

Efficacy and Safety of Peptide Receptor Therapy (PRRT) 90Y-Dotatoc in Neuroendocrine Tumors (NETs) Patients: Single-Institution Retrospective Analysis



Dioca, M. H.; Ortega Chahla, E.; Ciavarelli, I.; Macharashvili, I.; Adur, A.; Cuartero, V.; E, Rojas Bilbao; Katz, L; Diaz, C. Instituto de Oncología Angel Roffo – UBA. Capital Federal, Argentina

INTRODUCTION: NETs represent a heterogeneous group of tumors characterized by high expression of somatostatin receptors. PRRT represents an effective treatment option for well-differentiated metastatic NETs as it was demonstrated in prospective data (Netter trial). Studies on the use of 90Y-Dotatoc in clinical trials have reported objective response rates in 6%–37% of patients and have shown a positive impact on overall survival (OS), but these trials are highly heterogeneous. The reported median OS is 26-53 months and median progression free survival (PFS) is 13-36 months. Although PRRT is considered to be a well-tolerated treatment, there are risks associated with PRRT including myelosuppression, nephrotoxicity, and hepatotoxicity.

AIM: To describe the clinical characteristics and outcomes of a cohort of patients treated with 90Y-Dotatoc from a single argentinian Institution.

MATERIALS AND METHODS: We performed a descriptive, retrospective analysis of patients treated with PRRT from February 2006 to August 2018. Information was collected from clinical charts and dosing schedules and prescription were obtained from the nuclear medicine department of our institution. Overall survival was calculated using the Kaplan-Meier method.

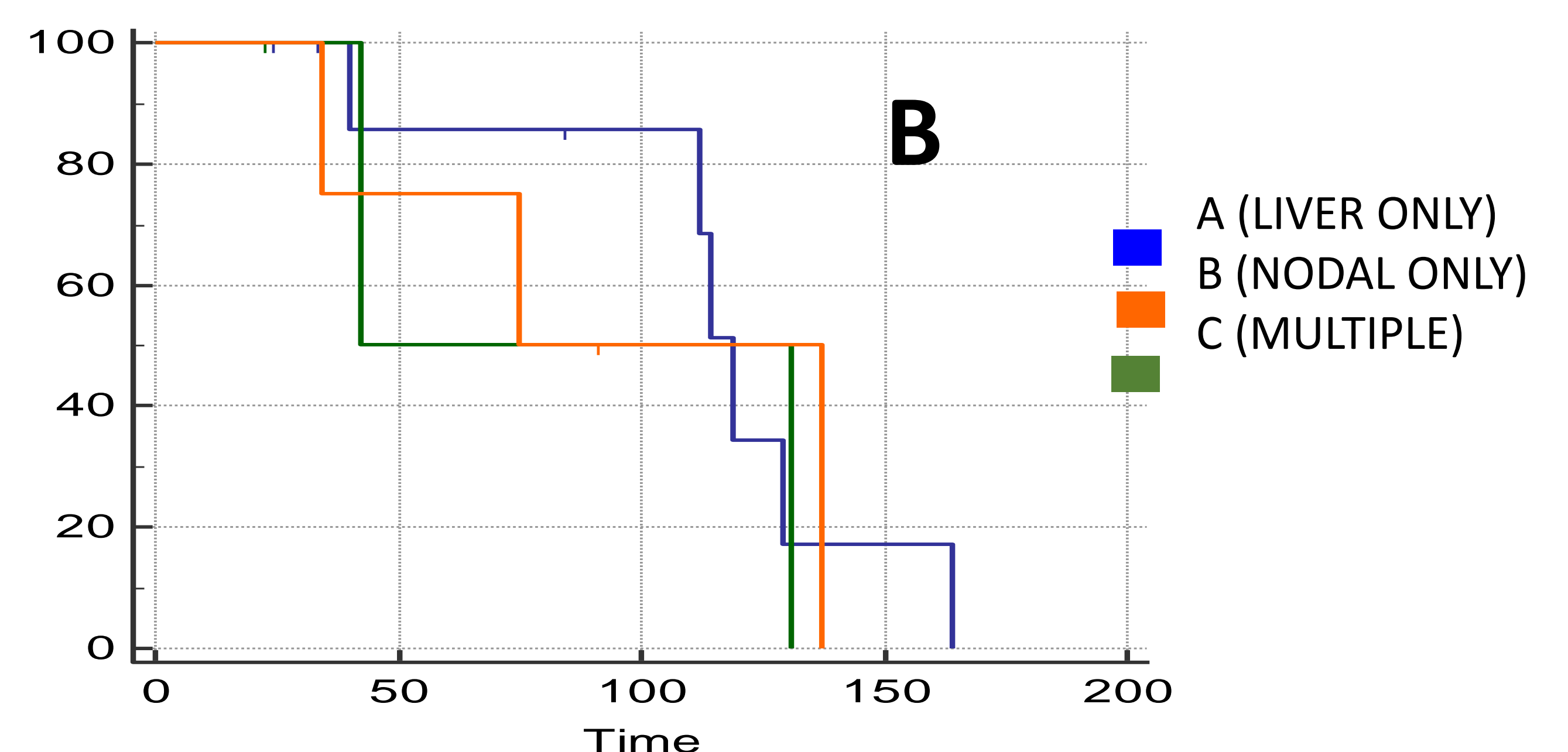
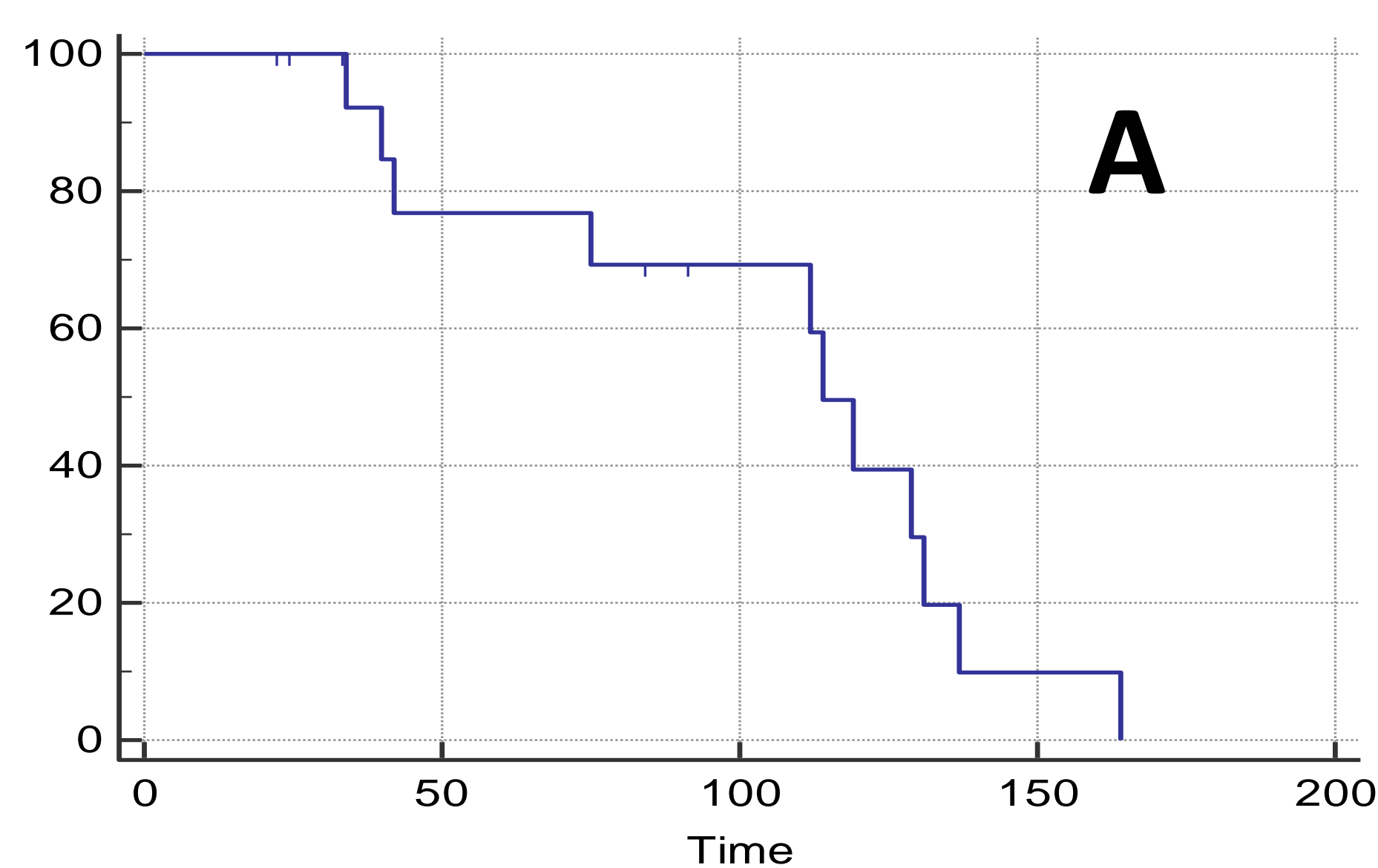
RESULTS: We included a total of 16 patients with diagnosis of GEP-NETs that received treatment with PRRT. Baseline characteristics of the population are described in Table 1.

The median number of cycles received was 2.5 (Range 1-7). No major toxicities were reported.

Median OS is 114 m (CI 95% 75-131m) (Graphic A). According to metastatic site we found for liver only disease, nodal only and multiple sites a median OS 119 m, 42 m and 75m respectively (Graphic B).

Table 1. Baseline characteristics

Age	Median 54,5 y (range 31-75)
Sex	Male 50% Female 50%
Primary site	Pancreas 37,5% Colon 19% Small bowel 12,5% Gastric 6,25% Other 25%
Grade	Ki 67 <3% 50% Ki 67 >3% 50%
Carcinoid syndrome	62%
Elevated Cromogranin A	50%
Surgery of primary tumor	68,75%



CONCLUSION: Studies on the use of 90Y-Dotatoc in clinical trials have reported objective response rates in 6%–37% and OS around 26-53 months. There are still no prospective data with 90Y-Dotatoc. In our cohort, patients with primary pancreatic tumors were 37% and all of them were G1. The selection of treatment with PRRT in this setting was done in absence of other effective treatments available at that time. We achieve carcinoid symptoms control in 90% of patients and a 70% reduction in cromogranin A levels.

We found better median OS in patients with liver only disease. Patients with multiple metastatic sites (mainly small bowel primary tumor) achieve better OS than those with nodal only disease (non-small bowel primary), this could be explained due to primary tumor location.

In our short experience PRRT was feasible, with no mayor concern about acute and late toxicities.

This is the first report of efficacy and safety of PRRT treatment with 90Y-Dotatoc in Argentine NET patients. the results are consistent with previous single institution reports.