



LIPS Session 5

Oncology & Theranostics Committee

Monday, October 19, 08:00–09:30

Session Title

Current and Emerging Imaging Applications in Breast Cancer

Chairpersons

Karolien Goffin (Leuven, Belgium)

Tessa Buckle (Leiden, Netherlands)

Programme

08:00–08:20 **Sofia Carrilho Vaz** (Lisbon, Portugal): FDG PET/CT in Breast Cancer

08:20–08:40 **Géraldine Gebhart** (Brussels, Belgium): FES & HER2 Imaging in Breast Cancer

08:40–09:00 **Philippe Backhaus** (Münster, Germany): FAPI Imaging in Breast Cancer

09:00–09:20 **David Kersting** (Essen, Germany): SSTR and GRPR Imaging in Breast Cancer

Educational Objectives

1. Revise the clinical indications for FDG PET/CT in breast cancer across staging, therapy monitoring, and recurrence assessment.
2. Select the appropriate PET radiotracer based on specific breast cancer subtypes and clinical scenarios.
3. Identify frequent normal variants and pitfalls of FDG and emerging PET radiotracers to mitigate diagnostic errors.
4. Analyze emerging radiotracers to identify and molecularly characterize breast cancer lesions, including their potential for radioligand therapy selection.

Summary

This session provides a comprehensive overview of the current and emerging role of PET imaging in breast cancer. It covers the established clinical indications for FDG PET/CT across different scenarios—from baseline staging and therapy response monitoring to recurrence assessment—in line with updated EANM recommendations. The session also highlights current evidence on the diagnostic accuracy of molecularly targeted PET tracers, including FES, HER2, FAPI, SSTR, and GRPR, identifies existing knowledge gaps, and outlines appropriate clinical indications. Normal variants, potential pitfalls, and the emerging diagnostic potential of each tracer are addressed, along with the opportunity to select patients for radioligand or other systemic therapies.

Key Words

Breast Cancer; Imaging; PET; FDG; FES; HER2; FAPI; SSTR; GRPR; Theranostics