

18F-FDG PET/CT imaging in diagnosis and staging of gallbladder adenocarcinoma-case report

Beshliev S.1, Spirov G.1, Todorovska-Stefanoska D.1, Taseski S.1, Angjeleska M.1, Ugrinska A.1
University Institute of Positron Emission Tomography, Skopje, Republic of North Macedonia



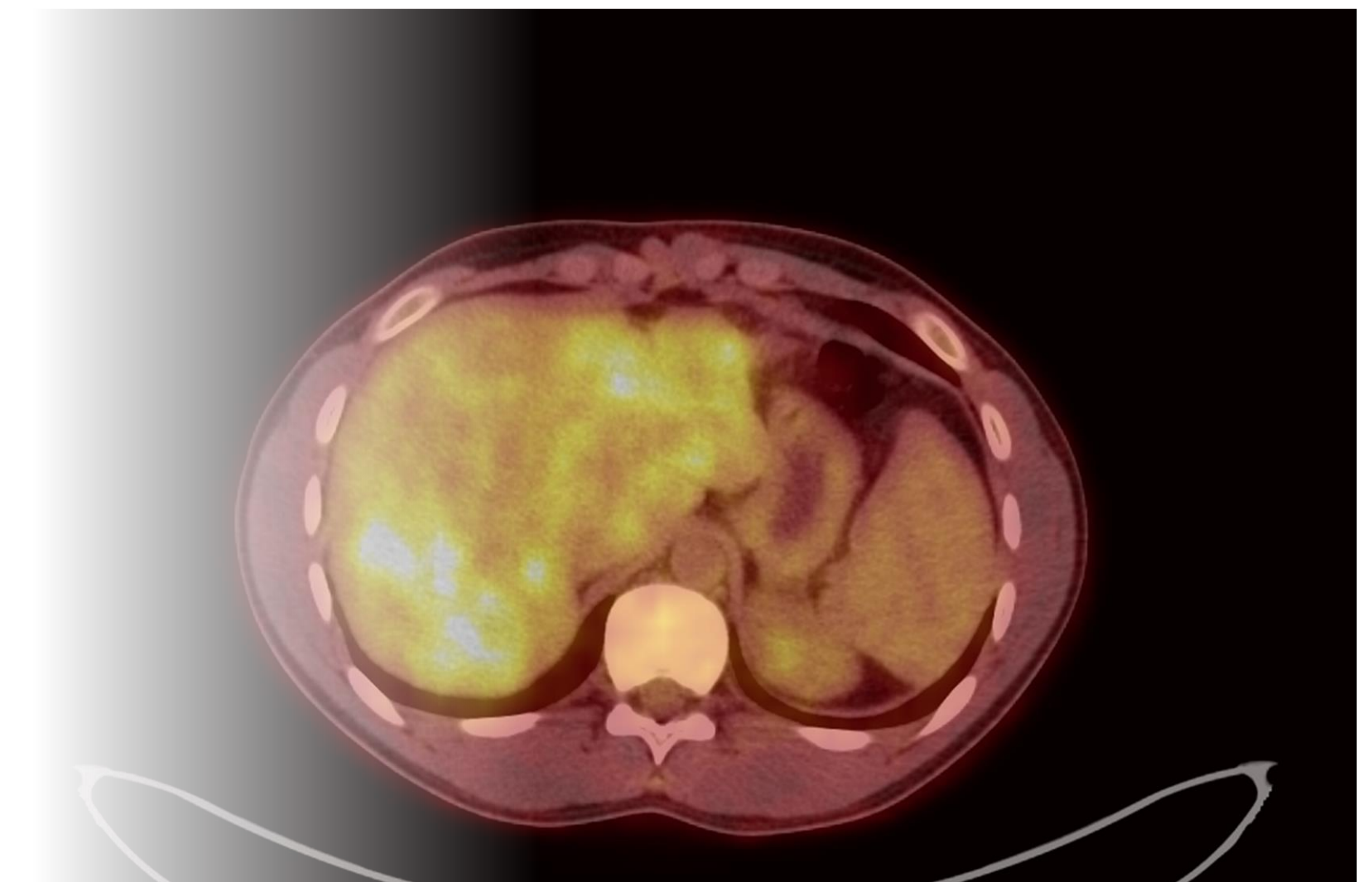
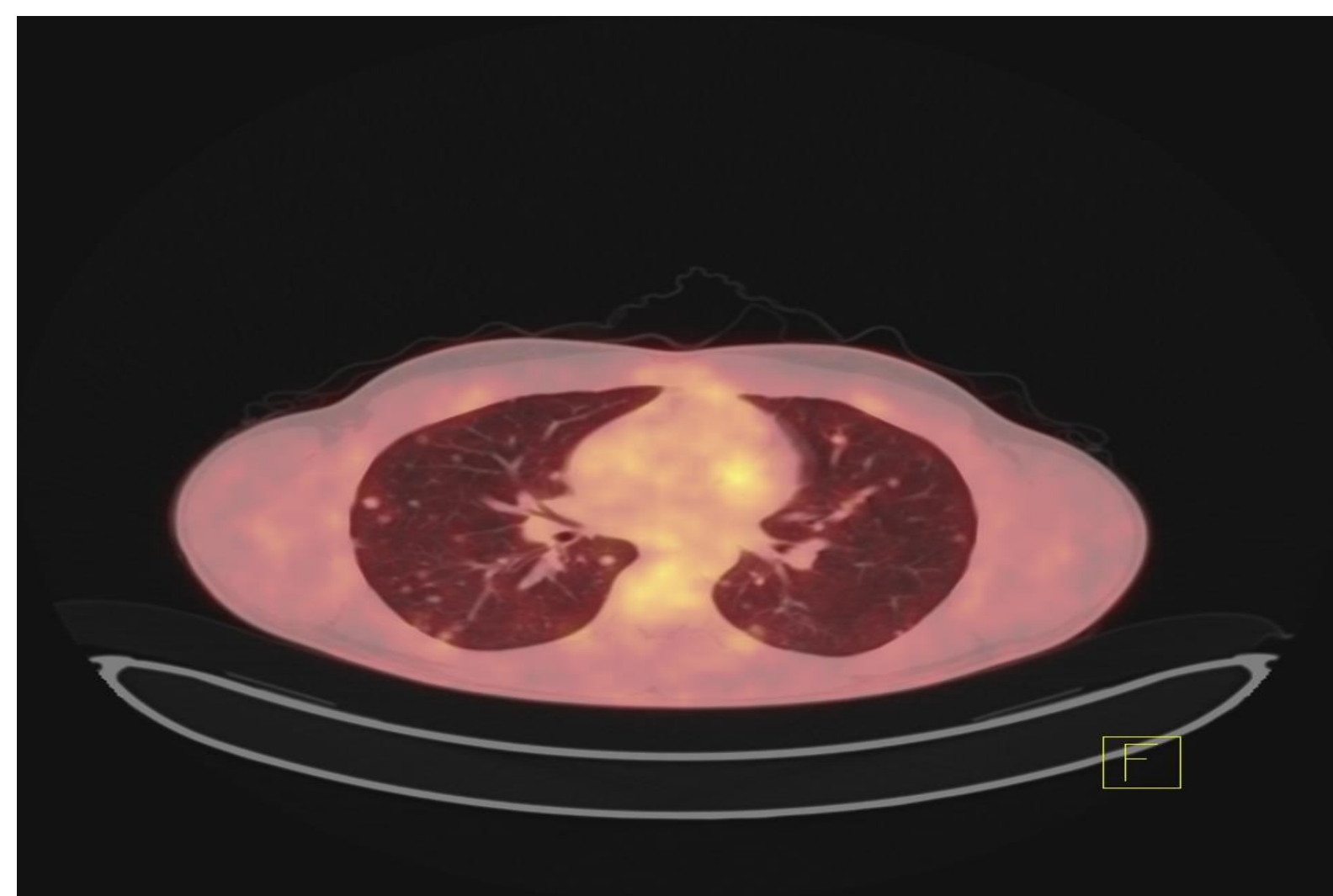
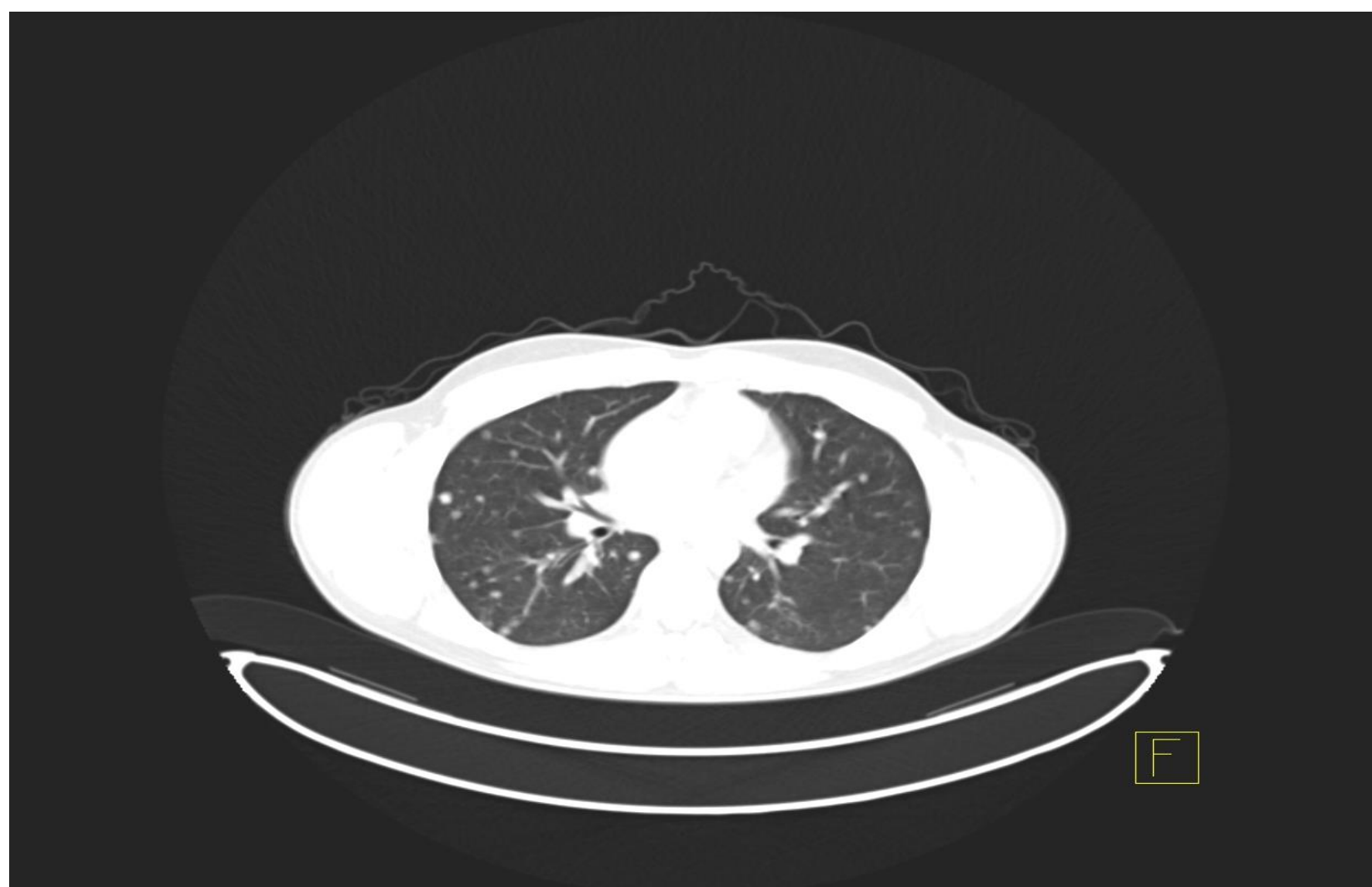
THE AIM

Presentation of a case with suspected gallbladder cancer where 18-FDG PET/CT proved to be useful imaging modality for the diagnosis and staging

CASE REPORT

• 57 years old female was referred to PET/CT scan due to inconclusive findings from ultrasonography(US), computed tomography (CT), an magnetic resonance imaging (MRI) and core biopsy of the liver. Pathohistological examination of the tumor mass in the liver confirmed hepatic metastasis from unknown origin. PET/CT scan was performed from the vertex of the skull to the toe, 3 minutes per bed on a SIMENS Biograph 40 PET/CT one hour after intravenous administration of 347Mbq of 18F-FDG with low dose CT scan without intravenous or gastrointestinal contrast. Pre scan glucose was 5.1 mmol/l. The maximal standardized uptake value (SUVmax) measured 3.9 in the region of the liver.

FINDINGS



PET/CT scan demonstrated increased FDG uptake (SUVmax=11.3) in a hypodense unhomogenous mass that involved the gallbladder and the liver in segment IV/VIII. Two metabolically active foci (SUVmax=4.3) were detected in the liver in the segment III and VI and two enlarged nodules near the pancreatic head (SUVmax=4.3).

CONCLUSION

The PET/CT confirmed the suspected diagnosis of gallbladder cancer and because of the spread in the liver and lymph nodes surgery was not performed. Gallbladder cancer is a rare malignancy that grows rapidly with local invasion into the liver and with distant spread to lymph nodes. Despite the routine use of ultrasonography, computed tomography and magnetic imaging, in this case report, PET/CT scan proved to be very useful due to its capability of whole body imaging and possibility of showing additional lesions and providing optimal pre-treatment staging in patient that allowed appropriate treatment plan to be tailored.