Sponsor

Novartis

Generic Drug Name

Ofatumumab

Trial Indication(s)

Relapsing remitting multiple sclerosis (RRMS)

Protocol Number

COMB157GCA04

Protocol Title

A Canadian Retrospective Analysis of PErsistence on Ofatumumab using Patient Support Program Data

Trial name CAPES

Clinical Trial Phase

Not applicable

Phase of Drug Development

Not applicable

Study Start/End Dates

Study Start Date: 09 February 2024 (Final Protocol)

Study Completion Date: 27 August 2024 (Full Stats Analysis Final)

Reason for Termination

Not applicable

Study Design/Methodology

This was an observational, non-interventional, real world study involving secondary use of de-identified aggregate data from patients prescribed ofatumumab, collected by the Kesimpta Go Program in Canada. This study utilized a cohort design. The study period included all available data captured by the Kesimpta Go Program from program inception (April 2, 2021) to the time of data transfer (May 1, 2024). Patients were indexed into the study on the date they started their medication, from April 2, 2021 to May 1, 2024. The baseline period represented the period prior to ofatumumab treatment initiation. Baseline variables were collected from the enrollment form, which include demographic and clinical history, such as whether the patient had prior treatment with disease-modifying therapy (DMT). Patients were followed until the first of the following censoring events: ofatumumab discontinuation; end of the study period; or leaving the Kesimpta Go Program.

Centers

Not applicable. Data was captured by the Kesimpta Go Program in Canada.

Objectives:

Primary objective(s)

To describe treatment persistence for patients prescribed ofatumumab in Canada who had enrolled in the Kesimpta Go Program.

Secondary objective(s)

1. Describe the baseline demographic and clinical characteristics of patients initiating ofatumumab in Canada who had enrolled in the Kesimpta Go Program.
2. Assess the association between persistence on ofatumumab and demographic and clinical history characteristics for patients enrolled in the Kesimpta Go Program.
3. Describe the reason(s) for discontinuation of ofatumumab for patients enrolled in the Kesimpta Go Program.

Test Product (s), Dose(s), and Mode(s) of Administration

Patients had received ofatumumab per their dosing regimen prior to this observational study.

Statistical Methods

For continuous variables, the descriptive statistics mean, standard deviation (SD), median, interquartile range (IQR), minimum, and maximum were calculated. The mean and SD were reported to one decimal place greater than the original data. Quartiles, medians, minimums, and maximums used the same number of decimal places as the original data. For categorical data, counts and proportions in each category were reported rounded to 1 decimal place. Time-to-event data was described using Kaplan-Meier (KM) methods, and resulting rates were reported rounded to two decimal places. The proportional hazard (PH) ratios resulting from the Cox models addressing secondary objective 2 were rounded to 2 decimal points, and the p-values to 3 decimal points, unless they were < 0.001, in which case they were reported as '<0.001'.

Study Population: Key Inclusion/Exclusion Criteria

Inclusion criteria:

Patients were included if they met ALL of the following criteria:

- Patients enrolled in the Kesimpta Go Program
- Patients with documented informed consent from enrollment in the Kesimpta Go Program
- Patients who started treatment with ofatumumab

Exclusion criteria:

Patients were excluded if they met ANY of the criteria below:

- Patients with no demographic information
- Patients who could not be linked across the data sources required for analysis (Kesimpta Go Program Enrollment Form, Pharmacy Claims Forms, Kesimpta Go Program Database)
- Patients with 3+ treatment interruptions (patient was "on hold" – i.e., not currently receiving the treatment in the patient support program)

Participant Flow

A total of 5,448 patients were included in the final study population for the main cohort. Of this, 5,436 patients had data to assess discontinuation.

Baseline Characteristics

Refer to Secondary Outcome Results.

Primary Outcome Result(s)

Kaplan-Meier estimates of ofatumumab discontinuation up to month 36 from treatment initiation

Discontinuation	6 months	12 months	18 months	24 months	30 months	36 months
Total Study cohort	1.49%	3.06%	3.86%	4.98%	6.32%	7.74%
Age Group						
18-34	1.93%	4.23%	5.53%	7.66%	10.76%	16.83%
35-44	1.06%	2.46%	2.93%	4.12%	4.42%	5.17%
45-54	1.60%	2.92%	3.30%	3.54%	4.68%	4.68%
55-64	1.75%	2.78%	5.09%	6.55%	8.75%	8.75%
65+	1.75%	4.27%	4.27%	4.27%	4.27%	NA
Sex						
Male	0.93%	1.64%	1.97%	2.63%	3.14%	NA
Female	1.71%	3.60%	4.57%	5.85%	7.50%	9.53%
Insurance Type						
Public	1.24%	2.83%	3.70%	4.91%	6.86%	6.86%
Private	1.63%	3.19%	3.94%	5.01%	6.04%	8.21%
Prior experience of DMT before index date						
Naive	0.98%	2.69%	3.25%	3.96%	6.03%	7.77%
Experienced	1.78%	3.28%	4.20%	5.53%	6.51%	7.60%

Secondary Outcome Result(s)

Patient demographics and characteristics

	Study Population Cohort
	Overall (N= 5,448)[1]
Age (years), Mean (SD)	41.2 (9.9)
Age (years), Median (IQR)	41 (34 - 48)
Age Group (years)	
18-34	1408 (25.8%)
35-44	2037 (37.4%)
45-54	1479 (27.1%)
55-64	462 (8.5%)
65+	62 (1.1%)
Sex	
Male, n (%)	1476 (27.1%)
Female, n (%)	3970 (72.9%)
Other, n (%)	2 (0.0%)
Index year	
2021, n (%)	609 (11.2%)
2022, n (%)	1376 (25.3%)
2023, n (%)	2482 (45.6%)
2024, n (%)	981 (18.0%)

	Study Population Cohort
	Overall (N= 5,448)[1]
Insurance coverage	
Public, n (%)	1900 (34.9%)
Private, n (%)	3495 (64.2%)
Other, n (%)	1 (0.0%)
Unknown, n (%)	52 (1.0%)
Clinical Characteristics History	
Prior experience of DMT before index date	
Naive, n (%)	2020 (37.1%)
Experienced, n (%)	3428 (62.9%)
Last DMT used before index date [2]	
Aubagio (teriflunomide)	474 (13.8%)
Avonex (interferon beta-1a)	92 (2.7%)
Betaseron (interferon beta-1b)	18 (0.5%)
Copaxone (glatiramer acetate)	330 (9.6%)
Extavia (interferon-1b)	3 (0.1%)
Gilenya (fingolimod)	260 (7.6%)
Glatect (glatiramer acetate)	191 (5.6%)
Kesimpta (ofatumumab)	1 (0.0%)
Lemtrada (alemtuzumab)	38 (1.1%)
Mavenclad (cladribine)	141 (4.1%)
Mayzent (siponimod)	2 (0.1%)

	Study Population Cohort
	Overall (N= 5,448)[1]
Methotrexate	1 (0.0%)
Novantrone (mitoxantrone)	1 (0.0%)
Ocrevus (ocrelizumab)	417 (12.2%)
Plegridy (peginterferon beta-1a)	31 (0.9%)
Rebif (interferon beta-1a)	103 (3.0%)
Tecfidera (dimethyl fumarate)	655 (19.1%)
Tysabri (natalizumab)	250 (7.3%)
Unknown	420 (12.3%)

[1] 5,448 out of 5,454 patients included in the cohort have complete demographic information.
[2] Percentages calculated over patients with a prior experience of DMT before index date.

Multivariate models of association between discontinuation of ofatumumab and demographic and clinical history characteristics in the total study cohort

Variable	Hazard Ratio	95% Confidence Interval	P-value	N (%)
Age Group				
18-34 (Reference Category)	1	-	-	1389 (25.8%)
35-44	0.46	(0.31, 0.67)	<0.001	2016 (37.5%)
45-54	0.49	(0.32, 0.74)	<0.001	1467 (27.3%)
55-64	0.78	(0.46, 1.32)	0.360	450 (8.4%)
65+	0.78	(0.19, 3.20)	0.725	60 (1.1%)
Sex				
Male (Reference Category)	1	-	-	1463 (27.2%)
Female	2.22	(1.44, 3.43)	<0.001	3919 (72.8%)
Insurance Type				
Public (Reference Category)	1	-	-	1899 (35.3%)
Private	1.17	(0.85, 1.63)	0.334	3483 (64.7%)
Last DMT Used before Index				
No prior DMT experience (Reference Category)	1	-	-	1998 (37.1%)
Self-injectables	0.91	(0.49, 1.70)	0.775	571 (10.6%)
Low efficacy oral therapy	0.96	(0.60, 1.53)	0.851	1120 (20.8%)
Medium efficacy oral therapy	1.18	(0.61, 2.29)	0.626	397 (7.4%)
Anti-CD20	2.96	(1.86, 4.72)	<0.001	409 (7.6%)
Infusions	1.52	(0.79, 2.93)	0.214	279 (5.2%)
Other	1.66	(1.03, 2.67)	0.038	608 (11.3%)

Reasons for discontinuation in the total study cohort

	Among the study population*, N = 5,436	Among those that discontinued, N = 167
Reasons for Discontinuation	**n (%)**	**n (%)**
N	167 (3.1%)	167 (100.0%)
Lack of efficacy	7 (0.13%)	7 (4.2%)
Non-adherence	3 (0.06%)	3 (1.8%)
Side effects	46 (0.85%)	46 (27.5%)
Switched medications	20 (0.37%)	20 (12.0%)
Trying to conceive/pregnancy	29 (0.53%)	29 (17.4%)
Patient request	29 (0.53%)	29 (17.4%)
Physician request	26 (0.48%)	26 (15.6%)
The treatment interruption gap is > 90 days	7 (0.13%)	7 (4.2%)
Reasons for Leaving Kesimpta Go program		
N	68 (1.2%)	68 (100.0%)
Could not contact participant/Unable to contact patient	6 (0.1%)	6 (8.8%)
Deceased	6 (0.1%)	6 (8.8%)
Doesn’t meet eligibility	1 (0.0%)	1 (1.5%)
Patient moved	7 (0.1%)	7 (10.3%)
Refused Coverage	2 (0.0%)	2 (2.9%)
Reimbursement Issues	1 (0.0%)	1 (1.5%)
No reason given	45 (0.8%)	45 (66.2%)

*Proportions calculated among the study population cohort with data that allowed the assessment of discontinuation.

Safety Results

Not applicable

Adverse Events by System Organ Class

Not applicable

Most Frequently Reported AEs Overall by Preferred Term n (%)

Not applicable

Serious Adverse Events and Deaths

Not applicable

Other Relevant Findings

Not applicable

Conclusion

This real world study found that relapsing remitting multiple sclerosis (RRMS) patients in Canada have a high level of persistence with ofatumumab, corresponding to >92% across 3 years, with only 167 of 5,436 patients discontinuing treatment over the 3-year study period. Such high persistence with ofatumumab complements the high rates reported from randomized controlled clinical trials and may be reflective of its strong benefit-risk profile.

Date of Clinical Study Report

20 December 2024