

## Chernobyl accident (15-17)

## 15 The Chernobyl Accident and Thyroid Cancer Risk of Members of the Public

(1991-1996): a cooperative joint analysis for the data observed in Bryansk oblast in Russia  
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Thyroid cancer risk (1991-1996) of members of the Public of Bryansk oblast has been analyzed to evaluate the effects of the Chernobyl accident. This area is one of the four most contaminated oblasts in Russia. The MRRC provided the data set of the incident cases by calendar year, 1989 census population by 27 rayons, the mean thyroid organ dose due to <sup>131</sup>I, and age at the accident. About 395,000 of the total 1,470,000 in 1989 census were those individuals whose ages at the accident were less than 19 years old. 75 thyroid cancer cases in the area were recorded in 1991-1996. Internal comparison by Poisson regression showed relative risk of 5 to 25 for the 200+ mGy dose group (mean dose 570 mGy) and excess relative risk per Gy of 4 to 20. Further efforts to construct more appropriate dosimetry to reflect individual situations and also comprehensive views applicable to the observations in Belarus and Ukraine are expected, but not easy.

## 16 Psychosomatic Health Status of Children Exposed to the Chernobyl Accident

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Childhood victims were investigated focussing on the psychosomatic disorders. The subjects were 704 children who evacuated from the Chernobyl zone to Kiev (evacuees) and 200 children who have been living in Kiev since prior to the accident (comparison group). A psychological test administered to 504 evacuees aged 12-14 years at the time of the accident and the comparison group indicated that the frequencies of neuroticism, high level of anxiety and conflicts were significantly higher in the evacuees than in the comparison group ( $p < 0.001$ ). Another psychological test administered at puberty to the 504 evacuees and 200 other evacuees exposed to the accident at 4-6 years of age indicated that the psycho-emotional portrait of evacuated teenagers significantly changed with time since the accident. The effects of the Chernobyl accident on the health of the vegetative dystonia observed in 1987-1990 and 1990-1995 were higher in the evacuees than in the comparison group, although they were not statistically significant. The present study indicates that the vegetative dystonia is still highly prevalent among childhood victims.