Utilization patterns of glucagon-like peptide 1 receptor agonists in patients with type 2 diabetes in France and Italy

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OBJECTIVE

- To characterize dosing patterns of dulaglutide and subcutaneous (s.c.) semaglutide in adults with type 2 diabetes (T2D) in France and Italy.

CONCLUSION

- In France and Italy, the most common dosage formulations at 12-months post-index were 1.5 mg for dulaglutide users and 0.5 mg and 1.0 mg for s.c. semaglutide users.

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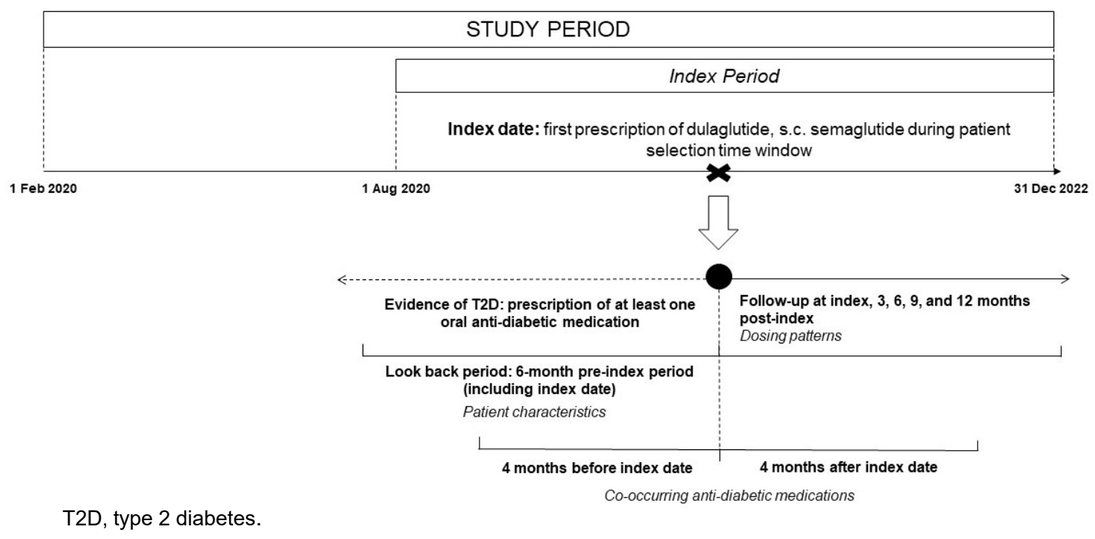
STUDY DESIGN

Figure 1. Study design



T2D, type 2 diabetes.

This retrospective cohort study used IQVIA Longitudinal Prescription Data databases in France and Italy from 1 Feb 2020 to 31 Dec 2022. No minimum follow-up was required, patients only contributed to the analysis at the timepoints during which they were being followed up.

Key inclusion criteria: Adults ≥ 18 years and ≥ 20 years of age in France and Italy, respectively, at the start of their lookback period (6 months pre-index, including index date).

- **Cohort 1 (incident glucagon-like peptide 1 receptor agonist [GLP-1 RA] users):**
  - First prescription for GLP-1 RA of interest during the patient selection window (1 Aug 2020 – 31 Dec 2022).
  - Evidence of T2D as indicated by ≥1 oral anti-diabetic medication in the lookback period including index date
- **Cohort 2 (prevalent GLP-1 RA users):**
  - Dispensation of a GLP-1 RA of interest during the patient selection window.
  - Treatment with any GLP-1 RA therapy in the lookback period.

BACKGROUND

Type 2 diabetes prevalence and burden

- According to the World Health Organization, T2D is a global emergency for high prevalence and elevated healthcare expenses[1].
- T2D is a chronic, systemic and complex disease, often associated with complications such as cardiovascular diseases, retinopathy, nephropathy and neuropathy[1].
- In France, T2D prevalence is 6843 cases per 100,000 persons[2], while in Italy is 9938 cases per 100,000[2].

Clinical guidelines for type 2 diabetes treatment

- The EASD-ADA consensus of 2022 recommends GLP-1 RAs with proven cardiovascular disease (CVD) benefit, such as dulaglutide and subcutaneous (s.c.) semaglutide, for patients with T2D and at high risk for CVD[3].
- Moreover, these medications have both high to very high glucose lowering and weight efficacy, and they are recommended in patients with T2D when losing weight is the focus[3].
- While dulaglutide 0.75 and 1.5 mg, and s.c. semaglutide were launched in both countries in 2016 and 2019[4-7], respectively, the 3.0 mg and 4.5 mg dulaglutide dosages were not available in Italy at the time of data analysis[4].

Table 1. Cohorts baseline characteristics

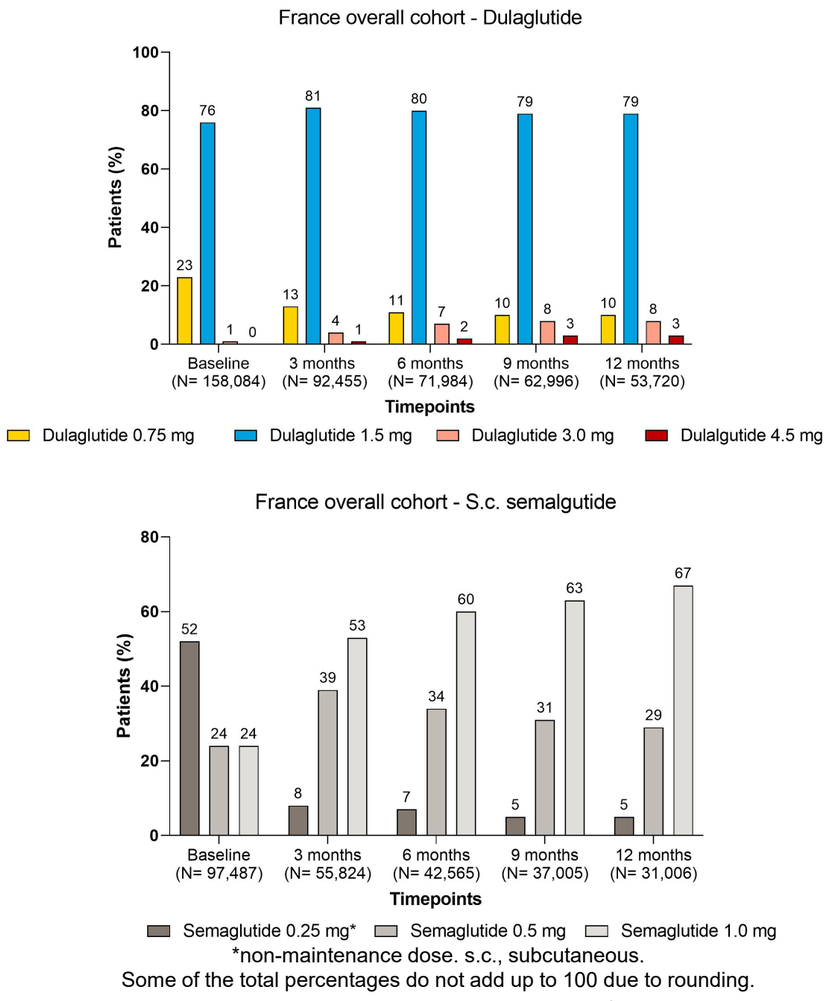
Characteristics, n (%) if not otherwise specified	Dulaglutide	S.c. semaglutide
France – overall cohort (N = 255,571)		
Patients	158,084 (62)	97,487 (38)
Age, mean (SD)	63.7 (11.3)	62.1 (11.5)
Gender, female	68,779 (44)	43,442 (45)
Co-occurring anti-diabetic medications		
0	12,130 (8)	8,815 (9)
1	49,960 (32)	33,742 (35)
2	60,191 (38)	33,264 (34)
≥3	35,803 (23)	21,666 (22)
Italy – overall cohort (N = 312,870)		
Patients	220,050 (70)	92,820 (30)
Age group		
20-49	14,597 (7)	9,292 (10)
50+	205,453 (93)	83,528 (90)
Gender, female	86,691 (39)	39,136 (42)
Co-occurring anti-diabetic medications		
0	22,945 (10)	9,931 (11)
1	110,551 (50)	47,604 (51)
2	62,302 (28)	24,781 (27)
≥3	24,252 (11)	10,504 (11)

n, number (proportion) of patients; N, total number of patients; s.c., subcutaneous; SD, standard deviation.
Some of the total percentages do not add up to 100 due to rounding.

RESULTS

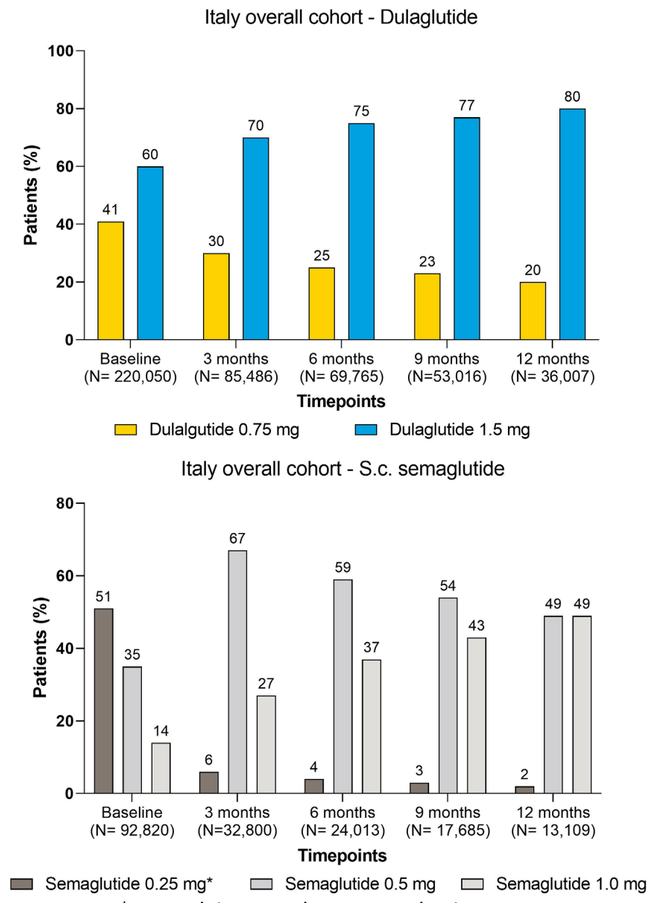
Results are presented only for overall cohort (cohort 1 plus cohort 2) for both countries (Figure 2 and Figure 3).

Figure 2. Dulaglutide and s.c. semaglutide dose distribution over follow-up period for the overall cohort in France.



*non-maintenance dose. s.c., subcutaneous.
Some of the total percentages do not add up to 100 due to rounding.

Figure 3. Dulaglutide and s.c. semaglutide dose distribution over follow-up period for the overall cohort in Italy.



*non-maintenance dose. s.c., subcutaneous.
Some of the total percentages do not add up to 100 due to rounding.

Distribution patterns

France: The dulaglutide dosages showed always the same distribution patterns over the follow-up, with dulaglutide 1.5 mg being the most common dosage in the cohort. Among s.c. semaglutide users, the 0.5 mg and 1.0 mg dosages were the most common of the three s.c. semaglutide dosages in the cohort at every timepoint of the follow-up, apart from baseline.

Italy: The distribution of dulaglutide 0.75 mg and 1.5 mg was constant over follow-up, and dulaglutide 1.5 mg was always the most prescribed of the two formulations. The distribution pattern for s.c. semaglutide was constant until 12 months post-index, where s.c. semaglutide 0.5 and 1.0 mg were equally the most common of the three s.c. semaglutide dosages in the cohort.

Limitations: The prescriptions databases lack clinical data and therefore, an assumption was made that patients that received GLP-1 RAs have T2D.