Real-World Effects and Utilisation Patterns of Elexacaftor, Tezacaftor, and Ivacaftor Combination Therapy (ELX/TEZ/IVA) in Patients with Cystic Fibrosis (CF)

First published: 15/09/2021

Last updated: 03/03/2025

Study Ongoing

Administrative details

EU PAS number

EUPAS43022

Study ID

45404

DARWIN EU® study

No

Study countries

- ☐ Germany
- ☐ United States

Study description

Cystic fibrosis (CF) is an autosomal recessive disease with serious, chronically debilitating morbidities, and high premature mortality. ELX/TEZ/IVA is currently indicated for treatment of CF in patients 12 years and older in the EU who have specified CFTR mutations. This 5-year observational post-authorisation safety study (PASS) will evaluate safety, effectiveness / CF disease progression, and pregnancy outcomes in patients with CF who are treated with ELX/TEZ/IVA, as well as its drug utilisation patterns using observational cohorts of patients receiving therapy in a real-world setting. Existing CF registries provide an established source to obtain data on long term effects in real world use for analysis. In the US Cystic Fibrosis Foundation Patient Registry (CFFPR) and German CF Registry, within-cohort evaluation of outcomes in the 5-year periods before and after treatment initiation will be performed. Evaluation of the outcome patterns and trends in the 5-year pre-treatment period will place into context the outcome patterns and trends observed in the post-treatment period. In addition, the European Cystic Fibrosis Society Patient Registry (ECFSPR) will be used to provide additional information for the evaluation of drug utilisation patterns in the European region. Information regarding the safety profile of the therapy under the real-world conditions of use will be informative to patients, caregivers, and prescribers. Existing CF registries provide an established source from which to obtain these data.

Study status

Ongoing

Research institutions and networks

Institutions

Vertex Pharmaceuticals

First published: 01/02/2024

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Institution

Mukoviszidose Institut

Germany

First published: 01/02/2024

Last updated: 01/02/2024

Institution | Patient organisation/association

European Cystic Fibrosis Society (ECFS)

First published: 01/02/2024

Last updated: 01/02/2024

Institution | Educational Institution

German CF Register Germany, ECFSPR European region (multiple countries), US CFF Patient Registry United States

Contact details

Study institution contact

Vertex Pharmaceuticals Global Medical Information

vertexmedicalinfo@vrtx.com

Study contact

vertexmedicalinfo@vrtx.com

Primary lead investigator

Julie Bower

Primary lead investigator

Study timelines

Date when funding contract was signed

Planned: 31/08/2021

Actual: 31/08/2021

Study start date

Planned: 31/08/2021

Actual: 31/08/2021

Date of interim report, if expected

Planned: 31/12/2021

Date of final study report

Planned: 31/12/2025

Sources of funding

- Pharmaceutical company and other private sector

More details on funding

Vertex Pharmaceuticals Incorporated

Study protocol

ELX-TEZ-IVA PASS Protocol_Version 2.0_redacted.pdf.pdf(674.84 KB)

Regulatory

Was the study required by a regulatory body?

Yes

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

EU RMP category 3 (required)

Methodological aspects

Study type

Study type list

Study type:

Non-interventional study

Scope of the study:

Assessment of risk minimisation measure implementation or effectiveness

Drug utilisation

Effectiveness study (incl. comparative)

Main study objective:

To evaluate, among patients treated with ELX/TEZ/IVA in the real-world setting: 1. Safety outcomes 2. Effectiveness outcomes / CF disease progression 3. Safety and effectiveness outcomes/ CF disease progression in genotype subgroups 4. Frequency and outcome of pregnancy in female patients 5. Drug utilisation patterns and characterise potential off-label use outside of the labelled indication

Study Design

Non-interventional study design

Cohort

Study drug and medical condition

Name of medicine

KAFTRIO

Medical condition to be studied

Cystic fibrosis

Population studied

Age groups

Children (2 to < 12 years)

Adolescents (12 to < 18 years)

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

Hepatic impaired

Immunocompromised

Pregnant women

Renal impaired

Estimated number of subjects

21000

Study design details

Outcomes

Safety analyses: death, organ transplant, hospitalisations, pulmonary exacerbations, CF complications, respiratory microbiology, liver function tests Disease progression analyses: Percent predicted FEV1, BMI Pregnancy analyses: pregnancy outcome, gestational age, congenital anomalies (data availability varies by registry) Drug utilization analyses: ELX/TEZ/IVA use outside of labeled indications

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Data analysis plan

Data will be analysed separately for each registry over the course of the 5 year study. Results of analyses will be presented in annual study reports. Each annual report will include patient data collected through the end of the previous calendar year. Descriptive statistics will be presented for all study outcomes. Continuous variables will be summarised using the following descriptive summary statistics where appropriate: the number of observations (n), mean, SD, SE, 95% CI, median, minimum value, maximum value, and 25th and 75th percentile values. Categorical variables will be summarised using counts, percentages, and 95% CIs as appropriate. All safety outcomes, effectiveness / CF disease progression outcomes, and pregnancy outcomes will be evaluated in the ELX/TEZ/IVA Cohorts in the US CFFPR and German CF registry. In addition to these 2 registries, the ECFSPR will be used to provide additional information for the evaluation of drug utilisation patterns in the European region.

Data management

ENCePP Seal

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)

Disease registry

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

No