

## Background

- Somatostatin receptor ligands, such as octreotide long-acting release (OCT) or lanreotide depot (LAN), are generally recommended as first-line medical therapies for acromegaly.<sup>1</sup>
  - Dose optimization of OCT or LAN may include dose up-titration or an extended dose interval (EDI).
- Few real-world studies in the United States (US) have assessed dosing of OCT or LAN treatments for acromegaly.

## Objective

To evaluate medication dosing and titration in patients with acromegaly who received OCT or LAN monotherapy injections in clinical settings.

## Methods

- De-identified patient data were extracted from MarketScan®, a US claims database, from Jan. 1st, 2010, to May 31st, 2020.
- Eligible patients had ≥2 claims associated with an acromegaly diagnosis with >30 days between the first and second claim, received monotherapy treatment for acromegaly for ≥90 days, were treated continuously (no prescription gaps >3 months), and had dosage information available.
- The lines of therapy were defined for each patient based on claims information for medical treatments for acromegaly (e.g. prescription dates, days' supply, ingredients, and dose information).
- Outcomes were:
  - Proportion of patients with treatment up-titration (increase in dose or injection frequency);
  - Proportion of patients with dose up-titration resulting in an above-recommended dose (>40 mg for OCT and >120 mg for LAN);
  - Proportion of patients with a starting dose above the recommended starting dose (>30 mg for OCT and >120 mg for LAN);
  - Proportion of patients with an EDI (indicated by prescription of OCT ≤30 mg or LAN ≤120 mg, reported overall for prescription supplies of 6 or 8 weeks), evaluated per treatment.

## Results

- Mean age for patients receiving OCT (N=117) and LAN (N=155) was 51.2 years and 48.8 years, respectively; the OCT cohort was 53% male and the LAN cohort was 50% male.
- Of the patients prescribed OCT, most (n=83; 70.9%) received 20 mg every 4 weeks (Q4W); of the patients on LAN, most (n=107; 69.0%) received 90 mg Q4W (Figure 1).
- While few patients were prescribed the maximum dose of either therapy, more patients receiving OCT started on a higher-than-approved dose in the US (>30 mg; 12.8%) than patients receiving LAN (>120 mg; 1.3% [Table 1]).
- Dose up-titration occurred for 17.1% of patients on OCT vs 15.5% of patients on LAN (Table 1).
- The most common dose up-titrations were:
  - 20 mg Q4W to 30 mg Q4W for patients receiving OCT;
  - 90 mg Q4W to 120 mg Q4W for patients receiving LAN (Figure 2).
- A low proportion of patients on either treatment used an EDI: 4.3% of patients on OCT (95% confidence interval [CI]: 1.4%, 9.7%) vs 7.1% of patients on LAN (95% CI: 3.6%, 12.3% [Table 1]).

## CONCLUSIONS

- Although biochemical control values were not available, low incidence of doses of OCT >30 mg or LAN >120 mg treatment may suggest that acromegaly was generally well-managed with monotherapy treatment; suboptimal dose optimization without achieving biochemical control cannot be excluded either.
- Dose up-titration after initiating treatment was similar to other studies.<sup>2</sup>
- While EDIs are not within label for OCT treatment, EDIs with LAN 120 mg provide similar biochemical control to standard dosing intervals for patients with well-controlled insulin-like growth factor-1 (IGF-1) and growth hormone (GH) levels;<sup>3,4</sup> however, few patients on LAN received this dosing plan, which suggests that EDIs could be offered more often to eligible patients to reduce the burden of injections and healthcare costs.

### Abbreviations

EDI: extended dose interval; LAN: lanreotide depot; OCT: octreotide long-acting release; Q4W: every 4 weeks; US: United States.

### References

1. Giustina A. et al. Rev Endocr Metab Disord 2020;21(4):667-678; 2. Fleseriu M. et al. Pituitary 2011;14(2):184-193; 3. Bernabeu I. et al. Endocrine 2020;70(3):575-583; 4. Fleseriu M. et al. Endocrine Abstracts 2022; 81 P432.

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Figure 1. Dosage of OCT and LAN among patients with acromegaly in the MarketScan® database

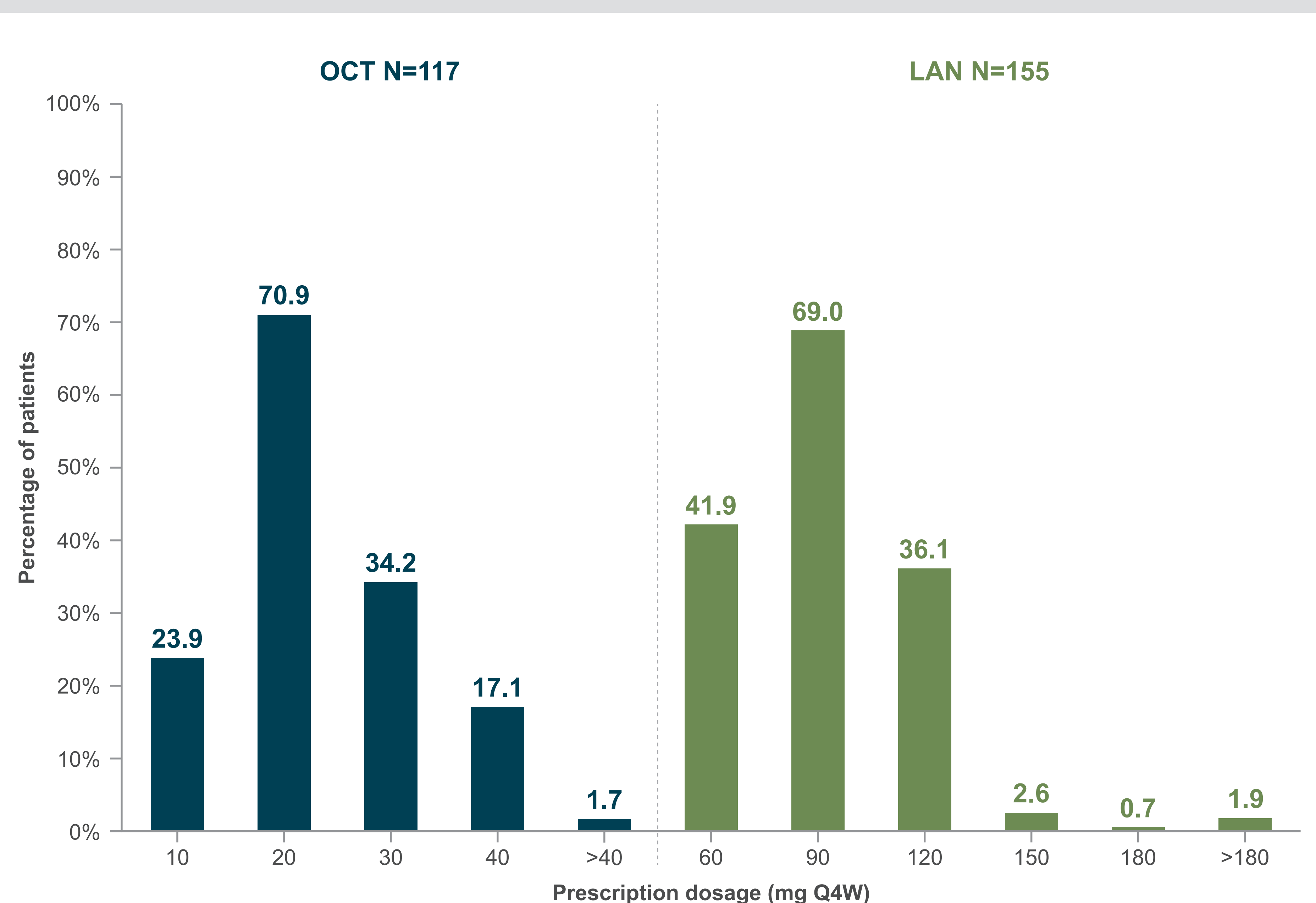
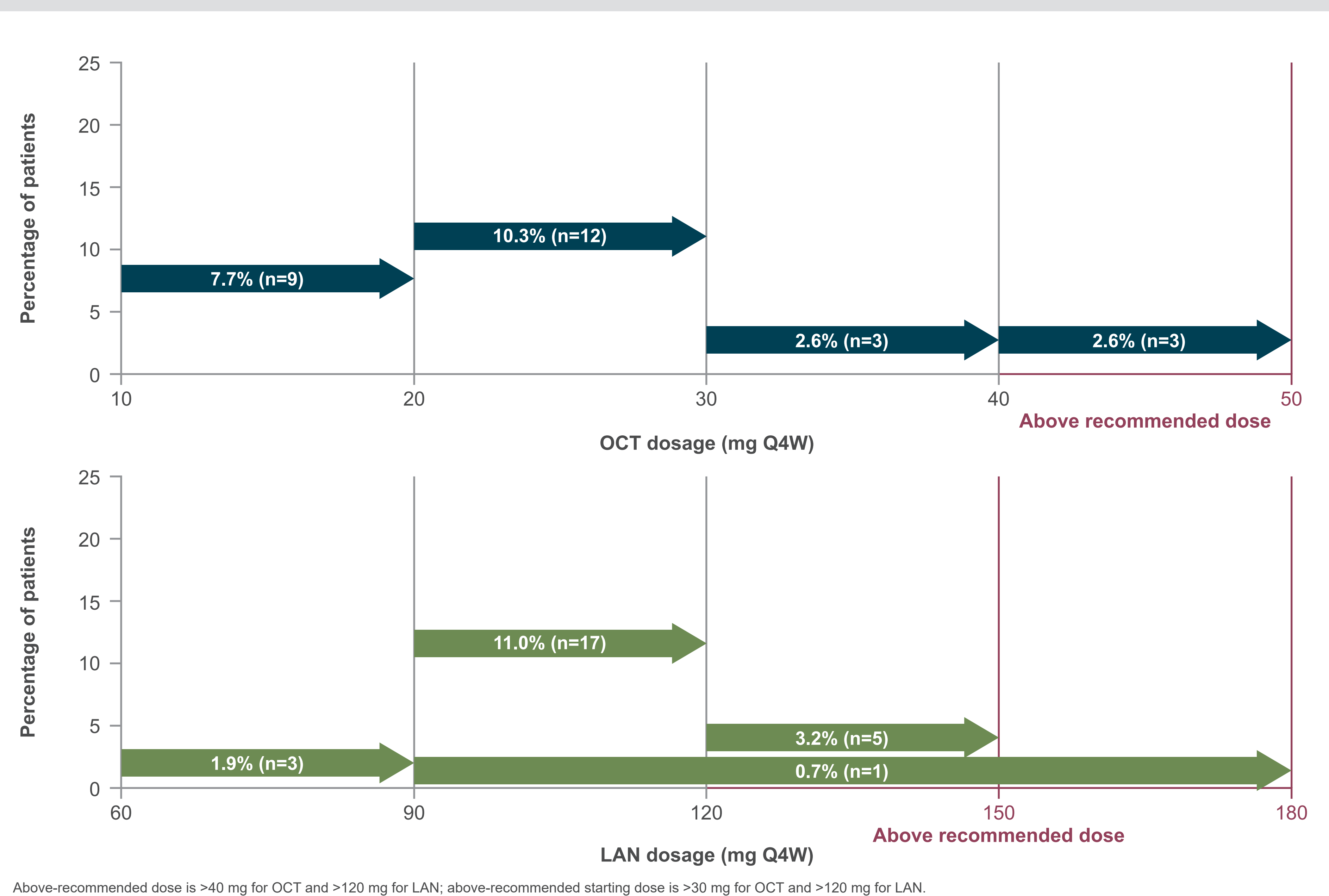


Table 1. Dose up-titration and EDI use among patients with acromegaly in the MarketScan® database

	Patients on OCT (N=117); n (%)	Patients on LAN (N=155); n (%)
Dose up-titration	20 (17.1)	24 (15.5)
Dose up-titration to an above-recommended dose	3 (2.6)	6 (3.9)
Above-recommended starting dose	15 (12.8)	2 (1.3)
EDI total (6 or 8 weeks; ≤30 mg for OCT and ≤120 mg for LAN)	5 (4.3)	11 (7.1)

Figure 2. Dose up-titration among patients with acromegaly in the MarketScan® database using OCT (N=117) and LAN (N=155)



Above-recommended dose is >40 mg for OCT and >120 mg for LAN; above-recommended starting dose is >30 mg for OCT and >120 mg for LAN.