2504
ANALYSIS OF BONE SCAN IN BREAST CANCER-
SIGNIFICANCE OF FOLLOW-UP STUDY. T.
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It is well known that metastatic involve-
ment of the bone is common in the breast
cancer. Therefore the bone scan has been
frequently used as a screening procedure of
this involvement for the breast cancer
patients. In this study we have reviewed
two hundred and six bone scans obtained of
148 cases for these two years. Seventy
thirteen scans of 68 cases showed no abnormal-
ity to suggest bony involvement, thus leaving
133 scans of 80 cases had positive or
equivocal findings. In these 80 cases, 20
cases were diagnosed as bone metastasis.
Seven cases of these 20 cases initial diag-
nosis of bone involvement is done by the
bone scan. 1) young age 2) a few years
after initial treatment 3) advanced stage 4)
extra osseous recurrence should be thought as a high risk group of osseous
metastasis. Patients whose bone scans are
positive with normal radiographs should be
also thought as a high risk group and ob-
tained periodic bone scan, because in these
patients bone scan may detect occult osseous
involvement.

2505
CLINICAL SIGNIFICANCE OF BONE SCAN IN RADIA-
TION TREATMENT OF UTERINE CERVICAL CANCER. J.
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Clinical significance of bone scan in the
radiotherapy of uterine cervical cancer has
been discussed. Bone scan was ordered
for the patients of uterine cervical cancer,
who were new patients with squamous cell
 carcinoma and diagnosed as 3rd or 4th stage.
Also bone scan was ordered for the patients
who complained pain, that was suspected due
to bone metastasis, during follow up study.
The patients, who were diagnosed as bone me-
tastasis by bone scan but diagnosed no evi-
dence of metastasis by another methods, were
followed and ordered repeated bone scan
within 3 or 4 months. Eighty four scans
were ordered for 66 patients. Thirty eight
cases(58%) were diagnosed as bone metastasis
by bone scan but only 7 cases(11%) had evi-
dences of metastatic bone lesion by other
methods. False positive were seen on lower
lumbar bones and sacro-iliac joints especi-
ally. In 13 cases, who were ordered more
than 2 scan, only 2 cases(15%) showed pro-
gressive changes and other 11 cases showed
improved or unchanged bone scan. Twenty
patients of 66 cases showed renal abnormali-
ties in the bone scan, and followed by other
methods of examination. Bone scan is one of
the useful methods of examination for meta-
static bone lesion, but has many false posi-
tives in this study. It would be need to
pay an attention for false positive of bone
scan in patients of uterine cervical cancer.

2506
A COMPARATIVE STUDY ON THE UTILITY OF 99mTc-
MDP AND 67Ga-CITRATE IN BONE TUMOR.
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We investigated the distribution of 67Ga-
citrate concentration on an experimental
tumor and compared the result with the dis-
tribution of 99mTc-MDP concentration. We
further conducted a comparative study of the
two agents in a number of clinical cases.
In experimental bone tumor (X; carcinoma)
99mTc-MDP concentrated only at new bone for-
mation sites reactive to the tumor, while
67Ga-citrate did at tumor sites as well.
This fact implies that 67Ga-citrate is more
useful for bone tumor investigations. In the
osteosarcoma case the 67Ga-scintigram showed
almost the same degree of accumulation as the
99mTc-MDP scintigram. The concentration
area was, however, smaller in 99mTc-MDP. Fur-
thermore, 67Ga-citrate concentrated far less in the
bone giant cell tumor and malignant fibrous
histiocytoma than did 99mTc-MDP, indicating that
67Ga-citrate was not adequate. The
primary purpose of scintigram is to discover the
metastasis of malignant tumor at such a
stage that the simple X-ray image cannot
identify it. 99mTc-MDP is supposed to serve
this purpose better than 67Ga-citrate insomuch as
99mTc-MDP sensitive concentration at the
reactive change site even though the focus is
small, while 67Ga-citrate is inferior in
such sensitivity.

2507
RADIONUCLIDE SCINTIGRAPHIC FINDINGS OF
STRESS-FRACTURE. A. Furuta, Y.
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Bone radiographs and RI-scintigrams of
sports players suspected stress fractures
were compared. Interval between onset of
pain and examination ranged one week to two
years. (Most frequently about one month.)
Associated activities include of running
7 cases, tennis, volleyball, basketball,
etc., 10 cases and rugger 3 cases. Site of
injury included tibia 14 cases, fibula 4
cases and calcaneus 3 cases. All rugger
players had calcaneus fracture. Radio-
graphic finding were negative or equivocal
in 9 cases. Bone scintigraphy was positive
in all cases. Bone scintigraphy is useful
in diagnosis of stress fracture especially
in early phase.