



## Clinical trial results:

### A Phase I, Open–Label, Randomized, Pharmacokinetic, Pharmacodynamic, And Safety Study Of Etrolizumab Followed By Open–Label Extension And Safety Monitoring In Pediatric Patients From 4 Years To Less Than 18 Years Of Age With Moderate To Severe Ulcerative Colitis Or Moderate To Severe Crohn’s Disease

#### Summary

EudraCT number	2017-003649-10
Trial protocol	ES GB PL DE BE
Global end of trial date	27 September 2023

#### Results information

Result version number	v3 (current)
This version publication date	05 April 2024
First version publication date	04 June 2020
Version creation reason	

#### Trial information

##### Trial identification

Sponsor protocol code	CA40192
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##### Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT03478956
WHO universal trial number (UTN)	-

Notes:

##### Sponsors

Sponsor organisation name	F. Hoffmann-La Roche, Ltd.
Sponsor organisation address	Grenzacherstrasse 124, Basel, Switzerland, CH-4070
Public contact	F. Hoffmann-La Roche, Ltd., F. Hoffmann-La Roche, Ltd., +41 616878333, global.trial_information@roche.com
Scientific contact	F. Hoffmann-La Roche, Ltd., F. Hoffmann-La Roche, Ltd., +41 616878333, global.trial_information@roche.com

Notes:

##### Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	Yes
EMA paediatric investigation plan number(s)	EMA-001434-PIP01-13
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?	Yes

Notes:

### Results analysis stage

Analysis stage	Final
Date of interim/final analysis	27 September 2023
Is this the analysis of the primary completion data?	No
Global end of trial reached?	Yes
Global end of trial date	27 September 2023
Was the trial ended prematurely?	Yes

Notes:

### General information about the trial

Main objective of the trial:

To evaluate the pharmacokinetics and pharmacodynamics of etrolizumab in a pediatric inflammatory bowel disease patient population.

Protection of trial subjects:

This study was conducted in full conformance with the ICH E6 guideline for Good Clinical Practice and the principles of the Declaration of Helsinki, or the laws and regulations of the country in which the research was conducted, whichever afforded the greater protection to the individual. The Informed Consent Forms and Child's Informed Assent Forms were signed and dated by the patient or the patient's legally authorized representative before his or her participation in the study.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	27 March 2018
Long term follow-up planned	Yes
Long term follow-up rationale	Safety
Long term follow-up duration	2 Years
Independent data monitoring committee (IDMC) involvement?	No

Notes:

### Population of trial subjects

#### Subjects enrolled per country

Country: Number of subjects enrolled	Belgium: 1
Country: Number of subjects enrolled	Poland: 20
Country: Number of subjects enrolled	Spain: 2
Country: Number of subjects enrolled	United Kingdom: 1
Worldwide total number of subjects	24
EEA total number of subjects	23

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)	8
Adolescents (12-17 years)	16
Adults (18-64 years)	0
From 65 to 84 years	0
85 years and over	0

## Subject disposition

### Recruitment

Recruitment details: -

### Pre-assignment

Screening details:

A total of 30 patients were screened and 6 failed screenings, 2 due to administrative reasons and 4 due to failure to meet exclusion criteria; a total of 24 subjects were enrolled in the study.

### Period 1

Period 1 title	Randomized Treatment Period
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Not blinded

### Arms

Are arms mutually exclusive?	Yes
<b>Arm title</b>	Etolizumab Q4W

Arm description:

Etolizumab 1.5 milligrams per kilogram of body weight (mg/kg) was administered by subcutaneous (SC) injection once every 4 weeks (Q4W) for a total of 4 doses over the course of the 24-week randomized treatment phase (16-week treatment period plus 8-week safety follow-up). Participants were then given the option to participate in the 312-week open-label extension (OLE) treatment phase with etolizumab 1.5 mg/kg SC Q4W followed by the 104-week safety surveillance phase (no etolizumab treatment) to monitor for progressive multifocal leukoencephalopathy (PML). All participants who chose not to enter the OLE phase after the 24-week randomized treatment phase entered the 104-week PML monitoring phase.

Arm type	Experimental
Investigational medicinal product name	Etolizumab
Investigational medicinal product code	RO5490261/F02-01
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Subcutaneous use

Dosage and administration details:

All participants randomized to this arm received 150 milligrams per millilitre (mg/mL) etolizumab by subcutaneous injection of 0.01 mL per kilogram (kg) of body weight (1.5 mg/kg) once every 4 weeks (Q4W) during the 24-week randomized treatment phase. Following the completion of this phase, participants who chose to enter the open-label extension phase received 150 mg/mL etolizumab by subcutaneous injection of 0.01 mL per kg of body weight (1.5 mg/kg) Q4W for up to 312 weeks.

<b>Arm title</b>	Etolizumab Q8W
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Arm description:

Etolizumab 3.0 mg/kg was administered by subcutaneous (SC) injection once every 8 weeks (Q8W) for a total of 2 doses over the course of the 24-week randomized treatment phase (16-week treatment period plus 8-week safety follow-up). Participants were then given the option to participate in the 312-week open-label extension (OLE) treatment phase with etolizumab 1.5 mg/kg SC Q4W followed by the 104-week safety surveillance phase (no etolizumab treatment) to monitor for progressive multifocal leukoencephalopathy (PML). All participants who chose not to enter the OLE phase after the 24-week randomized treatment phase entered the 104-week PML monitoring phase.

Arm type	Experimental
Investigational medicinal product name	Etolizumab
Investigational medicinal product code	RO5490261/F02-01
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Subcutaneous use

Dosage and administration details:

All participants randomized to this arm received 150 milligrams per millilitre (mg/mL) etolizumab by

subcutaneous injection of 0.02 mL per kg of body weight (3 mg/kg) once every 8 weeks (Q8W) during the 24-week randomized treatment phase. Following the completion of this phase, participants who chose to enter the open-label extension phase received 150 mg/mL etrolizumab by subcutaneous injection of 0.01 mL per kg of body weight (1.5 mg/kg) Q4W for up to 312 weeks.

<b>Number of subjects in period 1</b>	Etrolizumab Q4W	Etrolizumab Q8W
Started	12	12
Received at Least One Dose of Study Drug	12	12
Completed Treatment	11	10 <sup>[1]</sup>
Completed	11	11
Not completed	1	1
Consent withdrawn by subject	-	1
Adverse event	1	-

Notes:

[1] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.

Justification: Number reflects the number of subjects who completed treatment.

## Period 2

Period 2 title	Open Label Extension (OLE) and PML
Is this the baseline period?	No
Allocation method	Not applicable
Blinding used	Not blinded

## Arms

Are arms mutually exclusive?	No
<b>Arm title</b>	Etrolizumab Q4W

Arm description:

Etrolizumab 1.5 milligrams per kilogram of body weight (mg/kg) was administered by subcutaneous (SC) injection once every 4 weeks (Q4W) for a total of 4 doses over the course of the 24-week randomized treatment phase (16-week treatment period plus 8-week safety follow-up). Participants were then given the option to participate in the 312-week open-label extension (OLE) treatment phase with etrolizumab 1.5 mg/kg SC Q4W followed by the 104-week safety surveillance phase (no etrolizumab treatment) to monitor for progressive multifocal leukoencephalopathy (PML). All participants who chose not to enter the OLE phase after the 24-week randomized treatment phase entered the 104-week PML monitoring phase.

Arm type	Experimental
Investigational medicinal product name	Etrolizumab
Investigational medicinal product code	RO5490261/F02-01
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Subcutaneous use

Dosage and administration details:

All participants randomized to this arm received 150 milligrams per millilitre (mg/mL) etrolizumab by subcutaneous injection of 0.01 mL per kilogram (kg) of body weight (1.5 mg/kg) once every 4 weeks (Q4W) during the 24-week randomized treatment phase. Following the completion of this phase,

participants who chose to enter the open-label extension phase received 150 mg/mL etrolizumab by subcutaneous injection of 0.01 mL per kg of body weight (1.5 mg/kg) Q4W for up to 312 weeks.

<b>Arm title</b>	Etrolizumab Q8W
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Arm description:

Etrolizumab 3.0 mg/kg was administered by subcutaneous (SC) injection once every 8 weeks (Q8W) for a total of 2 doses over the course of the 24-week randomized treatment phase (16-week treatment period plus 8-week safety follow-up). Participants were then given the option to participate in the 312-week open-label extension (OLE) treatment phase with etrolizumab 1.5 mg/kg SC Q4W followed by the 104-week safety surveillance phase (no etrolizumab treatment) to monitor for progressive multifocal leukoencephalopathy (PML). All participants who chose not to enter the OLE phase after the 24-week randomized treatment phase entered the 104-week PML monitoring phase.

Arm type	Experimental
Investigational medicinal product name	Etrolizumab
Investigational medicinal product code	RO5490261/F02-01
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Subcutaneous use

Dosage and administration details:

All participants randomized to this arm received 150 milligrams per millilitre (mg/mL) etrolizumab by subcutaneous injection of 0.02 mL per kg of body weight (3 mg/kg) once every 8 weeks (Q8W) during the 24-week randomized treatment phase. Following the completion of this phase, participants who chose to enter the open-label extension phase received 150 mg/mL etrolizumab by subcutaneous injection of 0.01 mL per kg of body weight (1.5 mg/kg) Q4W for up to 312 weeks.

<b>Arm title</b>	PML Safety Monitoring
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Arm description:

After the randomized treatment period (if participants did not enter the OLE period) or after the OLE period participants were monitored during the 104-week safety surveillance phase (no etrolizumab treatment) for progressive multifocal leukoencephalopathy (PML).

Arm type	No intervention
No investigational medicinal product assigned in this arm	

<b>Number of subjects in period 2</b>	Etrolizumab Q4W	Etrolizumab Q8W	PML Safety Monitoring
Started	11	10	13
Completed	0	0	4
Not completed	11	10	9
Consent withdrawn by subject	-	2	-
Study terminated by sponsor	4	2	9
Adverse event	3	1	-
Lack of efficacy	3	5	-
Reason not provided	1	-	-

## Baseline characteristics

### Reporting groups

Reporting group title	Etrolizumab Q4W
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Reporting group description:

Etrolizumab 1.5 milligrams per kilogram of body weight (mg/kg) was administered by subcutaneous (SC) injection once every 4 weeks (Q4W) for a total of 4 doses over the course of the 24-week randomized treatment phase (16-week treatment period plus 8-week safety follow-up). Participants were then given the option to participate in the 312-week open-label extension (OLE) treatment phase with etrolizumab 1.5 mg/kg SC Q4W followed by the 104-week safety surveillance phase (no etrolizumab treatment) to monitor for progressive multifocal leukoencephalopathy (PML). All participants who chose not to enter the OLE phase after the 24-week randomized treatment phase entered the 104-week PML monitoring phase.

Reporting group title	Etrolizumab Q8W
-----------------------	-----------------

Reporting group description:

Etrolizumab 3.0 mg/kg was administered by subcutaneous (SC) injection once every 8 weeks (Q8W) for a total of 2 doses over the course of the 24-week randomized treatment phase (16-week treatment period plus 8-week safety follow-up). Participants were then given the option to participate in the 312-week open-label extension (OLE) treatment phase with etrolizumab 1.5 mg/kg SC Q4W followed by the 104-week safety surveillance phase (no etrolizumab treatment) to monitor for progressive multifocal leukoencephalopathy (PML). All participants who chose not to enter the OLE phase after the 24-week randomized treatment phase entered the 104-week PML monitoring phase.

Reporting group values	Etrolizumab Q4W	Etrolizumab Q8W	Total
Number of subjects	12	12	24
Age categorical			
Units: Subjects			
Children (2-11 years)	4	4	8
Adolescents (12-17 years)	8	8	16
Age Continuous			
Units: Years			
arithmetic mean	12.25	13.42	-
standard deviation	± 3.62	± 4.46	-
Sex: Female, Male			
Units: Participants			
Male	8	5	13
Female	4	7	11
Race			
Units: Subjects			
White	12	12	24
Ethnicity			
Units: Subjects			
Hispanic or Latino	0	1	1
Not Hispanic or Latino	12	11	23
Disease Indication: Crohn's Disease or Ulcerative Colitis			
Units: Subjects			
Crohn's Disease	5	5	10
Ulcerative Colitis	7	7	14
Randomization Stratification Factor: Body Weight <40 kg or ≥40 kg			
Units: Subjects			
<40 kg	5	4	9

≥40 kg	7	8	15
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## End points

### End points reporting groups

Reporting group title	Etrolizumab Q4W
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Reporting group description:

Etrolizumab 1.5 milligrams per kilogram of body weight (mg/kg) was administered by subcutaneous (SC) injection once every 4 weeks (Q4W) for a total of 4 doses over the course of the 24-week randomized treatment phase (16-week treatment period plus 8-week safety follow-up). Participants were then given the option to participate in the 312-week open-label extension (OLE) treatment phase with etrolizumab 1.5 mg/kg SC Q4W followed by the 104-week safety surveillance phase (no etrolizumab treatment) to monitor for progressive multifocal leukoencephalopathy (PML). All participants who chose not to enter the OLE phase after the 24-week randomized treatment phase entered the 104-week PML monitoring phase.

Reporting group title	Etrolizumab Q8W
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Reporting group description:

Etrolizumab 3.0 mg/kg was administered by subcutaneous (SC) injection once every 8 weeks (Q8W) for a total of 2 doses over the course of the 24-week randomized treatment phase (16-week treatment period plus 8-week safety follow-up). Participants were then given the option to participate in the 312-week open-label extension (OLE) treatment phase with etrolizumab 1.5 mg/kg SC Q4W followed by the 104-week safety surveillance phase (no etrolizumab treatment) to monitor for progressive multifocal leukoencephalopathy (PML). All participants who chose not to enter the OLE phase after the 24-week randomized treatment phase entered the 104-week PML monitoring phase.

Reporting group title	Etrolizumab Q4W
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Reporting group description:

Etrolizumab 1.5 milligrams per kilogram of body weight (mg/kg) was administered by subcutaneous (SC) injection once every 4 weeks (Q4W) for a total of 4 doses over the course of the 24-week randomized treatment phase (16-week treatment period plus 8-week safety follow-up). Participants were then given the option to participate in the 312-week open-label extension (OLE) treatment phase with etrolizumab 1.5 mg/kg SC Q4W followed by the 104-week safety surveillance phase (no etrolizumab treatment) to monitor for progressive multifocal leukoencephalopathy (PML). All participants who chose not to enter the OLE phase after the 24-week randomized treatment phase entered the 104-week PML monitoring phase.

Reporting group title	Etrolizumab Q8W
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Reporting group description:

Etrolizumab 3.0 mg/kg was administered by subcutaneous (SC) injection once every 8 weeks (Q8W) for a total of 2 doses over the course of the 24-week randomized treatment phase (16-week treatment period plus 8-week safety follow-up). Participants were then given the option to participate in the 312-week open-label extension (OLE) treatment phase with etrolizumab 1.5 mg/kg SC Q4W followed by the 104-week safety surveillance phase (no etrolizumab treatment) to monitor for progressive multifocal leukoencephalopathy (PML). All participants who chose not to enter the OLE phase after the 24-week randomized treatment phase entered the 104-week PML monitoring phase.

Reporting group title	PML Safety Monitoring
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Reporting group description:

After the randomized treatment period (if participants did not enter the OLE period) or after the OLE period participants were monitored during the 104-week safety surveillance phase (no etrolizumab treatment) for progressive multifocal leukoencephalopathy (PML).

### Primary: Maximum Serum Concentration (C<sub>max</sub>) of Etrolizumab After First and Last Dose During the Randomized Treatment Phase

End point title	Maximum Serum Concentration (C <sub>max</sub> ) of Etrolizumab After First and Last Dose During the Randomized Treatment Phase <sup>[1]</sup>
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End point description:

Etrolizumab concentrations in all pharmacokinetics (PK) samples were measured using a validated assay method. Non-compartmental analysis methods were employed to calculate PK parameters. The PK Evaluable Population included all participants who received at least one dose of study drug and had evaluable PK data. This analysis included data from participants who had received their first dose (Day 1 for both arms) and last dose (on Day 56 for Q8W arm and Day 84 for Q4W arm) of study drug.

End point type	Primary
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End point timeframe:

Arm Etro Q4W: Day 1, 84 and Arm Etro Q8W: Day 1, 56

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.

Justification: No formal hypothesis testing was planned for this study. All analyses were summarized by descriptive statistics.

End point values	Etrolizumab Q4W	Etrolizumab Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	11	12		
Units: micrograms per millilitre ( $\mu\text{g}/\text{mL}$ )				
arithmetic mean (standard deviation)				
After First Dose (n = 10, 12)	7.73 ( $\pm$ 2.18)	19.0 ( $\pm$ 8.21)		
After Last Dose (n = 11, 11)	9.80 ( $\pm$ 4.86)	18.1 ( $\pm$ 6.25)		

## Statistical analyses

No statistical analyses for this end point

### Primary: Time to Maximum Serum Concentration (Tmax) of Etrolizumab After First and Last Dose During the Randomized Treatment Phase

End point title	Time to Maximum Serum Concentration (Tmax) of Etrolizumab After First and Last Dose During the Randomized Treatment Phase <sup>[2]</sup>
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End point description:

Etrolizumab concentrations in all pharmacokinetics (PK) samples were measured using a validated assay method. Non-compartmental analysis methods were employed to calculate PK parameters. The PK Evaluable Population included all participants who received at least one dose of study drug and had evaluable PK data. This analysis included data from participants who had received their first dose (Day 1 for both arms) and last dose (on Day 56 for Q8W arm and Day 84 for Q4W arm) of study drug.

End point type	Primary
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End point timeframe:

Arm Etro Q4W: Day 1, 84 and Arm Etro Q8W: Day 1, 56

Notes:

[2] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.

Justification: No formal hypothesis testing was planned for this study. All analyses were summarized by descriptive statistics.

End point values	Etrolizumab Q4W	Etrolizumab Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	11	12		
Units: Day				
arithmetic mean (standard deviation)				
After First Dose (n = 10, 12)	4.65 ( $\pm$ 1.43)	4.00 ( $\pm$ 1.48)		
After Last Dose (n = 11, 11)	5.04 ( $\pm$ 2.92)	4.94 ( $\pm$ 3.28)		

## Statistical analyses

No statistical analyses for this end point

### Primary: Area Under the Concentration-Time Curve Within the Last Dosing Interval (AUC-tau) of Etrolizumab During the Randomized Treatment Phase

End point title	Area Under the Concentration-Time Curve Within the Last Dosing Interval (AUC-tau) of Etrolizumab During the Randomized Treatment Phase <sup>[3]</sup>
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End point description:

Etrolizumab concentrations in all pharmacokinetics (PK) samples were measured using a validated assay method. Non-compartmental analysis methods were employed to calculate PK parameters. The PK Evaluable Population included all participants who received at least one dose of study drug and had evaluable PK data. This analysis included data from participants who had received their last dose of study drug (on Day 56 for Q8W arm and Day 84 for Q4W arm). The value '999999' indicates that the mean and standard deviation were not reported because 0 participants were assessed at that timepoint.

End point type	Primary
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End point timeframe:

Arm Etro Q4W: Days 56, 84, 88, 98, 112 and Arm Etro Q8W: Day 56, 60, 70, 84, 88, 98, 112

Notes:

[3] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.

Justification: No formal hypothesis testing was planned for this study. All analyses were summarized by descriptive statistics.

End point values	Etrolizumab Q4W	Etrolizumab Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	11	10		
Units: Day*µg/mL				
arithmetic mean (standard deviation)				
AUC56-112 (n = 0, 10)	999999 (± 999999)	521 (± 306)		
AUC84-112 (n = 11, 0)	167 (± 86.9)	999999 (± 999999)		

## Statistical analyses

No statistical analyses for this end point

### Primary: Elimination Half-Life (t<sub>1/2</sub>) of Etrolizumab After Last Dose During the Randomized Treatment Phase

End point title	Elimination Half-Life (t <sub>1/2</sub> ) of Etrolizumab After Last Dose During the Randomized Treatment Phase <sup>[4]</sup>
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End point description:

Etrolizumab concentrations in all pharmacokinetics (PK) samples were measured using a validated assay method. Non-compartmental analysis methods were employed to calculate PK parameters. The PK Evaluable Population included all participants who received at least one dose of study drug and had evaluable PK data. This analysis included data from participants who had received their last dose of study drug (on Day 56 for Q8W arm and Day 84 for Q4W arm).

End point type	Primary
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End point timeframe:

Arm Etro Q4W: Days 84, 88, 98, 112, 126, 140, 168 and Arm Etro Q8W: Days 56, 60, 70, 84, 88, 98, 112, 126, 140, 168

Notes:

[4] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.

Justification: No formal hypothesis testing was planned for this study. All analyses were summarized by descriptive statistics.

<b>End point values</b>	Etrolizumab Q4W	Etrolizumab Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	11	10		
Units: Day				
arithmetic mean (standard deviation)				
After Last Dose	7.31 ( $\pm$ 1.76)	8.65 ( $\pm$ 3.74)		

## Statistical analyses

No statistical analyses for this end point

## Primary: Serum Trough Concentration (Ctough) of Etrolizumab at the End of Each Dosing Interval During the Randomized Treatment Phase

End point title	Serum Trough Concentration (Ctough) of Etrolizumab at the End of Each Dosing Interval During the Randomized Treatment Phase <sup>[5]</sup>
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End point description:

Etrolizumab concentrations in all pharmacokinetics (PK) samples were measured using a validated assay method. The PK Evaluable Population included all participants who received at least one dose of study drug and had evaluable PK data. This analysis included data from participants at the end of each dosing interval (on Days 28, 56, 84, and 112 for Q4W arm and Days 56 and 112 for Q8W arm). The value '999999' indicates that the mean and standard deviation were not reported because 0 participants were assessed at that timepoint.

End point type	Primary
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End point timeframe:

Arm Etro Q4W: Predose on Days 28, 56, 84, 112 and Arm Etro Q8W: Predose on Days 56, 112

Notes:

[5] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.

Justification: No formal hypothesis testing was planned for this study. All analyses were summarized by descriptive statistics.

<b>End point values</b>	Etrolizumab Q4W	Etrolizumab Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	11	12		
Units: micrograms per millilitre ( $\mu$ g/mL)				
arithmetic mean (standard deviation)				
Day 28 (n = 11, 0)	1.87 ( $\pm$ 1.32)	999999 ( $\pm$ 999999)		
Day 56 (n = 11, 11)	3.22 ( $\pm$ 2.24)	1.82 ( $\pm$ 1.99)		
Day 84 (n = 11, 0)	3.00 ( $\pm$ 2.38)	999999 ( $\pm$ 999999)		
Day 112 (n = 11, 10)	2.79 ( $\pm$ 2.01)	3.70 ( $\pm$ 4.64)		

## Statistical analyses

No statistical analyses for this end point

### Primary: Percentage of Baseline Absolute Numbers of Beta7 Receptor-Expressing Gut Homing CD3, CD4, and CD8 T Cells and CD19 B Cells with Unoccupied Beta7 Receptors in Peripheral Blood, Assessed by Flow Cytometry, During the Randomized Treatment Phase

End point title	Percentage of Baseline Absolute Numbers of Beta7 Receptor-Expressing Gut Homing CD3, CD4, and CD8 T Cells and CD19 B Cells with Unoccupied Beta7 Receptors in Peripheral Blood, Assessed by Flow Cytometry, During the Randomized Treatment Phase <sup>[6]</sup>
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#### End point description:

Target engagement of etrolizumab was assessed via measurement of Beta7 receptor occupancy on Beta7 receptor expressing gut homing lymphocyte subsets in peripheral blood, including CD3, CD4, and CD8 T cells and CD19 B cells, using qualified flow cytometry methods. A decrease to 0% of baseline (BL) in median absolute cell counts of Beta7 receptor-expressing T and B cell subsets with unoccupied Beta7 receptors following etrolizumab treatment indicated maximal receptor occupancy by etrolizumab. The Pharmacodynamics (PD) Evaluable Population included all participants who received at least one dose of study treatment and had evaluable PD data.

End point type	Primary
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#### End point timeframe:

Predose at Baseline (Day 1) and on Days 4, 56, 84, 98, and 112 (Treatment Period), and Days 126, 140, and 168 (Follow-Up Period)

#### Notes:

[6] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.

Justification: No formal hypothesis testing was planned for this study. All analyses were summarized by descriptive statistics.

End point values	Etrolizumab Q4W	Etrolizumab Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	12	12		
Units: Percentage of BL Unoccupied Beta7 Cells				
median (standard deviation)				
CD3 T Cells: Baseline (n = 11, 10)	100 (± 0.0)	100 (± 0.0)		
CD3 T Cells: Day 4 (n = 8, 10)	0.18 (± 0.2)	0.40 (± 0.4)		
CD3 T Cells: Day 56 (n = 9, 10)	1.92 (± 1.9)	13.74 (± 13.5)		
CD3 T Cells: Day 84 (n = 9, 9)	7.43 (± 6.0)	1.06 (± 1.1)		
CD3 T Cells: Day 98 (n = 10, 9)	0.36 (± 0.4)	1.06 (± 1.1)		
CD3 T Cells: Day 112 (n = 10, 9)	4.06 (± 2.6)	6.01 (± 5.6)		
CD3 T Cells: Day 126 (n = 9, 8)	12.00 (± 12.0)	27.24 (± 24.6)		
CD3 T Cells: Day 140 (n = 9, 9)	47.47 (± 21.9)	56.82 (± 22.2)		
CD3 T Cells: Day 168 (n = 10, 9)	71.64 (± 22.4)	51.79 (± 23.1)		
CD4 T Cells: Baseline (n = 11, 10)	100 (± 0.0)	100 (± 0.0)		
CD4 T Cells: Day 4 (n = 8, 10)	0.17 (± 0.2)	0.00 (± 0.0)		
CD4 T Cells: Day 56 (n = 9, 10)	3.33 (± 3.3)	16.56 (± 16.1)		
CD4 T Cells: Day 84 (n = 9, 9)	7.14 (± 7.1)	1.28 (± 1.0)		
CD4 T Cells: Day 98 (n = 10, 9)	0.24 (± 0.2)	1.28 (± 1.3)		
CD4 T Cells: Day 112 (n = 10, 9)	3.60 (± 3.1)	6.74 (± 6.4)		
CD4 T Cells: Day 126 (n = 9, 8)	13.33 (± 13.3)	37.03 (± 33.7)		
CD4 T Cells: Day 140 (n = 9, 9)	55.34 (± 23.9)	62.01 (± 20.3)		
CD4 T Cells: Day 168 (n = 10, 9)	74.49 (± 26.1)	50.00 (± 16.3)		
CD8 T Cells: Baseline (n = 11, 10)	100 (± 0.0)	100 (± 0.0)		

CD8 T Cells: Day 4 (n = 8, 10)	0.00 (± 0.0)	0.00 (± 0.0)		
CD8 T Cells: Day 56 (n = 9, 10)	1.56 (± 1.6)	8.41 (± 8.4)		
CD8 T Cells: Day 84 (n = 9, 9)	2.72 (± 2.7)	0.00 (± 0.0)		
CD8 T Cells: Day 98 (n = 10, 9)	1.10 (± 1.1)	2.33 (± 2.3)		
CD8 T Cells: Day 112 (n = 10, 9)	0.97 (± 1.0)	2.46 (± 2.5)		
CD8 T Cells: Day 126 (n = 9, 8)	20.00 (± 20.0)	14.51 (± 14.5)		
CD8 T Cells: Day 140 (n = 9, 9)	54.17 (± 18.8)	40.98 (± 24.7)		
CD8 T Cells: Day 168 (n = 10, 9)	63.34 (± 40.1)	55.56 (± 21.1)		
CD19 B Cells: Baseline (n = 11, 10)	100 (± 0.0)	100 (± 0.0)		
CD19 B Cells: Day 4 (n = 8, 10)	0.00 (± 0.0)	0.00 (± 0.0)		
CD19 B Cells: Day 56 (n = 9, 10)	3.57 (± 3.6)	19.14 (± 17.1)		
CD19 B Cells: Day 84 (n = 9, 9)	10.71 (± 10.7)	0.00 (± 0.0)		
CD19 B Cells: Day 98 (n = 10, 9)	0.00 (± 0.0)	0.00 (± 0.0)		
CD19 B Cells: Day 112 (n = 9, 9)	7.14 (± 7.1)	7.14 (± 7.1)		
CD19 B Cells: Day 126 (n = 9, 8)	42.86 (± 21.4)	33.93 (± 32.3)		
CD19 B Cells: Day 140 (n = 9, 9)	68.00 (± 30.5)	77.78 (± 32.6)		
CD19 B Cells: Day 168 (n = 10, 9)	73.21 (± 17.7)	40.00 (± 13.2)		

## Statistical analyses

No statistical analyses for this end point

## Secondary: Number of Participants with Adverse Events by Highest Severity Grade, Assessed According to National Cancer Institute Common Terminology Criteria for Adverse Events, version 4.0 (NCI-CTCAE v4.0), During the Randomized Treatment Phase

End point title	Number of Participants with Adverse Events by Highest Severity Grade, Assessed According to National Cancer Institute Common Terminology Criteria for Adverse Events, version 4.0 (NCI-CTCAE v4.0), During the Randomized Treatment Phase
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End point description:

All adverse events (AEs) were graded for severity using the NCI-CTCAE v4.0. Any AE not specifically listed was assessed per the following 5 grades: Grade 1 = mild; asymptomatic or mild symptoms; clinical or diagnostic observations only; or intervention not indicated. Grade 2 = moderate; minimal, local, or non-invasive intervention indicated; or limiting age-appropriate instrumental activities of daily living. Grade 3 = severe or medically significant, but not immediately life-threatening; hospitalization or prolongation of hospitalization indicated; disabling; or limiting self-care activities of daily living. Grade 4 = life-threatening consequences or urgent intervention indicated. Grade 5 = death related to AE. Not all grades are appropriate for all AEs; some AEs have fewer than 5 options. The terms "severe" and "serious" are not synonymous and are independently assessed for each AE. Multiple occurrences of AEs were counted only once per participant at the highest (worst) grade.

End point type	Secondary
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End point timeframe:

From Baseline until 12 weeks (Q4W arm only) or 16 weeks (Q8W arm only) after the last dose of study drug during the randomized treatment phase (up to 24 weeks)

<b>End point values</b>	Etrolizumab Q4W	Etrolizumab Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	12	12		
Units: Participants				
Any Adverse Event - Any Grade	9	10		
Any Adverse Event - Grade 1	2	2		
Any Adverse Event - Grade 2	4	5		
Any Adverse Event - Grade 3	3	3		
Any Adverse Event - Grade 4	0	0		
Any Adverse Event - Grade 5	0	0		

## Statistical analyses

No statistical analyses for this end point

### Secondary: Number of Participants with Serious Infection-Related Adverse Events by Highest Severity Grade, Assessed According to NCI-CTCAE v4.0, During the Randomized Treatment Phase

End point title	Number of Participants with Serious Infection-Related Adverse Events by Highest Severity Grade, Assessed According to NCI-CTCAE v4.0, During the Randomized Treatment Phase
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End point description:

Serious infection-related AEs were graded for severity per the NCI-CTCAE v4.0. Any AE not specifically listed was assessed per the following 5 grades: Grade 1 = mild; asymptomatic or mild symptoms; clinical or diagnostic observations only; or intervention not indicated. Grade 2 = moderate; minimal, local, or non-invasive intervention indicated; or limiting age-appropriate instrumental activities of daily living. Grade 3 = severe or medically significant, but not immediately life-threatening; hospitalization or prolongation of hospitalization indicated; disabling; or limiting self-care activities of daily living. Grade 4 = life-threatening consequences or urgent intervention indicated. Grade 5 = death related to AE. Not all grades are appropriate for all AEs; some AEs have fewer than 5 options. The terms "severe" and "serious" are not synonymous and are independently assessed for each AE. Multiple occurrences of AEs were counted only once per participant at the highest (worst) grade.

End point type	Secondary
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End point timeframe:

From Baseline until 12 weeks (Q4W arm only) or 16 weeks (Q8W arm only) after the last dose of study drug during the randomized treatment phase (up to 24 weeks)

<b>End point values</b>	Etrolizumab Q4W	Etrolizumab Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	12	12		
Units: Participants	0	0		

## Statistical analyses

No statistical analyses for this end point

## Secondary: Number of Participants with Hypersensitivity Reactions by Highest Severity Grade, Assessed According to NCI-CTCAE v4.0, During the Randomized Treatment Phase

End point title	Number of Participants with Hypersensitivity Reactions by Highest Severity Grade, Assessed According to NCI-CTCAE v4.0, During the Randomized Treatment Phase
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### End point description:

Hypersensitivity reactions were graded for severity using the NCI-CTCAE v4.0. Any AE not specifically listed was assessed per the following 5 grades: Grade 1 = mild; asymptomatic or mild symptoms; clinical or diagnostic observations only; or intervention not indicated. Grade 2 = moderate; minimal, local, or non-invasive intervention indicated; or limiting age-appropriate instrumental activities of daily living. Grade 3 = severe or medically significant, but not immediately life-threatening; hospitalization or prolongation of hospitalization indicated; disabling; or limiting self-care activities of daily living. Grade 4 = life-threatening consequences or urgent intervention indicated. Grade 5 = death related to AE. Not all grades are appropriate for all AEs; some AEs have fewer than 5 options. The terms "severe" and "serious" are not synonymous and are independently assessed for each AE. Multiple occurrences of AEs were counted only once per participant at the highest (worst) grade.

End point type	Secondary
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### End point timeframe:

From Baseline until 12 weeks (Q4W arm only) or 16 weeks (Q8W arm only) after the last dose of study drug during the randomized treatment phase (up to 24 weeks)

End point values	Etrolizumab Q4W	Etrolizumab Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	12	12		
Units: Participants	0	0		

## Statistical analyses

No statistical analyses for this end point

## Secondary: Number of Participants with Malignancies by Highest Severity Grade, Assessed According to NCI-CTCAE v4.0, During the Randomized Treatment Phase

End point title	Number of Participants with Malignancies by Highest Severity Grade, Assessed According to NCI-CTCAE v4.0, During the Randomized Treatment Phase
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### End point description:

Malignancies were graded for severity using the NCI-CTCAE v4.0. Any AE not specifically listed was assessed per the following 5 grades: Grade 1 = mild; asymptomatic or mild symptoms; clinical or diagnostic observations only; or intervention not indicated. Grade 2 = moderate; minimal, local, or non-invasive intervention indicated; or limiting age-appropriate instrumental activities of daily living. Grade 3 = severe or medically significant, but not immediately life-threatening; hospitalization or prolongation of hospitalization indicated; disabling; or limiting self-care activities of daily living. Grade 4 = life-threatening consequences or urgent intervention indicated. Grade 5 = death related to AE. Not all grades are appropriate for all AEs; some AEs have fewer than 5 options. The terms "severe" and "serious" are not synonymous and are independently assessed for each AE. Multiple occurrences of AEs were counted only once per participant at the highest (worst) grade.

End point type	Secondary
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### End point timeframe:

From Baseline until 12 weeks (Q4W arm only) or 16 weeks (Q8W arm only) after the last dose of study drug during the randomized treatment phase (up to 24 weeks)

<b>End point values</b>	Etrolizumab Q4W	Etrolizumab Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	12	12		
Units: Participants	0	0		

## Statistical analyses

No statistical analyses for this end point

### Secondary: Number of Participants with Anti-Drug Antibodies (ADAs) to Etrolizumab at Baseline and Post-Baseline During the Randomized Treatment Phase

End point title	Number of Participants with Anti-Drug Antibodies (ADAs) to Etrolizumab at Baseline and Post-Baseline During the Randomized Treatment Phase
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End point description:

Participants were considered to be etrolizumab anti-drug antibody (ADA) positive if they were ADA negative or had missing data at Baseline (BL) but developed an ADA response following study drug exposure (i.e., treatment-induced ADA positive), or if they were ADA positive at baseline and the titer of one or more postbaseline samples was at least 0.60 titer unit greater than the titer of the baseline sample (i.e., treatment-enhanced ADA positive); these ADA positive responses are summarized together (induced + enhanced) in the 'treatment-emergent ADA positive' category. Participants were considered to be ADA negative if they were ADA negative or had missing data at Baseline (BL) and all postbaseline samples were negative (i.e., treatment-emergent ADA negative), or if they were ADA positive at baseline but did not have any postbaseline samples with a titer that was at least 0.60 titer unit greater than the titer of the baseline sample (i.e., treatment unaffected).

End point type	Secondary
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End point timeframe:

Predose (dosing days only) on Days 1, 28, 84, 112, and 168 (up to the end of the randomized treatment phase at Week 24)

<b>End point values</b>	Etrolizumab Q4W	Etrolizumab Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	12	12		
Units: Participants				
Baseline (BL): ADA Positive	1	0		
BL: ADA Negative	11	12		
Post-BL: Treatment-Emergent ADA Positive	4	2		
Post-BL: Treatment-Induced ADA Positive	4	2		
Post-BL: Treatment-Enhanced ADA Positive	0	0		
Post-BL: Treatment-Emergent ADA Negative	7	10		
Post-BL: Treatment Unaffected	1	0		

## Statistical analyses

No statistical analyses for this end point

### Secondary: Long-Term Safety of Etrolizumab: Number of Participants with Adverse Events by Highest Severity Grade, Assessed According to NCI-CTCAE v4.0

End point title	Long-Term Safety of Etrolizumab: Number of Participants with Adverse Events by Highest Severity Grade, Assessed According to NCI-CTCAE v4.0
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#### End point description:

All adverse events (AEs) were graded for severity using the NCI-CTCAE v4.0. Any AE not specifically listed was assessed per the following 5 grades: Grade 1 = mild; asymptomatic or mild symptoms; clinical or diagnostic observations only; or intervention not indicated. Grade 2 = moderate; minimal, local, or non-invasive intervention indicated; or limiting age-appropriate instrumental activities of daily living. Grade 3 = severe or medically significant, but not immediately life-threatening; hospitalization or prolongation of hospitalization indicated; disabling; or limiting self-care activities of daily living. Grade 4 = life-threatening consequences or urgent intervention indicated. Grade 5 = death related to AE. Not all grades are appropriate for all AEs; some AEs have fewer than 5 options. The terms "severe" and "serious" are not synonymous and are independently assessed for each AE. Multiple occurrences of AEs were counted only once per participant at the highest (worst) grade.

End point type	Secondary
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#### End point timeframe:

From the start of 312-week OLE and the 104-week PML safety surveillance phase until the participant withdrew from the study (from Week 24 up to approximately 5.5 years)

End point values	Etrolizumab Q4W	Etrolizumab Q8W	PML Safety Monitoring	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	11	10	1 <sup>[7]</sup>	
Units: Participants				
OLE: Any AE - Any Grade (n=11, 10, 0)	11	9	0	
OLE: Any AE - Grade 1 (n=11, 10, 0)	0	0	0	
OLE: Any AE - Grade 2 (n=11, 10, 0)	8	4	0	
OLE: Any AE - Grade 3 (n=11, 10, 0)	3	5	0	
OLE: Any AE - Grade 4 (n=11, 10, 0)	0	0	0	
OLE: Any AE - Grade 5 (n=11, 10, 0)	0	0	0	
PML: Any AE - Any Grade (n=6, 6, 1)	2	2	0	
PML: Any AE - Grade 1 (n=6, 6, 1)	1	1	0	
PML: Any AE - Grade 2 (n=6, 6, 1)	1	1	0	
PML: Any AE - Grade 3 (n=6, 6, 1)	0	0	0	
PML: Any AE - Grade 4 (n=6, 6, 1)	0	0	0	
PML: Any AE - Grade 5 (n=6, 6, 1)	0	0	0	

#### Notes:

[7] - n=12 (6 each) captured under PML data for Etro Q4W and Q8W

## Statistical analyses

No statistical analyses for this end point

### Secondary: Long-Term Safety of Etrolizumab: Number of Participants with Serious Infection-Related Adverse Events

End point title	Long-Term Safety of Etrolizumab: Number of Participants with Serious Infection-Related Adverse Events
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End point description:

Serious infection-related AEs were assessed using NCI-CTCAE v4.0. Safety Population: all participants who received at least one dose of study treatment.

End point type	Secondary
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End point timeframe:

From the start of 312-week OLE and the 104-week PML safety surveillance phase until the participant withdrew from the study (from Week 24 up to approximately 5.5 years)

End point values	Etrolizumab Q4W	Etrolizumab Q8W	PML Safety Monitoring	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	11	10	1 <sup>[8]</sup>	
Units: Participants				
OLE phase (n=11, 10, 0)	1	0	0	
PML phase (n=6, 6, 1)	0	0	0	

Notes:

[8] - n=12 (6 each) captured under PML data for Etro Q4W and Q8W

## Statistical analyses

No statistical analyses for this end point

### Secondary: Long-Term Safety of Etrolizumab: Number of Participants with Hypersensitivity Reactions

End point title	Long-Term Safety of Etrolizumab: Number of Participants with Hypersensitivity Reactions
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End point description:

Hypersensitivity reactions were assessed using NCI-CTCAE v4.0. Safety Population: all participants who received at least one dose of study treatment.

End point type	Secondary
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End point timeframe:

From the start of 312-week OLE and the 104-week PML safety surveillance phase until the participant withdrew from the study (from Week 24 up to approximately 5.5 years)

End point values	Etrolizumab Q4W	Etrolizumab Q8W	PML Safety Monitoring	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	11	10	1 <sup>[9]</sup>	
Units: Participants				
OLE phase (n=11, 10, 0)	2	2	0	
PML phase (n=6, 6, 1)	0	1	0	

Notes:

[9] - n=12 (6 each) captured under PML data for Etro Q4W and Q8W

### Statistical analyses

No statistical analyses for this end point

#### Secondary: Long-Term Safety of Etrolizumab: Number of Participants with Malignancies

End point title	Long-Term Safety of Etrolizumab: Number of Participants with Malignancies
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End point description:

Malignancies were assessed using NCI-CTCAE v4.0. Safety Population: all participants who received at least one dose of study treatment.

End point type	Secondary
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End point timeframe:

From the start of 312-week OLE and the 104-week PML safety surveillance phase until the participant withdrew from the study (from Week 24 up to approximately 5.5 years)

End point values	Etrolizumab Q4W	Etrolizumab Q8W	PML Safety Monitoring	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	11	10	1 <sup>[10]</sup>	
Units: Participants				
OLE phase (n=11, 10, 0)	0	0	0	
PML phase (n=6, 6, 1)	0	0	0	

Notes:

[10] - n=12 (6 each) captured under PML data for Etro Q4W and Q8W

### Statistical analyses

No statistical analyses for this end point

#### Secondary: Long-Term Safety of Etrolizumab: Number of Participants with Anti-Drug Antibodies (ADAs) to Etrolizumab at Baseline and Post-Baseline

End point title	Long-Term Safety of Etrolizumab: Number of Participants with Anti-Drug Antibodies (ADAs) to Etrolizumab at Baseline and Post-Baseline
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End point description:

Participants were ADA positive if they were ADA negative or had missing data at Baseline (BL) but developed an ADA response following study drug exposure (treatment-induced ADA positive), or if they were ADA positive at baseline and the titer of one or more postbaseline samples was at least 0.60 titer unit greater than that of the baseline sample (treatment-enhanced ADA positive); ADA induced + enhanced are combined in the 'treatment-emergent ADA positive' category. Participants were ADA negative if they were ADA negative or had missing data at Baseline (BL) and all postbaseline samples were negative (treatment-emergent ADA negative), or if they were ADA positive at baseline but did not have any postbaseline samples with a titer that was at least 0.60 titer unit greater than the titer of the baseline sample (treatment unaffected). All participants, who received at least one dose of study treatment and had at least one baseline or post-baseline ADA result, were evaluated.

End point type	Secondary
End point timeframe:	
Predose (dosing days only) at Baseline (Day 1), Days 28, 84, and 112, Weeks 24, 36, 72, and 120, and every 12 weeks thereafter for up to 4.25 years	

<b>End point values</b>	Etrolizumab Q4W	Etrolizumab Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	12	12		
Units: Participants				
Baseline (BL): ADA Positive	1	0		
Baseline (BL): ADA Negative	11	12		
Post-BL: Treatment-Emergent ADA Positive	4	3		
Post-BL: Treatment-Induced ADA Positive	4	3		
Post-BL: Treatment-Enhanced ADA Positive	0	0		
Post-BL: Treatment-Emergent ADA Negative	7	9		
Post-BL: Treatment Unaffected	1	0		

### Statistical analyses

No statistical analyses for this end point

### Secondary: Number of Participants with Confirmed Progressive Multifocal Leukoencephalopathy (PML) During the 104-Week Post-Treatment PML Monitoring Phase

End point title	Number of Participants with Confirmed Progressive Multifocal Leukoencephalopathy (PML) During the 104-Week Post-Treatment PML Monitoring Phase
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End point description:

The 104-week safety surveillance PML-monitoring phase (no etrolizumab treatment) consisted of telephone calls approximately every 6 months with administration of the protocol's PML Subjective Checklist. If there were any signs or symptoms suggestive of PML identified on this subjective checklist during the telephone call, the participant was asked to come into the clinic for a neurologic examination. The protocol's PML Algorithm was followed for any suspected case of PML, and any confirmed case of PML would be reported as a serious adverse event. Safety Population: all participants who received at least one dose of study treatment.

End point type	Secondary
End point timeframe:	
Approximately every 6 months from last dose of study drug until the end of the PML monitoring phase (up to 104 weeks)	

<b>End point values</b>	PML Safety Monitoring			
Subject group type	Reporting group			
Number of subjects analysed	13			
Units: Participants	0			

### Statistical analyses

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No statistical analyses for this end point

## Adverse events

### Adverse events information

Timeframe for reporting adverse events:

Up to 5.5 years

Adverse event reporting additional description:

After informed consent but prior to initiation of study drug, only serious AEs caused by protocol-mandated intervention were reported. After initiation of study drug, all AEs were reported until the last study visit or 12 weeks after the last dose of study drug. After this period, only serious AEs related to prior study drug were reported.

Assessment type	Systematic
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### Dictionary used

Dictionary name	MedDRA
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Dictionary version	26.0
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### Reporting groups

Reporting group title	Etrolizumab Q4W
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Reporting group description:

Etrolizumab Q4W

Etrolizumab 1.5 milligrams per kilogram of body weight (mg/kg) was administered by subcutaneous (SC) injection once every 4 weeks (Q4W) for a total of 4 doses over the course of the 24-week randomized treatment phase (16-week treatment period plus 8-week safety follow-up).

Reporting group title	PML Safety Monitoring
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Reporting group description:

After the randomized treatment period (if participants did not enter the OLE period) or after the OLE period participants were monitored during the 104-week safety surveillance phase (no etrolizumab treatment) for progressive multifocal leukoencephalopathy (PML).

Reporting group title	Open Label Extension (OLE)
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Reporting group description:

After the randomized treatment phase, participants were given the option to participate in the 312-week open-label extension (OLE) treatment phase. Participants were administered etrolizumab 1.5 mg/kg SC Q4W.

Reporting group title	Etrolizumab Q8W
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Reporting group description:

Etrolizumab Q8W

Etrolizumab 3.0 mg/kg was administered by subcutaneous (SC) injection once every 8 weeks (Q8W) for a total of 2 doses over the course of the 24-week randomized treatment phase (16-week treatment period plus 8-week safety follow-up).

<b>Serious adverse events</b>	Etrolizumab Q4W	PML Safety Monitoring	Open Label Extension (OLE)
Total subjects affected by serious adverse events			
subjects affected / exposed	2 / 12 (16.67%)	0 / 13 (0.00%)	6 / 21 (28.57%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events	0	0	0
Nervous system disorders			
Idiopathic intracranial hypertension			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences causally related to treatment / all	0 / 0	0 / 0	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Blood and lymphatic system disorders			
Anaemia			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastrointestinal disorders			
Gastritis			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Diarrhoea			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Crohn's disease			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 2
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Colitis ulcerative			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 2
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Vomiting			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Reproductive system and breast disorders			
Balanoposthitis			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Psychiatric disorders			
Intentional self-injury			

subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
<b>Drug abuse</b>			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
<b>Anxiety disorder</b>			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences causally related to treatment / all	1 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
<b>Infections and infestations</b>			
<b>Sinusitis</b>			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

<b>Serious adverse events</b>	Etrolizumab Q8W		
<b>Total subjects affected by serious adverse events</b>			
subjects affected / exposed	2 / 12 (16.67%)		
number of deaths (all causes)	0		
number of deaths resulting from adverse events	0		
<b>Nervous system disorders</b>			
<b>Idiopathic intracranial hypertension</b>			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
<b>Blood and lymphatic system disorders</b>			
<b>Anaemia</b>			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
<b>Gastrointestinal disorders</b>			
<b>Gastritis</b>			

subjects affected / exposed	0 / 12 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Diarrhoea			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Crohn's disease			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Colitis ulcerative			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Vomiting			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Reproductive system and breast disorders			
Balanoposthitis			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Psychiatric disorders			
Intentional self-injury			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Drug abuse			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		

Anxiety disorder			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
<b>Infections and infestations</b>			
Sinusitis			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		

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

<b>Non-serious adverse events</b>	<b>Etrolizumab Q4W</b>	<b>PML Safety Monitoring</b>	<b>Open Label Extension (OLE)</b>
<b>Total subjects affected by non-serious adverse events</b>			
subjects affected / exposed	8 / 12 (66.67%)	4 / 13 (30.77%)	20 / 21 (95.24%)
<b>General disorders and administration site conditions</b>			
Pyrexia			
subjects affected / exposed	4 / 12 (33.33%)	1 / 13 (7.69%)	6 / 21 (28.57%)
occurrences (all)	7	1	6
Peripheral swelling			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences (all)	1	0	0
Chest pain			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	3 / 21 (14.29%)
occurrences (all)	0	0	4
Vaccination site reaction			
subjects affected / exposed	0 / 12 (0.00%)	1 / 13 (7.69%)	1 / 21 (4.76%)
occurrences (all)	0	1	1
<b>Reproductive system and breast disorders</b>			
Amenorrhoea			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences (all)	0	0	1
Polymenorrhoea			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences (all)	0	0	0

Dysmenorrhoea subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0	0 / 13 (0.00%) 0	2 / 21 (9.52%) 2
Respiratory, thoracic and mediastinal disorders			
Catarrh subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0	0 / 13 (0.00%) 0	0 / 21 (0.00%) 0
Cough subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0	0 / 13 (0.00%) 0	1 / 21 (4.76%) 2
Epistaxis subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1	0 / 13 (0.00%) 0	2 / 21 (9.52%) 4
Nasal congestion subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1	0 / 13 (0.00%) 0	0 / 21 (0.00%) 0
Oropharyngeal pain subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1	0 / 13 (0.00%) 0	1 / 21 (4.76%) 1
Rhinorrhoea subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0	0 / 13 (0.00%) 0	2 / 21 (9.52%) 2
Investigations			
Weight decreased subjects affected / exposed occurrences (all)	2 / 12 (16.67%) 2	0 / 13 (0.00%) 0	1 / 21 (4.76%) 2
Injury, poisoning and procedural complications			
Arthropod bite subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1	0 / 13 (0.00%) 0	0 / 21 (0.00%) 0
Head injury subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0	0 / 13 (0.00%) 0	2 / 21 (9.52%) 2
Ligament sprain subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0	1 / 13 (7.69%) 1	1 / 21 (4.76%) 1

Nervous system disorders			
Syncope			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences (all)	1	0	2
Headache			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	5 / 21 (23.81%)
occurrences (all)	0	0	8
Blood and lymphatic system disorders			
Anaemia			
subjects affected / exposed	3 / 12 (25.00%)	0 / 13 (0.00%)	4 / 21 (19.05%)
occurrences (all)	3	0	5
Lymphopenia			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences (all)	1	0	2
Ear and labyrinth disorders			
Tinnitus			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences (all)	1	0	0
Gastrointestinal disorders			
Diarrhoea			
subjects affected / exposed	2 / 12 (16.67%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences (all)	2	0	3
Crohn's disease			
subjects affected / exposed	2 / 12 (16.67%)	0 / 13 (0.00%)	5 / 21 (23.81%)
occurrences (all)	2	0	9
Abdominal pain			
subjects affected / exposed	3 / 12 (25.00%)	0 / 13 (0.00%)	6 / 21 (28.57%)
occurrences (all)	3	0	12
Abdominal pain upper			
subjects affected / exposed	1 / 12 (8.33%)	2 / 13 (15.38%)	4 / 21 (19.05%)
occurrences (all)	1	2	5
Aphthous ulcer			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences (all)	0	0	3
Colitis ulcerative			
subjects affected / exposed	2 / 12 (16.67%)	0 / 13 (0.00%)	7 / 21 (33.33%)
occurrences (all)	2	0	13

Constipation			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences (all)	1	0	0
Vomiting			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences (all)	1	0	0
Toothache			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences (all)	0	0	0
Nausea			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	3 / 21 (14.29%)
occurrences (all)	1	0	3
Haematochezia			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences (all)	1	0	1
Dyspepsia			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences (all)	0	0	1
Odynophagia			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences (all)	1	0	1
Skin and subcutaneous tissue disorders			
Rash papular			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences (all)	1	0	1
Rash			
subjects affected / exposed	0 / 12 (0.00%)	1 / 13 (7.69%)	1 / 21 (4.76%)
occurrences (all)	0	1	1
Erythema			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences (all)	2	0	2
Renal and urinary disorders			
Leukocyturia			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences (all)	1	0	0
Musculoskeletal and connective tissue disorders			

Arthralgia			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	3 / 21 (14.29%)
occurrences (all)	1	0	3
Pain in extremity			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences (all)	0	0	2
<b>Infections and infestations</b>			
Conjunctivitis			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences (all)	0	0	5
Viral upper respiratory tract infection			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences (all)	1	0	1
Varicella			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences (all)	0	0	1
Upper respiratory tract infection			
subjects affected / exposed	2 / 12 (16.67%)	0 / 13 (0.00%)	8 / 21 (38.10%)
occurrences (all)	2	0	16
Respiratory tract infection viral			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences (all)	1	0	0
Respiratory tract infection			
subjects affected / exposed	1 / 12 (8.33%)	0 / 13 (0.00%)	4 / 21 (19.05%)
occurrences (all)	1	0	7
Nasopharyngitis			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	3 / 21 (14.29%)
occurrences (all)	0	0	5
Folliculitis			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences (all)	0	0	0
Herpes zoster			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences (all)	0	0	2
Gastrointestinal infection			

subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences (all)	0	0	2
Gastroenteritis			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences (all)	0	0	2
COVID-19			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	4 / 21 (19.05%)
occurrences (all)	0	0	4
Rhinitis			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	4 / 21 (19.05%)
occurrences (all)	0	0	4
Pharyngitis			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	5 / 21 (23.81%)
occurrences (all)	0	0	5
Oral herpes			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	2 / 21 (9.52%)
occurrences (all)	0	0	2
Metabolism and nutrition disorders			
Decreased appetite			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences (all)	0	0	0
Iron deficiency			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	1 / 21 (4.76%)
occurrences (all)	0	0	1
Vitamin B12 deficiency			
subjects affected / exposed	0 / 12 (0.00%)	0 / 13 (0.00%)	0 / 21 (0.00%)
occurrences (all)	0	0	0

<b>Non-serious adverse events</b>	Etrolizumab Q8W		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	9 / 12 (75.00%)		
General disorders and administration site conditions			
Pyrexia			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences (all)	0		
Peripheral swelling			

<p>subjects affected / exposed occurrences (all)</p> <p>Chest pain subjects affected / exposed occurrences (all)</p> <p>Vaccination site reaction subjects affected / exposed occurrences (all)</p>	<p>0 / 12 (0.00%) 0</p> <p>0 / 12 (0.00%) 0</p> <p>0 / 12 (0.00%) 0</p>		
<p>Reproductive system and breast disorders</p> <p>Amenorrhoea subjects affected / exposed occurrences (all)</p> <p>Polymenorrhoea subjects affected / exposed occurrences (all)</p> <p>Dysmenorrhoea subjects affected / exposed occurrences (all)</p>	<p>1 / 12 (8.33%) 1</p> <p>1 / 12 (8.33%) 1</p> <p>0 / 12 (0.00%) 0</p>		
<p>Respiratory, thoracic and mediastinal disorders</p> <p>Catarrh subjects affected / exposed occurrences (all)</p> <p>Cough subjects affected / exposed occurrences (all)</p> <p>Epistaxis subjects affected / exposed occurrences (all)</p> <p>Nasal congestion subjects affected / exposed occurrences (all)</p> <p>Oropharyngeal pain subjects affected / exposed occurrences (all)</p> <p>Rhinorrhoea</p>	<p>1 / 12 (8.33%) 1</p> <p>1 / 12 (8.33%) 1</p> <p>0 / 12 (0.00%) 0</p> <p>0 / 12 (0.00%) 0</p> <p>0 / 12 (0.00%) 0</p>		

subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Investigations Weight decreased subjects affected / exposed occurrences (all)	2 / 12 (16.67%) 2		
Injury, poisoning and procedural complications Arthropod bite subjects affected / exposed occurrences (all)  Head injury subjects affected / exposed occurrences (all)  Ligament sprain subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0  0 / 12 (0.00%) 0  0 / 12 (0.00%) 0		
Nervous system disorders Syncope subjects affected / exposed occurrences (all)  Headache subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0  3 / 12 (25.00%) 4		
Blood and lymphatic system disorders Anaemia subjects affected / exposed occurrences (all)  Lymphopenia subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1  0 / 12 (0.00%) 0		
Ear and labyrinth disorders Tinnitus subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
Gastrointestinal disorders			

Diarrhoea			
subjects affected / exposed	2 / 12 (16.67%)		
occurrences (all)	2		
Crohn's disease			
subjects affected / exposed	2 / 12 (16.67%)		
occurrences (all)	2		
Abdominal pain			
subjects affected / exposed	2 / 12 (16.67%)		
occurrences (all)	4		
Abdominal pain upper			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences (all)	0		
Aphthous ulcer			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	3		
Colitis ulcerative			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences (all)	0		
Constipation			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Vomiting			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences (all)	0		
Toothache			
subjects affected / exposed	2 / 12 (16.67%)		
occurrences (all)	2		
Nausea			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences (all)	0		
Haematochezia			
subjects affected / exposed	0 / 12 (0.00%)		
occurrences (all)	0		
Dyspepsia			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		

Odynophagia subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
Skin and subcutaneous tissue disorders Rash papular subjects affected / exposed occurrences (all)  Rash subjects affected / exposed occurrences (all)  Erythema subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0  1 / 12 (8.33%) 1  1 / 12 (8.33%) 1		
Renal and urinary disorders Leukocyturia subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
Musculoskeletal and connective tissue disorders Arthralgia subjects affected / exposed occurrences (all)  Pain in extremity subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 2  0 / 12 (0.00%) 0		
Infections and infestations Conjunctivitis subjects affected / exposed occurrences (all)  Viral upper respiratory tract infection subjects affected / exposed occurrences (all)  Varicella subjects affected / exposed occurrences (all)  Upper respiratory tract infection	1 / 12 (8.33%) 3  1 / 12 (8.33%) 1  1 / 12 (8.33%) 1  0 / 12 (0.00%) 0		

subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
Respiratory tract infection viral subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
Respiratory tract infection subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
Nasopharyngitis subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Folliculitis subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Herpes zoster subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
Gastrointestinal infection subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
Gastroenteritis subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
COVID-19 subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
Rhinitis subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
Pharyngitis subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
Oral herpes subjects affected / exposed occurrences (all)	0 / 12 (0.00%) 0		
Metabolism and nutrition disorders			

Decreased appetite subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Iron deficiency subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Vitamin B12 deficiency subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		

## More information

### Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
09 August 2018	Protocol CA40192 Version 2 was amended to clarify the exclusion criteria and the Schedule of Assessments for the open-label extension (OLE) phase: -Exclusion criteria for patients with strictures (stenosis) of the colon have been revised to exclude patients with fixed symptomatic stenosis of the intestine; -Exclusion criteria for the use of other biologics (e.g., anti-TNF) has been clarified; -Exclusion criteria has been deleted for tube feeding, defined formula diets, or parenteral alimentation/nutrition. Based on investigator feedback, this is a standard of care for patients with Crohn's disease. Including these treatments as a exclusion criterion reduces the potential patient pool at the sites; -The option for the administration of etrolizumab outside the clinic site has been removed; -The option of patients enrolling in the adult OLE studies of GA28951 and GA29145 has been deleted. Protocols GA28951 and GA29145 do not specify that patients from this study are eligible for enrollment; -Instructions about patient withdrawal from the RBR after site closure have been modified to indicate that the investigator must inform the Sponsor of patient withdrawal by emailing the study number and patient number; -Language regarding pregnancies in partners of male patients has been modified to account for the fact that some sites may not allow follow-up on partner pregnancies; -Language has been added for consistency with Roche's current data retention policy and to accommodate more stringent local requirements (if applicable); -Appendix 1c, Schedule of Assessments, for the OLE phase has been revised to list out every 4-week, 12-week and dosing visit time point.
22 November 2019	Protocol CA40192 Version 3 was amended to increase the number of participants and to extend the duration of the open-label extension (OLE) phase: -The total number of participants enrolled in the study was increased from approximately 16 to approximately 24, in order to achieve the requirement of 4 children from 4 years to <12 years of age with evaluable pharmacokinetic profiles; -The duration of the OLE was extended from 2 years to 6 years (312 weeks) in order to ensure that participants currently in the OLE will have drug available until the start of the pediatric Phase III program; -The end of study and length of study have been updated to include the extended duration of the OLE phase; -The Schedule of Assessments for the OLE phase has been revised to include the extended duration.
28 May 2021	Protocol CA40192 Version 4 was amended to clarify the 12-week safety follow up period after completion or early termination of the open-label extension phase, to add results from completed Phase III ulcerative colitis studies, and to add coronavirus disease 2019 (COVID-19) vaccine-related language. In addition, guselkumab was removed from the list of prohibited therapy. Schedule of assessments during the OLE phase was updated to include visits for conducting pregnancy tests.

Notes:

### Interruptions (globally)

Were there any global interruptions to the trial? Yes

Date	Interruption	Restart date
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27 September 2023	The study was terminated due to program discontinuation, based on mixed efficacy results in the adult ulcerative colitis and Crohn's disease studies. There were no safety concerns.	-
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Notes:

### **Limitations and caveats**

None reported