Clinical trial results:
Phase 3 Multicenter, Double-Blind, Placebo-Controlled Trial of Viralym-M (ALVR105) for the Treatment of Patients With Virus-Associated Hemorrhagic Cystitis After Allogeneic Hematopoietic Cell Transplant

Summary

EudraCT number	2020-000722-26
Trial protocol	SE FR IT
Global end of trial date	30 January 2024

Results information

Result version number	v1 (current)
This version publication date	04 May 2024
First version publication date	04 May 2024

Trial information

Trial identification

Sponsor protocol code	3AVM-003-HC

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT04390113
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	AlloVir, Inc.
Sponsor organisation address	1100 Winter Street, Waltham, MA, United States, 02451
Public contact	Clinical Trials Information Line, AlloVir, Inc., +1 (833)409-2281, clinicaltrials@allovir.com
Scientific contact	Clinical Trials Information Line, AlloVir, Inc., +1 (833)409-2281, clinicaltrials@allovir.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	30 January 2024
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	30 January 2024
Was the trial ended prematurely?	Yes

Notes:

General information about the trial

Main objective of the trial:

To compare the time to resolution of macroscopic hematuria in recipients of posoleucel (PSL) to that in recipients of placebo.

Protection of trial subjects:

This study was performed in compliance with the principles of Good Clinical Practice, including the archiving of essential documents.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	18 March 2021
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	Yes

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Canada: 2
Country: Number of subjects enrolled	United States: 61
Country: Number of subjects enrolled	Korea, Republic of: 8
Country: Number of subjects enrolled	Spain: 5
Country: Number of subjects enrolled	Sweden: 1
Country: Number of subjects enrolled	United Kingdom: 8
Country: Number of subjects enrolled	France: 3
Country: Number of subjects enrolled	Italy: 9
Worldwide total number of subjects	97
EEA total number of subjects	18

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	0

Adolescents (12-17 years)	2
Adults (18-64 years)	95
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Participants were enrolled from March 2021 to Jan 2024 across 57 study centers in the United States, Canada, France, Italy, Spain, Sweden, the United Kingdom and South Korea.

Pre-assignment

Screening details:

Overall 144 participants were screened and a total of 97 participants were randomized in the study.

Period 1

Period 1 title	Overall Study (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Carer, Assessor

Arms

Are arms mutually exclusive?	Yes
Arm title	Posoleucel (ALVR105)

Arm description:

All participants received 2 infusions of either PSL or placebo separated by 14 (±3) days. Administering the second infusion as early as 11 days after the first infusion was encouraged if feasible. Participants who weighed <40 kg at the time of screening received 2×10^7 PSL cells (or placebo), while those who weighed ≥40 kg at the time of screening received 4×10^7 PSL cells (or placebo). All infusions were administered intravenously (IV) (via peripheral or central line) over approximately 5 minutes as a slow push.

Arm type	Experimental
Investigational medicinal product name	Posoleucel (PSL)
Investigational medicinal product code	
Other name	ALVR105, PSL
Pharmaceutical forms	Dispersion for infusion
Routes of administration	Intravenous use

Dosage and administration details:

Participants who weighed <40 kg at the time of screening received 2×10^7 PSL cells, while who weighed ≥40 kg at the time of screening received 4×10^7 PSL cells. All infusions were administered intravenously (via peripheral or central line) over approximately 5 minutes as a slow push.

Arm title	Placebo

Arm description:

All participants received 2 infusions of either PSL or placebo separated by 14 (±3) days. Administering the second infusion as early as 11 days after the first infusion was encouraged if feasible. Participants who weighed <40 kg at the time of screening received 2×10^7 PSL cells (or placebo), while those who weighed ≥40 kg at the time of screening received 4×10^7 PSL cells (or placebo). All infusions were administered IV (via peripheral or central line) over approximately 5 minutes as a slow push.

Arm type	Placebo
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Dispersion for infusion
Routes of administration	Intravenous use

Dosage and administration details:

Participants received weight-based matching placebo to posoleucel. All infusions were administered IV (via peripheral or central line) over approximately 5 minutes as a slow push.

Number of subjects in period 1	Posoleucel (ALVR105)	Placebo
Started	57	40
Completed	37	26
Not completed	20	14
Consent withdrawn by subject	10	5
Physician decision	1	3
Adverse event, non-fatal	1	-
Death	2	1
Other	1	-
Study terminated by sponsor	5	3
Missing	-	1
Not treated	-	1

Baseline characteristics

Reporting groups	
Reporting group title	Posoleucel (ALVR105)

Reporting group description:

All participants received 2 infusions of either PSL or placebo separated by 14 (±3) days. Administering the second infusion as early as 11 days after the first infusion was encouraged if feasible. Participants who weighed <40 kg at the time of screening received 2×10^7 PSL cells (or placebo), while those who weighed ≥40 kg at the time of screening received 4×10^7 PSL cells (or placebo). All infusions were administered intravenously (IV) (via peripheral or central line) over approximately 5 minutes as a slow push.

Reporting group title	Placebo

Reporting group description:

All participants received 2 infusions of either PSL or placebo separated by 14 (±3) days. Administering the second infusion as early as 11 days after the first infusion was encouraged if feasible. Participants who weighed <40 kg at the time of screening received 2×10^7 PSL cells (or placebo), while those who weighed ≥40 kg at the time of screening received 4×10^7 PSL cells (or placebo). All infusions were administered IV (via peripheral or central line) over approximately 5 minutes as a slow push.

Reporting group values	Posoleucel (ALVR105)	Placebo	Total
Number of subjects	57	40	97
Age categorical Units: Subjects			
Age continuous Units: years			
arithmetic mean	44.9	47.0	
standard deviation	± 16.59	± 16.60	-
Gender categorical Units: Subjects			
Female	19	16	35
Male	38	24	62
Ethnicity Units: Subjects			
Hispanic or Latino	13	7	20
Not Hispanic or Latino	38	30	68
Unknown or Not Reported	6	3	9
Race Units: Subjects			
American Indian or Alaska Native	1	0	1
Asian	7	3	10
Native Hawaiian or Other Pacific Islander	2	0	2
Black or African American	9	2	11
White	33	30	63
More than one race	0	0	0
Unknown or Not Reported	5	5	10

End points

End points reporting groups

Reporting group title	Posoleucel (ALVR105)

Reporting group description:

All participants received 2 infusions of either PSL or placebo separated by 14 (±3) days. Administering the second infusion as early as 11 days after the first infusion was encouraged if feasible. Participants who weighed <40 kg at the time of screening received 2×10^7 PSL cells (or placebo), while those who weighed ≥40 kg at the time of screening received 4×10^7 PSL cells (or placebo). All infusions were administered intravenously (IV) (via peripheral or central line) over approximately 5 minutes as a slow push.

Reporting group title	Placebo

Reporting group description:

All participants received 2 infusions of either PSL or placebo separated by 14 (±3) days. Administering the second infusion as early as 11 days after the first infusion was encouraged if feasible. Participants who weighed <40 kg at the time of screening received 2×10^7 PSL cells (or placebo), while those who weighed ≥40 kg at the time of screening received 4×10^7 PSL cells (or placebo). All infusions were administered IV (via peripheral or central line) over approximately 5 minutes as a slow push.

Primary: Time to Resolution of Macroscopic Hematuria

End point title	Time to Resolution of Macroscopic Hematuria

End point description:

Time to macroscopic hematuria resolution is calculated from time of randomization to the first date of observed macroscopic hematuria resolution. Kaplan-Meier estimates reported as median number of days to resolution. Participants were censored at the last follow-up time of any participant in the ITT population if they took definitive therapies to stop bladder bleeding or received treatment for hemorrhagic cystitis with non-PSL VSTs before achieving resolution or deceased. Participants were also censored at last follow up if they failed to achieve resolution by end of study.

BK Intent-to-Treat [ITT] Population: All patients randomized who had BKV in their urine at baseline.

End point type	Primary

End point timeframe:

Up to 24 weeks

End point values	Posoleucel (ALVR105)	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	48	38		
Units: days				
median (confidence interval 95%)	36 (22.0 to 63.0)	31 (18.0 to 63.0)		

Statistical analyses

Statistical analysis title	Primary Analysis: Posoleucel versus Placebo

Statistical analysis description:

Stratified log rank test p-value for the primary efficacy endpoint is based on the stratification factors at randomization. The stratified Cox model is employed to estimate the hazard ratio and 95% CI.

Stratification factors include age (<12 years or >=12 years) and use of cidofovir within 4 weeks prior to screening.

Comparison groups	Posoleucel (ALVR105) v Placebo
Number of subjects included in analysis	86
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.6253
Method	Logrank
Parameter estimate	Hazard ratio (HR)
Point estimate	0.92
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.55
upper limit	1.55

Secondary: Time Until Bladder Pain is Resolved

End point title	Time Until Bladder Pain is Resolved

End point description:

End point type	Secondary

End point timeframe:

Until event occurrence through Week 24

End point values	Posoleucel (ALVR105)	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	0[1]	0[2]		
Units: days				
arithmetic mean (standard deviation)	()	()		

Notes:

[1] - Data not collected due to early study termination.

[2] - Data not collected due to early study termination.

Statistical analyses

No statistical analyses for this end point

Secondary: Days in the Hospital for Any Reason

End point title	Days in the Hospital for Any Reason

End point description:

End point type	Secondary

End point timeframe:

Until event occurrence through Week 24

End point values	Posoleucel (ALVR105)	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	0[3]	0[4]		
Units: days				
arithmetic mean (standard deviation)	()	()		

Notes:

[3] - Data not collected due to early study termination.

[4] - Data not collected due to early study termination.

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With Treatment Emergent Acute Graft Versus Host Disease (GVHD)

End point title	Number of Participants With Treatment Emergent Acute Graft Versus Host Disease (GVHD)

End point description:

Grading of acute GVHD is reported according to CTCAE version 5.0 which ranges from Grade 0 (best/no disease) to. Grade IV (worst). Participants with Grade I-IV are included.

Modified ITT Population (mITT): All randomized participants who receive any dose of study drug.

End point type	Secondary

End point timeframe:

Until event occurrence through Week 24

End point values	Posoleucel (ALVR105)	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	57	39		
Units: Participants	11	9		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With Treatment Emergent Cytokine Release Syndrome (CRS)

End point title	Number of Participants With Treatment Emergent Cytokine Release Syndrome (CRS)

End point description:

CRS is defined as a supraphysiologic response following any immune therapy that results in the activation or engagement of endogenous or infused T cells and/or other immune effector cells. Symptoms can be progressive, must include fever at the onset, and may include hypotension, capillary

leak (hypoxia), and end organ dysfunction.

mITT: All randomized participants who receive any dose of study drug.

End point type	Secondary

End point timeframe:

Up to 24 weeks

End point values	Posoleucel (ALVR105)	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	57	39		
Units: Participants	1	0		

Statistical analyses

No statistical analyses for this end point

Secondary: Time to Resolution for All Target Viruses

End point title	Time to Resolution for All Target Viruses

End point description:

End point type	Secondary

End point timeframe:

Until event occurrence through Week 24

End point values	Posoleucel (ALVR105)	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	0[5]	0[6]		
Units: days				
arithmetic mean (standard deviation)	()	()		

Notes:

[5] - Data not collected due to early study termination.

[6] - Data not collected due to early study termination.

Statistical analyses

No statistical analyses for this end point

Secondary: Average Daily Bladder Pain

End point title	Average Daily Bladder Pain

End point description:

End point type	Secondary

End point timeframe:
Until event occurrence through Week 6

End point values	Posoleucel (ALVR105)	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	0[7]	0[8]		
Units: scores on a scale				
arithmetic mean (standard deviation)	()	()		

Notes:

[7] - Data not collected due to early study termination.

[8] - Data not collected due to early study termination.

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events:	
Up to 24 weeks	
Assessment type	Systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	26.0

Reporting groups	
Reporting group title	Posoleucel (ALVR105)

Reporting group description:

All participants received 2 infusions of either PSL or placebo separated by 14 (±3) days. Administering the second infusion as early as 11 days after the first infusion was encouraged if feasible. Participants who weighed <40 kg at the time of screening received 2×107 PSL cells (or placebo), while who weighed ≥40 kg at the time of screening received 4×107 PSL cells (or placebo). All infusions were administered IV (via peripheral or central line) over approximately 5 minutes as a slow push.

Reporting group title	Placebo

Reporting group description:

All participants received 2 infusions of either PSL or placebo separated by 14 (±3) days. Administering the second infusion as early as 11 days after the first infusion was encouraged if feasible. Participants who weighed <40 kg at the time of screening received 2×107 PSL cells (or placebo), while who weighed ≥40 kg at the time of screening received 4×107 PSL cells (or placebo). All infusions were administered IV (via peripheral or central line) over approximately 5 minutes as a slow push.

Serious adverse events	Posoleucel (ALVR105)	Placebo	
Total subjects affected by serious adverse events			
subjects affected / exposed	28 / 57 (49.12%)	19 / 39 (48.72%)	
number of deaths (all causes)	2	1	
number of deaths resulting from adverse events			
Vascular disorders			
Hypotension			
subjects affected / exposed	0 / 57 (0.00%)	2 / 39 (5.13%)	
occurrences causally related to treatment / all	0 / 0	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Shock haemorrhagic			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Surgical and medical procedures			
Arterial revascularisation			

subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
General disorders and administration site conditions			
Asthenia			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Non-cardiac chest pain			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pyrexia			
subjects affected / exposed	2 / 57 (3.51%)	3 / 39 (7.69%)	
occurrences causally related to treatment / all	0 / 2	0 / 3	
deaths causally related to treatment / all	0 / 0	0 / 0	
Immune system disorders			
Acute graft versus host disease in intestine			
subjects affected / exposed	2 / 57 (3.51%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 2	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Acute graft versus host disease in liver			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Chronic graft versus host disease in intestine			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory, thoracic and mediastinal disorders			
Acute respiratory failure			

subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 1	0 / 0	
Dyspnoea			
subjects affected / exposed	2 / 57 (3.51%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 2	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Haemoptysis			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hypoxia			
subjects affected / exposed	1 / 57 (1.75%)	2 / 39 (5.13%)	
occurrences causally related to treatment / all	0 / 1	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Painful respiration			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonitis			
subjects affected / exposed	1 / 57 (1.75%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory failure			
subjects affected / exposed	2 / 57 (3.51%)	3 / 39 (7.69%)	
occurrences causally related to treatment / all	0 / 2	0 / 3	
deaths causally related to treatment / all	0 / 1	0 / 1	
Investigations			
Lipase increased			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Injury, poisoning and procedural complications			

Humerus fracture			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infusion related reaction			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Subdural haematoma			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Toxicity to various agents			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Transfusion reaction			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Transplant failure			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cardiac disorders			
Cardiac failure congestive			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pericarditis			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Tachycardia			

subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Nervous system disorders			
Dizziness			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Encephalopathy			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Headache			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Seizure			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Blood and lymphatic system disorders			
Anaemia			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Febrile neutropenia			
subjects affected / exposed	1 / 57 (1.75%)	2 / 39 (5.13%)	
occurrences causally related to treatment / all	0 / 1	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastrointestinal disorders			
Diarrhoea			
subjects affected / exposed	2 / 57 (3.51%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

Gastrointestinal haemorrhage			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Lower gastrointestinal haemorrhage			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Nausea			
subjects affected / exposed	3 / 57 (5.26%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 3	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Vomiting			
subjects affected / exposed	3 / 57 (5.26%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 3	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Abdominal pain			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Renal and urinary disorders			
Acute kidney injury			
subjects affected / exposed	1 / 57 (1.75%)	2 / 39 (5.13%)	
occurrences causally related to treatment / all	0 / 1	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Anuria			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cystitis haemorrhagic			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Dysuria			

subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Urinary retention			
subjects affected / exposed	2 / 57 (3.51%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Urinary tract obstruction			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Viral haemorrhagic cystitis			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Musculoskeletal and connective tissue disorders			
Back pain			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pain in extremity			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Bacterial pyelonephritis			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Bacterial sepsis			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

COVID-19			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
COVID-19 pneumonia			
subjects affected / exposed	2 / 57 (3.51%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cellulitis			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Clostridium difficile colitis			
subjects affected / exposed	1 / 57 (1.75%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Escherichia bacteraemia			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastroenteritis salmonella			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Human herpesvirus 6 encephalitis			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Kidney infection			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Klebsiella bacteraemia			

subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Lower respiratory tract infection			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Mastoiditis			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Otitis media acute			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonia			
subjects affected / exposed	4 / 57 (7.02%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 4	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 1	
Pneumonia escherichia			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonia staphylococcal			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Post-acute COVID-19 syndrome			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory syncytial virus infection			

subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Sepsis			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Septic shock			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Sinusitis			
subjects affected / exposed	2 / 57 (3.51%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Upper respiratory tract infection			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Urinary tract infection			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Urinary tract infection bacterial			
subjects affected / exposed	0 / 57 (0.00%)	1 / 39 (2.56%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Urinary tract infection pseudomonal			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Viral haemorrhagic cystitis			

subjects affected / exposed	2 / 57 (3.51%)	2 / 39 (5.13%)	
occurrences causally related to treatment / all	0 / 2	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Metabolism and nutrition disorders			
Decreased appetite			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

Frequency threshold for reporting non-serious adverse events: 5 %

Non-serious adverse events	Posoleucel (ALVR105)	Placebo	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	54 / 57 (94.74%)	36 / 39 (92.31%)	
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Acute myeloid leukaemia recurrent			
subjects affected / exposed	2 / 57 (3.51%)	2 / 39 (5.13%)	
occurrences (all)	2	2	
Vascular disorders			
Hypertension			
subjects affected / exposed	4 / 57 (7.02%)	1 / 39 (2.56%)	
occurrences (all)	4	1	
Hypotension			
subjects affected / exposed	6 / 57 (10.53%)	4 / 39 (10.26%)	
occurrences (all)	6	4	
General disorders and administration site conditions			
Fatigue			
subjects affected / exposed	3 / 57 (5.26%)	2 / 39 (5.13%)	
occurrences (all)	3	2	
Oedema peripheral			
subjects affected / exposed	3 / 57 (5.26%)	4 / 39 (10.26%)	
occurrences (all)	3	4	
Pyrexia			
subjects affected / exposed	11 / 57 (19.30%)	8 / 39 (20.51%)	
occurrences (all)	11	8	

Immune system disorders			
Acute graft versus host disease in intestine			
subjects affected / exposed	8 / 57 (14.04%)	3 / 39 (7.69%)	
occurrences (all)	8	3	
Acute graft versus host disease in liver			
subjects affected / exposed	1 / 57 (1.75%)	2 / 39 (5.13%)	
occurrences (all)	1	2	
Acute graft versus host disease in skin			
subjects affected / exposed	6 / 57 (10.53%)	5 / 39 (12.82%)	
occurrences (all)	6	5	
Chronic graft versus host disease in eye			
subjects affected / exposed	3 / 57 (5.26%)	1 / 39 (2.56%)	
occurrences (all)	3	1	
Chronic graft versus host disease in intestine			
subjects affected / exposed	3 / 57 (5.26%)	2 / 39 (5.13%)	
occurrences (all)	3	2	
Chronic graft versus host disease in skin			
subjects affected / exposed	3 / 57 (5.26%)	3 / 39 (7.69%)	
occurrences (all)	3	3	
Hypogammaglobulinaemia			
subjects affected / exposed	0 / 57 (0.00%)	2 / 39 (5.13%)	
occurrences (all)	0	2	
Chronic graft versus host disease oral			
subjects affected / exposed	3 / 57 (5.26%)	0 / 39 (0.00%)	
occurrences (all)	3	0	
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	5 / 57 (8.77%)	2 / 39 (5.13%)	
occurrences (all)	5	2	
Dyspnoea			
subjects affected / exposed	6 / 57 (10.53%)	2 / 39 (5.13%)	
occurrences (all)	6	2	
Hypoxia			

subjects affected / exposed	2 / 57 (3.51%)	3 / 39 (7.69%)	
occurrences (all)	2	3	
Respiratory failure			
subjects affected / exposed	2 / 57 (3.51%)	3 / 39 (7.69%)	
occurrences (all)	2	3	
Rhinorrhoea			
subjects affected / exposed	4 / 57 (7.02%)	1 / 39 (2.56%)	
occurrences (all)	4	1	
Psychiatric disorders			
Agitation			
subjects affected / exposed	0 / 57 (0.00%)	2 / 39 (5.13%)	
occurrences (all)	0	2	
Confusional state			
subjects affected / exposed	3 / 57 (5.26%)	2 / 39 (5.13%)	
occurrences (all)	3	2	
Depression			
subjects affected / exposed	3 / 57 (5.26%)	2 / 39 (5.13%)	
occurrences (all)	3	2	
Hallucination			
subjects affected / exposed	1 / 57 (1.75%)	2 / 39 (5.13%)	
occurrences (all)	1	2	
Insomnia			
subjects affected / exposed	3 / 57 (5.26%)	0 / 39 (0.00%)	
occurrences (all)	3	0	
Investigations			
Blood bilirubin increased			
subjects affected / exposed	1 / 57 (1.75%)	2 / 39 (5.13%)	
occurrences (all)	1	2	
Alanine aminotransferase increased			
subjects affected / exposed	2 / 57 (3.51%)	3 / 39 (7.69%)	
occurrences (all)	2	3	
Aspartate aminotransferase increased			
subjects affected / exposed	3 / 57 (5.26%)	3 / 39 (7.69%)	
occurrences (all)	3	3	
Blood alkaline phosphatase increased			

subjects affected / exposed	2 / 57 (3.51%)	4 / 39 (10.26%)	
occurrences (all)	2	4	
Blood creatinine increased			
subjects affected / exposed	6 / 57 (10.53%)	6 / 39 (15.38%)	
occurrences (all)	6	6	
Blood lactate dehydrogenase increased			
subjects affected / exposed	1 / 57 (1.75%)	4 / 39 (10.26%)	
occurrences (all)	1	4	
C-reactive protein increased			
subjects affected / exposed	0 / 57 (0.00%)	2 / 39 (5.13%)	
occurrences (all)	0	2	
Gamma-glutamyltransferase increased			
subjects affected / exposed	0 / 57 (0.00%)	3 / 39 (7.69%)	
occurrences (all)	0	3	
Neutrophil count decreased			
subjects affected / exposed	6 / 57 (10.53%)	5 / 39 (12.82%)	
occurrences (all)	6	5	
Platelet count decreased			
subjects affected / exposed	7 / 57 (12.28%)	3 / 39 (7.69%)	
occurrences (all)	7	3	
White blood cell count decreased			
subjects affected / exposed	5 / 57 (8.77%)	3 / 39 (7.69%)	
occurrences (all)	5	3	
Injury, poisoning and procedural complications			
Fall			
subjects affected / exposed	3 / 57 (5.26%)	1 / 39 (2.56%)	
occurrences (all)	3	1	
Cardiac disorders			
Pericardial effusion			
subjects affected / exposed	3 / 57 (5.26%)	0 / 39 (0.00%)	
occurrences (all)	3	0	
Tachycardia			
subjects affected / exposed	3 / 57 (5.26%)	1 / 39 (2.56%)	
occurrences (all)	3	1	
Nervous system disorders			

Dysgeusia			
subjects affected / exposed	0 / 57 (0.00%)	3 / 39 (7.69%)	
occurrences (all)	0	3	
Headache			
subjects affected / exposed	2 / 57 (3.51%)	3 / 39 (7.69%)	
occurrences (all)	2	3	
Dizziness			
subjects affected / exposed	1 / 57 (1.75%)	0 / 39 (0.00%)	
occurrences (all)	1	0	
Blood and lymphatic system disorders			
Anaemia			
subjects affected / exposed	4 / 57 (7.02%)	9 / 39 (23.08%)	
occurrences (all)	4	9	
Febrile neutropenia			
subjects affected / exposed	3 / 57 (5.26%)	2 / 39 (5.13%)	
occurrences (all)	3	2	
Neutropenia			
subjects affected / exposed	6 / 57 (10.53%)	0 / 39 (0.00%)	
occurrences (all)	6	0	
Thrombocytopenia			
subjects affected / exposed	2 / 57 (3.51%)	2 / 39 (5.13%)	
occurrences (all)	2	2	
Eye disorders			
Dry eye			
subjects affected / exposed	3 / 57 (5.26%)	1 / 39 (2.56%)	
occurrences (all)	3	1	
Gastrointestinal disorders			
Abdominal pain			
subjects affected / exposed	6 / 57 (10.53%)	7 / 39 (17.95%)	
occurrences (all)	6	7	
Constipation			
subjects affected / exposed	3 / 57 (5.26%)	3 / 39 (7.69%)	
occurrences (all)	3	3	
Diarrhoea			
subjects affected / exposed	13 / 57 (22.81%)	8 / 39 (20.51%)	
occurrences (all)	13	8	
Dry mouth			

subjects affected / exposed	4 / 57 (7.02%)	1 / 39 (2.56%)	
occurrences (all)	4	1	
Nausea			
subjects affected / exposed	11 / 57 (19.30%)	3 / 39 (7.69%)	
occurrences (all)	11	3	
Vomiting			
subjects affected / exposed	7 / 57 (12.28%)	2 / 39 (5.13%)	
occurrences (all)	7	2	
Skin and subcutaneous tissue disorders			
Pruritus			
subjects affected / exposed	2 / 57 (3.51%)	2 / 39 (5.13%)	
occurrences (all)	2	2	
Rash			
subjects affected / exposed	0 / 57 (0.00%)	7 / 39 (17.95%)	
occurrences (all)	0	7	
Rash maculo-papular			
subjects affected / exposed	2 / 57 (3.51%)	3 / 39 (7.69%)	
occurrences (all)	2	3	
Renal and urinary disorders			
Acute kidney injury			
subjects affected / exposed	3 / 57 (5.26%)	3 / 39 (7.69%)	
occurrences (all)	3	3	
Dysuria			
subjects affected / exposed	6 / 57 (10.53%)	2 / 39 (5.13%)	
occurrences (all)	6	2	
Haematuria			
subjects affected / exposed	4 / 57 (7.02%)	0 / 39 (0.00%)	
occurrences (all)	4	0	
Urinary retention			
subjects affected / exposed	4 / 57 (7.02%)	0 / 39 (0.00%)	
occurrences (all)	4	0	
Urinary tract obstruction			
subjects affected / exposed	0 / 57 (0.00%)	2 / 39 (5.13%)	
occurrences (all)	0	2	
Musculoskeletal and connective tissue disorders			

Arthralgia			
subjects affected / exposed	2 / 57 (3.51%)	3 / 39 (7.69%)	
occurrences (all)	2	3	
Flank pain			
subjects affected / exposed	1 / 57 (1.75%)	2 / 39 (5.13%)	
occurrences (all)	1	2	
Pain in extremity			
subjects affected / exposed	1 / 57 (1.75%)	2 / 39 (5.13%)	
occurrences (all)	1	2	
Infections and infestations			
Adenovirus infection			
subjects affected / exposed	3 / 57 (5.26%)	1 / 39 (2.56%)	
occurrences (all)	3	1	
COVID-19			
subjects affected / exposed	6 / 57 (10.53%)	3 / 39 (7.69%)	
occurrences (all)	6	3	
Cytomegalovirus infection reactivation			
subjects affected / exposed	3 / 57 (5.26%)	3 / 39 (7.69%)	
occurrences (all)	3	3	
Cytomegalovirus viraemia			
subjects affected / exposed	3 / 57 (5.26%)	0 / 39 (0.00%)	
occurrences (all)	3	0	
Epstein-Barr virus infection reactivation			
subjects affected / exposed	3 / 57 (5.26%)	2 / 39 (5.13%)	
occurrences (all)	3	2	
Oral candidiasis			
subjects affected / exposed	3 / 57 (5.26%)	3 / 39 (7.69%)	
occurrences (all)	3	3	
Parainfluenzae virus infection			
subjects affected / exposed	2 / 57 (3.51%)	2 / 39 (5.13%)	
occurrences (all)	2	2	
Pneumonia			
subjects affected / exposed	6 / 57 (10.53%)	4 / 39 (10.26%)	
occurrences (all)	6	4	
Upper respiratory tract infection			

subjects affected / exposed	3 / 57 (5.26%)	2 / 39 (5.13%)	
occurrences (all)	3	2	
Urinary tract infection			
subjects affected / exposed	3 / 57 (5.26%)	5 / 39 (12.82%)	
occurrences (all)	3	5	
Urinary tract infection bacterial			
subjects affected / exposed	2 / 57 (3.51%)	2 / 39 (5.13%)	
occurrences (all)	2	2	
Viral haemorrhagic cystitis			
subjects affected / exposed	2 / 57 (3.51%)	3 / 39 (7.69%)	
occurrences (all)	2	3	
Metabolism and nutrition disorders			
Decreased appetite			
subjects affected / exposed	6 / 57 (10.53%)	5 / 39 (12.82%)	
occurrences (all)	6	5	
Hyperglycaemia			
subjects affected / exposed	3 / 57 (5.26%)	1 / 39 (2.56%)	
occurrences (all)	3	1	
Hyperkalaemia			
subjects affected / exposed	0 / 57 (0.00%)	3 / 39 (7.69%)	
occurrences (all)	0	3	
Hyperphosphataemia			
subjects affected / exposed	0 / 57 (0.00%)	2 / 39 (5.13%)	
occurrences (all)	0	2	
Hypocalcaemia			
subjects affected / exposed	3 / 57 (5.26%)	0 / 39 (0.00%)	
occurrences (all)	3	0	
Hypokalaemia			
subjects affected / exposed	9 / 57 (15.79%)	8 / 39 (20.51%)	
occurrences (all)	9	8	
Hypomagnesaemia			
subjects affected / exposed	3 / 57 (5.26%)	2 / 39 (5.13%)	
occurrences (all)	3	2	
Hyponatraemia			
subjects affected / exposed	3 / 57 (5.26%)	1 / 39 (2.56%)	
occurrences (all)	3	1	

Hypophosphataemia subjects affected / exposed occurrences (all)	2 / 57 (3.51%) 2	3 / 39 (7.69%) 3	
Metabolic acidosis subjects affected / exposed occurrences (all)	0 / 57 (0.00%) 0	2 / 39 (5.13%) 2	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
12 March 2020	Amendment 1
12 November 2020	Amendment 2
17 June 2021	Amendment 3
23 February 2022	Amendment 4
13 November 2023	Amendment 5

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

Limitations of the trial such as small numbers of subjects analysed or technical problems leading to unreliable data.

AlloVir decided to discontinue the trial on 22-Dec-2023 following a pre-planned DSMB futility analysis concluding the study was unlikely to meet its primary endpoint; no safety concerns were identified.

Notes: