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GALLIUM-67 SCINTIGRAPHY IN EVALUATION OF PROGNOSIS OF BRONCHOGENIC CARCINOMA TREATED WITH RADIATION. Z.Ayabe, Y.Ichiya, M.Katsuragi, Y.Kuwabara, K.Jingu and K.Matsuura. Kyushu University. Fukuoka.

Clinical significance of Gallium-67 scintigraphy was evaluated as a prognostic factor in 80 patients with bronchogenic carcinomas treated with radiation. Gallium-67 scintigraphy was performed before and after radiotherapy, and correlations between these scintigraphic findings and the changes in tumor size or observed survival rates of the patients were investigated. Statistic significances were evaluated using logrank and chi-square tests. Measurement of tumor sizes was possible in 63 cases, in which there was no statistically significant correlation between degrees of Ga-67 uptake before radiotherapy and effects of radiation. Abnormal uptake of Ga-67 was seen in 55 cases of 63 before radiotherapy, and there was no significant correlation between interval changes of Ga-67 uptake and effects of radiation in these 55 cases. Correlations between survival rate and degrees of Ga-67 uptake before and after radiotherapy were evaluated in 61 cases whose clinical stages were I-III, but they were not statistically significant. Interval changes of Ga-67 uptakes by irradiation were not significantly correlated with observed survival rates.

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CLINICAL INVESTIGATION OF TUMOR SCINTIGRAPHY IN PRIMARY LUNG CANCER. H.Sakata, H.Yoshimura, K.Shimabukuro, K.Shirano, M.Nakajo and S.Shinohara. Kagoshima University. Kagoshima.

Ga-67 citrate was used as a tumor imaging agent for evaluation of the primary and metastatic lesions in a total of 160 cases of primary lung cancer. Tl-201 chloride tumor imaging was also performed in 50 of these cases and compared to Ga-67 imaging. The results were as follows: The positive rate of Ga-67 in primary lesion was 86% (137/160) and 36% in 28 patients with tumors less than 3cm in diameter and appeared to be dependent on the tumor size rather than the tumor histology. In detection of metastases to the mediastinum, Ga-67 imaging was superior to the conventional chest X-ray examination (82% vs. 69% in superior mediastinum and 72% vs. 48% in middle and inferior mediastinum). Ga-67 imaging delineated cervical lymphnode metastases in 90% of the sites (26/29) including those difficult to be palpated in 3 cases. Tl-201 imaging showed the same positive rate in primary lesion that Ga-67 imaging did in 43 patients with tumors in the lung fields except the left lower lung (81%). Heart intensity appeared to obscure the Tl-201 deposit in 4 of the other 7 patients with tumors adjacent to the heart in whom Ga-67 visualized all tumors. Ga-67 imaging was superior to Tl-201 imaging in detection of metastases to hilar and mediastinal lymphnodes (82% vs. 43%).