Advances in Therapy

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PEER-REVIEWED INFOGRAPHIC

Patterns of use and clinical outcomes with long-acting somatostatin analogs for neuroendocrine tumors

Harrow et al[1]

BACKGROUND

Neuroendocrine tumors (NETs) are a group of rare malignancies arising from cells in the endocrine system[2,3]

In Europe, the annual age-adjusted incidence rate is approximately 25 per 1,000,000 people, with incidence increasing due to advances in diagnostic techniques[4]

Real-world data comparing patterns of use and clinical outcomes of LAN and OCT are lacking

Treatment for NETs

- Long-acting somatostatin analogs (LA SSAs) are approved as first-line treatment for NETs[5]
- **Lanreotide autogel (LAN)** is approved to treat gastroenteropancreatic (GEP) NETs and the symptoms associated with NETs[5,6]
- **Octreotide long-acting release (OCT)** is approved for the treatment of functional GEP-NETs and advanced NETs of the midgut

STUDY DESIGN

Retrospective cohort study based on administrative claims data

Time period during which included patients initiated treatment with LAN or OCT*

Follow-up period: at least one year of follow-up for all patients

1st January 2009 — 31st December 2016 — 31st December 2017

SNDS[b] Claims Database

Covers ~**99%** of the French population[7]

Included patients

- At least 18 years of age
- Receiving treatment for any NETs[c]
- Receiving an LA SSA for the first time[d]
- Received at least six subsequent dispensings of first-line LAN or OCT during the first year of treatment

Outcomes compared between patients receiving LAN and patients receiving OCT

- Treatment persistence (evaluated by measuring median treatment duration)
- Time to second-line treatment[e]
- Treatment switching (defined as the initiation of a second LA SSA within a maximum of 12 months after the initiation of the first LA SSA)
- Dispensing of pancreatic enzyme replacement therapy (PERT)
- Use of rescue medication
- Average monthly dose above the recommended dose

[a]LAN 60-120 mg, OCT 10-30 mg
[b]Système National des Données de Santé, a national French claims database
[c]Patients with acromegaly or thyrotroph adenoma were excluded from this analysis
[d]Indicated by no LA SSA treatment (identified using product identifier and Anatomic Therapeutic Chemical codes) in the prior 12 months
*Only evaluated in the subgroup of patients with gastroenteropancreatic (GEP) NETs

RESULTS

Included patients

4,417 patients had a NET and were receiving an LA SSA for the first time between 2009 and 2016

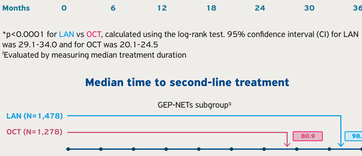
2,327 (52.7%) initiated treatment with **LAN**

Of patients in the GEP-NETs subgroup (N=2,756)
1,478 (53.6%) initiated treatment with **LAN**

2,090 (47.3%) initiated treatment with **OCT**

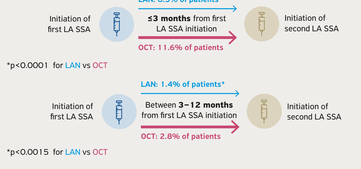
Of patients in the GEP-NETs subgroup (N=2,756)
1,278 (46.4%) initiated treatment with **OCT**

Treatment persistence[f]



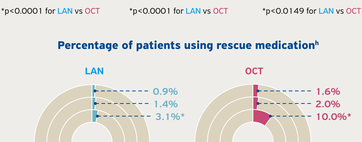
*p<0.0001 for LAN vs OCT, calculated using the log-rank test. 95% confidence interval (CI) for LAN was 29.1-34.0 and for OCT was 20.1-24.5
[f]Evaluated by measuring median treatment duration

Median time to second-line treatment



*p=0.97 for LAN vs OCT, calculated using the log-rank test. 95% CI for LAN was 65.8-NA and for OCT was 69.9-97.0
[g]Analysis limited to the GEP-NETs subgroup due to availability of data

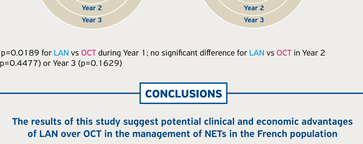
Treatment switching



*p<0.0001 for LAN vs OCT

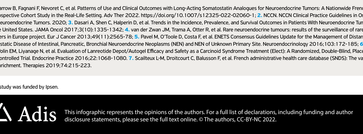
*p<0.0015 for LAN vs OCT

Percentage of patients with average monthly dose per trimester above the recommended dose



*p<0.0001 for LAN vs OCT
*p<0.0001 for LAN vs OCT
*p<0.0149 for LAN vs OCT

Percentage of patients using rescue medication[h]



*p<0.0001 for LAN vs OCT during Year 1; no significant difference for LAN vs OCT in Year 2 (p=0.2042) or Year 3 (p=0.1275)
[h]Defined as the use of a short-acting SSA

Percentage of patients with dispensing of pancreatic enzyme replacement therapy

*p=0.0189 for LAN vs OCT during Year 1; no significant difference for LAN vs OCT in Year 2 (p=0.4477) or Year 3 (p=0.1629)

CONCLUSIONS

The results of this study suggest potential clinical and economic advantages of LAN over OCT in the management of NETs in the French population

These findings should be further explored in specific, controlled studies

REFERENCES

1. Harrow B, Degnard F, Nevoret C, et al. Patterns of Use and Clinical Outcomes with Long-Acting Somatostatin Analogues for Neuroendocrine Tumors: A Nationwide French Retrospective Cohort Study in the Real-Life Setting. Adv Ther 2022; https://doi.org/10.1007/s12325-022-02060-1. 2. NCCN. NCCN Clinical Practice Guidelines in Oncology: Neuroendocrine Tumors. 2020. 3. Dasari A, Shen C, Halperin D, et al. Trends in the Incidence, Prevalence, and Survival Outcomes in Patients With Neuroendocrine Tumors in the United States. JAMA Oncol 2017;3(10):1335-1342. 4. van der Zwan JM, Trama A, Otter R, et al. Rare neuroendocrine tumours: results of the surveillance of rare cancers in Europe project. Eur J Cancer 2011;47(8):1169-1181. 5. Pavel M, O'Toole D, Costa F, et al. ENETS Consensus Guidelines Update for the Management of Distant Metastatic Disease of Intestinal, Pancreatic, Bronchial Neuroendocrine Neoplasms (NEN) and NEN of Unknown Primary Site. Neuroendocrinology 2016;103:172-185. 6. Vinik AI, Wolin EM, Liyanage N, et al. Evaluation of Lanreotide Depot/Autogel Efficacy and Safety as a Carcinoid Syndrome Treatment (Elect): A Randomized, Double-Blind, Placebo-Controlled Trial. Endocrine Practice 2014;6:22-1068-1080. 7. Scailteux LM, Droitcourt C, Balusson F, et al. French administrative health care database (SNDS): The value of its enrichment. Therapies 2019;74:215-223.

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