

CHERNOBYL – 25 YEARS AFTER: IS THERE A SIGNAL IN AUSTRIAN HEALTH DATA?

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Background and Aims: Austria was among the areas outside the former Soviet Union hardest hit by the fall-out following the nuclear accident at Chernobyl in April 1986. In the aftermath of this event several claims were made about measurable health effects in Western European countries. No consistent study has so far been conducted in Austria.

Methods: If the findings in other Western European countries were causally related to the accident also an effect should be visible in Austria provided the data were available with sufficient quality. Although a statistically significant effect on cancer incidence is not likely this endpoint was considered because of its high emotional impact. In addition data on chromosomal aberrations were reviewed and effects of the nuclear accident on the birth weight and the sex ratio at birth were investigated.

Results: No significant effect on cancer incidence was observed, but the spatial distribution of adolescent thyroid cancer in the years 1990-2004 was consistent with a small additional effect of the fall-out in the expected magnitude. An even less clear tendency was seen for leukaemia.

Claims of an increase in trisomy 21 in other European countries do not seem very consistent. Austrian data do not indicate an increase in trisomy 21 but surprisingly an increase in other aneuploidies was observed in 1987. There was no influence on the sex ratio at birth. When the first trimester coincided with the 4 months after the nuclear accident there was a small but significant reduction in birth weight although there was no clear pattern in the spatial distribution of the effect.

Conclusions: None of the findings is proof for a causal impact of the nuclear accident. On theoretical basis some minor effects are to be expected and findings are on the whole consistent with this expectation.