Chronic Lymphocytic Leukemia

A clinical trial to compare how safe and effective different doses of mosunetuzumab on its own or in combination with other treatments are in people with chronic lymphocytic leukemia that has not responded to, or has come back after previous treatments

A Study Evaluating the Safety, Efficacy, and Pharmacokinetics of Mosunetuzumab and a Combined Regimen of Mosunetuzumab and Venetoclax in Participants With Relapsed or Refractory Chronic Lymphocytic Leukemia

Trial Status	Trial Runs In	Trial Identifier
Recruiting	8 Countries	NCT05091424 2022-501876-24-00
		BO43243

The source of the below information is the publicly available website ClinicalTrials.gov. It has been summarised and edited into simpler language.

Trial Summary:

This study will assess the safety, tolerability, pharmaokinetics, and preliminary efficacy of mosunetuzumab (Lunsumio) monotherapy in participants with relapsed or refractory (R/R) chronic lymphocytic leukemia (CLL). This study will also allow participants who are currently progressing on a Bruton tyrosine kinase inhibitor (BTKi) and requiring salvage therapy as assessed by the treating physician to continue their BTKi throughout the screening period and for the first two cycles of mosunetuzumab. An additional arm (open to non-US participants only) has been added to assess the safety, tolerability, pharmacokinetics, and preliminary efficacy of mosunetuzumab in combination with venetoclax, a B-cell lymphoma 2 (BCL2) inhibitor.

Hoffmann-La Roche Sponsor		Phase 1 Phase	
NCT05091424 2022-501876-24-00 BO43243 Γrial Identifiers			
Eligibility Criteria	:		
Gender	Age >=18 Years		Healthy Volunteers

1. Why is the BO43243 clinical trial needed?

Chronic lymphocytic leukaemia (CLL) is a type of blood cancer in which the bone marrow makes too many B-cells (a type of white blood cell). The excess B-cells build up and stop the blood, bone marrow and lymph nodes working properly. Standard treatment for CLL includes medicines such as:

- Bruton's tyrosine kinase inhibitors (BTKi), such as ibrutinib and acalabrutinib. These work by blocking a protein called BTK in CLL cells so they cannot grow as quickly
- Venetoclax, which works by blocking the action of a protein called BCL2. This protein helps keep CLL cells alive. Venetoclax can be given on its own or with:
- Rituximab or obinutuzumab, which are known as 'immunotherapies'. They stick to CLL cells and help the body's immune system fight the cancer and /or
- Chemotherapy

Treatment can include stem cell transplant, but age or medical conditions prevent this for most people. Some people have CLL that does not respond to (known as 'refractory' CLL) or comes back after (known as 'relapsed' CLL) treatment with standard medicines. More treatments for people with CLL are needed when previous treatment has not worked. Mosunetuzumab is a type of immunotherapy. Mosunetuzumab attaches to a marker on some types of CLL cells and another marker on cancer-killing immune cells called T cells. This brings the CLL cells closer to T cells. Mosunetuzumab is an experimental drug – this means health authorities have not approved mosunetuzumab on its own or in combination with other treatments for treating CLL, but mosunetuzumab has been approved to treat a cancer called follicular lymphoma.

This clinical trial aims to test mosunetuzumab at different doses on its own or in combination with other treatments. This is to understand how safe and how well it works in people with relapsed or refractory CLL and how the body processes mosunetuzumab.

2. How does the BO43243 clinical trial work?

This clinical trial is recruiting people with relapsed or refractory CLL. People can take part if they have had two types of treatment previously that have failed and have received venetoclax and/or a BTKi treatment, or if they have had two types of treatment before that have failed and have been taking a BTKi for at least 12 months but their CLL is worsening so they require a different treatment.

People who take part in this clinical trial (participants) will be given increasing doses of the clinical trial treatment mosunetuzumab every week until the target dose is reached. This is either on its own (Group 1), or with BTKi (if they are currently treated with BTKi) until the target dose of mosunetuzumab is reached (Group 2), or in combination with venetoclax daily for up to 2 years (Group 3). Treatment will end if their cancer gets worse or they have unacceptable side effects. Participants will stay in the hospital for 2 days after each dose of mosunetuzumab and will be given a medicine called a corticosteroid to lower the chance of side effects. Once the target doses are reached, mosunetuzumab will be given (without needing to stay in hospital after each dose) once every 3 weeks for about 1 year,

with or without daily venetoclax for up to 2 years unless a participants' cancer gets worse or they have unacceptable side effects. Participants who are currently being treated with a BTKi will continue to be given it for up to 6 weeks from the start of mosunetuzumab treatment.

The clinical trial doctor will see participants at least every 3 weeks. These hospital visits will include checks to see how the participant responds to the treatment and any side effects they may have. Participants will also be seen 1 month after the last dose of clinical trial treatment is given. Then, they will be followed up for as long as they agree to it, about every 3 months for 2 years, then every 6 months. The total time in the clinical trial could be more than 3 years depending on the response to treatment. Participants can stop trial treatment and leave the clinical trial at any time.

3. What are the main endpoints of the BO43243 clinical trial?

The main clinical trial endpoint (the main result measured in the trial) is the number and seriousness of side effects with different doses of mosunetuzumab given on its own or in combination with other treatments.

The other clinical trial endpoints include:

- How many participants have a response to treatment (objective response rate)
- How many participants have no CLL cells detectable in their blood or bone marrow 2– 3 months after the final dose of treatment
- The length of time between the start of the trial and participant's cancer getting worse (progression-free survival)
- How long participants live (overall survival)
- The time between treatment and having a change in disease or treatment (event free survival)
- How many participants have no signs of cancer on scans or tests (complete response)
- How much time there is between participant's cancer getting better from treatment and then getting worse (duration of response)
- How the body processes mosunetuzumab with and without venetoclax

4. Who can take part in this clinical trial?

People can take part in this trial if they are over the age of 18 and have relapsed or refractory CLL after at least two treatments have failed, including a BTKi and/or venetoclax. People may not be able to take part in this trial if they have certain medical conditions including severe heart, lung or liver disease. People also may not be able to take part if they have had certain treatments including mosunetuzumab. Women cannot take part in this trial if they are pregnant or breastfeeding or are planning to become pregnant during or soon after the clinical trial.

5. What treatment will participants be given in this clinical trial?

Everyone in this clinical trial will join 1 of 3 treatment groups and will be given:

- Group 1 Increasing doses of mosunetuzumab only, as an injection under the skin (subcutaneous injection) weekly until the target dose is reached, then every 3 weeks for about 1 year
- Group 2 Increasing doses of mosunetuzumab, given in the same way as Group 1, AND continued treatment with a BTKi (taken as prescribed) for up to 6 weeks from the start of mosunetuzumab treatment
- Group 3 Increasing doses of mosunetuzumab, given in the same way as Group 1, AND venetoclax with increasing doses at the start and then the same dose given as a daily tablet for about 2 years

This is an open-label trial, which means everyone involved, including the participant and the clinical trial doctor, will know the clinical trial treatment that the participant has been given. Participants may also receive tocilizumab as an infusion into the vein (intravenous infusion) if they experience certain side effects during the clinical trial.

6. Are there any risks or benefits in taking part in this clinical trial?

The safety or effectiveness of the experimental treatment or use may not be fully known at the time of the trial. Most trials involve some risks to the participant. However, it may not be greater than the risks related to routine medical care or the natural progression of the health condition. People who would like to participate will be told about any risks and benefits of taking part in the clinical trial, as well as any additional procedures, tests, or assessments they will be asked to undergo. All of these will be described in an informed consent document (a document that provides people with the information they need to decide to volunteer for the clinical trial).

Risks associated with the clinical trial drugs

Participants may have side effects (an unwanted effect of a drug or medical treatment) from the drugs used in this clinical trial. Side effects can be mild to severe, even life-threatening, and may vary from person to person. Participants will be closely monitored during the clinical trial; safety assessments will be performed regularly. Participants will be told about the known side effects of mosunetuzumab, venetoclax and tocilizumab and possible side effects based on human and laboratory studies or knowledge of similar drugs. Participants will be told about any known side effects of subcutaneous injections, intravenous infusions or taking tablets.

Potential benefits associated with the clinical trial

Participants' health may or may not improve from participation in the clinical trial. Still, the information collected may help other people with similar medical conditions in the future.