MELODI WORKSHOP 2023

Updates on radiation-induced circulatory diseases

Virtual meeting: 30.5.2023 – 2.6.2023

Organised by: The Federal Office for Radiation Protection (BfS)

Registration: MELODI2023@bfs.de

Registration is now open and will close on 07.05.2023. There is no registration fee.

Topics:

- **Epidemiology**
- **Biology**
- **Medical Exposure**
- **Modelling and Data Managment**
- **Cerebrovascular diseases**

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Multidisciplinary European Low Dose Initiative

MELODI is a European Platform dedicated to low dose radiation risk research. In 2010 MELODI was founded as a registered association with 15 members.

Preliminary program

Intro session

- S. Salomaa: summary Sitges and open questions (MELODI)
- D. Laurier: ICRP activities for a better consideration of cardiovascular risks in radiological protection (ICRP TG119, MELODI)
- N Hamada: Radiation effect classification and insights from recent studies (ICRP, TG119)
- S. Tapio: UNSCEAR evaluation of diseases of the circulatory system (CircuDis, UNSCEAR)
- J. Huff: CVD and Space radiation (NASA)

Epidemiology

- M. Little: Ionising radiation and cardiovascular disease: a systematic review and meta-analysis (ICRP TG119)
- T. Azizova: Risks of circulatory system diseases in the Russian cohort of Mayak nuclear workers (ICRP TG119)
- LT. Dauer: Million Person study

Medical exposure

- Borm: exposure during radiotherapy (Technical University München)
- W. Tinganelli: FLASH and normal tissue effects
- C. Bergom: Unbreak my Heart: The Beneficial Effects of Cardiac Radiation (Washington University, USA)

Cerebrovascular diseases

- R. Benotmane: CeVD (SCKCEN, MELODI)
- Ch. Ouzounis: BRIDE (Brain Radiation Information Data Exchange, Griechenland))
- I. Grumbach: Mitochondrial Injury in Radiation-Induced Cerebrovascular Disease (University of Iowa, USA)

Biology

- M. Boerma: Biological Mechanisms of Radiation-Induced Cardiovascular Effects (member CircuDis, UNSCEAR)
- J. Fiedler: Modelling human heart biology with novel in vitro and ex vivo approaches (ITEM Fraunhofer)
- R. Ramadan: DNA Methylation Alterations in Fractionally Irradiated Rats and Breast Cancer Patients Receiving Radiotherapy (SCKCEN) (MELODI)
- T. Ebrahinian Chiusa: Low doses of ionising radiation and vascular effects: Focus on experimental studies (IRSN, MELODI)
- I. Schröder: Cardiomyocyte dysfunction upon radiation: a 3D in vitro human risk model (GSI, Darmstadt)
- L. Laiakis: Small molecules in radiation-induced cardiovascular disease (Georgetown University, USA)

Models and data managment

- H. Schöllnberger: Radio-biologically motivated modelling of radiation-risks of mortality from cardiovascular diseases in the Canadian fluoroscopy cohort study and the atomic bomb survivors (BfS, MELODI)
- V. Chauhan: AOP in cardiovascular diseases (Health Canada)
- Ch. Kaiser: Biologically-based risk modelling of cardiovascular disease after radiotherapy: the role of adverse outcome pathways and the MEDIRAD experience (MELODI, UNSCEAR, BfS)