Furthermore, we found four of five aberrant thyroid glands in three patients on CT, because thyroidal tissue has high density on CT (Our mean density is 105.4±35.1 Hounsfield units) For diagnosing the aberrant thyroid gland, CT is as useful as RI scintigraphy.

In 44 cases (92%) of 48 thyroid carcinomas, T1-201 accumulated at the cold nodules of the I-123 thyroid scan in both early and delayed scan. Among them, anaplastic and papillary carcinomas showed more markedly high activities than follicular carcinomas in the delayed scan. On the other hand, 30 cases (94%) of 32 benign thyroid tumors showed no T1-201 accumulation in the delayed scan. Thus the delayed scan is quite useful in differentiating malignant thyroid tumors from benign ones.

The purpose of this study is to evaluate benign and/or malignant thyroid tumors with T1-201 thyroid scan. We studied 80 cases of the thyroid tumors seen as cold nodules on the I-123 thyroid scan. T1-201 thyroid scan was performed 10 min. (early scan) and 2 to 4 hours (delayed scan) after intravenous injection of 2 mCi of T1-201.

The consistency of T1-201 is quite satisfactory and superior to that of I-131 (0.33).

In group B of 14 patients in which a portion of normal thyroid tissue was left all of 5 patients with malignant lesions were positively visualized by T1-201. This result indicates that T1-201 can concentrate into malignant lesion even in the presence of normal thyroid tissue.

With regard to T1-201 concentration in malignant lesions at different locations, T1-201 was positive in all of 6 focal lesions in group A and all of 4 focal lesions in group B. These good results show that T1-201 scintigraphy might be useful in the evaluation of focal lesions.