Implications of medical low dose radiation exposure

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Introduction

The evolution of medical science and the growing pace of innovation and deployment of medical technology have led to a situation where most of the artificial ionising radiation exposure of the European population is due to medical procedures. Though most exposures result in low to moderate doses in most tissues, there is a need to evaluate their health effects and optimise dose reduction practices and dose evaluation tools.

MEDIRAD aims to enhance the scientific bases and clinical practice of radiation protection in the medical field and thereby address the need to better understand and evaluate the health effects of low-dose ionising radiation exposure from diagnostic and therapeutic imaging and from off-target effects in radiotherapy (RT).

This 4-year project started on June 1, 2017 and brings together 33 partner institutions from 14 European countries. The multi-disciplinary consortium includes clinical experts, scientists and policy makers in the fields of medical, radiation protection and nuclear research from hospitals, universities and major research centres across Europe.

MEDIRAD Ambitions:

The overall MEDIRAD ambition is to bring together research and development teams of scientists and clinicians in a joint collaborative effort to conduct research and to achieve innovative results that contribute to enhanced protection of patients and medical professionals. The MEDIRAD key research objectives are summarised in the following three pillars:

- **Pillar 1**: Develop innovative tools to increase the efficiency of future radiation protection research activities and support good clinical practice.
- **Pillar 2**: Improve the understanding of low-dose ionising radiation risks associated with major medical radiation procedures.
- **Pillar 3**: Develop recommendations based on the scientific evidence emerging from MEDIRAD's research results and establish procedures and information exchange infrastructures to facilitate professional consensus.

MEDIRAD Work Plan

The MEDIRAD Work Plan is divided into five pillars:

- **WP1: Project management and dissemination**
- **WP2: Impact of low dose radiation exposure**
- **WP3: Epidemiological studies of the consequences of RT and CT scanning**
- **WP4: Breast cancer secondary cancer risk**
- **WP5: Possible health impact of paediatric scanning**

MEDIRAD Consortium

The MEDIRAD consortium includes 33 partner institutions from 14 European countries. The multi-disciplinary consortium includes clinical experts, scientists and policy makers in the fields of medical, radiation protection and nuclear research from hospitals, universities and major research centres across Europe.

MEDIRAD Countries

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