

Evaluation of CEA RIA Kit

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We have had an opportunity to evaluate of CEA using Sephadex G-50 column. In this report, specimen collected in- and out-patient of malignant disease 51 cases, benign cases were examined. The results were as follows;

1) Basic characteristics of the kit on profile of calibration curve, relation between measured value and incubation condition (e.g. time and temp.), results of dilution and recovery test were all satisfactory. As to the Sephadex column, adequacy of the rinse out procedure and elution profile of CEA fraction were well reaffirmed. Correlation of measured values between plasma and serum specimen also showed an agreeable results. 2) Normal values of plasma CEA on 31 males and 50 females were 3.3 ± 0.97 and 2.7 ± 1.1 na/gl, respectively. 3) A statistically positive correlation was observed among the measured values by this kit and CIS or Dainabot kit, $r=0.798$ and $r=0.801$, respectively.

From the above results, it was revealed that determination of CEA by the present column method can be performed with more simple procedure and within shorter time. Reproducibility of measured value was also satisfactory and concluded to be useful for routine use.

STUDIES ON NCA (NONSPECIFIC CROSS-REACTING ANTIGEN) IN FECES AND VARIOUS ORGANS THAT CROSS-REACT WITH CEA. T.Miyazaki, M.Yoshimura, T.Hachiya, Y.Kajita, H.Ijichi and Y.Ochi. Kyoto prefectural University of Medicine, Nantan General Hospital, Shiga University of Medical Science. Kyoto, Yagi and Otsu.

When the PCA (perchloric acid) extract of feces was fractionated by gel-filtration using Sephadex G-200, two molecular size fractions (large and small) having CEA like activity were obtained. The PCA extract applied to the affinity chromatography using anti-CEA bound Sepharose. The purified protein with CEA like activity was obtained and then labelled with ^{125}I . ^{125}I -labelled protein was analysed by Sephadex G-200 column. Two radioactivities of the peak 1 (mw : 180,000) and the peak 2 (mw : 60,000) were found. In non-cancerous organs the protein having CEA like activity was examined by gel-filtration using Sephadex G-200. Stomach, thyroid, kidney and spleen showed only the protein having large molecular size in the void volume region. However, pancreas, lung and liver showed the protein having small molecular size besides the large molecular size in the void volume region. These experiments demonstrated the existence of the CEA like protein with size heterogeneity in the feces and various organs of non-cancerous state.