

Subject ID: LM00010

Pathology Report Date: 8/09/00

Pathology Report Summary

DIAGNOSIS:

Uterus - leiomyosarcoma, grade I/III, with serosal implants; slight to moderate endometrial adenomatous/cystic hyperplasia; chronic cervicitis with squamous metaplasia

Ovaries/Oviducts, Bilateral – cortical stroma hyperplasia, benign

Soft tissue, cul-de-sac – well differentiated epithelial leiomyosarcoma (uterine primary)

PRE-OPERATIVE DIAGNOSIS: Uterine fibroids

SPECIMEN: 1) Uterus, bilateral tubes and ovaries and cervix
2) Tissue from cul-de-sac
3) Posterior cul-de-sac, FS

FROZEN SECTION DIAGNOSIS: Spindle neoplasm with atypia

GROSS DESCRIPTION:

1--The specimen includes a 1482-gram uterine fundus occupied almost entirely by a large mass, with original dimensions of the spheroidal mass up to approximately 15 cm. The serosal surface is pink to tan to gray and exhibits minimal fibrous adhesions. The cut surfaces of the mass reveal gray-tan lobulated stroma with an appearance and texture suggesting smooth muscle. Areas of necrosis and hemorrhage can also be found, suspicious for malignant change. In one area of uninvolved myometrium, a cleft-like structure typical of endometrial cavity is noted, lined by grayish-brown to reddish granular endometrial surfaces. A detached cylindroidal cervix is present up to 5.2 x 2.3 x 1.7 cm. The mucosa of the canal is unaltered. The os is up to 1.2 cm in diameter and has an indistinct squamocolumnar junction. The right ovary is up to 2.1 x 2.2 x 1.1 cm. The bosselated pink to tan outer surface can be incised to reveal corpora albicantia. The oviduct extends up to 8 cm from the fundus and is externally unremarkable. The left ovary is up to 3.1 x 2.2 x 1.2 cm. The gray-tan bosselated outer surface can be incised to reveal stroma and small cysts, none more than 7 mm in diameter. The oviduct is up to 7 cm in length and externally unremarkable. Separate and detached, free in the fixative, is a discoid fragment of firm yellowish-gray tissue up to 2.7 x 2.3 x 1.0 cm, with somewhat nodular outer surfaces. A section is prepared (F).

2--The 26-gram specimen is a mass of lobulated coagulated blood up to 5.2 x 4.3 x 2.6 cm. Transection reveals thrombotic material without definitive features. Two smaller fragments are included containing areas of tan-gray stroma, neither more than 1.5 cm in maximum width.

3--The 4 gram specimen is a series of irregular fragments of purplish-gray to tan fragments of slightly firm tissue, ranging from a few millimeters up to the largest, which is 2.5 x 1.8 x 1.2 cm.

MICROSCOPIC DESCRIPTION:

1--The myometrial mass is a low grade leiomyosarcoma. The fields of smooth muscle cells are arranged in a streamy manner, with a dense population of nuclei, within which mitotic figures are easily identified in significant numbers. Occasional fields include polypoid and bizarre nuclei. Occasional foci of necrosis can also be found. The additional detached fragment (F) contains neoplasm as well.

The uninvolved myometrium shows areas of quite normal appearance. The endometrial surfaces exhibit cystic and adenomatous hyperplasia, the latter occurring in mild to focally moderate grade. The cervix shows slight chronic cervicitis with squamous metaplasia.

The right ovary contains structures of follicular derivation. Slight stromal hyperplasia is present. The oviduct is not altered. Malignancy elements are not present.

The left ovary exhibits ordinary follicular structures as well, with slight stromal hyperplasia. The oviduct is unaltered.

2--The bloody coagulum consists of fibrinoid, erythrocytes, platelets, and leukocyte debris. Certain edges of certain fragments have undergone early organization. Within the coagulum are certain fragments of poorly preserved cellular tissue closely resembling areas of the neoplasm described above. Other areas show well-preserved, frank neoplasm.

3--The section sampled from the posterior cul-de-sac exhibits hemorrhagic, slightly inflamed fibromuscular, vascularized tissue, some surfaces that are covered by peritoneum. Certain fragments include cellular neoplasm identical to that described above in paragraph #1.

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PATHOLOGICAL DIAGNOSIS:

1. Uterus, tubes, and ovaries (hysterectomy, bilateral salpingo-oophorectomy).

Cervix – No diagnostic abnormality.

Endometrium – Cystic hyperplasia.

Myometrium – Well differentiated epithelioid leiomyosarcoma, grade I/III

Right and left fallopian tubes – No diagnostic abnormalities.

Right and left ovaries – No diagnostic abnormalities.

2. Tissue from cul-de-sac (excision) – Fragments of smooth muscle neoplasm consistent with well differentiated epithelioid leiomyosarcoma.

3. Posterior cul-de-sac (excision) – Fragments of smooth muscle neoplasm consistent with well differentiated epithelioid leiomyosarcoma. – Benign mesothelial hyperplasia

COMMENT:

Epithelioid tumors that are large, have coagulative necrosis, and cytologic atypia usually behave in a malignant fashion. Thus, despite the pushing margin and low mitotic count in this tumor, it is best defined as a well-differentiated epithelioid leiomyosarcoma.

GROSS DESCRIPTION:

After the clinical report was finalized and returned to the originating pathologist, re-examination of the case revealed that three slides from another case had accidentally been misnumbered as three slides part 2 from this current case. This case will now be redictated with that knowledge.

CLINICAL BRIEF:

The patient is a 42-year-old woman who had a pelvic neoplasm initially thought to be large leiomyomata. The tumor had grown through the myometrium and had two major juxtaposed areas of mass effect. The fundal component of the uterus was a total of 1,482 grams and the structure was 15 cm in diameter.

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Pathology Report Date: 9/22/00

Pathology Report Summary

FINAL PATHOLOGIC DIAGNOSIS:

1) Uterine tissue and 2) & 3) Pelvic cul-de-sac tissue (uterine leiomyosarcoma , morphologically intermediate grade, measuring at least 15 cm in dimension (size by report)

Tissue from pelvic cul-de-sac consists of fragments of leiomyosarcoma, up to 2.5 cm (size by report). The tumor is comprised of areas with spindle cells and areas with a more epithelioid appearance. Mitoses number up to 7 per 10 high power fields. Necrosis is present.

Cervix with squamous metaplasia.

Proliferative endometrium with focal alterations in gland architecture consistent with prior anovulation. No tumor is seen in sections of ovaries and fallopian tubes.

Immunoperoxidase staining at Brigham and Women's Hospital reveals that the tumor cells are positive for smooth muscle actin, desmin, and caldesmon, and negative for paracytokeratin, confirming the above diagnosis

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Pathology Report Date: 3/22/01
Pathology Report Summary

SPECIMEN: Uterine Parafin Block

1) Steroid Receptor Immunohistochemistry Assay:

Estrogen Receptor (ER) Positive with H-Score of 270
Progesterone Receptor (PR) Positive with H-Score of 270

2) Oncoprotein Expression:

Her2/neu/C erb B2 Staining pattern = 0 Overexpression = Negative

3) DNA Cell Cycle Analysis:

<u>Test</u>	<u>Result</u>	<u>Prognostic Groupings</u>
Ploidy	Diploid	Favorable
DNA Index	1.0	Favorable
S-Phase percent	7.82	-----

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Pathology Report Date: 8/09/02
Pathology Report Summary

PRE-OPERATIVE DIAGNOSIS: Leiomyosarcoma

FROZEN SECTION DIAGNOSIS: (1) Blood clot in vessel. (2) Atypical cellular leiomyosarcoma versus LG leiomyosarcoma

GROSS DESCRIPTION:

1--The first specimen is received in formalin and is labeled BIOPSY OF LEIOMYOSARCOMA. The specimen consists of a small piece of tissue measuring 2.0 x 0.9 x 0.4 cm. The section shows a blood vessel with blood clot in it. The entire specimen is submitted.

FROZEN SECTION GROSS EXAMINATION ONLY: Blood vessels with clot.

2--The second specimen is received in formalin and is labeled RECTOSIGMOID PERITONEAL MASS. The specimen consists of a portion of adipose tissue with round tumor mass measuring 2 cm at the greatest diameter. Part of mass is covered by blood clot.

FROZEN SECTION DIAGNOSIS: Atypical cellular leiomyoma vs. low grade leiomyosarcoma. Representative sections are submitted.

MICROSCOPIC DESCRIPTION:

1--Section shows blood vessel with organizing blood clot.

2--The sections shows leiomyosarcoma with cellular pleomorphism and low mitoses.

GROSS DESCRIPTION:

1--7mm in diameter, the oviduct is up to 7.0 cm in length and externally unremarkable. Separate and detached, free in the fixative, is a discoid fragment of firm yellowish-gray tissue up to 2.7 x 2.3 x 1.0 cm, with somewhat nodular outer surfaces. A section is prepared (F).

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3--The 4 gram specimen is a series of irregular fragments of purplish-gray to tan fragments of slightly firm tissue, ranging from a few millimeters up to the largest, which is 2.5 x 1.8 x 1.2 cm.

MICROSCOPIC DESCRIPTION:

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GROSS DESCRIPTION:

Left Lower Lobe Wedge Resection: Received fresh for frozen section. This is a wedge resection of lung tissue that is 8.0 x 2.5 x 2.5 cm. A wire suture line runs along the length of this specimen. The pleura is generally smooth, but is found to be disrupted in one area. This may represent a focus of adhesions. Prior to sectioning, the intact pleura is stained blue.

On section, the specimen contains a subpleural nodular and fleshy mass that is 2.5 cm in maximum dimension. The parenchyma is congested. There is no evidence of other tumor, and no other abnormality is identified.

FROZEN SECTION DIAGNOSIS: Malignant neoplasm, consistent with metastasis; stapled margin, grossly clear.

MICROSCOPIC DESCRIPTION:

Left Lower Lobe Wedge Resection: Permanent sections confirm the frozen section diagnosis and reveal a spindle cell neoplasm. The lesion is somewhat irregular, but is well-circumscribed and demarcated from the surrounding compressed lung. Overall architecture is nodular and there are often sweeping and interlacing fascicles of spindled cells. There is cytologic atypia with nuclei that are often large, irregular and hyperchromatic with sometimes prominent nucleoli. Mitotic figures are frequent including abnormal forms. The tumor pushes up to and compresses the adjacent visceral pleura, but is not seen distinctly perforating it. Sections taken parallel to the margin reveal a focal nest of tumor in the initial sections; deeper sections into the block (presumably closer to the true margin are negative for tumor, but in these sections there are a few scattered small, non-caseating granulomata.

Immunoperoxidase stains using a melanoma antibody cocktail are negative. Stains with antibodies to actin and smooth muscle myosin heavy chain reveal are strongly positive, consistent with leiomyosarcoma.