



Plenary Session 4

Tuesday, October 22, 2024, 11:30 - 13:00

Session Title

Trailblazing Trends for Tomorrow's Nuclear Medicine

Chairpersons

Silvia Morbelli (Genova, Italy)

Felix Mottaghy (Aachen, Germany)

Programme

- 11:30 - 11:45 **Stefano Fanti** (Italy): Extended Field of View PET: Managing Expectations
- 11:45 - 12:00 **Philippe Lambin** (Maastricht, Netherlands): Nuclear Medicine as a Pillar of Precision Oncology - Marie Curie Lecture
- 12:00 - 12:15 **Tobias Maurer** (Hamburg, Germany): Nuclear Medicine in the Operating Room: Present and Future
- 12:15 - 12:30 **Piotr Slomka** (Los Angeles, USA): AI in Clinical Routine: Are We Ready?
- 12:30 - 12:45 **Isabelle Durand-Zaleski** (Paris, France): How to Meet the Requirements of Health Technology Assessment Keeping Up with Innovation
- 12:45 - 13:00 **Konrade von Bremen** (Bern, Switzerland): The EU Strategy to Guarantee the Future of Nuclear Medicine

Educational Objectives

- To understand the clinical impact of some of the most relevant recent technical innovations in the field of Nuclear Medicine.
- To learn about practical and clinical impact of new PET and SPECT instruments as well as of sophisticated pre- and post-processing approaches.
- To understand the importance of balancing innovation and cost-effectiveness when introducing technical innovation in the clinical ground
- To discuss the European strategy to guarantee the future of Nuclear Medicine

Summary

Nuclear Medicine is witnessing a revolution across a large spectrum of patient care applications, hardware, software and novel radiopharmaceuticals. In recent years some of the most important innovations in the field of nuclear medicine have been related to the approval of several personalized, targeted radiopharmaceuticals for diagnosis and therapy bringing more clarity to clinical management. However, in terms of technical innovations, there's much more already available or upcoming in the clinical ground in Nuclear Medicine.



New hardware technology has been recently made available. Among these innovations, the availability of Total Body PET/Long Axial Field of View PET might represent a groundbreaking opportunity. Indeed, new technology allows us to optimize radiation doses, acquisition protocols, scanning times and overall patient care for diagnosis and treatment. Similarly recent years have been characterized by an increasing use of intraoperative probe utilization allowing minimally invasive techniques targeting the most avid areas of a lesion or other relevant surgery-related issues. Recent years have also been characterized the development of AI in several subfields of Nuclear Medicine impacting administered dose, scan duration, resolution, workflows as well as post processing analysis and thus lesion classification, characterization, and patient risk stratification. All these relevant innovations need now to find a proper spot and role in the clinical setting to meet the requirements of health technology assessment while keeping up with innovation. This complex translation will be discussed during the Plenary Session which will also address the European strategy to guarantee the future of Nuclear Medicine.

Key Words

Long Axial Field of View PET; Interventional Nuclear Medicine; Radioguided surgery; Artificial Intelligence; Health technology assessment