

Clinical Evaluation of Ga-67 Citrate Scintiscanning

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Ga-67 scintigraphic study was performed in 636 cases pathohistologically confirmed, containing 502 malignant tumor cases which were investigated about ratio of positive findings on scintigrams on a viewpoint of scanned area and pathohistological findings.

The ratio of positive scans in lesions of extremities was highest. Because radioactivity of background in these lesions is lower and more homogenous than other part of body. Thorax, Head & Neck, and Abdomen follow after Extremity (Fig.-1).

On a point of pathohistological findings, the ratio of positive scan in cases of malignant lymphoma is higher than squamous cell carcinoma and adenocarcinoma in every regions of body (Fig.-2).

Fig. 1 Positive Findings of Malignant Tumor (Scanned area)

| | | |
|-------------|-------|-----------|
| Extremity | 79.5% | (35 44) |
| Thorax | 61.7% | (26 204) |
| Head & Neck | 59.7% | (83 139) |
| Abdomen | 33.5% | (52 155) |

Consequently, Ga-67 scintigraphic study is very effective for detection of lesions of malignant lymphoma and other metastatic lesions especially in bone and soft tissue. In some cases of benign lesions, active inflammatory lesions, granulomatous lesions and benign tumorous conditions, abnormal deposits of Ga-67 were visualized on scintigrams (Fig.-3).

Fig. 3 Positive Findings in Benign Lesions

| | case | positive | % |
|-------------------|------|----------|------|
| Hed & Neck | | | |
| Parotitis | 3 | 2 | |
| Lymph. ad. tbc. | 4 | 1 | |
| Wegener's gl. | 1 | 1 | |
| Thorax | | | |
| Pulmonary tbc | 10 | 6 | 60% |
| Sarcoidosis | 10 | 9 | 90% |
| Pneumonia | 9 | 5 | 55% |
| Extremity | | | |
| Fibrous Dysplasia | 4 | 4 | 100% |
| Osteomyelitis | 2 | 1 | |

Fig. 2 Positive Findings of Malignant Tumor (Pathohistological findings)

| | Head & Neck | Thorax | Abdomen |
|--------------------|-------------|--------------|--------------|
| Malignant Lymphoma | 73% (36 49) | 78% (18 23) | 66% (2 3) |
| Squamous Cell Ca. | 62% (36 58) | 68% (69 101) | 36% (4 11) |
| Adenocarcinoma | 34% (9 26) | 39% (25 64) | 27% (29 107) |