tricular cavity are depicted by summing up the counts which are limited to end-diastolic or end-systolic phase (30–50 milliseconds). This is done through an "electronic timer" which was earlier made by us for the purpose of repeated short X-ray exposures at a preset phase of cardiac cycle.

The scintiphotos of the left ventricular cavity thus obtained are of fairly satisfactory density and sharpness.

Heart Pool Scanning in the Diagnosis of the Pericardial Effusion

Y. Yamagishi, S. Watanabe, N. Komata, M. Hasegawa, H. Watanabe,
J. Yukutake, S. Shiba and M. Karasawa
Department of Radiology (Director, T. Saitoh)
K. Yahata, Y. Haria and F. Takano
Department of Internal Medicine (Director, E. Kimura)
Nippon Medical School, Tokyo

In the diagnosis of the pericardial effusion, overlapping of the chest X-ray film and the heart scintigram as correct as possible is very important.

For this purpose, we tried four quadrant exposure technic as follows.

Method:
1.5–2.5 mCi of $^{99m}$Tc-albumine or 300 μCi–500 μCi of RIHSA was used 15 minutes before the scanning.

After scanning, a patient was laid down of one’s back and a quadrant of the chest was exposed shielding the other three quadrants by lead plate. In this series, central beam of the X-ray was set at a point of the margin of the heart and the other quadrants were exposed by turns.

Then the following numerical values were measured.

1. Distance of the transverse length of the heart between the X-ray film and the scintigram in the right.
2. The same in the left.
3. Distance from the heart and the liver in the scintigrams.
4. The ratio of the transverse length of the heart on the scintigram to the X-ray film.

21 cases of pericardial effusion including 3 suspected patients and 27 negative cases as control were measured.

**Result**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pericardial</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effusion</td>
<td>12–44</td>
<td>18–62</td>
<td>10–40</td>
<td>0.83–0.54</td>
</tr>
<tr>
<td>Control</td>
<td>3–15</td>
<td>5–30</td>
<td>0–5</td>
<td>0.93–0.82</td>
</tr>
</tbody>
</table>

in mm