



# Study to Evaluate Safety, Tolerability, Pharmacokinetics and Pharmacodynamics of LCZ696 Followed by a 52-week Study of LCZ696 Compared With Enalapril in Pediatric Patients With Heart Failure- PANORAMA

08/08/2025 07:24:44

## Main Information

**Primary registry identifying number**

LBCTR2019040224

**Protocol number**

CLCZ696B2319

**MOH registration number**

22659/2018

**Study registered at the country of origin**

Yes

**Study registered at the country of origin: Specify****Type of registration**

Retrospective

**Type of registration: Justify**

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

**Date of registration in national regulatory agency**

29/05/2018

**Primary sponsor**

Novartis Pharma Services Inc.

**Primary sponsor: Country of origin**

Novartis Pharmaceuticals

**Date of registration in primary registry**

09/05/2021

**Date of registration in national regulatory agency**

29/05/2018

**Public title**

Study to Evaluate Safety, Tolerability, Pharmacokinetics and Pharmacodynamics of LCZ696 Followed by a 52-week Study of LCZ696 Compared With Enalapril in Pediatric Patients With Heart Failure- PANORAMA

**Acronym**

PANORAMA

**Scientific title**

Multicenter, Open-label Study to Evaluate Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of LCZ696 Followed by a 52-week Randomized, Double-blind, Parallel Group, Active-controlled Study to Evaluate the Efficacy and Safety of LCZ696 Compared With Enalapril in Pediatric Patients From 1 Month to < 18 Years of Age With Heart Failure Due to Systemic Left Ventricle Systolic Dysfunction

**Acronym****Brief summary of the study: English**

This study consist of two parts (Part 1 and Part 2). The purpose of Part 1 is to evaluate the way the body absorbs, distributes and removes the drug LCZ696. This will help determine the proper dose of LCZ696 for Part 2 of the study.

The purpose for Part 2 is to compare the effectiveness and safety of LCZ696 with enalapril in pediatric heart failure patients over 52 weeks of treatment.

**Brief summary of the study: Arabic**



52تليها دراسة لمدة LCZ696 دراسة متعددة المراكز، مفتوحة العنوان؛ لتقييم الأمان والتحمل والحركيات الدوائية والديناميكيات الدوائية لعقار مقارنة بعقار LCZ696 أسبوعاً عشوائية، مزدوجة التعمية، من مجموعات علاج متوازنة، مُضَبطة بعقار فعّال، ؛ لتقييم أمان وفعالية عقار سنة و يعانون من فشل القلب بسبب قصور جهازي بوظائف 18إنالابريل في الأطفال المرضى الذين تتراوح أعمارهم بين شهر واحد إلى أقل من انقباض البطين الأيسر

## Health conditions/problem studied: Specify

Cardiovascular / Pediatric Heart Failure

## Interventions: Specify

Drug: LCZ696

LCZ696: 3.125 mg granules (packaged in capsules containing 4 or 10 granules), 50 mg, 100 mg, 200 mg dosage strengths

Drug: Enalapril

Enalapril will be open label in Part 1 and double blind in Part 2

Drug: Placebo of LCZ696

Drug: Placebo of Enalapril

## Key inclusion and exclusion criteria: Inclusion criteria

Chronic heart failure resulting from left ventricular systolic dysfunction, and receiving chronic HF therapy (if not newly diagnosed)

NYHA classification II-IV (older children: 6 to <18 years old) or Ross CHF classification II-IV (younger children: < 6 years old)

Systemic left ventricular ejection fraction  $\leq 40\%$  or fractional shortening  $\leq 20\%$

For Part 1 study: Patients must be treated with an ACEI or ARB prior to screening. Patients in Group 1 and 2 must be currently treated with the dose equivalent of at least enalapril 0.2 mg/kg prior to the LCZ696 3.1 mg/kg administration. Group 3 patients will participate in LCZ696 0.8 mg/kg and not LCZ696 3.1 mg/kg.

Biventricular physiology with systemic left ventricle

## Key inclusion and exclusion criteria: Gender

Both

## Key inclusion and exclusion criteria: Specify gender

## Key inclusion and exclusion criteria: Age minimum

1

## Key inclusion and exclusion criteria: Age maximum

17

## Key inclusion and exclusion criteria: Exclusion criteria

Patient with single ventricle or systemic right ventricle

Patients listed for heart transplantation (as United Network for Organ Sharing status 1A) or hospitalized waiting for transplant (while on inotropes or with ventricular assist device)

Sustained or symptomatic dysrhythmias uncontrolled with drug or device therapy

Patients that have had cardiovascular surgery or percutaneous intervention to palliate or correct congenital cardiovascular malformations within 3 months of the screening visit. Patients anticipated to undergo corrective heart surgery during the 12 months after entry into Part 2

Patients with unoperated obstructive or severe regurgitant valvular (aortic, pulmonary, or tricuspid) disease, or significant systemic ventricular outflow obstruction or aortic arch obstruction

Patients with restrictive or hypertrophic cardiomyopathy

Active myocarditis

Renal vascular hypertension (including renal artery stenosis)

Moderate-to severe obstructive pulmonary disease

Serum potassium  $> 5.3$  mmol/L

History of angioedema

Allergy or hypersensitivity to ACEI / ARB

## Type of study

Interventional

## Type of intervention

Pharmaceutical

## Type of intervention: Specify type

N/A

## Trial scope

Therapy

## Trial scope: Specify scope

N/A

## Study design: Allocation

Randomized controlled trial

## Study design: Masking

Blinded (masking used)

## Study design: Control

Active

## Study phase

3

## Study design: Purpose

Treatment

## Study design: Specify purpose

N/A

**Study design: Assignment**

Parallel

**IMP has market authorization**

Yes, Lebanon and Worldwide

**Name of IMP**

LCZ696 Entresto

**Type of IMP**

Others

**Pharmaceutical class**

angiotensin receptor neprilysin inhibitor

**Therapeutic indication**

Chronic Heart Failure

**Therapeutic benefit**

Global Rank endpoint through 52 weeks of Treatment

**Study model**

N/A

**Study model: Specify model**

N/A

**Time perspective**

N/A

**Time perspective: Specify perspective**

N/A

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

Samples without DNA

**Target sample size**

10

**Date of first enrollment: Type**

Actual

**Study design: Specify assignment**

N/A

**IMP has market authorization: Specify**

Approved for Adults use only : France, Germany, Belgium, UK, USA, KSA, UAE, Turkey

**Year of authorization**

2016

**Month of authorization**

3

**Study model: Explain model**

N/A

**Time perspective: Explain time perspective**

N/A

**Target follow-up duration: Unit**
**Biospecimen description**

Biological samples : Urine, Hematology, Chemistry will be sent to Clinical Reference Laboratory, Europe Ltd.  
7310 Cambridge Research Park  
Beach Drive, Waterbeach  
Cambridge, CB25 9TN  
United Kingdom

**Actual enrollment target size**

9

**Date of first enrollment: Date**

17/08/2018

**Date of study closure: Type**

Actual

**Date of study closure: Date**

28/02/2022

**Recruitment status**

Recruiting

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

10/01/2021

**IPD sharing statement plan**

No

**IPD sharing statement description**

Not provided

**Additional data URL**

<https://clinicaltrials.gov/ct2/show/record/NCT02678312?term=pediatric&cond=Cardiovascular+Diseases&cntry=LB&rank=1>

**Admin comments****Trial status**

Approved

## Secondary Identifying Numbers

Full name of issuing authority	Secondary identifying number
Clinicaltrials.gov	NCT02678312

## 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	Ghassan Chehab	Beirut	Lebanon	009613388581	ghassanchehab@yahoo.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	Linda Daou	Beirut	Lebanon	009613524424	drindadaou@gmail.com	Hotel Dieu De France

## Centers/Hospitals Involved in the Study

Center/Hospital name	Name of principles investigator	Principles investigator speciality	Ethical approval
Hotel Dieu De France	Dr Linda Daou	Pediatric Cardiologist	Approved
Rafik Hariri University Hospital	Dr Ghassan Chehab	Pediatric Cardiologist	Approved

## Ethics Review

Ethics approval obtained	Approval date	Contact name	Contact email	Contact phone
Hotel Dieu de France	27/02/2018	Sami Richa	cue@usj.edu.lb	961421229
Rafic Hariri University Hospital	09/01/2018	Rawan Yamout	rawan.yamout@crurhuh.com	018300000 ext 2037



## Countries of Recruitment

Name
Lebanon
Argentina
Bulgaria
Canada
China
Croatia
Finland
France
Hungary
Japan
Jordan
Turkey
United States of America

## Health Conditions or Problems Studied

Condition	Code	Keyword
Heart Failure	Heart failure, unspecified (I50.9)	HF

## Interventions

Intervention	Description	Keyword
Physical Exam, Vital signs, ECG, Echocardiography, Urinalysis, Serum/ urine pregnancy test, lab test, completion of QoL questionnaires	Physical Exam, Vital signs, ECG, Echocardiography, Urinalysis, Serum/ urine pregnancy test, lab test, completion of QoL questionnaires	ICF, Lab, IMP, radiology



## Primary Outcomes

Name	Time Points	Measure
Percentage of patients falling into each category based on global ranking	52 weeks	52 weeks
The global ranking is based on clinical events such as death, listing for urgent heart transplant, mechanical life support requirement at end of study, worsening heart failure (HF), New York Heart Association (NYHA)/Ross, Patient Global Impression of Severity (PGIS), Pediatric Quality of Life Inventory (PedsQL) physical functioning domain. The primary endpoint will be derived based on 5 categories ranking worst to best outcome	52 weeks	52 weeks

## Key Secondary Outcomes

Name	Time Points	Measure
Time to first occurrence of Category 1 or Category 2 event	52 weeks	52 weeks
Change from baseline in NYHA/Ross functional class	52 weeks	52 weeks



## 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