AMSER Case of the Month October 2025

61-year-old with acute abdominal pain, fever, and left upper quadrant fullness

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LECOM LAKE ERIE COLLEGE OF OSTEOPATHIC MEDICINE

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Patient Presentation

- HPI: Patient is a 61-year-old male that presents to the ED with worsening LUQ abdominal pain, as well as fever, chills, dizziness, nausea and anorexia.
- Past Medical History: Portal Hypertension, Hypertension, Hyperlipidemia, Pancreatitis, Discitis, Chronic Lymphocytic Leukemia
- Family History: Heart Disease, Diabetes
- Social History: Former smoker, Illicit Drug use 30 years prior to presentation
- Medications: Lexapro, Pepcid, Lopid, Insulin Glargine, Insulin Lispro, Protonix, Cyanocobalamin, Ferrous Sulfate
- Vitals on Presentation:
  - Temp. 99°F, HR 86 BPM, Resp. 18, BP 115/68, SpO2 92%

Pertinent Labs

	Reference Range:
• CBC:	
• WBCs 69.65 k/mcL	4.40 – 11.30 k/mcL
• WBC Differential	
• Absolute Neutrophil Count 19.5 k/mcL	2.00 – 9.30 k/mcL
• Absolute Lymphocyte Count 48.06 k/mcL	0.60 – 3.40 k/mcL
• Target cells present	None seen
• Smudge cells present	None seen

What Imaging Should We Order?

Select the applicable ACR Appropriateness Criteria

Variant 1: **Acute nonlocalized abdominal pain and fever. No recent surgery. Initial imaging.**

Procedure	Appropriateness Category	Relative Radiation Level
CT abdomen and pelvis with IV contrast	Usually Appropriate	☢☢☢
MRI abdomen and pelvis without and with IV contrast	May Be Appropriate	O
US abdomen	May Be Appropriate	O
CT abdomen and pelvis without IV contrast	May Be Appropriate	☢☢☢
MRI abdomen and pelvis without IV contrast	May Be Appropriate	O
CT abdomen and pelvis without and with IV contrast	May Be Appropriate	☢☢☢☢
Radiography abdomen	May Be Appropriate	☢☢
FDG-PET/CT skull base to mid-thigh	Usually Not Appropriate	☢☢☢☢
WBC scan abdomen and pelvis	Usually Not Appropriate	☢☢☢☢
Nuclear medicine scan gallbladder	Usually Not Appropriate	☢☢
Fluoroscopy contrast enema	Usually Not Appropriate	☢☢☢
Fluoroscopy upper GI series with small bowel follow-through	Usually Not Appropriate	☢☢☢

This imaging modality was ordered by the ER physician

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Findings (unlabeled)

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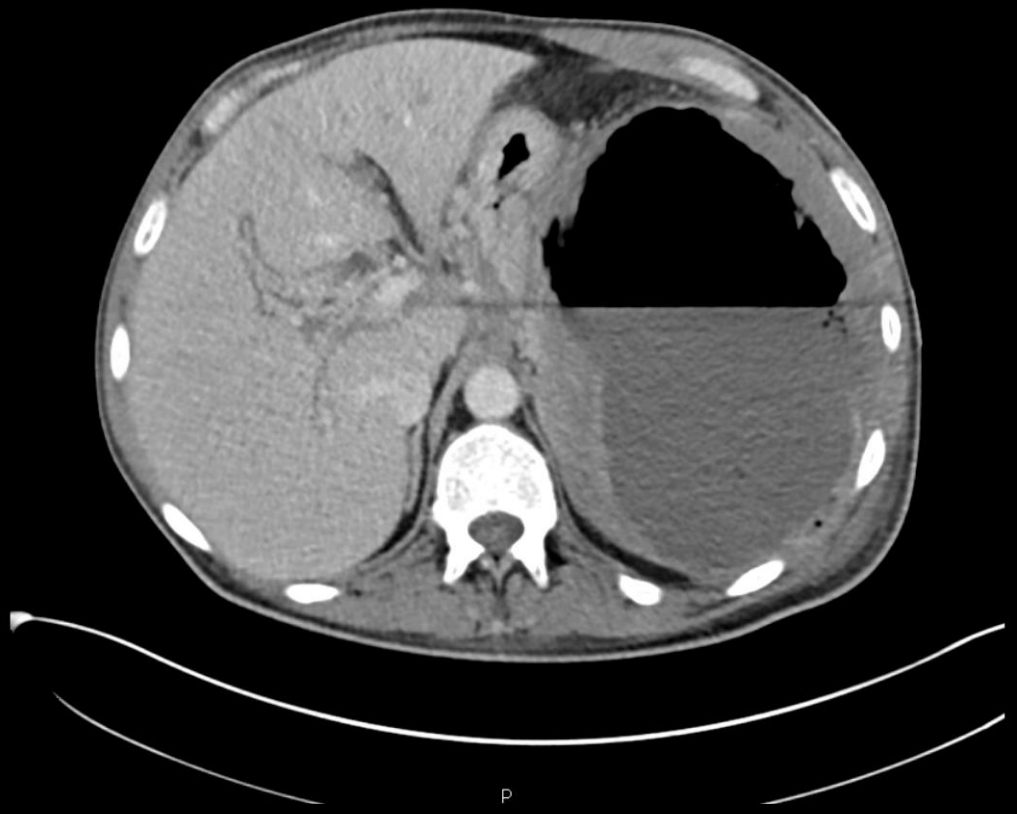
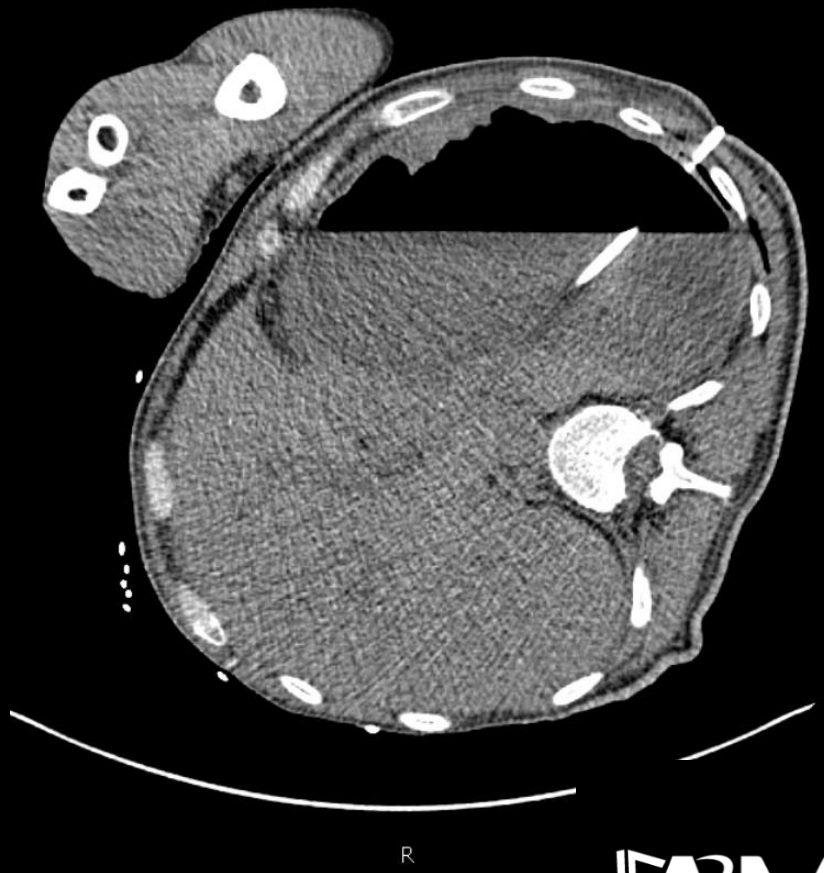
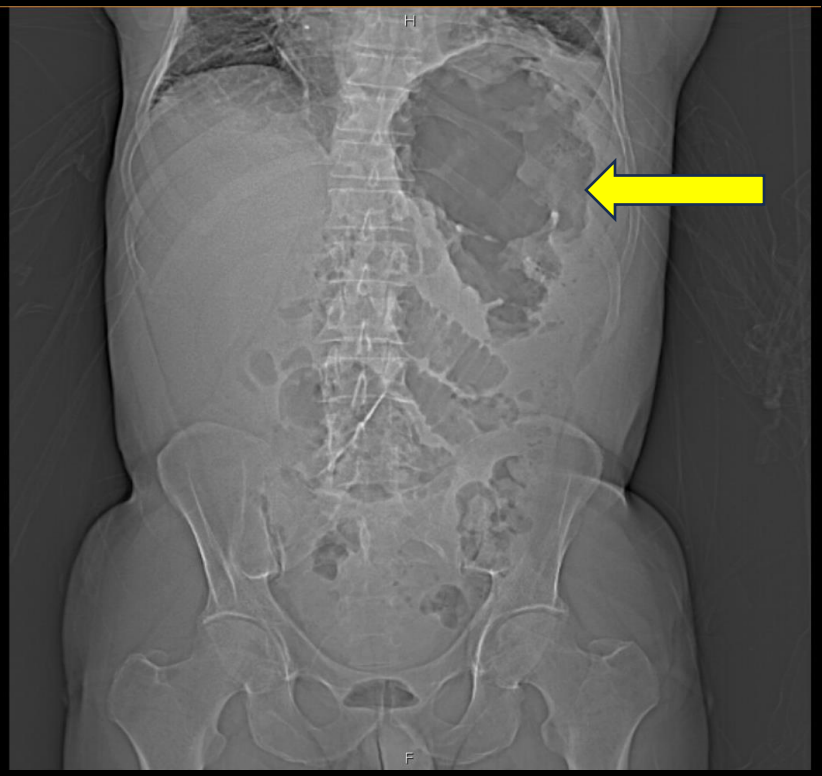
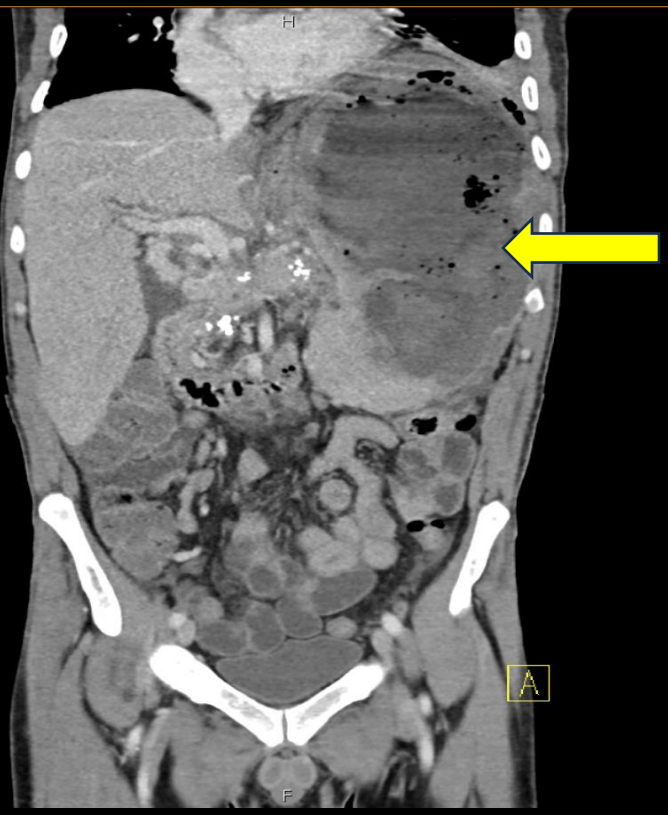




Findings: (labeled)

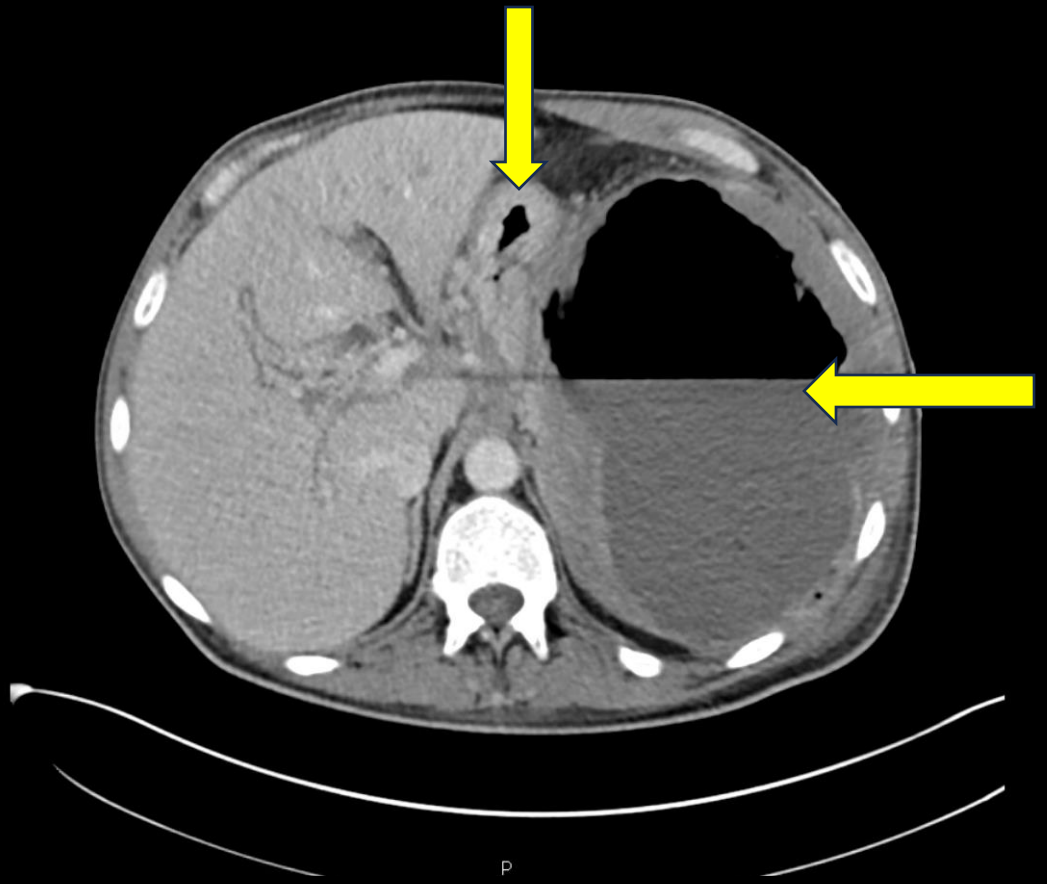


Scout Radiograph showing large air collection

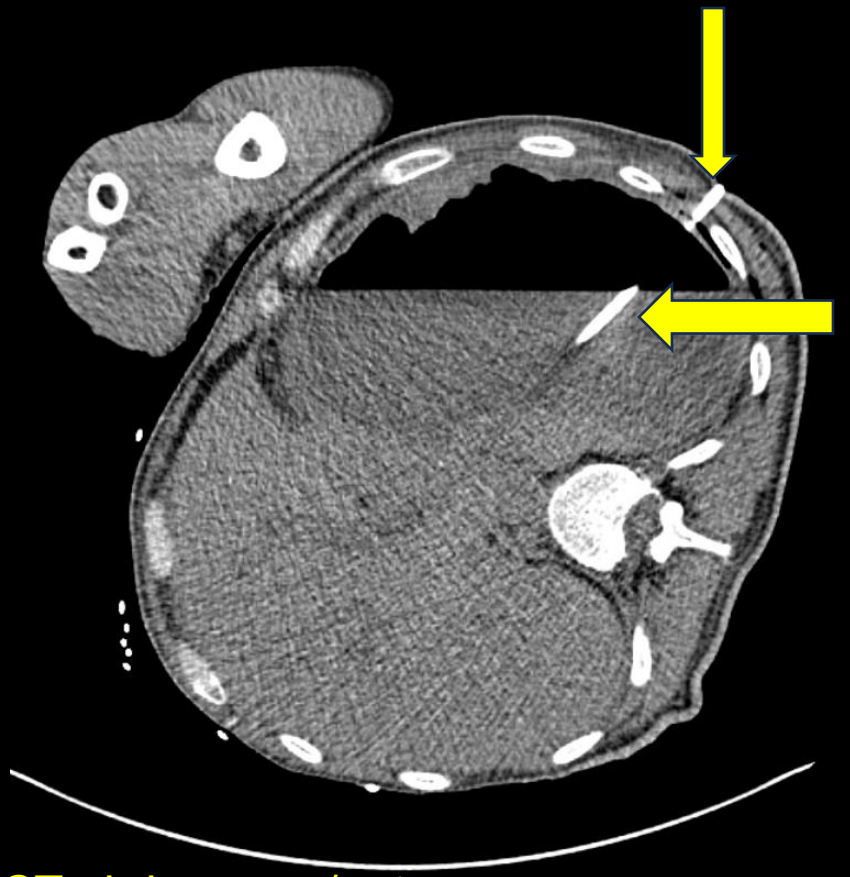


CT Abdomen and Pelvis w/ contrast coronal view showing splenomegaly with large fluid collection.

Findings: (labeled)



CT abdomen and Pelvis w/ contrast axial view showing splenomegaly with air fluid level (right) w/ compression of the stomach (top).



CT abdomen w/out contrast axial view showing drain insertion into the splenic abscess.

Final Dx:

Splenic Abscess

Case Discussion

- Once the abscess was found on imaging, a drainage + drain placement was performed.
- A total of 470 mL of thickened, tan/gray-colored, foul-smelling, purulent fluid was aspirated, and a sample was submitted for analysis.
- Body fluid culture and gram stain were positive for Klebsiella pneumoniae and Klebsiella (Enterobacter) aerogenes.
- Patient was started on IV ceftriaxone and metronidazole prior to culture, which was switched to just IV cefepime after final cultures.
- A drainage catheter exchange was performed 12 days later, during which an additional 915 mL of tan-colored, foul-smelling fluid was drained.

Case Discussion

- The most common presenting features of splenic abscesses are fever, left upper quadrant pain, splenomegaly, and left pleural effusion.
- The diagnosis of splenic abscesses requires a thorough, interdisciplinary approach, as they often arise in immunocompromised individuals due to malignancy, systemic infections, or postoperative complications, particularly in cancer patients undergoing immunosuppressive therapy.
- Splenic abscesses most commonly arise from hematogenous spread but can also result from contiguous contamination, superinfected hematoma, or infarction.

Case Discussion

- *Management:*
  - Splenic abscesses are treated with broad-spectrum antibiotics. Antibiotic spectrum is narrowed once a microorganism is identified.
  - Removal of the fluid collection can be performed by percutaneous drainage, local excision, or splenectomy.
  - Drainage/resection of a splenic abscess is less invasive and more ideal, with splenectomy reserved for more complicated cases.
- *Organism*
  - *K. pneumoniae* has been reported in 10 to 16 percent of cases of splenic abscess.
  - ESBL producing K. pneumoniae with has shown a high sensitivity to cefepime, as an alternative to carbapenems.

References:

1. Bona, Robert (2025). *Splenomegaly and other splenic disorders in adults*. UpToDate. Retrieved on August 13, 2025, from https://www.uptodate.com/contents/splenomegaly-and-other-splenic-disorders-in-adults?search=splenomegaly&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1
2. LaBombardi, Vincent J. (2003, October 12). *Use of Cefepime for the treatment of infections caused by extended spectrum β-lactamase-producing Klebsiella penumoniae and Escherichia coli*. Elsevier. Retrieved on August 14, 2025, from https://doi.org/10.1016/j.diagmicrobio.2006.03.019

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1. Marietta, Mia (2025, March 20). *Splenic Abscess*. StatPearls – NCBI Bookshelf. Retrieved August 14, 2025, from https://www.ncbi.nlm.nih.gov/books/NBK519546/
2. Yu, Wen-Liang (2025, April 01). *Clinical features, diagnosis, and treatment of Klebsiella pneumoniae infection*. UpToDate. Retrieved August 13, 2025, from https://www-uptodate com.lecom.idm.oclc.org/contents/clinical-features-diagnosis-and-treatment-of-klebsiella-pneumoniae-infection?search=klebsiella%20pneumonia&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1#H2814768