DISCONTINUATION AND PREDICTIVE FACTORS IN PATIENTS TREATED WITH GLP-1 RECEPTOR ANALOGUES: EVIDENCE FROM SICILIAN DISTRIBUTION "PER CONTO" (DPC) DATA (2021-2024).

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Background

GLP-1 receptor agonists are a pharmacological class indicated for the treatment of Type 2 diabetes mellitus (T2DM), for which the prescription and reimbursement criteria by the National Health Service (NHS) is regulated by AIFA (Italian Medicines Agency) prescription Note No. 100. In Sicily, GLP1-RA are dispensed exclusively through the distribution "per conto" (DPC) channel, a community pharmacy distribution model reimbursed by the National Health Service.

Objective

To evaluate 1-year treatment persistence among patients with T2DM residing in Sicily who initiated GLP-1 RA therapy, using dispensing data from the DPC channel, and to identify predictors of treatment discontinuation.

Materials and Methods

- **Design** : Retrospective cohort study based on DPC dispensing data (2021–2024);
- **Population**: "New users" of GLP-1 RAs aged ≥45 years, with 1-year follow-up from the first dispensing (index date).
- **Definition of "new users":** Patients who received their first prescription of a GLP-1 RA during the index period and had no prescriptions for drugs in the same class during the wash-out period.
- **1-year Persistence:** The time elapsed between the first and last dispensing (including the days of coverage of the final supply) without therapy interruptions of ≥60 days.

TIMELINE

Observation Period:
All eligible patients in the index period were observed for 12 months.

01/01/2021 — 01/05/2021 — 31/12/2023 — 31/12/2024

Wash-out period:
Selection of individuals who did not receive GLP-1 prescriptions in the 120 days prior to the index period.

Index Period:
Individuals who received at least one prescription for GLP-1.

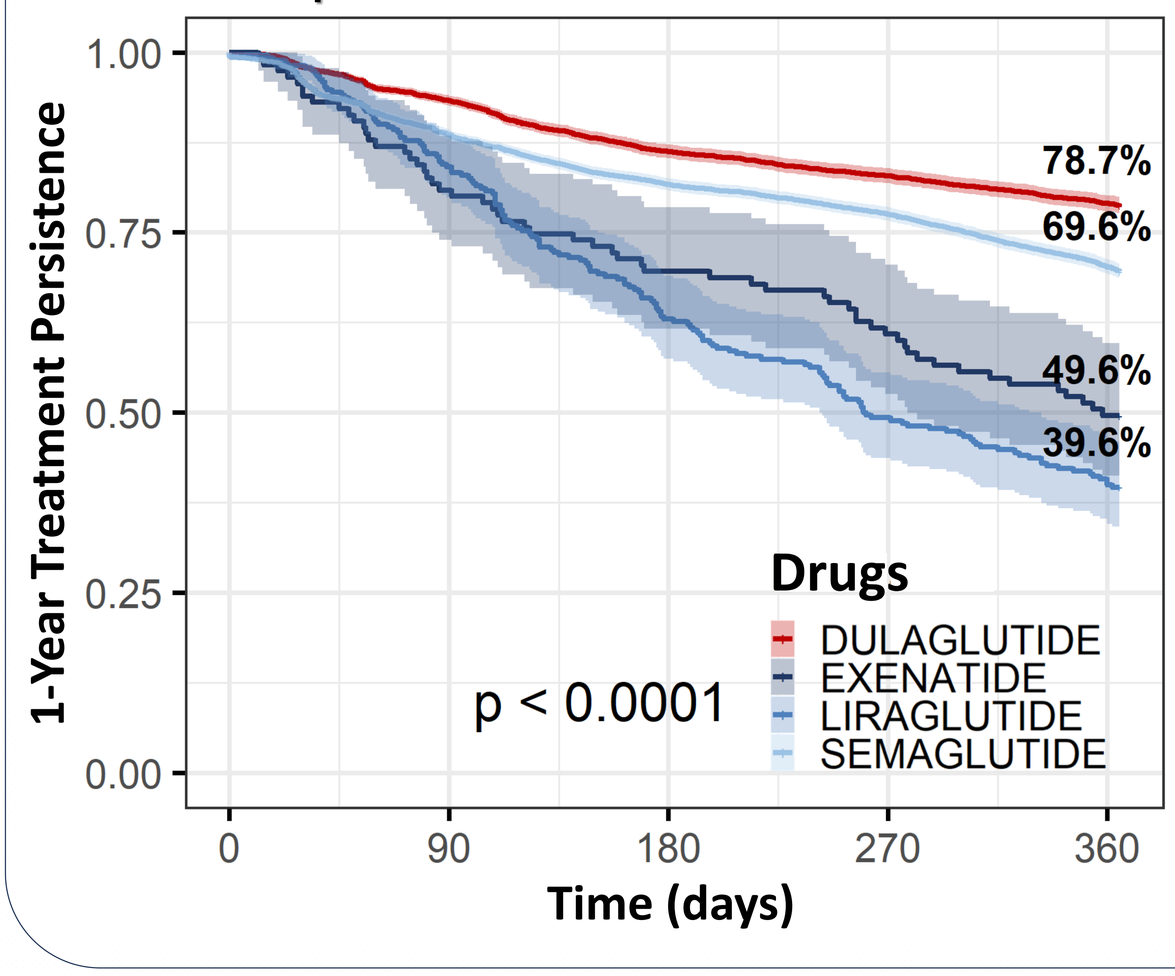
365 Days
Minimum observation period from the final date of the index period.

Results

Sample: **12.468** patients analyzed. Discontinuation events at 1 year: **3.417**.

In the Cox model, the risk of discontinuation was higher for semaglutide (HR 1,56; p < 0,001), exenatide (HR 3,05; p < 0,001), and liraglutide (HR 3,65; p < 0,001) compared to dulaglutide.

Kaplan-Meier curves for GLP1-RA



Cox Regression Model Forest Plot

Variable		N	Hazard ratio	p
Drug	DULAGLUTIDE	4746		Reference
	SEMAGLUTIDE	7370		1.56 (1.45, 1.68) <0.001
	EXENATIDE	109		3.05 (2.32, 4.00) <0.001
	LIRAGLUTIDE	243		3.65 (3.07, 4.35) <0.001
Sex	F	5021		Reference
	M	7447		0.99 (0.92, 1.06) 0.7
Age group	≥80	828		Reference
	45-64	6121		0.62 (0.54, 0.70) <0.001
	65-79	5519		0.72 (0.64, 0.82) <0.001

Compared with patients aged ≥80 years, persistence was higher in those aged 45–64 years (HR 0,62) and 65–79 years (HR 0,72; p<0,001). No significant differences were observed by sex.

Conclusions

Dulaglutide was associated with greater treatment persistence, whereas liraglutide and exenatide showed higher discontinuation rates. Age, rather than sex, was a significant determinant of therapeutic continuity, supporting the need for personalized strategies and closer monitoring in elderly patients.

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