

Surgical Pathology:

Collected 1/16/2024 18:01 Status: Edited Result - FINAL Dx: Colon cancer (HC CODE)

Test Result Released: Yes (seen)

Component

Clinical Information

Colon cancer (HC CODE)

Final Diagnosis

- A. Colon, Ascending, Right Hemicolectomy:
 - Invasive adenocarcinoma, moderately-differentiated; see cancer case summary.
 - Appendix with fibrous obliteration.
 - Twenty-eight lymph nodes with no malignancy identified (0/28).

Addendum 1

Immunohistochemistry (IHC) Testing for Mismatch Repair (MMR) Proteins: Colorectal Carcinoma

- MLH1: Intact nuclear expression
- MSH2: Intact nuclear expression
- MSH6: Intact nuclear expression
- PMS2: Intact nuclear expression
- Controls adequate: Background nonneoplastic tissue/internal control with intact nuclear expression

IHC INTERPRETATION: No loss of nuclear expression of MMR proteins: low probability of microsatellite instability-high (MSI-H). Intact expression of all four proteins indicate that the MMR enzymes tested are intact, but does not entirely exclude Lynch syndrome, as approximately 5% of families may have a missense mutation (especially in MLH1) that can lead to a non-functional protein with retained antigenicity. Defects in lesser known MMR enzymes may also lead to a similar result, but this situation is rare. Additional molecular pathologic study of MSI testing with microsatellite markers may be considered and performed if clinically applicable.

Note: These results should not be considered in isolation, and clinical correlation (possibly with genetic counseling) is recommended to assess the need for germline testing.

Synoptic Checklist

COLON AND RECTUM: Resection, Including Transanal Disk Excision of Rectal Neoplasms (COLON AND RECTUM: RESECTION - All Specimens) 8th Edition - Protocol posted: 6/22/2022

SPECIMEN

Procedure	Right hemicolectomy
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TUMOR

Tumor Site	Cecum
Histologic Type	Adenocarcinoma
Histologic Grade	G2, moderately differentiated
Tumor Size	Greatest dimension (Centimeters): 4.2 cm
Additional Dimension (Centimeters)	3.6 cm
	1 cm
Tumor Extent	Invades through muscularis propria into the pericolonic or perirectal tissue
Macroscopic Tumor Perforation	Not identified
Lymphovascular Invasion	Not identified
Perineural Invasion	Not identified
Treatment Effect	No known presurgical therapy

MARGINS

Margin Status for Invasive Carcinoma	All margins negative for invasive carcinoma
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Closest Margin(s) to Invasive Carcinoma	Proximal
Distance from Invasive Carcinoma to Closest Margin	5.0 cm
Margin Status for Non-Invasive Tumor	All margins negative for high-grade dysplasia / intramucosal carcinoma and low-grade dysplasia

REGIONAL LYMPH NODES

Regional Lymph Node Status	All regional lymph nodes negative for tumor
Number of Lymph Nodes Examined	28
Tumor Deposits	Not identified

PATHOLOGIC STAGE CLASSIFICATION (pTNM, AJCC 8th Edition)

Reporting of pT, pN, and (when applicable) pM categories is based on information available to the pathologist at the time the report is issued. As per the AJCC (Chapter 1, 8th Ed.) it is the managing physician's responsibility to establish the final pathologic stage based upon all pertinent information, including but potentially not limited to this pathology report.

pT Category	pT3
pN Category	pN0

ADDITIONAL FINDINGS

Additional Findings	None identified
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Comment(s)	Immunohistochemical studies for mismatch repair proteins are pending and will be reported in an addendum.
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Gross Description

A. The specimen is received fresh labeled with the patient's name, medical record number, and "specimen 1; colon, ascending". It consists of a stapled, intact right hemicolectomy consisting of a 4.0 x 3.5 cm in diameter segment of terminal ileum and a 17.0 cm in length by 4.0 cm in diameter segment of colon. The serosa is light tan and smooth. There is a slight bulging area of the cecum which is inked black. There is a corresponding 4.2 x 3.6 x 1.0 cm light tan, granular and sessile cecal mass. The mass is 5.0 cm from the proximal ileal margin, approximately 12.5 cm from the distal colon margin, and 7.0 cm from the nearest mesenteric/high vascular soft tissue margin. The mass involves the outer perimeter of the bowel wall, abuts, however does not involve the serosa. Involvement of the underlying adipose tissue is noted. The remaining mucosa is light tan and normally plicated.

The appendix is 8.0 cm in length by 0.5 cm in diameter. It is light tan, smooth with a pinpoint lumen and a wall up to 0.2 cm in thickness. It is overall unremarkable. The pericolonic adipose tissue is removed and a lymph node search is performed, revealing 29 light tan possible lymph nodes ranging from 0.2 to 1.5 cm. Representative sections are submitted as follows:

- A1: Research mirror section
- A2: Mucosa and adipose tissue, research mirror section
- A3: Proximal ileum margin en face
- A4: Distal colon margin en face
- A5: Mesenteric/vascular soft tissue margin en face
- A6: Ileum and ileocecal valve
- A7: Appendix with entirely submitted bisected tip
- A8-A11: Full-thickness bowel wall with mass, demonstrating deepest extent of invasion (include serosa)
- A12-A15: 24 intact possible lymph nodes (6 in each)
- A16: 2 bisected possible lymph nodes (1 is inked green)
- A17: 2 bisected possible lymph nodes (1 is inked green)
- A18: 1 serially section possible lymph node

Date and Time of Collection: 1/16/2024 6:01 PM
Date and Time in Formalin: 1/16/2024 at 6:29 PM