



## CASE REPORT

### PHOTO QUIZ

#### Multiple Foci of FDG Uptake at the Iliac Bifurcation Level

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In a 70-year-old female with a history of left breast cancer (S/P mastectomy 21 years ago) and gastric lymphoma (S/P partial gastrectomy six years ago), a new apical lesion in the left lung was revealed by recent thorax CT. An FDG PET/CT study was requested in order to evaluate the thoracic mass and extent of the disease. The FDG PET showed three foci of intensely increased FDG uptake in the left lung, mediastinum and right groin (not shown). All these pathologic findings correlated with the CT lesions (not shown). Coronal and transaxial whole body FDG PET

images (Figure 1. D, E, F) demonstrated multiple hypermetabolic foci at the iliac bifurcation level corresponding to the mass lesion on CT images (Figure 1. A, B, C).

**Question:** Based on the patient's history and FDG PET/CT findings, which one of the following is the most likely?

- Enlarged lymph nodes
- Residual tumor
- Normal variant
- Inflammatory bowel disease

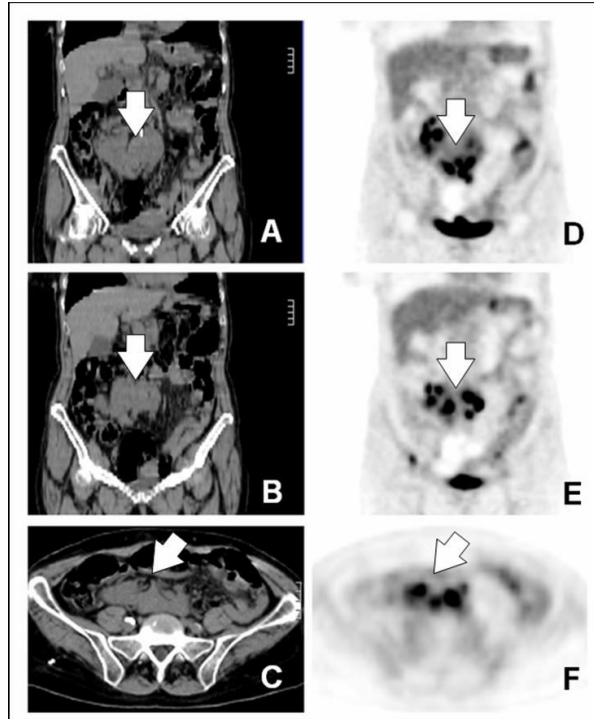


Figure 1:

#### İletişim Bilgileri:

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### Answer To Photo Quiz

The answer is (c). In this case, the FDG PET showed multiple foci of FDG uptake at the iliac bifurcation level, mimicking pathological enlargement of the lymph nodes in which the CT findings correlate with renal fusion abnormality (Figure 1). Note that on coronal PET/CT images (Figure 1. A, D), the left kidney was not visualised in its normal anatomic location.

FDG-PET and CT are both standard imaging tools in cancer management. Alone, each imaging test has particular benefits and limitations but when the results of PET and CT scans are "fused" together, the combined image provides complete information on cancer location and metabolism.

The highly sensitive PET scan detects the metabolic signal of actively growing cancer

cells in the body and the CT scan provides a detailed picture of the internal anatomy that reveals the location, size and shape of abnormal hypermetabolic foci<sup>1,2</sup>

Because FDG is not a tumor specific tracer, PET scanning of the abdomen and pelvis is prone to artifacts and unrecognized non-malignant lesions can appear as pathologic lesions. PET images should be correlated with other imaging modalities (e.g. CT, US, MRI, DMSA scan) when they are available<sup>3</sup>.

FDG accumulation may be a result of various benign pathologies (e.g. infection, drug toxicity, granulocyte colony-stimulating factor therapy, radiation therapy, physiologic activity, postoperative or postbiopsy changes, fracture, degenerative change, injection leakage) which may cause false-positive findings<sup>2,4-6</sup>.

### REFERENCES

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