



# Study of Efficacy and Safety of AMG 334 in Adult Episodic Migraine Patients

14/12/2025 09:03:42

## Main Information

### Primary registry identifying number

LBCTR2019060240

### Protocol number

AMG334A2302

### MOH registration number

49904/2017

### Study registered at the country of origin

Yes

### Study registered at the country of origin: Specify

### Type of registration

Retrospective

### Type of registration: Justify

LCTR was recently initiated, original file was previously submitted by Paper

### Date of registration in national regulatory agency

20/12/2017

### Primary sponsor

Novartis Pharma Services Inc.

### Primary sponsor: Country of origin

Novartis Pharmaceuticals

### Date of registration in primary registry

11/06/2019

### Date of registration in national regulatory agency

20/12/2017

### Public title

Study of Efficacy and Safety of AMG 334 in Adult Episodic Migraine Patients

### Acronym

EMPOWER

### Scientific title

A 12-week Double-blind, Randomized, Multi-center Study Comparing the Efficacy and Safety of Once Monthly Subcutaneous AMG 334 Against Placebo in Adult Episodic Migraine Patients (EMPOWER)

### Acronym

### Brief summary of the study: English

The purpose of this study is to evaluate the efficacy and safety of AMG334 in countries beyond the United States (US) and European Union (EU).

### Brief summary of the study: Arabic

أسبوعًا تقارن ما بين فعالية وسلامة جرعة شهرية واحدة تحت الجلد من دواء 12 دراسة متعددة المراكز، عشوائية التوزيع، مزدوجة التعمية من AMG 334 (EMPOWER) مقابل الدواء الوهمي لدى مرضى بالغين مصابين بالصداع النصفي العرضي

### Health conditions/problem studied: Specify

Migraine

### Interventions: Specify

#### •Biological: Erenumab

AMG334 is a fully human monoclonal antibody targeting the CGRP receptor under development for migraine prophylaxis in adults.

#### •Other: Placebo

Placebo will match the active study drug and will be administered similarly.

### Key inclusion and exclusion criteria: Inclusion criteria

- 1.Documented history of migraine in the 12 months prior to screening
- 2.4-14 days per month of migraine symptoms



3.>=80% diary compliance during the Baseline period

**Key inclusion and exclusion criteria: Gender**

Both

**Key inclusion and exclusion criteria: Age minimum**

18

**Key inclusion and exclusion criteria: Exclusion criteria**

- 1.>50 years old at migraine onset
- 2.Pregnant or nursing
- 3.History of cluster or hemiplegic headache
- 4.Evidence of seizure or major psychiatric disorder
- 5.Score of 19 or higher on the BDI
- 6.Active chronic pain syndrome
- 7.Cardiac or hepatic disease

**Type of study**

Interventional

**Type of intervention**

Pharmaceutical

**Trial scope**

Other

**Study design: Allocation**

Randomized controlled trial

**Study design: Control**

Placebo

**Study design: Purpose**

Treatment

**Study design: Assignment**

Parallel

**IMP has market authorization**

Yes, Worldwide

**Name of IMP**

erenumab (AIMOVIG)

**Type of IMP**

Others

**Pharmaceutical class**

Erenumab (Aimovig) is a human monoclonal immunoglobulin G2 (IgG2) that is directed against the canonical CGRP receptor, where it inhibits and blocks the action of CGRP.

**Therapeutic indication**

Preventive treatment of migraine in adults.

**Therapeutic benefit**

**Key inclusion and exclusion criteria: Specify gender**

**Key inclusion and exclusion criteria: Age maximum**

65

**Type of intervention: Specify type**

N/A

**Trial scope: Specify scope**

**Study design: Masking**

Blinded (masking used)

**Study phase**

3

**Study design: Specify purpose**

N/A

**Study design: Specify assignment**

N/A

**IMP has market authorization: Specify**

USA, Europe (Austria, Croatia, Czech republic, Denmark, Estonia, Finland, Germany, Iceland, Italy, Latvia, Poland, Portugal, Norway, Sweden, Switzerland, UK)

**Year of authorization**

**Month of authorization**



The primary efficacy endpoint was 50% reduction in MMD while change from baseline in MMD was a secondary endpoint, also showed positive outcomes. Considering the totality of data, erenumab 70 mg has shown robust and consistent clinically and statistically significant efficacy with no significant dose-dependent adverse events, while erenumab 140 mg has shown even greater treatment effects along with a favorable safety and tolerability profile that was similar to erenumab 70 mg.

**Study model**

N/A

**Study model: Explain model**

N/A

**Study model: Specify model**

N/A

**Time perspective**

N/A

**Time perspective: Explain time perspective**

N/A

**Time perspective: Specify perspective**

N/A

**Target follow-up duration****Target follow-up duration: Unit****Number of groups/cohorts****Biospecimen retention**

Samples with DNA\*\*

**Biospecimen description**

A central laboratory will be used for analysis of all specimens collected.  
Quintiles Ltd. – Scotland; Q<sup>2</sup> Solutions; The Alba Campus; Rosebank; Livingston; West Lothian; EH54 7EG; United Kingdom; Telephone: 01506816043  
Hematology: red blood cells (RBCs), nucleated RBCs, hemoglobin, hematocrit, MCV, MCH, MCHC, RDW, reticulocytes, platelets, white blood cells (WBCs), WBC differential. The differential will measure: bands/stabs, neutrophils, eosinophils, basophils, lymphocytes, monocytes, myeloblasts, promyelocytes, myelocytes, metamyelocytes, and atypical lymphocytes.  
Chemistry: sodium, potassium, chloride, bicarbonate, total protein, albumin, calcium, magnesium, phosphorus, glucose, BUN/urea, bilirubin (direct and total), alkaline phosphatase, ALT (SGPT), AST (SGOT), total cholesterol, HDL, LDL, triglycerides, CPK, and eGFR.  
Urinalysis: specific gravity, pH, blood, protein, glucose, bilirubin, WBC, RBC, epithelial cells, bacteria, casts, and crystals

**Target sample size**

44

**Actual enrollment target size**

40

**Date of first enrollment: Type**

Actual

**Date of first enrollment: Date**

08/02/2018

**Date of study closure: Type**

Actual

**Date of study closure: Date**

07/02/2020

**Recruitment status**

Recruiting

**Recruitment status: Specify****Date of completion**

02/09/2019

## IPD sharing statement plan

Yes

## Additional data URL

<https://clinicaltrials.gov/ct2/show/record/NCT03333109>

## Admin comments

## Trial status

Approved

## IPD sharing statement description

Novartis is committed to sharing with qualified external researchers, access to patient-level data and supporting clinical documents from eligible studies. These requests are reviewed and approved by an independent review panel on the basis of scientific merit. All data provided is anonymized to respect the privacy of patients who have participated in the trial in line with applicable laws and regulations.

This trial data availability is according to the criteria and process described on [www.clinicalstudydatarequest.com](http://www.clinicalstudydatarequest.com)

## Secondary Identifying Numbers

Full name of issuing authority	Secondary identifying number
Clinicaltrials.gov	NCT03333109

## Sources of Monetary or Material Support

Name
Novartis Pharma Services Inc.

## Secondary Sponsors

Name
NA



## Contact for Public/Scientific Queries

Contact type	Contact full name	Address	Country	Telephone	Email	Affiliation
Public	Taghrid Hajj	Beirut	Lebanon	03/494008	taghridelhajj@gmail.com	Rafik Hariri University Hospital
Scientific	Hind Khairallah	Sin El Fil	Lebanon	+961 1 512002 Ext. 271	Hind.Khairallah@fattal.com.lb	Khalil Fattal et Fils s.a.l.
Public	Achraf Makki	Beirut	Lebanon	70/878886	am132@aub.edu.lb	American University Of Beirut Medical Center
Public	Ghassan Mehanna	Beirut	Lebanon	71/454849	drgmouhanna@gmail.com	Bellevue Medical Center
Public	Shawkat Beayni	Chouf	Lebanon	03/700357	sh_beayni@hotmail.com	Ainwazein Medical Village
Public	Salim Atrouni	Beirut	Lebanon	03/215679	atrounidr@hotmail.com	Makassed General Hospital
Public	Naji Riachi	Beirut	Lebanon	03/229324	naji.riachi@laumcrh.com	Lebanese American University Medical Center Rizk Hospital
Public	Aline Mourad	Beirut	Lebanon	70/472332	aline_mourad@hotmail.com	Saint Georges Hospital University Medical Center

## Centers/Hospitals Involved in the Study

Center/Hospital name	Name of principles investigator	Principles investigator speciality	Ethical approval
Rafic Hariri University Hospital	Dr. Taghrid Hajj	Neurologist	Approved
American University of Beirut Medical Center	Dr. Achraf Makki	Neurologist	Approved
Bellevue Medical Center	Dr. Ghassan Mehanna	Neurologist	Approved
Ain Wazein Medical Village	Dr. Shawkat Beayni	Neurologist	Approved
Makassed General Hospital	Dr. Salim Atrouni	Neurologist	Approved
Lebanese American University Medical Center Rizk Hospital	Dr. Naji Riachi	Neurologist	Approved
Saint George Hospital University Medical Center	Dr Aline Mourad	Neurologist	Approved



## Ethics Review

Ethics approval obtained	Approval date	Contact name	Contact email	Contact phone
American University of Beirut Medical Center	14/06/2018	Fouad Ziyadeh	fz05@aub.edu.lb	+961 (0) 1 350 000 ext:5445
Saint George Hospital University Medical Center	21/06/2018	Michel Daher	mndaher@stgeorgehospital.org	+961 (0)1 441 733
Bellevue Medical Center	25/10/2017	Ghassan Maalouf	gmaalouf@bmc.com.lb	+961 (0) 1 682666 ext 7600
Ain w Zein Medical Village	23/12/2017	Khaled Abdel Baki	Khaled.abdelbaki@awmedicalvillage.org	+961 (0) 5 509 001 ext 2000
Makassed General Hospital	09/11/2017	Mariam Rajab	research.makassed@hotmail.com	01636941
Lebanese American University- University Medical Center Rizk Hospital	24/01/2018	Christine Chalhoub	christine.chalhoub@lau.edu.lb	+961 9 547254 ext. 2340
Rafic Hariri University Hospital	29/11/2017	Rawan Yamout	rawan.yamout@crurhuh.com	018300000 ext 2036

## Countries of Recruitment

Name
Lebanon
Argentina
India
Republic of Korea
Malaysia
Mexico
Philippines
Singapore
Taiwan
Thailand
Viet Nam



## Health Conditions or Problems Studied

Condition	Code	Keyword
Migraine	Migraine (G43)	Migraine

## Interventions

Intervention	Description	Keyword
ICF, Physical Exam, ECG, local Labs	ICF, Physical Exam, ECG, local Labs	ICF, Physical Exam, ECG, local Labs

## Primary Outcomes

Name	Time Points	Measure
Change from baseline in monthly migraine days at the last month	3 months	3 months

## Key Secondary Outcomes

Name	Time Points	Measure
•Achievement of at least a 50% reduction from baseline in monthly migraine days	3 months	3 months
•Change from Baseline in acute migraine-specific medication treatment days	3 months	3 months
•Change from Baseline in headache impact scores as measured by the HIT-6	3 months	3 months



## Trial Results

Summary results

Study results globally

Date of posting of results summaries

Date of first journal publication of results

Results URL link

Baseline characteristics

Participant flow

Adverse events

Outcome measures

URL to protocol files