Calculation was as follows;
A: counts per min. in supine position.
B: counts per min. in prone position.
Then, liver count rate
\[
= \frac{1}{2} \left\{ \frac{(A + B)}{2 + \sqrt{AB}} \right\} \text{(Arimizu)}
\]
Second, liver uptake measurements were begun 10 min. after intravenous administration of 100 
\(\mu\text{Ci/kg Tc-99m Sn colloide} \) corresponding to the
body weight of the rabbit. At the same time, the
region of interest was applied to the liver zone
to exclude extrahepatic factors. Using the above
mentioned equation to estimate liver mass, a
highly significant correlation (\(r=0.95, p<0.05\))
could be obtained between count rate and liver
weight.
The advantages of this method are independent
of liver configuration and is a simple procedure
in normal subjects. However, in cases of de-
creased Tc-99m Sn colloid uptake of the liver,
the value would be markedly changed and some
correction factors to calculation would be re-
quired to estimate the accurate liver weight.

Preliminary results of the experimental studies
indicate that the procedure may have useful
diagnostic application with regard to the patho-
physiological abnormality of liver.

The Diagnostic Value of the Right Lateral Hepatic Scintiphotogram
in Diffuse Liver Diseases

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To determine the diagnostic criteria of hepatic
scintiphotogram in diffuse liver diseases, a retro-
spective study using the right lateral view has
been attempted in 92 cases which had been histo-
logically confirmed.

Material and Method: A total of 112 patients
both with diffuse liver diseases and without them,
had the following diagnoses: acute hepatitis in
10; chronic inactive hepatitis in 20; chronic ac-
tive hepatitis in 25; cirrhosis in 37; and no liver
disease in 20. The radioisotope used in all cases
was Au-198 colloid in a dose of 300 \(\mu\text{Ci} \) (I.V.). A
gamma camera with diversing collimator (To-
shiba, Japan) was applied to frontal, prone and
right lateral scintiphotography with a present
count 35K.

Results: The findings of the lateral scinti-
photogram in various liver diseases were divided
into 7 types.
1) Wedged shape indentation of the lower margin
was noted along the frontal surface.
2) Similar to 1st type without roundness in the
posteroinferior margin.
3) Enlarged liver protruding inferiorly.
4) Oval shaped liver with narrow indentation of
the lower margin.
5) Liver showed expansion in the posteroinferior
margin and the hepatic hilus with a deep in-
dentation was noted along the anterosuperior
part.
6) Atrophic type of the liver without roundness
in the lower margin.
7) Atrophic type of the liver with scintigraphic
appearance of the bone marrow.
75% of the 1st type of the liver was seen in no
liver disease, 90% of the 3rd type in acute hepa-
titis, 85% of the 4th type in chronic hepatitis, and also 83% of the 5th type in cirrhosis.

**Conclusion:** In patients with diffuse liver diseases, the diagnostic accuracy can be greatly increased by the combined use of the right lateral view with the standard anterior view.

**Axial Hepato- and Reno-Scintigraphy**

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Studies of axial scintigraphy were made for the purpose of three dimensional observation of the liver and kidney.

$^{99m}$Tc$\text{S}_7$, or $^{99m}$Tc Sn colloid was used for liver scintigraphy, and $^{203}$Hg chloromerodrin was used for renal scintigraphy.

The patient was bent his neck forward at standing or sitting position, and axial hepa-to-scintigraphy was performed vertically by fixing the scinticamera over his neck. For axial reno-scintigraphy, the patient was bent forward his upper half of the body to horizontal level and applied scinticamera head upon his hip.

Furthermore, axial reno- and cysto-scintigraphy was performed by taking the patient sitting position upon the scinticamera head.

Axial hepato-scintigraphy was clearly demonstrated transverse projection of the right lobe of the liver. This procedure was valuable for diagnosis of lesion in the inner portion of the right hepatic lobe. Transverse projection of the spleen was also demonstrated. When the stomach was distended by air, the spleen was displaced to the left and back. This procedure made clear to distinguish the left lobe of the liver from the spleen.

By axial reno-scintigraphy, transverse projection of the kidney was nearly round circle in scintigram. At horizontal position, scintigram of the bladder was demonstrated as separate shadow from the renal scintigram, but overlapped when it was taken at sitting position.

Thus, axial scintigraphy can be taken without use of any special equipment, and valuable for diagnosis of lesion in the liver and kidney by three dimensional observation of scintigram.