



Joint Symposium 7

Inflammation & Infection Committee / ESICM

Tuesday, October 7, 15:00 – 16:30

Session Title

The Role of Nuclear Medicine Imaging in Intensive Care Unit (ICU) Patients

Chairpersons

Ayah Nawwar (Cheltenham, United Kingdom)

Hendrik Bracht (Bielefeld, Germany)

Programme

- 15:00 – 15:30 **Hendrik Bracht** (Bielefeld, Germany): Infection and inflammation in ICU patients
- 15:30 – 16:00 **Janesh Pillay** (Groningen, Netherlands): Patient preparation, transport logistics and safety
- 16:00 – 16:30 **Elena Romano Gargarella** (Rome, Italy): Diagnostic performance of FDG PET/CT in ICU patients

Educational Objectives

1. To describe the link between the development of critical illness and infection and inflammation
2. To investigate the feasibility of FDG PET/CT in ICU patients
3. To provide specific recommendations regarding patient preparation, transport logistics and safety
4. To evaluate the performance of FDG PET/CT in ICU patients

Summary

FDG PET/CT imaging has become a key tool for evaluating infectious and inflammatory diseases. However, its application in ICU patients is limited, which is surprising since both infection and inflammation have a high prevalence in this patient population. This limited use is caused by the perceived complexity and risk of planning and performing FDG PET/CT in such patients. Recent advances in PET/CT technology, such as long axial field of view (LAFOV) PET/CT systems, have led to a significant reduction in acquisition time and administered activity. Therefore, these technological improvements together with the presence of trained staff could lead to a more routine use of PET/CT in ICU patients. FDG PET/CT results could allow clinicians to detect underlying inflammatory and infection foci, especially in ICU patients with negative conventional imaging, and potentially improve the outcome of this population.

Key Words

Critically ill patients; ICU; FDG; PET; Infection; inflammation