Criteria	Yes	No
Diagnosis Discrepancy		✓
Primary Tumor Site Discrepancy		✓
HIPAA Discrepancy		✓
Prior Malignancy History		✓
Dual/Synchronous Primary Noted		
Case is (circle): QUALIFIED DISQUALIFIED		
Reviewer Initials: BS Date Reviewed: 5/19/11		

JW 6/3/11

Surgical Pathology Report

Final

UUID:A6419790-A6CE-47E2-8035-437820EC63EC
TCGA-FI-A2D4-01A-PR Redacted

SURGICAL PATHOLOGY REPORT
FINAL WITH ADDENDUM

Service: Gynecology
Location:

(Age:

Patient Type:

Reported:

Physician(s):

DIAGNOSIS:

UTERUS, ENDOMYOMETRIUM, TOTAL ABDOMINAL HYSTERECTOMY
- ADENOCARCINOMA, ENDOMETRIOID TYPE, FIGO GRADE 3 OF 3, WITH AREAS OF KERATINIZING SQUAMOUS DIFFERENTIATION
- CARCINOMA INVADES TO A MYOMETRIAL DEPTH OF 13 MM OUT OF A TOTAL MYOMETRIAL THICKNESS OF 13 MM
- EXTENSIVE LYMPHVASCULAR INVASION BY CARCINOMA IDENTIFIED IN THE MYOMETRIUM
- TUMOR INVADES THROUGH MYOMETRIUM INTO SURROUNDING SOFT (ADIPOSE) TISSUE
- SEE SYNOPSIS

UTERUS, CERVIX, TOTAL ABDOMINAL HYSTERECTOMY
- EXTENSIVE INVOLVEMENT BY INVASIVE HIGH GRADE ADENOCARCINOMA
- WIDESPREAD LYMPHVASCULAR INVASION BY CARCINOMA IDENTIFIED

OVARY, RIGHT, OOPHORECTOMY
- ADENOCARCINOMA (3 CM)

FALLOPIAN TUBE, RIGHT, SALPINGECTOMY
- NO EVIDENCE OF MALIGNANCY

OVARY, LEFT, OOPHORECTOMY
- FOCAL INVASIVE ADENOCARCINOMA

FALLOPIAN TUBE, LEFT, SALPINGECTOMY
- NO EVIDENCE OF MALIGNANCY

ICD-O-3
adenocarcinoma, endometrioid, NOS
8380/3
Site: endometrium C54.1
JW 6/3/11

LYMPH NODE, RIGHT EXTERNAL ILIAC, BIOPSY (FS1)
- METASTATIC ADENOCARCINOMA PRESENT IN ONE LYMPH NODE (1/1), WITH EXTENSIVE SQUAMOUS DIFFERENTIATION AND TUMORAL NECROSIS
- TUMOR DEPOSIT MEASURES 2.5 CM

By this signature, I attest that the above diagnosis is based upon my personal examination of the slides/media other material indicated in the diagnosis).

***Report Electronically Reviewed and Signed Out By

Intraoperative Consultation:

An intraoperative non-microscopic consultation was obtained and interpreted as: "Called to pick up 'cervix, uterus, BSO' that consists of a hysterectomy with bilateral salpingo-oophorectomy specimen. The external os measures 0.3 cm. Sectioned to show a fungating mass that measures ~ 7 cm, filling the endometrial cavity and endocervical canal. Per surgeon, please perform ER, PR. Rest for permanents. Tumor and normal tissue taken fo by

.ymph node, right external iliac, biopsy
- "Metastatic adenocarcinoma," by

Microscopic Description and Comment:

Microscopic examination substantiates the above cited diagnosis. ER and PR immunostains are pending; results will be issued in an addendum.

History:

The patient is a -year-old woman with endometrial cancer. Operative procedure: Total abdominal hysterectomy with bilateral Salpingo-oophorectomy with lymph node dissection.

Specimen(s) Received:

A: UTERUS, CERVIX, LEFT FALLOPIAN TUBE, LEFT OVARY, RIGHT FALLOPIAN TUBE, AND RIGHT OVARY
B: LYMPH NODE, RIGHT EXTERNAL ILIAC

Gross Description:

The specimens are received in two formalin-filled containers, each labeled The first container is also labeled "cervix, uterus, BSO." It holds a 590 gram uterus with attached cervix that measures 16 cm from fundus-to-ectocervix, 7 cm from cornu-to-cornu, and 8 cm from anterior-to-posterior. The serosal surface is glistening and shiny. The 8 x 6 x 7 cm cervix has a 7 x 7 cm ectocervix and a 3 cm external os. The endocervical canal measures 6 x 3 cm, and it is filled with a fungating necrotic mass that measures 4 x 3 cm. The mass appears to be extending from the endometrial cavity. The endometrial cavity is completely filled by a necrotic fungating mass that measures 7 x 5 cm. The mass appears to be invading the lower uterine segment. The mass appears to be invading most of the endometrium, and it is less than 0.1 cm from the outer serosal surface in both lower uterine segments as well as endomyometrium. The 4 x 3 x 2 cm pink-tan ovary has a normal outer surface. Cut sections show normal ovarian parenchyma with a single hemorrhagic cyst that measures 1 x 0.5 cm. The 5 x 0.7 x 0.5 cm pink-tan fallopian tube has a normal outer surface. Cut sections show a pinpoint lumen. The 4 x 4 x 2 cm pink-tan ovary has a normal outer surface. Cut sections show a 3 x 2 x 1.2 cm ill-defined tan mass with normal ovarian parenchyma. Labeled A1 and A2 - anterior cervix, one section; A3 - posterior cervix; A4 - anterior lower uterine segment; A5 and A6 - posterior lower uterine segment; A7 to A10 - anterior endomyometrium with a fungating necrotic tumor (A7 and A8 is one section); A11 to A14 - posterior endomyometrium with a mass (A13 and A14 is one section); A15 and A16 - left adnexa; A17 to A19 - right adnexa with a tan mass. Jar 3.

The second container is also labeled "right external iliac lymph node, FS1/X." It holds a white cassette that holds a single fragment of tan soft tissue that measures 2.5 x 0.9 x 0.2 cm. Also in the container there are two fragments of tan soft tissue, the larger one that measures 2.5 x 1.2 x 0.5 cm, and the smaller one that measures 2.5 x 0.9 x 0.3 cm. The white cassette is labeled B1. The remaining tissue is trisected and submitted in cassettes B2 to B4. Jar 0.

SYNOPTIC REPORTING FORM FOR MALIGNANT ENDOMETRIAL TUMORS

HISTOPATHOLOGIC TYPE
The histologic diagnosis is adenocarcinoma, endometrioid type with squamous differentiation

FIGO GRADE
The FIGO Grade of the tumor is 51 to 100% solid growth pattern (FIII)

TUMOR INVASION
Invasive tumor is present with invasion of the entire myometrium and penetration of the serosa

TUMOR SIZE
The tumor invades to a depth of 13 mm
The myometrial thickness is 13 mm

LOWER UTERINE SEGMENT INVOLVEMENT
(does not change the stage)
The lower uterine segment is involved by tumor

ENDOCERVICAL INVOLVEMENT
The endocervix is involved by invasive tumor in the mucosa and stroma

LYMPHVASCULAR SPACE INVASION
Lymphvascular space invasion by tumor is present and widespread in scope

REGIONAL LYMPH NODES (N)
Regional lymph node metastasis (N1)
The regional lymph nodes are involved by tumor in 1 nodes
The total number of lymph nodes examined is 1

DISTANT METASTASIS (M)
Distant metastasis cannot be assessed (MX)

PRIMARY TUMOR (TNM Category/FIGO Stage)
Tumor involves serosa and/or adnexa (direct extension or metastasis) and/or cancer cells in ascites or peritoneal washings (T3a/IIIA)

STAGE GROUPING
T3a/N1/MX

The pathologic stage assigned here should be regarded as provisional, and may change after integration of clinical data not provided with this specimen.

Addenda/Procedures

Addendum Ordered **Status:** Signed Out
Addendum Complete: **By:**
Addendum Signed Out:

Addendum Comment
Immunohistochemical stains for estrogen receptor and progesterone receptor were performed. at the clinicians request. 5-10% of the tumor cells show strong positivity for both estrogen receptor and progesterone receptor.

Addendum Ordered: **Status:** Signed Out
Addendum Complete: **By:**
Addendum Signed Out:

Addendum Comment
Immunostains of the endometrial adenocarcinoma show an abnormal expression pattern, with loss of expression of MLH1 and PMS2 in the tumor, with preserved expression of MSH2 and MSH6.

These antibodies are directed against the DNA mismatch repair enzymes MLH1, MSH2, PMS2, and MSH6. These targets are expressed in normal cells. When expression is lost, the result is often micro-satellite instability. Thus, one may immunostain for these mismatch repair enzymes, as a surrogate for MSI testing. In cases where the immunostains show a normal pattern of expression, MSI is very unlikely. One can then reasonably skip the more expensive and time consuming process of MSI analysis in such cases. In contrast, tumors such as the current case, with loss of expression of one or more of these proteins, are likely to manifest MSI.

In this case, tissue will be sent for confirmatory PCR testing for MSI.

Addendum Ordered: **Status:** Signed Out
Addendum Complete: **By:**
Addendum Signed Out:

Addendum Comment

TUMOR MICROSATELLITE INSTABILITY

Method

A PCR based assay is used to test for tumor microsatellite instability (MSI) with the use of 5 mononucleotide repeat markers (BAT25, BAT26, Mono27, NR24, and NR21). The tumor tissue is classified as MSS/MSI-L (instability detected in 0 or 1 out of 5 markers), or MSI-H (instability in 2 or more of 5 markers tested).

Results

Tumor type: endometrial adenocarcinoma MSI: MSI-H (instability observed in 3 of 3 informative markers)

Interpretation

High levels of microsatellite instability (MSI-H) are indicative of defective DNA mismatch repair function. These results increase the risk that this individual has an inherited colon cancer syndrome due to defective DNA mismatch repair (HNPCC). However, MSI testing does not distinguish between a somatic and a germline defect in one of the DNA mismatch repair genes, nor does it provide information as to which gene might be involved. The use of immunohistochemistry, followed by germline mutational analysis, can further evaluate the possibility of HNPCC in this individual.

Genetic counseling is suggested prior to proceeding with genetic testing to discuss the risks and benefits of testing with this individual.

CAUTIONS: Test results should be interpreted in context of clinical findings, family history, and other laboratory data. If results obtained do not match other clinical or laboratory findings, please contact the

laboratory for possible interpretation. Misinterpretation of results may occur if the information provided is inaccurate or incomplete.

This test was reported and interpreted by

Surgical Pathology report is available on-line or

END OF REPORT