

also partly performed.

A total of 84 clinic patients with cervical cancer and 15 patients with no urologic disorders are reported.

Intravenous pyelograms or scintigraphy by the intravenous injection of a tracer dose of 100 to 150 microcuries of  $^{203}\text{Hg}$  chlormerodrin with over each kidney were available for comparison.

The following results were obtained;

(1) Abnormal renograms showed an increase in patients with Stage III and IV cancers.

(2) Use of the combination of radium and cobalt therapy showed renographic abnormalities in the urinary tract. An increase of

types  $M_1$ ,  $M_2$ , and L was observed after radium therapy. Type  $M_1$  after cobalt therapy showed a slight increase.

(3) Radioisotope renography provides information which is not obtainable by intravenous pyelography.

(4) The renographic results showed variable changes after irradiation and operative treatment.

(5) Renograms after radical operation revealed an increase of types  $M_1$ ,  $M_2$  and L. Normal renograms were much observed in the 1st postoperative month.

(6) The use of the renogram as a routine screening procedure in following the gynecologic cancer patient provides a dynamic picture of renal function.

## Radioisotope Placentography

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Radioisotope placentography with  $^{131}\text{I}$ -HSA,  $^{51}\text{Cr}$ -Red Blood Cell, and  $^{99\text{m}}\text{Tc}$ -Albumin was reviewed. Authors adopted  $^{113\text{m}}\text{In}$  preparation as a superior agent for placental localization.

$^{113\text{m}}\text{In}$  preparation was obtained by  $^{113}\text{Sn}$ - $^{113\text{m}}\text{In}$  generator elution and stabilized with gelatin at pH 4. The short 1.7-hr. physical half life and lack of beta emission keep the radiation dose to the fetus relatively low. This agent does not accumulate in the bladder in the early period of test, while there is no confusing uptake in the pelvis. Scintillation camera (pho/Gramma III) was used to take multiple views of placenta in a short period of time. It takes 2 to 4 minutes for a single shot, and only about 10 to 15 minutes are necessary for the whole procedure. A small lead disc was stuck on the pubic bone as a landmark. This landmark roughly tells the position of the outer orifice of the pregnant uterus.

$^{113\text{m}}\text{In}$  preparation of 1 to  $3\ \mu\text{Ci}$  was intra-

venously administered to the patients who complained the bleeding in the third trimester. Six cases were so far examined by  $^{113\text{m}}\text{In}$  with the use of the scintillation camera, and all cases were correctly diagnosed. Placenta previa was eliminated in 3 cases and normal deliveries were resulted at the term of gestation. Placenta previa was positively diagnosed in 2 cases. In a case of 8 months of gestation with heavy bleeding the fetal head was perforated. The another one of 8 months of gestation was operated on by the Ceaserian section at the term. Placenta previa was confirmed in these cases.

A hydatidiform mole of 5 months from the last period was diagnosed by the placentography. No placental visualization was observed in scintigram.

The radioisotope placentography is useful for the differential diagnosis of the bleeding in the third trimester, and is also useful for the diagnosis of the hydatidiform mole even in the second trimester.