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A Phase I randomized, open-label pharmacokinetic comparability study comparing pre- and post-change teclistamab in participants with relapsed/refractory multiple myeloma

Submission date	Recruitment status	[_] Prospectively registered
11/04/2024	No longer recruiting	[_] Protocol
Registration date	Overall study status	[_] Statistical analysis plan
22/05/2024	Ongoing	[_] Results
Last Edited	Condition category	[_] Individual participant data
03/07/2025	Cancer	[X] Record updated in last year

Plain English summary of protocol

Background and study aims
Multiple myeloma (MM) is a blood cancer that forms in a type of white blood cell (WBC) called plasma cells. Drugs that activate T-cells (type of WBCs) to attack cancer cells may be an effective way to destroy them. Teclistamab binds to a protein called cluster of differentiation 3 (CD3) receptor, which is found on T cells. It also binds to a protein called B-cell maturation antigen (BCMA), which is found on myeloma cells and some B cells (another type of WBC). This activates the T cells and leads to the killing of myeloma cells. In this study, the researchers want to learn more about how teclistamab made from the current commercial manufacturing process (pre-change) gets absorbed, distributed in the body, and excreted (pharmacokinetics) compared to the teclistamab made from a new manufacturing process (post-change).

Who can participate?
Patients aged 18 years or older with relapsed or refractory multiple myeloma. Cancer is called relapsed if it comes back after treatment and is called refractory if it does not respond to treatment.

What does the study involve?
At the start of the study, study doctors will confirm if the participants can take part in the study. They will divide participants into either of the two treatment groups in a random way to receive the treatment in 28-day cycles:
Group A: Pre-change teclistamab as an injection under the skin
Group B: Post-change teclistamab as an injection under the skin
Participants will be followed up on their overall health throughout the study. During the study, some tests such as blood and urine tests, imaging scans, and bone marrow testing will be performed. Blood samples will be taken at multiple timepoints to see how the body responds to treatment. Disease status will be checked based on International Myeloma Working Group

(IMWG) criteria for multiple myeloma. Side effects will be recorded until the study ends (up to about 3 years).

What are the possible benefits and risks of participating?
Participants may or may not receive any benefit from taking part in this study but the information that is learned from the study may help people with multiple myeloma in the future. This is a Phase I study in which pharmacokinetics (the process by which a drug gets absorbed, distributed in the body, and excreted) of pre-change teclistamab will be compared to post-change teclistamab. However, no differences are expected.
The expected risks for teclistamab includes inflammation condition that may occur after treatment with some types of immunotherapy, such as monoclonal antibodies (cytokine release syndrome), Neurological side effects may occur that include headaches or a condition of brain (immune effector cell-associated neurotoxicity syndrome), reduction in blood cells (cytopenias), low protein in blood that fights infection (hypogammaglobulinemia), infections, injection-site reactions.
The participant information sheet and informed consent form, which will be signed by every participant agreeing to take part in the study, includes a detailed section outlining the risks of participating in the study. Participants may have none, some, or all of the possible side effects listed, and they may be mild, moderate, or severe. To minimise the risk associated with taking part, participants are frequently reviewed for any side effects and other medical events. If they have any side effects, are worried about them, or have any new or unusual symptoms, participants will be encouraged to talk with their study doctor. The study doctor will also be monitoring for side effects and will provide appropriate medical care. There may also be side effects that the researchers do not expect or do not know about and that may be serious. Many side effects go away shortly after the intervention ends. However, sometimes side effects can be serious, long-lasting, or permanent. If a severe side effect or reaction occurs, the study doctor may need to stop the procedure. The study doctor will discuss the best way of managing any side effects with participants. There is always a chance that an unexpected or serious side effect may happen. This can happen to people who take this or any other drug.

Where is the study run from?
Janssen-Cilag International NV (Netherlands)

When is the study starting and how long is it expected to run for?
April 2024 to December 2027

Who is funding the study?
Janssen-Cilag International NV (Netherlands)

Who is the main contact?
Dr Lacramioara Arvata, JanssenUKRegistryQueries@its.jnj.com

Contact information

Type(s)
Scientific

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Additional identifiers

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2023-508426-10

IRAS number
1009491

ClinicalTrials.gov number
NCT06425991

Secondary identifying numbers
64007957MMY1008, IRAS 1009491, CPMS 60389

Study information

Scientific Title
A Phase I randomized, open-label pharmacokinetic comparability study comparing pre- and post-change teclistamab in participants with relapsed/refractory multiple myeloma

Acronym
MajesTEC-10

Study objectives
Primary objective:
The primary objective of this study is to evaluate the pharmacokinetic (PK) comparability of teclistamab monotherapy using teclistamab from the pre-change manufacturing process with that of the post-change manufacturing process.

Secondary objectives:
1. To compare the immunogenicity of pre-change teclistamab and post-change teclistamab

2. To compare the safety profile of pre-change teclistamab and post-change teclistamab
3. To compare the efficacy of pre-change teclistamab and post-change teclistamab

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 21/05/2024, North East - Tyne & Wear South Research Ethics Committee (NHSBT Newcastle Blood Donor Centre; Holland Drive, Newcastle upon Tyne, NE2 4NQ, United Kingdom; +44 (0)20 710 48120; tyneandwearsouth.rec@hra.nhs.uk), ref: 24/NE/0076

Study design
Open randomized controlled parallel-group trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Hospital

Study type(s)
Safety, Efficacy

Participant information sheet
Not available in web format, please use the contact details to request a participant information sheet

Health condition(s) or problem(s) studied
Relapsed/refractory multiple myeloma

Interventions
Participants will be divided into either of the two treatment groups in a random way to receive the treatment in 28-day cycles:
Arm A: Participants will receive teclistamab monotherapy (made from the pre-change manufacturing process) as an injection under the skin for all step-up and treatment doses until confirmed progressive disease, death, intolerable toxicity, withdrawal of consent to treatment, or the end of the study, whichever occurs first.
Arm B: Participants will receive teclistamab monotherapy (made from the post-change manufacturing process) as an injection under the skin for all step-up and treatment doses until confirmed progressive disease, death, intolerable toxicity, withdrawal of consent to treatment, or the end of the study, whichever occurs first.

Participants will be followed up for their overall health throughout the study.

Intervention Type
Drug

Pharmaceutical study type(s)

Pharmacokinetic, Pharmacodynamic

Phase
Phase I

Drug/device/biological/vaccine name(s)
Teclistamab

Primary outcome measure
PK comparability between pre-change teclistamab and post-change teclistamab:
1. Maximum observed serum concentration (Cmax) of teclistamab after the first treatment dose.
2. Area under serum concentration versus time curve (AUCtau) of teclistamab first treatment dose. AUCtau is defined as the area under the concentration-time curve during the dosing interval of teclistamab (after the first treatment dose).
3. Observed serum concentration immediately prior to the next study treatment administration (Ctrough) on Cycle 3 Day 1

Secondary outcome measures
1. Number of participants with anti-drug antibodies (ADAs) to teclistamab, reported up to approximately 3 years
2. Number of participants with adverse events (AEs) by severity, reported up to approximately 3 years
3. Number of participants with serious adverse events (SAEs) by severity, reported up approximately 3 years
4. Number of participants with abnormal laboratory results, such as hematology and chemistry, reported up to approximately 3 years
5. Percentage of participants with overall response (partial response [PR] or better), defined as participants who have a PR or better prior to subsequent antimyeloma therapy in accordance with the IMWG 2016 criteria - measured up to approximately 3 years
6. Percentage of participants with complete response (CR) or better response, defined as participants who achieve a CR or better response prior to subsequent antimyeloma therapy in accordance with the IMWG 2016 criteria - measured up to approximately 3 years
7. Percentage of participants with very good partial response (VGPR) or better response, defined as participants who achieve a VGPR or better response prior to subsequent antimyeloma therapy in accordance with the IMWG 2016 criteria - measured up to approximately 3 years
8. Characterization of changes in sBCMA as a pharmacodynamic marker measured using soluble BCMA blood concentrations, reported up to approximately 3 years

Overall study start date
09/04/2024

Completion date
30/12/2027

Eligibility

Key inclusion criteria
1. Documented diagnosis of multiple myeloma as defined by the criteria below:
1.1. Multiple myeloma diagnosis according to International Myeloma Working Group (IMWG) diagnostic criteria

1.2. Measurable disease at screening as defined by any of the following:
1.2.1. Serum M-protein level greater than or equal to (≥)0.5 grams per deciliter (g/dL) (central laboratory); or
1.2.2. Urine M-protein level ≥200 milligrams (mg)/24 hours (central laboratory) or
1.2.3. Serum immunoglobulin free light chain ≥10 milligrams per deciliter (mg/dL) (central laboratory) and abnormal serum immunoglobulin kappa lambda free light chain ratio
2. Received one to three prior lines of antimyeloma therapy, including a minimum of two consecutive cycles each of a PI, lenalidomide, and an anti-CD38 monoclonal antibody (or minimum of six doses if anti-CD38 monoclonal antibody was only part of a maintenance regimen) in any prior line.
3. Documented evidence of progressive disease or failure to achieve a response to the last line of therapy based on the investigator's determination of response by International Myeloma Working Group (IMWG) criteria
4. Have an Eastern Cooperative Oncology Group (ECOG) performance status score of 0 to 2
5. A female participant of childbearing potential must have a negative highly sensitive serum pregnancy test at screening and within 24 hours of the start of study treatment and must agree to further serum or urine pregnancy tests during the study

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
100

Key exclusion criteria
1. Received any bispecific antibody and/or chimeric antigen receptor T cell (CAR-T) cell therapy
2. Contraindications or life-threatening allergies, hypersensitivity, or intolerance to any study drug or its excipients
3. Received a live, attenuated vaccine within 4 weeks before the first dose of the study drug. Non-live or non-replicating vaccines authorized for emergency use by local health authorities are allowed
4. Central nervous system involvement or clinical signs of meningeal involvement of multiple myeloma. If either is suspected, negative whole-brain magnetic resonance imaging (MRI) and lumbar cytology may be required
5. Participant had major surgery or had significant traumatic injury within 2 weeks prior to randomization, or will not have fully recovered from surgery, or has major surgery planned during the time the participant is expected to be treated in the study

Date of first enrolment
13/05/2024

Date of final enrolment

31/01/2025

Locations

Countries of recruitment
Australia

Canada

England

France

Germany

Italy

Korea, South

Poland

Spain

United Kingdom

United States of America

Study participating centre
Christie Hospital
Wilmslow Road
Manchester
United Kingdom
M20 4BX

Study participating centre
Derriford Hospital
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PL6 8DH

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Hammersmith Hospital
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Sponsor type
Industry

Funder(s)

Funder type
Industry

Funder Name
Janssen-Cilag International NV

Results and Publications

Publication and dissemination plan
1. Peer-reviewed scientific journals
2. Internal report
3. Conference presentation
4. Publication on website
5. Submission to regulatory authorities

Study results will be available via publication in scientific journals, the EudraCT database and presentation at scientific meetings. Results will be made available to participants via a Plain Language Summary a year after the end of the study. The summary will describe the results regardless of study outcome in language that is understandable to the general public. It will not

contain individual participant results or their personal information. A copy of the Summary will be provided to the REC.

Intention to publish date
30/12/2028

Individual participant data (IPD) sharing plan
The data sharing policy of the Janssen Pharmaceutical Companies of Johnson and Johnson is available at https://www.janssen.com/clinical-trials/transparency. As noted on this site, requests for access to the study data can be submitted through the Yale Open Data Access (YODA) Project site at yoda.yale.edu.

IPD sharing plan summary
Available on request