

## Clinical Evaluation of $^{67}\text{Ga}$ Scintigram for Head and Neck Malignant Neoplasms

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Gallium citrate  $^{67}\text{Ga}$  scintigraphy was evaluated in 136 patients with suspected new or known previous history of malignant neoplasm involving the head and neck region.

In 60 of 73 patients (82%) with malignant neoplasm and 15 of 21 patients (71%) with recurrent malignant neoplasm, abnormal positive uptake was observed in the biopsy-proven malignant lesion. In the patient with maxillar, tongue, laryngeal cancer or malignant lymphoma, the correlation between  $^{67}\text{Ga}$  scintigram and pathological finding was significant. However, in the patient

with thyroid or recurrent laryngeal cancer, that was not significant.

In 22 of 26 patients (85%) who were previously treated and without recurrence,  $^{67}\text{Ga}$  scintigram did not show any special positive uptake.

In 13 of 19 patients (68%) who were treated successfully,  $^{67}\text{Ga}$  scintigram changed from true positive to true negative uptake. However, in 4 patients who were treated unsuccessfully,  $^{67}\text{Ga}$  scintigram showed positive uptake after the treatment.

## Gallium-67 Citrate Scanning in Patient with Head and Neck Malignant Lymphoma

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Fifty Ga-67 citrate scans were performed in 40 patients with head and neck malignant lymphoma before, during and after radiotherapy for 2 year period. Primary lesion accumulated gallium in 5 out of 8 patients who underwent scan during 0 to 1000 rads irradiation. Four out of 9 patients revealed abnormal uptake of gallium in the primary lesion during 1001 to 2000 rads irradiation. No primary lesion accumulated gallium during

2000 rads over irradiation.

We observed the uptake of gallium in pulmonary hilum, thoracic spine, and lumber spine in 38%, 42% and 38%, respectively.

Two interesting gallium accumulation were presented. one of which proved to be gallium accumulation in the muscle infiltrated by lymphoma at the time of autopsy.