

# Budget Impact Analysis of Lanreotide vs. Octreotide in Qatar for Patients with Acromegaly and Gastroenteropancreatic Neuroendocrine Tumors (GEP-NETs)

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**Hamad A\* <sup>1</sup>**, Rohani Z <sup>2</sup>, Rasul K <sup>3</sup>, Al Okka R <sup>1</sup>, Shaheen R <sup>4</sup>, Alharbi M <sup>4</sup>, Magdy H\*\* <sup>5</sup>, El Tohamy H <sup>5</sup>  
<sup>1</sup> Pharmacy Department, National Center for Cancer Care & Research, Hamad Medical Corporation, Doha, Qatar, <sup>2</sup> Endocrinology Department, Hamad General Hospital, Hamad Medical Corporation, Doha, Qatar <sup>3</sup> Medical Oncology Department, National Center for Cancer and Research, Doha, Qatar , <sup>4</sup> HEPA Solutions, Riyadh, Saudi Arabia, <sup>5</sup> IPSEN, Dubai, United Arab Emirates.  
\*presenting author, \*\* Mr. Magdy was previously affiliated with Ipsen but is not currently employed by the organization

## KEY LEARNINGS

Lanreotide is a cost effective option for the treatment of patients with acromegaly and GEP-NETs.

## BACKGROUND

- Acromegaly is a chronic rare disease, caused by persistent hypersecretion of growth hormone (GH), that results in the enlargement of organs and extremities.<sup>1,2</sup>
- Gastroenteropancreatic neuroendocrine tumors (GEP-NETs) are neoplasms that arise from hormone-secreting cells in the pancreas and gastrointestinal tract.<sup>3</sup>
- Somatostatin analogs (SSAs) such as are used in the treatment of acromegaly and GEP-NETs. Both lanreotide and octreotide are recommended for disease and tumor control.<sup>4-7</sup>
- Despite similar efficacy between lanreotide and octreotide, differences in cost and resource use can influence treatment decisions.
- In Qatar, the majority of patients with acromegaly and GEP-NETs who are eligible for SSA treatment are being treated with octreotide, although the introduction of lanreotide may offer a cost-effective option.

## OBJECTIVE

- To assess the financial impact of adopting lanreotide over octreotide for the treatment of patients with acromegaly and GEP-NETs in Qatar, using a 5-year budget impact model from a public hospital payer perspective.

## CONCLUSIONS

- This analysis shows that the adoption of lanreotide over octreotide for the treatment of acromegaly and GEP-NETs is expected to reduce the budget spending to public hospital payers in Qatar. With the same budget spending on octreotide, listing lanreotide could potentially enable more patients to access SSA treatment.

## METHODS

- A budget impact model was developed to assess the financial impact of introducing lanreotide for acromegaly and GEP-NET from a Qatari public hospital payer perspective, over a 5-year time horizon.
- The model's data were sourced from local experts, medical databases, and the national drug list.
- Input parameters included drug acquisition costs, preparation and administration costs, medical resource utilization, and follow-up costs.
- The SSA eligible population over 5 years was estimated from reported prevalence and incidence rates.
- The model compared the budget impact for two scenarios: the current scenario in which 50 patients receive octreotide; and a hypothetical scenario where the 50 patients receive lanreotide.
- To account for uncertainty, a one-way sensitivity analysis was conducted by varying the input parameters for drug and healthcare costs by  $\pm 20\%$ .

## RESULTS

- At the 5-year time point, a total of 50 patients with acromegaly and GEP-NET (28 and 22 patients, respectively) are estimated to be eligible for SSA.
- The annualized per patient cost associated with lanreotide and octreotide was QAR 221,613 (€55,794.34) and QAR 238,760 (€60,111.35), respectively (**Figure 2**).
- The introduction of lanreotide to the formulary would potentially lead to cumulative cost savings of QAR 4,286,750 (€1,079,252.48) over five years for 50 patients (**Figure 3**).
- The budget impact over the years is presented in **Figure 4**.
- The estimated 7% reduction in budget was mainly driven by the lower annual drug acquisition costs of lanreotide compared with octreotide and the lower resource utilization due to reduced nursing administration and monitoring time with the ready-to-use injections of lanreotide.
- One way sensitivity analysis showed consistent savings with lanreotide upon drug cost variation (**Table 1**).

Figure 1. Model structure

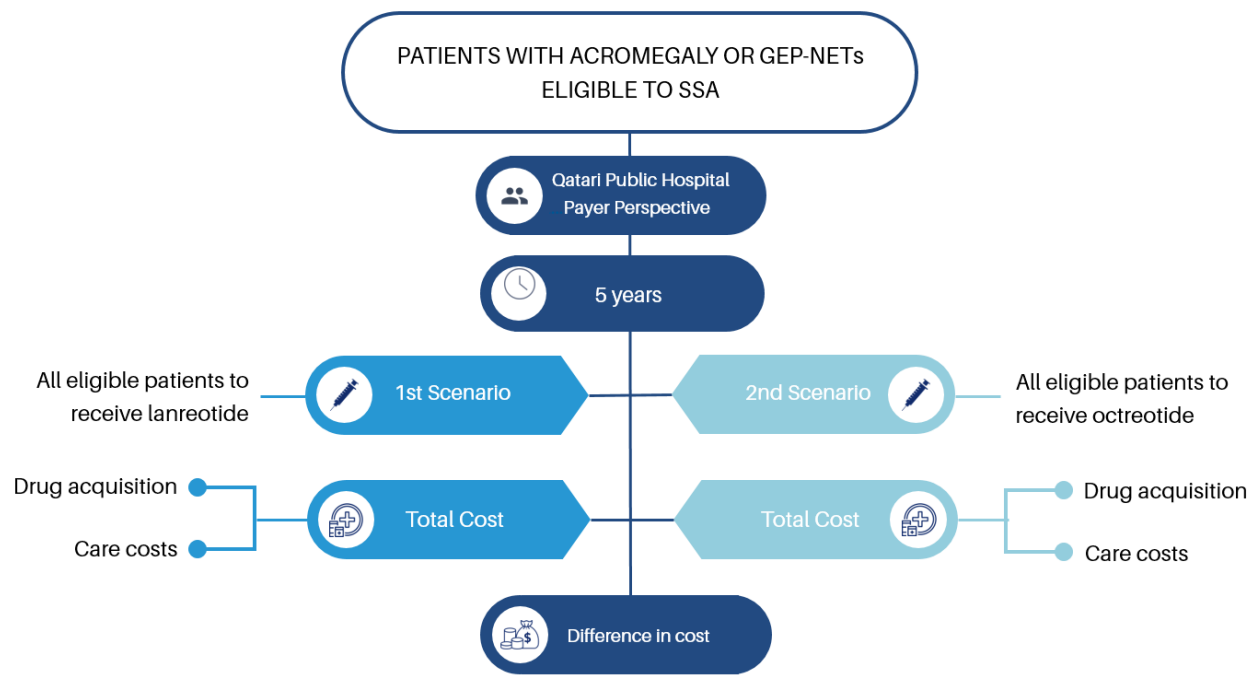


Figure 2. Annualized per patient cost (QAR)

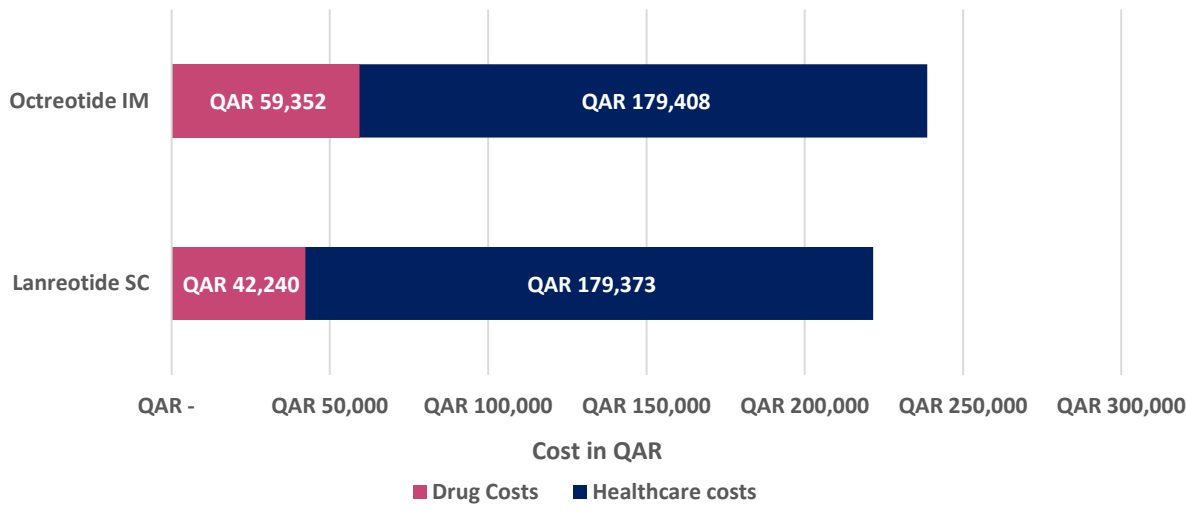


Figure 3. First year cost and cumulative 5<sup>th</sup> year cost per 50 patients (QAR)

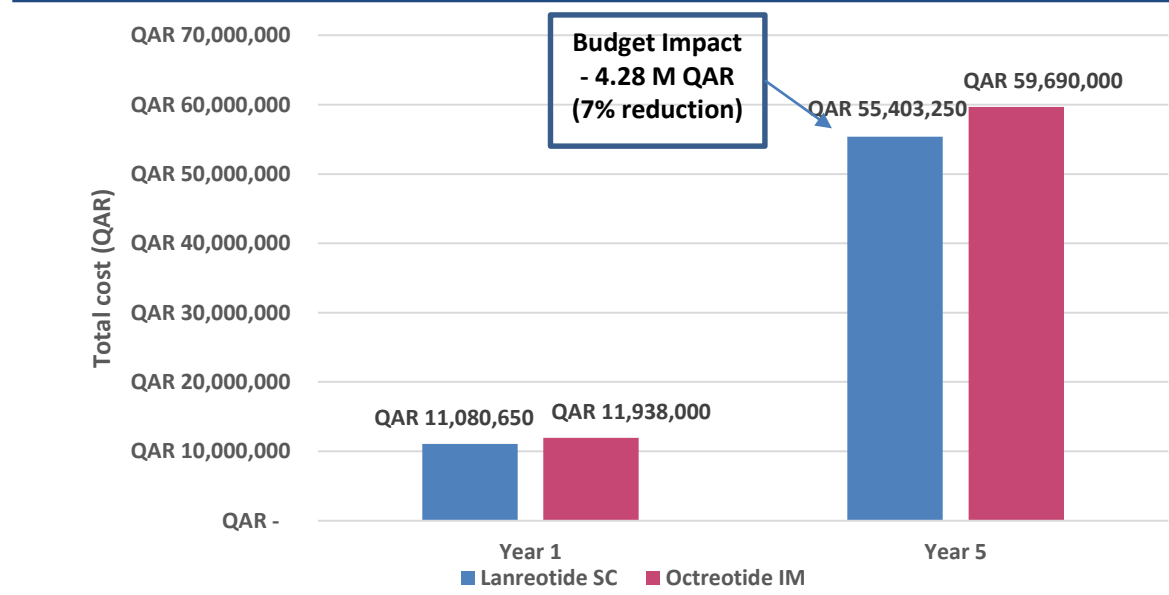


Figure 4. Budget impact over 5 years for 50 patients

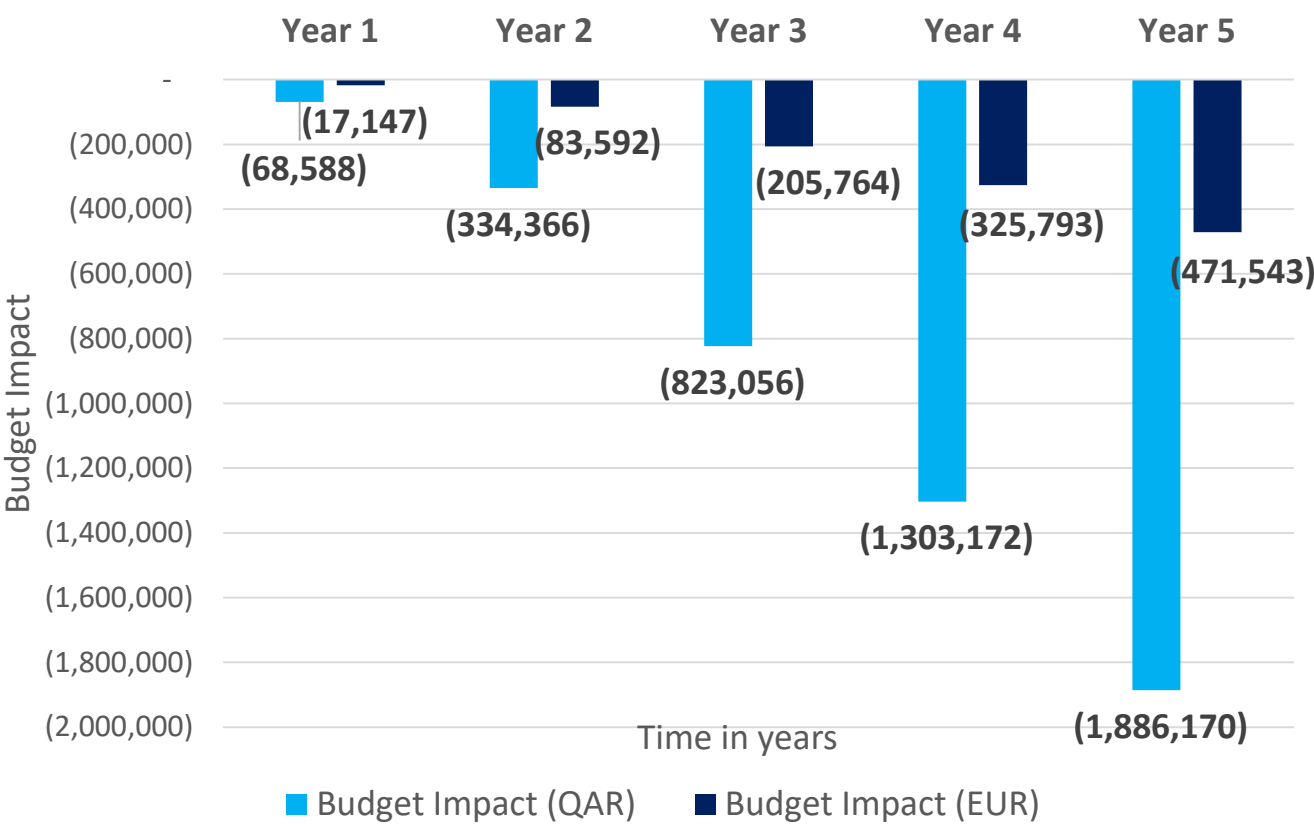


Table 1. One way sensitivity analysis

Parameter	Lanreotide SC (QAR)	Octreotide IM (QAR)	Difference (QAR)	Difference (EUR)
Base Case Analysis for 50 Patients	11,080,650	11,938,000	QAR (857,350)	€ (214,338)
Direct Drug Cost of Lanreotide SC +20%	11,503,050	11,938,000	QAR (434,950)	€ (108,738)
Direct Drug Cost of Lanreotide SC - 20%	10,658,250	11,938,000	QAR (1,279,750)	€ (319,938)
Direct Drug Cost of Octreotide IM +20%	11,080,650	12,531,520	QAR (1,450,870)	€ (362,718)
Direct Drug Cost of Octreotide IM - 20%	11,080,650	11,344,480	QAR (263,830)	€ (65,958)

Abbreviations: EUR, euro; IM, intramuscular; SC, subcutaneous; QAR, Qatari riyal

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