
Clinical usefulness of CA 15-3 determination as tumor marker (especially breast cancer) were examined. Normal subject (50) showed 14.4 ± 3.1 U/ml (Mean ± SD). 30 U/ml were chosen as cut-off limit of normal according to Terasaki's report. Elevated serum levels were found in patients with breast cancer (25.8%), lung cancer (23.8%), pancreatic cancer (29.2%), gastric cancer (21.0%), and ovarian cancer (42.1%). CA 15-3 levels were positive in the 10% of clinical stage I-III in both breast cancer and lung cancer. Highly positive cases with high elevation levels were observed in metastatic breast cancer (75.0%, 95.7 U/ml (mean)) and also in metastatic lung cancer (52.8%, 63.8 U/ml (mean)). The increased value was also observed in pancreas cancer (45.5%), gastric cancer (64.3%), and kidney cancer (25.0%).

Elevated serum levels could be found in a few months before clinically detectable metastases. CA 15-3 determination is useful for monitoring patients with metastatic breast cancer. When the serum of patient with breast cancer was fractionated on Sepharose 6B, CA 15-3 activity was found in the MW of about 1,000,000 - 2,000,000 daltons. CA 15-3 activity was destroyed by neuraminidase treatment. From these experiments, CA 15-3 assay may recognize a glycoprotein with sialic acid residue.

CLINICAL AVAILABILITY OF THE MEASUREMENT CA15-3 FOR BREAST CANCER. Y. Horino, A. Komori, H. Esuchi, Y. Miyamoto, H. Yamamoto (JMCK Co., Ltd.), S. Azumi (Kyoto Daiichi Red Cross Hospital), H. Kodama (Kodama Clinic of the mammary gland).

CA15-3 is the antigen related with breast cancer, detected in 1984 by Hilken et al. It is now a new tumor marker of breast cancer. This time, we examined clinical availability for breast cancer making use of ELSA CA15-3 kit (Midori Jui). The value of serum CA15-3 at the sample of healthy body 277 was 11.2 ± 4.3 ml/ml, the value of Cut Off was 200/ml. The positive rate at a case of breast cancer was 36.3% (28/77), according to stages, Stage I 10.0% (1/10), Stage II 5.7% (3/19), Stage IIIC 6.7% (4/6), Stage IV 100.0% (1/1), and at the sample of a relapsed after an operation 60.7% (17/28), in this way, the positive rate rose with the advance in a deasease stage. Moreover at the sample of a non-relapsed after an operation 15.3% (2/13). In metastasized breast cancer, the positive rate was raised by the combination of CA15-3 and CEA. Now we are examining the correlation of CA15-3 and metastasis parts.

Therefore, though CA15-3 seems to have a trouble in an early diagnosis of breast cancer, it is suggested to be available to the judgement of cure effect and the inspection of metastasis for progressing breast cancer including metastasis.