

menarche and benign breast diseases were born about 4 and 8 years after peaks of the solar index Rz, respectively [Ryabykh e.a. 1992].

**Methods:** Crude incidence rates for BC during years 1952–1985 in Bulgaria were considered. Subjects of the case-control study were 10856 females born and diagnosed with BC during years 1897–1972 and 1991–1994, respectively. Time series analysis with filters, descriptive statistics, non-parametric tests, and odds-ratio (OR) with 95% CI were used [Strike 1991; Dimitrov 1993].

**Results:** Cyclicity in BC incidence variations for Bulgaria was confirmed (period  $T = 16 \pm 18$  years,  $P < 0.01$ ). Mean age at diagnosis (MAD) for 3139 patients born in and about the years of solar maxima was about 2 years lower than that for the rest of the BC patients ( $t = 7.21$ ,  $P < 0.001$ ). However, neither MAD ( $P = 0.07$ ) nor risk ( $OR_{\pm}[0.92 \pm 1.36]$ ) was significantly different to that for females with malignant melanoma of the skin (controls). The latter upheld the idea for etiologic associations between these two cancers [Koh e.a. 1987].

587

POSTER

### Hemoblastoses in Belarus: 10 years after Chernobyl. Do we have any radiation-dependent increase?

V.E. Ivanov, G.V. Tolochko, L.P. Shuvaeva, R.F. Jaroshevich, V.S. Lazarev, V.I. Bekish, K.V. Salnikov, T.I. Terehovich, E.P. Ivanov. *Institute of Haematology, Minsk, Republic of Belarus*

**Purpose:** Belarus is the country mostly affected by the Chernobyl disaster consequences in terms of the portion of population living in radiation-contaminated territories and of the content of 137 Cs in tissues and 90 Sr in bones of inhabitants and also in terms of the estimated long life bone marrow doses. Therefore, epidemiological studies of post Chernobyl hemoblastoses incidence rate are vitally important and original.

**Methods:** Our team created the National Blood Diseases Register, that includes the data on 10,128 pre-Chernobyl and 12,994 post-Chernobyl cases of haemoblastoses. We fulfilled the register-based study referring to the above periods (1979–1985 vs. 1986–1994).

**Results:** We discovered the statistically significant increase of IR of all the forms of leukemia among adults, but without any correlation between IR and level of radionuclide contamination. There was significant correlation

between IR and level of chemical pollution. Noticeable that in 1993–94 the IR of acute leukemia and CML among the clean-up-workers of the 1986–87 group (the average dose of 5–50 rad), who were evacuated to the most severely chemically contaminated cities, started to increase sufficiently.

**Conclusion:** Taking into account our data, the observed sharp increase of the cancer pathologies in the exposed evacuated persons (especially in the ones, evacuated to the Minsk, the most severely chemically contaminated city), one may treat the small doses of ionizing radiation as accelerators of chemical cancerogenesis.

588

POSTER

### Formation of the regional register of hereditary breast cancer

I.V. Teryeschenko, E.M. Sionimskaya. *Cancer Research Institute, Tomsk, Russia*

**Purpose:** The program of forming the regional hereditary and familial breast cancer (BC) register has been fulfilling at the Cancer Research Institute since 1996. The aim is the detection of hereditary forms of BC; long-term follow-up of the relatives from families with BC history; medico-genetic prognostication.

**Methods:** The criteria of selecting families are the following: the presence of two or more BC in combination with cases of ovarian, endometrial and colon cancers in family; early age of cancer appearance; the presence of bilateral lesion. Risk of breast cancer developing is calculated on the base of family-population studies.

**Results:** At present the register includes 75 families. There are more than one third of patients under the age of 40. The women-relatives of patients are recommended the ultra-sound examination under 35 and then the annual mammography. Molecular genetic diagnosis of hereditary BC is planned. For this purpose the formation of DNA bank has been begun. A blood sample is drawn first in families with suspicion to syndrome BC/ovarian cancer.

**Conclusion:** Out of the total number of women under control, there are 45% of daughters and 32% of sisters of BC patients. The psychological and social aspects should be taken into account when settling the prognostic problems of medico-genetic consulting.