

### **Bone Scintigraphy on 210 Breast Cancer Patients**

I. YAMAMOTO, M. FUKUNAGA, S. DOKO, E. YABUMOTO, Y. ONOYAMA, K. TORIZUKA

*Department of Radiology, Kyoto Univ. Hospital, Kyoto*

T. FUJITA, R. MORITA

*Central Division of Radioisotopes, Kyoto Univ.*

K. HAMAMOTO

*Department of Radiology, Ehime Univ. Hospital, Ehime*

210 patients of breast cancer were examined by the bone scintigraphy with  $^{99m}\text{Tc}$ -labeled phosphate compounds and some problems on reading the scintigram and the results were discussed.

On reading the bone scintigram of breast cancer patients, one problem is unequality of the uptake by the chest wall, the shoulder and the sternoclavicular joint. This was observed on 40 per cents, 35 per cents and 24 per cents cases of post-radical operation, respectively. Another problem is a sole uptake by the chest wall which was proved to be due to rib fracture by irradiation. This was observed 8 per cents irradiated cases.

#### **Results**

49 of 210 cases (22 per cents) had positive scintigrams. 151 or 210 cases were negative. In 10 of 210 cases (6 per cents), scintigraphic diagnosis was equivocal.

On 45 to 50 y.o., 33 per cents were positive, but

on over 61 y.o., only 10 per cents were positive.

The most frequent location of metastasis was the lumbar spine. The next was the thoracic spine. The distant bone metastasis was very rare.

Histologically, in scirrhous type, metastasis was the most frequent (38 per cents). In papillary type, it was the rarest (14 per cents). In medullary type, 29 per cents were positive.

On staging, the more proceed the stage, the more frequency of metastasis was observed. Pre-operative scintigraphy revealed that, on 6 of 35 cases, the staging was in error as missed skeletal metastasis.

#### **Conclusion**

The bone scintigraphy revealed that skeletal metastasis rate was 22 per cents on 210 breast cancer patients.

Pre-operative bone scintigraphy is recommended on staging of breast cancer patients.