

Barcelona, Spain

Joint Symposium 5

Oncology & Theranostics Committee / European Organisation for Research and Treatment of Cancer (EORTC)

Sunday, October 13, 14:30-16:00

Session Title

The Future of Medical Imaging in Precision Medicine

Chairpersons

Lioe-Fee de Geus-Oei (Leiden, Netherlands)

Christophe M. Deroose (Leuven, Belgium / EORTC)

Programme

- 14:30 - 14:50 Uwe Haberkorn (Heidelberg, Germany): The Future of Theranostic Radionuclide Approaches
- 14:50 - 15:10 Guus van Dongen (Amsterdam, Netherlands): Companion Diagnostics in Drug Development
- 15:10 - 15:30 Stefaan Vandenberghe (Ghent, Belgium): Total Body PET-CT for Pharmacokinetic Analysis
- 15:30 - 15:50 Irene Buvat (Orsay, France / EORTC): The Use of Artificial Intelligence in Precision Medicine
- 15:50 - 16:00 Panel Discussion

Educational Objectives

1. To learn about the current innovations which boost the role of Medical Imaging in the era of Precision Medicine
2. To learn about the Theranostic Concept, the Companion Diagnostic Approach and future developments on these topics
3. To hear how new technical innovations, such as total body PET and artificial intelligence, can facilitate abovementioned goals.

Summary

During this joint EANM-EORTC symposium, future perspectives on medical imaging in precision medicine are discussed. The mini-symposium addresses the successes of the theranostic concept in nuclear medicine, how the concept is currently applied in clinical care and reflects on recent developments that hold promise for the future of theranostics. Furthermore, the joint session shows why an image-guided approach - basing treatment decisions on the findings of companion diagnostics - is warranted for a successful future sustainable health care system. The session provides a general overview of current translational research and opportunities for utilizing and harnessing these tools to its full potential. The first total body PET-scanner in the world has recently been launched which makes total body full-kinetic analysis possible, which will definitely give the research on this topic an enormous boost. Last but not least, artificial intelligence has entered the medical arena and its use will continue to expand. The session will be concluded by a lecture on how artificial intelligence can help to facilitate delineation of total body tumour burden for therapy response monitoring according to PERCIST and Deauville criteria.

Key Words

Future, precision medicine, theranostics, companion diagnostics, drug development, total body PET-CT, pharmacokinetic analysis, artificial intelligence, response monitoring, PERCIST