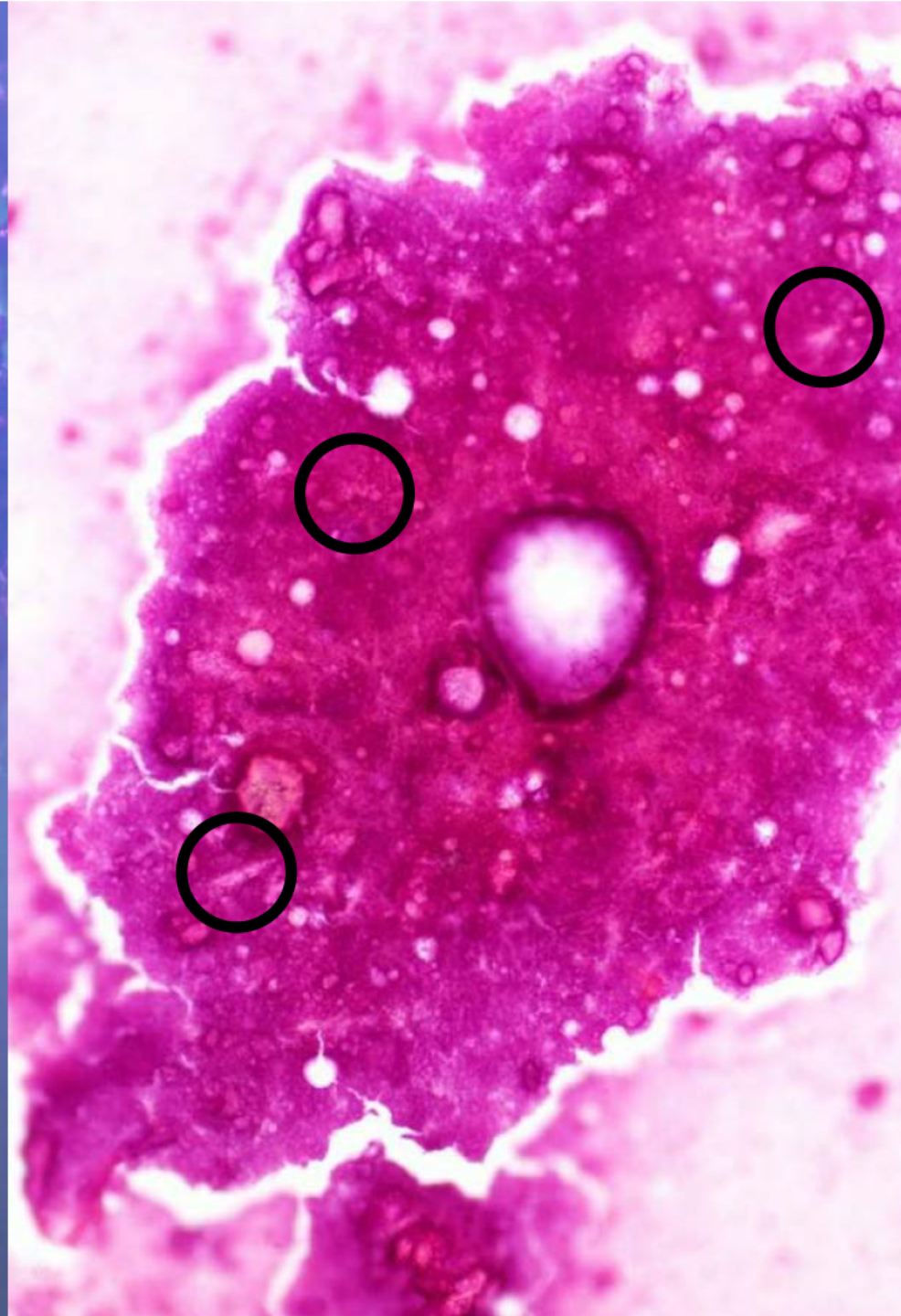
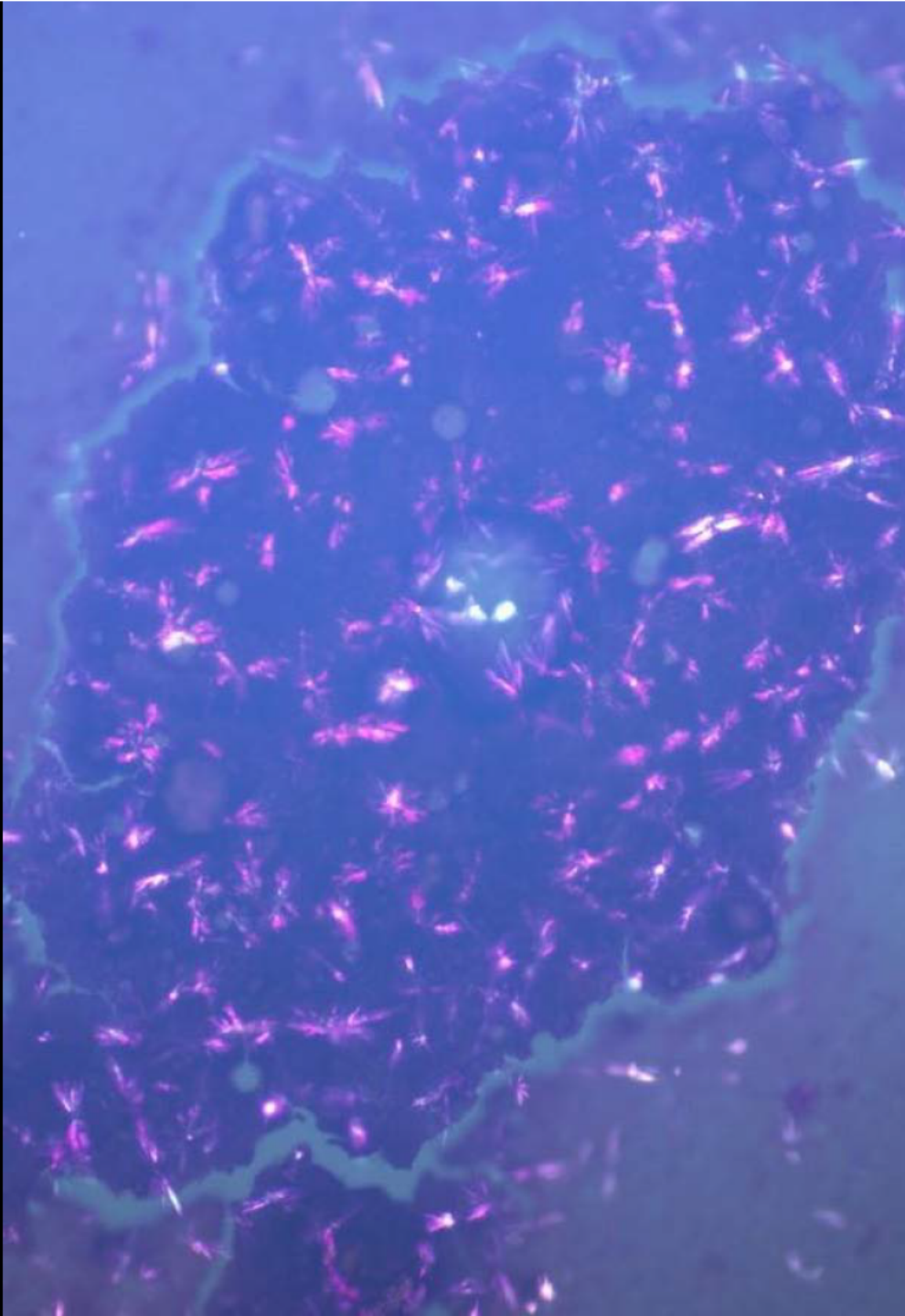


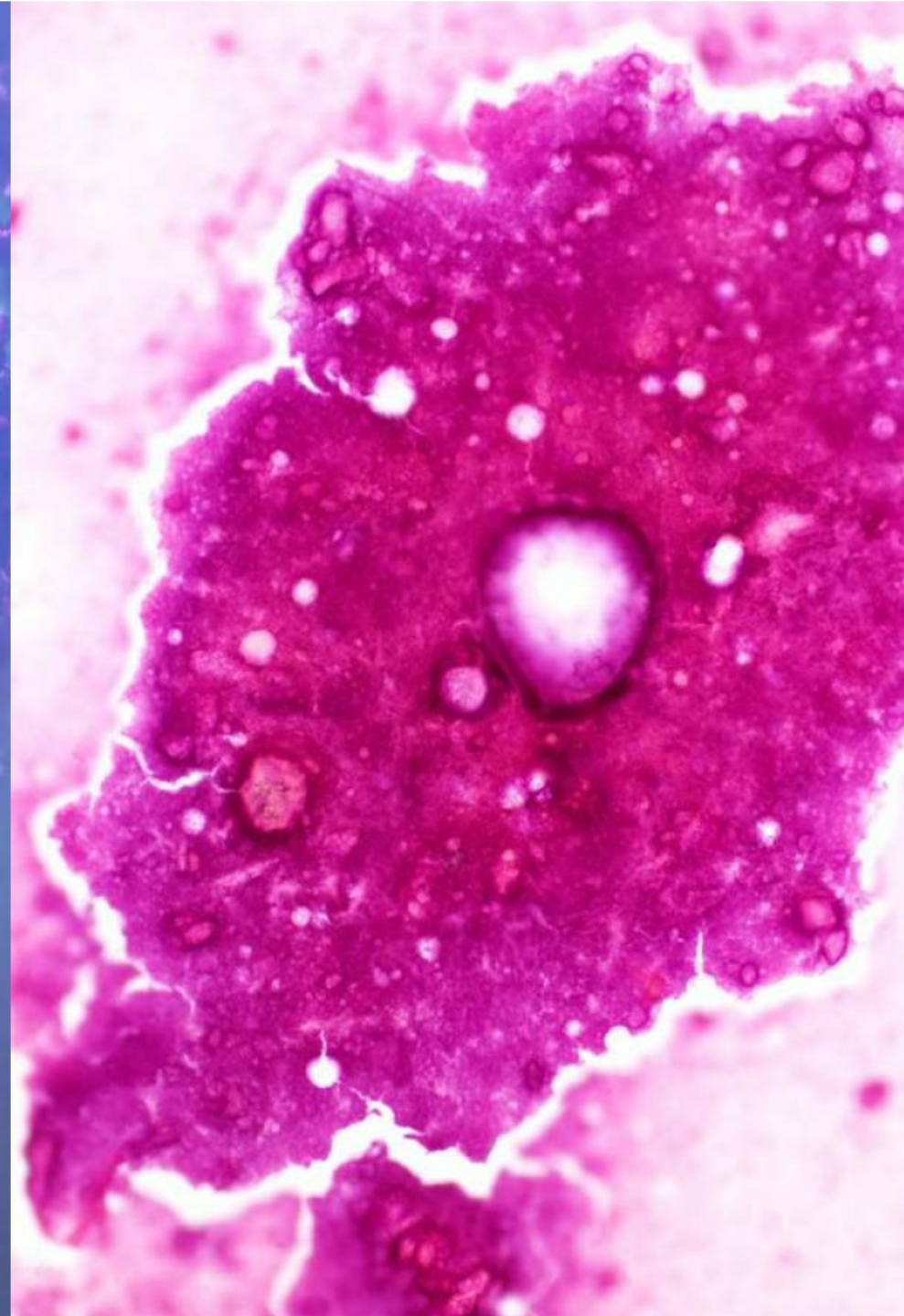
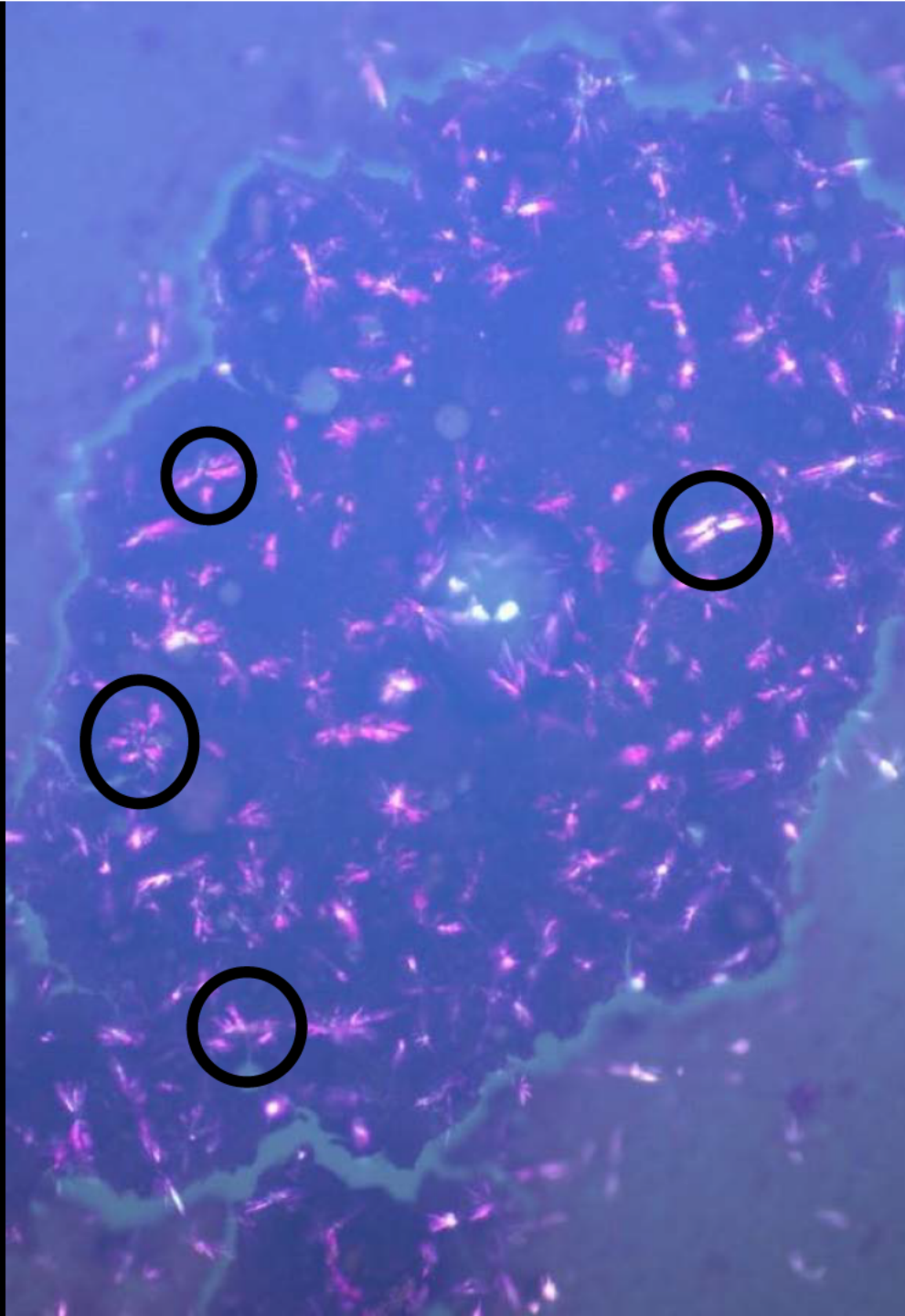


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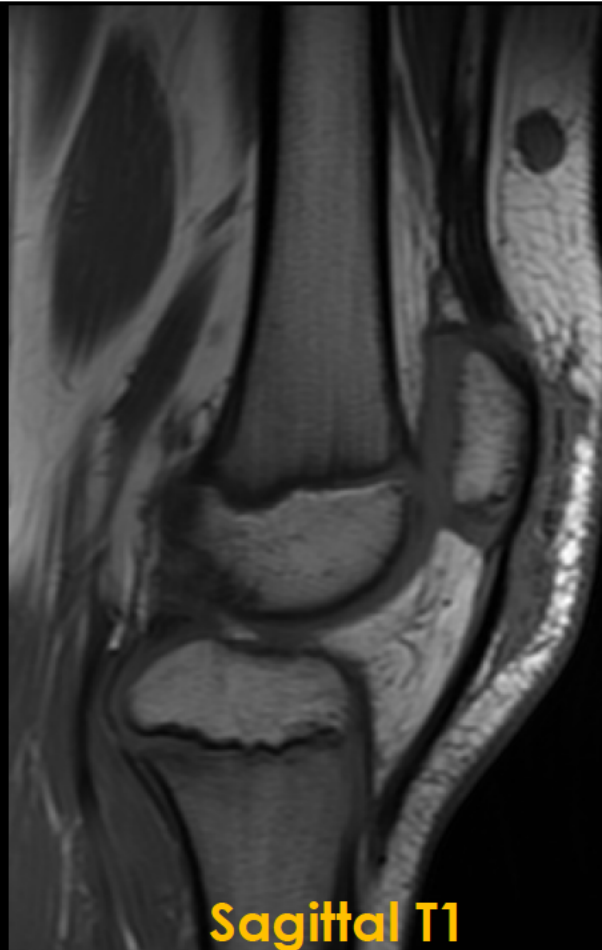




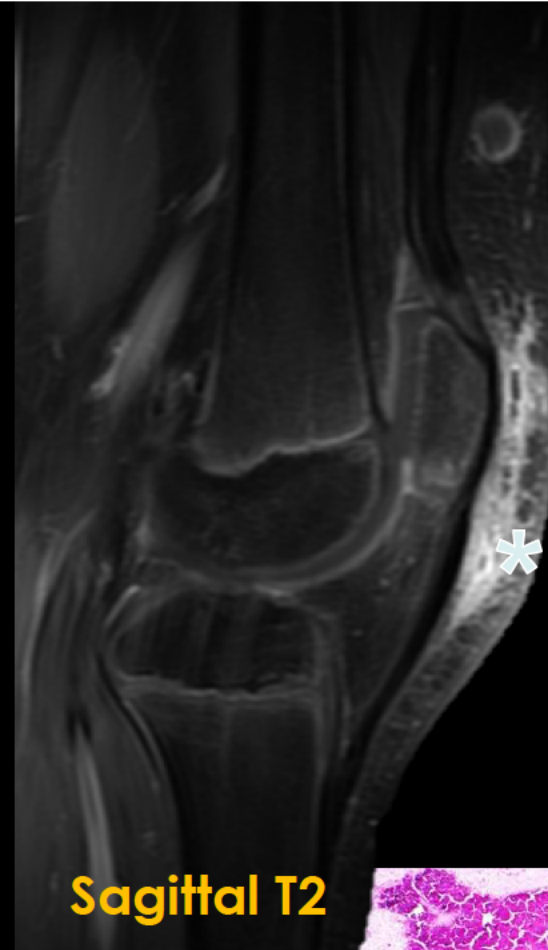
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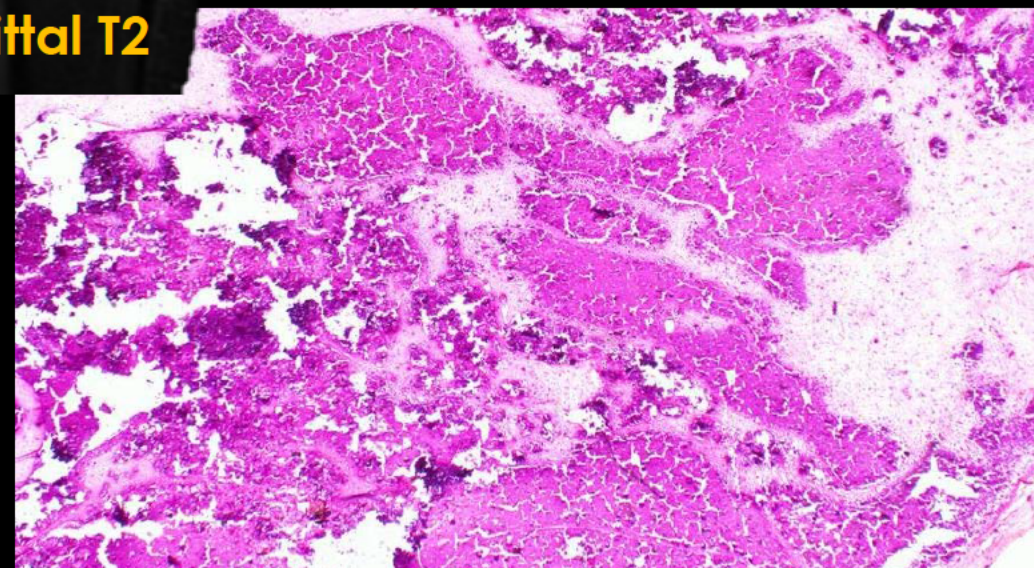
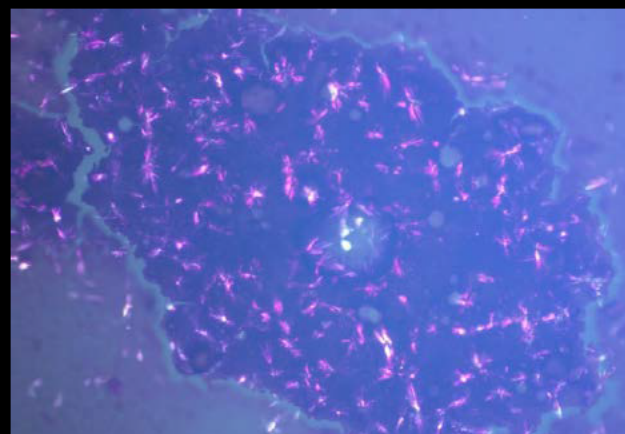
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Sagittal T1



Sagittal T2



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GOUT

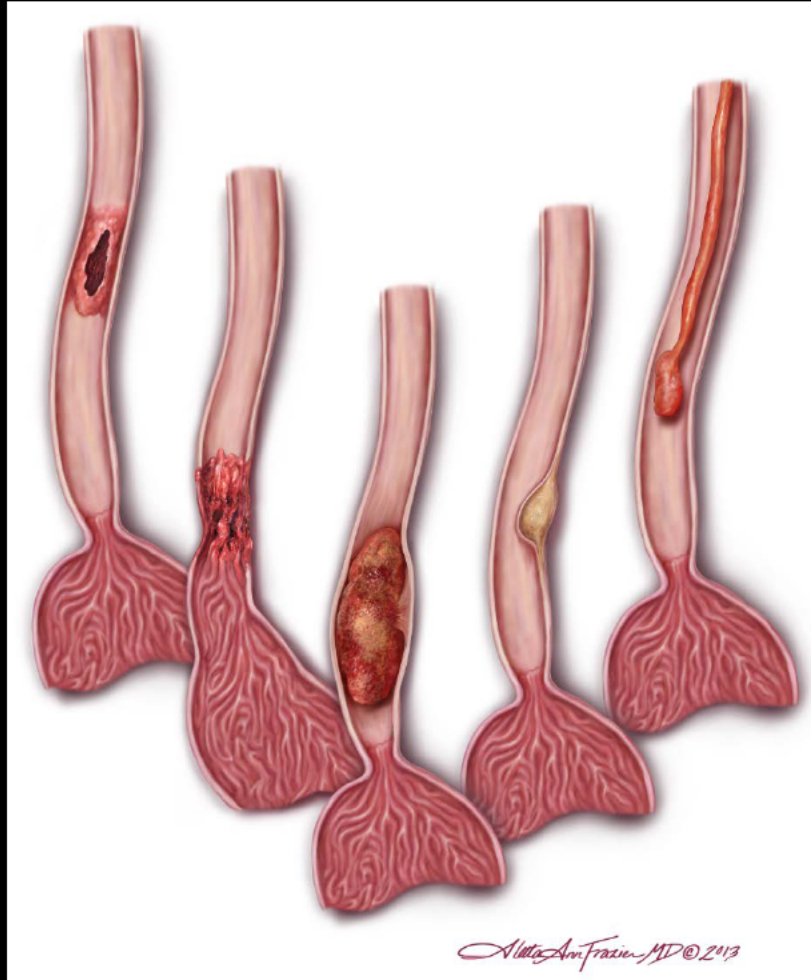
Dr. Neda Najmi
Saint Louis University

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Gastrointestinal Best Case



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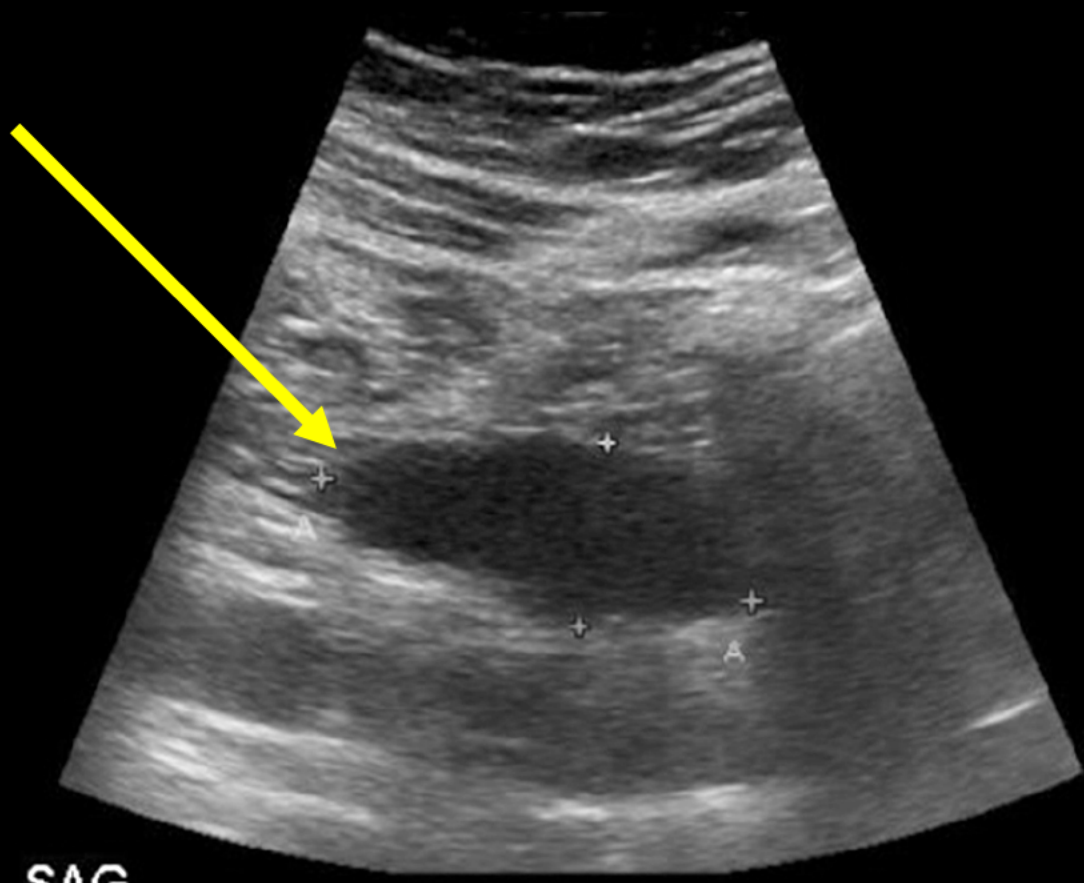
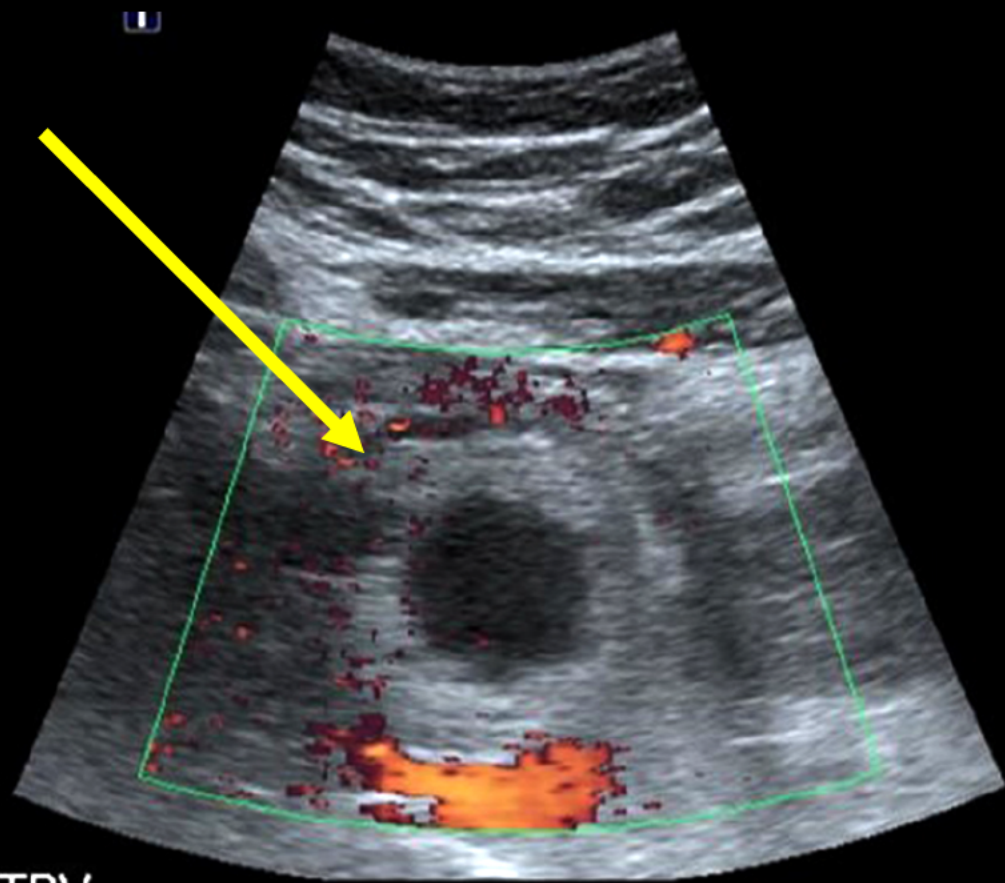
Clinical information

20 year old white male with 3 days of right lower quadrant pain.



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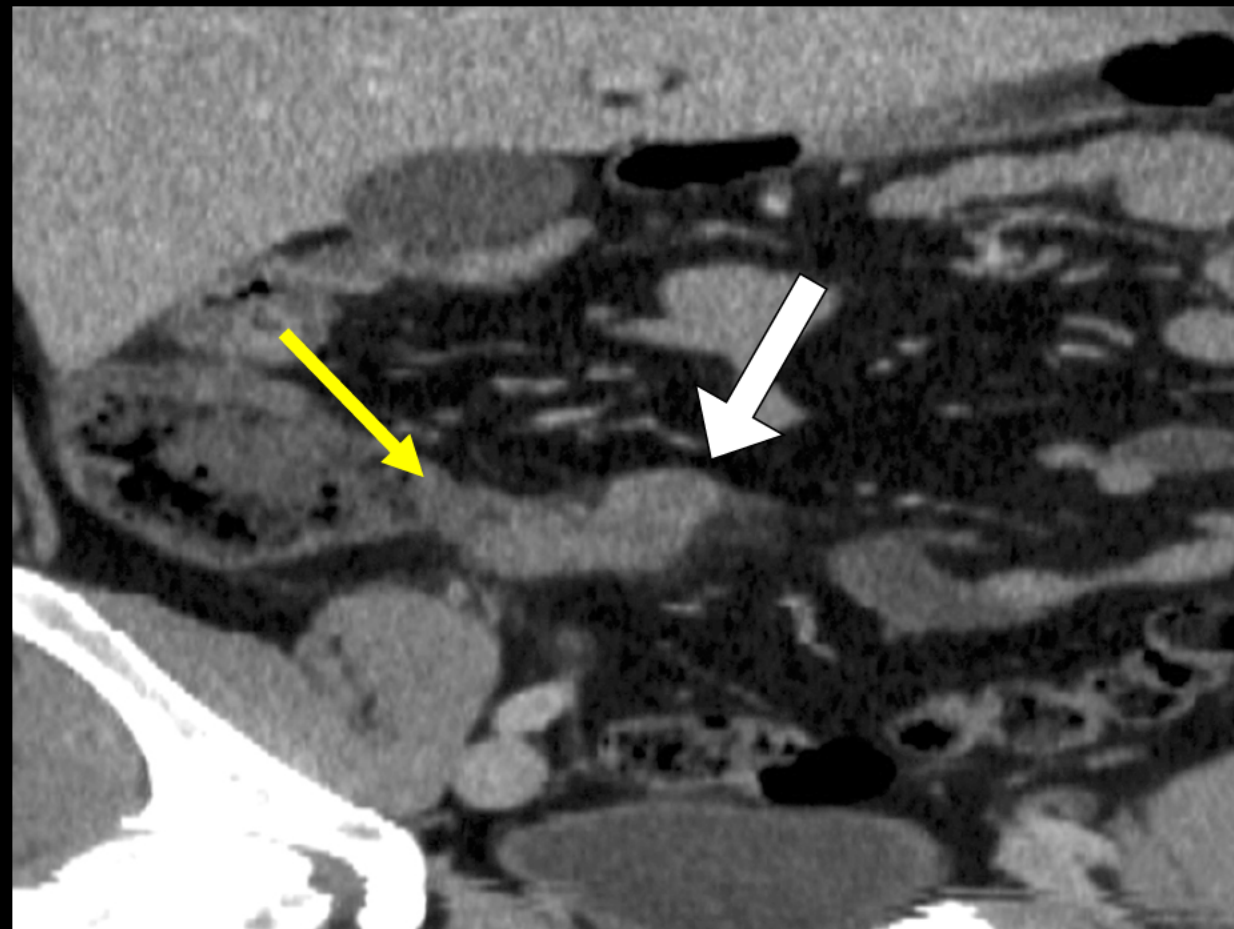
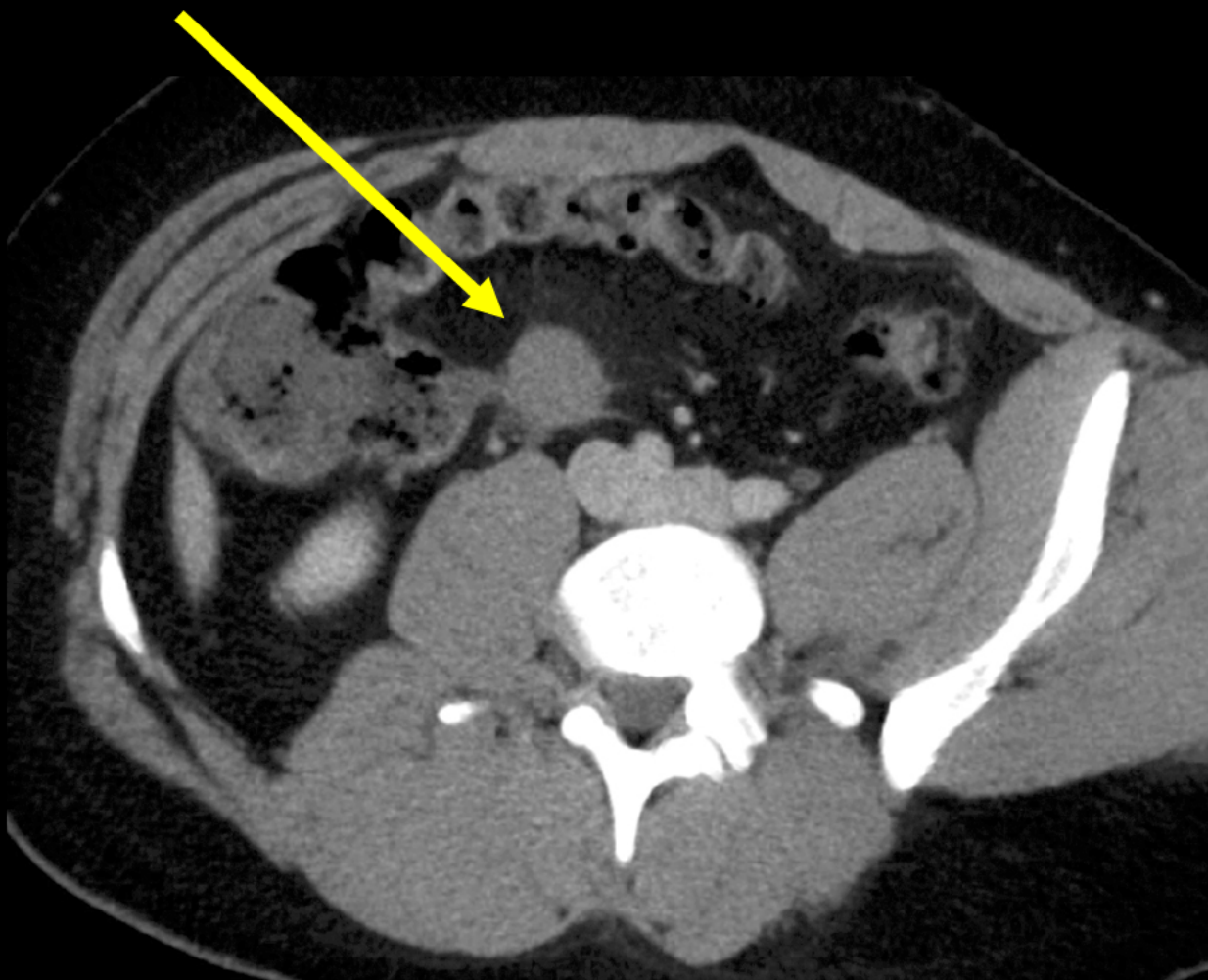


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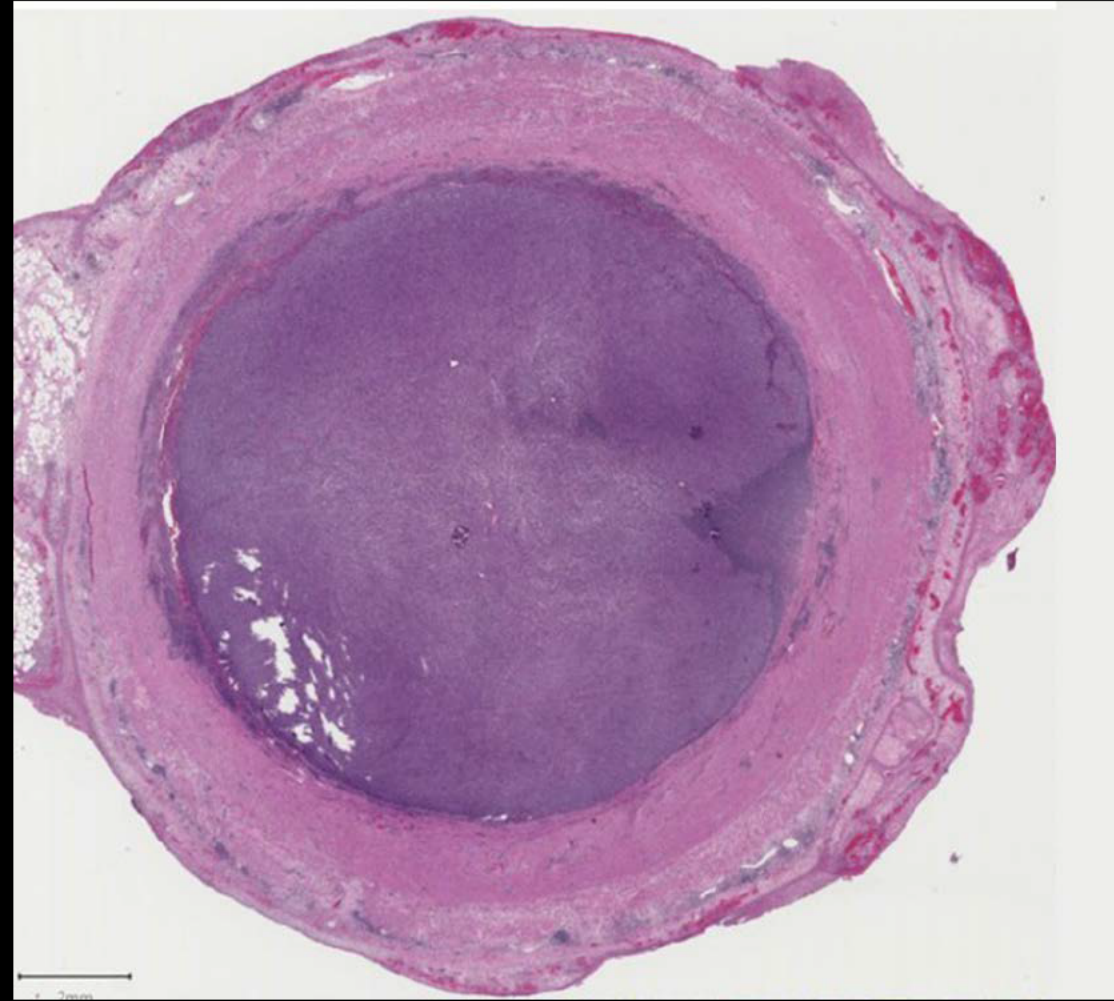
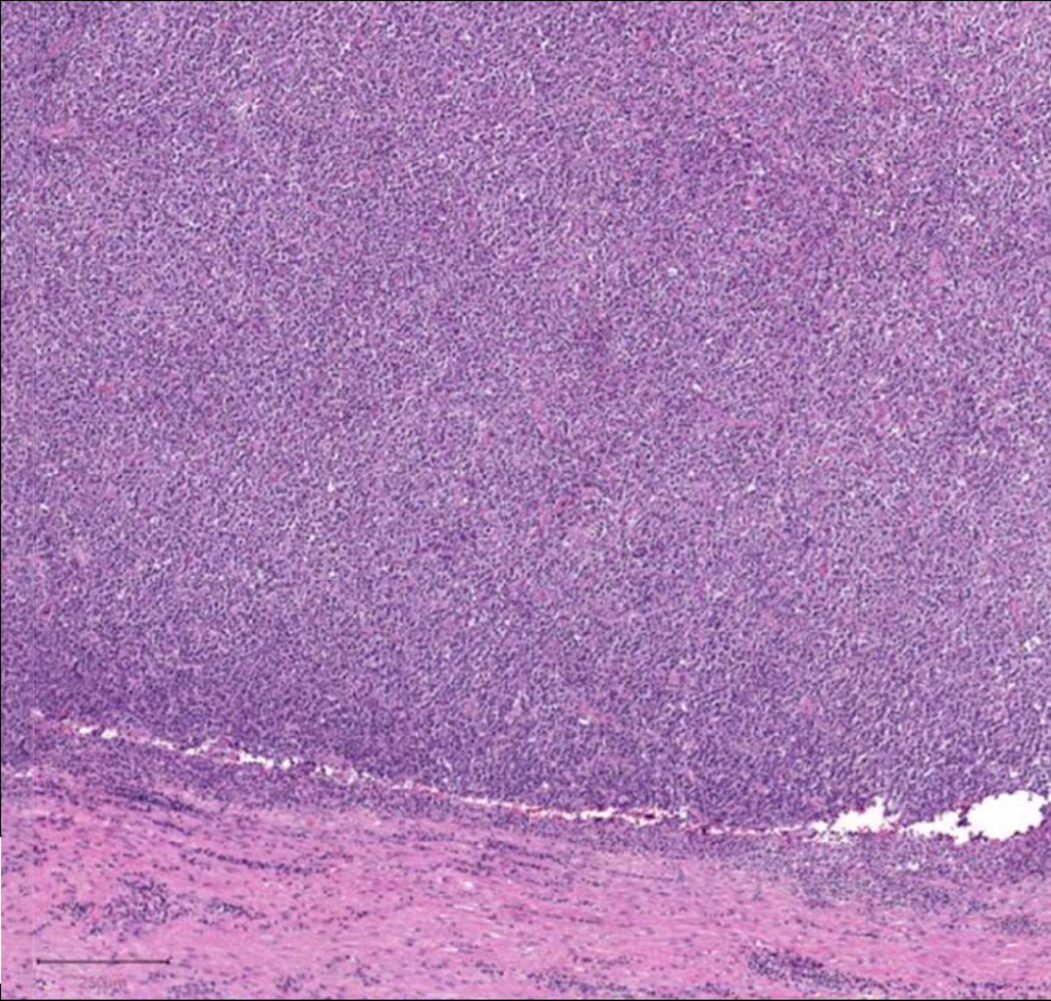
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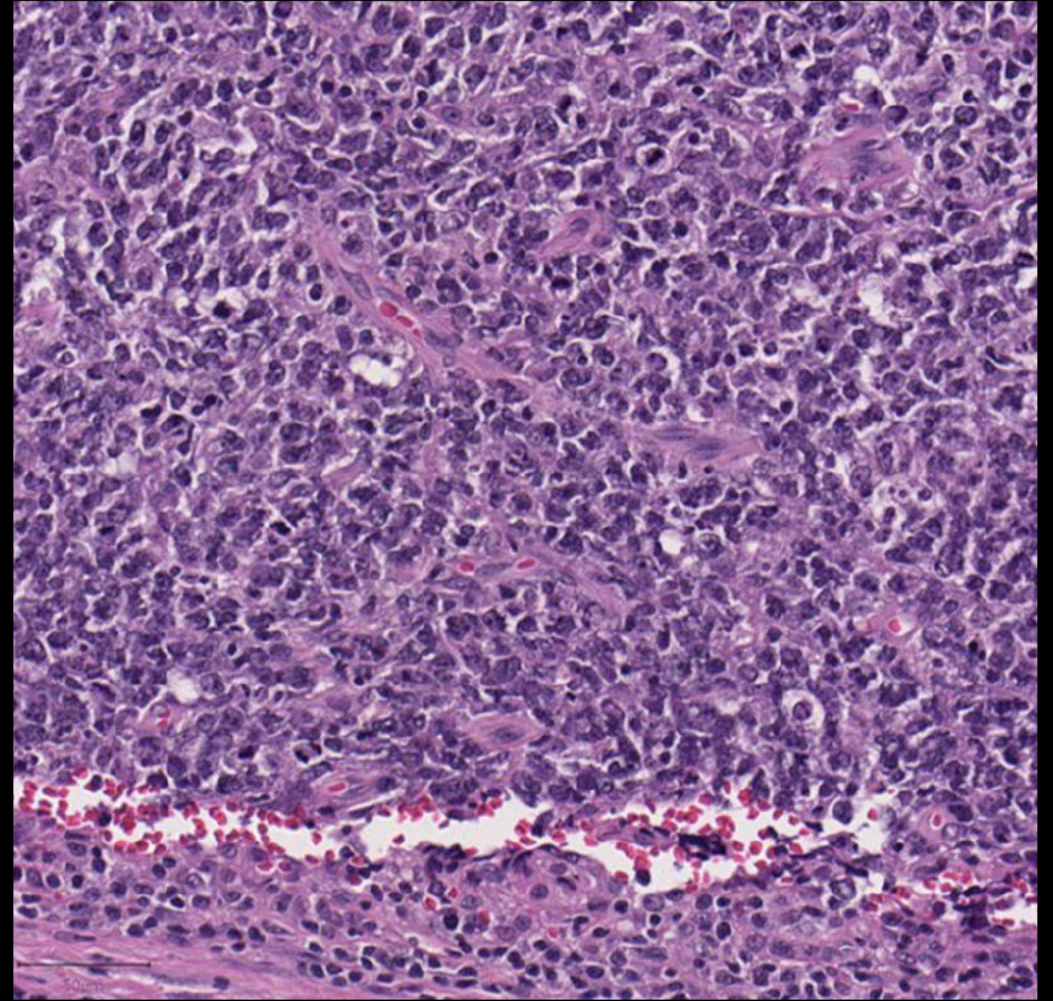
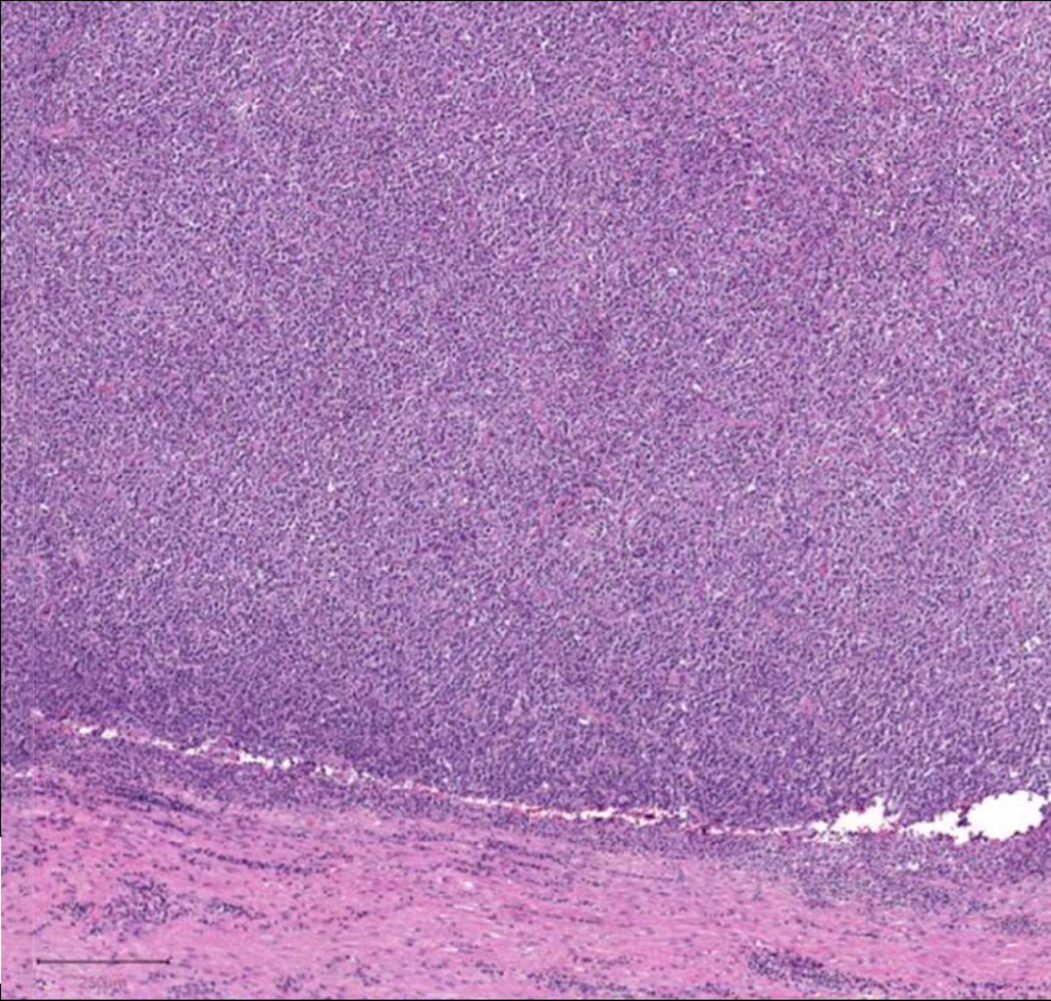




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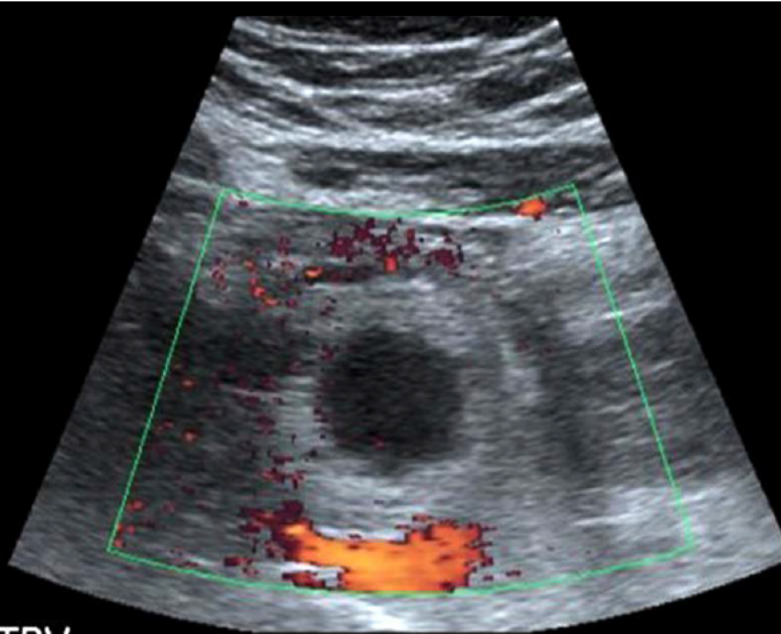
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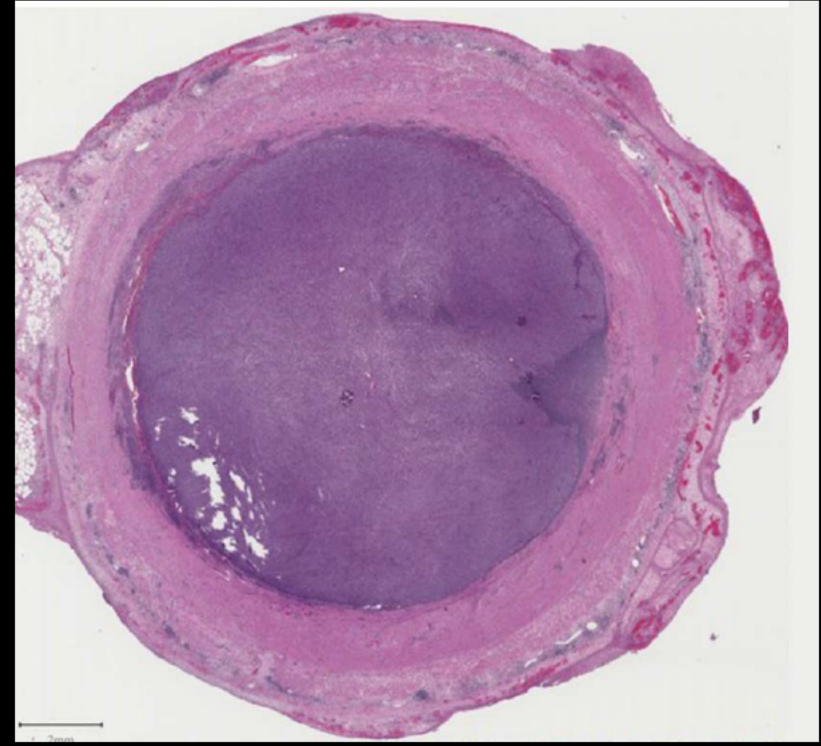
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Diffuse large B-cell lymphoma of the appendix

**Marc Napoleone
Mount Sinai Hospital
Toronto, Ontario**



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Neuroradiology Best Case



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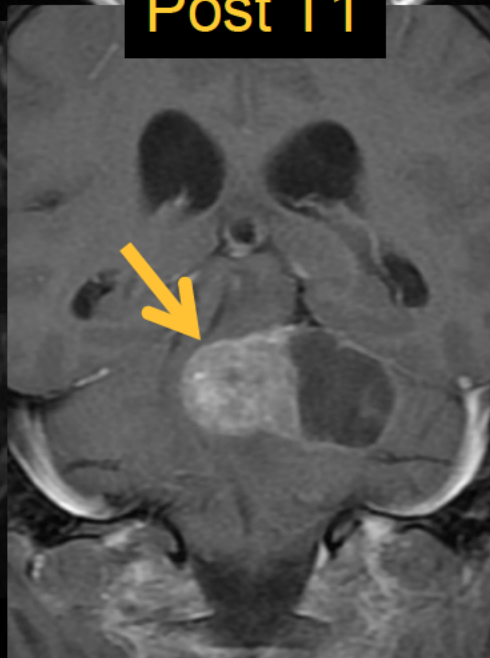
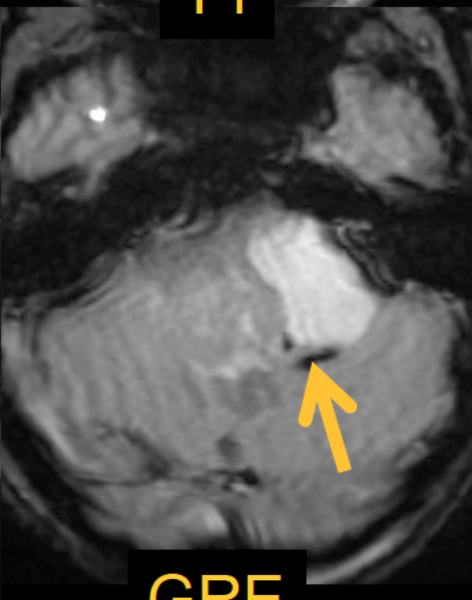
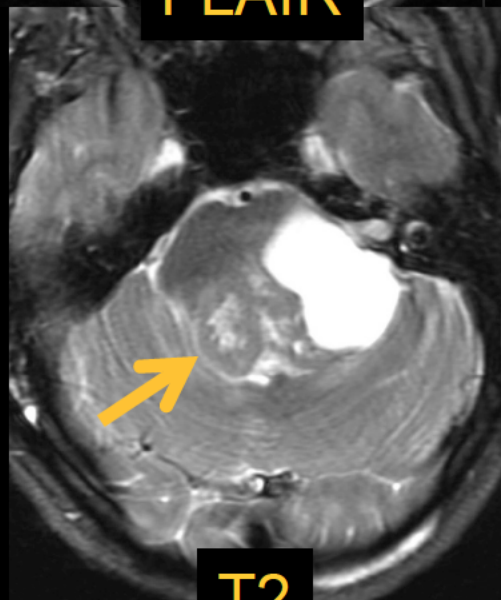
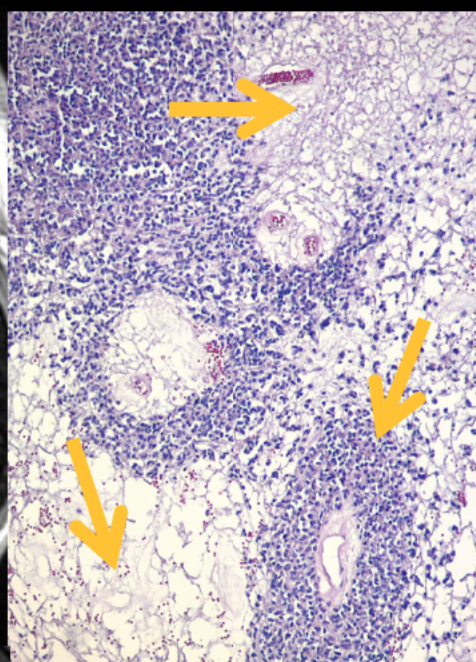
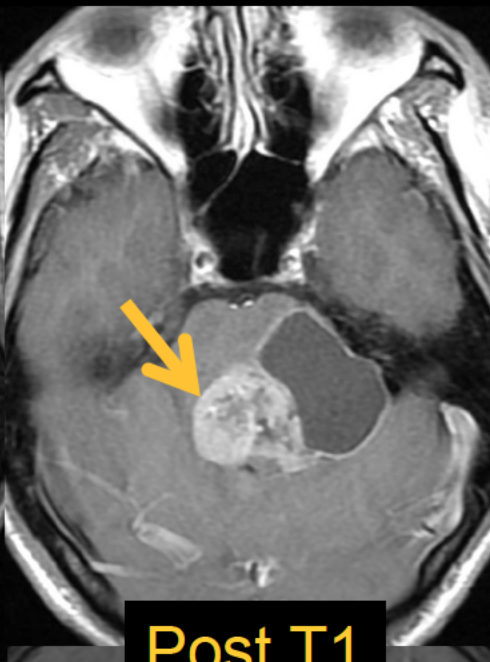
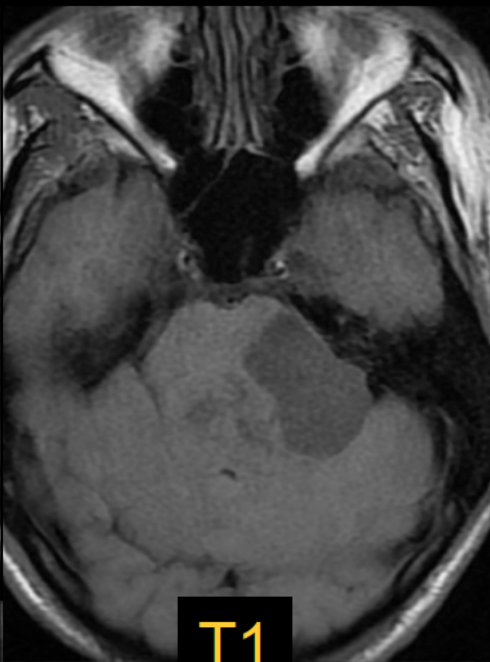
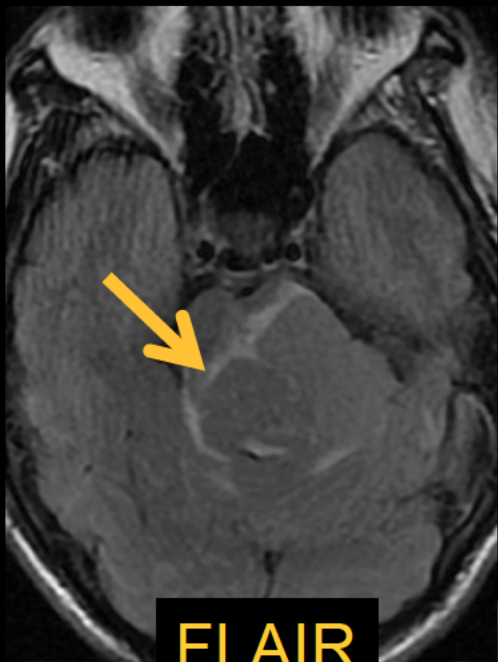
Clinical Information

35-year-old male with progressive gait disturbance, nausea, and vomiting.



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Liponeurocytoma

Roberto Kutcher, M.D.

University of Massachusetts

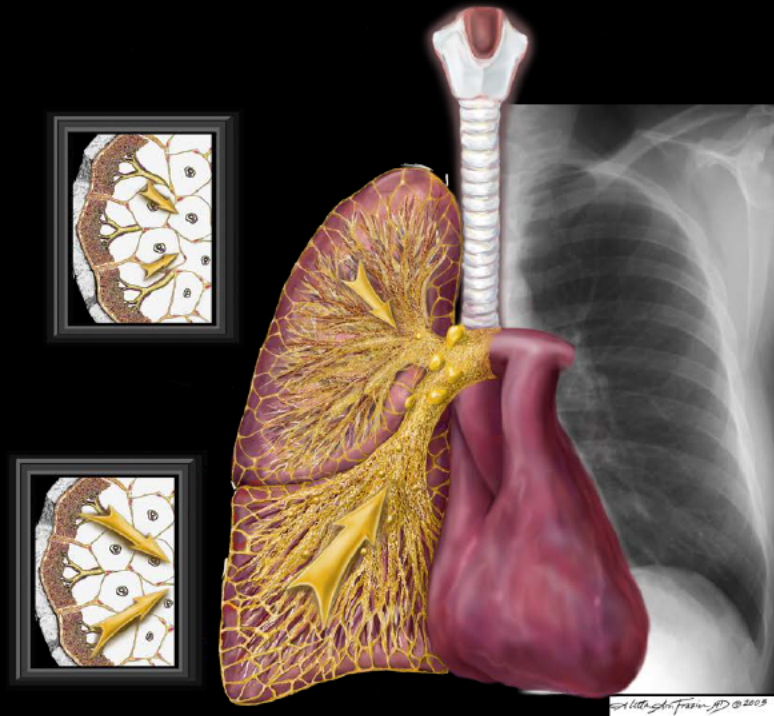
Worcester, Massachusetts



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Pulmonary and Mediastinal Best Case



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Clinical Information

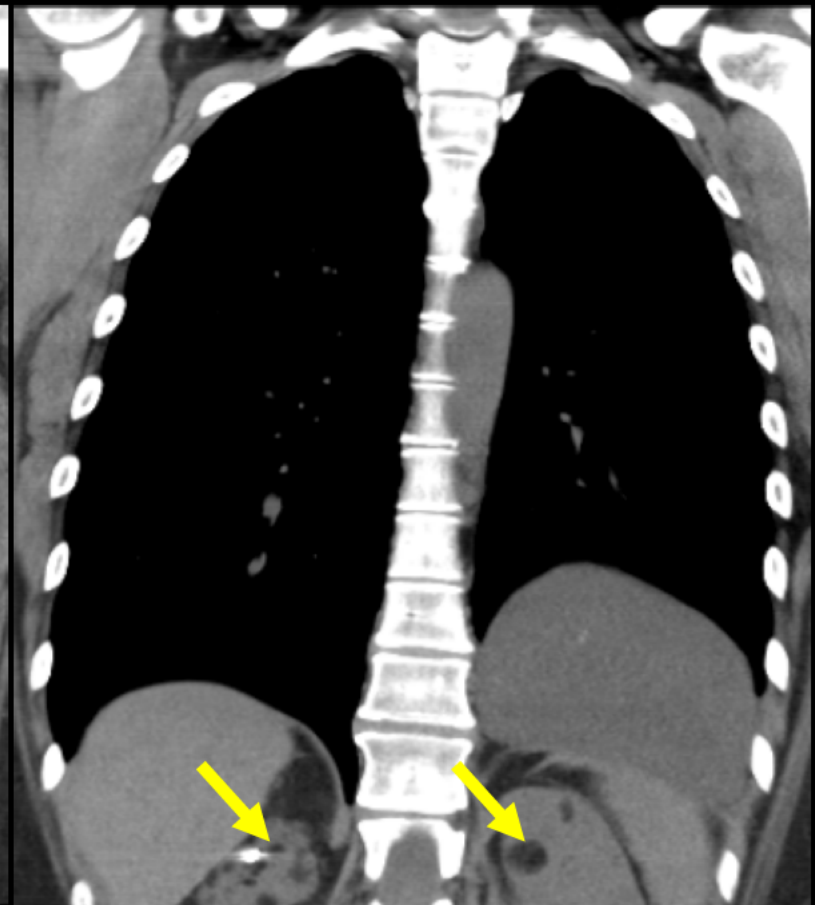
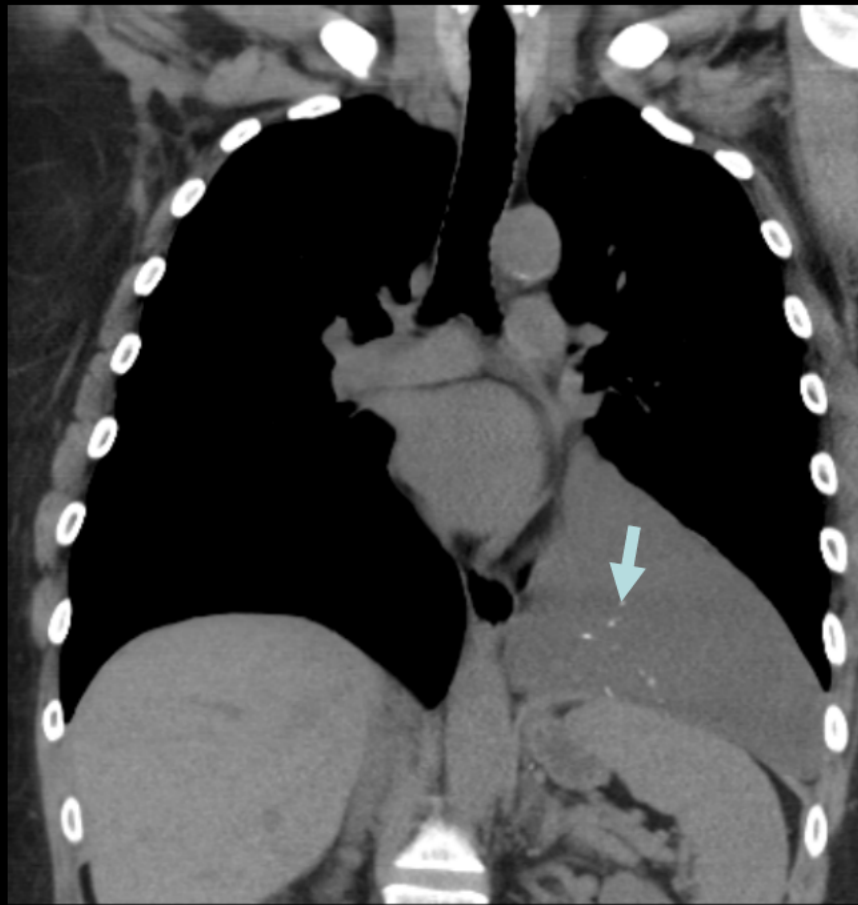
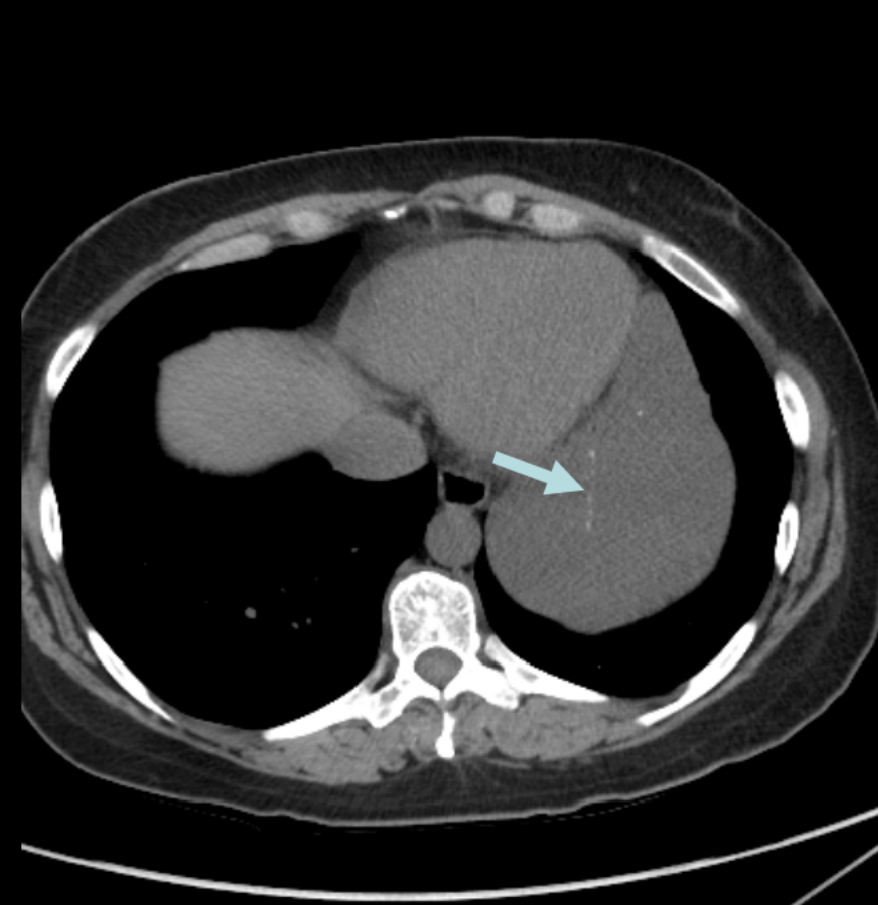
- 50F with tuberous sclerosis complex and a longstanding mediastinal cystic lesion
- Sudden-onset L pleuritic chest pain
- CTPA revealed significant increase in size and complexity of the mediastinal



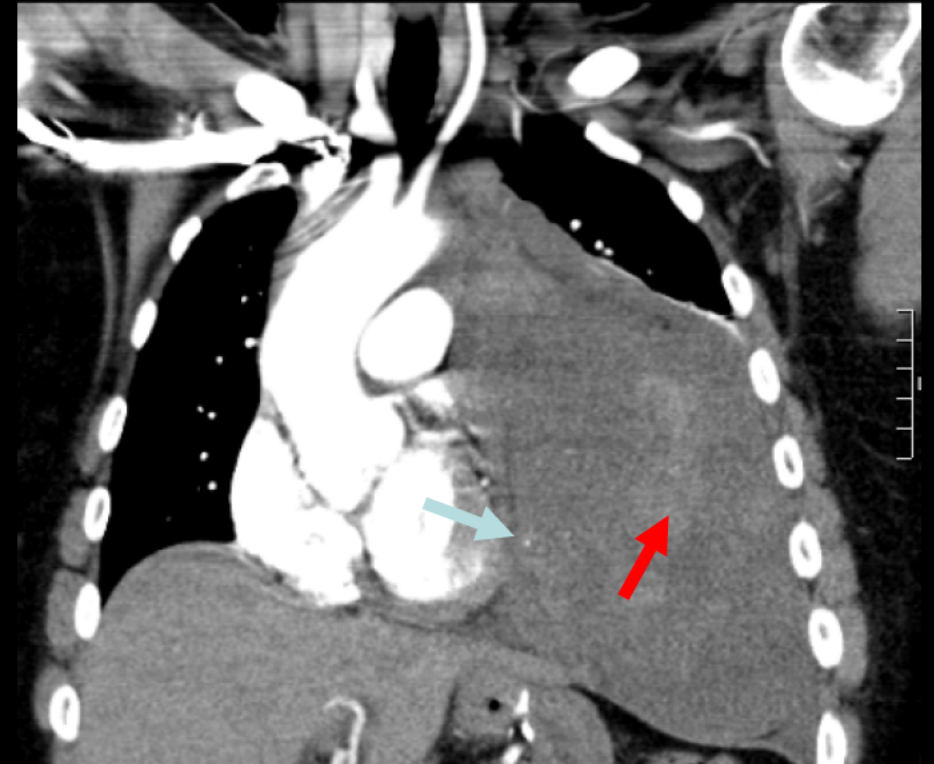
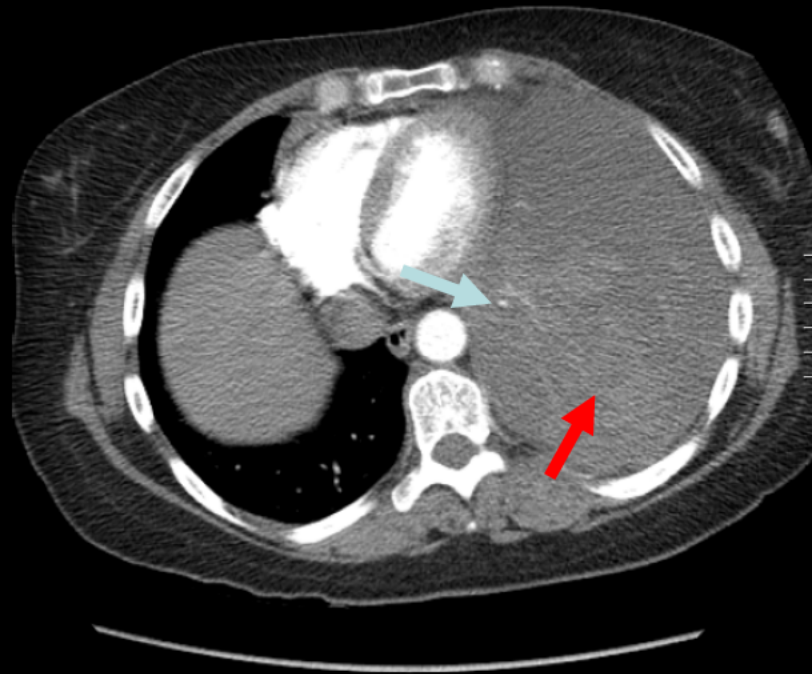
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CT 5-years prior shows a cystic lesion with small punctate and linear calcifications (blue arrows). Bilateral renal angiomyolipomas are present (yellow arrows)



New CT shows increase in size of mass with mediastinal shift to the right. Most of the mass is still fluid attenuation although there are areas of increased attenuation (red arrow) suggestive of hemorrhage. Punctate calcifications can be seen



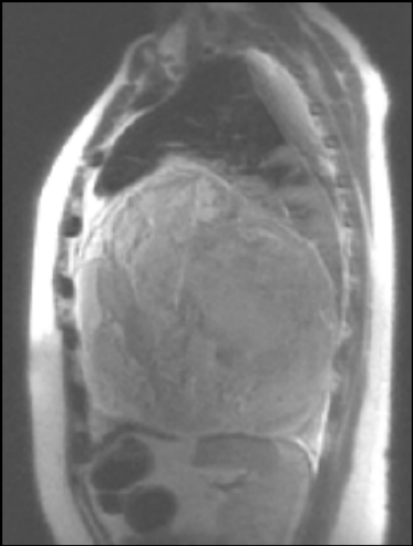
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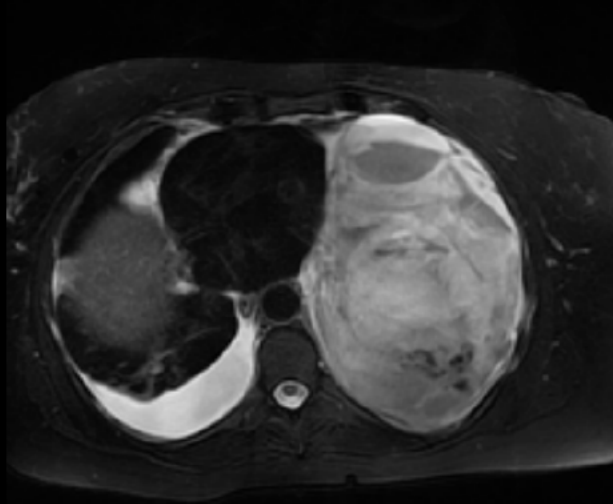
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MRI shows a complex hemorrhagic mass causing mediastinal shift to the left. No enhancement is seen up to 6 minutes post contrast.

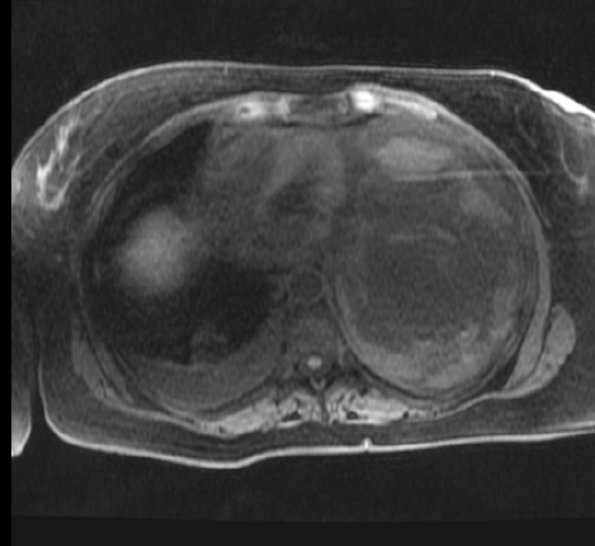
T2W Haste



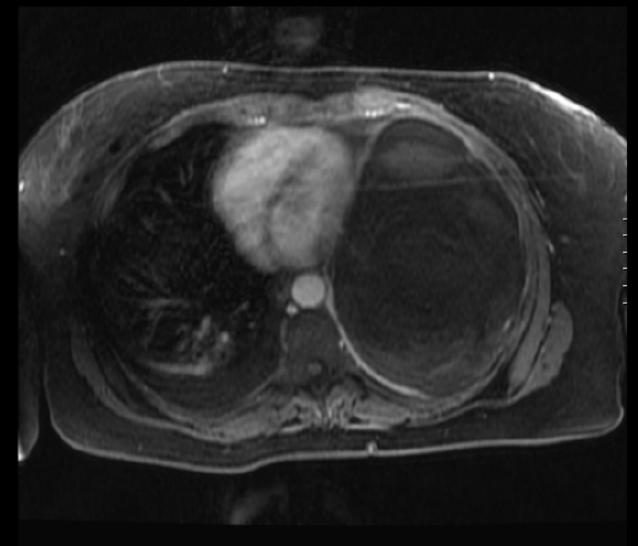
T2W FSE



T1W Lava Pre



T1W Lava Post

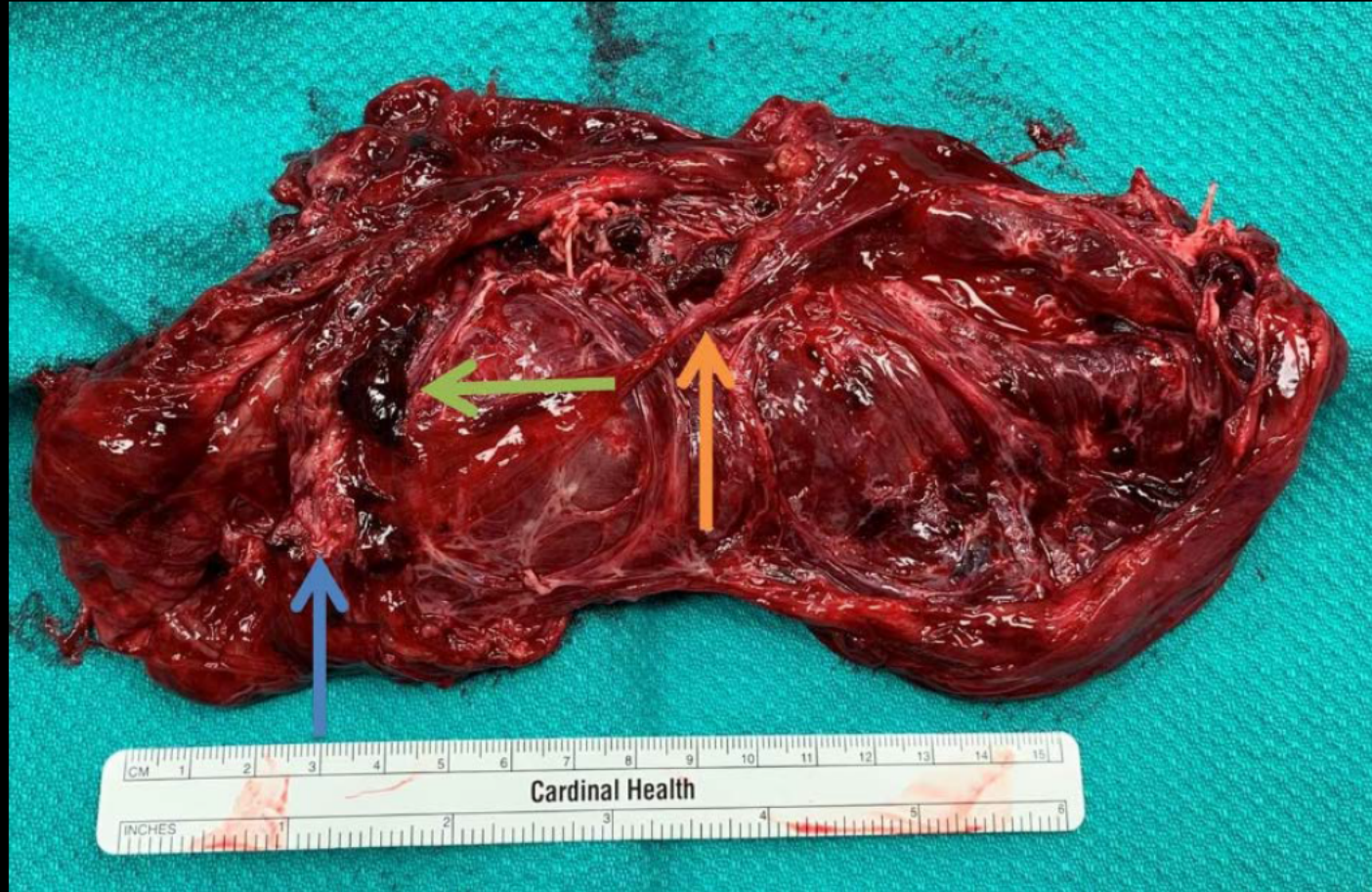


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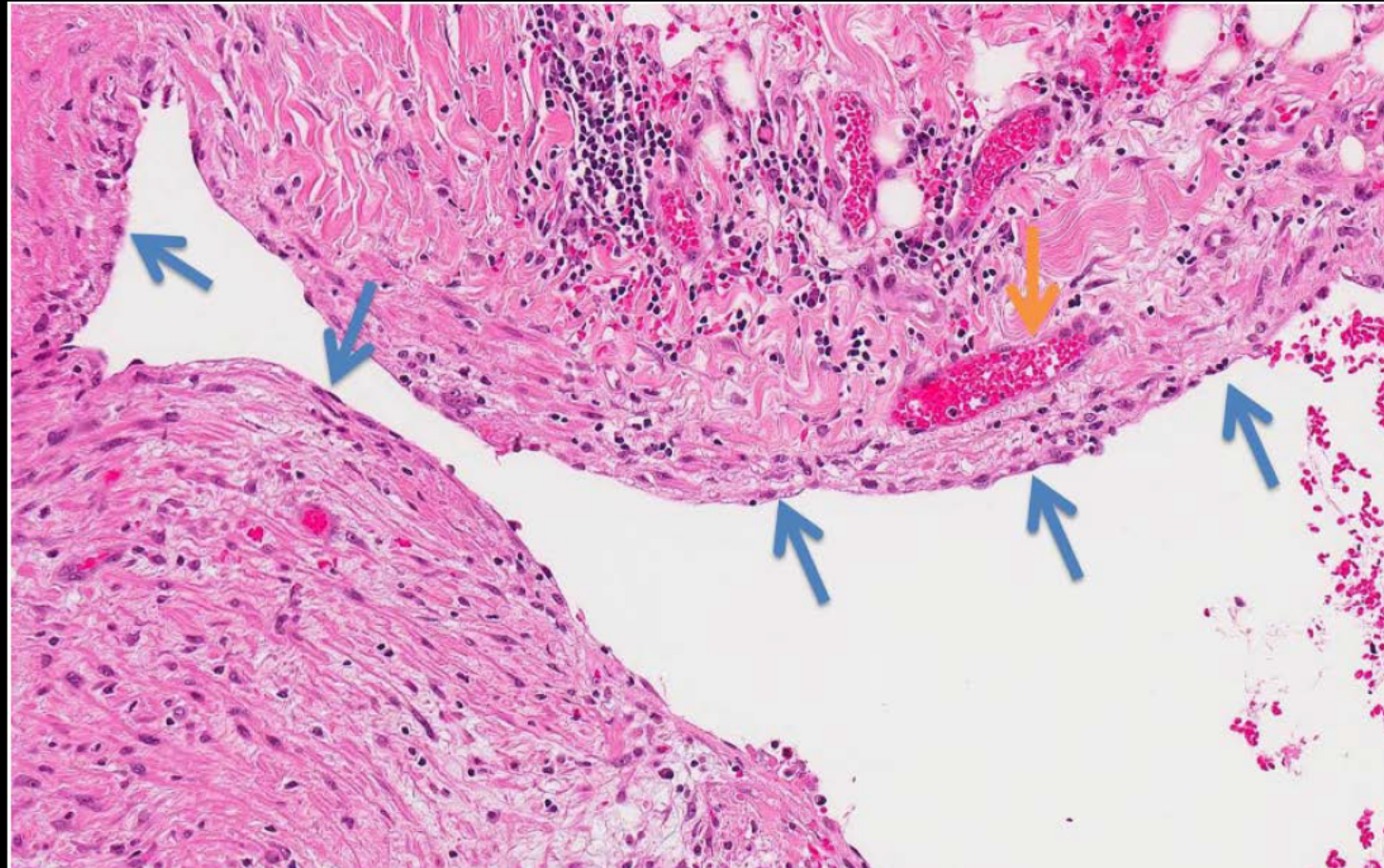
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Gross surgical specimen demonstrates a large hemorrhagic multilocular cyst with multiple septations (orange arrow). The external surface is composed of dense fibrous tissue and adipose tissue (blue arrow). The cyst is filled with blood clot (green arrow).



High power microscopic image demonstrates a dilated lymphatic channel which is lined by a single layer of endothelial cells (blue arrows). Some of the lymphatic channels are filled with red blood cells (orange arrow)

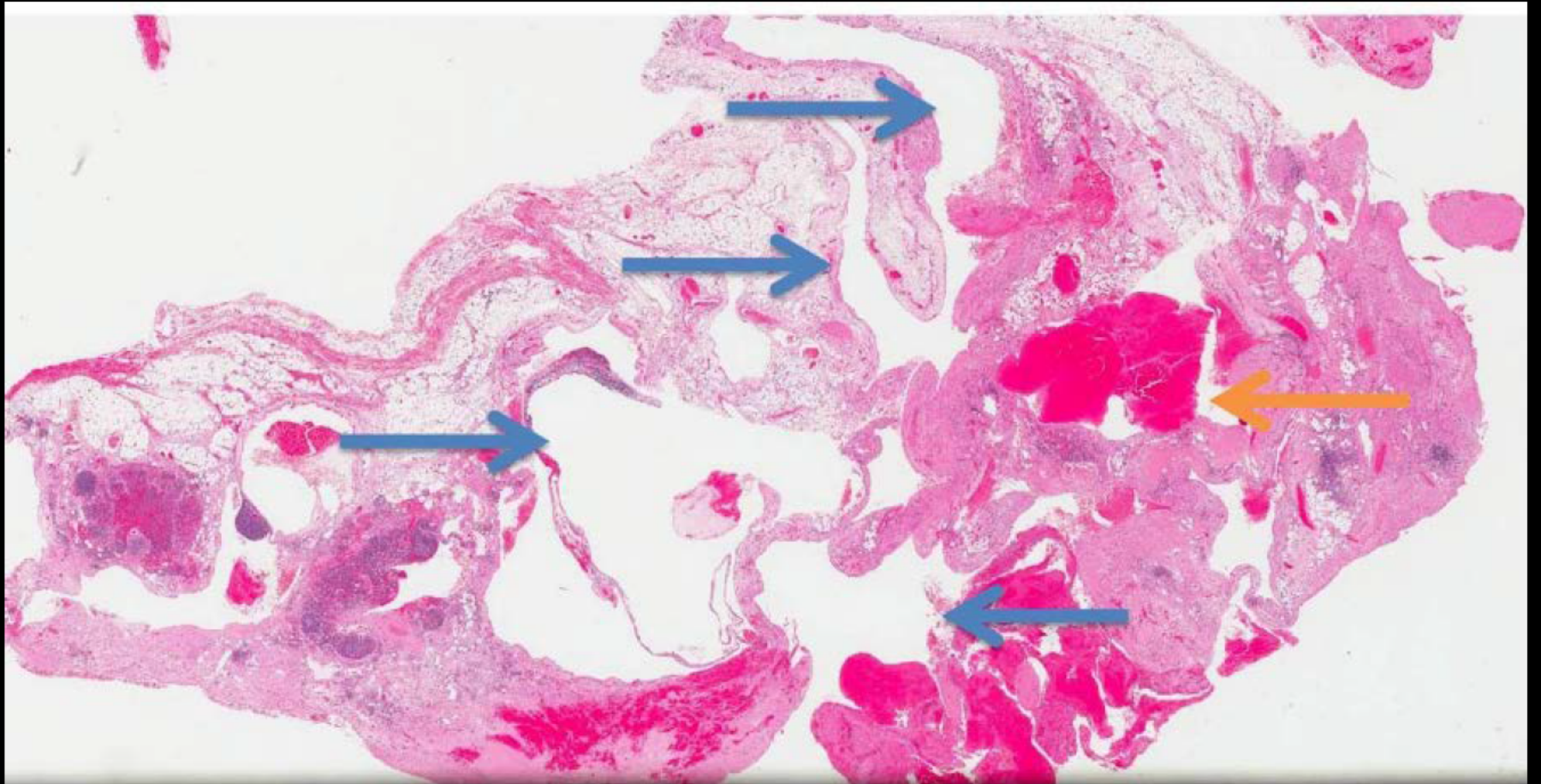


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Low power microscopic image also showing multiple dilated lymphatic channels, in keeping with a lymphangioma. Blood clot occupies the lumen of the cyst (orange arrow)

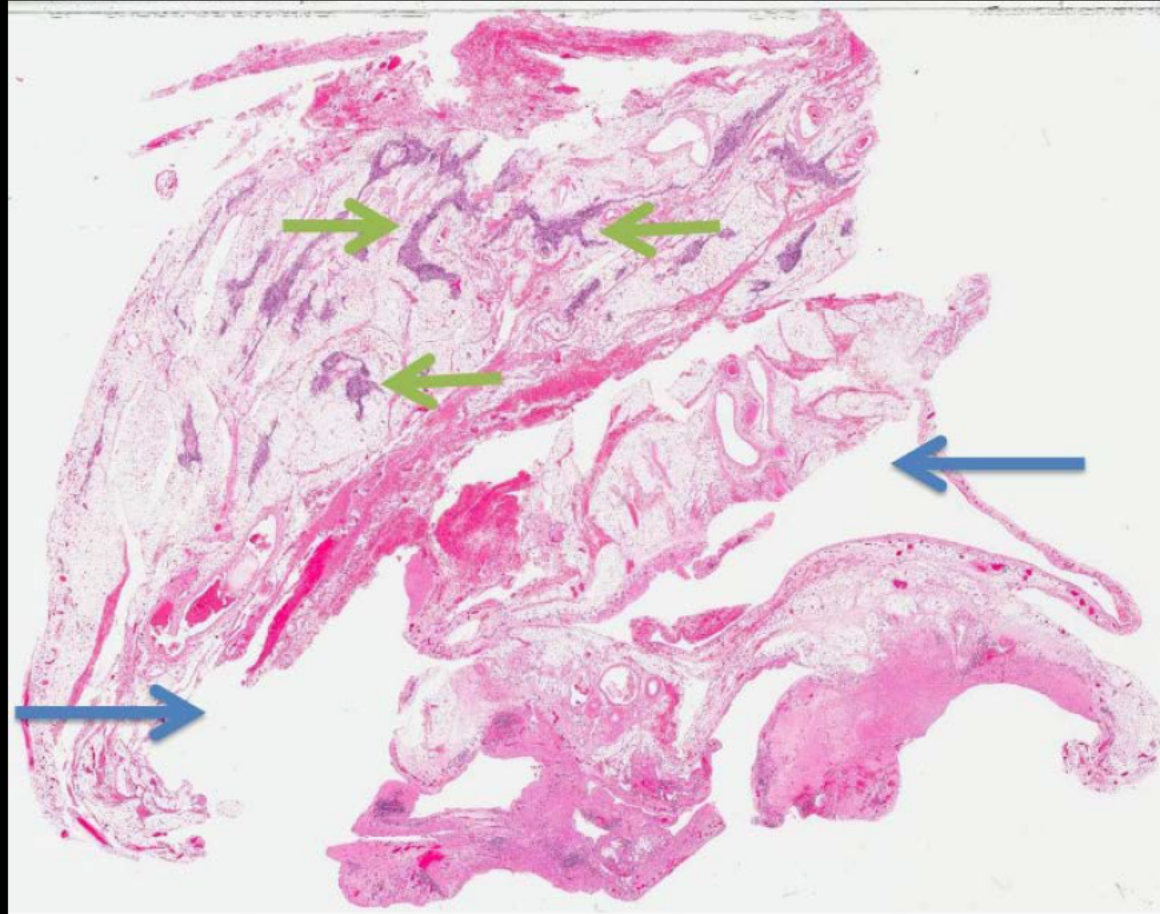


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Low power microscopic image demonstrates multiple dilated lymphatic channels (blue arrows). There are also focal areas of atrophic thymic tissue (green arrows).



Lymphangioma with hemorrhage

Olivia Li, M.D.

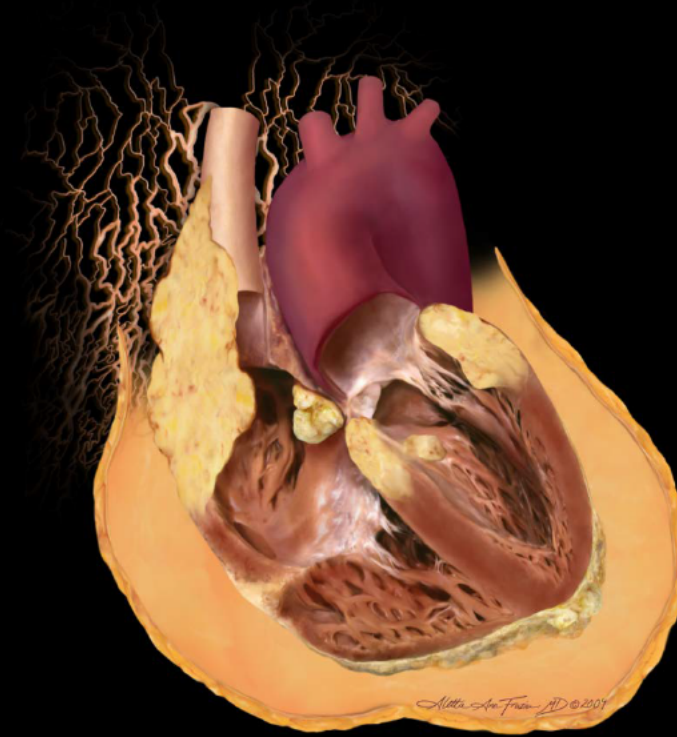
Victoria Hospital, London



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Cardiovascular Best Case



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Clinical information

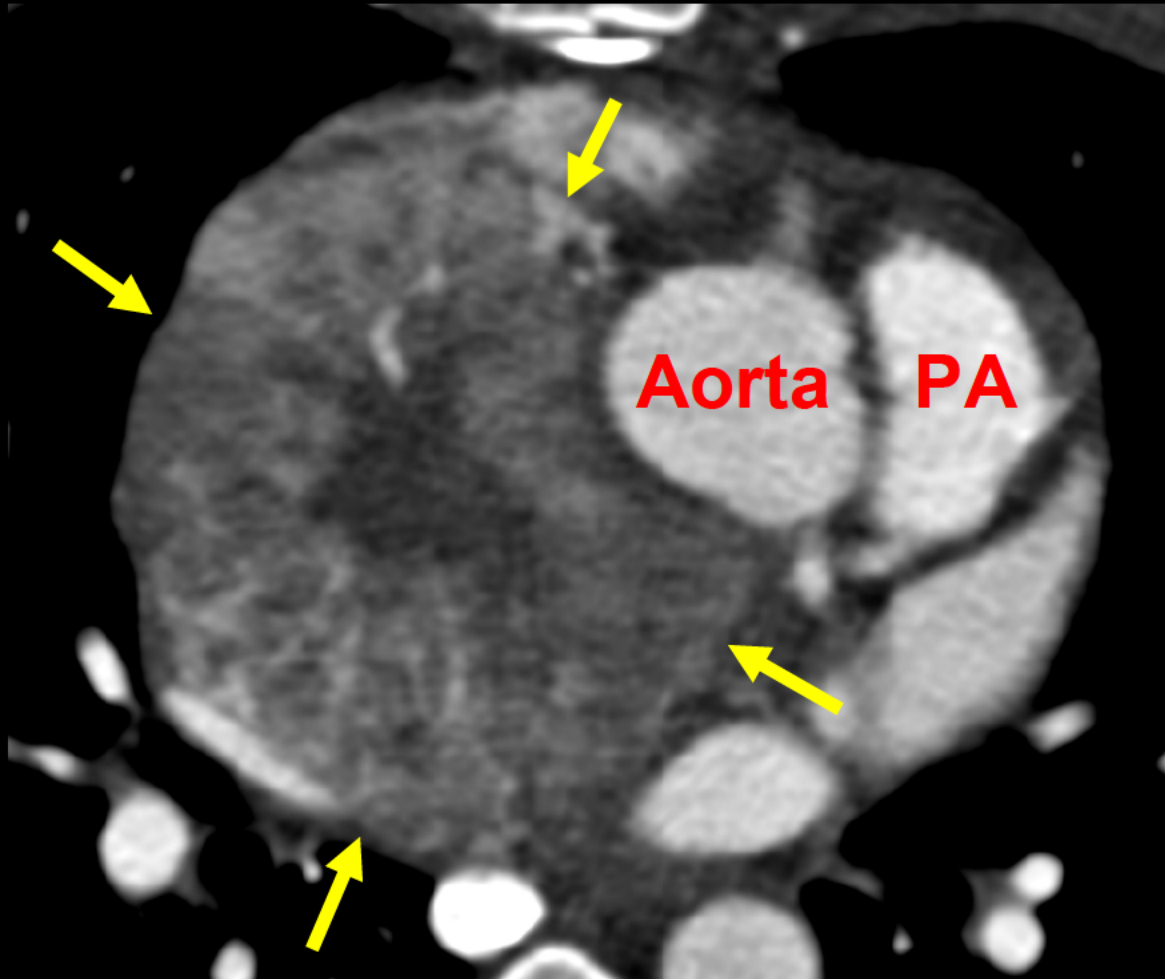
43 y.o. female previously well with new onset atypical chest pain while playing tennis. Transthoracic ECHO showed a “5 x 5 cm mass posterior to aortic valve apparatus”.



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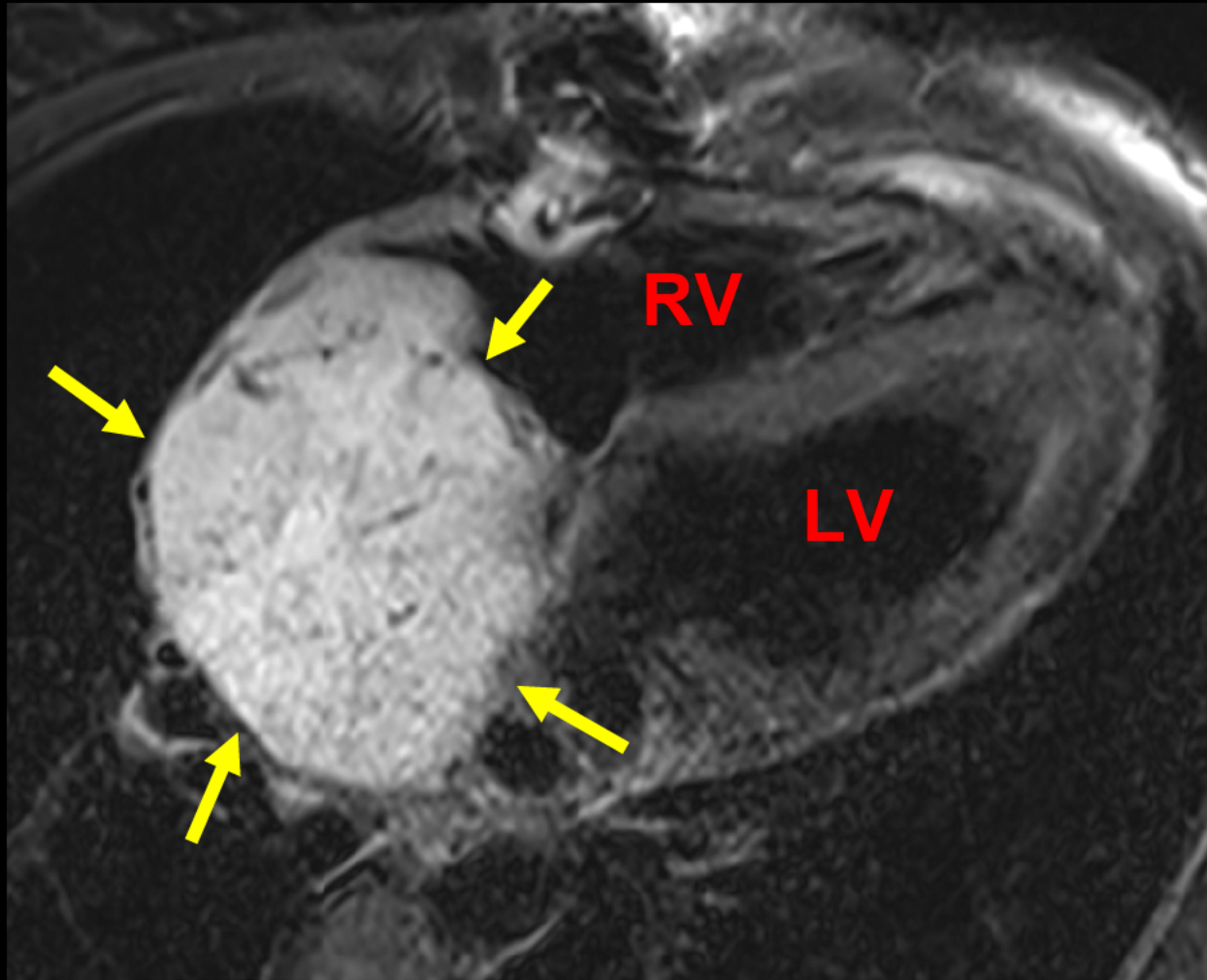
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Axial Cardiac CTA

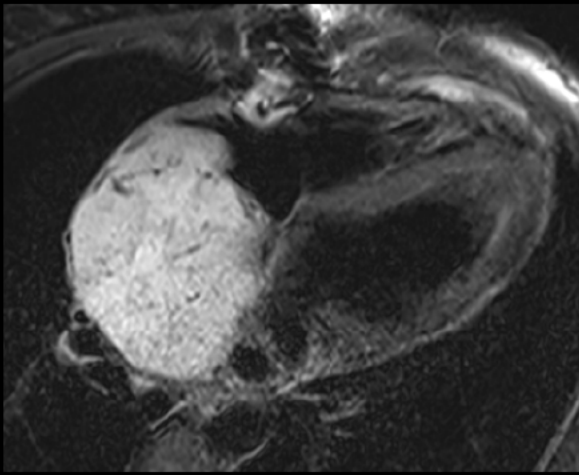


Extensively enhancing mass filling the right atrial chamber (with central low density), appears to involve right atrial wall and possibly inter-atrial septum

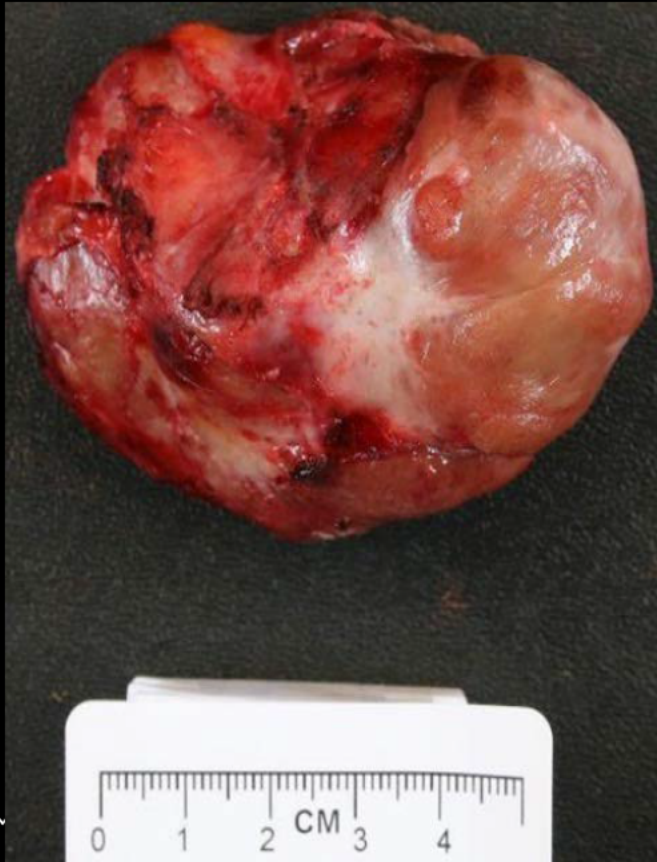
T2W 4-Chamber Cardiac MRI



Diffusely high signal intensity lesion with scattered vascular channel voids: the so-called “salt and pepper” appearance.



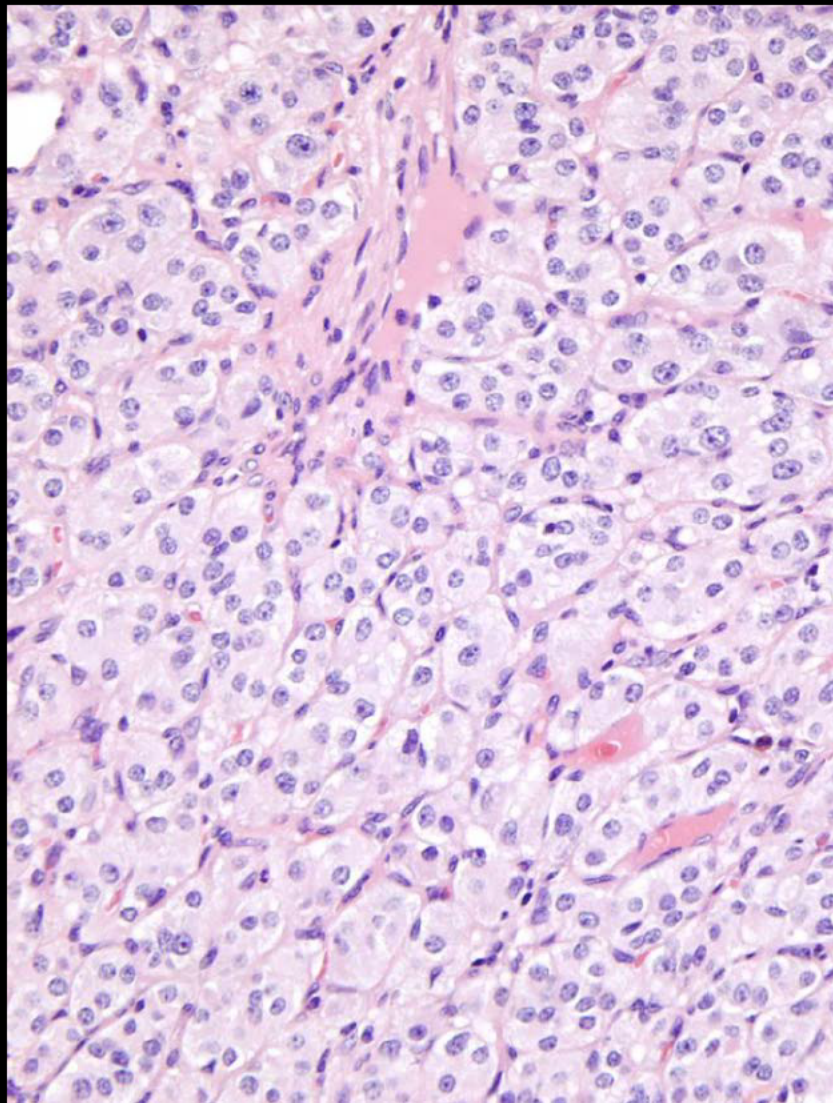
Resected Right Atrial Mass



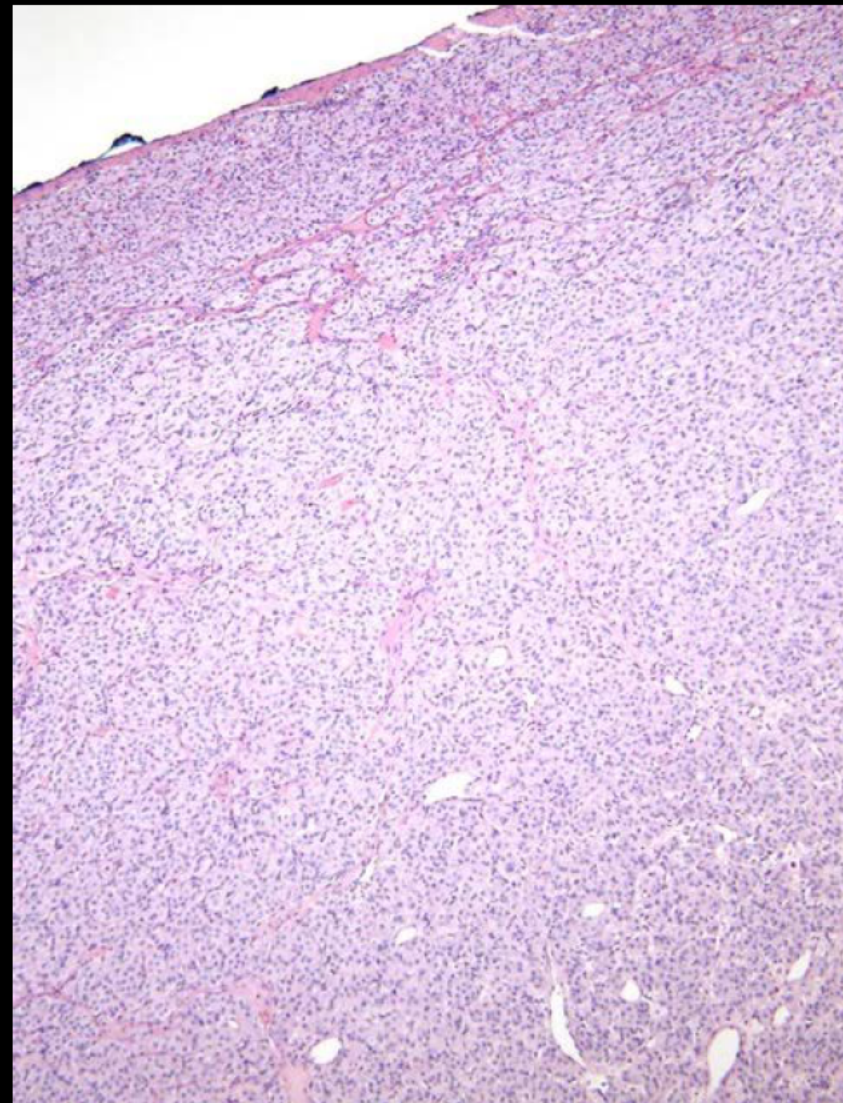
Surface & cut section images of gross specimen (resected from wall of right atrium and interatrial septum) shows dense fleshy yellow tissue, scattered vessels with patchy hemorrhage, & central gelatinous core.

At surgery, mass occluded SVC/RA junction, compressed right main pulmonary artery, and was fed by circumflex artery; right atrial reconstruction was required.

H & E stain photomicrographs



Classic trabecular pattern of fibrovascular stroma, "Zellballen" (spherical aggregates of plump chromaffin cells), and scattered vascular spaces



Paraganglioma of the Right Atrium

Jisoo Kim, M.D.

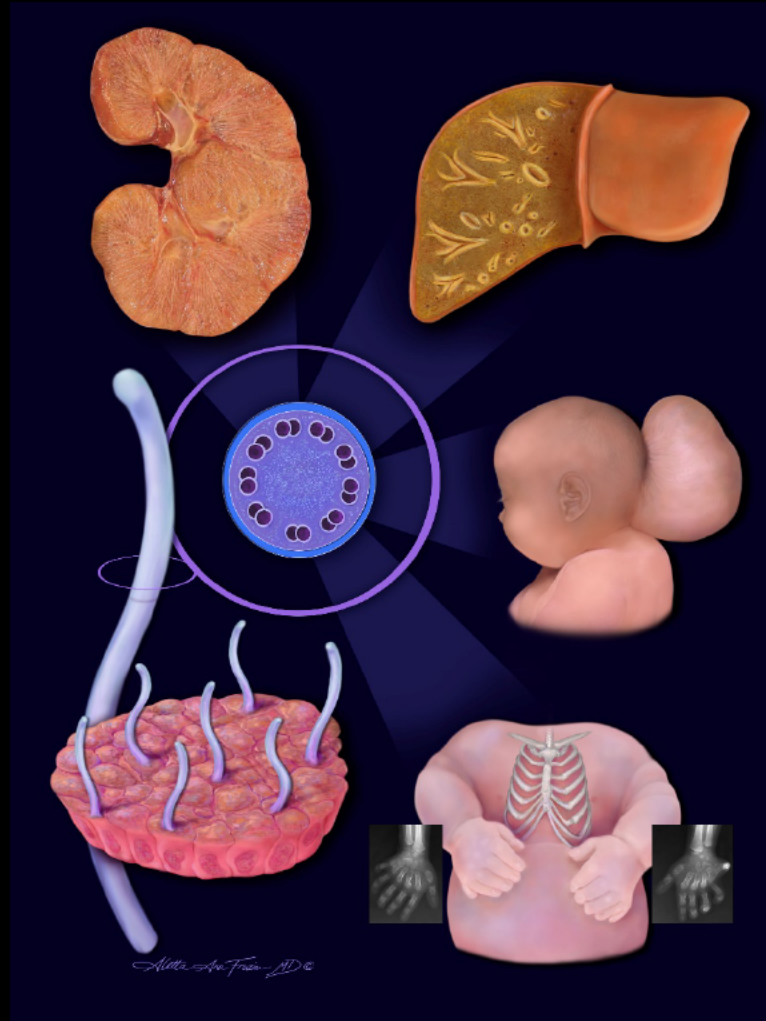
Brigham and Women's Hospital
Boston, Massachusetts

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Pediatric Best Case



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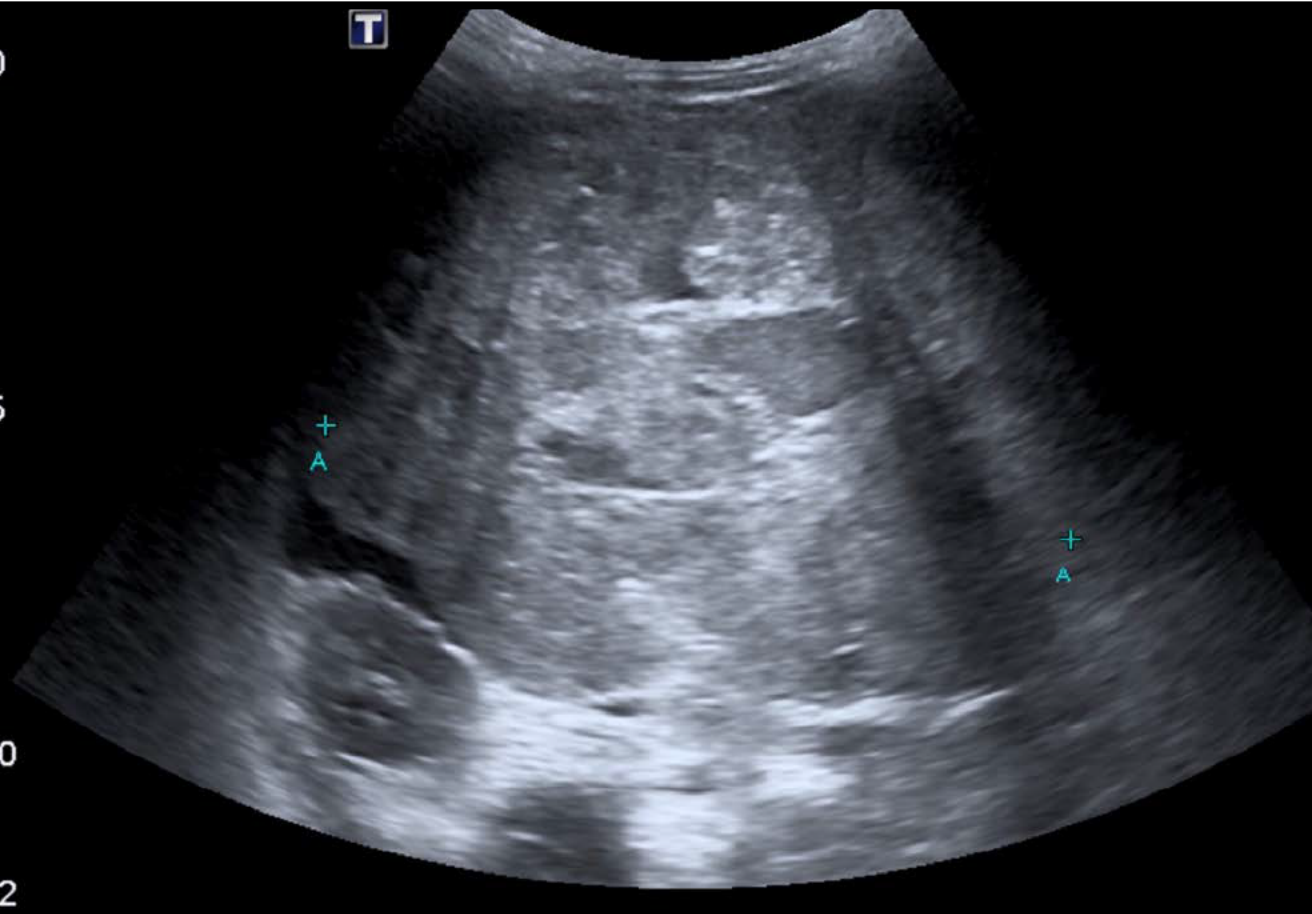
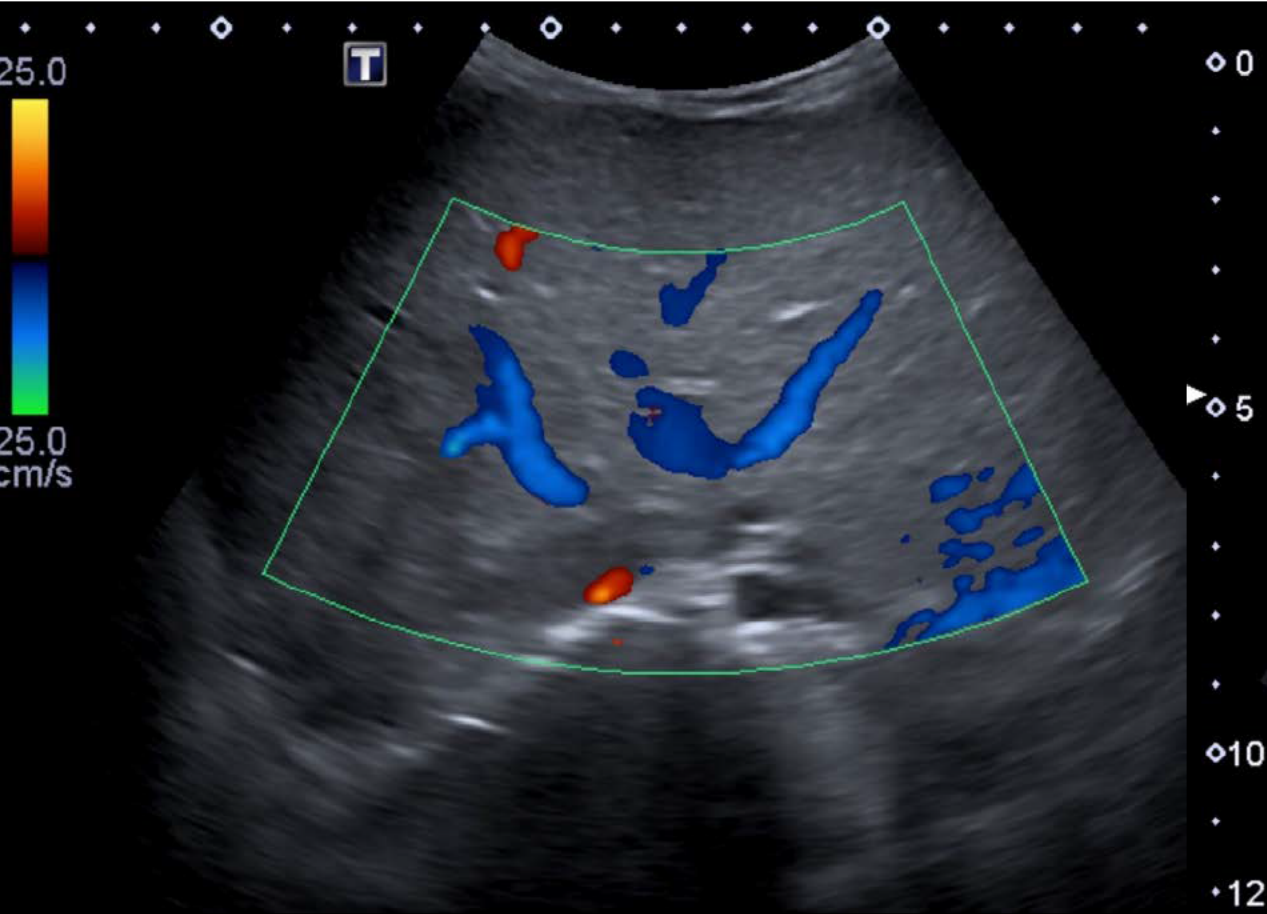
Clinical information

Patient is a 14-month-old Caucasian male without any significant medical history who presented with increasing abdominal girth



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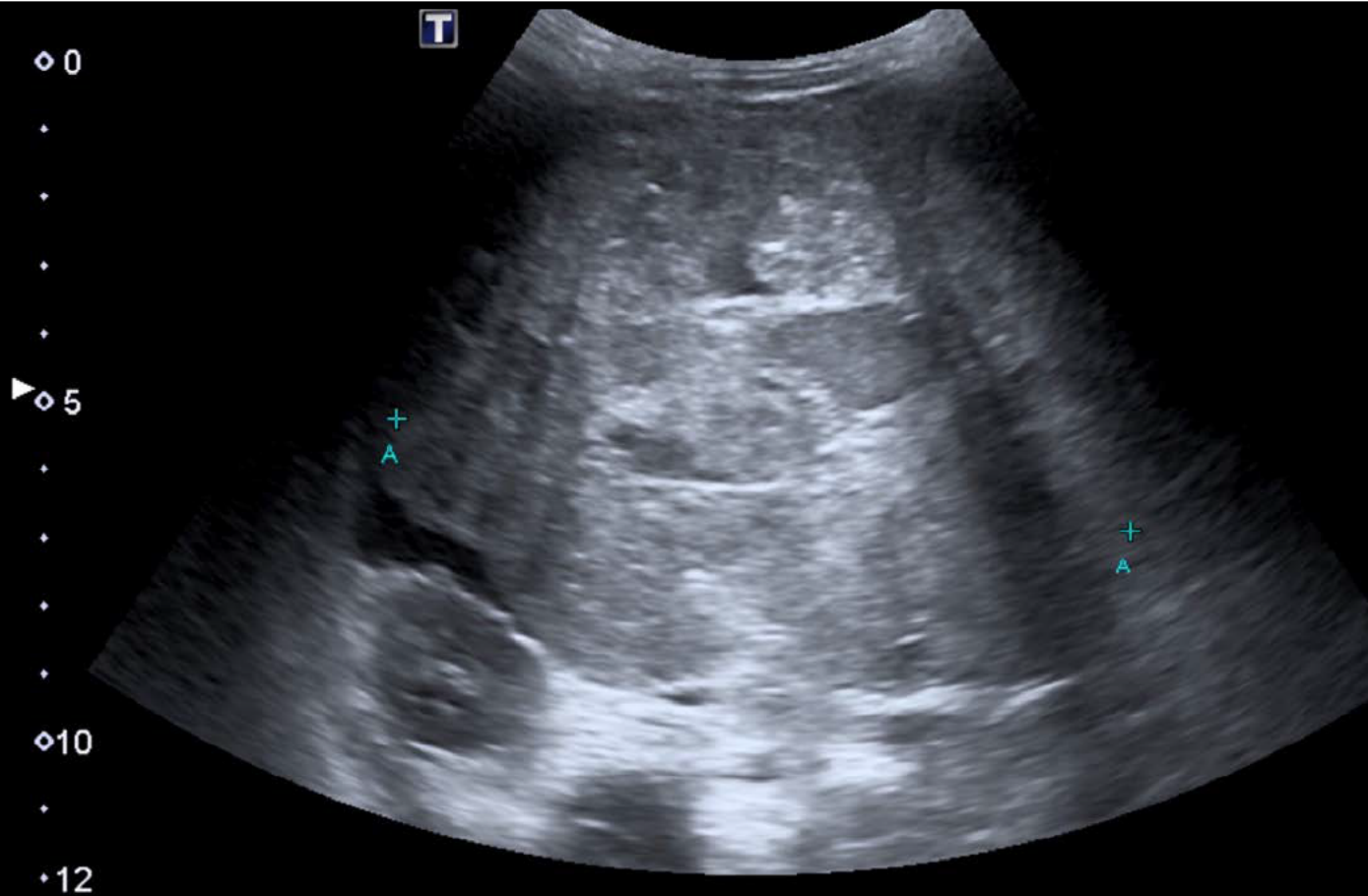
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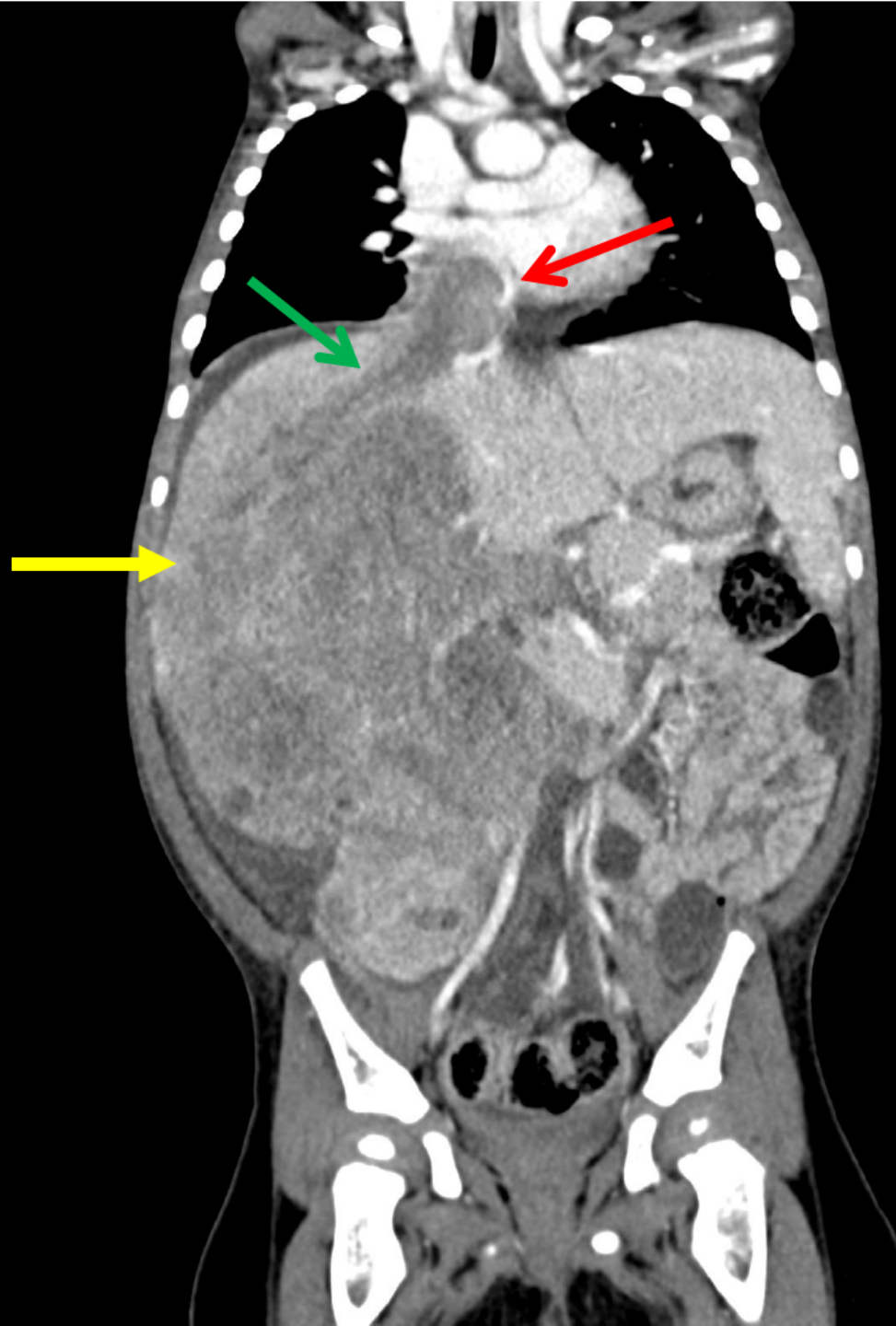
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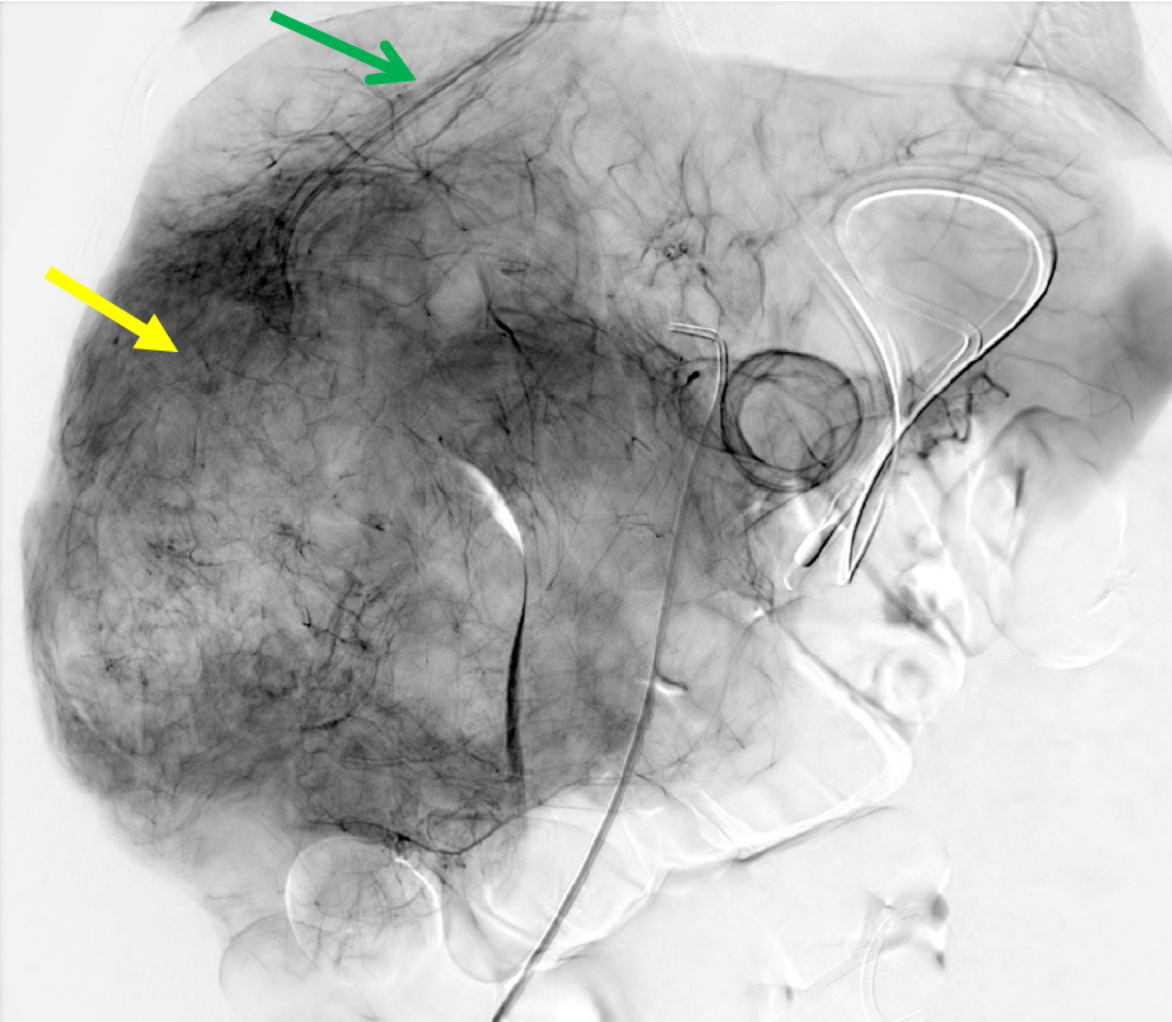
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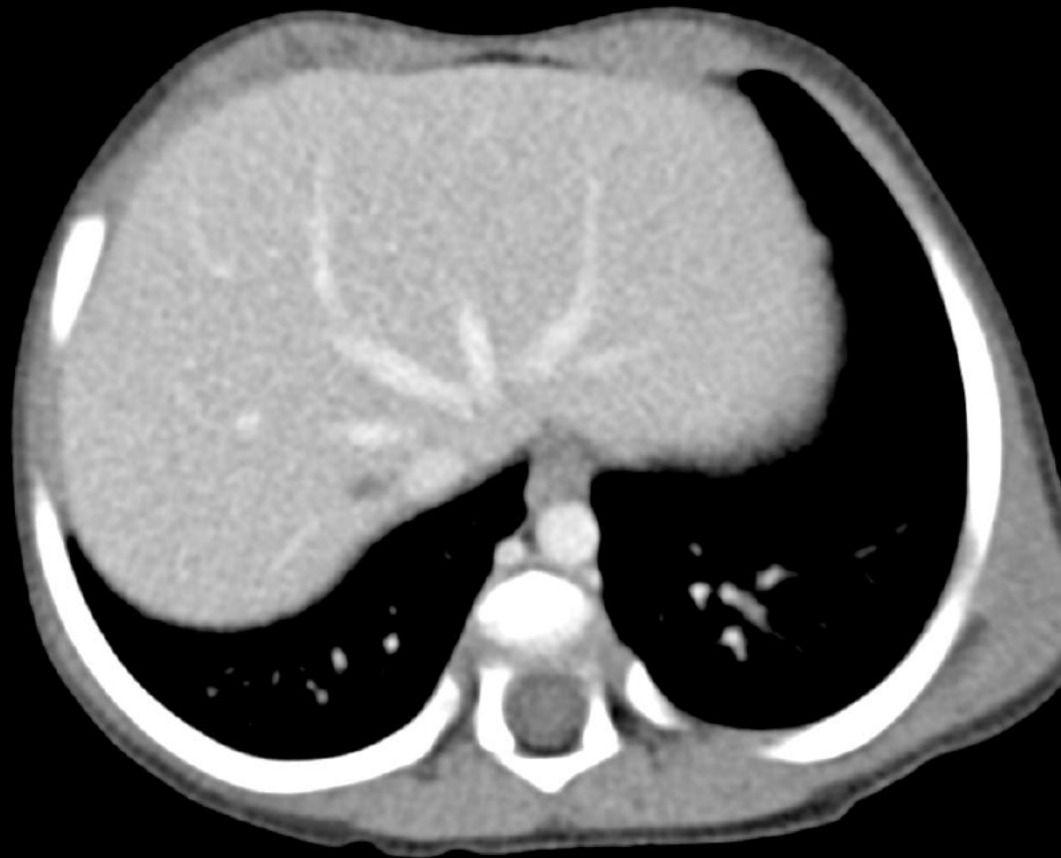


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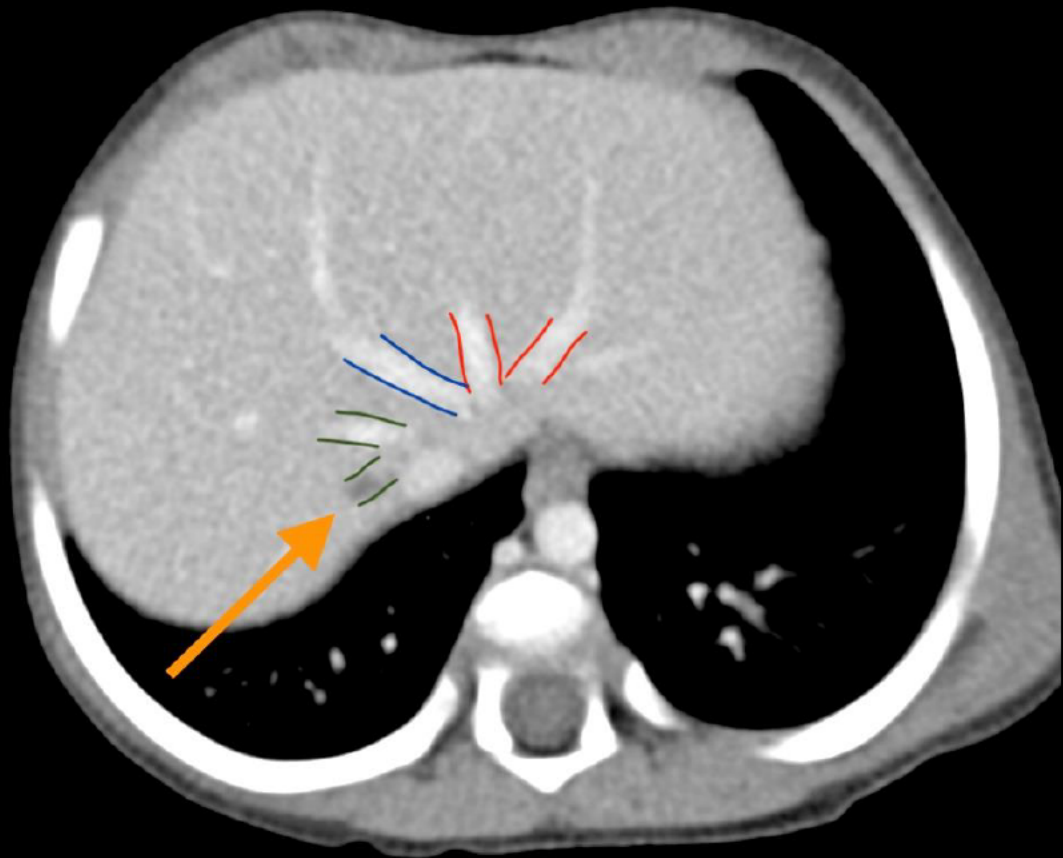




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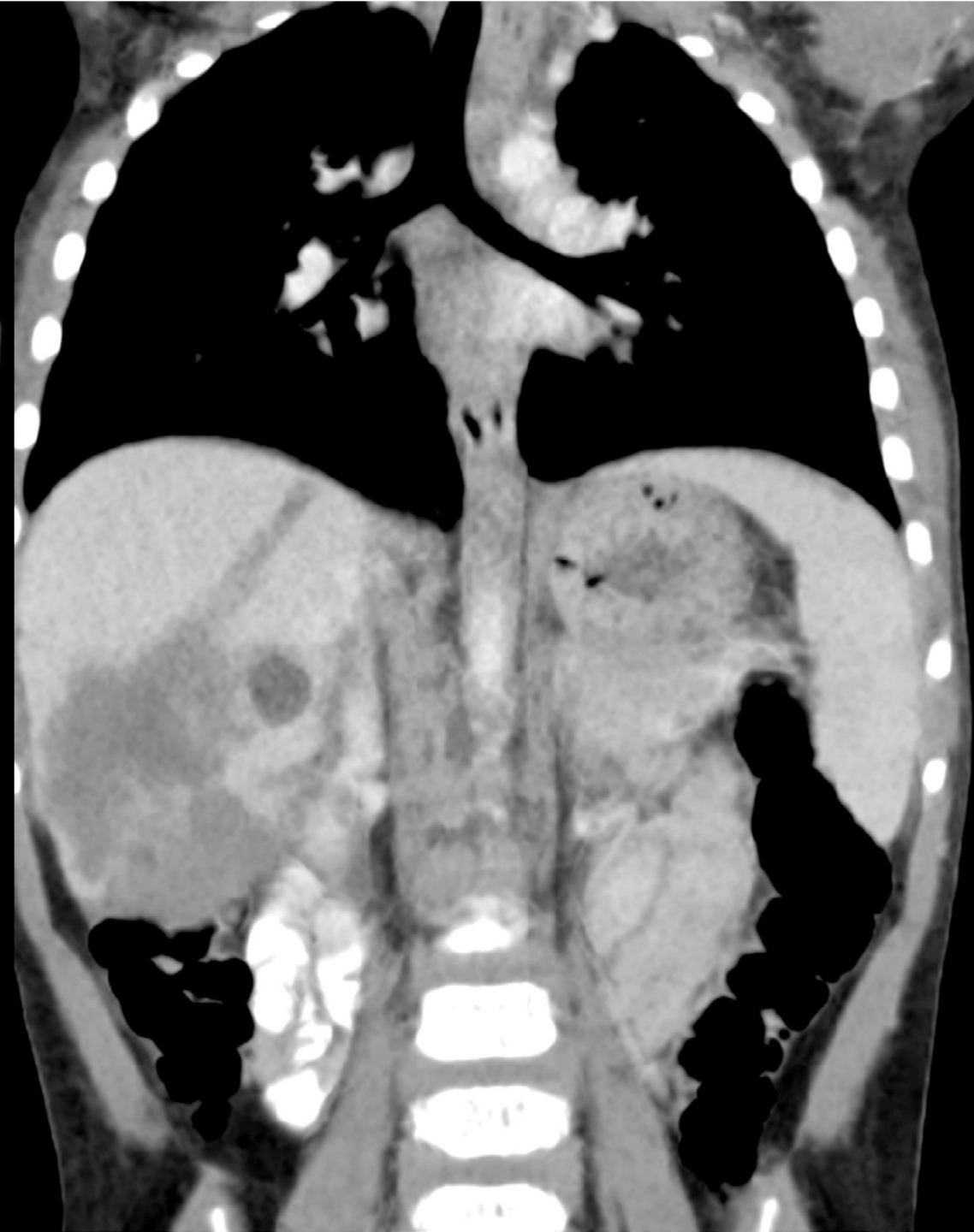
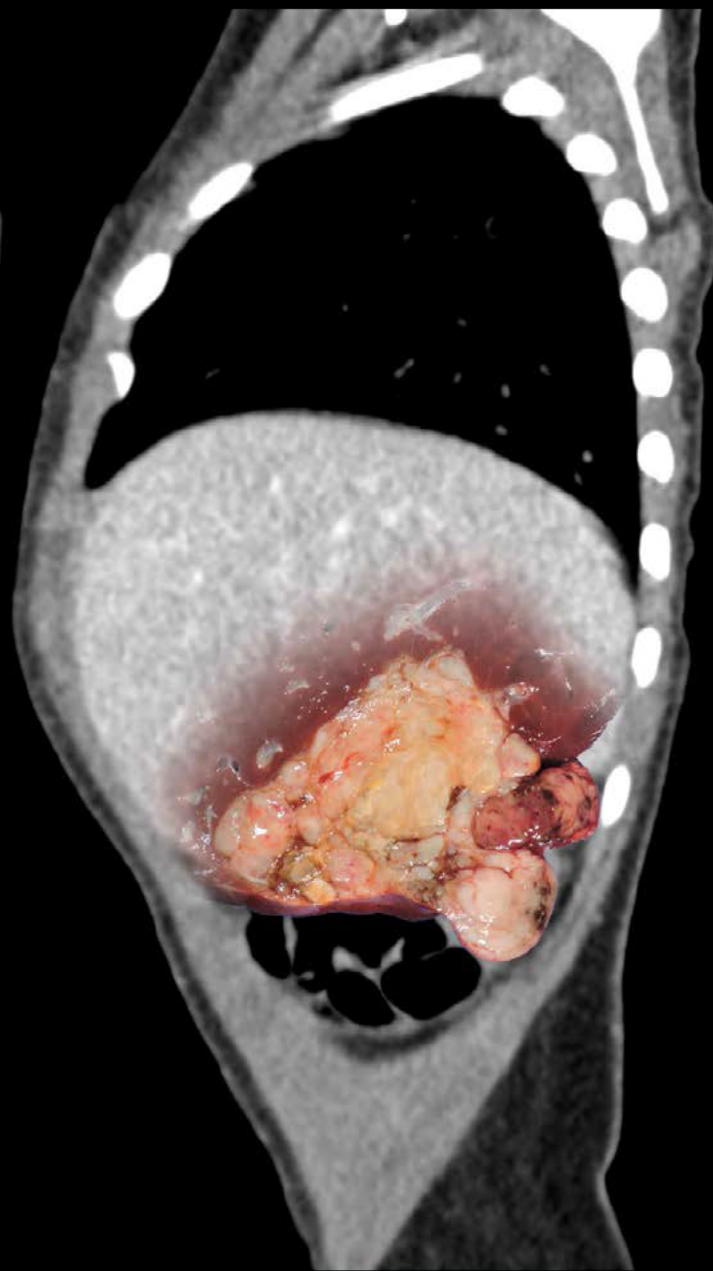
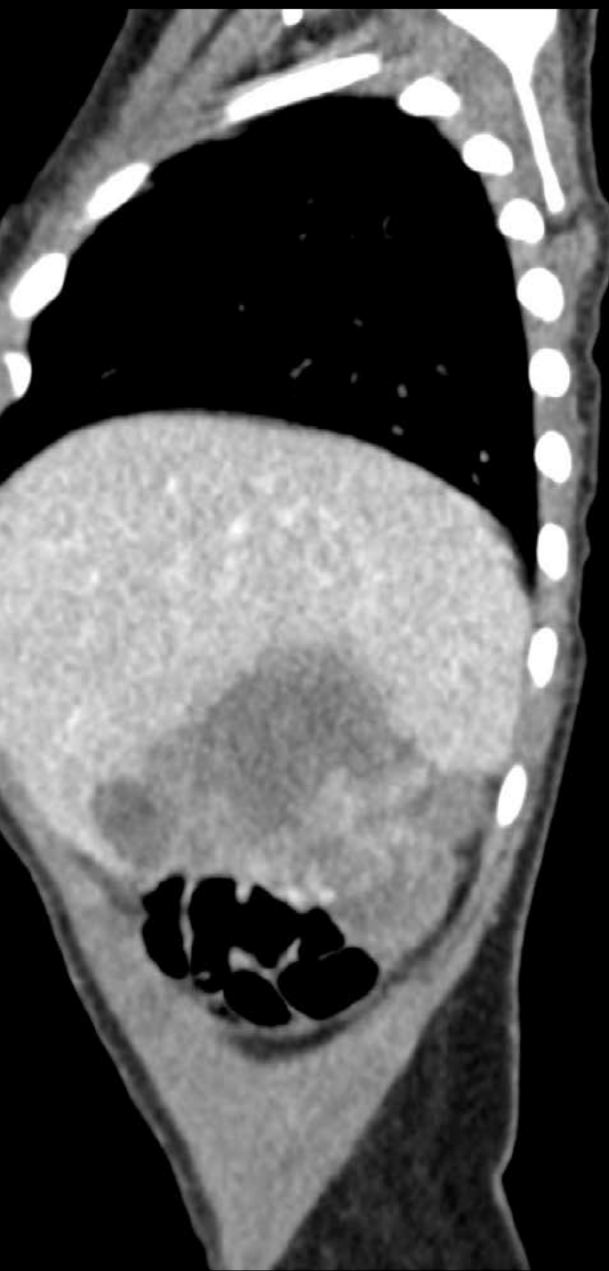
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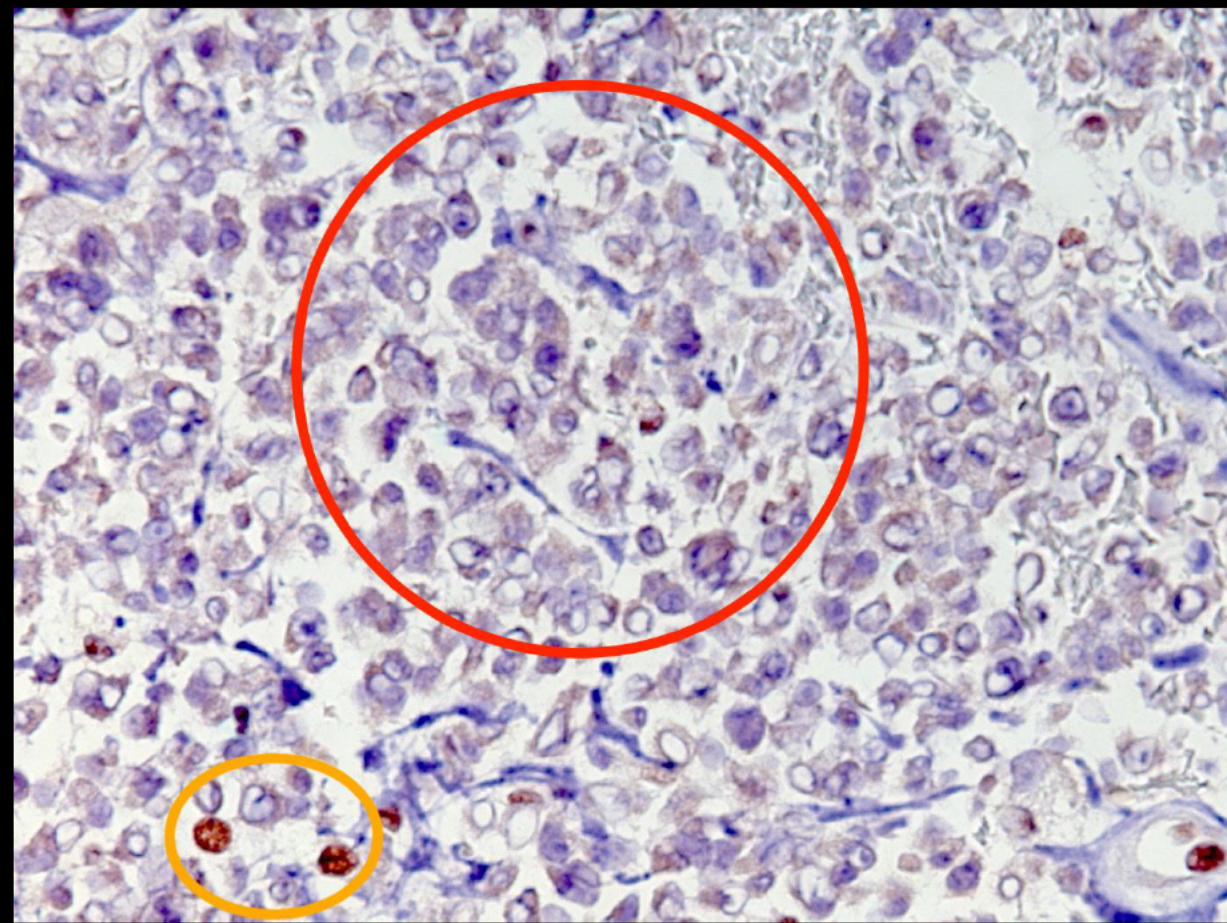
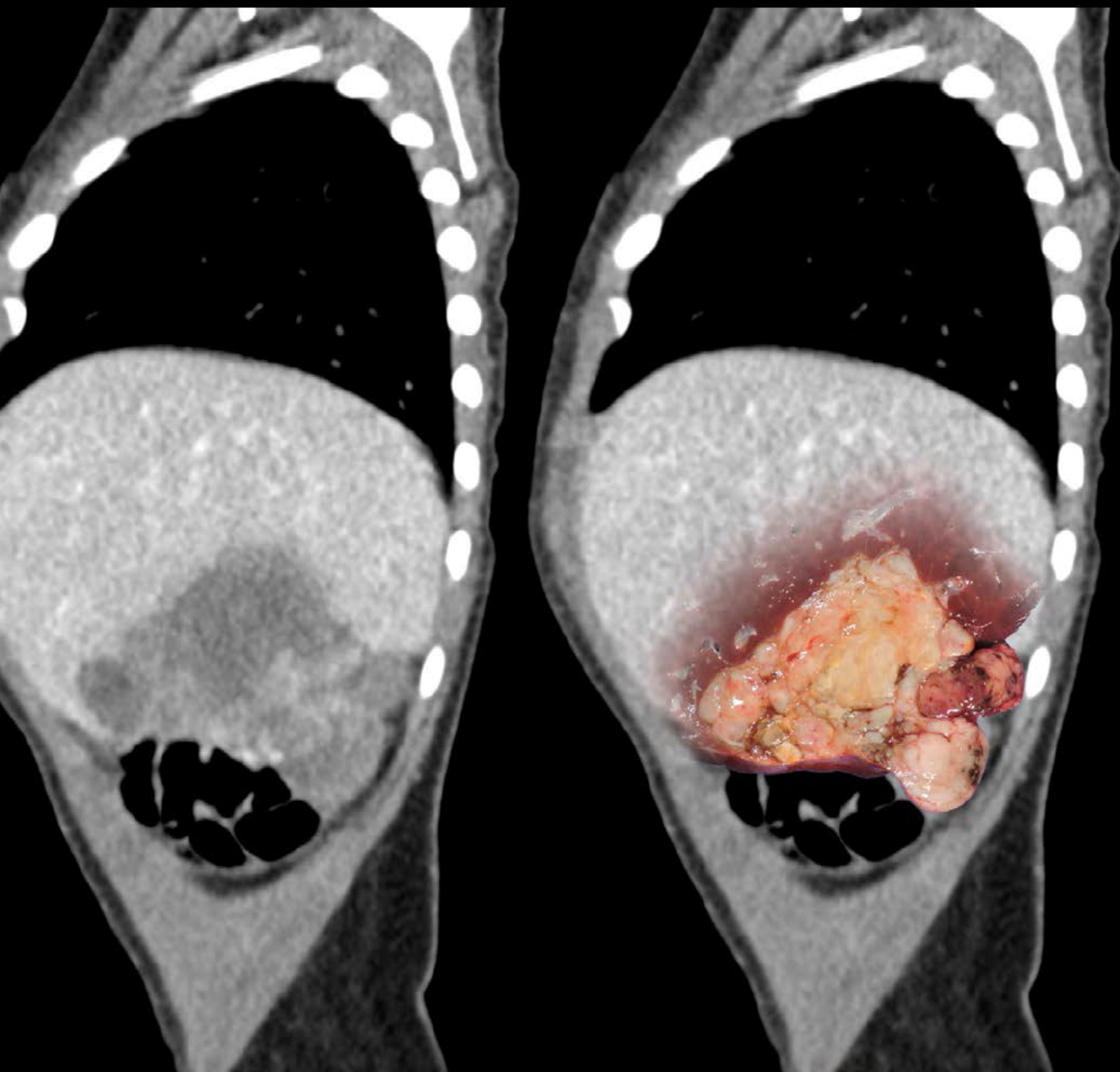


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Malignant Rhabdoid Tumor

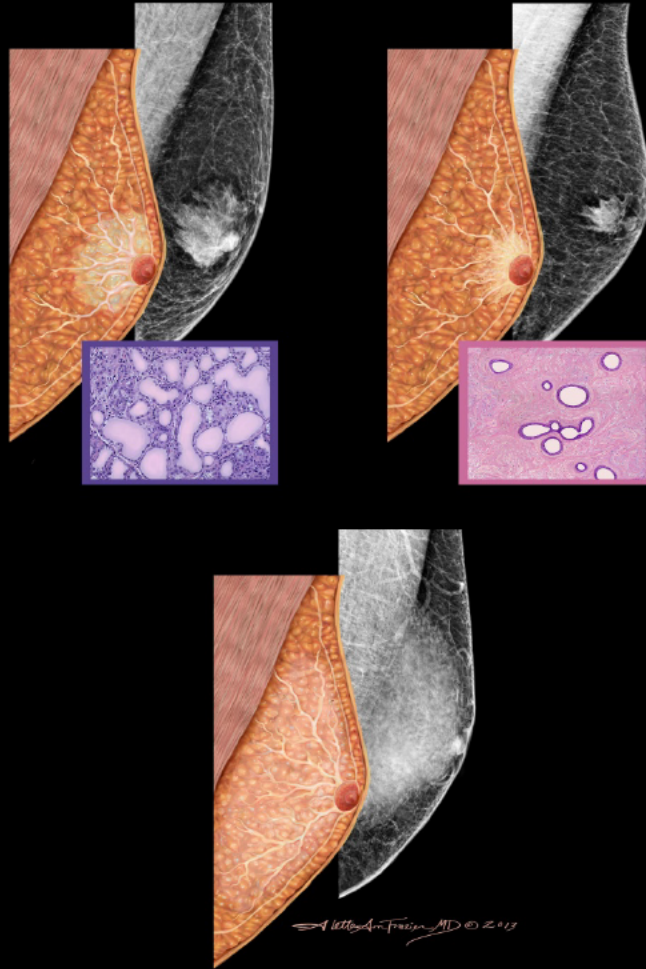
Francis Fortin
CHU Sainte-Justine
Montreal, Canada



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Breast Best Case



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Clinical information

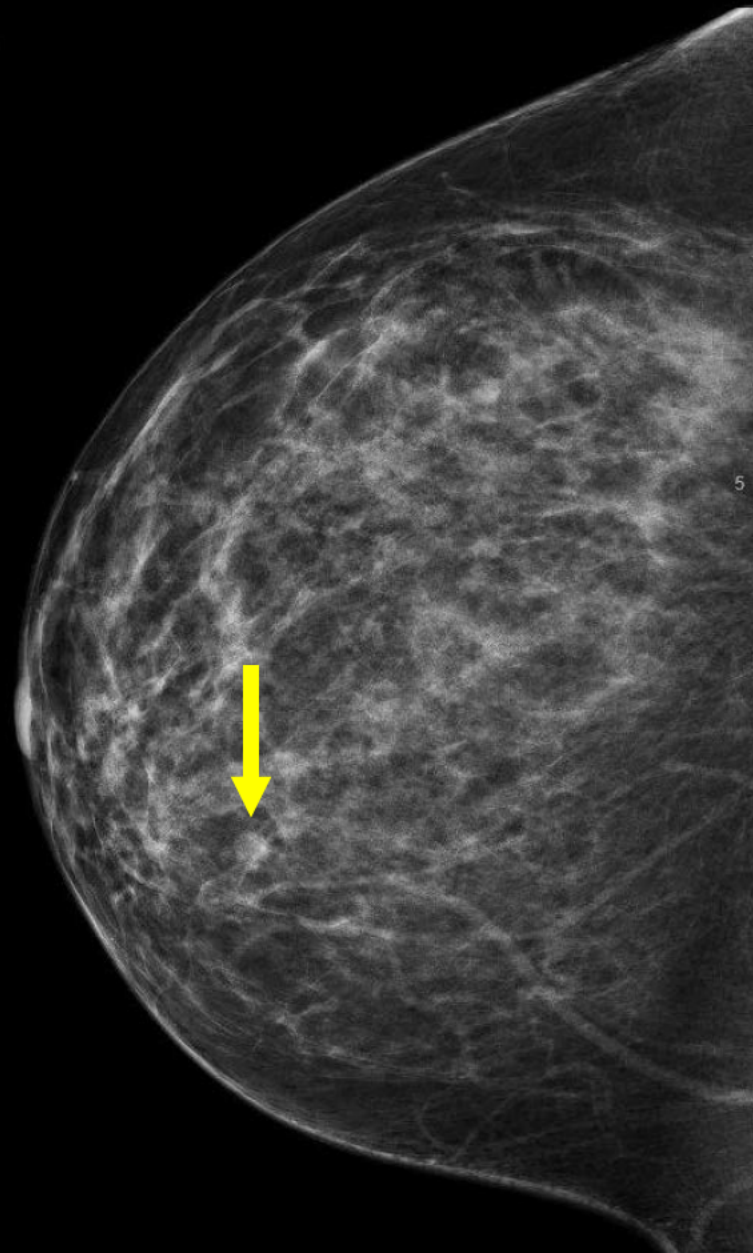
40-year-old woman with abnormal screening mammogram. No personal or family history of breast cancer.

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! CAD



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US performed

30Hz
RS

2D
51%
Dyn R 68
P Med
Res
TAC1

✦ Dist 0.668 cm



RT BREAST 5:00 N+2 Trans

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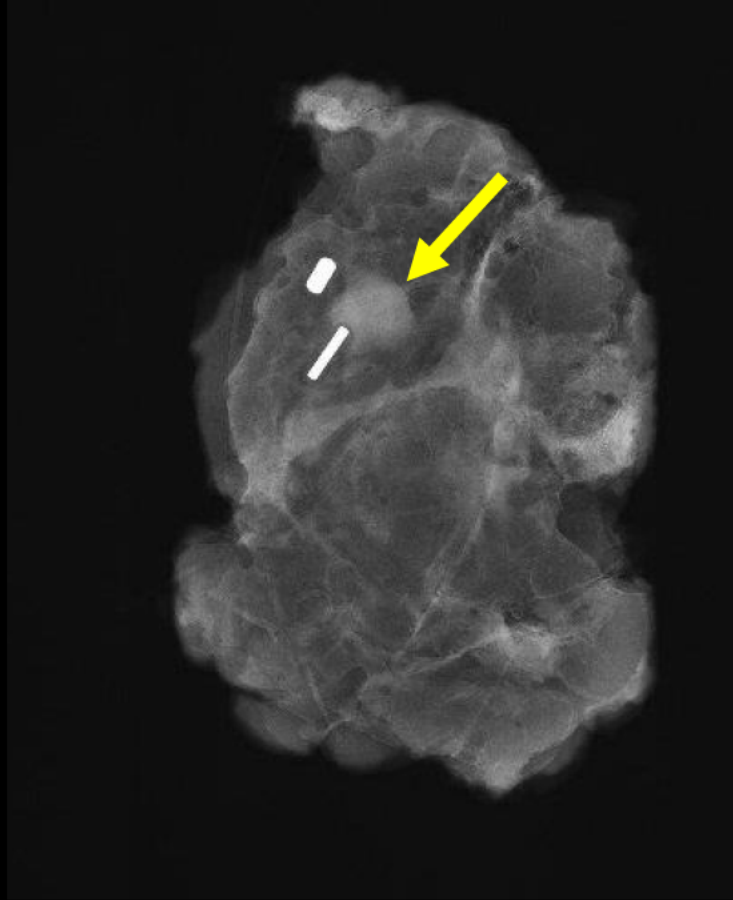


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Core biopsy and subsequent excision performed

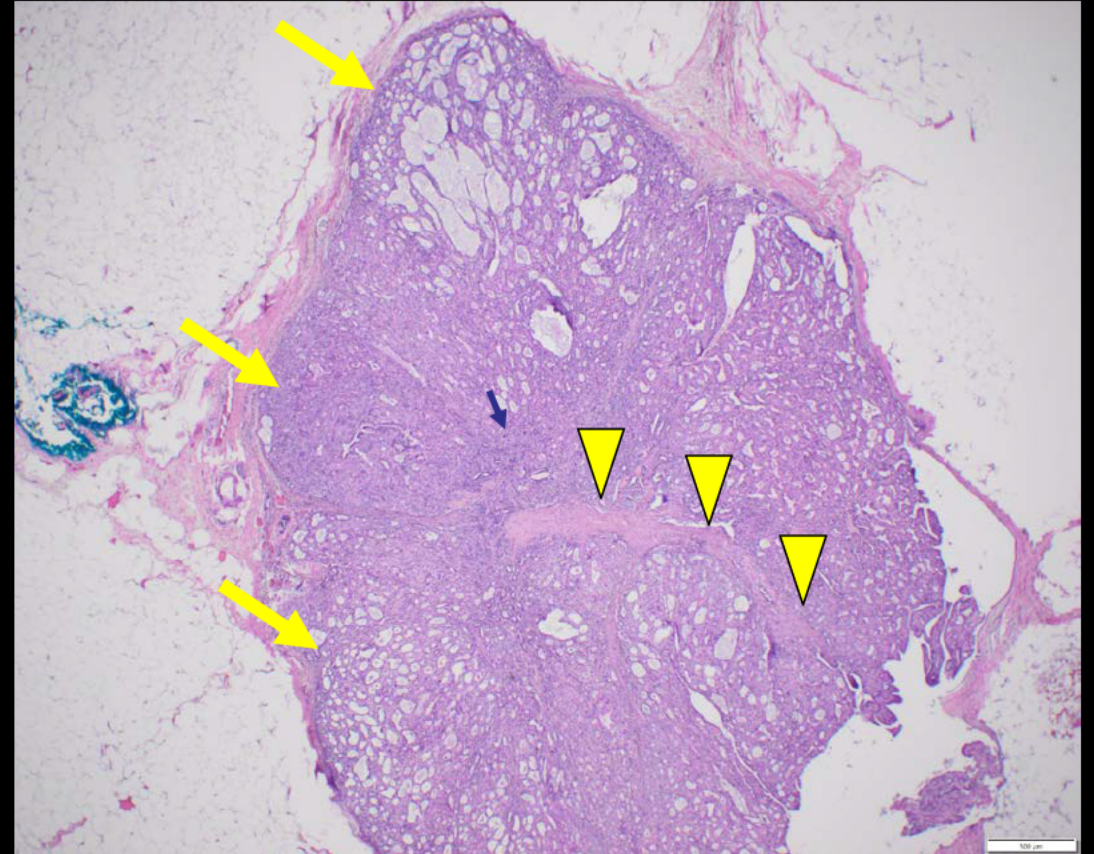
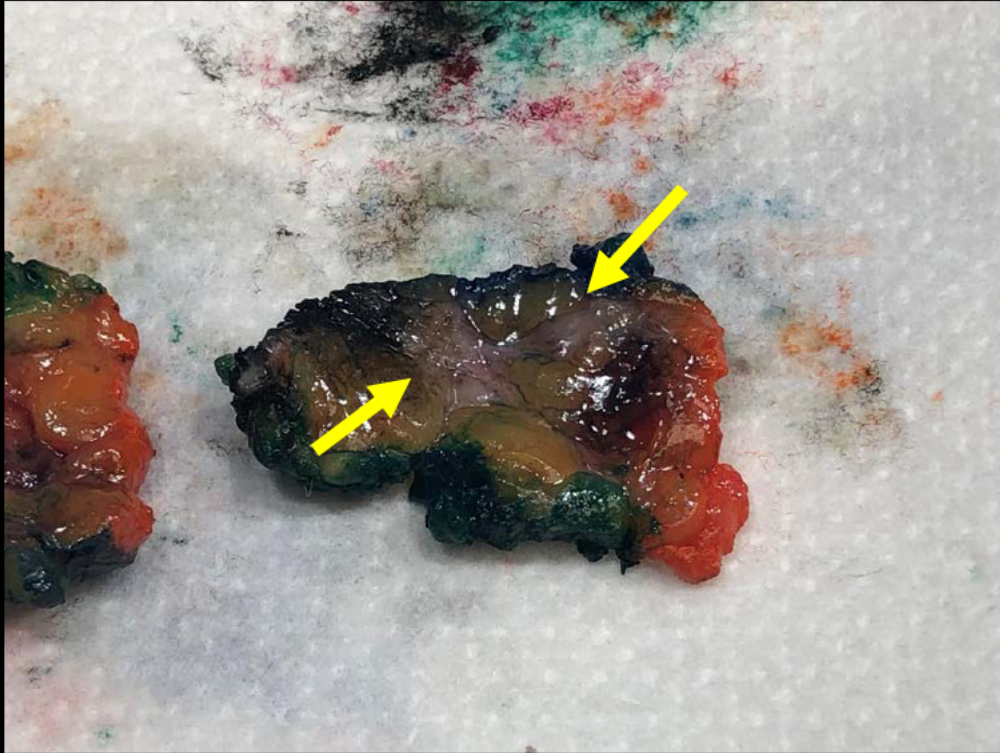


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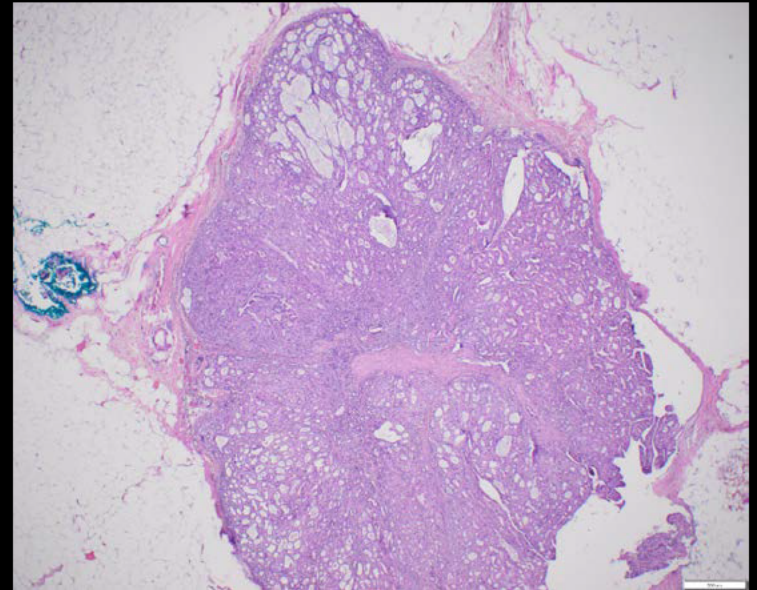
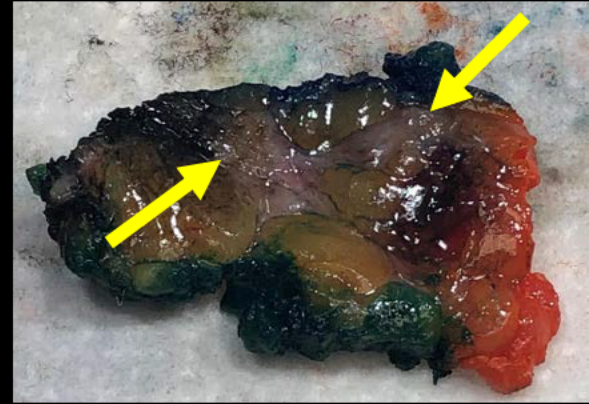
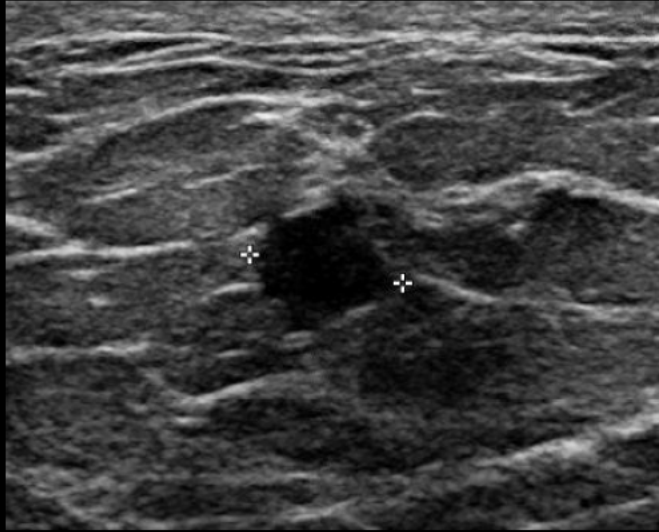
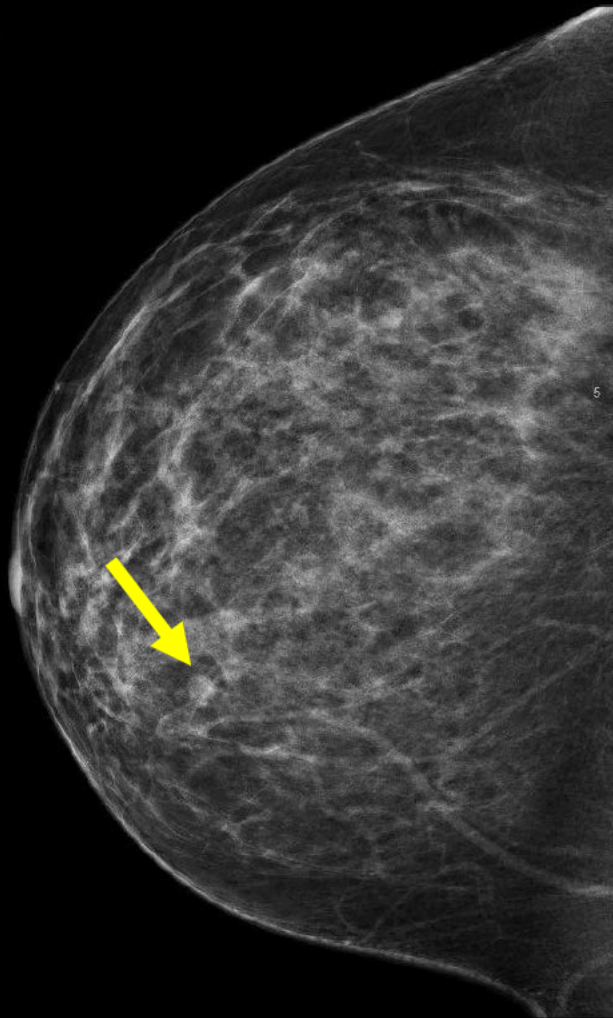
Pathology



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Intraductal Papilloma with Atypia

John Mistrot, MD
Baylor Scott and White
Temple, Texas



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Genitourinary Best Case



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Clinical information

23 year old male with acute onset right testicular/groin pain.

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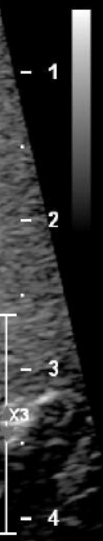
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testicular
L12-5
72Hz
RS

2D
70%
Dyn R 66
P Low
Res

TIS0.1 MI0.5

M3



Trans B/L TESTES

- 5

testicular
L12-5
5Hz

2D
71%
Dyn R 60
P Med
Res

CF
51%
385Hz
WF 40Hz
6.9MHz

TIS0.1 MI0.8

M3



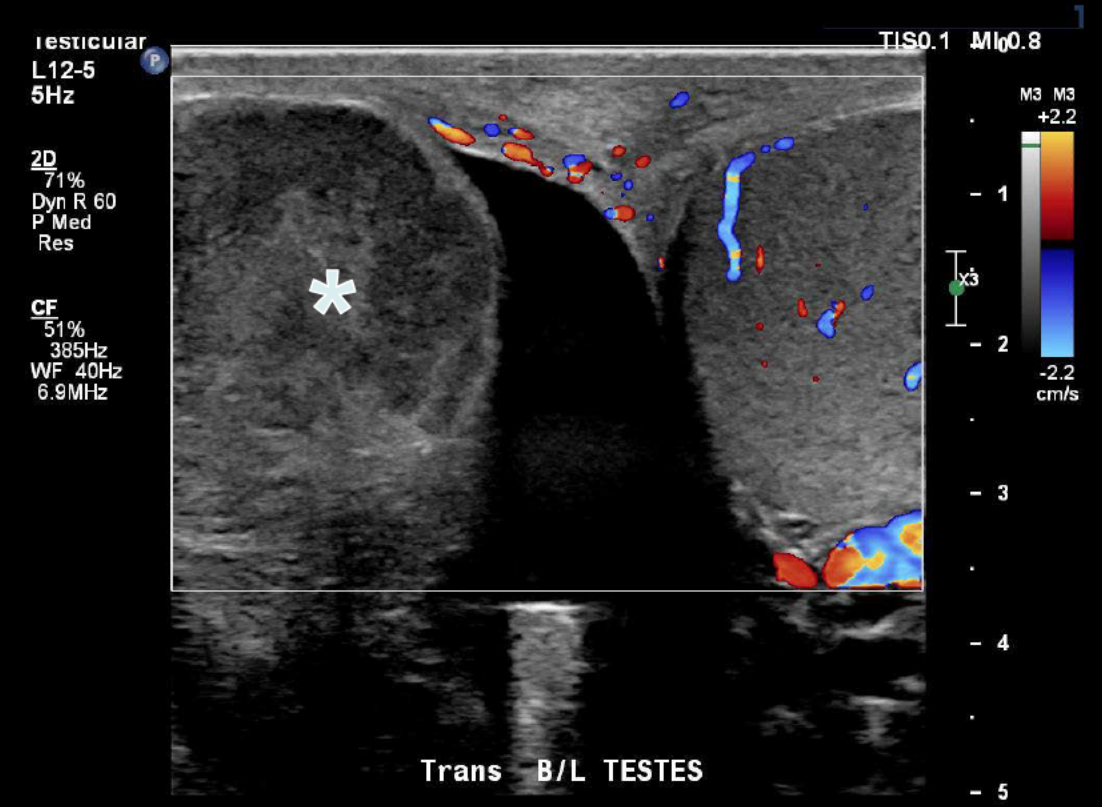
Trans B/L TESTES

- 5

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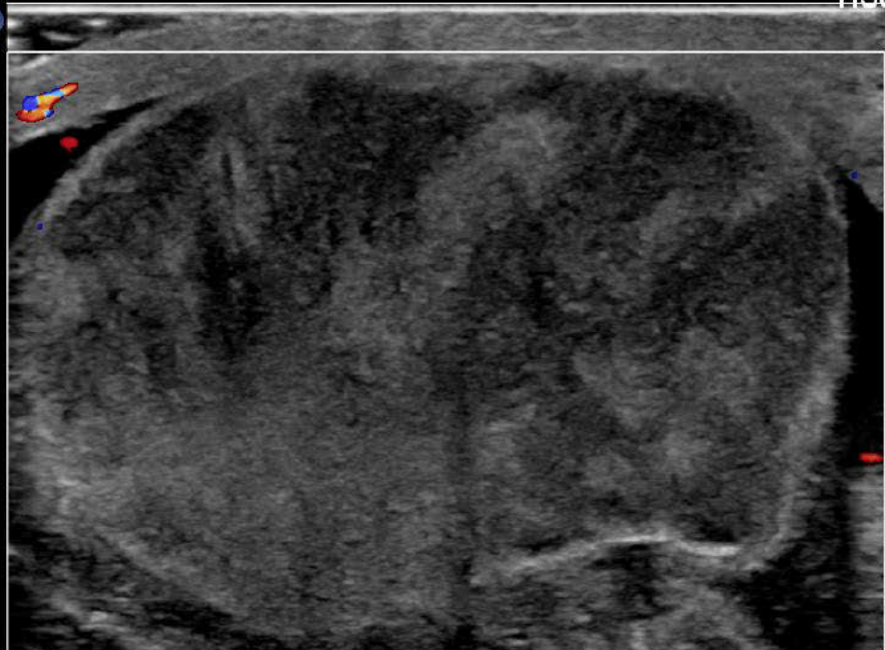
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testicular
L12-5
5Hz

2D
69%
Dyn R 60
P Med
Res

CF
51%
385Hz
WF 40Hz
6.9MHz



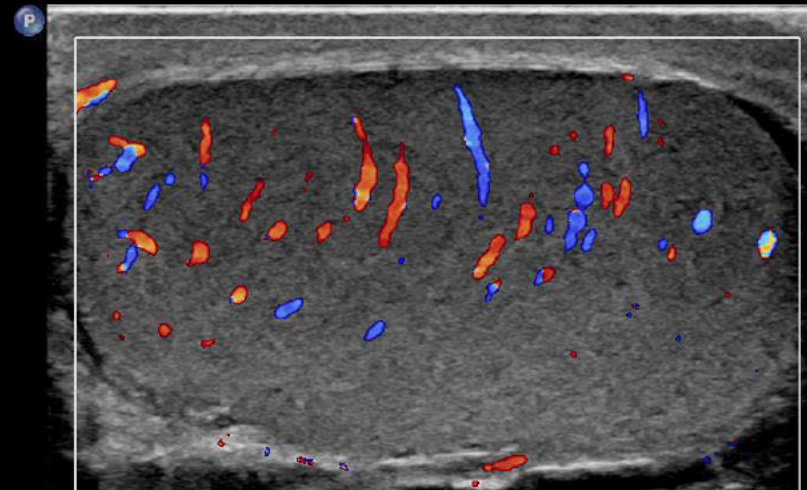
TIS0.1 MI0.8



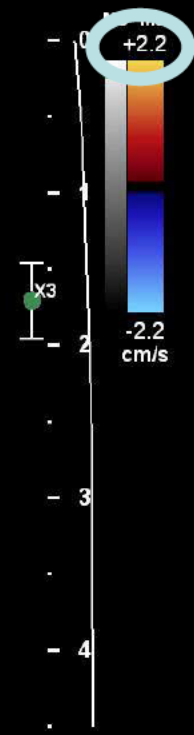
testicular
L12-5
5Hz

Z 0.8
2D
69%
Dyn R 60
P Med
Res

CF
54%
385Hz
WF 40Hz
6.9MHz



TIS0.1 MI 0.8



Long Right Testicle

Long Left Testicle



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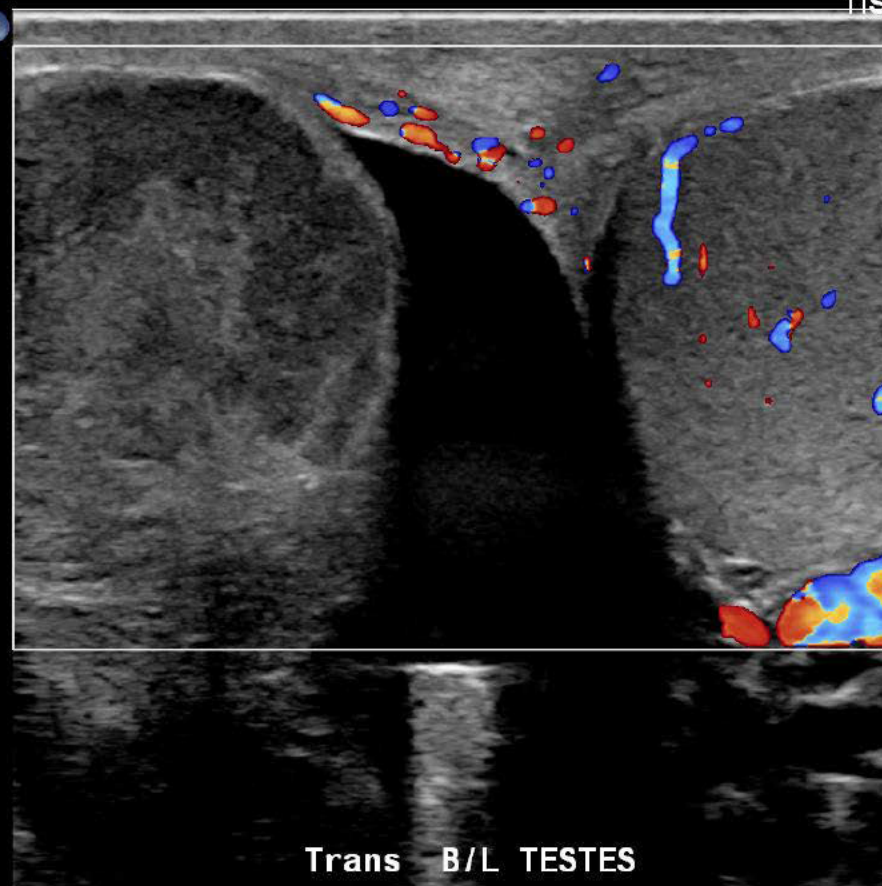
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testicular
L12-5
5Hz

2D
71%
Dyn R 60
P Med
Res

CF
51%
385Hz
WF 40Hz
6.9MHz



TIS0.1 MI0.8

M3 M3
+2.2
- 1
- 2
- 3
- 4
- 5
-2.2
cm/s

Trans B/L TESTES

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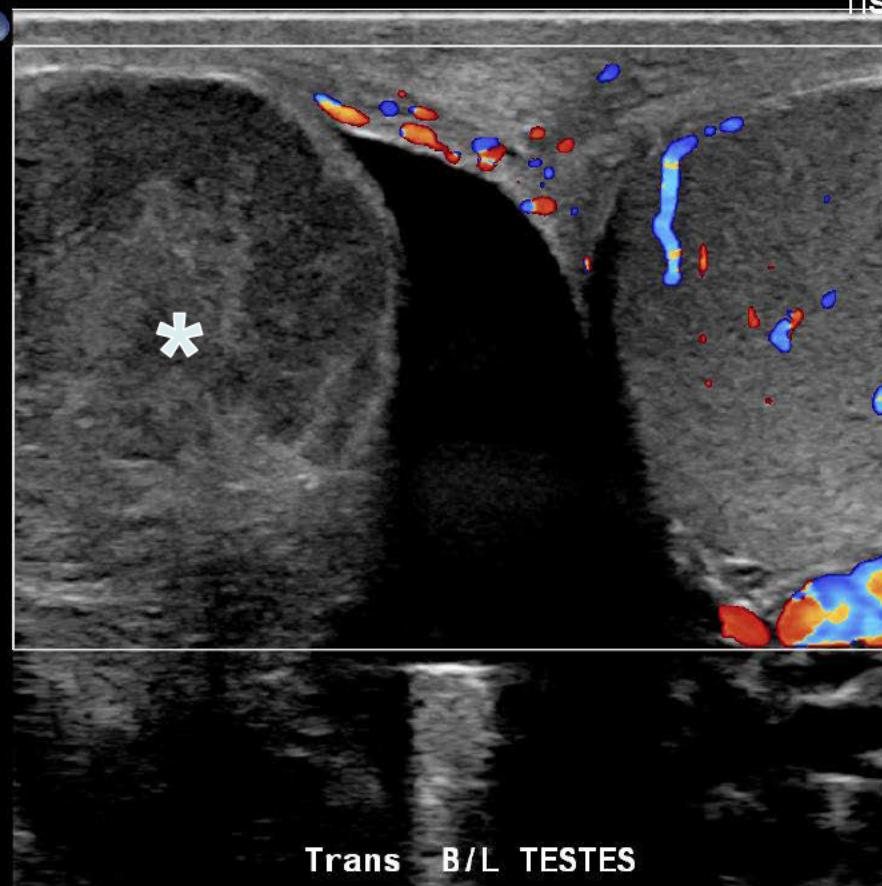
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testicular
L12-5
5Hz

2D
71%
Dyn R 60
P Med
Res

CF
51%
385Hz
WF 40Hz
6.9MHz

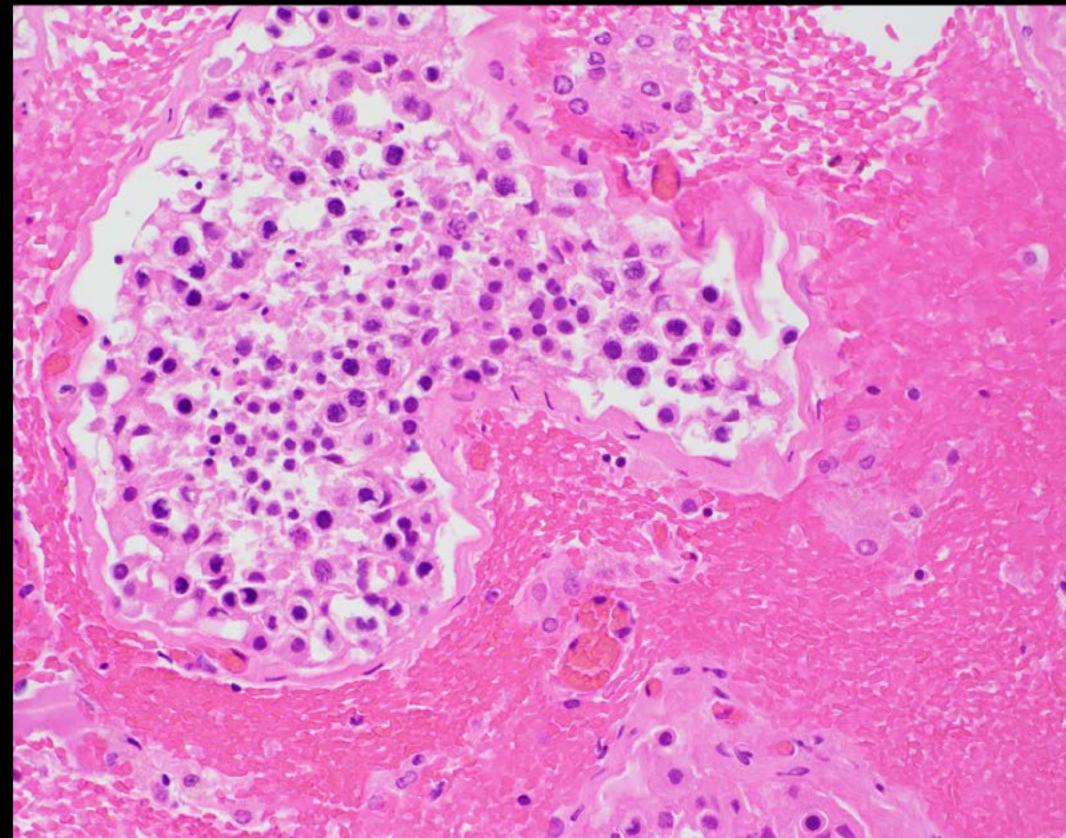
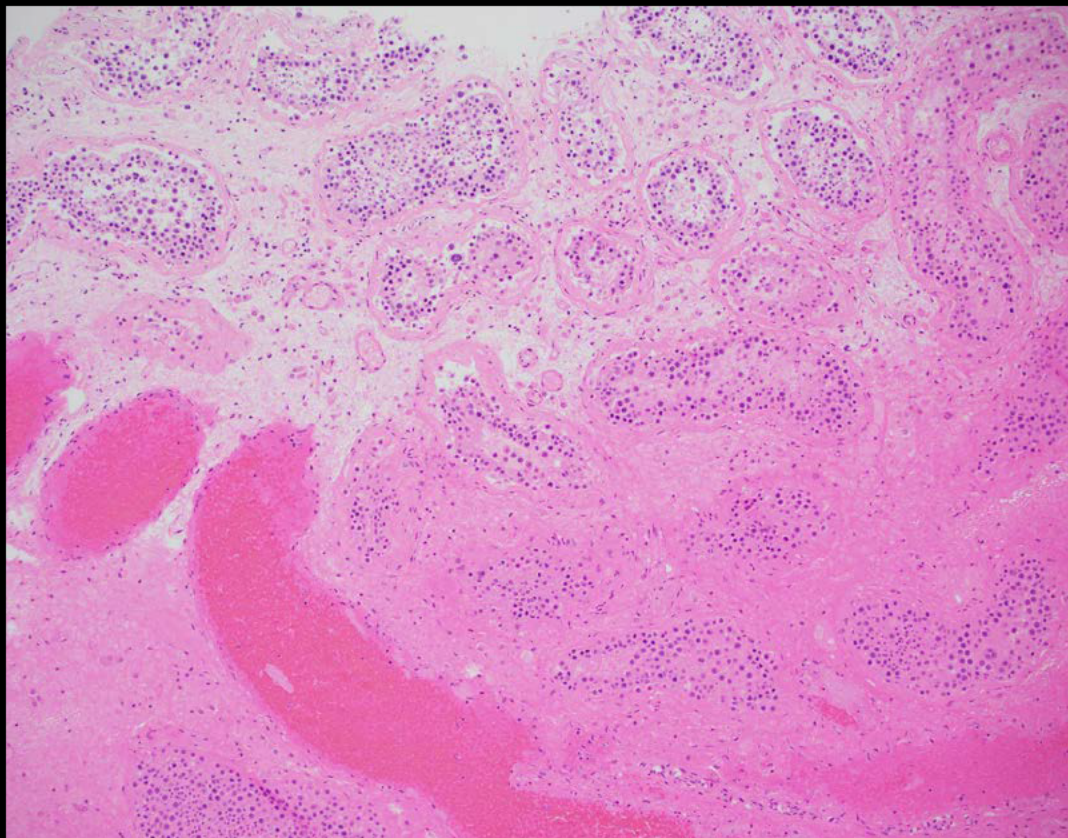


TIS0.1 MI0.8

M3 M3
+2.2
- 1
- 2
- 3
- 4
- 5
-2.2
cm/s

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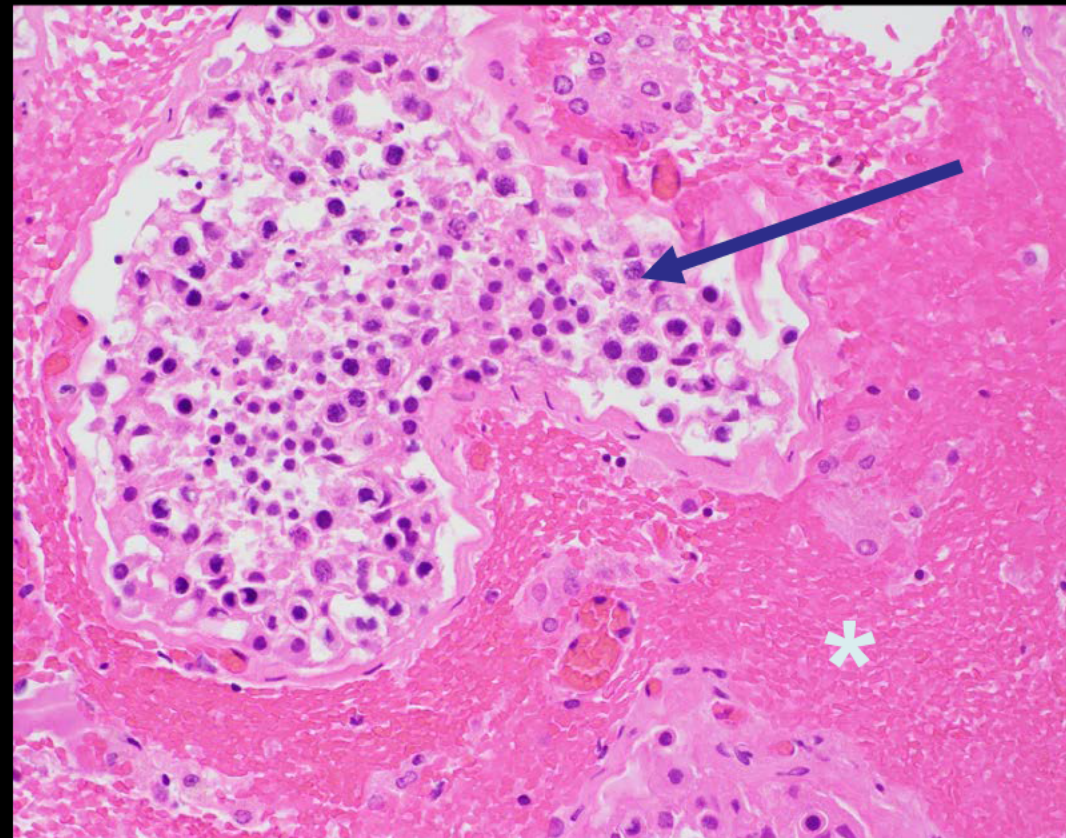


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High Power



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Testicular Torsion

Adam Jackson, MD

Madigan Army Medical Center

Joint Base Lewis-McChord, WA



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