Symposium no. 11: New Approaches to Cancer Diagnosis and Management

11.037

Age-dependent prognostic significance of MYCN oncogene amplification in Neuroblastoma

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Preliminary Italian experience has confirmed the role of MYCN gene amplification (MYCN-A) as an important prognostic factor in neuroblastoma (NB). Furthermore the molecular analysis of Italian NB reveals a significantly lower prevalence of MYCN-A than previously reported by others. In advanced disease (Evans stage III and IV) we observed 23% MYCN-A cases as compared to 53% and 54% in USA and Japanese patients respectively. Hereby we report the data of a multicentric Italian study of 125 patients evaluated at onset. Progression-free survival rate in 18 patients with MYCN-A (≥3 per haploid genome) is associated with a significantly worse prognosis as opposed to 93 non-amplified cases. However, after stratification by age at onset (cut-off 1 year) only in the infant group is a significant difference found between amplified and non-amplified cases. Our results suggest that MYCN-A is an age-dependent molecular prognostic factor.

Supported by AIRC.

11.038

Prognostic variables of women with ovarian cancer undergoing second look procedures

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The correlation of the immunological markers CA 125 and neopterin and several clinical variables with the second look result and the subsequent survival was studied. Factors that were associated significantly with the status at second look were the primary residual tumor ($p<0.0001$), the FIGO stage ($p=0.017$) and the CA 125 serum levels ($p<0.0001$). For the survival after second look CA 125 and neopterin levels determined at the time of second look were significant predictors ($p<0.0001$). Subdivision of patients according to the tumor load at second look revealed an association of high neopterin concentrations with unfavourable survival in women with either small or no tumor residuals. CA 125 serum levels showed a very close correlation with the surgical result of second look.

11.039

One McAbLC-1 AGAINST HUMAN LUNG CANCER

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One McAb from 20 hybrids from a fusion, named LC-1, has been obtained. The results of ABC staining of LC-1 in 48 human lung cancers are:21/22 adenorcanoma, 10/11 squamacarcinoma, 3/3 large cell carcinoma, 5<5 mixed tumor and 7/7 small carcinoma showed the positive staining. Apart from 1/4 normal human kidney, all the other 15 normal human tissues and 12 sixth months fetal tissues showed negative reaction. The antigen associated binding sites with ^{125}I LC-1 was about $7.2X10^{4}$ per cell. The affinity constant of LC-1 was $4.8X10^{-9}$ M. 3 bands, M.W. are 91K, 70K and 51K, could be seen in immunoblot of LC-1 reacted with the extracts of lung adenocarcinoma cells. They are all reacted with staining of alcian blue but only 2 bands, 70K and 51K, staining by sudan black. WHen cells treacted with proteinase K and sodium periadote separataly, and then performed RIA and FACS, sodium periodate treatment could influence the binding significantly. It was shown that the antigens was glycoproteins in adenocarcinoma and the epitope may be polysacchrides.

11.040

PROGNOSTIC IMPORTANCE OF FLOW CYTOMETRIC IMMUNOPHENOTYPING OF 540 CONSECUTIVE PATIENTS WITH CHRONIC LYMPHOCYTIC LEUKEMIA.

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In a danish multicenter-study, the CLL-2 project, blood mononuclear cells from 540 newly diagnosed, unselected patients with B-cell chronic lymphocytic leukemia were examined by immunofluorescence flow cytometry for a panel of surface membrane markers, including immunoglobulin M and D, anti-CD3, -5, -20, -21, -22, -FMC7, and for the final 125 patients anti-CD23. There were 503 $CD5^+$ and 37 $CD5^-$ cases. In the $CD5^+$ cases, the cells typically expressed IgM, IgG, CD20, CD21, CD22, and CD23. In univariate analysis, age, clinical stage, IgM fluorescence intensity, CD23 and FCM7 had significant prognostic importance, high IgM-fluorescence intensity, high FMC7, and low CD23 expression being associated with a short survival. There was no significant difference in survival between 351 cases expressing IgMD and 55 cases expressing IgM without IgD, or between kappa and lambda light-chain monoclonal cases. CD20, CD21, and CD22 had no prognostic importance. In Cox multiple regression analyses, age, CD23, IgM-fluorescence intensity and clinical stage (Workshop) had independent prognostic importance. Thus, besides clinical variables, CD23 and IgM intensity might be useful prognostic markers in the management of $CD5^+$, B-cell CLL.

11.041

CHARACTERISATION OF MONOCLONAL ANTI-IDIOTYPE ANTIBODIES TO MALT-LYMPHOMA

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Human monoclonal antibodies were obtained from heterohybridoma fusion with a B-cell lymphoma of mucosa associated lymphoid tissue expressing IgA. Significant binding to mucosal lymphoid tissue but not nodal lymphoid tissue was observed. Murine monoclonal anti-idiotype antibodies were generated. Staining of tumor tissue and different mucosal epithelial cells was significant. Only occasional positive lymphocytes were observed in sections from normal lymphoid tissue and lymphomas from other individuals. This lymphoma may have arisen as a result of an autoimmune response to a mucosal antigen.

11.042

Diagnostic indexes for possible cancer symptoms in general practice

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Most medical encounters start with the presentation of symptoms that lead to hypotheses about the diagnosis. It might be useful to know the positive predictive value (PPV) and likelihood ratio (LR) of a particular symptom in relation to disease. A Norwegian general practice study of the seven warning signals of cancer, and of cancer patients and controls, has yielded necessary data. The calculation of diagnostic indexes for colorectal cancer, lung cancer, breast cancer and internal genital cancer in women, and skin cancer will be shown. It will also be shown how probabilities can be revised through further diagnostic information.