

CMBG453B12301 Study of Efficacy and Safety of MBG453 in Combination With Azacitidine in Subjects With Intermediate, High or Very High Risk Myelodysplastic Syndrome (MDS) as Per IPSS-R, or Chronic Myelomonocytic Leukemia-2 (CMML-2)

10/09/2025 16:19:30

Main Information

Primary registry identifying number

LBCTR2020094590

MOH registration number

Study registered at the country of origin

Type of registration

Prospective

Date of registration in national regulatory agency

Primary sponsor

Novartis Pharmaceuticals

Date of registration in primary registry

29/05/2021

Public title

CMBG453B12301 Study of Efficacy and Safety of MBG453 in Combination With Azacitidine in Subjects With Intermediate, High or Very High Risk Myelodysplastic Syndrome (MDS) as Per IPSS-R, or Chronic Myelomonocytic Leukemia-2 (CMML-2)

Scientific title

A Randomized, Double-blind, Placebo-controlled Phase III Multicenter Study of Azacitidine With or Without MBG453 for the Treatment of Patients With Intermediate, High or Very High Risk Myelodysplastic Syndrome (MDS) as Per IPSS-R, or Chronic Myelomonocytic Leukemia-2 (CMML-2)

Brief summary of the study: English

This is a Phase III multi-center, randomized, two-arm parallel-group, double-blind, placebo-controlled study of MBG453 or placebo added to azacitidine in adult subjects with intermediate, high or very high risk myelodysplastic syndrome (MDS) as per IPSS-R, or Chronic Myelomonocytic Leukemia-2 (CMML-2) who have an indication for treatment with azacitidine in first-line setting and are not eligible for intensive chemotherapy or hematopoietic stem cell transplantation (HSCT) according to medical judgment by the investigator.

The purpose of the current study is to assess clinical effects of MBG453 in combination with azacitidine in adult subjects with IPSS -R intermediate, high, very high risk MDS and CMML-2.

Brief summary of the study: Arabic

Protocol number

CMBG453B12301

Study registered at the country of origin: Specify

Type of registration: Justify

Primary sponsor: Country of origin

Novartis Pharmaceuticals

Date of registration in national regulatory agency

Acronym

CMBG453B12301

Acronym

1



دراسة متعددة المراكز، عشوائيّة التوزيع، مزدوجة التعمية، مرتكزة على المقارنة بدواء وهمي، في المرحلة الثالثة حول دواء أز اسيتيدين مع أو MBG لعلاج المرضى المصابين بمتلازمة خلل التنستج النقوي العالية الخطورة أو دَّات الخطورة العالية جداً وفقاً للنظام الدولي المنقحَّ لتسجيل النتائج (IPSS-R) 2أو بسرطان الدم الوحيديّ النقويّ المزمن-ّ

Health conditions/problem studied: Specify

Myelodysplastic Syndromes

·Leukemia, Myelomonocytic, Chronic

Interventions: Specify

•Drua: MBG453

A dose of MBG453 800 mg will be administered intravenously (IV) every 4 weeks (Q4W).

A dose of Azacitidine 75 mg/m2 will be administered IV or subcutaneously (SC) on Day 1-7, or Day 1-5, 8 and 9.

Drug: Placebo

A dose of Placebo 800 mg will be administered intravenously every 4 weeks (Q4W).

Key inclusion and exclusion criteria: Inclusion criteria

Inclusion Criteria:

- •Signed informed consent must be obtained prior to participation in the study
- •Age ≥ 18 years at the date of signing the informed consent form
- •Morphologically confirmed diagnosis of myelodysplastic syndrome (MDS) based on WHO 2016 classification (Arber et al 2016) by local investigator assessment with one of the following Prognostic Risk Categories, based on the revised International Prognostic Scoring System
- Very high (> 6 points)

 High (> 4.5 ≤ 6 points)
- ∘Intermediate (> 3 ≤ 4.5 points) Or Morphologically confirmed diagnosis of Chronic Myelomonocytic Leukemia -2 based on WHO 2016 classification (Arber et al 2016) by local investigator assessment with WBC < 13 x 109/L
- •Indication for azacitidine treatment according to the investigator, based on local standard medical practice and institutional guidelines for
- •Not eligible at time of screening for intensive chemotherapy according to the investigator, based on local standard medical practice and institutional guidelines for treatment decisions, including assessment of individual clinical factors such as age, comorbidities and performance
- •Not eligible at time of screening for hematopoietic stem cell transplantation (HSCT) according to the investigator, based on local standard medical practice and institutional guidelines for treatment decisions, including assessment of individual clinical factors such as age, comorbidities, performance status, and donor availability
- •Eastern Cooperative Oncology Group (ECOG) performance status of 0, 1 or 2

Key inclusion and exclusion criteria: Gender

Key inclusion and exclusion criteria: Specify gender

Both

Key inclusion and exclusion criteria: Age minimum

Key inclusion and exclusion criteria: Age maximum

Key inclusion and exclusion criteria: Exclusion criteria

- •Prior exposure to TIM-3 directed therapy at any time. Prior therapy with immune checkpoint inhibitors (e.g., anti-CTLA4, anti-PD-1, anti-PD-1, or anti-PD-L2), cancer vaccines is allowed except if the drug was administered within 4 months prior to randomization
- •Previous first-line treatment for intermediate, high, very high risk myelodysplastic syndromes (based on IPSS-R) or CMML with any antineoplastic agents including for example chemotherapy, lenalidomide and hypomethylating agents (HMAs) such as decitibine and azacitidine. However, previous treatment with hydroxyurea or leukopheresis to reduce WBC count is allowed prior to randomization.
- •Investigational treatment received within 4 weeks or 5 half-lives of this investigational treatment, whatever is longer, prior to randomization. In case of a checkpoint inhibitor: a minimal interval of 4 months prior to randomization is necessary to allow randomization.
- •Subjects with Myelodysplastic syndrome (MDS) based on 2016 WHO classification (Arber et al 2016) with revised International Prognostic Scoring System (IPSS-R) ≤ 3
- Diagnosis of acute myeloid leukemia (AML) including acute promyelocytic leukemia and extra-medullary acute myeloid leukemia, primary or secondary myelofibrosis based on WHO 2016 classification (Arber et al 2016)
- Diagnosis of therapy related myeloid neoplasms based on WHO 2016 classification (Arber et al 2016)
- •History of organ or allogeneic hematopoietic stem cell transplant

Other protocol-defined Inclusion/Exclusion Criteria may apply.

Type of study

Interventional



Type of intervention

Pharmaceutical

Trial scope

Therapy

Study design: AllocationRandomized controlled trial

Study design: Control

Placebo

Study design: Purpose

Treatment

Study design: Assignment

Parallel

IMP has market authorization

Νo

Name of IMP

MBG453

Type of IMP

Immunological

Pharmaceutical class

humanized monoclonal antibody against human TIM-3

Therapeutic indication

Patients with:

Myelodysplastic Syndromes or with chronic Leukemia Myelomonocytic

Therapeutic benefit

The primary objective of this study is to compare overall survival (OS) in the MBG453 plus azacitidine arm versus placebo plus azacitidine arm where OS is the time from randomization until death due to any cause.

Study model Study model: Explain model

N/A N/A

Study model: Specify model

N/A

Time perspective: Explain time perspective

N/A

Time perspective: Specify perspective

N/A

Target follow-up duration Target follow-up duration: Unit

3

Type of intervention: Specify type

N/A

Trial scope: Specify scope

N/A

Study design: MaskingBlinded (masking used)

Study phase

3

Study design: Specify purpose

N/A

Study design: Specify assignment

N/A

IMP has market authorization: Specify

Year of authorization Month of authorization



Number of groups/cohorts

Biospecimen retention

Samples without DNA

Biospecimen description

Samples will be shipped to covance central laboratory and BMA

will be

Target sample size

4

Date of first enrollment: Type

Anticipated

Date of study closure: Type

Anticipated

Recruitment status

Pending

Date of completion

29/07/2022

IPD sharing statement plan

Yes

Actual enrollment target size

Date of first enrollment: Date

29/10/2020

Date of study closure: Date

25/11/2027

Recruitment status: Specify

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 expert 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.

Additional data URL

https://clinical trials.gov/ct2/show/record/NCT04266301? term=MBG&draw=2&rank=2&view=record/NCT04266301. The state of th

Admin comments

Trial status

Approved

Secondary Identifying Numbers		
Full name of issuing authority	Secondary identifying number	
Clinical trials.gov	NCT04266301	



Sources of Monetary or Material Support

Name

Novartis Pharmaceuticals

Secondary Sponsors

Name

NA

Contact for Public/Scientific Queries						
Contact type	Contact full name	Address	Country	Telephone	Email	Affiliation
Public	Ali Bazarbachi	Beirut	Lebanon	961-1- 350000 ext 5800	bazarbac@aub.e du.lb	American University of Beirut Medical Center
Scientific	Hind Khairallah	Beirut	Lebanon	961151200 2 ext 271	hind.khairallah@f attal.com.lb	Khalil Fattal et Fils

Centers/Hospitals Involved in the Study			
Center/Hospital name	Name of principles investigator	Principles investigator speciality	Ethical approval
American UNiversity of Beirut medical Center	Ali Bazarbachi	Hematology	Approved

Ethics Review				
Ethics approval obtained	Approval date	Contact name	Contact email	Contact phone
American University of Beirut Medical Center	31/08/2020	Fuad Zyiadeh	fz05@aub.edu.lb	9611350000 ext 5445



Countries of Recruitment
Name
Lebanon
Australia
Austria
Belgium
Oman
Saudi Arabia
Czech Republic
Finland
France
Japan
Singapore
Spain
Switzerland
Taiwan
Thailand

Health Conditions or Problems Studied			
Condition Code Keyword		Keyword	
MDS Myelodysplastic syndrome, unspecified (D46.9) MDS		MDS	
CMML 2	Chronic monocytic leukaemia (C93.1)	CMML2	

Interventions		
Intervention	Description	Keyword
Informed consent, IMP administration, questionnaire , Bone marrow aspirate, Lab tests	Informed consent, IMP administration, questionnaire , Bone marrow aspirate, Lab tests	Informed consent, IMP administration, questionnaire , Bone marrow aspirate, Lab tests



Primary Outcomes		
Name	Time Points	Measure
Overall Survival	5 years	5 years

Key Secondary Outcomes		
Name	Time Points	Measure
Time to definitive deterioration of fatigue using Functional Assessment of Cancer Therapy (FACIT)-Fatigue score	5 years	5 years
Red Blood Cell transfusion-free intervals	5 years	5 years
Percent of subjects with at least 3 point confirmed improvement from baseline in FACIT-fatigue scoresscore	5 years	5 years
Percent of subjects with at least 10 point confirmed improvement from baseline in physical functioning using European Or ganization for Research and Treatment of Cancer's Core Quality of Life Questionnaire	5 years	5 years
Percentage of subjects with either CR, or mCR, or PR, or HI in each treatment arm according to International Working Group for MDS	5 years	5 years
Progression Free Survival (PFS)	5 years	5 years
Percentage of subjects with stable disease in each treatment arm according to International Working Group for MDS (IWG-MDS) as per investigator assessment	5 years	5 years



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	