

# Fluorodeoxyglucose Positron Emission Tomography-computed Tomography Evaluation of an Interesting Case of Uterine Carcinosarcoma with Isolated Appendicular Skeletal Metastases

## Abstract

Uterine carcinosarcomas, also known as malignant mixed mullerian tumors, are one of the rare and most aggressive neoplasms of the uterus. They have an aggressive course and can spread to distant organs. Owing to the low incidence of these tumors, the optimal adjuvant management after surgery is not well established. Many patients develop distant metastases during follow-up. An interesting case of uterine carcinosarcoma who developed metastases to the femur, tibia, and calcaneum during follow is presented.

**Keywords:** *Acral metastases, calcaneal metastases, fluorodeoxyglucose positron emission tomography-computed tomography, mixed mullerian tumor, uterine carcinosarcoma*

**Chidambaram  
Natrajan  
Balasubramanian  
Harisankar**

*Department of Nuclear  
Medicine, PET and Therapy,  
Amala Institute of Medical  
Sciences, Thrissur, Kerala, India*

## Introduction

Uterine carcinosarcoma is rare malignant tumors of the uterus. They are biphasic tumors with both carcinomatous component and sarcomatous component. Carcinosarcomas can also arise from the skin, salivary glands, lungs, and esophagus. A rare case of uterine carcinosarcoma with peripheral skeletal metastases is presented in this case report.

## Case Report

A 56-year-old female, a previously treated case of uterine carcinosarcoma, presented to the oncologist with pain in the right lower limb. She had undergone total abdominal hysterectomy and bilateral salpingo-oophorectomy for uterine carcinosarcoma before 2 years. On evaluation, there was tenderness around the right knee joint and right leg. Radiography showed a lytic lesion in the lateral condyle of the right femur and the proximal tibia. Biopsy from tibia was consistent with metastases from uterine carcinosarcoma. The patient was referred for a whole body 18 fluoride (18F)-fluorodeoxyglucose (FDG) positron emission tomography-computed tomography (PET-CT). 18F-FDG PET-CT performed [Figure 1a-maximum intensity projection-head to upper thigh and b-lower limbs] showed intense FDG

uptake (SUVmax 19.7) in multiple lytic lesions with soft-tissue components in the right lower limb as follows: lateral condyle of right femur [Figure 1c - axial CT and d - Fused PET-CT], the right calcaneum [Figure e - axial CT and f - Fused PET-CT], and multiple lesions in the right tibia [Figure 1g - coronal fused PET-CT and h - sagittal fused PET-CT]. No evidence of local recurrence in the pelvis was noted. No obvious site of metastatic disease was present in the other organs. The patient was treated with chemotherapy but did not show a significant response.

## Discussion

Uterine sarcomas, also known as malignant mixed mullerian tumors, are rare uterine neoplasms constituting <5% of all uterine malignancies.<sup>[1]</sup> They are known to occur in patients who have received pelvic irradiation.<sup>[2]</sup> They are also one of the most aggressive neoplasms with dismal prognosis.<sup>[3]</sup> Due to their monoclonal origin, they are now being considered as a metaplastic carcinoma.<sup>[4]</sup> The reported incidence of this condition is roughly eight new cases per million women.<sup>[5]</sup>

Surgery is the main line of treatment which includes hysterectomy with or without pelvic lymphadenectomy. No consensus is available as to the appropriate adjuvant

**Address for correspondence:**  
Dr. Chidambaram Natrajan  
Balasubramanian Harisankar,  
Department of Nuclear  
Medicine, Meenakshi Mission  
Hospital and Research Centre,  
Lake Area, Melur Road,  
Madurai - 625 107, Tamil Nadu,  
India.  
E-mail: hari.cnb@gmail.com

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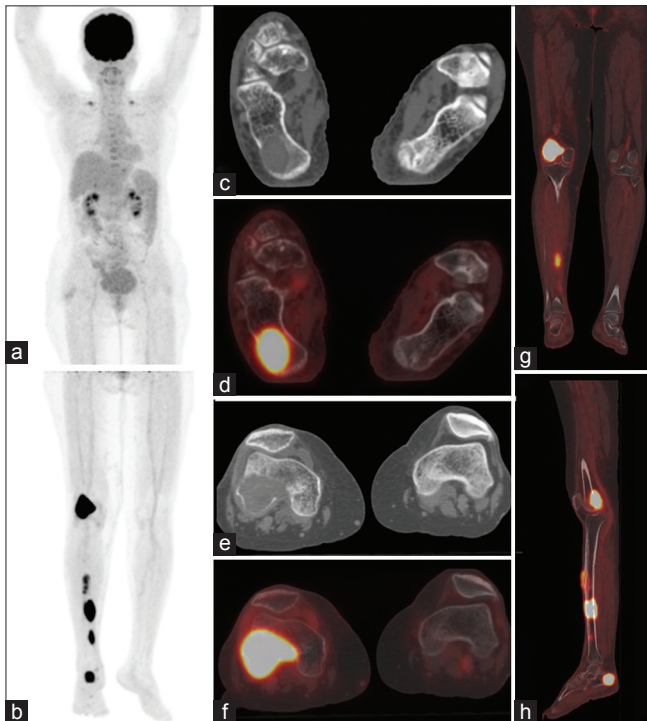
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**Figure 1:** 18 Fluoridefluorodeoxy glucose positron emission tomography-computed tomography performed (a: maximum intensity projection-head to upper thigh; b: lower limbs) showed intense fluorodeoxyglucose uptake (SUVmax 19.7) in multiple lytic lesions with soft tissue components in the right lower limb as follows: lateral condyle of right femur (c: axial computed tomography; d: Fused positron emission tomography-computed tomography), the right calcaneum (e: axial computed tomography; f: Fused positron emission tomography-computed tomography) and multiple lesions in the right tibia (g: coronal fused positron emission tomography-computed tomography and h: sagittal fused positron emission tomography-computed tomography). No evidence of local recurrence was noted. No other site of metastatic disease was present in the other organs

therapy postsurgery. Carcinosarcomas have propensity for transperitoneal spread like high-grade endometrial neoplasm. Metastatic disease to the lungs have also been described.<sup>[6]</sup> A case of carcinosarcoma metastases to the calcaneum has been previously reported.<sup>[7]</sup> Acral skeletal metastases are very rare and the most common cancers producing metastases to the peripheral skeleton are lung, renal, and thyroid cancers.<sup>[8]</sup> Carcinosarcomas should also be considered in the differential diagnosis of patients with acral metastases.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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### Conflicts of interest

There are no conflicts of interest.

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