IN VITRO RESPONSE OF CPA SYNCHRONIZED HUMAN BREAST CANCER CELLS TO CHEMOTHERAPY

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This laboratory has been engaged to exploit hormonal modifications of cell growth kinetics to potentiate the effectiveness of antitumour drugs. In the present study, EVSA-T breast cancer cells, endowed with receptor proteins for androgens, have been exposed in vitro to cyproterone acetate (CPA). The Thymidine Labelling Index (TLI), measuring the percentage of DNA synthetizing cells (S-phase) was compared to the growth fraction (GF) evaluations by Primer dependent α DNA Polymerase Index (PDP-LI) and by an immunoperoxidase assay that exploited a monoclonal antibody against DNA polymerase. As a consequence of a 24 hr exposure to CPA, cells were synchronized in the G1 phase, since kinetic determinations scored 12 by the TLI assay (% S phase) and 61 by the PDP-LI (% GF). By cell counting and colony survival assay we then investigated the cytotoxicity of doxorubicin and methotrexate on the synchronized EVSA-T cell line. It has been found that CPA treated cells exhibited increased sensitivity to methotrexate and not to doxorubicin in comparison with CPA untreated control cells.

IMMUNOLOGICAL CHANGES IN LUNG CANCER PATIENTS

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Lymphocyte subsets of 74 lung cancer patients were studied using monoclonal antibodies at diagnosis, to evaluate the presence of immune imbalance and its possible relation with prognosis. Statistical analysis of the data was performed and significant results are reported below:

	Cancer Patients	Controls	P
OKT4	772 + 291	989 + 376	<0.01
OKT4%	41 + 6.8	45.24 + 4.16	<0.05
OKT8%	33.3 + 6.39	29.34 + 3.84	<0.05
T4/T8	1.27 + 0.37	1.54 + 0.23	<0.01

In our data histotype, PS and tumour extension did not influence the degree of immunological change. The comparison of survival curves of patients with similar PS, histotype and tumour extension but normal or decreased ratio showed no significant difference.

A CYTOGENETIC STUDY OF A CONSECUTIVE SERIES OF 35 OVARIAN TUMOURS

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In order to study the cytogenetic patterns in borderline tumours (N=6), malignant neoplasms (N=16) and metastatic neoplasms (N=13) of the ovary a consecutive series of patients operated on in the Department of Gynaecology and Obstetrics, Odense University Hospital during a two year period (1.1.84 to 31.12.86) were investigated cytogenetically.

For each tumour, all material received was investigated using short-term culture conditions and G-banding technique. The number of metaphases obtained from each tumour varied between 0 and 800.

The study demonstrated a very large intra- as well as inter-tumour chromosome variation. Although no specific chromosome abberation was demonstrated in this series of ovarian tumours, an increasing cytogenetic complexity was seen when going from borderline tumours through primary tumours to metastatic tumours. The importance of consecutive series of tumour material in cytogenetic studies is emphasised by this investigation.

THE POTENTIAL CARCINOGENIC ACTIVITY OF ESTRADIOL AND CATECHOLESTRADIOLS

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Estradiol is metabolically activated by microsomes to the catecholestradiol, 2-hydroxyestradiol (2-OHE2) and 4-hydroxyestradiol (4-OHE2). The biphasic activities of these compounds were detected using the Chromotest Assay. At low concentrations, these steriods stimulated synthesis of beta-galactosidase, whilst at high concentrations, after the peak value, bacteria were killed and beta-galactosidase