

### **Study of the Liver Scintigraphy Compared with the X-Ray Examination with Pneumoperitoneum**

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Making clear the liver scintigram, It is necessary to confirm the liver margin in plain film in order to decide either it is true defect depend on tumor or false defect depend on variation of the liver, gas in GI tract and other organs. But we can not often confirm the liver margin only on plain films. 1,200–1,500 ml of air was injected into the peritoneum at the middle point of left Monroe-Richter

line.

The results were as follows: X-ray examination by pneumoperitoneum was useful to confirm the variation of the form of the liver, and defect of the margin, particularly defects of the left lobe. This examination was useful to investigate the relation of the liver and adjacent organs.

1,200–1,500 ml air was sufficient in this technique.

### **Liver Scintigraphy with $^{99m}\text{Tc}$ Label Preparations**

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Comparative evaluation of the commonly used radioisotopic gold label and  $^{99m}\text{Tc}$  label preparations (in three chemical forms: Sn, phytic acid and phytate) in scanning of the liver has been made. Assessed as to capacity of delineating defective areas with a scanner by using an experimental model consisting of five beads of various sizes placed in an liver phantom, the  $^{99m}\text{Tc}$  label preparations have proven to give more gratifying results. These three  $^{99m}\text{Tc}$  radio-pharmaceuticals were then compared by paper chromatography

as to degree of liberation of  $^{99m}\text{Tc}$  following labelation. There was no significant difference among them in this respect up to 2 hours. Over the ensuing hours, however, liberated  $^{99m}\text{TcO}_4^-$  was demonstrable with the phytic acid and phytate preparations whereas the Sn form exhibited essentially no liberation of  $^{99m}\text{TcO}_4^-$ . The data obtained seem to indicate that the Sn form prepared by autolabeling is preferable to the rest of the  $^{99m}\text{Tc}$  radiopharmaceuticals studied.