78 cases using $\gamma$-camera with high resolution collimetor.

The diagnistic accuracy of this procedure were 100% in uterine corpus cancer and myoma if growthing over 5 cm in diameter, the images of myoma as benign tumor were revealed the most accumulated activities with even distribution especially in the adenomyosis and with uneven distribution in the uterine corpus cancer. But impossible discrepancy image between normal uterine and back ground in normal cases is observed.

On the other hand, we considered that the possibility of differential diagnosis on the images in various uterine tumor is noted by combinating clinical datas.

In addition, these facts might be indicated the affinity of $^{201}Tl^{+}$ to one of the specific tissue as uterus as similar myocard.

## 86-Rubidium Uptake by Red Blood Cells of Patients with Uterus Carcinoma and Female Controls

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Rubidium-86 red blood cell uptake was lower in patients with breast tumor than in femal controls. The present study is part of an attempt to identify the red blood cell defect in cancer patients. We performed in vitro rubidium-86 uptake studies on female healthy controls between 35 and 51 years of age, and on patients with uterus cancer who were between 28 and 77 years old patient being follow-uped after radiotherapy, whose ages ranged from 44 to 68. Rubidium-86 was used as a substitute for radioactive potassium.

When incubated in vitro with rubidium-86 and their own plasma had lowest passive uptake values in follow-uped patients and lower in cancers than the red blood cells of female controls. There is no significant different active transport between three groups. Red blood cell membrane may have different sites for potassium and sodium and glycoside binding, or an other unknown factor.

Their plasma potassium, hematcrit value and copuscular voume were statistically no difference between the three groups, and cholesterol was higher in both of patients groups than female controls, however there is no correlation between the rubidium-86 red cell uptake and plasma cholesterol.

We interpret our and F.K. Bauer's data as a a membrane effect secondary to a plasma factor which inhibited rubidium-86 influx leading to reduced passive transfer of rubidium.

## Tumor Imaging by RI Angiogram

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We discussed the RI angiograms using $^{99m}$Tc-M.A.A. and $^{99m}$Tc-R.B.C. or $^{99m}Tc\text{-}O_4^-$ for the examination of malignant tumors. By infusion of $^{99m}$Tc-M.A.A. to the tumor-nurishing artery, we can obtain abnormal scintigram that shows increased density in tumor site, and by intra-venous administration of $^{99m}$Tc-R.B.C. or $^{99m}Tc\text{-}O_4^-$, we can get scitigram that shows abnormal circulation caused by malignant tumor. In fifty-five of 60 patients with malignant tumors, $^{99m}$Tc-M.A.A.-scan showed abnormal deposits, and in 37 of 41 patients, $^{99m}$Tc-R.B.C. or $^{99m}Tc\text{-}O_4^-$ scan showed abnormal circulation. Moreover, it is easy to differentiate the malignant tumor and aortic aneurysm without invasive process. We conclude that RI angiogram is useful imaging method to know the localization and the extension of malignant tumors, especially in theracic and pelvic regions.