

# Retroperitoneal Fibrosis Masquerading as Para-aortic Lymphadenopathy on F-18 FDG PET/CT in a Patient with Carcinoma Cervix

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## Abstract

We present a case of carcinoma cervix found to have a soft tissue lesion in retroperitoneal region with intense FDG uptake. However, this FDG uptake was false positive as the final diagnosis was retroperitoneal fibrosis.

**Keywords:** Carcinoma cervix, retroperitoneal fibrosis, F-18 FDG, PET-CT

## Introduction

F-18 FDG PET/CT is used for staging and evaluation of malignancies. Increased glucose uptake in the malignant tissue helps identify the local extent and spread of the disease to lymph nodes and distant sites with a higher sensitivity compared to conventional modalities. However, increased FDG uptake in several benign and inflammatory conditions can prove a hurdle in accurate interpretation. We report an interesting case of abnormal proliferation of connective tissue in the retroperitoneum resulting in false positive report for lymph node metastasis in the abdomen.

## Case Report

A 54 year old female patient diagnosed to have carcinoma of the cervix staged IIIb three years back presented with right lower limb swelling and flank pain. Computed tomography (CT) revealed an ill

defined hypo-attenuating para-aortic soft tissue mass lesion with indistinct fat planes along the inferior vena cava at places. The patient was subjected to an F-18 FDG PET/CT scan prior to radiotherapy planning to evaluate the loco-regional extent of the disease.

PET study revealed intense FDG uptake (SUVmax 7.9) in soft tissue lesion in the aorto-caval region in the abdomen, extending along bilateral iliac vessels (Figures 1 and 2). However no abnormal FDG uptake was noted in the uterus or the cervical region. CT guided FNAC from the lesion did not reveal any evidence of malignancy. A repeat CT scan after more than a month also did not reveal any change in the size of the lesions.

## Discussion

Retroperitoneal fibrosis (Ormond Disease) is an abnormal proliferation of the connective tissue in the retro-peritoneum. Several drugs, malignancies, radiation, hematomas and aortic dissection are known to be associated with the disease. FDG avidity in retroperitoneal fibrosis has been reported.<sup>[1,2]</sup> FDG PET/CT has also been used to monitor the disease activity in response to immunosuppressant therapies.<sup>[3]</sup> We report the case to emphasize the nature of false positivity in this clinical setting.

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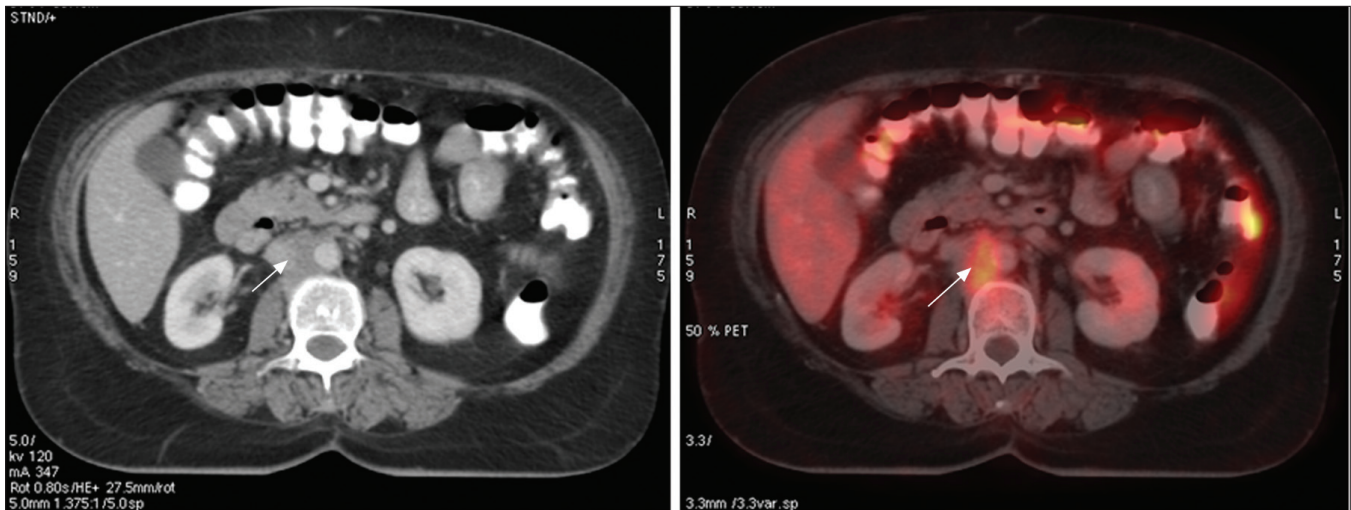


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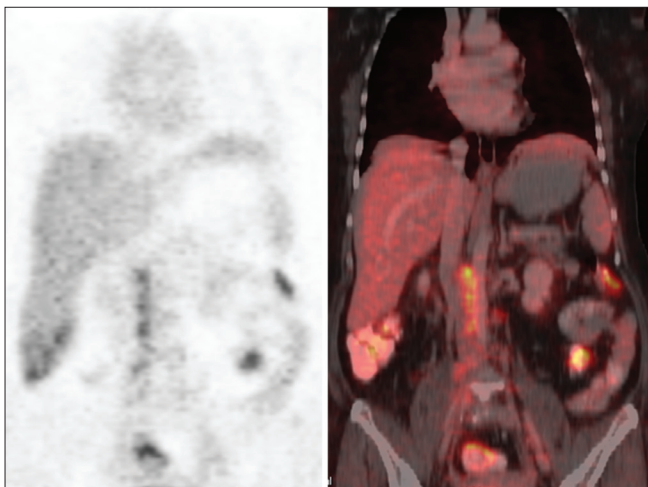
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**Figure 1:** F-18 FDG transaxial images showing soft tissue mass in the aorto-caval region on CT (left) and intense FDG uptake (arrow) on PET/CT fused image (right) in this soft tissue mass in the abdomen



**Figure 2:** F-18 FDG coronal sections from the same study showing soft tissue mass in the aorto-caval region on CT (left) and intense FDG uptake on PET/CT fused image (right) in this soft tissue mass extending along bilateral iliac vessels

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