AMSER Case of the Month August 2020

70 year old male presents with low back pain status post mechanical fall

Frank Santisi, MS4

Cooper Medical School of Rowan University

Mark DiMarcangelo, DO

James Kovacs, DO

Pauline Germaine, DO

Cooper University Hospital

Cooper Medical School of Rowan University

Patient Presentation

- HPI: 70 y/o male presents after fall at nursing home. Pt fell backwards hitting his back and the back of his head against the wall. Pain is 10/10 in lumbar spine and 5/10 in posterior neck. Pt was unable to ambulate after fall. Denies LOC, N/V, dizziness, numbness, and weakness
- PMH: COPD, CAD, ESRD on HD, HTN, RA
- PSH: N/A
- Social: N/A
- PE: Lower lumbar spine and neck tender to palpation, no erythema or swelling

Pertinent Labs

- Hgb: 9.8 ↓
- WBC: 7.89
- Platelets: 29 ↓
- BUN: 45 ↑
- Creatinine: 6.13 ↑

What Imaging Should We Order?

Select the applicable ACR Appropriateness Criteria

Variant 9: **Age greater than or equal to 16 years. Blunt trauma meeting criteria for thoracic and lumbar imaging. Initial imaging.**

Procedure	Appropriateness Category	Relative Radiation Level
CT thoracic and lumbar spine without IV contrast	Usually Appropriate	☢☢☢
Radiography thoracic and lumbar spine	May Be Appropriate	☢☢☢
CT myelography thoracic and lumbar spine	Usually Not Appropriate	☢☢☢☢
CT thoracic and lumbar spine with IV contrast	Usually Not Appropriate	☢☢☢
CT thoracic and lumbar spine without and with IV contrast	Usually Not Appropriate	☢☢☢☢
MRI thoracic and lumbar spine without and with IV contrast	Usually Not Appropriate	O
MRI thoracic and lumbar spine without IV contrast	Usually Not Appropriate	O

This imaging modality was ordered by the ER physician

Thoracic and lumbar spine CT reconstructions can be concurrently obtained from CT imaging of the chest, abdomen and pelvis in trauma patients imaged for soft tissue injuries without the need for additional radiation exposure. CT head and cervical spine examinations were also obtained in this patient and revealed no acute abnormalities.

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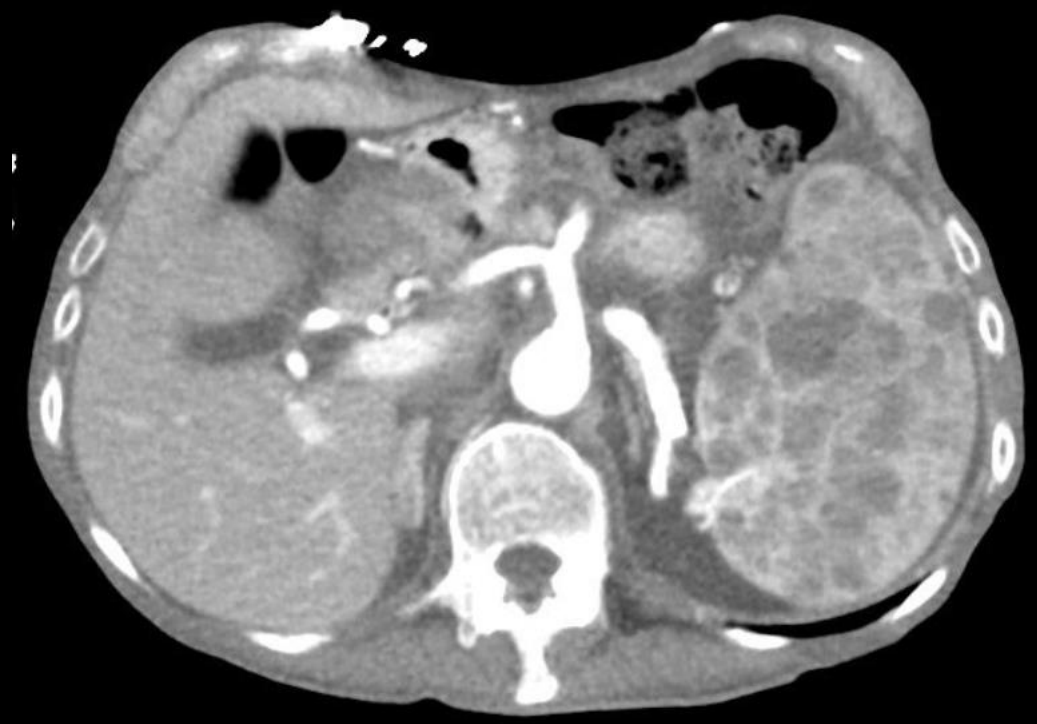
Findings (unlabeled)



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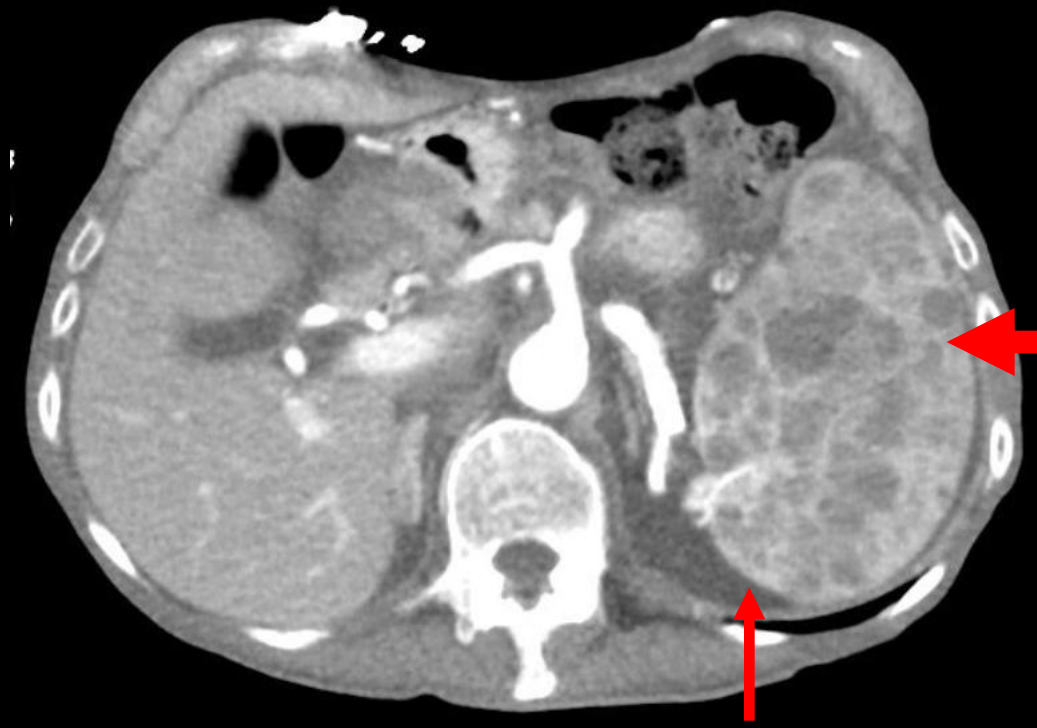
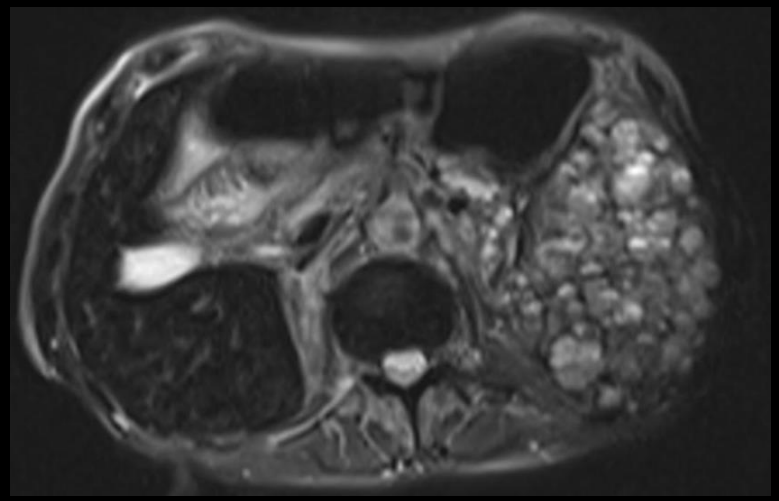


Splenomegaly with numerous hypodense lesions

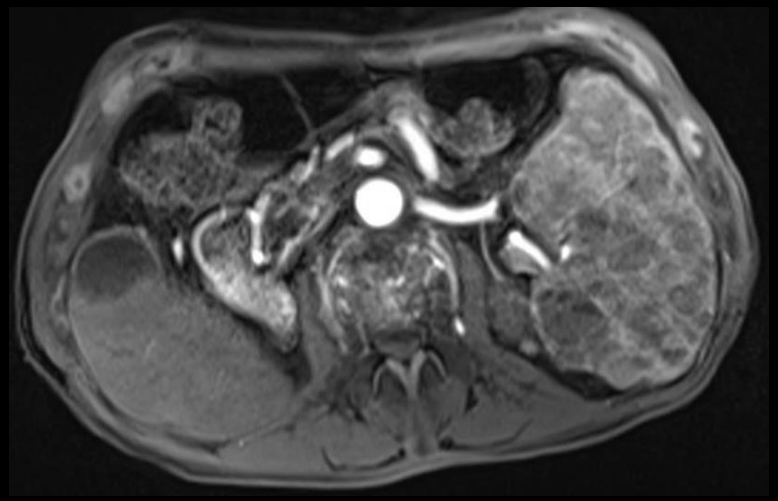
No visceral or spinal injury was found. Incidentally noted is minimal ascites.

Follow-up Imaging (unlabeled)

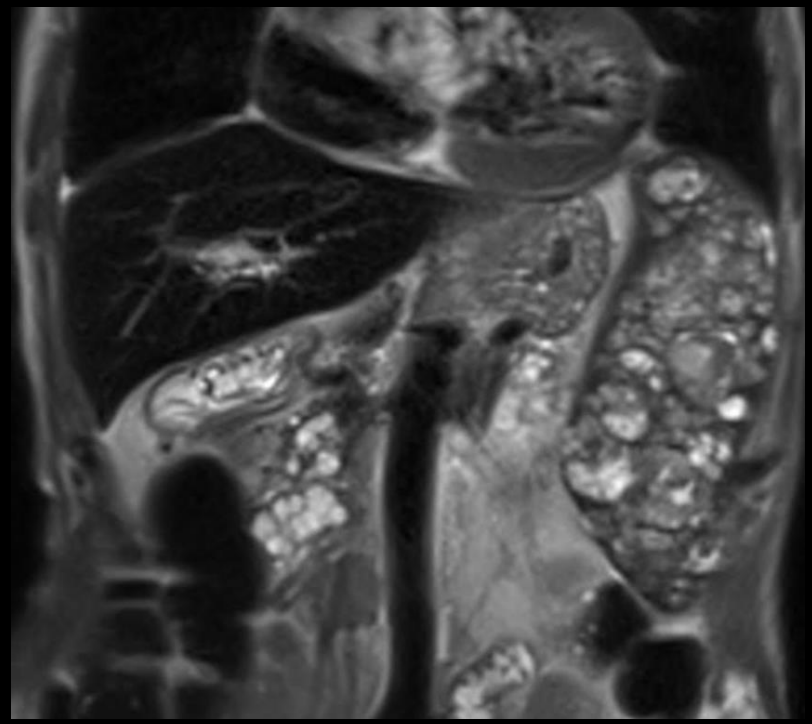
MRI Axial HASTE



MRI Axial T1 fat sat post contrast

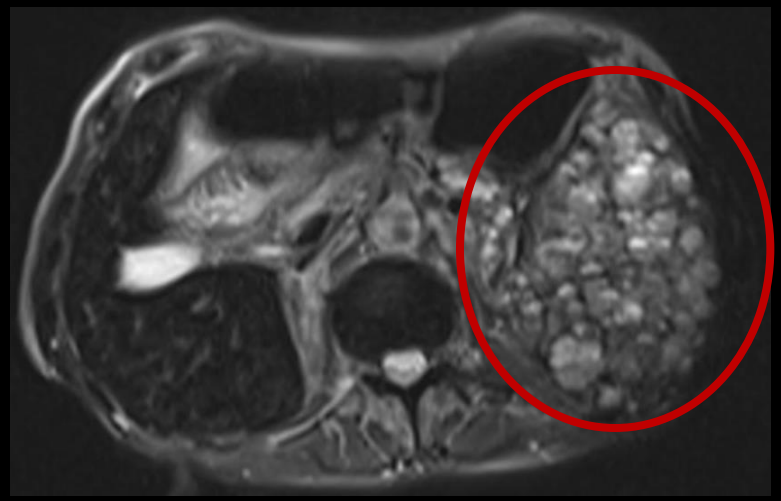


MRI Coronal HASTE

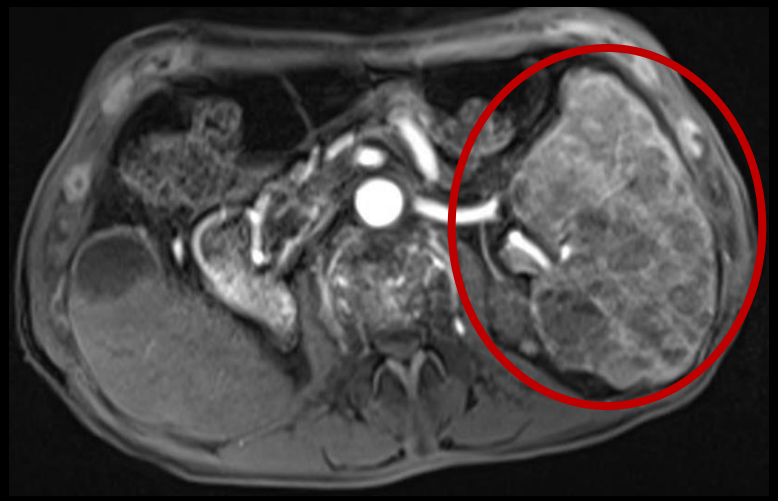


Follow-up Imaging (labeled)

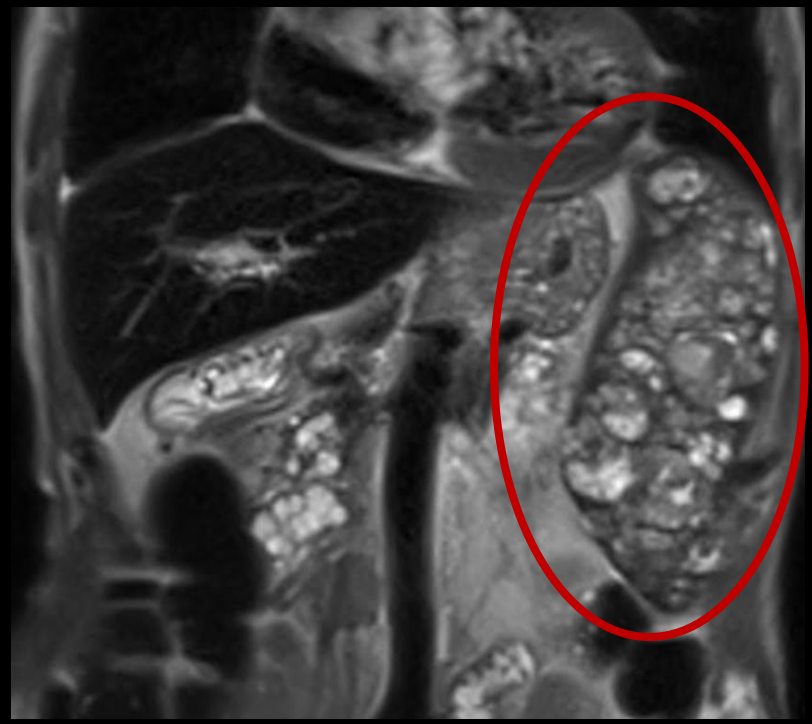
MRI Axial HASTE



MRI Axial T1 fat sat post contrast



MRI Coronal HASTE



Splenomegaly with innumerable T2 hyperintense non-enhancing circumscribed lesions, some with fluid/fluid levels

Final Dx:

Splenic Peliosis

Case Discussion

- Peliosis
  - Rare benign disorder defined by blood-filled cysts within solid viscera
  - Most commonly found in the liver. This disorder is rare in the spleen. It can also be found in the kidneys, bone marrow and lungs.
  - When peliosis is isolated to the spleen, the patient normally has no symptoms at presentation
  - May be associated with:
    - Concurrent malignancy
    - Anabolic steroids, OCPs
    - HIV
    - TB
    - Aplastic anemia

Case Discussion

- Radiologic differential diagnosis:
  - Hemangiomatosis
  - Lymphangioma
  - Angiosarcoma

Case Discussion

- Percutaneous aspiration of peliosis demonstrates black blood and no pus.
  - Peliosis is derived from the Greek word peliosis, meaning dusky or purple in color.
- Complications:
  - Spontaneous or traumatic rupture leading to hemoperitoneum
  - If liver is involved, the patient can develop jaundice and eventual liver failure
- Definitive diagnosis and treatment can be achieved with splenectomy

References:

- American College of Radiology. ACR appropriateness Criteria®. Available at https://acsearch.acr.org/list. Accessed on July 14th, 2020
- Davidson J, Tung K. Splenic peliosis: an unusual entity. Br J Radiol. 2010;83(990):e126-e128. doi:10.1259/bjr/71300465
- Singh-Ranger G, Rajarajan N, Aftab S, Stoker D. Splenic peliosis - a potentially fatal condition which can mimic malignancy. Int Semin Surg Oncol. 2007;4:27. Published 2007 Dec 8. doi:10.1186/1477-7800-4-27