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<sup>125</sup>I-ANTI-CEA ANTIBODY UPTAKE IN RESECTED TISSUES FROM PATIENTS WITH GASTRIC AND COLORECTAL CANCERS. Y.Ono, K.Asakura, E.Ohotake, K.Mstui, A.Obashi and K.Nishiyama. Yokohama City University. Yokohama.

Thirty to 150 $\mu$ Ci of I-125 labeled anti-CEA antibody was injected intravenously to 26 cancer patients (9 of gastric and 17 of colorectal) 24-48hrs before surgical procedure. Soon after resection small pieces of several tissues (tumor, normal mucosa, liver, muscle, fat tissue and skin) were cut off and one gram of venous blood was collected. Each tissues were measured by well type scintillation counter and the ratio of each tissues were calculated. The ratio of cancer tissue to blood ranged between 0.87 and 6.51 (average 1.91 $\pm$ 1.32). The ratio of cancer tissue to liver, normal mucosa, skin and fat tissue were 2.9 $\pm$ 1.5, 3.3 $\pm$ 1.5, 5.7 $\pm$ 3.3 and 12.5 $\pm$ 8.5 in average respectively. These data should encourage further study of RN imaging with CEA antibody.

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CLINICAL EVALUATION OF Tl-201 CHLORIDE SCINTIGRAPHY FOR BREAST CANCER. O.Senga, N.Hanamura, N.Terai, Y.Koike, F.Iida, K.Yano, H.Hirano and M.Takizawa. Shinshu University Matsumoto.

Twenty-three patients with breast tumors were scintigraphed with Tl-201 chloride. Each one was given a histological diagnosis after surgery or excisional biopsy. In 15 cases of primary breast cancer, 9 cases (60%) showed a positive figure by Tl-201 chloride scintigraphy. In 3 cases of recurrent breast cancer (local recurrence), all showed a positive figure. In examining each histological type of breast cancer, all cases of papillary tubular carcinoma were positive. In 8 patients with medullary tubular carcinoma, 5 cases (62.5%) revealed a positive figure. In 4 cases of scirrhous carcinoma, only one case (25%) were positive. Some cases showed an accumulation in the metastatic lymph nodes of the axilla. On the other hand, all cases of benign breast tumors showed a negative figure by Tl-201 chloride scintigraphy. From the above mentioned results, it was concluded that Tl-201 chloride has specific affinity for malignant breast tumors and it is also very useful tumor-seeking agent to detect the early recurrent breast cancer.

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CLINICAL EVALUATION OF TUMOR SCINTIGRAPHY WITH GA-67 CITRATE AND Tl-201 CHLORIDE IN MEDIASTINAL TUMORS. H.Yoshimura, M.Taguchi, K.Shimabukuro, K.Shirono, H.Sakata, M.Nakajo and S.Shinohara. Department of Radiology, Kagoshima University School of Medicine. Kagoshima.

Ga-67 citrate scintigraphy was evaluated in 75 cases of histologically proven mediastinal tumors; 20 of malignant tumor, 26 of benign tumor and 29 of thymoma. Of these 24 cases were examined by both of Ga-67 and Tl-201. The visualized intensity of the tumor was scaled into 3 degrees (-, +, ++ ) on Ga-67 and/or Tl-201 images. The Tl-201 degree in the tumor was compared with the findings of angiography and CT. The obtained results were as follows;

1) Ga-67 was positive for 85% of malignant tumors (17/20) and for 4% of benign tumors (1/26). Therefore the accuracy in differentiation of malignancy from benignancy was 91% (42/46) by the presence or absence of Ga-67 deposit in the tumor.

2) Thymoma was visualized by Ga-67 imaging in 1 of 8 cases (stage I), 3 of 5 (stage II) and 16 of 16 (stage III). The positive rate of thymoma correlated to the A-P diameter of the tumor.

3) The positive rate of Tl-201 was higher than that of Ga-67 in 14 cases of malignant tumor and thymoma (100% vs. 64%).

4) Visualization of tumors by Tl-201 imaging correlated to vascularity and stain on angiogram and enhancement on CT suggesting a blood flow effect.

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CARDIAC INVOLVEMENT FROM NON-HODGKIN'S LYMPHOMA (USEFULNESS OF 67-GALLIUM SCINTIGRAPHY). M.Koizumi, M.Kawamura, M.Kimura, Y.Watanabe, M.Ishino, S.Nakata, A.Iio and K.Hamamoto. Dept. of Radiology Ehime Univ. school of medicine. Ehime.

Four patients with cardiac involvement from non-Hodgkin's lymphoma were presented. Although the involvement of the heart from malignant lymphoma is relatively common, it is difficult to detect antemortem, and only a small number of studies discuss this subject in the literature. Four patients with non-Hodgkin's lymphoma associated with cardiac insufficiency showed Ga-67 uptake in the heart areas. The distribution and the degree of Ga-67 cardiac accumulation were various in each patient. In two patients, the localizations of Ga-67 in the heart were in good agreement with involved areas found by autopsies. Three patients of them well responded to the emergent irradiation and chemotherapy, and their cardiac symptoms was subsided.

Antemortem diagnosis of cardiac involvement from malignant lymphoma is important, because it may be cured by therapy. Ga-67 scintigraphy was found to be useful for detecting cardiac involvement of malignant lymphoma.