Real-World Use of Glucagon-Like Peptide 1 Receptor Agonists in Patients with MASLD: A Cross-Sectional Analysis from TARGET-NASH

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Background and Aims

- Glucagon-like peptide 1 receptor agonists (GLP-1 RA) are approved in the United States for diabetes and obesity
- There is considerable interest in using GLP-1 RA in patients with metabolic dysfunction associated steatotic liver disease (MASLD)
- Clinical trials have shown GLP-1 RA are well tolerated, but real-world data from larger cohorts are lacking
- **AIM:** To describe characteristics of patients with MASLD who are prescribed GLP-1 RA, including duration of use and tolerance

Methods

- TARGET-NASH is an ongoing real-world longitudinal observational cohort with >6,000 patients enrolled at academic and community sites in the United States with more than 6 years of median follow up; A subset of these patients administered a GLP-1 RA with a start date ranging from 2020 through 2023
- Patients are enrolled in TARGET-NASH based on a treating physician's diagnosis of MASLD
- Keyword-based language model used to extract causes of treatment discontinuation or disruption from EHR text
- Descriptive data is presented and comparisons of users vs. non-users was conducted using chi-squared tests

Table 1. Patient Demographics

	Non-GLP-1 RA Users	All GLP-1 RA Users
Median Age[1]	59.0	59.0
Female	58%	67%
Non-Hispanic White	68%	76%
Academic Setting	61%	88%
Private Insurance	55%	55%
Duration of Use (years)[2] Median (n)	N/A	2.50 (768)

[1]Age at GLP-1 RA start for GLP-1 RA users and at enrollment for non-GLP-1 RA users.
[2]Counts are based on unique patient-drug combinations, rather than patients.

Table 2. GLP-1 RA Treatment Duration and Reasons for Discontinuation at Baseline/Initiation

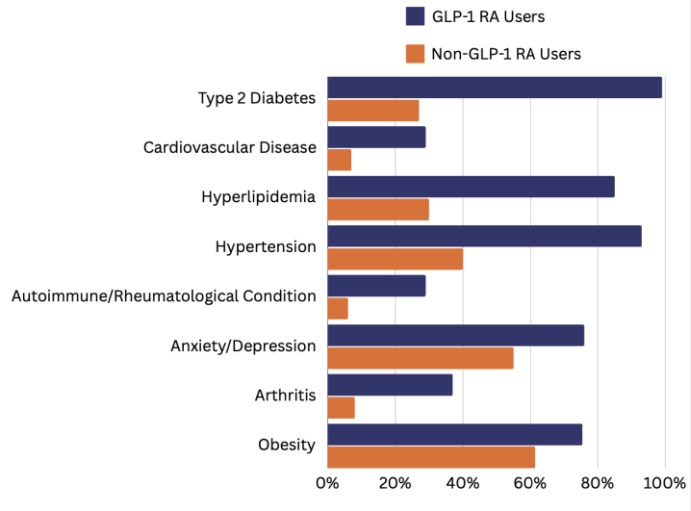
	MASL	MASH	MASLD Cirrhosis	All GLP-1 RA Patients
Adult patient on ≥1 GLP-1 RA medications	109 (9%)	269 (13%)	225 (15%)	603 (13%)
Number of Unique patient-exposures[1]	135	357	278	770
Evidence of Treatment Disruption, Modification, or Discontinuation[2]				
Any Reason Noted in EHR (n)	35 (32.1%)	125 (46.5%)	85 (37.8%)	245 (40.6%)
Adverse reaction or side effect	2 (1.8%)	28 (10.4%)	10 (4.4%)	40 (6.6%)
Cost/Expense	1 (0.9%)	7 (2.6%)	2 (0.9%)	10 (1.7%)
Lack of efficacy/non-response	0 (0%)	4 (1.5%)	3 (1.3%)	7 (1.2%)
Lack of drug availability	1 (0.9%)	0 (0%)	0 (0.0%)	1 (0.2%)
Insurance coverage	4 (3.0%)	7 (2.6%)	5 (2.2%)	16 (2.7%)
Patient Improvement	0 (0%)	1 (0.4%)	0 (0%)	1 (0.2%)
Patient or Provider decision	1 (0.9%)	1 (0.4%)	4 (1.8%)	6 (0.8%)
Switched drugs	6 (5.5%)	39 (14.5%)	15 (6.7%)	51 (8.5%)
Other/Unknown	24 (22.0%)	59 (21.9%)	55 (24.4%)	138 (22.9%)

[1]Unique patient-drug combinations. Exceeds patient N due to multi-drug use among the same patient.
[2]Percentages are calculated based on the adult patients on GLP-1 RA for each disease cohort.

Results

- Across phenotypes, patients were significantly more likely to receive a GLP-1 RA if treated at academic sites, female, and/or obesity class II/III (p<.0001)
- There are significant phenotypic differences in GLP-1 RA usage with MASH and cirrhosis accounting for 82% of GLP-1RA users
- Comorbidities were more common among GLP-1RA users (Figure 1) (p<.0001)
- Duration of GLP-1RA treatment was similar across phenotypes with a median duration of 2.5 years
- Treatment change/discontinuation rarely due to medical reasons (Table 2)
  - Most common reason is switching from one GLP-1RA to another (9%)
  - Only 7% of GLP-1RA users have adverse reactions (primarily GI-related)

Figure 1. Differences in Comorbidities by GLP-1 RA Use



Note: Significant differences were found in comorbidities for GLP-1 RA and non-GLP-1 RA users (p<.0001).

Conclusions

- In TARGET-NASH, 11% of participants were prescribed a GLP-1 RA
- Most users were Caucasian women from age 40-64; despite drug access concerns, insurance type did not differ between users and non-users
- To date, GLP-1 RA use in this real-world cohort appears to be primarily among those with type 2 diabetes
- This real-world population had significant comorbid conditions, with significant differences found between GLP-1 RA users and non-GLP-1RA users
- Despite this, GLP-1 RA were well tolerated with the majority of discontinuations due to non-medical reasons

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