



# PLAIN LANGUAGE SUMMARY OF CLINICAL STUDY RESULTS

**Study Sponsor:** Kite, a Gilead Company

**Kite Protocol Number:** KTE-C19-107

**Date of Study:** January 2018 to November 2024



**Short Study Title:** Study of Effectiveness of Axicabtagene Ciloleucel Compared to Standard of Care Therapy in People With Relapsed/Refractory Diffuse Large B Cell Lymphoma

**Study Nickname:** ZUMA-7

**Date of this Plain Language Summary:** August 2025

The information in this summary does not include any information available after this date.

## Thank you

Thank you to the participants who contributed to the clinical study for **axicabtagene ciloleucel**, also known as **KTE-C19**.



Kite, a Gilead Company, sponsored this study. We believe it is important to share the results with study participants and the general public.

If you participated in the study and have questions about the results, please speak with a doctor or staff member at the study site.

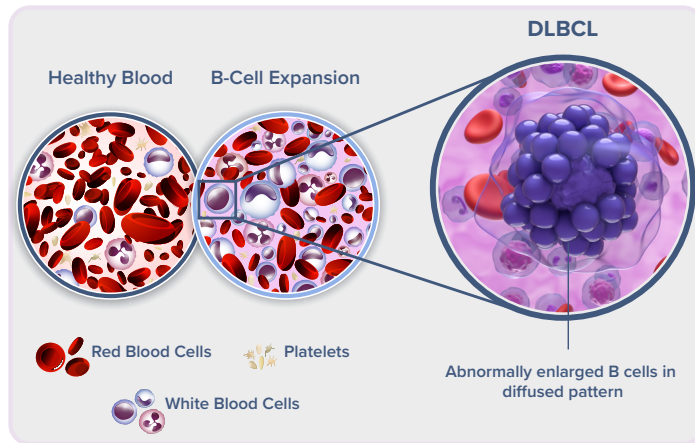
Always talk to a doctor or healthcare provider before making any treatment changes.

This document is a short summary of this study written for a general audience. Links to scientific summaries of this study can be found at the end of this document.

## i

## General information about the study

### What is Diffuse large B cell lymphoma (DLBCL)?



DLBCL is a type of blood cancer. In healthy people, the bone marrow — a soft, spongy tissue found inside bones, makes 3 main types of blood cells: red blood cells (RBCs), white blood cells (WBCs), and platelets. WBCs are also called lymphocytes. Lymphocytes are of 2 types: B cells and T cells.

In people with DLBCL, the B cells grow larger than the normal size like a diffuse (spread out) pattern and in an abnormal quantity. These cells don't grow or work like normal B cells. Over time, these defective cells build up and crowd out healthy blood cells. This may lead to severe infections and other health problems leading to death.

**Chemotherapy** has been the standard treatment for people with DLBCL. **Chemotherapy** is a combination of medicines that can kill cancer cells. However, these treatments may not be suitable for everyone or may not work for some people. Sometimes, the cancer shrinks or goes away with treatment, but it can come back later. This is called **relapsed** cancer. Other times, the cancer does not respond to treatment at all. This is called **refractory** cancer. Therefore, there is a need for new treatment options for people with relapsed or refractory DLBCL (r/r DLBCL).

**Axicabtagene ciloleucel (axi-cel)** is a type of **CAR T cell therapy**. It is approved as treatment for DLBCL in people who have failed two courses of treatment with chemotherapy.



**CAR T cell therapy:** **CAR** stands for **chimeric antigen receptor** made in a laboratory and inserted into T cells to better attack cancer cells. To prepare axi-cel, T cells are taken from the patient's blood, modified in a laboratory, and then put back into the patient's body to help destroy the cancer.

In this study, the researchers wanted to see if axi-cel can help people who failed one course of treatment with chemotherapy. This may help people get axi-cel sooner, mainly those who are unable to tolerate or respond to chemotherapy. Axi-cel was compared to standard of care therapy. It included chemotherapy because it is a common therapy used by doctors to treat people with r/r DLBCL.

This is a **Phase 3** clinical study. This means that researchers looked at how axi-cel worked in a large group of people with r/r DLBCL.



### What was the purpose of the study?

The purpose of the study was to learn how axi-cel works compared to standard of care therapy in participants with r/r DLBCL.

### The main question the researchers wanted to answer in this study was:

- **How long did participants remain event-free (called as **event-free survival [EFS]**) after joining the study?**
  - **EFS** was the length of time after joining the study that a participant remained free from events like cancer worsening, needing a new treatment, or death from any cause during the study period. A higher EFS time indicates better treatment effectiveness in controlling or managing the cancer.

Researchers also wanted to know if there were any side effects that participants had during the study.



## Who took part in the study?

**359** participants with r/r DLBCL around the world took part in the study.

### People could take part in the study if they:



Were at least  
18 years of age



Had confirmed  
r/r DLBCL



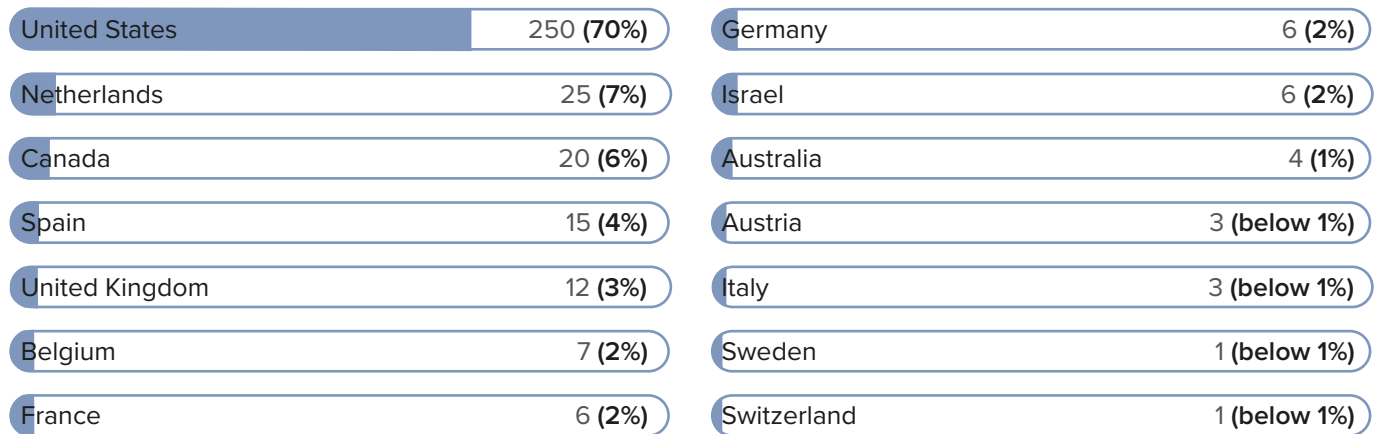
Took one course of  
treatment for r/r DLBCL  
before, but failed to respond



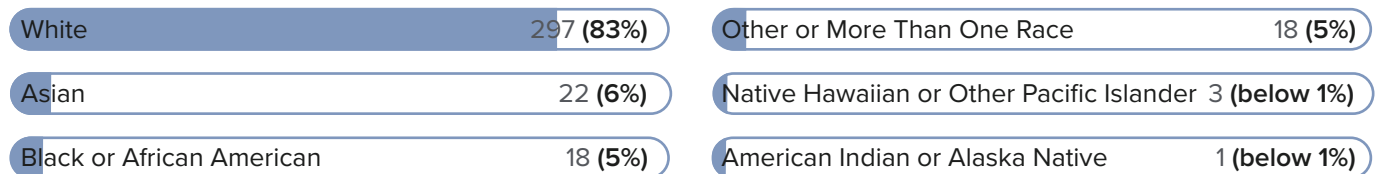
Had DLBCL relapse  
within 12 months

The study participants were between the ages of **21** and **81** years.

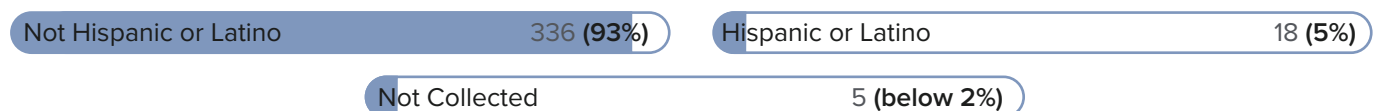
The participants from each country are shown below (Number (%) of participants).



The race of participants are shown below (Number (%) of participants).



The ethnicity of participants are shown below (Number (%) of participants).



Sex of participants are shown below  
Number (%) of participants



**Male**  
237 (66%)



**Female**  
122 (34%)



## What happened during the study?

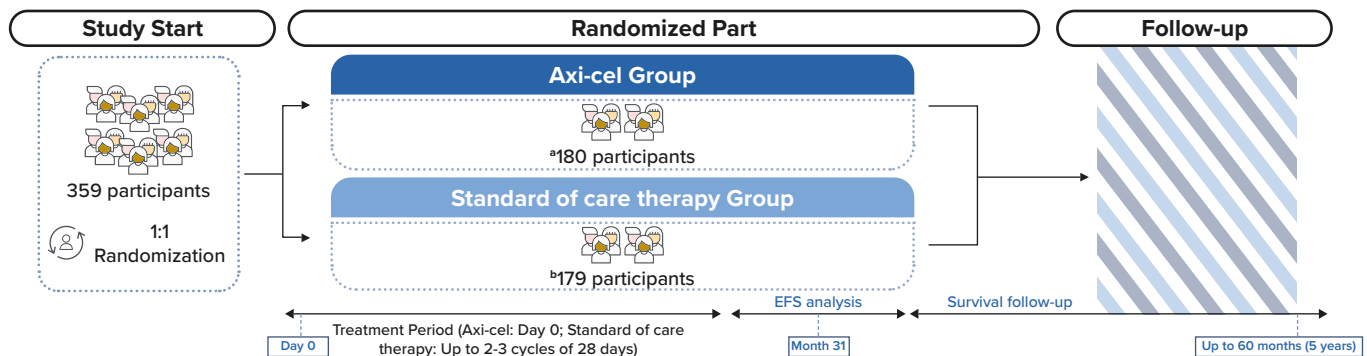
This was an **open-label** and **randomized** study. Participants were randomized in 2 groups: Axi-cel or Standard of care therapy.



**Open-label** means the participant, the doctors and the study staff knew that they were taking axi-cel or standard of care therapy.

**Randomized** means the researchers used a computer program to put the participants into treatment groups by chance. This helped make sure the treatments were chosen fairly. In this study participants had an equal chance of receiving any of the study treatments.

The graphic below shows the treatment plan.



a: Out of 180 participants, 170 received axi-cel and 10 received re-treatment with axi-cel; b: Out of 179 participants, 168 received standard of care therapy.



### Axi-cel group

Participants in this group went through below stages of treatment:

- A process called leukapheresis for taking out T cells. The T cells were then altered to make axi-cel
- 3 days of conditioning chemotherapy (medicines to remove lymphocytes to clear path for axi-cel)
- Then they received axi-cel at a target dose of 2 million cells per kg of body weight [for participants with weight below 100 kilogram (kg)] to a maximum of 200 million cells (for participants with weight above 100 kg)



### Axi-cel Re-treatment

If a participant had a response on Day 150 but their cancer came back, they were once allowed to receive the axi-cel treatment again. The re-treatment was given if their cancer still had a specific marker and they didn't have severe side effects from the initial treatment with axi-cel.

Participants who got axi-cel were monitored in the hospital for 7 to 10 days. Thereafter, they were suggested to stay nearby the hospital or clinic for at least 4 weeks, in case of any urgent care. Participants were followed for up to 5 years in this study. Subsequently, the participants joined another long-term follow-up study for axi-cel (Study KT-US-982-5968; NCT Number: NCT05041309; EU CT Number: 2023-507041-28), where to get monitored for safety over a period of 15 years.



### Standard of care therapy group

Participants received any one of the following standard of care therapies, all including rituximab, per study doctor's decision for 2 or 3 cycles. A **cycle** is the time between one round of treatment and the start of next. Each cycle was of 28 days. Chemotherapy medicines were given as a slow injection into a vein.

- **R-ICE (rituximab, ifosfamide, carboplatin, etoposide):**
  - Rituximab 375 mg/m<sup>2</sup> before chemotherapy
  - Ifosfamide 5 g/m<sup>2</sup> on Day 2 with mesna
  - Carboplatin maximum dose 800 mg on Day 2
  - Etoposide 100 mg/m<sup>2</sup>/day on Days 1-3
- **R-DHAP (rituximab, dexamethasone, high-dose cytarabine, platinum):**
  - Rituximab 375 mg/m<sup>2</sup> before chemotherapy
  - Dexamethasone 40 mg/day on Days 1-4
  - High-dose cytarabine 2 g/m<sup>2</sup> every 12 h for 2 doses on Day 2
  - Cisplatin 100 mg/m<sup>2</sup> on Day 1 (or oxaliplatin 100 mg/m<sup>2</sup>)

- R-ESHAP (rituximab, etoposide, methylprednisolone, cytarabine, cisplatin):
  - Rituximab 375 mg/m<sup>2</sup> Day 1
  - Etoposide 40 mg/m<sup>2</sup>/d on Days 1-4
  - Methylprednisolone 500 mg/day on Days 1-4 or 5
  - Cisplatin at 25 mg/m<sup>2</sup>/day on Days 1-4
  - Cytarabine 2 g/m<sup>2</sup> on Day 5
- R-GDP (rituximab, gemcitabine, dexamethasone, platinum):
  - Rituximab 375 mg/m<sup>2</sup> Day 1 (or Day 8)
  - Gemcitabine 1 g/m<sup>2</sup> on Days 1 and 8
  - Dexamethasone 40 mg on Days 1-4
  - Cisplatin 75 mg/m<sup>2</sup> on Day 1 (or carboplatin 800 mg maximum dose on Day 2)

If the standard of care therapy worked for the participant, they also got a high-dose therapy and autologous stem cell transplant (where abnormal B cells are replaced with participant's own healthy cells), per study doctor's decision.



## What were the results of the study?

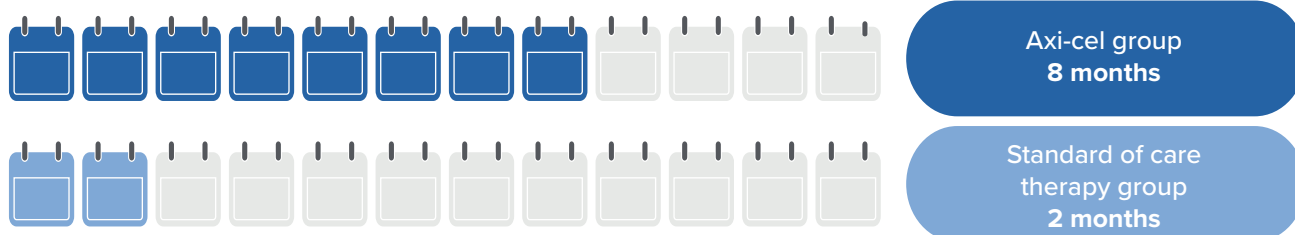


This is a summary of the main results from this study. The individual results of each participant might be different and are not in this summary. A detailed presentation of the results can be found on the websites listed at the end of this summary.

### How long did participants remain event-free after joining the study?

To find out EFS time, the researchers did tests and scans time to time to check cancer worsening. They also kept track of other events like needing a new treatment for DLBCL or death of the participant from any cause. They then calculated the average EFS time for each group.

The below graphic shows average EFS time in the axi-cel and standard of care therapy groups.



The EFS results showed that participants who received axi-cel remained event-free for a longer period (8 months) compared to those who received standard-of-care therapy (2 months).



## What side effects did participants have during the study?

Unwanted medical events can happen to the study participants when they take a study drug. In this summary, “side effects” are defined as unwanted medical events that the study doctors thought might be caused by the study drug.

The results from several studies are usually needed to help decide if a study drug actually causes a side effect.

Out of 180 participants, 170 received axi-cel. Out of 179 participants, 168 received standard of care therapy. Out of 180, 10 participants received retreatment with axi-cel. Therefore, the results in this section are reported only for 170 participants in axi-cel group, 168 participants in standard of care therapy group and 10 participants in the axi-cel retreatment group.



A side effect is considered “serious” if it:

- results in death
- is life-threatening
- is considered by the study doctor to be medically important
- causes lasting problems
- requires hospital care
- causes a birth defect



The table below shows how many participants had side effects during the study.

Overall Side Effects			
	Axi-cel group (Out of 170 participants)	Standard of care therapy group (Out of 168 participants)	Axi-cel retreatment group (Out of 10 participants)
	Number (%) of participants		
How many participants had any side effects?	163 (96%)	160 (95%)	10 (100%)
How many participants had any serious side effects?	64 (38%)	59 (35%)	2 (20%)
How many participants stopped taking the study treatment because of the side effects?	0	11 (7%)	0

**3 out of 338 (3%) treated participants** died due to serious side effects during the study.

- 1 out of 170 (below 1%) participants died in axi-cel group. The participant died after a liver infection came back (hepatitis B reactivation).
- 2 out of 168 (below 1%) participants died in standard of care therapy group.
  - One death was due to lung injury that causes fluid to leak into the lungs (acute respiratory distress syndrome) and the other death was due to the abrupt loss of heart function (cardiac arrest).

### What were the serious side effects?

The table below shows the serious side effects that occurred in at least 5% participants in any group during the study.

Serious Side Effects			
	Axi-cel group (Out of 170 participants)	Standard of care therapy group (Out of 168 participants)	Axi-cel retreatment group (Out of 10 participants)
	Number (%) of participants		
Fever (Pyrexia)	24 (14%)	4 (2%)	0
A brain condition that seriously changes how a person thinks and acts (Encephalopathy)	17 (10%)	0	0
Low blood pressure (Hypotension)	15 (9%)	3 (2%)	1 (10%)
A condition that makes it hard for a person to talk, understand others, read, or write, because of damage to the brain (Aphasia)	9 (5%)	0	0
Fever with a low number of white blood cells (Febrile neutropenia)	3 (2%)	19 (11%)	0
Low number of white blood cells (Neutrophil count decreased)	3 (2%)	3 (2%)	1 (10%)
Skin infection that results in swollen lump or boil (Furuncle)	0	0	1 (10%)

What were the non-serious side effects?

The table below lists the most common non-serious side effects that occurred in more than 30% of the study participants in any group. These side effects were not serious in nature and did not meet the definition of ‘serious side effects’ mentioned in the section above in this summary.

Non-Serious Side Effects			
	Axi-cel group (Out of 170 participants)	Standard of care therapy group (Out of 168 participants)	Axi-cel retreatment group (Out of 10 participants)
	Number (%) of participants		
Fever (Pyrexia)	148 (87%)	31 (18%)	9 (90%)
Low blood pressure (Hypotension)	61 (36%)	15 (9%)	2 (20%)
Extreme tiredness (Fatigue)	49 (29%)	80 (48%)	1 (10%)
Feeling sick to the stomach (Nausea)	29 (17%)	107 (64%)	1 (10%)
Low number of red blood cells (Anemia)	25 (15%)	82 (49%)	0
Loose watery stools (Diarrhoea)	24 (14%)	52 (31%)	0

There were other serious and non-serious side effects, but those occurred in fewer participants. Some participants may have had more than 1 serious and non-serious side effects.

? How has this study helped researchers?

The researchers learned more about the safety of axi-cel and how it works in people with r/r DLBCL, compared to standard of care therapy.

The results from several studies are needed to help decide which treatments work and are safe. This summary shows only the main results from this one study. Other studies may provide new information or different results.

Gilead Sciences does plan to have further clinical studies with axi-cel.



## Where can I learn more about this study?

You can find more information about this study on the websites listed below.

Organization (Website)	Study Identifier
European Medicines Agency <a href="http://www.clinicaltrialsregister.eu">www.clinicaltrialsregister.eu</a>	EudraCT Number: <a href="#">2017-002261-22</a>
United States National Institutes of Health (NIH) ( <a href="http://www.clinicaltrials.gov">www.clinicaltrials.gov</a> )	ClinicalTrials.gov Number: <a href="#">NCT03391466</a>
Gilead Website <a href="http://www.gileadclinicaltrials.com">www.gileadclinicaltrials.com</a>	<a href="#">KTE-C19-107</a>

Please note that information on these websites may be presented in a different way from this summary.

**Full Study Title:** A Phase 3, Randomized, Open-Label Study Evaluating the Efficacy of Axicabtagene Ciloleucel versus Standard of Care Therapy in Subjects with Relapsed/Refractory Diffuse Large B-cell Lymphoma (ZUMA-7)

To learn more about clinical trials in general,  
please visit this [page](#) on [www.clinicaltrials.gov](http://www.clinicaltrials.gov) website

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Clinical study participants belong to a large community of people who take part in clinical research around the world. They help researchers answer important health questions and find medical treatments for patients.

