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EDITORIAL

The role of PET scanning in the staging of lung cancer

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Positron emission tomography (PET) recently has proved useful in the staging of lung carcinoma, specifically in the determination of the presence of nodal disease and distant metastases. In several studies up to 18% of patients considered to be resectable have more advanced disease demonstrated by PET imaging.

Regarding nodal staging, the sensitivity of PET has been reported in the range of 76–100% and specificity in the range of 82–100%. Nearly all studies have demonstrated the superiority of FDG PET over CT scanning in the evaluation of nodal disease. A recent study by Peterman et al of 102 patients with nonsmall cell lung cancer demonstrated a sensitivity for PET in the detection of nodal disease of 91% with a specificity of 86%. Despite the superiority of PET over CT scanning, the resolution of PET makes determination of the extent of tumor and involvement of individual lymph node groups difficult although this should improve with the advent of combined CT PET scanners.

In addition, PET seems to improve the noninvasive detection of extrathoracic disease. Whole body PET can stage intrathoracic and extrathoracic disease in a single examination and has an overall greater accuracy than conventional imaging. Whole body PET can detect unsuspected extrathoracic metastases in up to 10% of patients when CT scanning fails to detect them, and also alters management in up to 40% of cases.

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