Joint Symposium 22
Radiation Protection + Thyroid + Dosimetry Committee / European Alliance for Medical Radiation Protection Research (EURAMED)
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Session Title
The MEDIRAD Project - Impact on Nuclear Medicine Practice

Chairperson
Glenn Flux (Sutton, UK)

Programme
3 min  Glenn Flux (Sutton, United Kingdom): Introduction - The MEDIRAD Project
28 min  Jan Taprogge (Sutton, United Kingdom): Multi-Centre Clinical Trials Involving Dosimetry of Radioiodine Treatment for Thyroid Cancer
28 min  Uta Eberlein (Würzburg, Germany): DNA Damage and Repair during Radioiodine Therapy within the MEDIRAD Project
28 min  Klaus Bacher (Ghent, Belgium): Hybrid Imaging in Nuclear Medicine - Results from the MEDIRAD Project
3 min  Session Summary by Chairperson

Educational Objectives
1. To understand the requirements and pitfalls of a European multi-centre clinical trial involving dosimetry of radioiodine treatment for thyroid cancer
2. To understand the DNA damage and repair during radioiodine therapy
3. To understand the current use and corresponding dose levels of hybrid imaging systems in Europe

Summary
The MEDIRAD project studies the implications of medical low-dose radiation exposure and thereby addresses the need to better understand and evaluate the health effects of low-dose ionising radiation exposure from diagnostic imaging and off-target effects in radiotherapy. The project received €10 million in funding from the European Commission under the Horizon 2020 programme and started in June 2017. MEDIRAD brings together over 70 scientists from 34 organisations in 14 countries and will end in February 2022. In the preparation phase EURAMED and its individual medical associations provided strategic guidance and input to the development of the project. In the MEDIRAD project, a European multi-centre clinical trial involving dosimetry of radioiodine treatment for thyroid cancer was set up. In this symposium, the different steps for a successful implementation of such a multi-centre study will be discussed. In addition, the results of a clinical study involving DNA damage and repair during these treatments will be presented. Apart from research on therapeutic nuclear medicine, diagnostic hybrid imaging was investigated. The results from conducted surveys and proposed diagnostic reference levels will be discussed.

Key Words
radioiodine therapy, multi-centre clinical trial, DNA damage and repair, hybrid imaging, diagnostic reference levels