

Barcelona, Spain

Teaching Session 2 - Interactive

Radiopharmacy + Inflammation & Infection + Oncology & Theranostics Committee

Sunday, October 13, 16:30-18:00

Session Title

Imaging of Immune Cells

Chairpersons

Peter Laverman (Nijmegen, Netherlands)

Thomas Mindt (Vienna, Austria)

Programme

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|---------------|--|
| 16:30 - 16:35 | Peter Laverman (Nijmegen, Netherlands): Introduction |
| 16:35 - 17:00 | Erik Aarntzen (Nijmegen, Netherlands): Basics of Immune Cells – Expression, Role and Targeting Possibilities |
| 17:00 - 17:25 | Rafael Torres Martin De Rosales (London, United Kingdom): Methods for Immune Cell Radiolabeling |
| 17:25 - 17:50 | Manfred Kneilling (Tübingen, Germany): Imaging of Immune Cell - From Preclinical to Clinical |
| 17:50 - 18:00 | Discussion/General Questions |

Educational Objectives

1. Knowledge of immune cells and their role in various processes
2. Knowledge of cell labeling methods
3. Knowledge of various methods to image immune cells

Summary

With the increasing number of new immuno therapy treatment strategies, understanding of the immune system is becoming more and more essential. Molecular imaging can play an important role in predicting therapy response and selecting patients. In this session the expression of immune cells and their role in various types of cancer will be explained. Also their targeting feasibilities will be discussed. Also, new cell labeling techniques will be reviewed which are beyond the traditional methods such as ^{99m}Tc -HMPAO or ^{111}In -oxine, and will include ^{89}Zr and multimodal labeling strategies. Finally, various examples of immune cell imaging – from preclinical to clinical – will be shown.

Key Words

Immune cells, cell labeling, immune therapy, T-cells, immune checkpoint imaging