

## Rapidly growing massive abdominal sarcomatoid carcinoma on F18-FDG PET-CT scan

Tanzil Sajid, Aamna Hassan

Department of Nuclear Medicine, Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan

**Correspondence:** Aamna Hassan. Email: aamnah@skm.org.pk

**ORCID ID:** 0000-0003-0026-0729

### Abstract

Sarcomatoid carcinoma is a rare type of tumour and most commonly arises in the lungs. However, rarely can it also be found in the abdomen. Sarcomatoid tumours are aggressive with large tumoural volume showing cancerous epithelial cells mixed with sarcomatous (nerve, muscle, fat etc.) features on histopathology. Most of the carcinosarcomas arise in the background of pleomorphic adenoma, originating from a myoepithelial precursor. These tumours are resistant to treatment and rapidly metastasize. We present a unique case of hepatocellular sarcomatoid sarcoma, evaluated through F18-FDG PET/CT.

**Keywords:** Sarcomatoid sarcoma, 18F FDG PET-CT, massive abdominal mass.

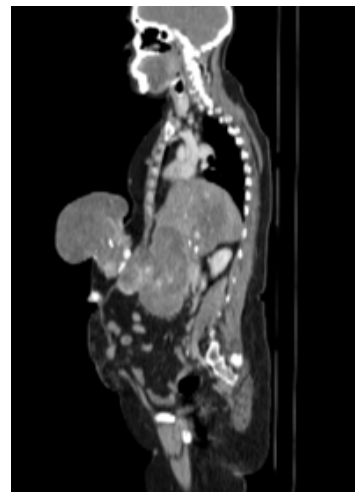
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**A**



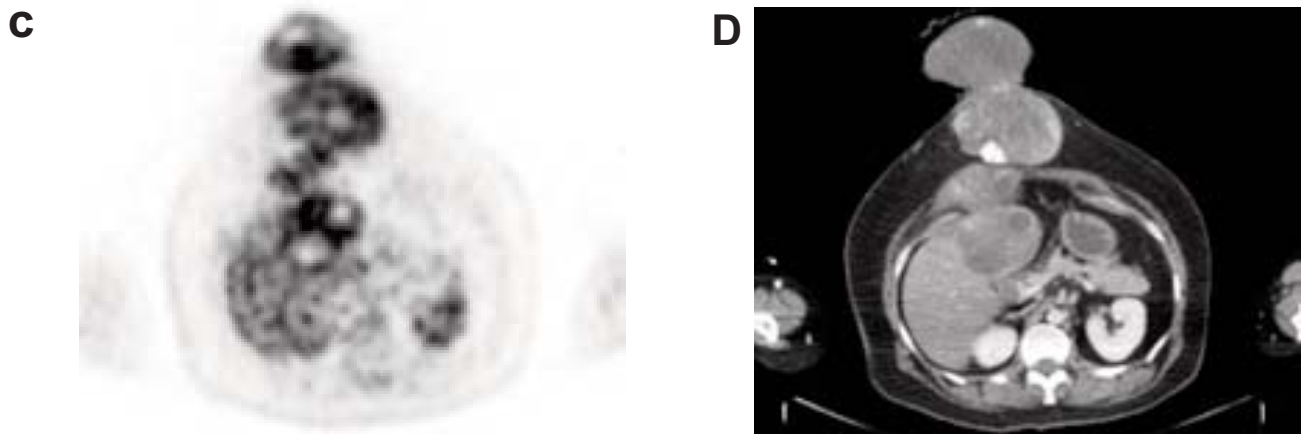
**Figure-A:** Sagittal view of PET shows massive tumour with heterogeneous FDG uptake, arising from hepatic parenchyma.

**B**



**Figure-B :** Correlative CT Sagittal view demonstrates massive intra-abdominal mass with internal solid cystic density and calcific foci extending into the anterior abdominal wall and an exophytic component outside the body contour with overlying skin ulceration.

A 51-year-old, known hypertensive woman presented with epigastric pain associated with gallstones for the last 3 years. She underwent laparoscopic cholecystectomy in April 2023 and histopathology showed malignant neoplasm with sarcomatous differentiation. Post-surgical CT scan was negative for residual disease. The patient did not seek oncology opinion. The patient presented with 03 months after surgery with rapidly developing mass at epigastrium. A positron emission computed tomography (PET/CT) was requested that was performed after IV dose of 391MBq of F18-FDG and scan was performed at 60 minutes after injection. The PET/CT demonstrated the massive intra-abdominal mass with internal solid cystic density and calcific foci extending into the anterior abdominal wall and an exophytic component outside the body contour with overlying skin ulceration (Fig 1 A, B, C and D). The mass showed heterogeneous FDG uptake on PET component.



**Figure- C&D:** Axial views of PET/CT showing the abdominal mass which involving the hepatic segment IV around the cholecystectomy bed with increased FDG uptake in the peripheral enhancing component of the mass.

Carcinomas with sarcomatoid features are extremely rare tumours that account for 1-2% only and characterised by features of epithelial and mesenchymal tumours<sup>1</sup>. The lungs are the most commonly affected organ; however, it can be found anywhere in the abdominopelvic regions. These tumours have extreme malignant potential and grow rapidly over a short period<sup>1</sup>.

18F-FDG PET/CT scan can aid in the diagnosis as well as evaluation of distant metastases in patients with sarcomatoid carcinomas. As these tumours mostly show internal necrosis, FDG uptake can be seen in the enhancing solid peripheral component<sup>2</sup>.

## References

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