

activity to that of blood rose significantly on day-3 and thereafter. Staphylococcal and streptococcal abscesses deposited ^{111}In , but much less than the tumor.

On paper electrophoresis of serum collected at 24 hr post- ^{111}In , radioactivity was seen localized in beta-globulin region. Gel filtration with Sephadex G-200 revealed similar results.

Subcellular distribution of $^{111}\text{InCl}_3$ was studied in VX-2 tumor and host liver. Its distribution was identical except that more radioactivity was seen in VX-2 soluble fraction than

that of liver.

Administration of ^{111}In in citrate form could not significantly improve tumor deposition of the radioisotope from chloride form.

^{111}In yields a rather high ratio of tumor to blood and to muscle, and was confirmed to be one of the best tumor-scanning agents in the experimental VX-2 carcinoma in the rabbit. Infective lesions deposit much less radioactivity than in the case of ^{67}Ga ; however, further studies are needed before definitive conclusions are drawn.

Study for Diagnosis of Malignant Tumor by the Measurement of Tumor Blood Flow Using ^{133}Xe Clearance

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The tumor blood flow should be different in relation to malignancy, if there were a difference on the amount of the blood vessels between malignant and benign tumor.

Using the subcutaneous tumor (26 cases) and breast tumor (21 cases), we worked out to estimate the tumor blood flow by ^{133}Xe clearance curve, obtained by ^{133}Xe injection into

the tumor directly.

From these studies, it was found that there were no difference on the blood flow between them, and the measurement of the tumor blood flow did not aid for diagnosis of the malignancy. However, it was supposed that there were correlation between the amount of capillary and tumor blood flow.

Autoradiographic Analysis on Cell Proliferation of Carcinogenic Tumors in the Mice Fore-Stomach

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The papilloma and the squamous cell carcinoma are induced at the fore stomach in the d-d mice by giving orally the water containing DMBA (7,12-dimethyl benzanthracene).

We studied on the kinetic analysis of cell proliferation in the papilloma and the squamous cell carcinoma by using the ^3H -thymidine autoradiography (cumulative labelling method). In the papilloma, the cell prolifer-

ation at the head increased comparing at the neck.

Two types are found in the squamous cell carcinoma: one is keratoid, the other non-keratoid. The cell proliferation of the keratoid is slightly earlier than non-keratoid one.

It is much interested that the cell proliferation of the papilloma at the head is similar to one of the squamous cell carcinoma.