



Case #118

NAME Educational Activities Committee

Case provided by:

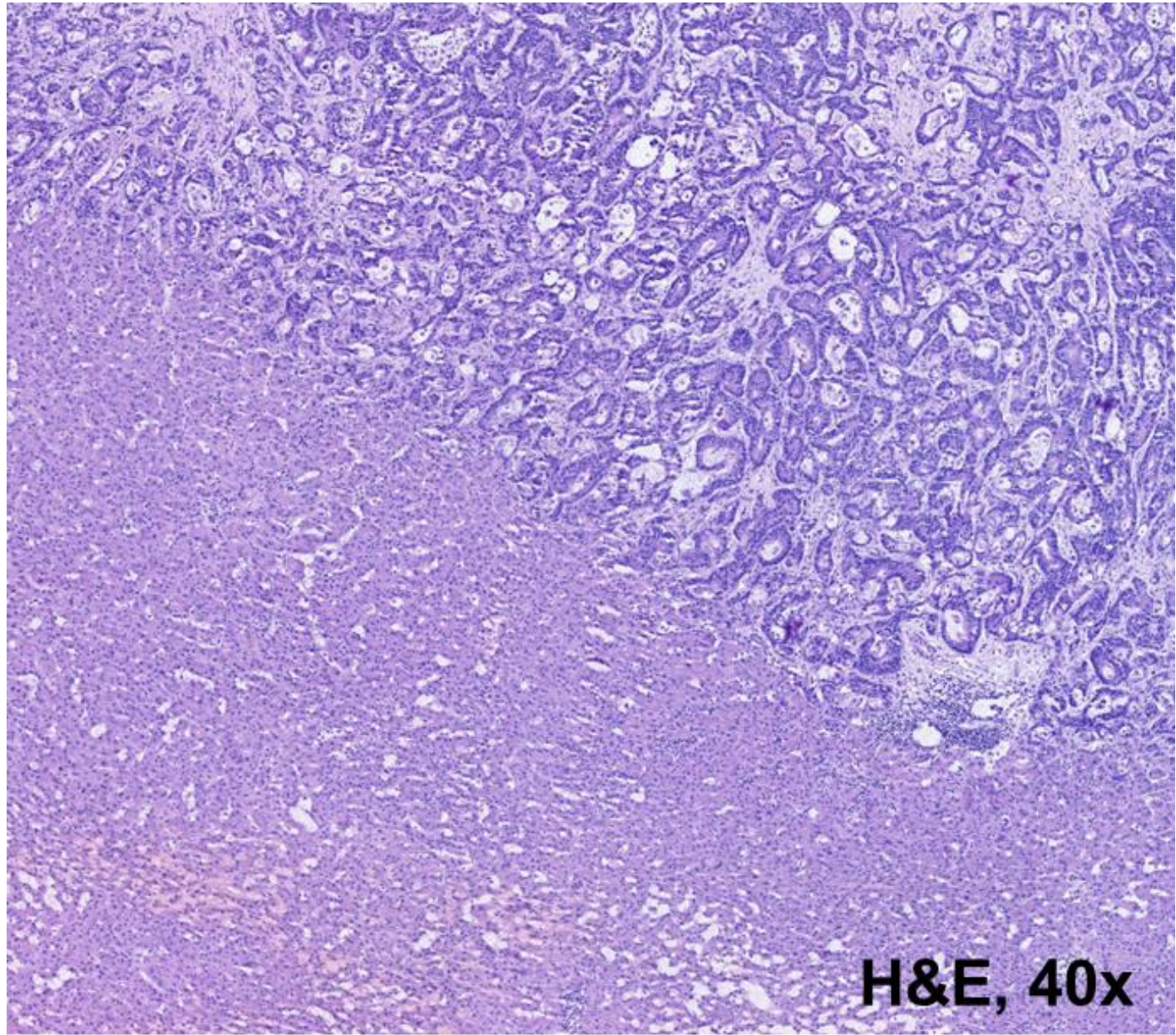
Dr. Thomas Auen (PGY3), Dr. Jacqueline Peck (PGY1), and Dr. Ana Yuil-Valdes
(attending physician/staff pathologist)

University of Nebraska Medical Center, Omaha, Nebraska

Pathology consultation was requested for organ procurement on a recently deceased 46-year-old male with no provided medical history. The histology shown is from frozen tissue sent for immediate review in the setting of possible liver transplant. Transplant was aborted based on the finding, and autopsy of the decedent confirmed the postmortem histopathologic finding.

Which of the following likely describes the rationale for the aborted transplant?

- A. A malignancy is demonstrated, which would likely stain positive for p40 and p63.
- B. A reactive process is demonstrated with increased inflammatory infiltrates and centrilobular necrosis about portal triads.
- C. A chronic process is demonstrated with fibrotic bands extending between portal triads, which would be highlighted by staining with Masson-Trichrome.
- D. A malignancy is demonstrated, which would likely stain positive for CK7 and/or CK20.
- E. A reactive process is demonstrated pronounced amounts of macro-steatosis and hepatocyte ballooning.



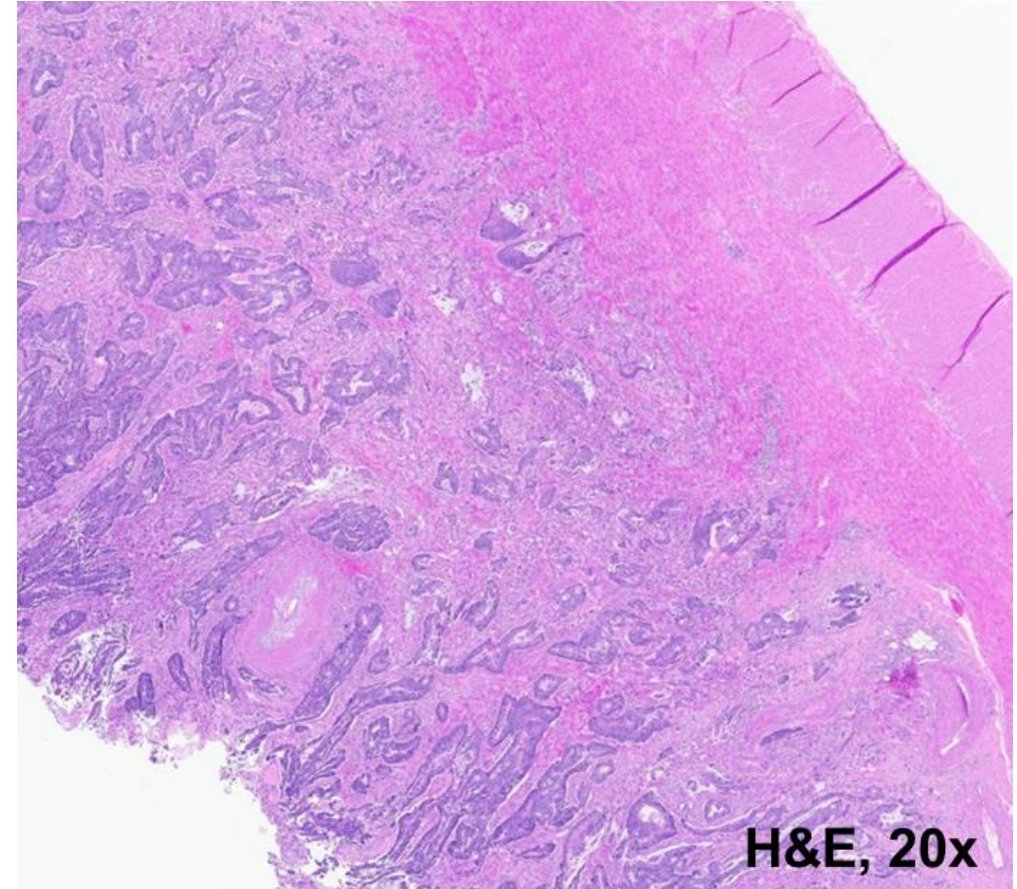
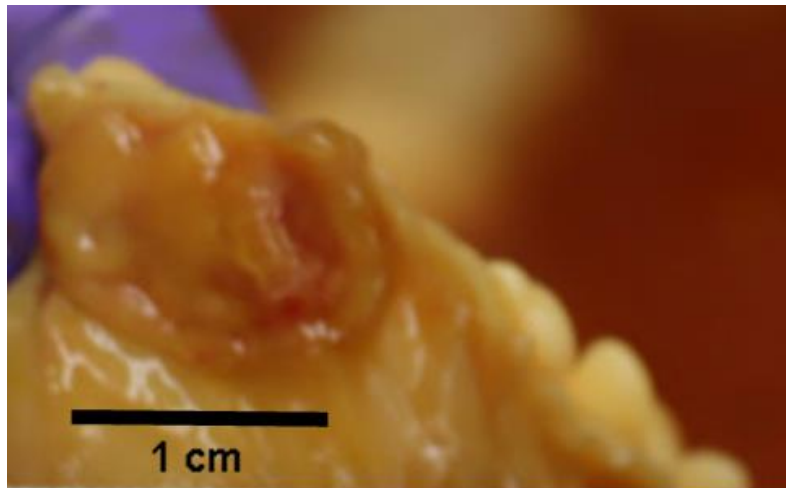
H&E, 40x

Answer...

D. A malignancy is demonstrated, which would likely stain positive for CK7 and/or CK20.

(CORRECT ANSWER, 79.51% of responses)

The unexpected findings shown is characteristic of adenocarcinoma. Additional workup on the specimen included positive immunohistochemistry staining for CK20 and CDX2, while stains were negative for CK7, TTF1, Pax8, and GATA3. The final diagnosis was called adenocarcinoma consistent with colorectal primary. The autopsy completed in subsequent days following the potential organ procurement identified a solitary lesion of the colon which, grossly (gross photo included) and microscopically (histology included) was consistent with a lesion worked up as adenocarcinoma and the suspected source of primary malignancy.



Other responses...

A. A malignancy is demonstrated, which would likely stain positive for p40 and p63. (11.36% of responses)

Answer A describes a squamous cell carcinoma, which is not consistent with the morphology shown in our picture.

B. A reactive process is demonstrated with increased inflammatory infiltrates and centrilobular necrosis about portal triads. (3.12% of responses)

Answer B would be consistent with hepatitis. These features are not identified in the section of tissue shown.

C. A chronic process is demonstrated with fibrotic bands extending between portal triads, which would be highlighted by staining with Masson-Trichrome. (2.67% of responses)

Answer C describes features consistent with bridging fibrosis or cirrhosis which is not seen in our picture.

E. A reactive process is demonstrated pronounced amounts of macro-steatosis and hepatocyte ballooning. (3.34% of responses)

These findings could be consistent with findings of nonalcoholic steatohepatitis (NASH), but the features of answer choice E are not shown in our picture.

REFERENCES

- Troxell ML, Lanciault C. Practical Applications in Immunohistochemistry: Evaluation of Rejection and Infection in Organ Transplantation. Arch Pathol Lab Med. 2016;140(9):910-925. doi:10.5858/arpa.2015-0275-CP
- Eccher A, Girolami I, Brunelli M, et al. Digital pathology for second opinion consultation and donor assessment during organ procurement: Review of the literature and guidance for deployment in transplant practice. Transplant Rev (Orlando). 2020;34(4):100562. doi:10.1016/j.trre.2020.100562
- Wang JH, Pfeiffer RM, Musgrove D, et al. Cancer Mortality Among Solid Organ Transplant Recipients in the United States During 1987-2018. Transplantation. 2023;107(11):2433-2442. doi:10.1097/TP.0000000000004694