

## A Quantitative Diagnosis of the Thyroid Scintigrams

D. ISHIKAWA

*Department of Radiology, Faculty of Medicine, University of Tokyo, Tokyo*

H. YASUKOCHI

*Branch Hospital, Faculty of Medicine, University of Tokyo, Tokyo*

Regarding the thyroid scintigram, we have reported on the defects of scintigram at the general meeting of the Radiological society in this year.

According to the results, some quantitative expressions from the scintigrams are tried on the defect of the scintigram, which are inflammation and benign or malignant tumors. For this purpose the defects of the scintigram are divided into some groups and expressed by the numbers according to its lesion.

For the method of the expression, the defects are divided into five categories as follows: first the scintigram is normal but include a nodule or irregularity clinically, second the position of the defects exist at the lateral or the under part of the lobes, third the size of the defect is over one half of one lobe, fourth the deposit remains at the center or the lateral of the thyroid gland, fifth the

margin of the defect is contract or irregular.

The probability is nominated by the order of frequency. The frequency of inflammation is twice because the inflammation are about a half of the groups. When the frequency of the cases are under ten, the nomination is a root of probability, and when they are between eleven and twenty, it is probability itself, and when over thirty, it is a square of probability.

According such a technique, these diseases are calculated by a revelational frequency. The result of this calculation are compared with the disease.

It is relatively easy to diagnose a malignancy and an inflammation by this method but a benign disease is difficult to diagnose. But if the information increases more and more, the diagnosis of these disease becomes more accurately.

## VIII. Liver

### <sup>198</sup>Au Scintigram of the Normal Liver

H. YOKOYAMA and S. FURUMOTO

*Toyoma Central Hospital*

K. HISADA

*Department of Radiology, School of Medicine, Kanazawa University, Kanazawa*

**Methods and Material:** Aloka JSS-103 Scintiscanner, Cristal 3×2 inches (NaI), Collimator 19 holes Focus 10 cm honeycone were employed.

Scanning was performed 30 minutes after intravenous injection of <sup>198</sup>Au (colloidal gold) with 3.0  $\mu$ Ci per kg of body weight.

Subjects scanned were 23 males and 17

females aged 20-70 year old who were operated with the diagnosis of gastritis, gastric ulcer, gastric polyp or duodenal ulcer.

All these subjects were assured that no pathological changes on the liver were observed macroscopically and microscopically, and the liverfunction tests (Meulen Gracht' method, alkaline-phosphatase, total serum-