Teaching Session 4  
Oncology & Theranostics Committee  
Accessible on-demand at any time

Session Title  
Immunotherapy - Assessing Organs and Events on $^{18}$F FDG PET/CT

Chairperson  
Nicolas Aide (Caen, France)

Programme  
29 min  Charline Lasnon (Caen, France): Immune Activation on PET - Beneficial or Detrimental?
29 min  Nicolas Aide (Caen, France): Hunting Down Immune Activation and irAEs
29 min  Rodney J. Hicks (Melbourne, Australia): Tricky Cases from Daily Routine Activity
3 min  Session Summary by Chairperson

Educational Objectives  
To be updated on patterns of immune activation to be sought on PET: are they beneficial or detrimental?  
To be taught to seek immune activation and immune-related adverse events  
To illustrate the first two talks, the attendees will be provided with tricky cases from daily routine activity

Summary  
PET reports for therapy monitoring of patients receiving immune checkpoint inhibitors (ICIs) should include therapy response according to validated criteria, presence of signs of immune activation and signs of toxicity, i.e. immune-related adverse events (irAEs). This session will provide the attendees with an update on signs of immune activation, starting with the usual suspect, i.e an increased spleen uptake, which, at the time of the first reports, was thought to be beneficial (reflecting the fact that the lymphocytes have been “unleashed” by the treatment), but has been recently reported to be detrimental either at baseline or when increasing after a few months of treatment.  
The attendees will also be updated on irAEs, especially those requiring withdrawal of ICIs and/or treatment by corticosteroids, e.g colitis and pneumonitis.  
Tricky cases from daily routine practice will be provided.

Key Words  
Immunotherapy; immune checkpoint inhibitors; immune activation; adverse events