

# Angioedema among patients with hypertension treated with aliskiren or other anti-hypertensive medications in the US – a cohort Study and a nested case-control analysis using health claims data

**First published:** 15/10/2013

**Last updated:** 29/03/2024

Study

Finalised

## Administrative details

### EU PAS number

EUPAS4963

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### Study ID

17554

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### DARWIN EU® study

No

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### Study countries

 United States

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## Study description

Retrospective database cohort study including a nested case-control analysis with secondary use of data from the IMS PharMetrics Plus™ claims database from the United States in adult hypertensive patients (18+ years of age) with a prescription for an anti-hypertensive medication of interest between July 1, 2007 and September 30, 2012. The primary objective is to assess the annual prevalence and incidence rates of angioedema in treated hypertensive patients among a commercially insured population, stratified by the anti-hypertensive medication filled. The secondary objective is to explore the relative risk of experiencing angioedema among patients prescribed aliskiren compared with other anti-hypertensive medications.

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## Study status

Finalised

## Research institutions and networks

### Institutions

**Novartis Pharmaceuticals**

**First published:** 01/02/2024

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

**Institution**

## Contact details

### Study institution contact

Novartis Clinical Disclosure Officer  
trialandresults.registries@novartis.com

Study contact

[trialandresults.registries@novartis.com](mailto:trialandresults.registries@novartis.com)

**Primary lead investigator**  
Novartis Clinical Disclosure Officer

Primary lead investigator

## Study timelines

### **Date when funding contract was signed**

Actual: 20/12/2012

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### **Study start date**

Actual: 22/08/2013

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### **Data analysis start date**

Actual: 22/09/2013

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

Planned: 31/01/2014

Actual: 20/02/2014

## Sources of funding

- Pharmaceutical company and other private sector

## More details on funding

Novartis Pharma AG

## Study protocol

[CSPP100A2415-Redacted-Protocol\\_15Aug2013.pdf](#) (3.22 MB)

## Regulatory

### **Was the study required by a regulatory body?**

Yes

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

EU RMP category 3 (required)

## Other study registration identification numbers and links

CSPP100A2415

## Methodological aspects

### Study type

### Study type list

**Study topic:**

Disease /health condition  
Human medicinal product

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**Study type:**

Non-interventional study

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**Scope of the study:**

Assessment of risk minimisation measure implementation or effectiveness

**Data collection methods:**

Secondary use of data

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**Main study objective:**

To assess the annual prevalence and incidence rates of angioedema in treated hypertensive patients (with focus on aliskiren)

## Study Design

**Non-interventional study design**

Case-control

## Study drug and medical condition

**Medicinal product name**

RASILAMLO

RASILEZ HCT

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**Medical condition to be studied**

Hypertension

## Population studied

### **Short description of the study population**

All adult hypertensive subjects with a prescription for an anti-hypertensive medication of interest between July 1, 2007 and September 30, 2012 derived from IMS PharMetrics Plus™ US claims database.

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### **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)
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### **Special population of interest**

Other

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### **Special population of interest, other**

Hypertensive patients

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### **Estimated number of subjects**

45000

## Study design details

### **Outcomes**

A diagnosis of angioedema, based on the ICD-9 code (i.e. ICD-9code 995.1) from medical claims, The secondary objective is to explore the relative risk of experiencing angioedema among patients prescribed aliskiren compared with other anti-hypertensive medications

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### **Data analysis plan**

**Prevalence:** A one-year period prevalence of angioedema will be calculated for the calendar years 2008-11. The denominator will consist of the aggregate person-time (expressed in years) of all patients who were continuously enrolled for at least one month in the calendar year of interest. **Incidence:** Similarly, the incidence of angioedema will be calculated for each of calendar years 2008-11. The denominator for incidence determination will consist of the aggregate person-time (expressed in years) of all patients who were continuously enrolled for at least one month in the calendar year of interest as well as the full preceding calendar year. The numerator of the incidence estimate will be determined by identifying all patients with a diagnosis of angioedema during the calendar year of interest. In order to be considered an incident patient, there must additionally be no evidence of angioedema diagnoses during the preceding calendar year(s). per 1,000 patient-years of follow-up

## Documents

### **Study results**

[SPP100A2415-Redacted-Final-Study-Report.pdf](#) (1.45 MB)

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## 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), other

IMS PharMetrics Plus Health Plan Claims Database

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### 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

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### Check completeness

Unknown

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### Check stability

Unknown

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## **Check logical consistency**

Unknown

# Data characterisation

## **Data characterisation conducted**

Unknown