

Real-World Experience With Therapeutics for ATTR-CM in The Canadian Population



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Material Presented

Gordon Moe;¹ Patrick Haines;² Gabrielle Houle;³ Matthew Dick;³ Ali Tehrani;³ David Danese;^{2*} Michael Heffernan⁴

¹ St. Michael's Hospital, University of Toronto, Toronto, ON, Canada; ² Alnylam Pharmaceuticals Inc., Mississauga, ON, Canada; ³ IQVIA Canada Inc., Mississauga, ON, Canada; ⁴ Oakville Trafalgar Memorial Hospital, Oakville, ON, Canada; *Former employee.

Conclusions

- This study offers valuable insights into the real-world use of pharmacotherapies indicated for the treatment of ATTR-CM in the Canadian healthcare setting.
- High polypharmacy suggests that patients with ATTR-CM have a large medication burden, and may contribute to potential drug-drug interactions
- Patients receiving treatment with Vyndaqel and Vyndamax demonstrated adherence rates that are consistent with previously published findings on real-world adherence to these drugs;⁵⁻⁸ however, persistence could be improved, with only 66.5% of patients on Vyndaqel and 79.5% on Vyndamax persistent on therapy at 12 months post-index.
- Further research with longer follow-up periods and more comprehensive data collection is needed to fully understand the impact of polypharmacy, adherence, and persistence on long-term outcomes and potential benefits of ATTR-CM pharmacotherapies in diverse patient populations.
- Novel ATTR agents with lower medication burden and high adherence and persistence may reduce the overall complexity of ATTR-CM management for patients.

Background

- Transthyretin amyloidosis (ATTR) is a systemic disorder characterized by the deposition of misfolded transthyretin (TTR) protein as amyloid in various tissues.^{1,2}
- ATTR-CM is the cardiac manifestation of ATTR, in which misfolded TTR proteins deposit in the myocardium, causing restrictive cardiomyopathy and progressive heart failure.¹
- Recent advancements in pharmacotherapy have transformed the management of ATTR by targeting the underlying pathophysiology of disease.^{3,4}
- Vyndaqel (tafamidis) and Vyndamax (tafamidis meglumine) are currently approved in Canada for the treatment of adult patients with ATTR-CM.
- It is important to gather post-marketing data to better understand their use in real-world clinical practice.

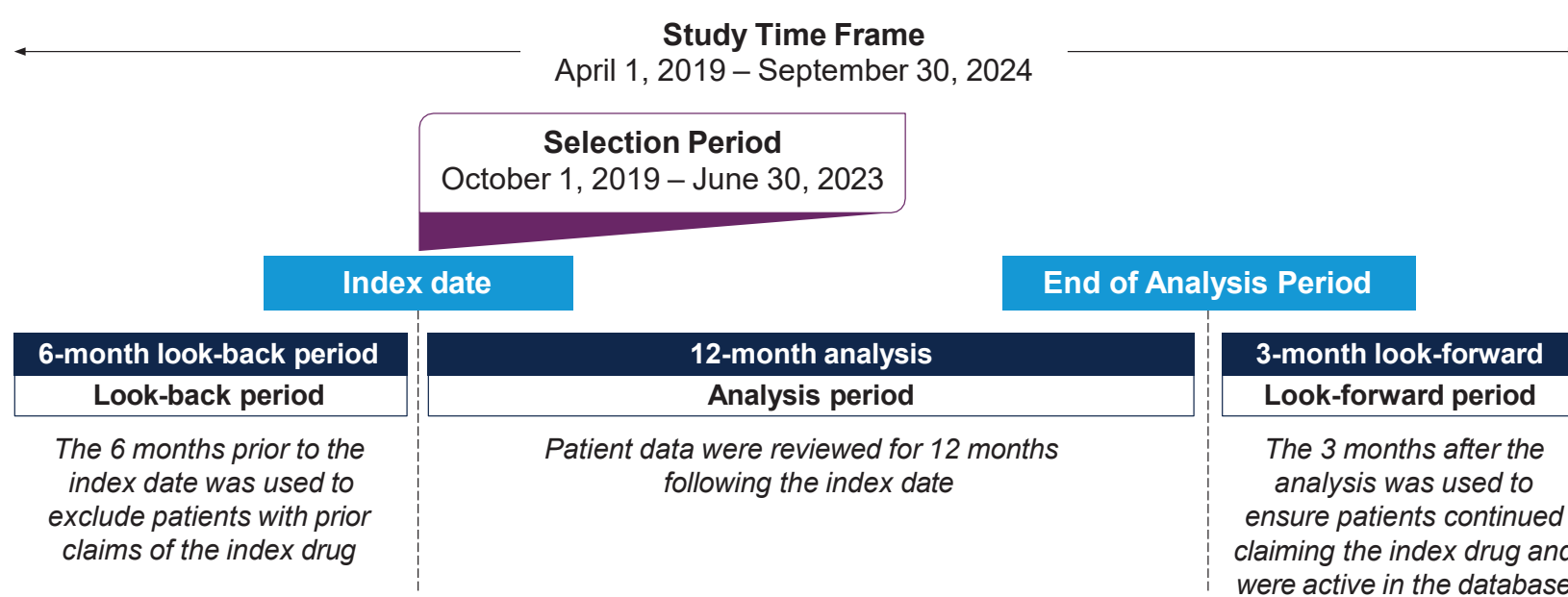
Objective

- This retrospective, observational study aimed to investigate real-world polypharmacy, prior treatment history, adherence, and persistence in Canadian adults initiated on Vyndaqel or Vyndamax.

Methods

- A cohort of Canadian adults initiated on Vyndaqel or Vyndamax (the target pharmacotherapies) from April 1, 2019, to September 30, 2024 (the study period) were identified using IQVIA's Private Drug Plan (PDP) and Ontario Drug Benefit (ODB) claims databases (**Figure 1**).
- Patients who were initiated on Vyndaqel or Vyndamax were characterized in terms of polypharmacy (the number of concomitant medication classes [ATC level 2 classes] captured in the database during the look-back period) and prior treatment history (presence of ≥ 1 claim for the treatments of interest described in **Table 1** during the look-back period).
- Persistence on therapy was defined as the time a patient stayed on a given target pharmacotherapy; patients were considered persistent from their index date until they switched (claimed a target pharmacotherapy other than their index pharmacotherapy after the index date) or stopped (had a treatment gap of more than 90 days between the end of supply of a claim and the start of a subsequent claim) the index therapy.
- Adherence to treatment was described using the medication possession ratio (MPR), which represents the proportion of days a patient had access to their medication during a continuous treatment episode; MPR was calculated for the treatment period in which patients were continuously taking Vyndaqel or Vyndamax with no evidence of switching or discontinuation, from the index date to the last claim date in the analysis period.

Figure 1. Study design and key time periods



Results

Polypharmacy and prior treatment history

- Between October 1, 2019, and June 30, 2023, after excluding patients who were not active on the drug plan in the look-back and look-forward periods, a total of 351 patients initiated one of the target pharmacotherapies in IQVIA's PDP and ODB claims databases (**Table 1**).

- Polypharmacy was observed for a majority of patients, with 55.2% on Vyndaqel and 61.6% on Vyndamax claiming medications from 7 or more ATC level 2 classes.

Table 1. Demographic characteristics, polypharmacy, and prior treatment history of patients newly initiated on target pharmacotherapies

Characteristic	Vyndaqel	Vyndamax
Number of patients, n (%)	239 (100.0%)	112 (100.0%)
Gender, n (%)		
Female	28 (11.7%)	15 (13.4%)
Male	211 (88.3%)	97 (86.6%)
Age (year)		
Mean (SD)	79.5 (6.1)	80.3 (6.8)
Median (IQR)	80 (9)	81 (11)
Payer type, n (%)		
PDP	67 (28.0%)	32 (28.6%)
ODB	172 (72.0%)	80 (71.4%)
Polypharmacy, n (%)		
0-3	25 (10.5%)	9 (8.0%)
4-6	82 (34.3%)	34 (30.4%)
7-9	85 (35.6%)	35 (31.3%)
10+	47 (19.7%)	34 (30.4%)
Prior treatment history, n (%)		
PPAR agonists	3*	0 (0.0%)
Diuretics	198 (82.8%)	91 (81.3%)
ACE inhibitors	56 (23.4%)	27 (24.1%)
ARBs	75 (31.4%)	38 (33.9%)
ARNIs	35 (14.6%)	12 (10.7%)
Beta blocking agents	121 (50.6%)	59 (52.7%)
SGLT2 inhibitors	57 (23.8%)	40 (35.7%)
Vericiguat	0 (0.0%)	0 (0.0%)
ATTR-specific therapy [†]	0 (0.0%)	0 (0.0%)
MRAs	100 (41.8%)	38 (33.9%)

Note: Percentages rounded to one decimal place. In accordance with privacy rules, all cell values of less than 6 patients or claims were masked by attributing a value of 3* to that cell.

[†]ATTR-specific therapy refers to prior use of Vyndaqel, Vyndamax, Onpattro, Tegsedi, or Amvuttra in the look-back period.

ACE, angiotensin-converting enzyme; ARB, angiotensin II receptor blocker; ARNI, angiotensin receptor-neprilysin inhibitor, MRA, mineralocorticoid receptor antagonist; PPAR, peroxisome proliferator-activated receptor; SGLT2, sodium-glucose co-transporter 2.

Persistence on, and adherence to, therapy

- The mean persistence on therapy was observed to be 295.7 days for Vyndaqel and 318.6 days for Vyndamax; at 12 months post-index, 66.5% of patients on Vyndaqel and 79.5% on Vyndamax were persistent on therapy (**Table 2**).
- The average adherence rate was high for both treatments (**Table 3**).
- Similarly, the proportion of patients who were adherent (MPR $\geq 80\%$) was also observed to be high for both treatments (**Table 3**).

Table 2. Mean persistence and proportion of patients persistent at 12 months post-index.

Target pharmacotherapy	Total patients (n)	Mean persistence (days)	Patients persistent at 12 months, n (%)
Vyndaqel	239	295.7	159 (66.5%)
Vyndamax	112	318.6	89 (79.5%)

Table 3. Average adherence to therapy and proportion of patients adherent.

Target pharmacotherapy	Total patients (n)	Average adherence (MPR)	Patients adherent ($\geq 80\%$ MPR), n (%)
Vyndaqel	232	96.0%	189 (81.5%)
Vyndamax	107	98.3%	92 (86.0%)

LIMITATIONS

- While MPR shows that patients obtained a supply of Vyndaqel or Vyndamax, it does not confirm whether the patient subsequently took the medication.
- Patients who did not meet the 12-month analysis period plus 3-month look-forward requirements were excluded, which could introduce survival bias as it may disproportionately exclude patients with shorter follow-up periods, who might have poorer health outcomes.
- The PDP and ODB databases do not contain diagnosis information; the indication of ATTR in this study was inferred based on Health Canada's indications for the studied products.
- The PDP and ODB databases do not capture medications dispensed over the counter, in hospitals, or paid out-of-pocket; it is possible these patients and their claims for medications through these channels were not captured in the data, potentially understating the degree of polypharmacy seen in these patients.

CONFLICTS OF INTEREST STATEMENT

- PH is an employee of Alnylam Pharmaceuticals Inc.
- DD was an employee of Alnylam Pharmaceuticals Inc. at the time the study was conducted.
- AT, MD, and GH are employees of IQVIA, a consulting company that received fees from Alnylam Pharmaceuticals Inc.
- HM has received research grant support and/or speaker/consulting honoraria (e.g., advisory boards) from Bayer, Boehringer Ingelheim, Astra Zeneca, Novartis, Amgen, Novo Nordisk, Eli Lilly, Pfizer, and Alnylam.

REFERENCES

- Fine NM, Davis MK, Anderson K, et al. CCS/CHFS Joint Statement on Cardiac Amyloidosis. Can J Cardiol. 2020;36(3):322-334. doi:10.1016/j.cjca.2019.12.034
- Adams D, Koike H, Slama M, Coelho T. Hereditary transthyretin amyloidosis: progress in a fatal disease. Nat Rev Neurol. 2019;15(7):387-404. doi:10.1038/s41582-019-0210-4
- Griffin JM, Rosenthal JL, Grodin JL, et al. ATTR amyloidosis: management strategies. JACC CardioOncol. 2021;3(4):488-505. doi:10.1016/j.jacc.2021.06.006
- Ando Y, Adams D, Benson MD, et al. Therapy and monitoring of ATTRv amyloidosis. Amyloid. 2022;29(3):143-155. doi:10.1080/13506129.2022.2052838
- Attal S, Kemner J, Alvir J, et al. Tafamidis 61 mg: patient characteristics and persistency. Cardiol Ther. 2024;13(2):369-378. doi:10.1007/s40119-024-00365-6
- Kato T, Ines M, Minamisawa M, et al. Tafamidis adherence in Japan. ESC Heart Fail. 2024;11(5):2881-2888. doi:10.1002/ehf2.14736
- Chung H, Cantu C, Pankratova C, et al. Tafamidis adherence with assistance program. Sci Rep. 2024;14(1):16261. doi:10.1038/s41598-024-62660-5
- Roy A, Peterson A, Marchant N, et al. Tafamidis adherence via specialty pharmacy data. Patient Prefer Adherence. 2022;16:1115-1129.2022;16:1115-1129.

Contact information: Dr. Gordon Moe | gordon.moe@unityhealth.to

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