

Summary

Reevaluation of ^{201}Tl -SPECT for Patients with Solitary Pulmonary Nodule —Comparison Study with Biopsy Method and Tumor Marker Measurement—

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We compared the differential diagnostic capabilities of ^{201}Tl -SPECT and biopsy methods and serum tumor marker in 125 patients with solitary pulmonary lesions composed of 87 lung cancer and 38 benign lesions. The sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV) and accuracy of ^{201}Tl -SPECT were 76%, 95%, 97%, 63%, and 82%, respectively. These parameters are similar in biopsy methods. Although sensitivity improved to be 85% by the combination with tumor marker methods, both specificity and accuracy deteriorated to be 55%

and 76%. Using combination method with ^{201}Tl -SPECT and biopsy, sensitivity, NPV and accuracy improved to be 84%, 70% and 85%. Based on its high PPV value, ^{201}Tl -SPECT could be useful when biopsy method could not prove lung cancer or in case whose biopsy is considered to be invasive. Because of the lower NPV value owing to false negative cases in some adenocarcinoma, negative ^{201}Tl -SPECT case should be followed up carefully.

Key words: ^{201}Tl -SPECT, Lung cancer, Comparison study, Biopsy.