

## 6

CLINICAL APPLICATION OF RADIOIMMUNO-DETECTION USING LABELLED POLY- OR MONOCLONAL ANTIBODIES: SUMMARY OF THE RESULTS IN JAPAN. S. Nagataki. Nagasaki University School of Medicine, Nagasaki, Japan.

Radioimmunodetection or radioimmunomaging is to detect tumors using labelled antibodies against tumor-specific or tumor-associated antigens. This new technique has been used widely in the U.S. and Europe. The present report is the summary of the results of clinical application in Japan.

The table shows the total number of patients who received radioimmunodetection at the time of this symposium. Types of antibodies and names of Institutes are also shown.

Antibodies	Institutions	Number of patients
CEA polyclonal	Hokkaido Univ.	5
	Nagasaki Univ.	7
monoclonal	Hokkaido Univ.	5
	Nagasaki Univ.	4
AFP polyclonal	Jikei Univ.	2
	Kanazawa Univ.	7
	Nagasaki Univ.	15
monoclonal	Nagasaki Univ.	14
Tg polyclonal	Nagasaki Univ	9

Melanoma monoclonal	"	1
Grand total		69

In these patients, radioimmunodetection could detect malignant tumors in only 50% of them whose diagnosis could be made by the other diagnostic techniques. In order to improve the detection rate, it is important to consider 1) the improvement according to the principle of radioimmunodetection, 2) the application of modern techniques of nuclear medicine and 3) the establishment of medical and ethical criteria to apply these techniques to patients.

In the theoretical improvement, it is necessary to consider a) the presence of large amounts of circulating antigens which may prevent labelled antibodies to reach to tumor cells, b) characteristics of antigens on the cell surface and mechanism of secretion of antigens from cells, since antibodies can not get into cells and bind antigens only on the cell surface, c) the fate of antigen-antibody immune complex on the cell surface, such as internalization of immune complex d) clearance of circulating radioactivity which interfere with the clear image of tumors. The most important and urgent problem in Japan is to establish the nationwide criteria for indication in order to apply this new and useful technique to many patients.