

CME Session 7

Physics + Dosimetry Committee

Thursday, October 21, 15:05-16:35

Session Title

Developments and Challenges in Theranostics

Chairperson

Ana Denis-Bacelar (Teddington, United Kingdom)

Programme

- 15:05 - 15:34 Lioe-Fee de Geus-Oei (Leiden, Netherlands): Where Are We with Theranostic Imaging Today?
- 15:34 - 16:03 Cristina Müller (Villingen, Switzerland): Terbium Radioisotopes for Theranostics, What to Expect?
- 16:03 - 16:32 Mark Konijnenberg (Rotterdam, Netherlands): Quantitative Theranostic Imaging - Challenges and Opportunities
- 16:32 - 16:35 Session Summary by Chairperson

Educational Objectives

1. Where are we with theranostics today?
2. Theranostic potential of novel radionuclides
3. Challenges of theranostic imaging and dosimetry

Summary

This CME session will review the current status of theranostics from a clinical perspective and identify key clinical needs to be addressed with future developments. Next, the theranostic potential of novel radionuclides and the use of novel isotopes such as the family of Terbium isotopes will be discussed in terms of their (dis)advantages and how they can support novel theranostic strategies. Finally, some technical challenges will be addressed such as quantitative imaging for theranostics and how diagnostic PET imaging can be used to predict dosimetry of a therapeutic companion drug to support personalized dose assessment.

Key Words

Clinical theranostics, novel radionuclides, quantitative SPECT and PET imaging, personalized dosimetry