A Preliminary Study of $^{169}$Yb Scintigraphy of Lung Cancer and Other Diseases

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$^{169}$Yb scintigrams in 22 patients with lung cancer (16 cases) and other diseases were reviewed.

One to 3 days after an intravenous administration of 2~500 $\mu$Ci $^{169}$Yb-citrate, scintigrams were obtained by either dual probe scanner or scinticamera. Positive results were obtained in 8 lesions (72.7%) out of II lung cancer patients before radiotherapy, and minimum diameter of these tumors was over 35 mm.

In a patient 10 months after irradiation with 6,000 rads, tumor recurrence was suspected in his fibrotic left upper field. $^{169}$Yb scan was positive, and the second course of radiotherapy was effective.

In another patient, $^{169}$Yb scan was positive. Left lower lobe was extirpated, the tumor revealed to be an epidermoid carcinoma. Macroautoradiogram of the sliced specimen showed marked but inhomogeneous densities over the tumor and faint densities around bronchial walls. Accumulations of radionuclide to the tumor and bronchial wall compared to that of lung parenchyma ranged 11.1~7.2 and 2.0 respectively.

In each case of pulmonary cyst, pulmonary infarction and radiation fibrosis, $^{169}$Yb scan was negative. Because of the marked accumulation of this nucleide to bones, one must be careful to evaluate the scintigrams in false positive cases.

Tumor Scanning with Co-57 Bleomycin and Yb-169 Citrate in Head and Neck Malignancy

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Recently, many investigators have tried to find the tumor specific agent for diagnosis of malignant tumors. Also for head and neck malignancy, radioisotopic elements such as I-131 fibrinogen, Ga-67 citrate and Tc-99m compound have been introduced.

Maeda et al reported that Co-57 Bleomycin (BLM) can be used a radioisotopic scanning agent for diagnosis of a variety of human cancers, since, clinical application in Otolaryngology are investigated in our hospital.

Co-57 BLM was administered to 16 patients