European non-interventional post-authorization safety study related to serious cardiovascular events of myocardial infarction and stroke, and all-cause mortality for romosozumab by the EU-ADR Alliance

First published: 24/09/2020

Last updated: 20/11/2026

Study Finalised

Administrative details

EU PAS number

EUPAS35881

Study ID

37810

DARWIN EU® study

No

Study countries

Denmark
France
Germany
Italy
Netherlands
Spain
United Kingdom

Study description

The main objective is to evaluate potential differences in terms of serious cardiovascular adverse events between romosozumab and currently available therapies used in comparable patients in real-world conditions.

Study status

Finalised

Research institutions and networks

Institutions

UCB Biopharma SRL

Contact details

Study institution contact

Clinical Trial Registries and Results Personal data of lead investigator will not be disclosed because his/her consent

required for disclosure according to applicable data protection laws is not available. clinicaltrials@ucb.com

Study contact

clinicaltrials@ucb.com

Primary lead investigator

Clinical Trial Registries and Results Personal data of lead investigator will not be disclosed because his/her consent required for disclosure according to applicable data protection laws is not available.

Primary lead investigator

Study timelines

Date when funding contract was signed

Actual: 30/09/2020

Study start date

Actual: 01/10/2020

Date of final study report

Actual: 13/11/2026

Sources of funding

More details on funding

UCB Biopharma SRL

Study protocol

op0004-protocol-final-Redacted.pdf (1.62 MB)

OP0004-protocol-Substantial Amendment-4_Redacted.pdf (1.71 MB)

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)

Other study registration identification numbers and links

OP0004

Methodological aspects

Study type

Study type list

Study topic:

Disease /health condition

Study type:

Non-interventional study

Scope of the study:

Drug utilisation

Study design:

Multi-national, multi-database cohort study

Main study objective:

The overarching objective of this study is to characterize the risk of serious cardiovascular events of myocardial infarction and stroke, and all-cause mortality including cardiovascular death associated with the use of romosozumab, in comparison with other available osteoporosis medications in routine clinical practice in Europe

Study Design

Non-interventional study design

Cohort

Study drug and medical condition

Medicinal product name

EVENITY

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

ROMOSOZUMAB

Anatomical Therapeutic Chemical (ATC) code

(M05BX) Other drugs affecting bone structure and mineralization

Other drugs affecting bone structure and mineralization

Medical condition to be studied

Osteoporosis postmenopausal

Population studied

Short description of the study population

Indicated population for romosozumab in Europe as per the SmPC and therefore comprises all women from the source population with severe OP who are first dispensed or prescribed an OP medication of interest (new user)

Age groups

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

Estimated number of subjects

337.200

Study design details

Outcomes

MACE-2 (first occurrence of death all cause including cardiovascular (CV) death, Myocardial Infarction (MI), or stroke), - Myocardial Infarction (MI)- Stroke- Death

due to cardiovascular (CV) causes, ie, MI or stroke- All-cause mortality- First occurrence of death (CV causes), MI, or stroke (MACE-1)

Data analysis plan

Incidence rates and 95 % confidence intervals for each outcome will be calculated for each study drug cohort using a Poisson model. These will be reported for prespecified intervals of 6, 12, 18, and 24 months after treatment indexes, and will be stratified by several factors including age, prior use of osteoporosis medication, and previous history of cardiovascular event.
For comparative safety studies, propensity score matching will be used to match patients using romosozumab to up to 3 users of alendronate. Cox regression models stratified by matched sets will be used to calculate hazard ratios and 95 % CIs for each of the safety endpoints (MI, stroke, MACE-1, and MACE-2) according to drug exposure in the propensity-matched cohorts.
The pooled estimates of the incidence rate for the databases will be calculated using the random or fixed effects meta-analysis depending on heterogeneity detected using an I^2 threshold of >40 %.

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 source(s)

Clinical Practice Research Datalink

Danish registries (access/analysis)

Integrated Primary Care Information (IPCI)

The Information System for Research in Primary Care (SIDIAP)

German Pharmacoepidemiological Research Database

Système National des Données de Santé (French national health system main database)

Data source(s), other

Health Search Database (HSD), Italy

Data sources (types)

Administrative healthcare records (e.g., claims)

Electronic healthcare records (EHR)

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