THE ISRAELI CHERNOBYL HEALTH EFFECTS STUDY (ICHES)

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AIM
To estimate the prevalence of various diseases among the immigrants to Israel from the radiation-inflicted areas around Chernobyl.

METHODS
A case-control study with on-going recruitment of cases and with two fixed control groups.

The cases group includes all immigrants who registered with the Study Center who were from one of 14 regions (oblasts) in the former USSR where evidence of Cs137 in the ground was found in 1990, following the Chernobyl accident. This group currently includes 9,804 people.

RESULTS
The cases group (volunteers) includes about 10% of the target population. The age-sex distribution of the cases group is very similar to that of the target population of all immigrants as of 8.9.

Pregnancy outcome - No increase in the rate of miscarriages was noted in the years following the accident among the exposed group (Figure 1).

Cancer - Cancer was self-reported at time of registration by 165 (1.7%) of the cases group; a prevalence rate of 1683/100,000. The most prevalent cancers reported are breast cancer, colorectal cancer and leukemia (Figures 2,3).

BACKGROUND
More than 100,000 people have immigrated to Israel since 1989 from areas in the former USSR in which radiation from the Chernobyl accident was measurable.

Exposure to radiation is known to be responsible for a variety of sequella. Among these are various malignancies and other chronic diseases. Pregnancy outcome is also possibly influenced by radiation exposure.

The Chernobyl accident is characterized by a long-term low-dose exposure. The health consequences of this type of exposure are not yet known to the scientific community.

The two control groups are:
7,000 immigrants from the same areas as the cases who did not register with the Study Center (to control for a possible selection-bias due to volunteer effect).

7,000 immigrants from non-exposed areas (Moscow and St. Petersburg) to provide the baseline disease rates for the (European) Russian-Jewish population.

All study participants were requested to complete a self-reported questionnaire. All participants of the cases group, but only about 10% of the participants of the control group have returned their questionnaires. An effort to increase compliance among the controls is under way.

DISCUSSION
The current results need to be interpreted with caution. They are as yet uncontrolled, and are based, at this stage, on self-reports only. The study team is currently making an effort to increase compliance of the control group as well as to validate the health status of the participants by reports from the treating physicians.

The study participants have reported a high prevalence of health problems. Whether this reflects a true health consequence of the Chernobyl accident or is only a reflection of the anticipation of disease in this group remains to be established.
Pregnancy Outcome Among Immigrants to Israel from Chernobyl-Radiation-Affected Areas

Cumulative Age-Adjusted Incidence Rate of Self-Reported Malignancies
The Chernobyl Accident ICHES Register, 1995

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