Pre-Congress Symposium 11
Inflammation & Infection Committee
Wednesday, October 13, 09:00-12:00

Session Title
Light in the Dark - Hybrid Imaging in Patients with Sepsis/Bacteremia

Chairperson
Giorgio Treglia (Bellinzona, Switzerland)

Programme
09:00 - 09:25 Anna L. Goodman (London, United Kingdom): Game Intro - Sepsis/Bacteremia and the Questions from Clinicians to NM Physicians
09:25 - 09:55 Andor WJM Glaudemans (Groningen, Netherlands): Level 1 - Diagnostic Yield of FDG PET/CT in Patients with Sepsis/Bacteremia
09:55 - 10:25 Søren Hess (Odense, Denmark): Level 2 - Clinical Impact and Outcome Using FDG PET/CT in Patients with Sepsis/Bacteremia
10:25 - 10:40 Break
10:40 - 11:05 Ilse J. Kouijzer (Nijmegen, Netherlands): Level 3 - Cost-Effectiveness and Proposed Optimal Use of FDG PET/CT in Patients with Sepsis/Bacteremia
11:05 - 11:30 Anne Roivainen (Turku, Finland): Bonus Level - Other Tracers Beyond FDG
11:30 - 11:50 Onofrio A. Catalano (Boston, USA): Next Level - Possible Role of FDG PET/MRI
11:50 - 12:00 Summary by Chairperson: Game Outro

Educational Objectives
1. To describe the current role of hybrid imaging in patients with sepsis/bacteremia;
2. To summarize the diagnostic yield, the clinical impact and cost-effectiveness of FDG PET/CT in patients with sepsis/bacteremia;
3. To investigate the possible role of FDG PET/MRI and hybrid imaging with other tracers than FDG in this setting.

Summary
Bloodstream infections are characterized by high morbidity and mortality. Identification of infectious foci and metastatic infections in patients with sepsis/bacteremia may have a relevant clinical impact, but it remains difficult. In about half of cases of sepsis/bacteremia metastatic infections may be present without signs or symptoms pointing to the areas of interest. Hybrid imaging techniques, such as
fluorodeoxyglucose positron emission tomography/computed tomography (FDG PET/CT), may be very useful to detect infectious foci in patients with sepsis/bacteremia which may otherwise be missed. As unknown foci are associated with increased mortality, increasing the detection of infectious foci (making „light in the dark”) could enable improved source control and result in improved outcomes in patients with sepsis/bacteremia.

This symposium provides first of all an introduction to the clinical problems in patients with sepsis/bacteremia exploring the reasons for using advanced imaging modalities in these patients. The role of FDG PET/CT in this setting is widely discussed including the diagnostic yield of this method and factors influencing its diagnostic performance. Beyond the diagnostic role, this session will underline that FDG PET/CT may have a relevant clinical impact changing the therapeutic management and outcome in patients with sepsis/bacteremia. Furthermore, the optimal use of FDG PET/CT in patients with sepsis/bacteremia is proposed taking into account several factors including the cost-effectiveness of this hybrid imaging method. Lastly, other tracers beyond FDG and the possible role of FDG PET/MRI are discussed.

Key Words
Bacteremia; sepsis; FDG; WBC; PET/CT; PET/MRI