

《招待講演》

PET in Clinical Oncology: The Referring Physician's View Point

Peter J. Ell

Professor of Nuclear Medicine, University of London
The Middlesex Hospital,
UK

Positron Emission Tomography (PET) and the use of F-18 labelled glucose (FDG) have gained an important place in the management of patients presenting with diagnosed or suspicious malignancy. Main indications are becoming clear and emphasis is shifting from diagnosis to the monitoring of disease response to treatment. Technology is also changing rapidly with the arrival of PET/CT, 2D whole body imaging, new F-18 labelled ligands and rapid whole body imaging protocols. The road is clear for FDG PET to become incorporated in the routine assessment of patients with cancer. FDG PET is now clinically relevant in main stream oncology in staging and re-staging patients with lymphoma, colorectal cancer, melanoma, head and neck, lung and breast cancer. The solitary pulmonary nodule continues to be a subject of interest for FDG PET studies and other tumours such as oesophageal, ovarian and pancreas cancer have all been investigated with varying success.

The view point of the referring physician remains less well documented. Prospective audit in this area would help to understand how FDG PET is indeed changing the management of patients. With this in mind a prospective assessment of referring physicians was carried out. 1500 questionnaires were issued to referring doctors and the response received from 330 analysed. A return rate of 22% was achieved. In 25% of all studies investigated cancer was upstaged with FDG PET and downstaged in 14%. Patient management was altered as a consequence of FDG PET in 39% of all cases. The FDG PET study was judged by the physicians as being helpful in greater than 75% of all tests investigated.

This data offers further support and evidence on the clinical utility of FDG PET in the investigation and management of the oncological patient. This is further relevant within the European context where reimbursement for FDG PET studies continues to be an active subject of debate between government authorities, insurers and service providers.

In this review we will also demonstrate our initial experience with 300 patients scanned with PET/CT and the GE Discovery LS system. PET/CT is a new imaging modality which is changing

the reporting of both PET and CT studies. PET/CT is becoming a road map for CT. Whilst PET/CT reduces the imaging time for each patient and hence increases throughput, PET/CT is also saving CT reporting time, specially in whole body studies for lymphoma and melanoma.

Finally we will present data on F-18 labelled fluorothymidine, a ligand for the investigation of cell proliferation *in vivo* in man. This points to the application of a series of new F-18 labelled ligands which will further extend the utility of PET imaging in the investigation of malignancy.