

Institut für Sozial- und Präventivmedizin • ISPM

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Zusatzinformationen zum Seminar vom Donnerstag, 26. August 2009, 16:00 Uhr



Prof. Maria Blettner

Maria Blettner is the director of the Institute for Medical Biomathematics, Epidemiology and Informatics at the University of Mainz. Her main research areas are statistical methods in epidemiology and radiation and cancer epidemiology. She is vice chairperson of the cancer registry of Rhineland-Palatinate and Member of several scientific councils like the German Medical association, the International Agency for Research on Cancer or the International Commission on Radiological Protection. As an author for more than 200 peer-reviewed papers and editor for several Journals, she is always interested to improve epidemiologic and statistical work and publication.

A Cohort Study of Childhood Cancer Incidence after Postnatal Diagnostic X-Ray Exposure

Ionizing radiation is an established cause of cancer, yet little is known about the health effects of doses from diagnostic examinations in children. The risk of childhood cancer was studied in a cohort of 92.957 children who had been examined with diagnostic X rays in a large German hospital during 1976–2003. Radiation doses were reconstructed using the individual dose area product and other exposure parameters, together with conversion coefficients developed specifically for the medical devices and standards used at the radiology department. Newly diagnosed cancers occurring between 1980 and 2006 were determined through record linkage to the German Childhood Cancer Registry. The median radiation dose was 7 μ Sv. Eight-seven incident cases were found in the cohort: 33 leukemia, 13 lymphoma, 10 central nervous system tumors, and 31 other tumors. The standardized incidence ratio (SIR) for all cancers was 0.99 (95% CI: 0.79–1.22). No trend in the incidence of total cancer, leukemia or solid tumors with increasing radiation dose was observed in the SIR analysis or in the multivariate Poisson regression. Risk did not differ significantly in girls and boys. Overall, while no increase in cancer risk with diagnostic radiation was observed, the results are compatible with a broad range of risk estimates.