CME Session 7

Oncology & Theranostics Committee
Monday, October 6, 15:00 – 16:30

Session Title

Targeted Radionuclide Therapy Accross Various SST Expressing Tumor Models: a new Framework for Rethinking

Chairpersons

Valentina Ambrosini (Bologna, Italy)
David Taïeb (Marseille, France)

Programme

15:00 – 15:20 **Valentina Ambrosini** (Bologna, Italy): The "mild" tumour model (midgut/PPGL/ G1-G2 meningioma/typical lung carcinoids)
15:20 – 15:45 **David Taïeb** (Marseille, France): The "aggressive" tumour model (heavily treated GEP-NET/atypical lung carcinoids)
15:45 – 16:10 **Magdalena Mileva** (Brussels, Belgium): The "highly aggressive" tumour model (SCLC-LCLC/G3 GEP-NET/G3 meningioma/Merckel)
16:10 – 16:30 **Emmanuel Deshayes** (Montpellier, France): When passing the baton to alpha?

Educational Objectives

On successful completion of this activity, participants should be able to:

1. Explain how clinically relevant subclassification into mild, aggressive, and highly aggressive forms can help guide therapeutic strategies and design further studies.
2. Describe the patients who are most likely to benefit from targeted radionuclide therapy in these situations and provide a comprehensive summary of the associated key clinical outcomes.
3. Critically evaluate the potential therapeutic advantages of combination treatment strategies, including alpha-emitting PRRT, across diverse clinical scenarios.

Summary

Targeted radionuclide Therapy (TRT) is a tissue-of-origin agnostic approach. When evaluating response to TRT, it is essential to consider the diverse natural progression of SST-expressing tumours, even in the absence of treatment. For instance, progression-free survival (PFS) varies significantly between G1 and G3 neuroendocrine neoplasms (NEN). Because actively proliferating cells are typically more radiosensitive than slower-growing, indolent tumours, objective response rates (ORR) are often higher in more aggressive tumours. However, this increased sensitivity is offset by shorter PFS, as these tumours tend to repopulate more rapidly following incomplete eradication by treatment. This variability highlights the need to assess more than just target expression when determining treatment strategies. Emerging advances in molecular profiling are expected to further refine tumour subclassification and improve treatment precision. At the heart of precision medicine is the ability to accurately measure and practically apply molecular and clinical data to inform care planning. To elevate the standard of care for patients with NETs, it is essential to foster collaboration among healthcare providers, academic institutions, industry stakeholders, and

professional and patient-centred organizations. These collaborative efforts should drive global initiatives—such as the development of registries and databases, the organization of dedicated symposia and congresses—to support clinical trials, research, and the dissemination of knowledge in the rapidly evolving field of theranostics.

Key Words
Somatostatin receptors; PRRT; PET; alpha