Teaching Session 4 - Interactive
Translational and Molecular Imaging Therapy Committee
Monday, October 14, 16:30-18:00

Session Title
Chemical Entities that can Induce a Therapeutic Response in Vivo - Light vs Radioisotopes

Chairpersons
Luigi Aloj (Cambridge, United Kingdom)
Tessa Buckle (Leiden, Netherlands)

Programme

16:30 - 17:00 Tayyaba Hasan (Boston, United States of America): PDT General Overview

17:00 - 17:30 Barış Karakullukçu (Amsterdam, Netherlands): PDT Strategies for Recurrent Head and Neck Cancer

17:30 - 18:00 Mark Konijnenberg (Rotterdam, Netherlands): PDT and the Dosimetry of Light

Educational Objectives
1. Insight in the biological aspects of photodynamic therapy
2. Understanding of clinical indications that could benefit from photodynamic therapy
3. Relate dose response of photodynamic therapy to radioisotope-based therapy

Summary
This teaching session has the intent to enlighten the European nuclear medicine community on the use of photosensitizers to realize photodynamic therapy (PDT). The concept of PDT has been around for many decades and the technology in some cases e.g. oral cavity cancer treatment has already made it into routine care. Surprisingly, these efforts have only penetrated the field of nuclear medicine to a very limited extend. The recent (re)introduction of PDT in the arena of nuclear medicine, has been induced by adding commercial photosensitizers to known targeting vectors that are based on known radiotracers. With the interest in this work expanding it become necessary to define how such tracers may impact clinical care. More specifically what will the implementation of photodynamic therapy be when we often already have access to targeted therapeutic approaches that are based on the use of radioisotopes? As dosing of therapy may provide an answer, questions on how dose effects from photodynamic therapy compare to those of therapeutic isotopes will be addressed.

Key Words
photodynamic therapy, molecular imaging, dose-response, fluorescence