Plenary Session 4
Tuesday, September 12, 11:30–13:00

Session Title
Diagnostic Imaging: Proven Beyond Doubt?

Chairpersons
Pedro Fragoso Costa (Essen, Germany)
Valentina Garibotto (Geneva, Switzerland)

Programme

11:30 – 11:33	Introduction by Chairperson
11:33 – 11:47	**Josée Zijlstra** (Amsterdam, The Netherlands): FDG PET imaging and lymphomas: a proven certainty?
11:47 – 12:02	**Sofia Carrilho Vaz** (Lisbon, Portugal): PET imaging in every oncological guideline: what is still missing?
12:02 - 12:16	**Alexander Drzezga** (Cologne, Germany): Impact without a cure: prospective evidence for diagnostic neuroimaging
12:16 – 12:30	**Danilo Neglia** (Pisa, Itlay): Cardiac imaging: prospective studies and the EURECA registry
12:30 – 12:44	**Mathieu Gauthé** (Grenoble, France): Cost effectiveness molecular imaging studies
12:44 – 12:57	**Jens Kleesiek** (Essen, Germany): Real world data: an answer to all questions?
12:57 – 13:00	Summary by Chairperson

Educational Objectives

1. Identify the current state-of-the art and future tendencies of FDG PET/CT in the management of lymphoma patients.
2. Understand the pathway of including nuclear medicine imaging in oncological guidelines and identify the current body of evidence that is recognized for oncological guidelines.
3. Explain the role of nuclear medicine imaging techniques and their role in the management of neurological diseases.
4. Understand the rationale, methods, and results of the EURECA study and its impact for the management of chronic coronary disease.

5. Identify methods for the evaluation of cost-effectiveness in medical imaging and their application in nuclear medicine imaging.
6. Get acquainted with artificial intelligence methodology and how it can be used to improve the nuclear medicine imaging paradigm.

Summary

The last plenary of the congress will provide insight over the most relevant aspects of nuclear diagnostic imaging topics. It is undeniable that nuclear medicine modalities have gained significant relevance in the management of several diseases.

First, we will have a review on FDG PET/CT in lymphoma. Being an indispensable and multi-faceted tool for clinical care and decision making in patients with lymphoma, FDG PET/CT plays a crucial role in staging, restaging, response assessment, biopsy guidance and identifying immune-related adverse events. Current guidelines on FDG for lymphoma are an example of how PET/CT can become a milestone of patient care. Still on the guideline's topic, we will discuss the successes of implementing nuclear medicine imaging in clinical guidelines and, most importantly, how promising new imaging methods and tracers could have a role to pay in oncological guidelines. Another pilar of nuclear medicine is neuroimaging, with applications such as imaging of cerebral blood flow, imaging of brain metabolism, imaging of neurotransmitter systems, and imaging of other cerebral functions such as amyloid and brain tumour imaging. On the topic of cardiac imaging, we will present the prospective, multicentre EURECA registry. This study assessed the use of imaging and adoption of the European Society of Cardiology Guidelines in patients with chronic coronary syndromes, showing that adhering to the Guidelines, diagnostic yield and therapeutic accuracy were superior. Still with all the clinical gain nuclear medicine imaging has to offer, the mainstream survival of nuclear medicine will be also determined by the cost-effectiveness of nuclear medicine imaging and the impact of these techniques on patient management and in-house costs. Such aspects will also be discussed in this session. Finally, the unstoppable revolution of artificial intelligence has arrived in nuclear medical imaging, as such we will discuss applications, chances and risks of artificial intelligence and how it is already transforming our way of thinking imaging.

Key Words

PET, SPECT, Lymphoma, Guidelines, Neuroimaging, Nuclear Cardiology, Cost-effectiveness, Artificial Intelligence