

Surgical Pathology:

Collected 4/4/2024 13:35 Status: Edited Result - FINAL Dx: Rectal cancer (HC CODE)

Test Result Released: Yes (not seen)

Component

Clinical Information

Rectal cancer (HC CODE)

Final Diagnosis

*Case was amended for the sole purpose of adding several non-required elements the cervical synoptic report (discussed at GYN tumor board 4/18/24). No substantive changes to the diagnosis were made.

A. Rectum and sigmoid colon, low anterior resection:

-**ADENOCARCINOMA (pT2 pN0)**. Synoptic report.

-Additional findings: Thirty benign pericolic lymph nodes (0/30), multiple hyperplastic polyps.

B. Uterus, bilateral fallopian tubes and ovaries, total hysterectomy and bilateral salpingo-oophorectomy:

-Cervix: **SQUAMOUS CELL CARCINOMA, HPV ASSOCIATED (pT1b2 pN0)**. See synoptic report.

-Endometrium:

-Benign proliferative pattern endometrium.

-Endometrial polyp with focal metaplastic changes.

-Fallopian tubes: Benign fallopian tubes with no significant histopathologic changes.

-Ovaries: Benign ovaries with no significant histopathologic changes.

C. Lymph Nodes, Pelvic Right:

-Eight lymph nodes, negative for malignancy (0/8).

D. Lymph Nodes, Pelvic Left:

-Seven lymph nodes, negative for malignancy (0/7).

E. Additional distal rectal margin excision:

-Negative for malignancy.

Note: The corresponding cytology case (CNG24-952, pelvic fluid) was reviewed in conjunction with the above.

Addendum 1

Additional studies:

-PD-L1 (22C3 Keytruda): QNS.

Note: An additional block has been submitted for repeat testing. A supplementary report will be issued with the results.

Addendum 2

Additional studies:

-PD-L1 (22C3 Keytruda): **Positive for PD-L1 expression** (combined positive score: 40).

Note: For complete details, please see the full attached report.

Addendum 3

Additional studies:

-Caris molecular intelligence report: For complete molecular testing details, please see the attached report.

Addendum 4

Additional testing:

-Signatera Residual Disease test: Please see attached report.

At the request of the clinician, re-examination of the original report, slides(s) and/or paraffin block(s) on this case was performed to select and submit appropriate tissue/cells conforming to the requirements of the specified molecular/genetic test(s).

Special Studies

Colon

-Immunohistochemistry (IHC) testing for mismatch repair (MMR) proteins (A9):

MLH-1: Intact nuclear expression.

MSH-2: Intact nuclear expression.

MSH-6: Intact nuclear expression.

PMS-2: Intact nuclear expression.

IHC interpretation: No loss of nuclear expression of MMR proteins: Low probability of microsatellite instable-high (MSI-H) or inheritable MMR-related cancer syndrome (ie. Lynch syndrome).

Uterus

-p16: Positive in cervical carcinoma

-p53 staining demonstrates wild-type pattern of positivity within metaplastic changes in the endometrial polyp; Ki-67 in the same area demonstrates a low proliferative index. The results favor a benign diagnosis.

-CD45 and CD163 highlight an intravascular cellular infiltrate within vessels in the parametrial margin; pankeratin stain is negative. The results support the above diagnosis.

Synoptic Checklist

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

SPECIMEN

Procedure	Low anterior resection
Macroscopic Evaluation of Mesorectum	Complete

TUMOR

Tumor Site	Rectosigmoid
Histologic Type	Adenocarcinoma
Histologic Grade	G2, moderately differentiated
Tumor Size	Greatest dimension (Centimeters): 3.8 cm
Tumor Extent	Invades into muscularis propria
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
Distance from Invasive Carcinoma to Radial (Circumferential) Margin	Greater than 1 cm
Distance from Invasive Carcinoma to Distal Margin	Greater than 1 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	30
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	pT2
pN Category	pN0

UTERINE CERVIX: Resection (UTERINE CERVIX: RESECTION - B, C, D) 9th Edition - Protocol posted: 4/5/2023**SPECIMEN**

Procedure	Total hysterectomy and bilateral salpingo-oophorectomy Pelvic lymphadenectomy
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TUMOR

Tumor Site	Not specified
Tumor Size	Greatest Dimension (Centimeters): 2.1 cm cm
Histologic Type	Squamous cell carcinoma, HPV-associated
Histologic Grade	G2, moderately differentiated
Depth of Stromal Invasion	Greater than 5 mm
Extent of Depth of Stromal Invasion	Middle one-third
Horizontal Extent of Stromal Invasion	7 mm
Other Tissue / Organ Involvement	Not identified
Lymphatic and / or Vascular Invasion	Not identified
Tumor Comment	Tumor invading 6mm out of 15mm total stromal thickness

MARGINS

Margin Status for Invasive Carcinoma	All margins negative for invasive carcinoma
Margin Status for HSIL or AIS	All margins negative for high-grade squamous intraepithelial lesion (HSIL) and / or adenocarcinoma in situ (AIS)

REGIONAL LYMPH NODES

Regional Lymph Node Status	All regional lymph nodes negative for tumor cells
Lymph Nodes Examined	
Total Number of Pelvic Nodes Examined	15
Total Number of Para-aortic Nodes Examined	0

pTNM CLASSIFICATION (AJCC 9th Version)

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	pT1b2
pN Category	pN0

ADDITIONAL FINDINGS

Additional Findings

High-grade squamous intraepithelial lesion (CIN 2 or 3)

SPECIAL STUDIES

p16 Immunohistochemistry

Positive

Gross Description

A. The specimen is received fresh, labeled with the patient's name, medical record number, "colon, sigmoid and rectum". It consists of a 25.3 cm in length by 5.5 cm in circumference segment of bowel with 2 stapled margins and attached yellow mesentery. The mesorectal envelope appears intact and complete. The serosa is tan-pink and smooth with focal black tattooing. The radial resection margin is inked black. The bowel is opened to reveal a 3.8 x 3.5 x 0.9 cm tan-pink, centrally ulcerated exophytic mass located entirely above the anterior peritoneal reflection, 11.2 cm from the proximal margin and 4.4 cm from the distal margin. Sectioning through the mass reveals a tan-white, firm cut surface with a depth of invasion of 0.3 cm, into the submucosa and bowel wall, 0.2 cm from the serosa. The mass is 1.5 cm from the radial margin. The remaining mucosa has multiple tan-pink sessile polyps ranging from 0.2 to 0.4 cm, coming to within 4.6 cm from the proximal margin and 0.9 cm from the distal margin. The adipose tissue contains 26 tan-pink possible lymph nodes ranging from 0.1 to 1.0 cm. Representative sections are submitted in cassettes as follows:

- A1: Mirror section for research-tumor
- A2: Mirror sections for research-normal mucosa and mesentery
- A3: Proximal margin, en face
- A4: Distal margin, en face
- A5: Mesenteric vascular pedicle, en face
- A6: Nearest radial margin, en face
- A7-A8: Mass with deepest invasion to serosa (inked blue)
- A9: Additional sections of mass
- A10-A12: Sessile polyps, entirely submitted
- A13: 7 possible lymph nodes, in toto
- A14: 7 possible lymph nodes, in toto
- A15: 7 possible lymph nodes, in toto
- A16: 3 possible lymph nodes, in toto
- A17: 1 bisected lymph node
- A18: 1 bisected lymph node

Date and Time of Collection: 4/4/2024 1:35 PM

Date and Time in Formalin: 4/4/2024 1:55 PM

Cold Ischemic Time: Less than 1 hour

Total Fixation Time: Greater than 6 and less than 72 hours

B. The specimen is received fresh, labeled with the patient's name, medical record number, "uterus, cervix, bilateral fallopian tubes and bilateral ovaries". It consists of a 95.5 g, 7.1 x 3.2 x 1.8 cm uterus with attached cervix (3.1 x 2.1 cm in diameter), attached bilateral fimbriated fallopian tubes (right: 5.1 x 0.5 cm; left: 5.4 x 0.5 cm) and attached bilateral ovaries (right: 2.1 x 1.5 x 0.8 cm; left: 2.5 x 1.5 x 1.0 cm). There is up to 0.7 cm on the anterior aspect and up to 0.9 cm in the posterior aspect of tan-pink vaginal mucosa. The anterior paracervical resection margin is inked blue and the posterior is inked black. The attached parametrium is tan-red and partially hemorrhagic on the right side. The serosa is tan-pink and smooth. The ectocervical mucosa is tan-white with a centrally located slitlike os measuring 0.5 cm in diameter. The uterus is bivalved to reveal a 2.1 x 2.0 cm tan-white, centrally ulcerated mass in the anterior endocervical mucosa, involving the junction to the ectocervical mucosa. The mass is 1.6 cm from the anterior vaginal cuff margin, 1.5 cm from the right parametrial margin, and 3.1 cm from the left parametrium margin. Sectioning through the mass reveals tan-white, indurated cut surface with a depth of 0.3 cm into the 1.5 cm thick cervical stroma. The mass is 0.7 cm from the deep paracervical resection margin. The posterior cervix does not appear to be involved by mass, however the endocervical mucosa is tan-pink and granular with focal granularity on the ectocervix.

The 2.5 cm in length by 1.5 cm in width uterine cavity is lined by tan-pink, partially granular endometrium averaging 0.2 cm in thickness. In the posterior aspect there is a 1.5 x 1.5 x 0.6 cm tan-white exophytic, cystic endometrial polyp, which appears confined to the mucosa. The myometrium is tan-pink, smooth and averages 2.1 cm in thickness. There is a 1.6 x 1.1 x 0.9 cm intramural tan-white whorled nodule. The bilateral ovaries and bilateral fallopian tubes are unremarkable. Representative sections are submitted in cassettes as follows: