CME Session 6

Oncology & Theranostics Committee
Monday, October 6, 09:45 – 11:15

Session Title

PET in mCRPC: Toward Multiparametric Multitracer Biomarkers

Chairpersons

Désirée Deandreis (Villejuif, France)
Clément Bailly (Nantes, France)

Programme

09:45 – 10:05 **Irene Burger** (Baden, Switzerland): Evaluating mCRPC with PSMA PET: Strengths and Pitfalls
10:05 – 10:25 **Jean-Mathieu Beauregard** (Quebec, Canada): Multi-Tracer PET/CT for the Characterization and Prognostication of mCRPC: the 3TMPO Study
10:25 – 10:55 **Wolfgang Fendler** (Essen, Germany): Standardised Assessment: Promise V2 and beyond
10:55 – 11:15 **Nina Tunariu** (Sutton, United Kingdom): Multimodal imaging in mCRPC: a game changer

Educational Objectives

1. Overview of PSMA/PET performance in mCRPC for (re-)staging and therapeutic response assessment
2. Exploration of the potential prognostic role of multitracer imaging in mCRPC
3. Overview of novel parameters, response criteria and frameworks for PSMA PET evaluation
4. Understand the complementarity of whole body MRI and PSMA PET in mCRPC

Summary

The development of PSMA PET/CT in the diagnostic management of prostate cancer patients surely represents one of the most relevant recent revolutions in the field of diagnostic imaging. However, some challenges still need to be solved, particularly in the mCRPC (metastatic castration-resistant prostate cancer) setting. While PSMA PET/CT has demonstrated a higher detection rate in comparison to conventional imaging, its real impact on patients' prognosis is still an open question.

Moreover, in the mCRPC setting, PSMA PET/CT presents some limitations in sensitivity and specificity. Due to its heterogeneity, mCRPC may present a mosaic of neoplastic clones, some of which could be PSMA negative, paving the way for multitracer imaging, particularly in those already subjected to multiple lines of treatment, or if neuroendocrine dedifferentiation is suspected.

The assessment of response to therapy in mCRPC patients is also an ongoing, open issue. PSA levels do not provide information about the location and biological behaviors of individual lesions which often display tumor variability in terms of response to therapy. Conventional imaging has limited sensitivity and specificity. Novel parameters and response criteria have been proposed over the past few years with PSMA PET/CT, with promising results.

Unspecific bone uptake represents specific issues for PSMA PET/CT in mCRPC patients. Their misinterpretation could be particularly relevant determining a wrong treatment selection both in terms of timing and type of therapy. An integrated multimodal imaging approach could hypothetically provide the answer to this issue.

Key Words
mCRPC; PSMA; PROMISE criteria; WB MRI