



CTE Session 7

Technologists and Neuroimaging Committee

Tuesday, October 22, 15:00 - 16:30

Session Title

Brain PET Studies

Chairpersons

Marta Coelho (Essen, Germany)

Diego Cecchin (Padova, Italy)

Programme

15:00 - 15:30 **Donatienne Van Weehaeghe** (Ghent, Belgium): PET-CT neuroimaging – the state of the art

15:30 - 16:00 **Antoine Rogeau** (Lille, France): Tracing the brain disease – radiotracers of choice

16:00 - 16:30 **Marco De Summa** (Rome, Italy): PET-MRI imaging: the next step in the future?

Educational Objectives

1. Present the most commonly diagnosed brain tumours.
2. Overview the clinical targets of the PET-CT neuroimaging.
3. Specify the state of the art of the PET-CT brain imaging.
4. Discuss the characteristics and applications of radiotracers used for PET-CT scanning.
5. Indicate the benefits and limitations of PET studies using different radiopharmaceuticals.
6. Characterize novel radiotracers used for oncologic and non-oncologic purposes considering brain PET-CT studies.
7. Discuss the potential role and limitations of the PET-MRI in brain studies.
8. Differentiate between PET-CT and PET-MRI brain imaging utilities.
9. Indicate the impact of PET-CT and PET-MRI methods on the patients' management.

Summary

Positron emission tomography (PET), computed tomography (CT) and the magnetic resonance imaging (MRI) provide important structural information about the brain pathophysiology. Each method offers the possibility to provide pieces of information considering a variety of brain conditions. Combining sets of data coming from different modalities was a major step in the future of the neuroimaging, resulting in the hybrid imaging development. Over the course of years, both PET-CT and PET-MRI techniques gained multiple clinical applications, depending on the used radiopharmaceutical and protocol of choice. During this session, several professionals will discuss their experience in performing PET-CT and PET-MRI brain imaging, as well as, the drug developments ensuring the most sensitive and specific neuroimaging.

Key Words

Brain; drug development; computed tomography; imaging; magnetic resonance imaging; positron emission tomography; radiotracers