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A continuous cell lines has been established from a dog with leukaemia. The cells are regarded as members of the T-lymphocyte line in origin, because they did not produce immunoglobulins, did not phagocytize but did agglutinate with concanavalin A, phytohaemagglutinin and pokeweed mitogen and showed reactivity only in the lymphocyte acid phosphatase test. Their ability to grow on semi-solid agar as well as the clinical findings confirm that they are malignant.

The cells showed variability in chromosome number and extensive formation of centric fusions. Every cell was unique in chromosomal constitution and in addition, the prevalence of a nullisomy applying to many chromosomes in each cell was detected.

AFFINITY LABELLING OF THE MOUSE LIVER PROLACTIN RECEPTOR

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To detrmine the molecular weight of the prolactin receptor in the liver of lactating mice we covalently bound [125]I-iodinated human prolactin to its receptor in liver membranes using dimethyl suberimidate as a bifunctional cross-linker. SDS-PAGE and autoradiography reveals a single hormone rceptor complex at a MW of 60 kD that is competed wth an excess of cold ovine prolactin (oPRL) or human growth hormone (hGH). This suggests that the prolactin receptor has a binding subunit of about 36 kD (MW of prolactin: 24 kD). A cross-linked complex of the same molecular weight can be detected using [125]I-hGH and is competed wth cold hGH or oPRL, suggesting the use of the same binding subunit by both hormones. Immunoaffinity purification of the cross-linked ligand receptor complexes with anti-prolactin antibody is under investigation.

REGRESSION ANALYSIS OF EXPRESSION PATTERNS OF ANTIGENS IN COLORECTAL CANCER

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In addition to conventional pathological parameters in colon cancer, such as shape and size of the primary tumour, central node involvement, venous invasion, grade and stage, new variables, such as the immunoreactivity patterns at a cellular level of CEA, Ca 19-9, mucin, serotonin, secretory component and the DNA-index were tested for their potential prognostic values. A regrssion analysis was performed of the pathology data of 350 patients with primary colorectal cancer. These data were prospectively collected in a multicentre study with a follow-up of five years. All specimens were centrally reviewed.

In the multivariate analysis, stage was the predictive factor with the highest hazard ratios, but absence of central node involvement, tumours with diameters between 3,5 and 6 cm, exophytic growth, well differentiated tumours, tumours with CEA immunoreactivity, absence for staining with serotonin and diploid tumours had a favourable prognosis.

The aforementioned variables may be included in a prognostic index. Routine application of some variables is hampered by small numbers in the subgroups of hazard ratios.

MAPPING OF PAI-1 TO A REGION OF ABNORMALITIES OF CHROMOSOME 7 IN CANCER

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Alterations of chromosome 7 are frequently found in metaphases of patients with myelodysplasia or leukaemia. Dysfunction of one or more genes located in 7q21-q35 could be involved in these malignancies. Recently, several genes have been localized to this region of chromosome 7. In haematological cancers possible malfunctions of COL1A2, OI4, EPO, KIT, MET and TCRB are particularly interesting.

We have mapped the gene for plasminogen activator inhibitor, type 1 (PAI-1) by chromosomal in situ hybridization analysis to 7q21.3-q22. Interestingly, studies of genetic recombination between PAI-1 and other genes previously mapped to this region showed that it was closely linked to both