



Special Track Session 14

Translational Molecular Imaging & Therapy Committee

Wednesday, October 8, 09:45 – 11:15

Session Title

Challenge the Expert: How Can Lessons from Radiobiology be Applied to the Design of Clinical Trials?

Moderators

Uta Eberlein (Würzburg, Germany)

Peter Laverman (Nijmegen, Netherlands)

Expert

Julie Nonnekens (Rotterdam, Netherlands): The radiobiologists view

Emmanuel Deshayes (Montpellier, France): The physicians view

Challengers: Radiostars

Simone Kleinendorst (Nijmegen, Netherlands)

Hélène Koch (Lausanne, Switzerland)

Sarah Schumann (Würzburg, Germany)

Wendy Delbart (Brussels, Belgium)

Educational Objectives

1. To understand the key concepts of radiobiology
2. To understand the role of radiobiology in clinical trials
3. Identify the most important challenges in translating biology to clinical practice

Summary

With the increase in number of clinical targeted radionuclide therapy (TRT) trials, the role of radiobiology becoming an increasingly important. However, how to optimally use the radiobiological knowledge is still an open question. In this Challenge the Expert session we will try to answer this question.

Firstly, the concept of radiobiology and the role of biology in the field of TRT will be introduced by a biologist. Secondly, the clinical view on the current challenges in clinical TRT trials will be presented by a physician.

The team of young professional professionals will then challenge these experts with questions and statements to further identify which, and how, key concepts from radiobiology can applied in the design of clinical trials. Several topics such as the role of immunology, relevant animal models, dosimetry, heterogeneity, combination therapy, samples/specimens will be discussed.

Key Words

Radiobiology; clinical trials; dosimetry; translation; dose-effect relationship