Reference
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ADDENDA

6. Diagnostic and prognostic methods,
E. ENGELSMAN, Antoni van Leeuwenhoek Ziekenhuis, Amsterdam, The Netherlands

A convincing correlation between estrogen receptor content of human breast cancer and the response of the tumor to endocrine treatment has been established.

For practical purpose it is important that the method of the ER assay is standardized as much as possible.

A second EORTC workshop, in 1979, has resulted in agreement on standard procedures. Not less important is the decision about a cut-off point between ER negative and positive. By shifting this cut-off point the correlation between ER and clinical features will change. A method to obtain optimal prediction of clinical hormone sensitivity from ER values will be demonstrated.

Relations between ER and histological grading of the tumor, between ER and CEA content of tumors, will be discussed.

Data on ER and the course of inoperable breast cancer will be presented.

Correlation between presence of ER and the prevalence of bone metastases, and the treatment-induced hypercalcemia will be shown.

63. Endogenous estradiol-17β concentrations in breast tumours determined by mass fragmentography and by radioimmunoassay: relationship to receptor content,
M. EDERY, J.C. SASSIER, J. GOUSSARD, L. DEHENNIN[1], R. SCHOLLER[1], J. REIFFSTECK[1] and M.A. DROSDOWSKY, Laboratoire de Biochimie, C.H.U., Caen, and [1]Fondation de Recherche en Hormonologie, Fresnes, France

Several reports have recently appeared concerning the presence of endogenous steroids and particularly estradiol-17β, in mammary tumours related to their role in mammary tumour development. We compared the values obtained for estradiol-17β measured by radioimmunoassay (RIA) and by gas chromatography coupled with mass fragmentography (GC-MF) with the use of an internal standard in 60 samples of primary breast tumour. Regression analysis for the data obtained by RIA (x) and GC-MF (y) gives the equation $y = 0.901 x 92.566$; the correlation coefficient is 0.875. However, if only the lower values (≤ 100 pg/g) are used for the regression analysis, no correlation is found between the two methods. These results suggest that if high values measured by RIA and GC-MF agree well, careful attention must be drawn on the interpretation of the low values obtained by RIA. So, it appears that the use of mass fragmentography is of better validity in providing an accurate methodology to measure steroid concentration in tumour extracts. Using the GC-MF methodology we have measured the oestradiol concentration together with oestradiol and progesterone receptor content. "Receptor positive" tumours contained a statistically significant higher estradiol concentration (541 pg/g tissue) than those "receptor negative" (171 pg/g tissue). There was also a positive correlation between the receptor level and the estradiol-17β content. A long term program will appreciate whether endogenous estradiol-17β concentration in conjunction with receptor assays can provide a better prognostic evaluation for endocrine therapy in breast cancer than that provided by the receptor alone.