

Multiple (18)F-FDG-PET/CT for Postoperative Monitoring of Breast Cancer Patients

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ABSTRACT

Background

Positron emission tomography (PET)-computed tomography (CT) may be useful in the post-treatment follow-up of breast cancer patients. Purpose: To assess the usefulness of (18)F-fluorodeoxyglucose (FDG) PET-CT (PET-CT) for postoperative monitoring of breast cancer patients. Material and Methods: One hundred twenty-nine PET-CT studies performed on 55 female postoperative breast cancer patients (median age 56 years, range 36-86 years) were analyzed. The median interval between the PET-CT studies was 6 months (range 1-15 months). In order to determine the usefulness of serial PET-CT examinations in the postoperative follow-up of breast cancer patients, the PET-CT findings were compared with the physical findings, findings obtained by other imaging modalities, and the (18)F-FDG-PET (PET) findings.

Results

The PET findings were negative in 4 metastatic bone lesions with a positive bone scan. The PET findings were also negative in 6 of 9 osteogenic bone metastases and one of 64 osteolytic bone lesions. There were 5 cases with false-positive of PET, which were determined to be areas of soft-tissue hyperactivity. All false-positive/-negative findings were corrected by the addition of CT.

Conclusion

The results of this study lend support to the clinical role of PET-CT in the postoperative follow-up/monitoring of breast cancer patients.