



LIPS Session 7

Neuroimaging & Paediatric Committee

Monday, October 19, 15:00–16:30

Session Title

Improving Diagnostics and Management of Paediatric Brain Tumours: The Role of PET and Theranostics

Chairpersons

Lisbeth Marner (Copenhagen, Denmark)

Julian Rogasch (Berlin, Germany)

Programme

15:00–15:20 **Sabine Plasschaert** (Utrecht, Netherlands): Clinical Challenges and Current Management of Paediatric CNS Tumours

15:20–15:45 **Diego Cecchin** (Padova, Italy): Imaging of CNS Tumours with PET

15:45–16:10 **Ian Law** (Copenhagen, Denmark): New Advances in Paediatric Neuroimaging: PET/MR and Total-Body PET

16:10–16:30 **Nelleke Tolboom** (Utrecht, Netherlands): Theranostic Potential in Paediatric CNS Tumours

Educational Objectives

1. Understand the main clinical challenges and current management strategies in paediatric CNS tumours.
2. Understand the current role of PET imaging in CNS tumours, including tracer selection, clinical indications, and its impact on diagnosis, treatment planning, and potential response assessment in paediatric populations.
3. Recognise recent technological advances in paediatric neuroimaging, particularly PET/MR and total-body PET, and evaluate how these innovations improve lesion detection, radiation dose optimisation, and whole-body assessment in children.
4. Explore the theranostic potential of PET in paediatric CNS tumours, identifying emerging molecular targets, radiopharmaceutical strategies, and opportunities for personalised treatment approaches based on imaging biomarkers.

Summary

This session focuses on advanced PET imaging in paediatric CNS tumours, highlighting the clinical value of molecular imaging for diagnosis, treatment planning, and response assessment. It presents recent technological innovations such as PET/MR and total-body PET, emphasising improved lesion detection and radiation dose optimisation in children. The session also explores the emerging theranostic potential of PET, addressing molecular targets and personalised treatment strategies in paediatric neuro-oncology.

Key Words

Paediatric CNS Tumours; Amino Acid PET; Theranostics