

## Concentration and distribution of tumor associated antigens TAG-72 and CEA in stomach cancer

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We measured the concentration and distribution of tumor associated antigens, TAG-72 and CEA, in stomach cancer by *in vitro* quantitative autoradiography (IV-QAR). Frozen sections of 33 specimens were incubated with varying concentrations of <sup>125</sup>I-labeled CEA-79.1 and B72.3 antibodies specific for carcinoembryonic antigen (CEA) and tumor-associated glycoprotein-72 (TAG-72), respectively. Computer analysis of specific antibody binding gave maximal binding values which were equal to the concentrations of the antigen or epitope. TAG-72 was detected in 25 specimens, at a concentration ranging from 8.4 to 562.9 pmol/g. CEA was detected in 32 of the 33 specimens and its concentration ranged from 8.8 to 525.3 pmol/g. The distribution of TAG-72 by IV-QAR coincided with that of the tumor cells in 41.4% of the pathologic lesions. The distribution of CEA coincided with the tumor cells in 80.5% of pathologic lesions, nearly twice the TAG-72. The concentration of TAG-72 was significantly higher in mucinous adenocarcinoma and mucin containing adenocarcinomas than other types of adenocarcinomas. There was no significant difference in the concentration of CEA among the pathologic types of stomach cancer. In summary, stomach cancer exhibited wide variations in TAG-72 and CEA expression. CEA expression was more frequent and homogeneous than TAG-72.

**Key words:** carcinoembryonic antigen, tumor-associated glycoprotein-72, autoradiography, stomach cancer