A Retrospective, Multi-Center, Observational Study to Assess the Effect of Tecfidera® Delayed-Release Capsules on Lymphocyte Subsets in Subjects with Relapsing Forms of Multiple Sclerosis (REALIZE)

First published: 24/10/2016

Last updated: 01/04/2024

Study Finalised

Administrative details

EU PAS number

EUPAS9336

Study ID

29107

DARWIN EU® study

No

Study countries

United States

Study description

The primary objective of the study is to retrospectively investigate changes in lymphocyte counts and lymphocyte subtypes, with a focus on CD4+ and CD8+ T cells, in participants on Tecfidera therapy for at least 6 months. The secondary objective is to investigate changes in lymphocyte subtypes other than CD4+ and CD8+ T cells.

Study status

Finalised

Research institutions and networks

Institutions

Biogen

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Institution

Multiple centres: 10 centres are involved in the study

Contact details

Study institution contact

Study Director Biogen ctrr@biogen.com

Study contact

ctrr@biogen.com

Primary lead investigator

Study Director Biogen

Primary lead investigator

Study timelines

Date when funding contract was signed

Planned: 27/03/2015

Actual: 27/01/2015

Study start date

Planned: 01/07/2015

Actual: 21/07/2015

Data analysis start date

Actual: 19/04/2016

Date of final study report

Planned: 14/11/2016

Actual: 25/01/2017

Sources of funding

- Pharmaceutical company and other private sector

More details on funding

Biogen

Study protocol

109MS419 Protocol V2 Final 03Dec2015_Redacted.pdf (618.42 KB)

Regulatory

Was the study required by a regulatory body?

No

Is the study required by a Risk Management Plan (RMP)?

EU RMP category 3 (required)

Other study registration identification numbers and links

109MS419/NCT02519413: https://clinicaltrials.gov/ct2/show/NCT02519413

Methodological aspects

Study type

Study type list

Study topic:

Disease /health condition

Human medicinal product

Study type:

Non-interventional study

Scope of the study:

Effectiveness study (incl. comparative)

Data collection methods:

Secondary use of data

Main study objective:

The primary objective of the study is to retrospectively investigate changes in lymphocyte counts and lymphocyte subtypes, with a focus on CD4+ and CD8+ T cells, in participants on Tecfidera therapy for at least 6 months.

Study Design

Non-interventional study design

Cohort

Other

Non-interventional study design, other

Retrospective, observational study

Study drug and medical condition

Medicinal product name

TECFIDERA

Medical condition to be studied

Multiple sclerosis

Population studied

Short description of the study population

Adult patients with relapsing forms of MS who were receiving or received Tecfidera for at least 6 months in routine clinical practice.

Age groups

- Adults (18 to < 46 years)
- Adults (46 to < 65 years)
- Adults (65 to < 75 years)
- Adults (75 to < 85 years)
- Adults (85 years and over)

Special population of interest

Other

Special population of interest, other

Multiple sclerosis patients

Estimated number of subjects

483

Study design details

Outcomes

• Estimated absolute lymphocyte count (ALC) change from baseline following Tecfidera initiation• Estimated CD4+ count change from baseline following Tecfidera initiation• Estimated CD8+ count change from baseline following Tecfidera initiation, • Raw absolute counts for leukocyte, lymphocyte, CD4+/CD8+ ratio following Tecfidera initiation • Raw absolute counts for additional lymphocyte subsets (other than CD4+ and CD8+) • Change from baseline for leukocyte, lymphocyte, CD4+/CD8+ ratio following Tecfidera initiation • Change from baseline for additional lymphocyte subsets (other than CD4+and CD8+) following Tecfidera initiation

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Data analysis plan

For the primary analysis changes from baseline in Lymphocyte, CD4, and CD8 counts will be analyzed separately using a repeated measures mixed effects model (RMMM). In addition descriptive statistics will be presented for at 6 and 12 Months for absolute values, the change and percent change from baseline. Kaplan-Meier curves will estimate the time to pre-determined lymphocyte counts following the start of Tecfidera therapy. An analysis of covariance and logistic regression models will be evaluated to determine potential predictors of low lymphocyte counts. Descriptive statistics will be used to summarize lymphocyte counts and subsets post discontinuation. Similar analyses will be performed for the additional lymphocyte subsets and CD4/CD8 ratio.The association between opportunistic and serious infections and WBC, lymphocytes, CD4 as well as CD8 counts will be evaluated with a Fisher’s exact and Barnard’s exact test.

Documents

Study results

109MS419 CSR Synopsis_Redacted.pdf (93.07 KB)

Data management

The use of the ENCePP Seal has been discontinued since February 2025. The ENCePP Seal fields are retained in the display mode for transparency but are no longer maintained.

Data sources

Data sources (types)

Other

Data sources (types), other

Retrospective medical chart abstraction This retrospective chart review study aims to investigate the effect of Tecfidera on lymphocytes and lymphocyte subsets, to observe lymphocyte recovery following Tecfidera discontinuation, and to assess the incidence of opportunistic infections, serious infections, and MS relapses

Use of a Common Data Model (CDM)

CDM mapping

No

Data quality specifications

Check conformance

Unknown

Check completeness

Unknown

Check stability

Unknown

Check logical consistency

Unknown

Data characterisation

Data characterisation conducted

Unknown