

heterogeneity and others, are consequence of adaptive properties of tumoral cells. The description and evaluation of concepts and the future projections in cancer research will be interest to all investigators concerned with cancer endocrine tissues.

P29

Communication and educational model for cancer prevention in Colombia

C. Wiesner, C. Cortés. *Instituto Nacional de Cancerología, Grupo Planificación Programas de Prevención, Bogotá, Colombia*

Introduction: Colombian National Social Security includes Health Education as a strategy for Health Promotion and Preventing Disease. Cancer prevention is focused on Information, Education and Communication strategies to control cancer risks factors by promoting behavioural change. Evaluation of these strategies failed to live up to public and professional expectations.

Objectives: To design an Education Model for Cancer Control within a Cancer Control Model in order to improve control of cancer risk factors, promote cancer early detection in Colombia.

Methodology: a non systematic review of literature was done using the following words: health education, education for cancer control and Behavioural Models. analyzing the literature, an Educative-Communication Model was proposed. This proposal was discussed with experts from different regions around the country.

Results: We defined a Model grounded in the rational structure of Third Generation Models for health education. It is dialectical model on the bases of social interaction. In order to design communication products it is necessary to gather needs socio anthropological information, communitarian "habitus" and risk perceptions. Communication products are essential elements for establishing a dialogue between communities and institutions. The proposal should consider the cultural and political framework in order to modify it, if necessary.

P30

The clinical-genetic monitoring of cancer of female reproductive organs as a problem of preventive medicine

V. Zaporozhan¹, V. Pishak², A. Peresunko³, E. Oliynyk³.

¹*Odessa State Medical University, Obstetrics and Gynecology, Odessa, Ukraine;* ²*Bukovinian State Medical University, Medical Biology and Genetics, Chernivtsi, Ukraine;*

³*Bukovinian State Medical University, Oncology and Radiology, Chernivtsi, Ukraine*

The specialized genetic consulting of relatives of patients with malignant tumors of female reproductive organs doesn't function in Ukraine. The decrease of mortality and incapacity of patients with this kind of cancer is impossible without the state program of anticancer actions.

Goals of the study: The assessment of the efficacy of the genetic approaches to the early diagnostics and prevention of tumors of female reproductive sphere (patients with ovarian and endometrial cancer), the creation of groups of increased genetic

risk among their relatives and clinical-genetic monitoring of their health on the example of Chernivtsi Region of Ukraine. Materials and methods. The clinical-genealogical analysis has been conducted among 500 women with ovarian cancer and 482 women with endometrial cancer.

Results and discussion: The clinical-genealogical analysis revealed a high level of aggregation of malignant tumors among relatives of patients. 110 healthy women have been picked out in the genealogies of patients with ovarian and endometrial cancer, who were included in the group of genetic dispensary follow-up. 62 women were close relatives of the patients with ovarian cancer (30 – sisters, 22 – daughters, 10 – mothers) and 48 women were relatives of the patients with endometrial cancer (24 – sisters, 17 – daughters, 7 – mothers). All women from the risk groups underwent detailed screening examination. During the observation period of 3 years on 110 women from the risk groups several cases of benign tumors, pre-cancer of the female reproductive sphere have been diagnosed: myoma of the uterus – 8 patients; ovarian cysts and cystomata – 7 patients; nodular and diffuse mastopathy – 29 patients; tuboovarian tumors – 5 patients; endometrial hyperplasia – 9 patients; chronic adnexitis – 11 patients. This approach in the decision of the problem of early diagnostics of cancer of reproductive sphere is very efficient – four women from the group of enhanced genetic risk have been first diagnosed with early ovarian and endometrial cancer.

Conclusions: The information of the clinical-genetic monitoring of the health of persons with enhanced risk of ovarian, endometrial and breast cancer, confirms the high efficiency of this approach in the decision of problems of early diagnostics and prevention of malignant tumors of female reproductive system. It should be recommended as a model for creation of a new direction in the anticarcinogenic fight.

P31

Different pathways of centromeric micronuclei formation in peripheral blood lymphocytes of cancer patients and workers occupationally exposed to mutagens/carcinogens?

G. Iarmarcovai¹, T. Orsiere¹, I. Sari-Minodier¹, M. Baciuchka-Palmaro², J. Pompili¹, A. Botta¹. ¹*Faculte de Medecine, Lab. Biogenotoxicologie et Mutagenese En, Marseille, France;* ²*Service d'Oncologie Médicale, CHU Timone Adultes, Marseille, France*

Aim: The cytokinesis blocked micronucleus (CBMN) assay is widely used in biomonitoring purposes. Micronuclei (MN) are either a recognized consequence of genome instability or thought to be a biomarker of exposure to environmental mutagens/carcinogens. To discriminate between MN containing acentric chromosomal fragment and MN containing whole chromosome, in situ hybridization can be performed. MN are then commonly classified as centromeric or acentromeric but one can also discriminate between monocentromeric and multicentromeric MN. We report data from 3 biomonitoring studies in which these two kinds of centromere-positive MN were recorded.

Methods: CBMN assay in combination with fluorescent in situ hybridization using a human pancentromeric DNA probe were carried out on peripheral lymphocytes on 3 studies: (i) 10 untreated cancer patients vs 10 controls, (ii) 27 welders

vs 30 controls and (iii) 18 pathologists/anatomists exposed to formaldehyde vs 18 controls. Centromere-negative micronucleus (C-MN), centromere-positive micronucleus (C+MN), micronucleus containing only one centromere (C1+MN) and micronucleus containing more than one centromere (Cx+MN) were scored.

Results: In untreated cancer patients, (i) about 70% of the MN were C+MN, (ii) about 50% of the MN were Cx+MN, and (iii) about 66% of the C+MN were Cx+MN. In welders, (i) about 50% of the MN were C+MN, (ii) about 25% of the MN were Cx+MN, and (iii) about 50% of the C+MN were Cx+MN. In pathologists/anatomists (i) about 78% of the MN were C+MN, (ii) about 50% of the MN were Cx+MN and (iii) about 66% of the C+MN were C1+MN.

Conclusions: Most of the MN were centromere positive whatever the population was. In untreated cancer patients, one-half of the MN and two-thirds of the C+MN were Cx+MN suggesting that most of the aneugenic events leading to micronucleus formation involve several chromosomes per micronucleus. In welders, aneugenicity was partly responsible for the higher MN frequency in exposed subjects than in controls and the groups did not differ in MN content. In contrast, formaldehyde exposure leads to an increase in the C1+MN only, suggesting that aneugen mechanisms involve only one chromosome per micronucleus. Our results suggest that aneugenic events leading to centromeric micronuclei in cancer patients and workers occupationally exposed to mutagens/carcinogens arise from different pathways of C+MN formation.

P32

Bone mass density and subsequent risk of prostate cancer

O. Ganry¹, J. Peng, P. Fardellone. ¹University Hospital of Amiens, Department of Epidemiology, Amiens; ²Cancer Registry of Somme Area, Amiens; ³University of Amiens, Department of Rheumatology, Amiens, France

To test the hypothesis that high bone mass density, a potential marker for cumulative exposure to androgens, insulin growth factors, calcium and vitamin D intake, is associated with a higher risk of prostate cancer. 558 men older than 60 years were followed through record-linkage of cancer registry, after a measure of bone mass density by densitometry in four different sites (lumbar spine L2-L4, Ward's triangle, trochanter, femoral neck). All incident cases of prostate cancers were confirmed histologically. Overall 18 cases of prostate cancer were observed cf 14.5 expected (standardized incidence ratio (SIR) = 1.24, 95 percent confidence interval (CI)=0.74-1.65). The SIR increased with increasing bone mass density showing a significantly risk of 42% (Ward's triangle) to 66% (lumbar spine, trochanter, femoral neck) for men who were at the higher bone mass density, comparatively to men who were at the lowest bone mass density.

Our results are consistent with the hypothesis that men with high bone mass may be at an increased risk of prostate cancer. Although the biological mechanisms underlying this relation are not understood, cumulative exposure to high levels of androgens, IGF-I or calcium and vitamin D intake may be involved.

P33

Preoperative predictability of ovarian malignancy using risk of malignancy index

C. Enakpene¹, P. Fasching², T. Goecke², J. Siemers², W.M. Beckmann². ¹University College Hospital, Department of Obstetrics and Gynaecology, Ibadan, Nigeria; ²Friedrich-Alexander University, Frauenklinik, Erlangen, Germany

Topic: Preoperative predictability of ovarian cancer using risk of malignancy index. Aims: To determine the sensitivity, specificity and the predictive powers of using risk of malignancy index in the prediction of ovarian cancer in women with adnexa masses before surgical operation.

Method: This is a case-controlled study involving all women with suspected adnexa masses at the Friedrich-Alexander University Frauenklinik, Erlangen, Germany from January 2002 to September 2005. Their case records were retrieved from the medical records and information were extracted and entered directly into SPSS software. The data were validated and computed using the same software to determine the sensitivity, specificity and the positive and negative predictive values of risk of malignancy index in determining which of the adnexal masses was malignant before surgery.

Results: This will follow as soon as we have been able to complete our analysis.

Chemoprevention (experimental and clinical)

P34

Natural cloudy apple juice and polyphenol-enriched apple juice extract prevent intestinal adenoma formation in the APCMin/+ model for colon cancer prevention

L. Pan¹, F. Will², N. Frank¹, H. Dietrich², H. Bartsch¹, C. Gerhauser¹. ¹German Cancer Research Center, Toxicology and Cancer Risk Factors, Heidelberg, Germany; ²Research Institute Geisenheim, Wine Analysis and Beverage Research, Geisenheim, Germany

Apples and apple juice are known to contain a variety of phenolic compounds with potential cancer preventive potential. The aim of the present study was to investigate cancer preventive efficacy of cloudy apple juice (CAJ) in comparison with a polyphenol-enriched apple extract (PAE) in the C57BL/6-ApcMin (ApcMin) mouse strain commonly used in cancer chemoprevention studies. Groups of seven-week-old male mice (n=12 each) received either CAJ (containing 90 mg/L polyphenols), PAE (0.2% in drinking water, containing 600 mg/L polyphenols) or water ad libitum for 10 weeks. Average daily CAJ intake was significantly higher than water or PAE intake (average (avg) in mL/animal/day; control: 2.7, CAJ: 3.6, PAE: 2.8), concomitant with a slight decrease in daily food intake in both intervention groups (avg in g/animal/day control: 3.7, CAJ: 3.3, PAE: 3.5), but there was no difference in average body weights (bw avg in g after 10 weeks of intervention; control: 25.1, CAJ: 25.4; PAE: 25.5). Importantly, CAJ and