

Clinical Outcomes following salvage PRRT in Patients with Metastatic Neuroendocrine Tumors

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OBJECTIVES

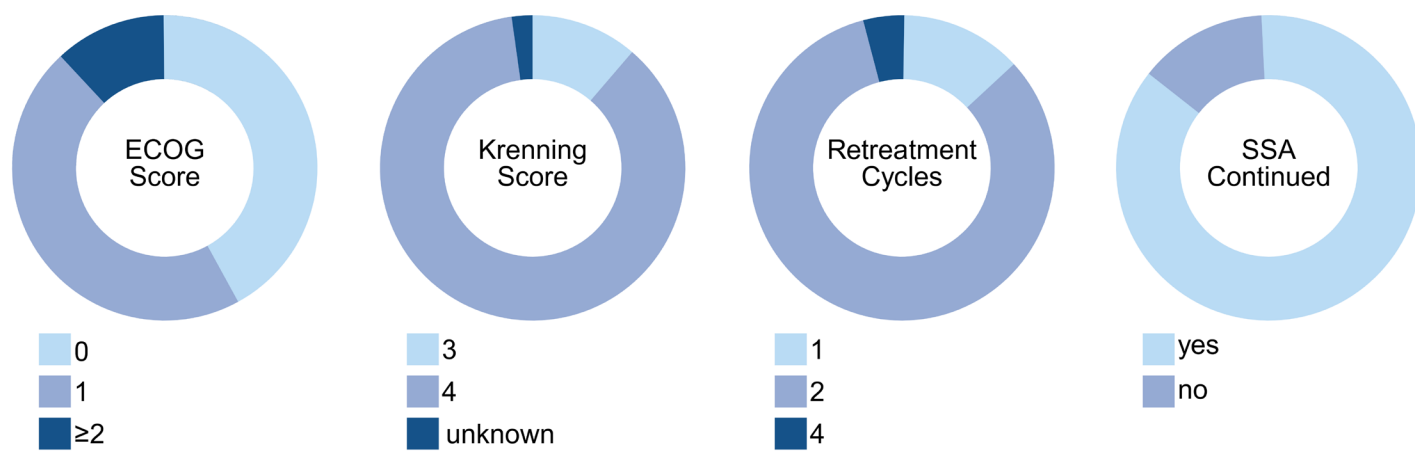
1. Evaluate clinical outcomes after salvage PRRT for metastatic NETs.
2. Identify factors associated with survival outcomes after retreatment.

METHODS

- Design: Retrospective cohort at Mayo Clinic sites (2016–2025).
- Inclusion: Patients with metastatic, well-differentiated NETs who progressed after initial PRRT and were retreated with ¹⁷⁷Lu-DOTATATE.
- Eligibility for Retreatment:
 - Prior clinical benefit and tolerability from PRRT.
 - DOTATATE-avid disease on Ga-68 PET/CT.
- Assessments:
 - Imaging, labs, and clinical records reviewed.
 - Toxicity graded via CTCAE v5.0.
 - Survival analyses and Cox regression in R

COHORT CHARACTERISTICS

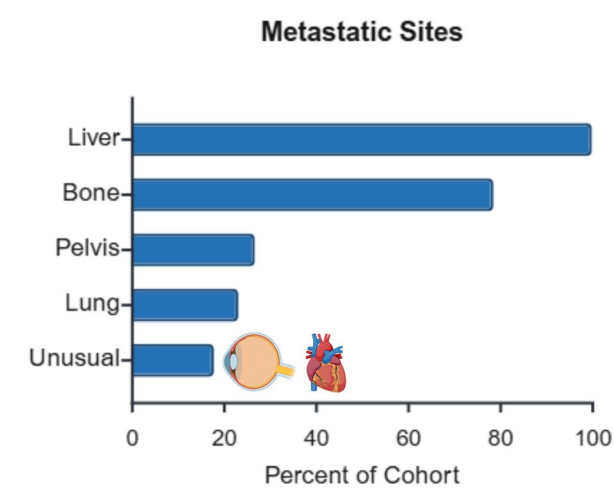
- Final cohort: 56 patients
- Regimen: 1-4 additional cycles PRRT 200mCi (typically 2 cycles)
- Median time from initial PRRT to retreatment: 42 months (range 34-54)



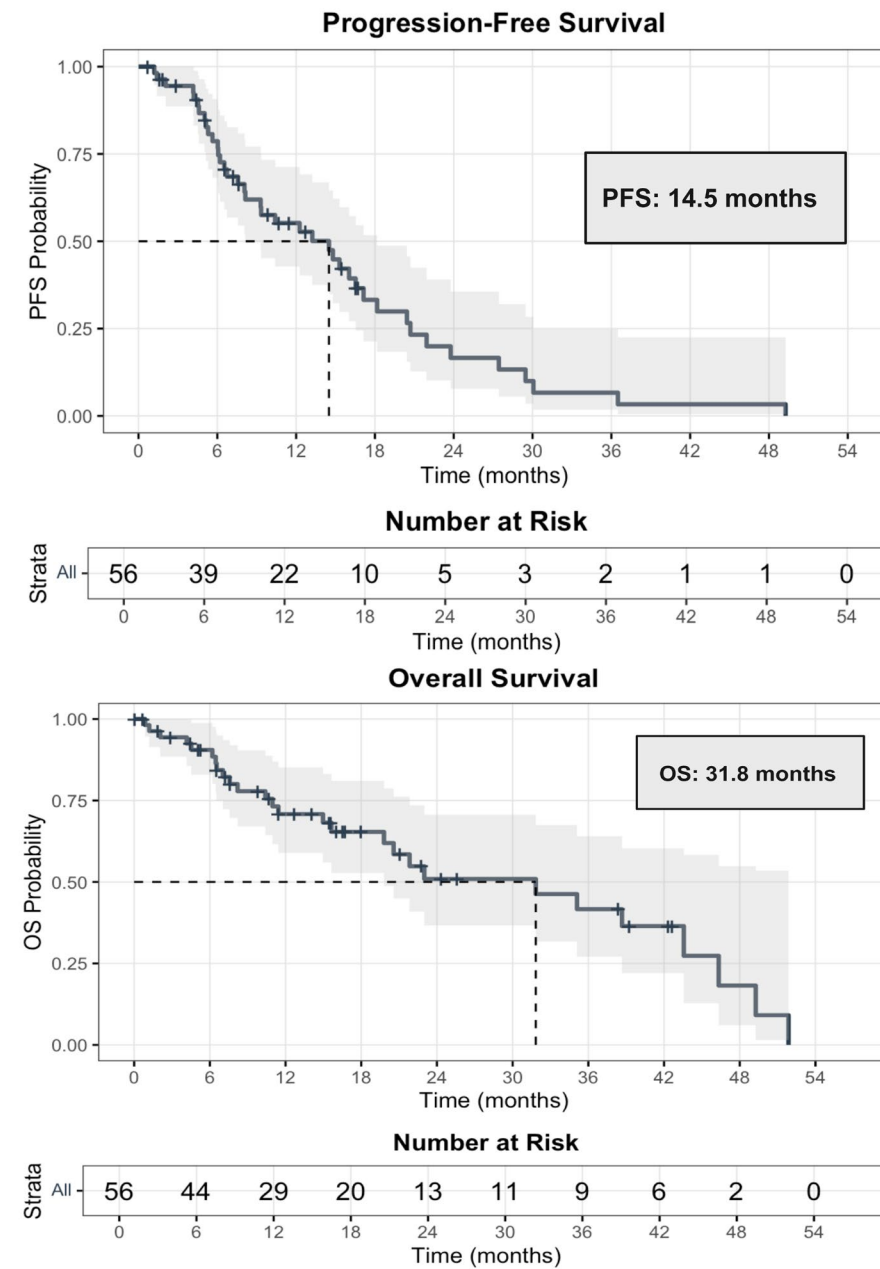
Primary Tumor location	N (%)
Small bowel	28 (50.0)
Pancreatic	19 (33.9)
Other	9 (16.1)

Grade	N (%)
1	14 (25.0)
2	30 (53.6)
3	8 (14.3)
Low	3 (5.4)
Unknown	1 (1.8)

Hormone Secretion	
None	30 (53.6)
Serotonin	21 (37.5)
Gastrin	2 (3.6)
VIP	1 (1.8)
Glucagon	1 (1.8)
Catecholamines	1 (1.8)



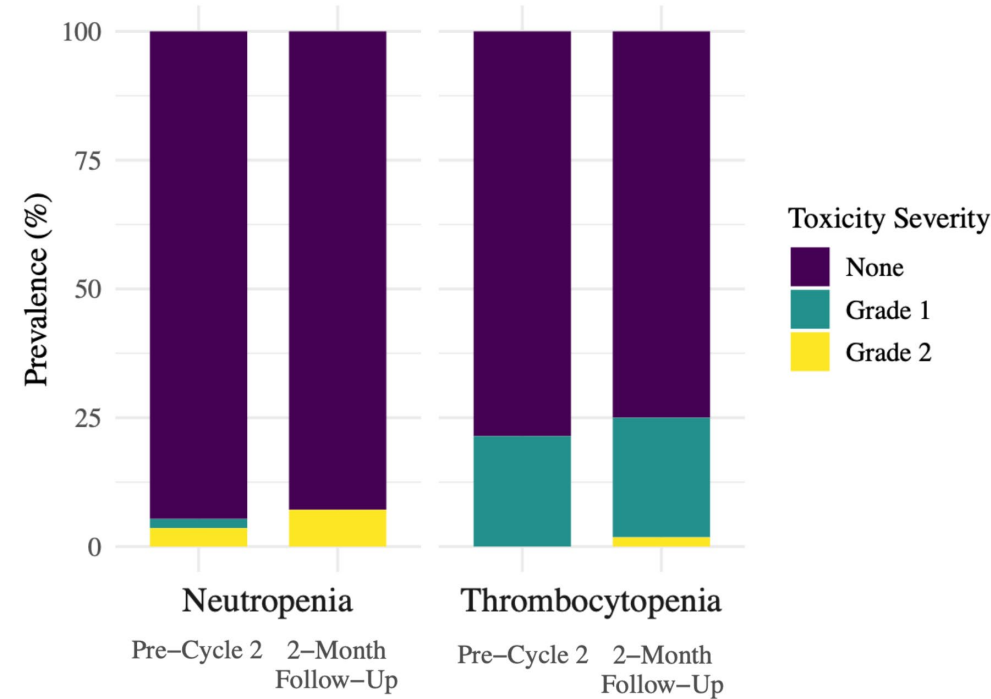
SURVIVAL



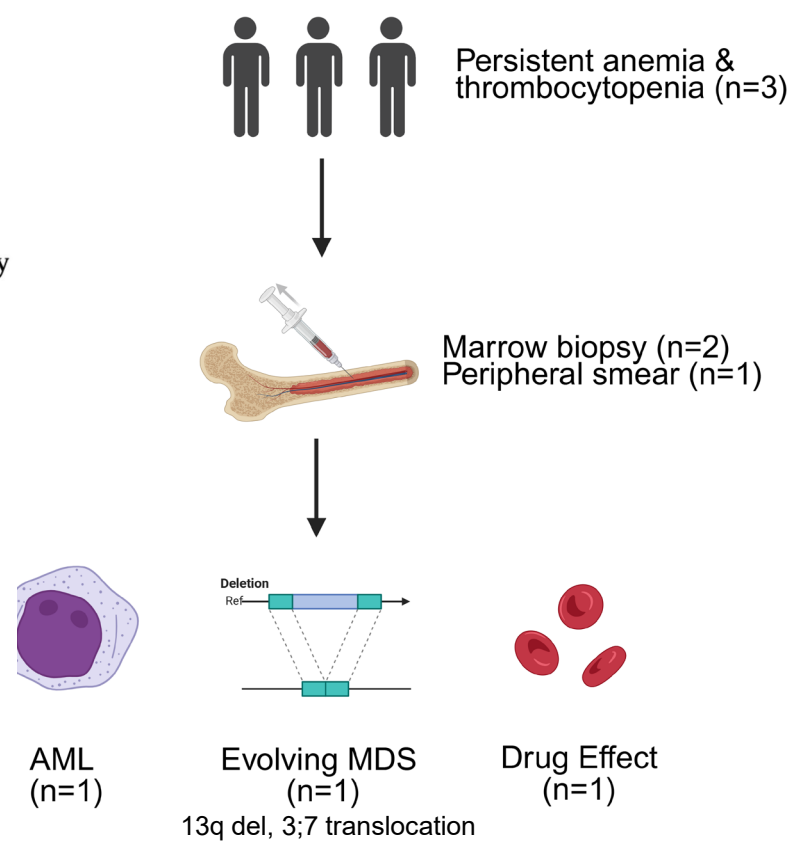
Of 21 patients with hormonally active NETs prior to PRRT retreatment, 12 (57.1%) showed improvement in symptoms, 7 (33.3%) remained stable, 1 (4.8%) worsened, and 1 (4.8%) had an unknown outcome.

TOXICITY

Hematologic Toxicity During PRRT Retreatment



Long-term Bone Marrow Toxicity



RE-RETREATMENT

- 5 patients received 2 additional PRRT cycles after retreatment (total of 8 cycles).
- No acute toxicities observed.
- Outcomes:
 - 3 progressed within 8 months.
 - 2 remained progression-free at 10.3 and 17.0 months.

CONCLUSION

- Retreatment with PRRT is well tolerated and prolongs survival in patients with well-differentiated metastatic NETs.

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