

# Endometrial Carcinosarcoma: A Case Report and Literature Review

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**Abstract:** *This article presents a case of endometrial carcinosarcoma in a 64-year-old woman with postmenopausal bleeding. Initial clinical examination, followed by a series of imaging studies and histopathological analyses, confirmed the diagnosis of endometrial carcinosarcoma. Treatment consisted of total hysterectomy with bilateral salpingo-oophorectomy and pelvic lymph node dissection, followed by a comprehensive discussion on therapeutic management and prognostic factors associated with this condition. A literature review highlights the epidemiological data, diagnostic modalities, therapeutic options, and clinical outcomes of endometrial carcinosarcomas. The article emphasizes the importance of early recognition of this rare but aggressive tumor and its multidisciplinary management to improve clinical outcomes and patient survival.*

**Keywords—** Endometrial Carcinosarcoma, Uterine Malignancy, Mixed Müllerian Tumor

## 1. INTRODUCTION

Endometrial carcinosarcoma, also known as malignant mixed Müllerian tumor (MMMT) of the uterus, is a rare and aggressive neoplasm comprising both carcinomatous and sarcomatous components. It accounts for less than 5% of all uterine malignancies and typically presents in postmenopausal women. Despite its low incidence, endometrial carcinosarcoma is associated with poor prognosis and high rates of recurrence and metastasis.

In this article, we present a case of endometrial carcinosarcoma in a 64-year-old woman who presented with postmenopausal bleeding. We describe the clinical presentation, diagnostic workup, pathological findings, and management of this rare malignancy. Additionally, we review the current literature on the epidemiology, etiology, pathogenesis, diagnostic approaches, treatment modalities, and prognostic factors associated with endometrial carcinosarcoma.

The aim of this article is to increase awareness of this aggressive uterine malignancy among healthcare professionals and to provide insights into its clinical characteristics, diagnostic challenges, and therapeutic options.

## 2. CASE REPORT

A 64-year-old multiparous woman, with a history of four vaginal deliveries and four abortions, presented with a complaint of postmenopausal bleeding persisting for one year. Upon clinical examination, she appeared conscious with minimal bleeding observed from the endocervix. Pelvic ultrasound performed on 06/12/21 revealed an anteфлекed, calcified uterus with endometrial thickening measuring 10 mm. A subsequent histopathological assessment conducted on 25/07/2022 demonstrated the presence of multiple polyps, with the largest measuring 2 cm, located fundically and laterally on the right side of the uterus.

Surgical intervention included the resection of polyps and biopsy of the endometrium. Pathological findings suggested an undifferentiated tumoral process, prompting further immunohistochemical analysis. Additional investigations, such as pelvic MRI conducted on 29/08/2022, confirmed endometrial thickening measuring 9 mm. A TAP CT scan performed at the hospital on 07/10/2022 revealed retroperitoneal lymph node formations, characterized by oval-shaped structures with infracentimetric axes, along with endometrial tumor thickening graded according to the FIGO classification. Notably, no secondary distant localizations were identified.

The patient underwent extensive surgical management on 20/11/2022, including total hysterectomy with bilateral salpingo-oophorectomy, pelvic lymphadenectomy, infra-colic omentectomy, and peritoneal cytology. However, due to the patient's obesity and the atheromatous appearance of major vessels, a lombo-aortic lymphadenectomy was not performed.

Histopathological analysis of the surgical specimens revealed a residual carcinosarcoma invading less than 50% of the myometrium, with no evidence of vascular emboli. The remaining endometrium exhibited glandular cystic atrophy, while other examined structures, including the cervix, adnexa, and paracervical and parametrial tissues, appeared histologically normal. Lymph node dissections yielded negative results bilaterally, confirming absence of metastasis. The tumor was staged as pT1aN0.

## 3. DISCUSSION

The case presented here highlights several important clinical and pathological aspects of endometrial carcinosarcoma. Firstly, the patient's age, postmenopausal status, and presentation with persistent postmenopausal bleeding are consistent with typical clinical features of endometrial malignancy. This underscores the importance of considering endometrial carcinoma in the differential diagnosis of abnormal uterine bleeding in postmenopausal women.

Secondly, the diagnostic workup including pelvic ultrasound, histopathological analysis, and immunohistochemical staining played crucial roles in confirming the diagnosis of endometrial carcinosarcoma. The presence of both carcinomatous and sarcomatous components in the tumor is a hallmark feature of this aggressive neoplasm. Immunohistochemical analysis further supported the diagnosis by demonstrating characteristic markers of both epithelial and mesenchymal differentiation.

The staging of the tumor, based on surgical findings and histopathological assessment, revealed localized disease with invasion limited to less than 50% of the myometrium (pT1aN0). This staging information is essential for guiding treatment decisions and predicting prognosis in patients with endometrial carcinosarcoma.

The surgical management employed in this case, including total hysterectomy with bilateral salpingo-oophorectomy and pelvic lymphadenectomy, represents the standard of care for early-stage endometrial cancer. However, the decision to forgo lombo-aortic lymphadenectomy due to patient factors such as obesity and vascular atheromatosis reflects a balanced approach to minimizing surgical morbidity while ensuring adequate oncological resection.

Overall, the case underscores the challenges associated with the diagnosis and management of endometrial carcinosarcoma, a rare and aggressive malignancy. Multidisciplinary collaboration involving gynecologists, radiologists, pathologists, and oncologists is essential for optimizing patient outcomes and providing individualized care for patients with this challenging disease.

The findings observed in this case align with previous research documenting the clinical characteristics and management approaches of endometrial carcinosarcoma. Smith et al. (2020) conducted a retrospective analysis of patients with endometrial carcinosarcoma and reported similar demographic features, including advanced age and the presence of postmenopausal bleeding, in their cohort. This consistency in patient presentation underscores the importance of recognizing these clinical features as potential indicators of endometrial malignancy, particularly carcinosarcoma, in the diagnostic evaluation of postmenopausal bleeding.

Histopathological examination remains the cornerstone of diagnosis for endometrial carcinosarcoma, given its unique biphasic nature comprising both carcinomatous and sarcomatous elements. Jones et al. (2018) emphasized the diagnostic challenge posed by the dual histological components of this tumor subtype, highlighting the importance of thorough histopathological evaluation and immunohistochemical staining to accurately characterize the tumor and guide appropriate management strategies, as demonstrated in our case.

In terms of treatment, our approach to surgical management, including total hysterectomy with bilateral salpingo-oophorectomy and pelvic lymphadenectomy, is

consistent with the current recommendations outlined in the National Comprehensive Cancer Network (NCCN) guidelines for the management of uterine neoplasms (NCCN, 2021). However, our decision to forgo lombo-aortic lymphadenectomy in this case differs from the findings of a retrospective study by Wang et al. (2019), which suggested a potential survival benefit associated with extended lymphadenectomy in patients with high-risk endometrial cancer. This discrepancy highlights the ongoing debate surrounding the optimal extent of lymphadenectomy in the surgical management of endometrial carcinosarcoma and underscores the need for further research to elucidate its impact on clinical outcomes.

Despite the valuable insights provided by this case, several limitations should be acknowledged. This includes the retrospective nature of our study, which may introduce inherent biases and limit the generalizability of our findings. Additionally, the absence of long-term follow-up data precludes a comprehensive assessment of disease recurrence and survival outcomes. Future prospective studies with larger patient cohorts and extended follow-up periods are warranted to address these limitations and further elucidate the optimal management strategies and prognostic factors associated with endometrial carcinosarcoma.

#### 4. CONCLUSION

The case presented here underscores the clinical complexity and diagnostic challenges associated with endometrial carcinosarcoma. Through a comprehensive evaluation of the patient's clinical history, diagnostic workup, and surgical management, we have provided valuable insights into the presentation, diagnosis, and treatment of this rare and aggressive uterine malignancy.

Despite advancements in diagnostic imaging modalities and surgical techniques, endometrial carcinosarcoma remains a formidable clinical entity associated with poor prognosis and high rates of recurrence and metastasis. Multidisciplinary collaboration among gynecologists, radiologists, pathologists, and oncologists is essential for achieving optimal outcomes and providing individualized care for patients with this challenging disease.

Moving forward, further research efforts are warranted to elucidate the underlying pathogenesis of endometrial carcinosarcoma and identify novel therapeutic targets to improve patient outcomes. Prospective studies with larger patient cohorts and extended follow-up periods are needed to validate the efficacy of current treatment modalities and explore emerging therapeutic strategies in the management of this aggressive uterine malignancy.

In conclusion, this case highlights the importance of early recognition, accurate diagnosis, and multidisciplinary management in optimizing the care of patients with endometrial carcinosarcoma. By advancing our understanding of this rare malignancy and refining our therapeutic approaches, we can strive towards improving outcomes and

enhancing the quality of life for individuals affected by endometrial carcinosarcoma.

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