



Images in Surgery

Large right lower quadrant abdominal mass

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A 36-year-old male with a past medical history of diabetes mellitus and hypertension presented to the emergency department for further evaluation of vague right sided abdominal pain with an incidentally found right upper quadrant fluid collection on outpatient magnetic resonance imaging. In the emergency department, he received an abdominal ultrasound, which demonstrated a large cystic structure in the right lower quadrant. He subsequently underwent a computerized tomography (CT) scan which revealed a dilated blind-ending tubular structure originating from the right lower quadrant extending to the right upper abdomen measuring $5.5 \times 17.1 \times 6.7$ cm (see Fig. 1: Panel A –coronal and B- axial, views). The patient underwent surgical resection of the mass by an open approach with a small midline incision approximating the umbilicus [1,2]. The operation was not attempted by a minimally invasive approach due to the size of the mass and risk of possible rupture. During the operation, there was no evidence of gross perforation of the mass or concern for peritoneal dissemination. The resected specimen measured 5×17 cm (Panel C). An intraoperative en face (shave) frozen section evaluation of the surgical margin was negative for mucin, dysplastic epithelium or adenocarcinoma, later confirmed on permanent hematoxylin & eosin staining (Panel D). The presence of low-grade dysplasia within the mucinous epithelium, lack of a lamina propria and submucosal fibrosis was consistent with this lesion being a low-grade appendiceal mucinous neoplasm (LAMN). Notably, absence of high-grade dysplasia or invasion of a lamina propria by dysplastic glands/epithelium excludes from the differential diagnoses of

either being a high- grade appendiceal mucinous neoplasm (HAMN) or invasive adenocarcinoma, respectively (Panel E). The presence of acellular mucin on the serosa led to a pathologic staging of this LAMN as Stage 4a (pT4a) (Panel F) [3]. On three-week follow up, the patient was recovering well.

What is the next step in management?

- A) Ileocectomy
- B) Right hemicolectomy
- C) Cytoreductive Surgery & Hyperthermic Intraperitoneal Chemotherapy (CRS & HIPEC)
- D) Surveillance with colonoscopy

CRediT authorship contribution statement

Isheeta Madeka: Investigation, Writing-Original draft preparation
Cannon Greco-Hiranaka: Writing-Original draft preparation
Ozlem Kulak: Visualization
Wilbur B Bowne: Writing-Review & Editing, Conceptualization, Supervision.

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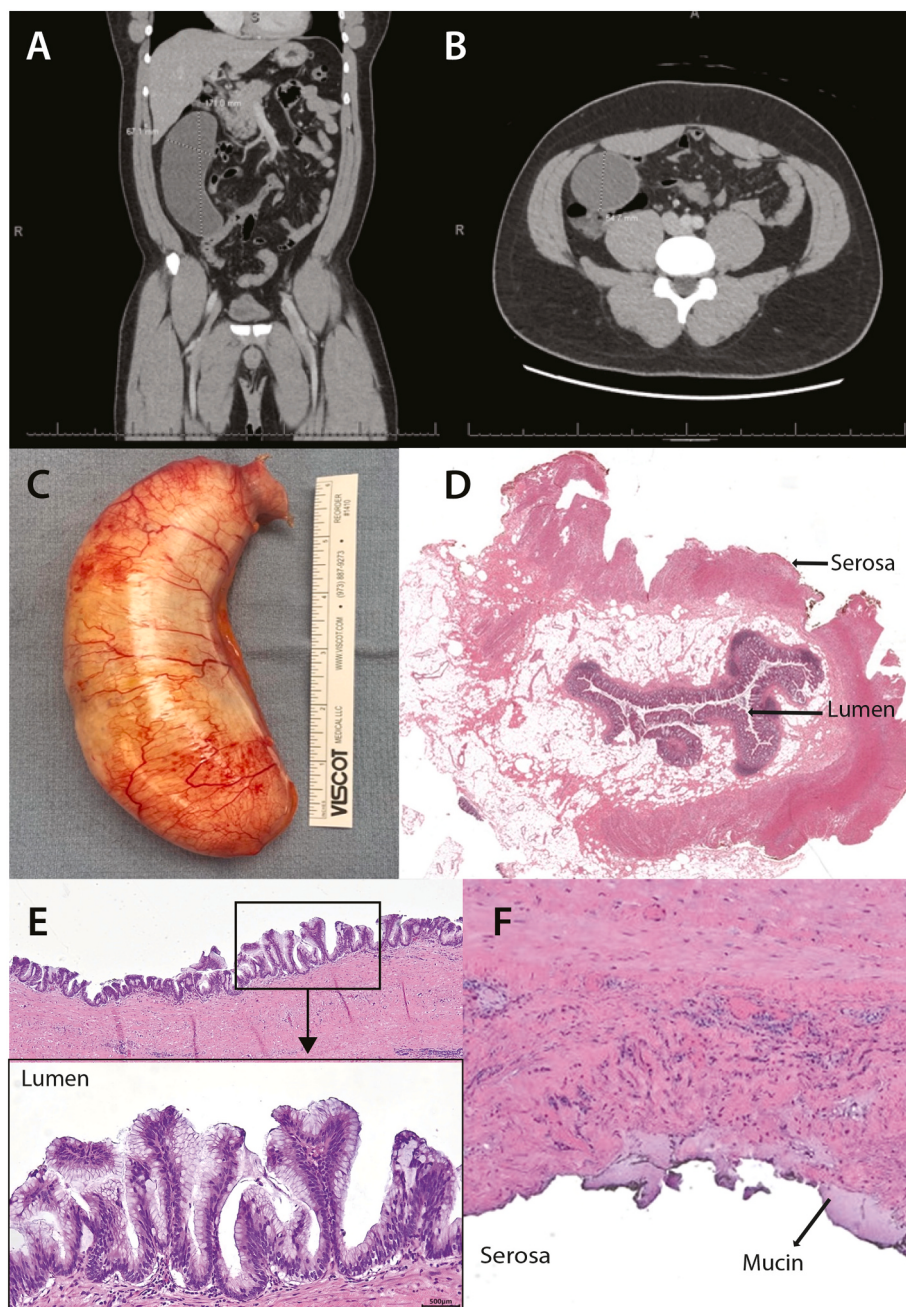


Fig. 1. Diagnostic imaging, intraoperative specimen, and pathology findings of large right lower quadrant mass (Panel A, B-coronal and axial views of computed tomography scan; Panel C-intraoperative resected specimen; Panel D-intraoperative frozen section; Panel E–F; final pathology sections).

Ethics approval

Ethics approval was not required for this manuscript as no HIPAA information was shared.

Declaration of competing interest

All authors have no declarations of interest to share.

References

- [1] Chicago Consensus Working Group. The Chicago Consensus on peritoneal surface malignancies: management of appendiceal neoplasms. *Cancer* 2020 June 1;126(11): 2525–33. Available from: <https://doi.org/10.1002/cncr.32881>.
- [2] Morano WF, Gleeson E, Sullivan SH, Padmanaban V, Mapow BL, Shewokis PA, et al. Clinicopathological features and management of appendiceal mucocoeles: systematic review. *Am Surg* 2018 Feb 1;84(2):273–81.
- [3] Umetsu SE, Kakar S. Staging of appendiceal mucinous neoplasms: challenges and recent updates. *Hum Pathol* 2023 Feb;132:65–76. Available from: <https://doi.org/10.1016/j.humpath.2022.07.004>.