Optimization of Radiation Protection of Medical Staff

Fact Sheet

**Project information**

**ORAMED**

- Grant agreement ID: 211361
- Project website
- Status: Closed project
- Start date: 1 February 2008
- End date: 31 January 2011

**Objective**

The state-of-the-art analysis performed in the FP6 CONRAD project highlighted high extremity doses and a lack of systematic data analysis on exposures to the staff in interventional radiology (IR) and nuclear medicine (NM). To optimize the working procedures in the medical field with respect to radiation protection, a project focussed on improving the knowledge on extremity and eye lens exposures is proposed, combined with an optimization in the use of active personal dosemeters. The first objective is to obtain extensive extremity dose data for staff in IR, with special attention to eye lens doses and the analysis of the radiation protection measures. At the present time there is no suitable dosimeter for eye lens dosimetry. Hp(3) is mentioned as the operational quantity to control the dose limits, but there are no conversion coefficients nor a calibration procedure available. The second objective of the project is to develop a formalism to measure eye lens doses and to design a prototype eye lens dosemeter. IR staff belongs to a specific working group which could benefit from a real time accurate dose assessment. Therefore, the third objective is to study the behaviour of commercial active personal dosemeters under real conditions and to design a prototype that could solve the present problems. In NM the doses to the different parts of the hands will be systematically mapped, with special attention to unsealed therapy sources, aiming to estimate the real dose load of NM workers and to describe appropriate protection measures. The different objectives of this project will be achieved through well coordinated measurement campaigns in European hospitals. Simulations will be performed to determine the main parameters that influence the extremity and eye lens doses and the effectiveness of different radiation protection
measures. The final objective is to develop a program to disseminate all conclusions and recommendations to the interested parties.

Field of Science

/medical and health sciences/clinical medicine/radiology
/social sciences/psychology/cognitive psychology/mental processes/attention
/natural sciences/computer and information sciences/data science/data analysis
/medical and health sciences/clinical medicine/radiology/nuclear medicine

Programme(s)

FP7-EURATOM-FISSION - EURATOM: Nuclear fission and radiation protection

Topic(s)

Fission-2007-3.2-01 - Enhanced safety and efficacy in the medical uses of radiation

Call for proposal

FP7-Fission-2007

See other projects for this call

Funding Scheme

CP - Collaborative project (generic)

Coordinator

STUDIECENTRUM VOOR KERNENERGIE / CENTRE D'ETUDE DE L'ENERGIE NUCLEAIRE

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Activity type: Research Organisations

EU Contribution: € 373 382

Website

Contact the organisation

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Griet Vanderperren (Ms.)

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**Website**

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**Permalink:** [https://cordis.europa.eu/project/id/211361/en](https://cordis.europa.eu/project/id/211361/en)

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