

## Imaging Sciences Interesting Cases

### CASE 579

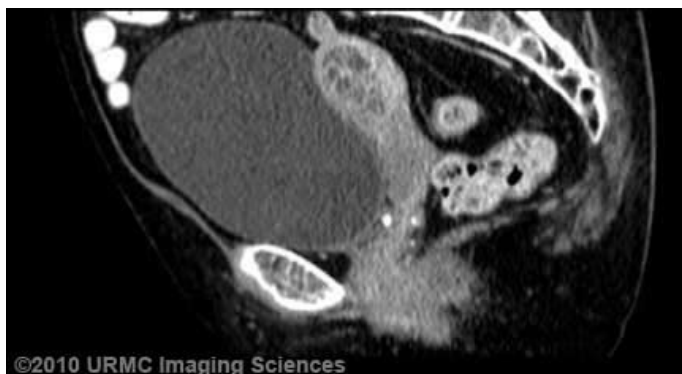
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**CLINICAL PRESENTATION:** Patient is a 77-year-old female with a recently diagnosed uterine tumor seen now for staging evaluation.

**IMAGING FINDINGS:** There is a 4 x 3 cm heterogeneous mass filling the uterus containing hypodense and soft-tissue components with irregular enhancement.



**Figure 1:** Axial image demonstrating the tumor within the uterus posterior to a distended bladder.



**Figure 2:** Sagittal view.



**Figure 3:** Coronal view.

**DIAGNOSIS:** Malignant mixed müllerian tumor of the uterus

**DISCUSSION:** Primary malignant mixed müllerian tumors (MMMTs) can occur anywhere along the lower female genital tract but most commonly arise in the uterine corpus. Uterine MMMTs are classified as carcinosarcomas and account for 2-5% of all uterine neoplasms. MMMTs differ from other uterine sarcomas in that they contain malignant epithelial (carcinomatous) elements in addition to a mesodermal (sarcomatous) component. It is thought that MMMTs may arise from an underlying endometrial carcinoma with

focal clonal evolution and subsequent sarcomatoid transformation. Studies have postulated that, similar to endometrial cancer, advanced age (median 65 yrs), excess estrogen exposure, nulliparity, pelvic radiation, and tamoxifen are risk factors.

Uterine MMMTs most commonly present as a sessile or pedunculated intracavitary lesions with associated expansion and filling of the endometrial canal. Findings in CECT demonstrate a heterogeneous, ill-defined, hypodense mass along with dilation of the endometrial canal. Alternatively, they may be identified as a heterogeneous mass replacing the uterine tissue. The sarcomatous components of uterine MMMT show avid enhancement and myometrial invasion is present in nearly 80% of cases, mainly involving the uterine fundus. Imaging characteristics of uterine MMMT are not unique. The differential diagnosis includes endometrial carcinoma, endometrial stromal sarcoma and, less likely, leiomyosarcoma.

MMMTs are among the most malignant neoplasms known to occur in the uterus. The average five-year survival for all stages is roughly 21% and 70-90% of tumor-related deaths occurred within 18 months of diagnosis. MMMTs are staged using the same FIGO classification as endometrial carcinoma. Tumor spread occurs by direct extension to the cervix and vagina followed by other pelvic organs including the bladder and rectum. Lymphatic spread to local and regional lymph nodes occurs at an early stage of disease. Hematogenous spread is also common typically to the lung, liver or bone. Tumors confined to the uterus (Stage I and II) are treated with TAH-BSO followed with postoperative pelvic irradiation. Extrauterine spread (Stage III and IV) are treated with surgery including tumor debulking, radiation, and chemotherapy. The optimal treatment for this rare and aggressive tumor has not been established.

#### **REFERENCES:**

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2. Ho SP, Ho TH. Malignant mixed Mullerian tumours of the uterus--a ten-year experience. *Singapore Med J.* 2002 Sep;43(9):452-6. PMID: 12568422 [PubMed]