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## SERIAL BONE SCANS IN THE ASSESSMENT OF RESPONSE TO PREOPERATIVE CHEMOTHERAPY IN OSTEOSARCOMA AND EWING'S SARCOMA.

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Tc-99m MDP bone scans in 14 cases of osteosarcoma and 5 cases of Ewing's sarcoma were reviewed in comparison with plain XP, xerography, CTscan and Angiography.

The results are as follows

- 1) Most patients with a good histological response showed a decrease in intensity and range of accumulation.
- 2) In the evaluation of the tumors with extra-osseous lesion, xerography was more useful than bone scan.
- 3) In the evaluation of the tumors with minimum extraosseous lesion, bone scan was useful than xerography.
- 4) If the tumor showed "progressive disease" during chemotherapy, bone scan was very useful.

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## THE USEFULNESS OF BONE AND BONE MARROW SCINTIGRAPHY IN THE DETECTION OF BONE LESION IN PATIENTS WITH MULTIPLE MYELOMA.

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We used a combination scintigraphy of bone and bone marrow to study the bone lesions in 14 patients with multiple myeloma (6 in untreated group and 8 in chemotherapy group).

In untreated group, on bone scintigram no abnormalities were shown in 3 cases, and cold lesions were recognized in 3 cases. The other hand, bone marrow scintigraphies were capable of delineating the extent of tumor invasion in all untreated cases.

In all chemotherapy cases, multiple hot spots were observed on bone scintigram, and no abnormalities were recognized on bone marrow scintigram.

In conclusion, the combination scintigraphy of bone and bone marrow was a useful method in evaluating bone lesions in patients with multiple myeloma.

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## SINGLE PHOTON EMISSION COMPUTED TOMOGRAPHY USING TECHNETIUM-99m MDP IN THE EVALUATION OF SKULL BASE INVASION OF NASOPHARYNGEAL CARCINOMA.

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Seventeen patients with nasopharyngeal carcinoma underwent bone SPECT using Tc-99m MDP for the evaluation of their skull base invasion. In thirteen of them, SPECT revealed positive results indicating bony involvement. All the patients who were diagnosed clinically as T-4 showed positive scans. Eight out of 12 patients who were clinically diagnosed to be free from skull base invasion also showed positive scans.

All the patients were treated with radiation therapy and their clinical courses were observed over a year. The prognosis of the positive patients were more reflective in bone SPECT than those of X-CT and other diagnostic methods. Bone SPECT was considered to be useful diagnostic tool for early detection of skull base invasion of nasopharyngeal carcinoma.

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## CLINICAL FEATURES OF FIBRO-OSSEOUS LESIONS OF JAWS WITH SPECIAL EMPHASIS ON DIAGNOSTIC VALUE OF BONE SCINTIGRAPHY.

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Fibro-osseous lesions (FOL) of the jaws are characterized by the formation of fibrous connective tissue in the spongiosa of bone, including several conditions that are considered separate clinical entities. These are fibrous dysplasia (FD), ossifying fibroma (OF), cemento-ossifying fibroma (COF) and such. The lesions are not uncommon, and sometimes silent in clinical behavior. In this report, the clinical features of 25 cases with FOL were analyzed with emphasis on usefulness of bone scintigraphy. There were 9 males and 16 females aged 6-59 (mean 27.6). Histologically, 15 cases were classified as FD, 5 were OF and one was COF. Other 4 cases could not be classified and remained as FOL. In all cases, bone scintigraphy revealed smoothly outlined and marked accumulation of the radioactivity in the lesions. Accordingly, bone scintigraphy is essential for "Ort-diagnose", especially when the lesions are sub-clinical. From the scintigraphic study, 4 cases of polyostotic fibrous dysplasia were easily diagnosed. Bone scintigraphy was also helpful to detect the multiple involvement in the maxillo-mandibular bones, because the lesions were frequently failed to be detected on X-ray film. In our series, 6 cases among 25 have multiple lesions in the jaw bones.