

CME 7

Translational Molecular Imaging and Therapy Committee
Monday, October 14, 14:30-16:00

Session Title

Imaging Immune Therapy

Chairpersons

Margret Schottelius (Garching, Germany)
Latifa Rbah-Vidal (Nantes, France)

Programme

- 14:30 - 15:00 Wolfgang Weber (Munich, Germany): Imaging of Immunological Targets
15:00 - 15:30 Caroline Bodet-Milin (Nantes, France): Current State of Imaging in Assessment of Immunotherapy
15:30 - 16:00 Margret Schottelius (Garching, Germany): Emerging Imaging Concepts in Immuno-Oncology

Educational Objectives

1. To review the role of imaging targets in cancer immunotherapy.
2. To give an overview on imaging methods to monitor responses to immune therapy.
3. To describe experimental imaging based-strategies that are currently being tested to assess and potentially predict responses to immune therapies.

Summary

Cancer immunotherapy has emerged as a promising treatment option for a variety of advanced cancers by tapping into the power of the immune system to specifically target malignant tissues. Immunotherapy has shown some notable and prolonged responses in the treatment of tumors. However, responses are variable and frequently delayed, complicating the efficacy evaluation.

Molecular imaging allows whole-body, non-invasive, quantitative and longitudinal visualization of functional processes on a molecular level and can provide additional immune-related tumor responses information beyond conventional morphological (x-ray computed tomography) or functional (magnetic resonance imaging) imaging. Furthermore, molecular imaging can potentially improve patient selection, stratification, and the early assessment of therapeutic response as well as immune-related adverse events.

This session will highlight the potential contribution of imaging approaches to patient selection, treatment monitoring and prediction of response in cancer immunotherapy studies and discusses recent advances in imaging strategies aiming to improve cancer immunotherapy outcomes.

The three lectures of this session will present the different imaging strategies of immunological targets, address several issues including current state of molecular imaging in assessment of immunotherapy and outline the emerging preclinical imaging concepts in immuno-oncology.

Key Words

Immune system, immunological targets, immunotherapy, imaging, response assessment, patient stratification