Metastatic Endometrial Serous Carcinoma to the Breast

David S. Lin  
*Henry Ford Health System*

Tayson Lin

Ziying Zhang  
*Henry Ford Health System*

Biren Shah

Follow this and additional works at: [https://scholarlycommons.henryford.com/merf2019caserpt](https://scholarlycommons.henryford.com/merf2019caserpt)

**Recommended Citation**

Lin, David S.; Lin, Tayson; Zhang, Ziying; and Shah, Biren, "Metastatic Endometrial Serous Carcinoma to the Breast" (2019). *Case Reports*. 82.  

This Poster is brought to you for free and open access by the Medical Education Research Forum 2019 at Henry Ford Health System Scholarly Commons. It has been accepted for inclusion in Case Reports by an authorized administrator of Henry Ford Health System Scholarly Commons.
Discussion, cont.

Endometrial carcinoma may spread locally by direct infiltration as well as systematically via lymphatic or hematogenous routes. Endometrial cancer staging utilizes surgicopathologic findings from exploratory laparotomy, abdominal hysterectomy, bilateral salpingo-oophorectomy, peritoneal lavage, and pelvic and para-aortic lymphadenectomy. Preoperative imaging using transvaginal ultrasonography, computed tomography, magnetic resonance imaging, and more recently, positron emission tomography, offer the benefit of identifying distant metastases. Typical metastatic sites include local pelvic recurrence, abdominal lymph nodes, peritoneum, and lungs. Rare metastatic targets include extra-abdominal lymph nodes, liver, adrenal glands, brain, bones, and soft tissues.

The breast is a rare target for extramammary metastases, with the most common primary tumors being melanoma, leukemia, or lymphomas. Endometrial metastases to the breast are even more rare. To our best knowledge, there is only one other documented account of metastatic endometrial serous carcinoma to the breast. Rates of clinically observed extramammary metastases to the breast range from 0.5 to 1.3%, however, this frequency is low compared to autopsy studies that report 6.6% of breast tumors to be non-primary. Discrepancy in the aforementioned findings could indicate that metastases to the breast may occur later during advanced malignant disease or with rare high-grade tumors such as type II endometrial cancer.

Imaging

Mediolateral oblique and craniocaudal mammographic images of the right breast (left) as well as spot compression images (middle) demonstrate a 25 mm mass in the upper inner quadrant posteriorly corresponding with the patient’s palpable lump. Targeted ultrasound (right) demonstrates a hypervascular solid mass corresponding with the mammographic findings.

H&E stain (left) demonstrates poorly differentiated malignant tumor cells that are morphologically and architecturally similar to the tumor cells in the endometrial curettage. Slit-like lumina are again seen that distinguish it from the round lumina of breast ductal carcinoma. Immunohistochemical stains for breast carcinoma markers mammaglobin (right) is negative for ductal carcinoma, further supporting the diagnosis of metastatic endometrial serous carcinoma.

Metastatic Endometrial Serous Carcinoma to the Breast

David S Lin MD, Tayson Lin, Ziyong Zhang MD, Biren Shah MD
Department of Radiology, Henry Ford Hospital, Detroit, Michigan
Wayne State University School of Medicine, Detroit, Michigan

Case Report

A 74-year-old postmenopausal female presents with several months of vaginal bleeding. Endometrial curettage and subsequent histopathology arrived at the diagnosis of endometrial serous carcinoma.

Shortly after, the patient developed a lump in her right breast. Mammogram and targeted ultrasound of the palpable area demonstrated a suspicious mass that was subsequently biopsied under ultrasound guidance. Histopathology revealed metastatic endometrial serous carcinoma.

Discussion

Endometrial carcinoma is a common gynecologic malignancy that typically affects postmenopausal women during their 6th or 7th decade of life. Clinical presentation of endometrial cancer may consist of abnormal vaginal bleeding, pelvic pain, and involuntary weight loss. Subtypes of endometrial cancer include the more common type I, endometroid adenocarcinoma, and the rarer type II, which encompasses clear-cell, carcinosarcoma, and endometrial serous carcinoma. All type II endometrial cancers are high-grade tumors. Definitive diagnosis involves dilatation and curettage or endometrial biopsy.

 diagnosed dilatation and curettage or endometrial biopsy.

Imaging

Sagittal (left) and axial (right) CT images of the abdomen and pelvis demonstrate a markedly enlarged and heterogeneous uterus with a heterogeneously thickened endometrium with areas of enhancement and necrosis.

Mediolateral oblique and craniocaudal mammographic images of the right breast (left) as well as spot compression images (middle) demonstrate a 25 mm mass in the upper inner quadrant posteriorly corresponding with the patient’s palpable lump. Targeted ultrasound (right) demonstrates a hypervascular solid mass corresponding with the mammographic findings.

H&E stain (left) demonstrates poorly differentiated malignant tumor cells that are morphologically and architecturally similar to the tumor cells in the endometrial curettage. Slit-like lumina are again seen that distinguish it from the round lumina of breast ductal carcinoma. Immunohistochemical stains for breast carcinoma markers mammaglobin (right) is negative for ductal carcinoma, further supporting the diagnosis of metastatic endometrial serous carcinoma.

References