

THE EFFECT OF PESTICIDE POLLUTION LOAD ON THE PREVALENCE OF BREAST CANCER IN OSH REGION (KYRGYZ REPUBLIC)

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Background and Aims: To study the effect of pesticide pollution load on the prevalence of breast cancer (BC).

Materials and Methods: A total of 826 patients with breast cancer, 330 breast milk and 90 tumor tissue specimens were subjected to analysis. To determine the concentration of OCPs in breast milk and tumor tissues the authors employed gas chromatography. According to the OCPs pollution concentration all patients were allocated to 4 groups. Group I consisted of women living in urban areas, where people consume vegetables, melons, legumes grown in areas contaminated by OCPs, Group II comprised women from cotton-growing areas, where pesticides had been used but residents of these areas cultivated vegetables, melons and legumes on ecologically clean fields Group III was made of women living in ecologically clean areas and Group IV consisted of women living near the pesticides warehouses with OCPs residues

Results: In group I the incidence of breast cancer per 100 thousand of the female population was 26.8. In Group II - 11.9, Group III - 7.3 and in Group IV- 20.2 cases (90 % were pluripara). To determine the effect of OCPs on the development of breast cancer the authors studied the concentration of OCPs in breast milk (BM). In Group I, concentration of OCPs in breast milk was detected in 58.65% of patients, in Group II - 37%, Group III - 21%, Group IV - 100%. Concentration of OCPs in tumor tissues specimen were found in 84%, 100%, 50% and 100% of patients, respectively.

Conclusion: Thus, organochlorine pesticides are thought to be one of the main causes in the prevalence of breast cancer in Osh region.