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BONE METASTASIS IN BREAST CANCER WITH REFERENCE TO f-FACTOR. T. Togawa, Y. Higuchi, A. Suzuki, K. Kato and K. Kobayashi. Dept. Nucl. Med., Fukushima Medical College, Fukushima.

The occurrence of bone metastasis in breast cancer is affected by various prognostic factors. In this study, we histologically analyzed the presence or absence of tumor infiltrations into extramammary fatty tissues (f-factor), and compared the f-factor with stage, WHO's histological classification, the classification by Japan Mammary Cancer Society, and n-factor. The frequency of bone metastasis was 10.6% in f(-) group, whereas it was 37.1% in f(+) group, significantly higher than in f(-) group ($p < 0.005$). There was no difference in frequency of bone metastasis between f(-) and f(+) groups with stage I, however, the bone metastasis is significantly frequent in f(+) than in f(-) group among the patients with stage II and III ($p < 0.05$). Also, among 85 patients with invasive ductal carcinomas by WHO's classification, only one (4.5%) of 22 in f(-) group was detected to have bone metastasis, whereas 25 (39.7%) of 63 in f(+) group were detected to have much more metastases than f(-) group ($p < 0.005$). The f-factor is one of the important prognostic factors in breast cancer, and was also considered to be closely correlated with bone metastasis.

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BREAST UPTAKE IN BONE SCINTIGRAMS OF BREAST CANCER PATIENTS. S.Kato, S.Sugiyama, A.Okazaki, K.Miyaishi and H.Niibe. Department of radiology, Gunma university school of medicine, Maebashi. J.Ito. Maebashi red cross hospital, Maebashi. M.Yamakawa. Matudo public hospital, Matudo.

The uptake of Tc-99m MDP in breast cancer had already been reported by many researchers. In this report, the relationships between breast cancer uptake in the bone scintigram and some factors which included T and N factor of TNM classification, histological type, estrogen receptor and microscopic calcification were analyzed. The subjects were 38 patients with breast cancer who had bone scintigrams with Tc-99m MDP before treatment for breast cancer had been started. Ten of 38 patients (26%) showed breast uptake in the bone scintigram. All of ten patients who showed breast uptake were classified as T3 or T4. There were no significant relationships between breast uptake and the other factors except for T factor. This should prove that breast cancer uptake of Tc-99m MDP in the bone scintigram is most affected by tumor size.

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BONE SCANNING IN CARCINOMA OF THE PROSTATE. F.Yoshigoe, T.Machida, M.Miki, Y.Ohishi, M.Ueda, A.Kido and M.Yanagisawa. Department of Urology, The Jikei University school of Medicine, Tokyo.

A comparative study was made of results obtained with 29 cases in which the general bone scanning with a scintillation counter was performed repeatedly for two years or more and the serum PAP levels were determined among the cases of cancer of the prostate in and after July, 1976.

As to 21 cases in Stage IV, the proportion of the aggravated, improved and unchanged cases on the general bone scintigrams was 11/21 (52%), 6/21 (29%) and 4/21 (19%) respectively.

In six (55%) out of 11 cases in Stage IV which showed aggravation, the serum PAP level clearly showed a tendency to rise. In cases in Stages I, II, III which developed bone metastasis, however, abnormal levels of serum PAP were observed in only one out of three cases (33%).

While the serum PAP level indicates the conditions of prostatic cancer well, the rise in the serum PAP level is not necessarily parallel with the progress of bone metastasis.

Therefore, the general bone scanning with a scintillation counter should be performed at least once every half a year for patients with cancer of the prostate.