



**Nuclear Medicine**

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Services

## Mesothelioma



This 84 year old man with history of asbestosis presented with right sided pleuritic chest pain and shortness of breath. A chest CT was obtained which showed a moderate to large layering right-sided pleural effusion. Thoracocentesis performed twice yielded bloody fluid with cytology showing atypical cells, inconclusive for malignancy. All cultures were negative.

A PET scan was obtained which showed diffusely increased tracer uptake along the pleura of the right lung (arrow heads), and two more focal areas of increased FDG uptake in the right pericardial fat and in the pleura anterior to the liver (arrows). The overall pattern of findings was suggestive of a malignant process involving the right pleura, possibly mesothelioma.

A video-assisted thoracoscopy was performed. Biopsies of the parietal pleura were consistent with the diagnosis of pleural **mesothelioma**, epithelial type.

**How did the PET help?** The PET increased the suspicion of mesothelioma in this patient with inconclusive cytology. It also showed disease limited to the chest without evidence of distant metastases.

In a recent study involving 14 patients with CT scan evidence of pleural thickening or fluid, the accuracy of PET in diagnosing between benign versus malignant disease was 92% (1).

(1) Eur J Cardiothorac Surg 2000;17(4):377-383