

AMSER Case of the Month: August 2023

48 yr old with LLQ abdominal pain and fatigue

Zuzanna Lutrzykowska, M1

Eliyas Asfaw, M1

Piroz Bahar, M1

University of Michigan Medical School

Benjamin Viglianti, MD, PhD, Attending Radiologist,
University of Michigan Department of Radiology

Special Thanks to Alexa Arvidson, MD from the University
of Michigan Department of Radiology



Patient Presentation

HPI:

48-year-old male with history of hypertension presents with concerns of:

- One and a half weeks of increasing fatigue, weakness, night sweats, decreased appetite and 10 pound weight loss
- One day of left lower quadrant abdominal pain, described as cramping, sharp, and unchanged with food

Physical exam:

- Tenderness noted over periumbilical region and left lower quadrant of abdomen with palpation; no guarding or rebound tenderness.

Case Presentation

Pertinent Labs

- CBC: Elevated WBC; Low HGB, HCT, PLT, RBC
- CMP: Elevated BUN, AST, ALT, ALP; Low protein
- Elevated Lipase
- Elevated ESR, CRP
- VBG: elevated PO₂, calcium, lactate; low sodium

What Imaging Should We Order?

Applicable ACR Appropriateness Criteria

American College of Radiology
ACR Appropriateness Criteria®
Left Lower Quadrant Pain

Variant 1: Left lower quadrant pain. Initial imaging.

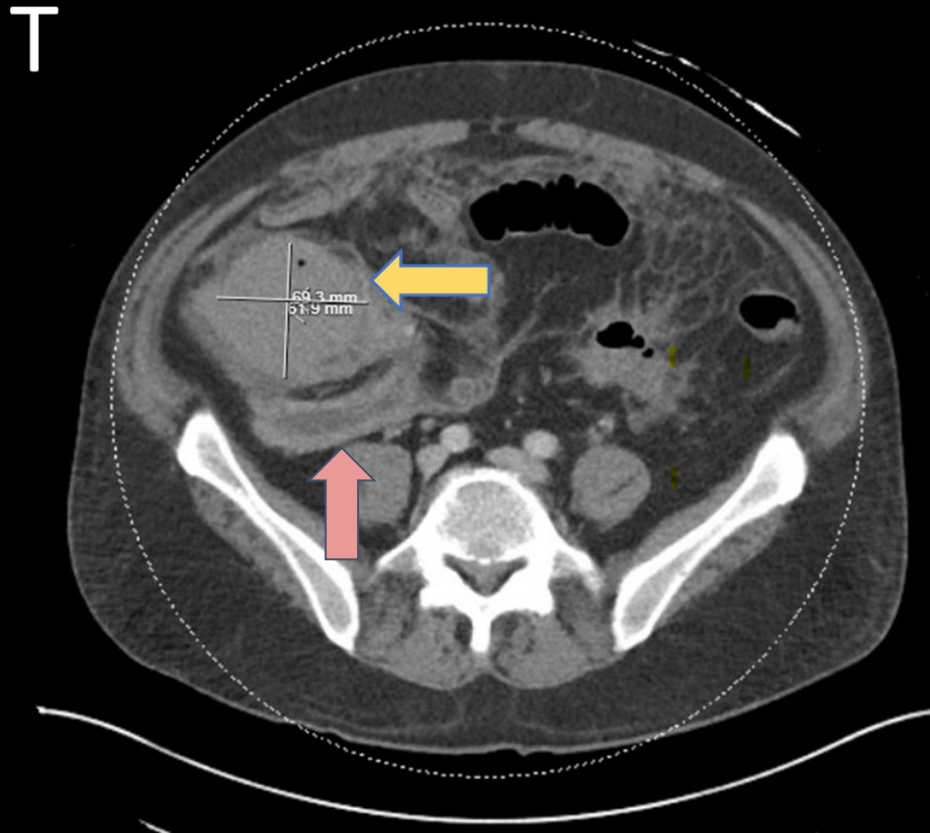
| Procedure | Appropriateness Category | Relative Radiation Level |
|---|--------------------------|--------------------------|
| CT abdomen and pelvis with IV contrast | Usually Appropriate | ☼☼☼ |
| US abdomen transabdominal | May Be Appropriate | ○ |
| US pelvis transvaginal | May Be Appropriate | ○ |
| Radiography abdomen and pelvis | May Be Appropriate | ☼☼☼ |
| MRI abdomen and pelvis without and with IV contrast | May Be Appropriate | ○ |
| MRI abdomen and pelvis without IV contrast | May Be Appropriate | ○ |
| CT abdomen and pelvis without IV contrast | May Be Appropriate | ☼☼☼ |
| Fluoroscopy contrast enema | Usually Not Appropriate | ☼☼☼ |
| CT abdomen and pelvis without and with IV contrast | Usually Not Appropriate | ☼☼☼☼ |

← This imaging modality was ordered by the ER physician

Findings (unlabeled)



Findings labeled



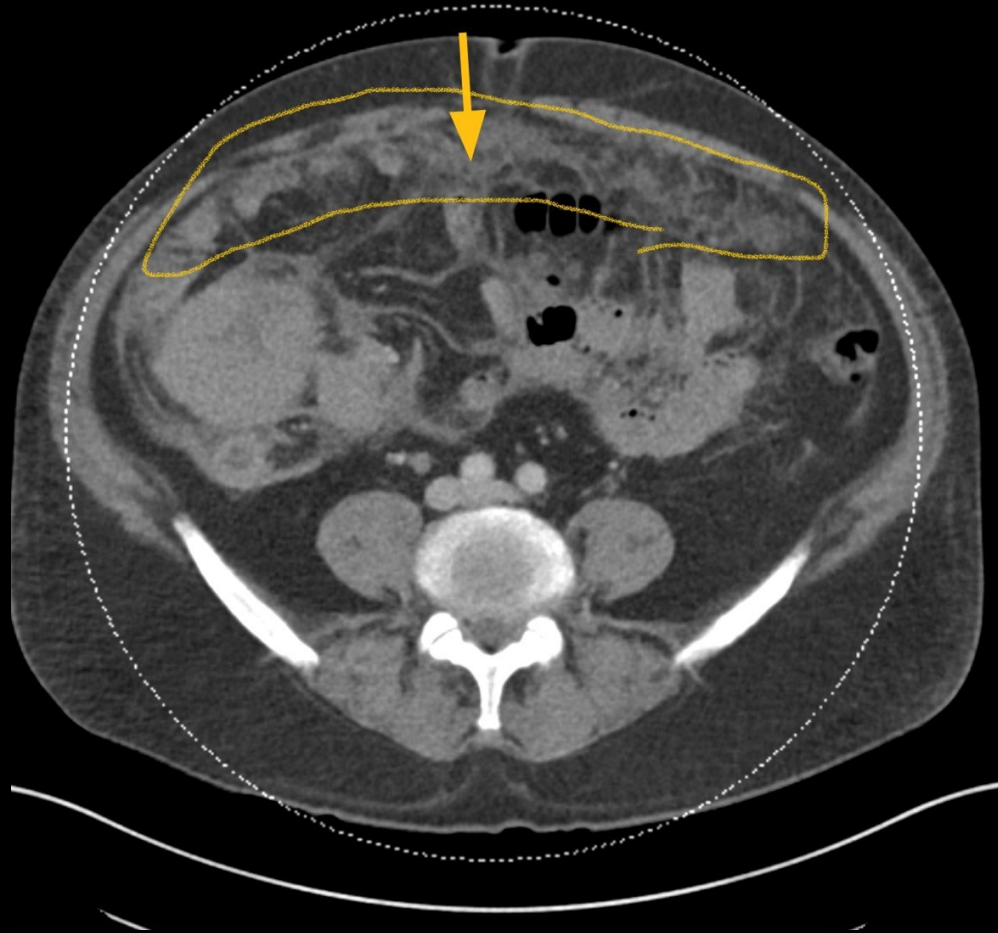
Key Findings

1. Within the base of the cecum involving the terminal ileum, there is a heterogeneously hyperdense mass with associated pathologic right lower quadrant mesenteric adenopathy.
1. The appendix is markedly enlarged up to 2.1 cm and hyperenhancing. Periappendiceal inflammatory changes with small to moderate volume free fluid extending into the pelvis.

Findings (unlabeled)



Findings labeled



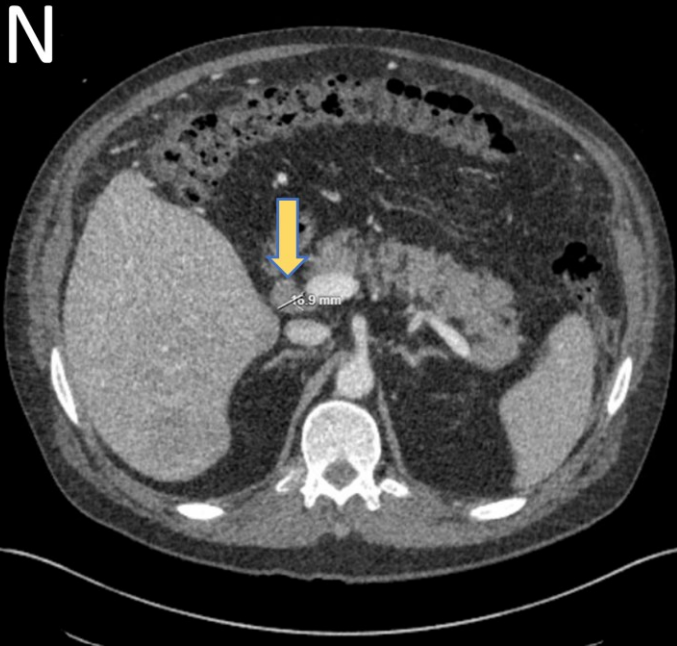
Key Findings

Peritoneal thickening, favored to represent peritoneal carcinomatosis. Multiple enlarged mesenteric and retroperitoneal lymph nodes were identified.

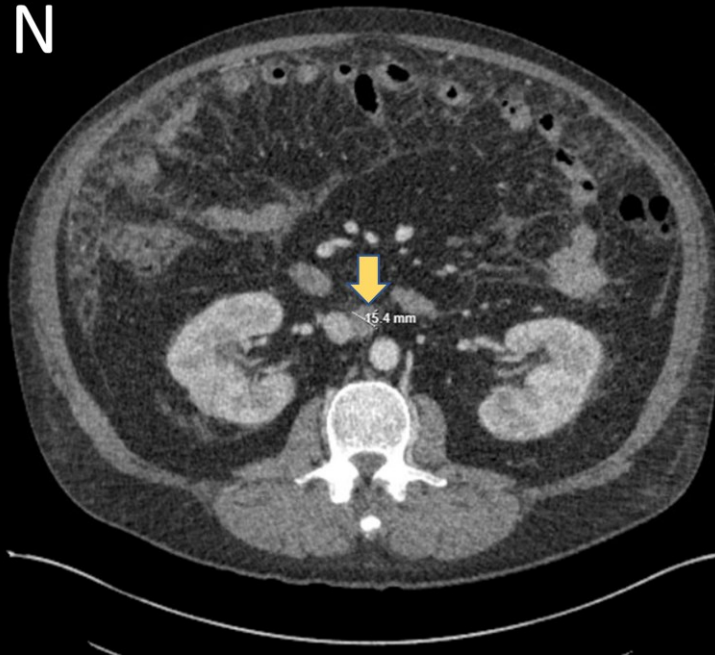
Findings (unlabeled)



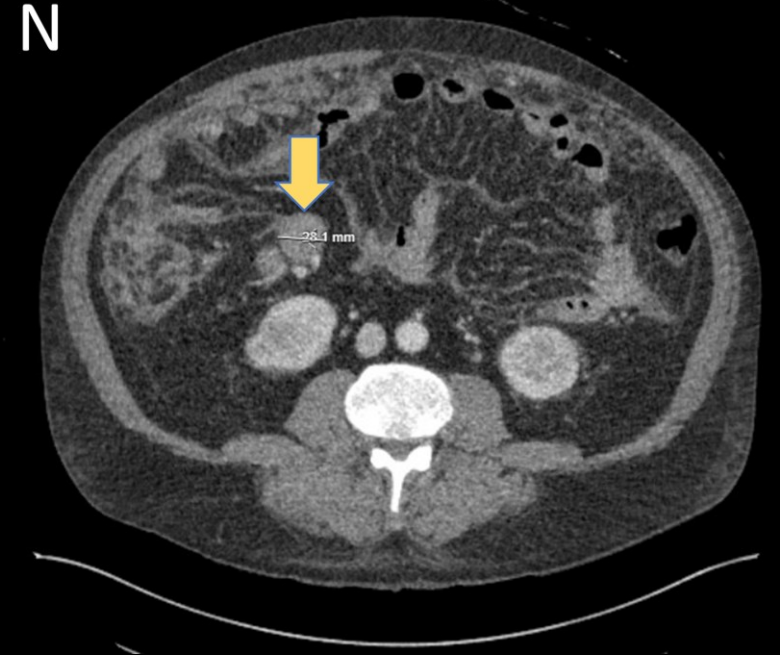
Findings labeled



Portacaval Lymph Node - 1.7cm



Aortocaval Lymph Node - 1.5cm



Ileocolic Lymph Node - 2.8cm

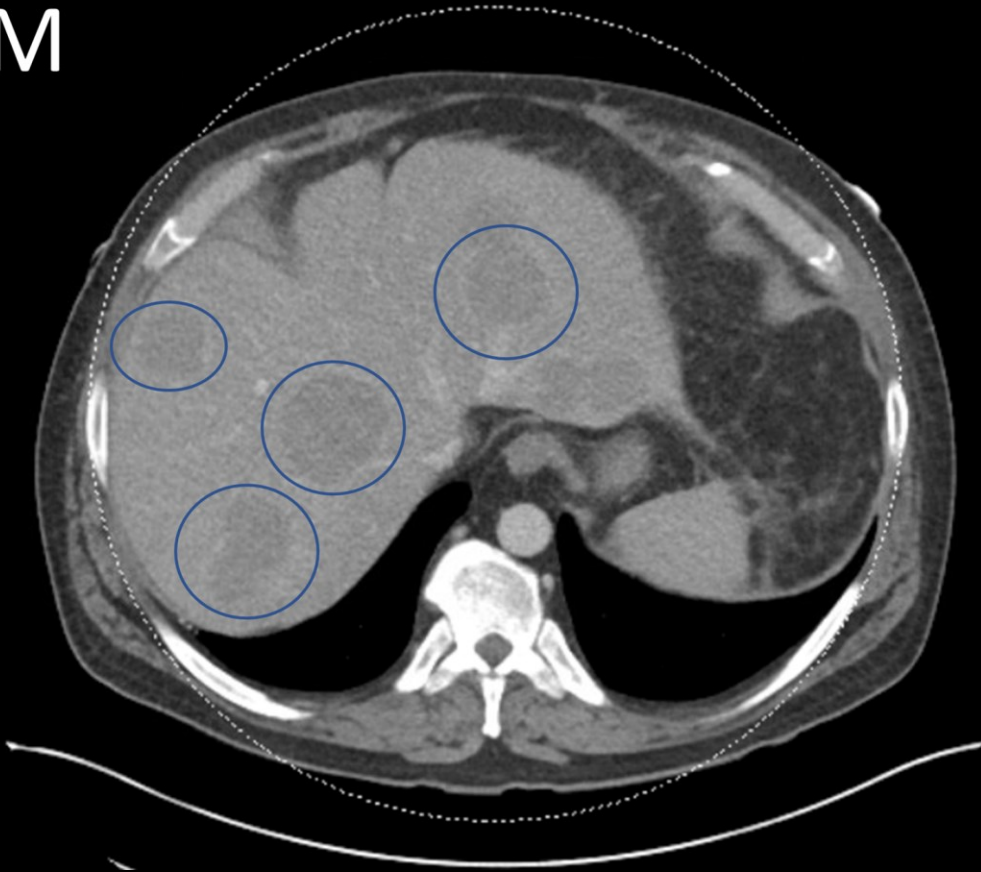
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Findings (unlabeled)



Findings labeled

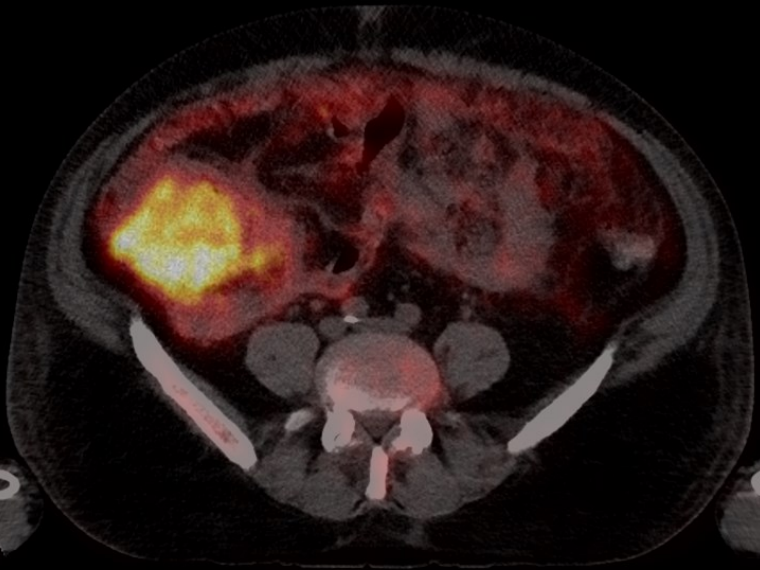
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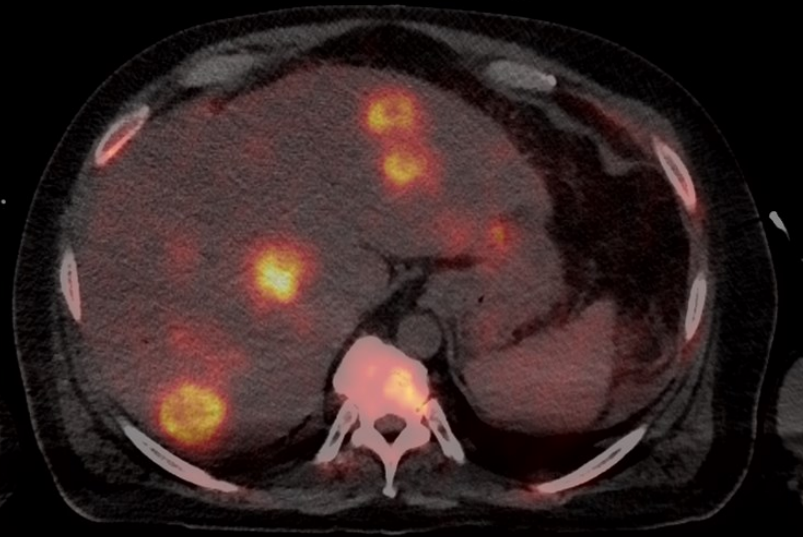
Key Finding:

Multiple rounded hypo-enhancing masses, compatible with hepatic metastatic disease

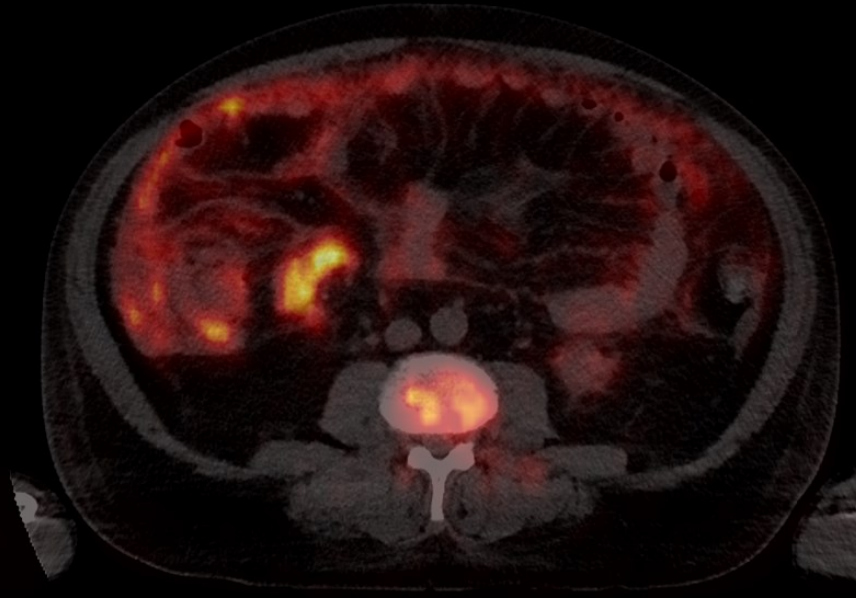
Follow up PET / CT Findings



Terminal ileal mass



Liver metastases



Metastatic mesenteric lymph nodes and multiple hypermetabolic peritoneal and omental implants

Diagnosis

Differential

- Ileal Adenocarcinoma
- Gastrointestinal Neuroendocrine Tumor
- Ileal Burkitt Lymphoma

→ Liver biopsy was performed and frozen section was positive for malignant neoplasm

- Frequent mitotic figures were found
- Immunostains show the lymphoma cells to be positive for nearly 100%
- **Burkitt Lymphoma is the final diagnosis**
- Appendicitis was due to obstruction from ileocecal mass

Case Discussion

Ileal Burkitt's Lymphoma

- Epidemiology: 1% - 5% of all non-Hodgkin lymphoma cases
- Who: 3-4:1 male to female ratio, with a higher incidence in Caucasian individuals (2)
- Presentation: Abdominal or jaw pain, melena, nausea, acute abdomen, rapidly enlarged cervical lymph nodes, abdominal masses, and ascites
- Where: Terminal ileum

Case Discussion

- Burkitt's lymphoma is a highly aggressive form of cancer with frequent metastases to the bone marrow, brain, and spinal cord
- Patients may thus present with non-abdominal symptoms as their chief concern
- Despite being rare, Burkitt's lymphoma warrants suspicion and work-up because of its rapid growth and responsiveness to early tumor cytoreduction and intense chemotherapy (5-year survival rate of 80%) (3)

Patient Outcome

- Admitted and started on chemotherapy course for Burkitt's lymphoma
 - Recent PET results show significant response to treatment with interval resolution of intra-abdominal, cecal, and hepatic metabolically avid disease as described
 - No definite new lesions identified
- Non-operative antibiotic course for appendicitis

References:

1. Galgano, Samuel J. et al. ACR Appropriateness Criteria® Left Lower Quadrant Pain-Suspected Diverticulitis. Journal of the American College of Radiology. 2019 May;16 (5):S141 - S149. <https://acsearch.acr.org/docs/69356/Narrative>.
1. Graham BS, Lynch DT. Burkitt Lymphoma. [Updated 2022 Aug 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK538148/>
1. Čubranić A, Golčić M, Fučkar-Čupić D, Brozović B, Gajski D, Brumini I. BURKITT LYMPHOMA IN GASTROINTESTINAL TRACT: A REPORT OF TWO CASES. Acta Clin Croat. 2019 Jun;58(2):386-390. doi: 10.20471/acc.2019.58.02.25. PMID: 31819338; PMCID: PMC6884372.