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## EVALUATION OF NEURON SPECIFIC ENOLASE(NSE) RIA KIT AND CLINICAL APPLICATION.

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Serum NSE concentration is known to rise at neuroendocrine tumours and small cell lung cancer(SCLC). Basic evaluation of Pharmacia NSE kit included within assay error 3.8-7.1%(c.v.), between assay error 6.5-14.5%(c.v.). Result of dilution test and recovery test was satisfactory. Hemolysis of the sample makes serum NSF concentration increasingly. Serum NSE levels were  $5.2 \pm 1.3$   $\mu\text{g/l}$  in 45 normal controls. Positive serum NSE levels were observed in patients with SCLC(50.0%), non-SCLC(11.7%), colorectal carcinoma(25.0%), pancreas carcinoma(12.5%), biliary tract carcinoma(9.1%), hepatoma(8.3%), gastric carcinoma(8.0%). NSE levels in the patients with SCLC changed in parallel with the clinical course during the treatments. Serum NSE seems to be a specific tumor marker in patients with SCLC.

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## CLINICAL SIGNIFICANCE OF MEASUREMENT OF SERUM NEUROSPECIFIC ENOLASE LEVELS IN PATIENTS WITH LUNG CANCER.

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Subjects were comprised 100 cases of healthy adult, 85 patients with primary lung cancer, 20 of benign lung disease and 4 of metastatic lung cancer, serum neuron specific enolase(NSE) levels were estimated by means of NSE RIA kit produced EIKEN radio-pharma cheutical Co. Lt. Normal range of serum NSE level showed from 4.5 to 10.30 (mean:6.81)ng/ml in 100 healthy adults. The serum NSE level in patients with small cell carcinoma was significantly higher than the mean in patients with other histological types. Positive rates of serum NSE levels were 80% in patients with small cell carcinoma, 54% in patients with adenocarcinoma, 52% in patients with squamous cell carcinoma and 1% in healthy adults respectively. According to progress of the staging of lung cancer patients, serum NSE levels become increased.

Serum NSE levels seems to be specific marker in patients with small lung cancer and to be useful for diagnosis and monitor for cancer treatment.

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## FUNDAMENTAL AND CLINICAL EVALUATION OF THE MEASUREMENT IN SERUM TISSUE POLYPEPTIDE ANTIGEN(TPA) BY USING RIA KIT. E.Otsuka. Yamato City Hospital. Yamato

TPA had been studied in 1957 by Dr. Björklund and his co-workers. A hemagglutination inhibition method was developed mainly as its measurement. Recently, a radioimmunoassay method is used for routine determination of TPA in serum and it seems to be an indicator of tumor development clinically. In contrast to many other tumor markers, TPA is elevated in a wide spectrum of cancer condition. Prolifigen 125-I RIA kit was utilized for this studies. As the fundamental studies, the standard curve, the incubation time and temperature, the intra- and inter-assay variation, the dilution test and the recovery test were performed. As the clinical studies, serum TPA values in 100 normal subjects (Men & women:20 - 60 years) were measured. And serum TPA values in 100 cases with cancer were measured. These values were compared with CEA values as the tumor marker used widely. Also, the positive rates in a wide variety of cancer were discussed. In conclusion, the clinical values of TPA as the tumor marker are reported.

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## TISSUE POLYPEPTIDE ANTIGEN ( TPA ) IN SERUM AND ASCITES — ANALYSIS OF PATIENTS WITH VARIOUS DIGESTIVE DISORDERS.

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Tissue Polypeptide Antigen ( TPA ) in serum and ascites was assayed with Prolifigen TPA·RIA kit in various gastrointestinal malignancies, liver and pancreas cancers and liver cirrhosis. Mean value of TPA in control group(50 cases) was  $60 \pm 18$  U/l and 100 U/l level was taken as upper normal limit. The percentage of positive cases in malignant diseases were 89% in gastric cancer(28 cases), 73% in colorectal cancer(11 cases), 73% in pancreatic cancer(11 cases), 75% in hepatoma(32 cases), 100% in cholangioma(3 cases) and 50% in gall-bladder cancer(4 cases). False positives in benign diseases were 60% in liver cirrhosis(30 cases) and 31% in chronic hepatitis(13 cases). Because correlation between serum levels of TPA and transaminase(GOT and GPT) was very high, care must be taken for the evaluation of TPA levels in liver diseases. Detailed analysis of cases with pancreatic cancer revealed that positive TPA values and CA19-9 values were equal and determination of both of them at the same time gave better clue for the diagnosis. TPA levels of ascites were much higher than those in serum, but ascites in malignancies contained more TPA than in liver cirrhosis.