Post-authorization safety study to assess the risk of diabetic ketoacidosis among type 2 diabetes mellitus patients treated with ertugliflozin compared to patients treated with other antihyperglycemic agents (MK-8835-062)

First published: 17/10/2019

**Last updated:** 11/02/2025





### Administrative details

#### **EU PAS number**

**EUPAS31718** 

Study ID

50276

**DARWIN EU® study** 

No

**Study countries** 

	United	States
--	--------	--------

#### Study description

A non-interventional cohort study will be conducted using the Reagan-Udall Foundation for the Food and Drug Administration (FDA)'s Innovation in Medical Evidence and Development Surveillance Distributed Database (IMEDS-DD), a subset of the FDA Sentinel Distributed Database.

This study will address the research question of whether new use of ertugliflozin is associated with an increased risk of diabetic ketoacidosis (DKA), compared to new use of other non-sodium–glucose cotransporter 2 (SGLT2) inhibitor antihyperglycemic agents (AHAs) among type 2 diabetes mellitus (T2DM) patients.

Propensity score matching will be used for confounding adjustment, followed by Cox proportional hazards models for risk estimation.

#### **Study status**

Finalised

### Research institutions and networks

### Institutions

## Reagan-Udall Foundation

First published: 01/02/2024

**Last updated:** 01/02/2024

Institution

### Contact details

### **Study institution contact**

Clinical Trials Disclosure Merck Sharp & Dohme LLC ClinicalTrialsDisclosure@merck.com

Study contact

ClinicalTrialsDisclosure@merck.com

### **Primary lead investigator**

Sengwee Toh

**Primary lead investigator** 

# Study timelines

#### Date when funding contract was signed

Actual: 03/07/2018

#### Study start date

Planned: 24/10/2019

Actual: 17/10/2019

#### Data analysis start date

Planned: 31/03/2024

#### Date of interim report, if expected

Planned: 31/12/2021

Actual: 09/12/2021

#### **Date of final study report**

Planned: 31/10/2024

Actual: 11/10/2024

## Sources of funding

- Other
- Pharmaceutical company and other private sector

## More details on funding

Merck Sharp & Dohme LLC, Pfizer Inc.

# Study protocol

MK-8835-062-00-v4-Protocol Final Redaction.pdf (3.92 MB)

MK-8835-062-01-v1-Protocol final redaction.pdf (891.27 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 topic:**

Herbal medicinal product

#### Study type:

Non-interventional study

### Scope of the study:

Assessment of risk minimisation measure implementation or effectiveness Safety study (incl. comparative)

#### Main study objective:

- 1. To assess the risk of DKA among new users of ertugliflozin relative to new users of sulfonylureas (SUs) or thiazolidinediones (TZDs).
- 2. To assess the risk of DKA among new users of ertugliflozin relative to new users of incretin-based drugs i.e. dipeptidyl peptidase 4 (DPP-4) inhibitors or glucagon-like peptide-1 (GLP-1) receptor agonists.

# Study Design

#### Non-interventional study design

Cohort

# Study drug and medical condition

#### Name of medicine

**SEGLUROMET** 

**STEGLATRO** 

**STEGLUJAN** 

#### Study drug International non-proprietary name (INN) or common name

**ERTUGLIFLOZIN** 

### **Anatomical Therapeutic Chemical (ATC) code**

(A10BK04) ertugliflozin

ertugliflozin

#### Medical condition to be studied

Diabetic ketoacidosis

# Population studied

#### 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)

#### **Estimated number of subjects**

8819

# Study design details

#### **Outcomes**

Hospitalization for DKA identified from principal discharge diagnosis of inpatient claims.

### Data analysis plan

Baseline demographic and clinical characteristics will be described by exposure group before and after propensity score matching.

Incidence rates (and 95% confidence interval) of DKA will be calculated by exposure group.

The differences between the exposure groups in terms of time to DKA will be assessed using Kaplan-Meier survival curves with log rank test.

Cox proportional hazards models will be used separately to compare the risk of DKA among new users of ertugliflozin to that among new users of SU/TZD, and to compare the risk of DKA among new users of ertugliflozin to that among new users of incretin-based drugs.

Subgroup analysis will be further conducted by concomitant insulin use on the index date.

Sensitivity analyses pre-defined in the protocol will be conducted to assess the robustness of the study results.

### **Documents**

#### **Study report**

MK-8835-062-02-interim-report-dec-2022\_final redaction.pdf (1.86 MB)

MK-8835-062-second-interim-report-nov-2022\_final redaction.pdf (1.07 MB)

MK-8835-062-interim-report-dec-2021\_final redaction.pdf (1.83 MB)

MK-8835-062-final-study-report-AUG-2024\_final-redaction.pdf (1.25 MB)

## 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)

Administrative healthcare records (e.g., claims)

## 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