

EVOLVING ROLE OF RADIOLIGAND THERAPY IN NETs

Neuroendocrine tumours (NETs) arise from hormone-secreting cells. **Treatment options vary** and include surgery, somatostatin analogues, radiotherapy, chemotherapy, targeted agents, and peptide receptor radionuclide therapy (PRRT).

+ PRRT IS HERE TO STAY

Building on the results of NETTER-1, the recent COMPETE study consolidated the role of PRRT as a **very effective 2nd line treatment**, with ¹⁷⁷Lu-edotreotide (¹⁷⁷Lu-DOTATOC) showing superior efficacy to everolimus.

Expert experience shows that NETs are **not as rare as once thought**. As patients may live with the disease for many years,^[1] **optimising care needs collaboration** over the whole of the patient's journey.



Build a good team

Partnerships with patients, caregivers & HCPs

Best outcomes achieved with **multi-disciplinary collaborations and shared and informed decision-making with the patient** to support improved, knowledgeable, and better-coordinated/-aligned NET medical teams.^[2]

PAIRING THE RIGHT PATIENT WITH THE RIGHT TREATMENT

Optimising treatment strategies needs an understanding of the clinical trial data and how studies differ.



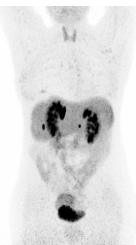
	COMPETE [3]	COMPOSE [4,5]	NETTER-1 [5,6]	NETTER-2 [7]
Tumour type	G1/G2 well-differentiated GEP-NETs	G2/G3 well-differentiated GE-NETs or P-NETs Ki67 ≥15% and ≤55%	G1/G2 well-differentiated, metastatic midgut	G2/G3 well-differentiated GEP-NETs Ki67 ≥10% and ≤55%
Study treatment	¹⁷⁷ Lu-edotreotide	¹⁷⁷ Lu-edotreotide	¹⁷⁷ Lu-DOTATATE	¹⁷⁷ Lu-DOTATATE + octreotide LAR
Comparator	Everolimus	SoC	Octreotide LAR	Octreotide LAR
Treatment line	1 st and 2 nd line	1 st and 2 nd line	2 nd line	1 st line
Efficacy results	Median PFS 23.9 months with ¹⁷⁷ Lu-edotreotide vs 14.1 months with everolimus (p=0.022)	Expected 2027	Median PFS not reached with ¹⁷⁷ Lu-DOTATATE vs 8.4 months with octreotide LAR (p<0.001) Estimated risk of death 60% lower with ¹⁷⁷ Lu-DOTATATE vs octreotide LAR (p=0.004)	Median PFS 22.8 months with ¹⁷⁷ Lu-DOTATATE vs 8.5 months with octreotide LAR (p<0.0001)
Key efficacy outcome	Clinically relevant and statistically significant benefit in PFS vs everolimus	Expected 2027	Markedly longer PFS with ¹⁷⁷ Lu-DOTATATE vs high-dose octreotide LAR alone	Significantly extended PFS with combination vs octreotide LAR alone
Key safety outcome	Well-tolerated with favourable safety results	Expected 2027	Limited acute toxic effects	Consistent with the established profile

Imaging

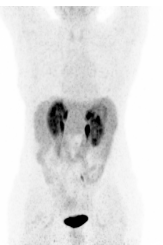
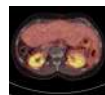
To support diagnosis :

- MRI of the abdomen and pelvis with a contrast agent or CT of abdomen and pelvis with arterial phase of liver
- Somatostatin receptor functional imaging at diagnosis
- Gallium-68 and, in the US, copper-64 radioisotopes at diagnosis
- DOTATATE/DOTATOC PET/CT if surgery indicated, to identify "occult disease"

Patient with P-NET despite multiple treatments, including several surgeries, chemotherapy, SSAs, and everolimus.



Same patient showing complete response after PRRT.



Source: Images kindly provided by Dr Ieva Ciuciulkaite, Dept. of Nuclear Medicine, University Hospital Essen, Germany

Managing adverse events*

- Most important for patients is **nausea during infusion of PRRT**. This is not associated directly with PRRT itself, but adjunct renal-protection agents^[8]
- For regulators, renal dose-effects and potential renal toxicity are fundamental; **there are long-term data to show that PRRTs are renally well-tolerated**^[9]
- For HCPs using maintenance therapy, long term bone marrow function effects are most relevant, although **they are infrequent**^[10]

*Expert opinion

G, grade; GE, gastroenteral; HCP, healthcare practitioner; Ki67, Kiel 67; LAR, long-acting release; CT, computerised tomography; Lu, lutetium; MRI, magnetic resonance imaging; P, pancreatic; PET, positron emission tomography; PFS, progression-free survival; SoC, standard of care; SSA, somatostatin analogue; US, United States.

References

- [1] Stang A, et al. Cancer Epidemiol. 2024;93:102659.
- [2] Singh S, et al. J Glob Oncol. 2016;8:3:43-53.
- [3] Capdevila J, et al. ENETS 2025; abstract #4669.
- [4] Available from: <https://clinicaltrials.gov/study/NCT04919226>. Accessed September 2025.
- [5] Harris PE, Zhernosekov K. Front Endocrinol (Lausanne). 2022;31:941832.
- [6] Strosberg J, et al. N Engl J Med. 2017;376:125-35
- [7] Singh S, et al. Lancet. 2024;403:2807-17.
- [8] Available from: <https://snmmi.org/Patients/Patients/Fact-Sheets/What-is-Peptide-Receptor-Radionuclide-Therapy--PRRT-.asp> Accessed September 2025.
- [9] Baum RP, et al. Theranostics. 2024;14:451-9.
- [10] Sabet A, et al. J Nucl Med. 2013;54:1857-61.

COR2ED
THE HEART OF MEDICAL EDUCATION

September 2025

Go to **COR2ED.COM** for more information and resources

