

Mini Course 2

Technologists Committee

Wednesday, October 19, 09:05-10:05

Session Title

Non-Fluoride Cyclotron Production - O15-Water Applications

Chairpersons

Christelle Terwinghe (Leuven, Belgium)

Andras Kedves (Kaposvar, Hungary)

Programme

09:05 - 09:25 **Frederik Cleeren** (Leuven, Belgium): General Design and Challenges of Non-Fluorine-18 Labeled Radiopharmaceuticals

09:25 - 09:45 **Pernille Rafn Hansen** (Copenhagen, Denmark): Cyclotron Production for 15O-Water

09:45 - 10:05 **Kathrine Marie Erenskjold** (Copenhagen, Denmark): Scanning with 15O-Water - From Patient Preparation to Image Reconstruction

Educational Objectives

1. Understand the process of the labelling cyclotron produced radioisotopes
2. Have an insight into the non-fluoride radiopharmaceutical cyclotron production
3. Follow the production of a special radiopharmaceutical (O15-Water)
4. Get introduced to different possibilities O15-Water use in brain and heart diseases
5. Learn how to perform O15—Water scans: patient preparation, scanning details and special features and image reconstructions

Summary

In this session, the role of technologists in the manufacturing and use of non-fluoride cyclotron produced radiopharmaceuticals will be explored.

In the first lecture the audience will hear about non-fluoride cyclotron produced radioactive tracers, as well as the state of the art radiopharmaceuticals in this area. The presenter will guide the audience through the procedure of radioisotope labelling in a general overview.

The second lecture will focus on the cyclotron production of a specific radiopharmaceutical: O15-Water. In this second talk, the details of this special production will be developed and discussed, raising awareness of the audience of the limitations and advantages of the use of this tracer.

Lastly, the third speaker will introduce the practical application of O15-Water in the clinical set, by presenting to the audience the whole procedure, from patient preparation to image acquisition and data collection, and also to image reconstruction details.

The speakers will discuss the applications of O15-Water in the procedure of brain and heart imaging showing practical examples of its application and sharing experiences. Shared experiences will also be a major asset of this session.

Key Words

radiopharmaceuticals, cyclotron, non-fluoride, 15O-Water