Abstract

Sera obtained in 1969 from 956 unselected elderly persons in Busselton, Western Australia were tested for carcinoembryonic antigen (CEA) by a "double antibody" microradioimmunoassay. Forty-four (4-5%) were positive for CEA (5 ng/ml or greater). Review of health records for the 4-year period subsequent to accession of sera showed that 6 (14%) of the 44 persons positive for CEA died of CEA associated cancers, 15 were heavy smokers, 2 had colonic diverticula and 1 a peptic ulcer. On the other hand, 18 (2%) of the 912 persons negative for CEA developed CEA associated cancers. Thus, a significantly greater proportion of cancers \((P = 0.01)\) was found in the persons positive for CEA. Furthermore, when 21 persons who were positive for CEA in 1969, but clinically well 4 years later, were examined 2 had occult cancer of lung and colon respectively. However, the relatively low yield of diagnosis of cancer from our present population survey led to the conclusion that, if screening for cancer were to be solely dependent on testing for CEA, increased specificity and sensitivity of test systems should be awaited.