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SCREENING OF PROSTATIC CANCER BY RIA FOR PROSTATIC ACID PHOSPHATASE. M.Miki, T. Machida, Y. Ohishi, M. Ueda, A. Kido, M. Yanagisawa, H. Yamazaki and N. Kondo. Department of Urology, Jikei University School of Medicine, Tokyo.

A double antibody RIA for human prostatic acid phosphatase (PAP) was developed. Serum samples from 24 male and 11 female controls, 122 patients with prostatic cancer (28 untreated and 94 treated), 267 benign prostatic hyperplasia, 23 with prostatitis, 83 other cancers and 126 with other diseases were studied by the RIA. The normal upper limit of the serum PAP level in the assay was set at 3.0 ng/ml by the value of mean $\pm$ 2SD of controls. An elevated serum PAP was found in 82.1% of untreated prostatic cancer patients, but in 16.0% of treated patients. Sera from untreated patients with prostatic cancer gave positive results in 3/7 of stage A, 4/4 of stage B, 6/7 of stage C and 10/10 of stage D. The highest value of them was 4260 ng/ml in a case of stage D and all cases with the serum PAP level exceeded 100 ng/ml were stage D prostatic cancers. While in 267 patients with benign prostatic hyperplasia, 34 cases (12.7%) had elevated serum PAP levels and the highest value of them was 6.6 ng/ml.

In contrast to the enzyme assay, the RIA was more efficient and distinguished for the detection of prostatic cancer.

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RESULTS OF SECOND CONTROL SURVEY ON RADIO-ISOTOPE IN VITRO TESTS IN JAPAN. M. Irie, F. Kinoshita, H. Yamada, H. Moteqi, S. Iino, A. Uchiyama, H. Nemura and H. Takino. Toho University School of Medicine, Tokyo Metropolitan Ohkubo Hospital, Tokyo Metropolitan Geriatric Hospital, Tokyo Metropolitan Komagome Hospital, Showa University School of Medicine, Chiba University School of Medicine, Tokyo Womens Medical College and Dai-nabott Radioisotope Lab. (Committee on Radioisotope In Vitro Test, Japan Radioisotope Association.)

Control survey of radioimmunoassay of T-3, T-4, TSH, Insulin, GH and CEA was carried out by "Committee on Radioisotope In Vitro Test" of Japan Radioisotope Association. Two hundred and sixty-one institutions joined in this survey. The results of control survey of each substances RIA are summarized in the table below. The value of coefficient of variation (CV) in each item was improved, compared with that in the 1st control survey. As the protein concentration of the control serum was somewhat low (4-5 g/dl), the value which was measured by PEG method tended to be a little higher, consequently.

RIA	SERUM A				SERUM B			
	N	Av $\pm$ SD	CV		N	Av $\pm$ SD	CV	
T ₄	104	152 $\pm$ 11	7.0		103	30 $\pm$ 04	12	
T ₃	130	100 $\pm$ 7	7.2		136	307 $\pm$ 26	8.5	
TSH	102	34.9 $\pm$ 3.3	9.5		103	7.1 $\pm$ 1.4	20	
Insulin	118	4.9 $\pm$ 1.7	35		116	41.2 $\pm$ 4.6	11	
GH	59	22.2 $\pm$ 2.9	13		61	3.2 $\pm$ 0.6	19	
CEA	163	3.3 $\pm$ 0.5	16		160	5.2 $\pm$ 0.7	13	