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UNIVERSITÄT  
BERN

INSTITUTE OF SOCIAL AND  
PREVENTIVE MEDICINE  
UNIVERSITY OF BERN

# Scientific Workshop

Natural background radiation and  
cancer risks in children  
June 5-6, 2018

How studies of background radiation and childhood cancer can improve our understanding of the effects of low-dose ionizing radiation.

## SPEAKERS

**Prof. Richard Wakeford**  
University of Manchester, UK

**Dr. Ausrele Kesminiene**  
International Agency for Research on Cancer  
Section of Environment and Radiation  
World Health Organization, France

**Prof. Mark Little**  
National Cancer Institute  
Division of Cancer Epidemiology and Genetics  
Radiation Epidemiology Branch, Bethesda, Maryland, USA

**Prof. Ole Raaschou-Nielsen**  
Institute of Cancer Epidemiology  
Danish Cancer Society, Denmark

**Dr. Gerry Kendall**  
Childhood Cancer Research Group  
University of Oxford, UK

**Dr. Jacqueline Clavel**  
**Dr. Denis Hémon**  
French Institute of Health and Medical Research (INSERM)  
Paris Descartes University, France

**Prof. Anssi Auvinen**  
**Dr. Atte Nikkilä**  
School of Health Sciences  
University of Tampere, Finland

**PD Dr. Peter Kaatsch**  
**PD Dr. Claudia Spix**  
German Childhood Cancer Registry  
University Medical Center Mainz, Germany

**Dr. Ben Spycher**  
Institute of Social and Preventive Medicine  
University of Bern, Switzerland

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**Register by April 30 at**  
[http://www.ispm.unibe.ch/about\\_us/events/radiation](http://www.ispm.unibe.ch/about_us/events/radiation)

**Venue**  
ISPM Bern  
Seminar Room  
Mittelstrasse 43  
3012 Bern  
Switzerland

**Contact**  
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## Background and Objectives

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It is well established from studies of atomic bomb survivors and other exposed groups that medium to high doses of ionising radiation can induce cancer. Furthermore, children are known to be more sensitive to radiation. However, the direct epidemiological investigation of cancer risks associated with low dose radiation (<100 mSv) remains a major challenge.

Recently, several large record-based studies have investigated associations between the risk of childhood cancer and exposure to natural background radiation. However, the evidence from these studies is mixed.

This scientific workshop will bring together researchers in the field and interested parties from around the world to discuss how epidemiological studies of exposure to background radiation and risk of childhood cancer can improve our understanding of the effects of low-dose ionising radiation.

The first day is organized as plenary sessions followed by a panel discussion that will provide the opportunity to highlight the methodological challenges and discuss the limitations of previous studies.

The second day will be held as round table discussions to debate methodological advances and initiate a multi-national collaboration between the research study groups. The study teams of the recent epidemiological studies will be represented, but the session is open to all interested people.

For more information please contact:  
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## Program

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### Tuesday, 5 June (room 24)

13.00 Welcome & setting the scene  
[Ben Spycher](#)

#### Broader context

Chair: [Matthias Egger](#)

13:15 Epidemiological evidence of cancer risks following exposure to ionising radiation in childhood  
[Richard Wakeford](#)

13:45 Childhood leukaemia and CT scans: Overview of recent epidemiological studies  
[Ausrele Kesminiene](#)

14:15 Methodological challenges of epidemiological research on the effects of natural background radiation  
[Mark Little](#)

14.45 Coffee Break

#### Recent studies on background radiation and childhood cancer

Chair: [Claudia Kühni](#)

15.15 Indoor radon and childhood leukaemia  
[Ole Raaschou-Nielsen](#)

15.35 A record-based case-control study of natural background radiation and the incidence of childhood leukaemia and other cancers in Great Britain during 1980-2006  
[Gerry Kendall](#)

15:55 Background ionizing radiation and the risk of childhood cancer: a census-based nationwide cohort study  
[Ben Spycher](#)

16:15 Coffee break

16.30 Residential Exposure to Natural Background Radiation and Risk of Childhood Leukaemia in France, 1990-2009  
[Jacqueline Clavel / Denis Hémon](#)

16.50 Background radiation and childhood leukemia: A nationwide register-based case-control study  
[Anssi Auvinen / Atte Nikkilä](#)

17.10 Background gamma radiation and childhood cancer in Germany: an ecological study  
[Claudia Spix / Peter Kaatsch](#)

#### Panel discussion

Chair: [Richard Wakeford](#)

17:30 What have we learnt?

19:30 Dinner

### Wednesday, 6 June (room 220)

#### Round table discussion

Chairs: [Anssi Auvinen](#), [Ben Spycher](#)

8:30 Open questions and methodological challenges

10:00 Coffee break

10:30 Possibilities and scope of future collaboration

12:00 Summing up

12:30 Stand-up Lunch / Farewell