Joint Symposium 3

Oncology & Theranostics Committee / EORTC
Monday, October 6, 08:00 – 09:30

Session Title

Oncological Response Criteria for PET: Beyond RECIST, EORTC & PERCIST

Chairpersons

Lioe-fee de Geus-Oei (Leiden, Netherlands)
Christophe Deroose (Leuven, Belgium)

Programme

08:00 – 08:20 **Egesta Lopci** (Milan, Italy): The importance of molecular imaging response criteria: rationale and overview of the landscape
08:20 – 08:45 **Cristina Nanni** (Bologna, Italy): Overview of PET response criteria in hematological malignancies (Lymphoma & Multiple myeloma)
08:45 – 09:10 **Wolfgang Fendler** (Essen, Germany): Risk and response assessment in prostate cancer using PSMA-PET
09:10 – 09:30 **Christophe Deroose** (Leuven, Belgium): How to define response for Somatostatin Receptor PET?

Educational Objectives

1. Present the need for validated response criteria for molecular imaging and distinguishing these from morphology based response systems such as RECIST 1.1.
2. Provide an overview [^{18}F]FDG PET response criteria for lymphoma and multiple myeloma.
3. Present the response criteria for PSMA PET in prostate cancer and provide an overview of the evidence that supports their use.
4. Give an overview of the current landscape of imaging response criteria in neuroendocrine tumours and provide a summary of imaging response frameworks for somatostatin receptor PET.

Summary

This joint session between the European Organisation for Research and Treatment of Cancer (EORTC) and the EANM Oncology and Theranostics committee will provide an overview of molecular imaging response criteria. Standardized criteria for assessing evolution of cancer burden in patients are a key part of both clinical care and scientific research. Current frameworks include RECIST (for morphological imaging) and EORTC and PERCIST criteria, developed for [18F]FDG PET. Progressive disease is an often used inclusion criterion in clinical trials and imaging objective response rate, duration of response and imaging progression-free survival or time-to-progression are key end points in clinical trials. Molecular imaging with [18F]FDG PET plays a key role in response assessment in hematological malignancies; the relevant frameworks (including Lugano classification) and their rationale will be demonstrated. Recently, PSMA PET response criteria have been developed and they can strengthen the use of PSMA PET in clinical trials and routine clinical practice.

Finally, somatostatin receptor PET has been a cornerstone of theranostics in neuro-endocrine tumours but no robust response criteria framework has emerged until now. The current state of the field and avenues towards accepted response criteria will be discussed.

Key Words
EORTC; PET; Response criteria; Lymphoma; Multiple myeloma; [18F]FDG; PSMA; Prostate cancer; Promise; Neuroendocrine tumor; Somatostatin receptor; RECIST; PERCIST; Lugano