

Abstract Title

Role of ^{18}F -FDG PET/CT in the detection of ovarian cancer recurrence in the setting of normal tumor markers.

Authors and Institutions

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ABSTRACT

Objectives: To evaluate the diagnostic performance of ^{18}F -fluorodeoxyglucose positron emission tomography/computed tomography in patients with clinically/radiologically suspected ovarian tumor recurrence & normal tumor markers.

Methods: A total of 54 ^{18}F -FDG PET/CT studies for patients with suspected ovarian tumor recurrence and normal tumor markers were evaluated. Each patient underwent ^{18}F -FDG PET/CT and Ce-CT scans in the same day. Studies were read independently by one experienced nuclear medicine physician and one experienced radiologist. A four-point score (score 0 = definitely benign, score 1 = probably benign, score 2 = probably malignant and score 3 = definitely malignant) used to assess the presence or absence of recurrence (local, regional or distant). The final diagnosis of tumor status was made on the basis of subsequent follow-up by conventional imaging (CT/MRI), ^{18}F -FDG PET/CT or histopathology whenever possible.

Results:

Of the 54 studies evaluated, 25 (46%) studies had tumor recurrence and 29 (55%) studies were free based on final diagnosis.

^{18}F -FDG PET/CT & Ce-CT had sensitivity, specificity and accuracy of 92% vs 72%, 90% vs 55%, and 91% vs 63%; respectively. ^{18}F -FDG PET/CT was significantly more sensitive, more specific and more accurate compared to Ce-CT with *P*-values of 0.06, 0.006 and 0.0009; respectively.

Conclusions: ^{18}F -FDG PET/CT is more accurate than Ce-CT in the diagnosis of ovarian tumor recurrence in patients with normal tumor markers.