Clinical trial results:
Efficacy and safety comparison of brodalumab versus guselkumab in adult subjects with moderate-to-severe plaque psoriasis and inadequate response to ustekinumab.

Summary

EudraCT number	2019-004099-20
Trial protocol	DE GB BE AT FR NL GR DK CZ IT
Global end of trial date	07 December 2022

Results information

Result version number	v1 (current)
This version publication date	23 December 2023
First version publication date	23 December 2023

Trial information

Trial identification

Sponsor protocol code	LP0160-1510

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT04533737
WHO universal trial number (UTN)	U1111-1283-7584

Notes:

Sponsors

Sponsor organisation name	LEO Pharma A/S
Sponsor organisation address	Industriparken 55, Ballerup, Denmark, 2750
Public contact	Clinical Disclosure, LEO Pharma A/S , +45 44945888, disclosure@leo-pharma.com
Scientific contact	Global Regulatory Affairs, LEO Pharma A/S, +45 44945888, raleodk@leo-pharma.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	23 June 2023
Is this the analysis of the primary completion data?	Yes
Primary completion date	08 September 2022
Global end of trial reached?	Yes
Global end of trial date	07 December 2022
Was the trial ended prematurely?	Yes

Notes:

General information about the trial

Main objective of the trial:

To compare the efficacy of brodalumab with guselkumab in adult subjects with moderate-to-severe plaque psoriasis and prior inadequate response to ustekinumab.

Protection of trial subjects:

This clinical trial was conducted to conform to the principles of the Declaration of Helsinki, the International Council for Harmonisation (ICH) Good Clinical Practice (GCP) guidelines, in compliance with the approved protocol, and applicable regulatory requirements.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	17 December 2020
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Netherlands: 1
Country: Number of subjects enrolled	Sweden: 3
Country: Number of subjects enrolled	United Kingdom: 5
Country: Number of subjects enrolled	Belgium: 4
Country: Number of subjects enrolled	Denmark: 1
Country: Number of subjects enrolled	France: 26
Country: Number of subjects enrolled	Germany: 40
Country: Number of subjects enrolled	Greece: 8
Country: Number of subjects enrolled	Italy: 5
Country: Number of subjects enrolled	Spain: 16
Country: Number of subjects enrolled	Switzerland: 4
Worldwide total number of subjects	113
EEA total number of subjects	104

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37	0

wk	
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	101
From 65 to 84 years	12
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

The trial was conducted at 62 sites that screened subjects in 12 European countries: Austria, Belgium, Denmark, France, Germany, Greece, Italy, the Netherlands, Spain, Sweden, Switzerland, and the United Kingdom.

Pre-assignment

Screening details:

141 subjects were screened and 113 subjects were randomized 1:1 (stratified by body weight [≤100 kg or >100 kg]) into the 2 treatment groups brodalumab and guselkumab.

Period 1

Period 1 title	Treatment period (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind[1]
Roles blinded	Subject, Assessor

Arms

Are arms mutually exclusive?	Yes
Arm title	Brodalumab 210 mg Q2W

Arm description: -

Arm type	Experimental
Investigational medicinal product name	Brodalumab
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection in pre-filled syringe
Routes of administration	Subcutaneous use

Dosage and administration details:

Brodalumab 210 mg (1.5 mL) subcutaneously at Weeks 0, 1, 2, and then Q2W until the end of trial (last administration of brodalumab at Week 26).

Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection in pre-filled syringe
Routes of administration	Subcutaneous use

Dosage and administration details:

Placebo 1.0 mL subcutaneously at Weeks 0, 4, and then every 8 weeks (Q8W) until the end of trial (last administration of placebo at Week 20).

Arm title	Guselkumab 100 mg Q8W

Arm description: -

Arm type	Active comparator
Investigational medicinal product name	Guselkumab
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection in pre-filled syringe
Routes of administration	Subcutaneous use

Dosage and administration details:

Guselkumab 100 mg (1.0 mL) subcutaneously at Weeks 0, 4, and then Q8W until the end of trial (last administration of guselkumab at Week 20).

Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection in pre-filled syringe
Routes of administration	Subcutaneous use

Dosage and administration details:

Placebo 1.5 mL subcutaneously at Weeks 0, 1, 2, and then Q2W until the end of trial (last administration of placebo at Week 26).

Notes:

[1] - The roles blinded appear to be inconsistent with a double blind trial.

Justification: Only the assessor evaluating the efficacy was blinded. The assessor could be someone other than the investigator.

Number of subjects in period 1	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W
Started	56	57
Completed	50	50
Not completed	6	7
Consent withdrawn by subject	1	3
Adverse event, non-fatal	3	1
Randomised in error	-	3
Lack of efficacy	2	-

Baseline characteristics

Reporting groups	
Reporting group title	Brodalumab 210 mg Q2W
Reporting group description: -	
Reporting group title	Guselkumab 100 mg Q8W

Reporting group description: -

Reporting group values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W	Total
Number of subjects	56	57	113
Age categorical Units: Subjects			
In utero	0	0	0
Preterm newborn infants (gestational age < 37 wks)	0	0	0
Newborns (0-27 days)	0	0	0
Infants and toddlers (28 days-23 months)	0	0	0
Children (2-11 years)	0	0	0
Adolescents (12-17 years)	0	0	0
Adults (18-64 years)	53	48	101
From 65-84 years	3	9	12
85 years and over	0	0	0
Age continuous Units: years			
arithmetic mean	48.5	51.1	
standard deviation	± 10.7	± 13.6	-
Gender categorical Units: Subjects			
Female	16	16	32
Male	40	41	81

End points

End points reporting groups	
Reporting group title	Brodalumab 210 mg Q2W
Reporting group description: -	
Reporting group title	Guselkumab 100 mg Q8W
Reporting group description: -	

Primary: Having PASI 100 response at Week 16	
End point title	Having PASI 100 response at Week 16
End point description: FAS	
End point type	Primary
End point timeframe: Week 16	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	53.4 (40.0 to 66.8)	35.9 (23.0 to 48.7)		

Statistical analyses

Statistical analysis title	Primary endpoint analysis
Statistical analysis description: The primary endpoint was analyzed based on a logistic regression model, adjusted for baseline body weight (≤100 kg, >100 kg) and baseline PASI score. Missing data were imputed using multiple imputation based on a missing at random assumption within treatment groups. The primary endpoint was tested based on the odds ratio between the two treatment groups.	
Comparison groups	Guselkumab 100 mg Q8W v Brodalumab 210 mg Q2W
Number of subjects included in analysis	112
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.069
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	2.05
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.95
upper limit	4.44

Secondary: Having PASI 100 response at Week 4

End point title	Having PASI 100 response at Week 4
End point description: FAS	
End point type	Secondary
End point timeframe: Week 4	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	23.3 (12.0 to 34.6)	1.9 (-1.8 to 5.6)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having PASI 100 response at Week 8

End point title	Having PASI 100 response at Week 8
End point description: FAS	
End point type	Secondary
End point timeframe: Week 8	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	40.8 (27.5 to 54.1)	16.5 (6.5 to 26.4)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having PASI 100 response at Week 28

End point title	Having PASI 100 response at Week 28
End point description: FAS	
End point type	Secondary
End point timeframe: Week 28	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	61.4 (48.3 to 74.5)	36.8 (23.9 to 49.8)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having PASI 90 response at Week 16

End point title	Having PASI 90 response at Week 16
End point description: FAS	
End point type	Secondary
End point timeframe: Week 16	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	69.1 (56.7 to 81.5)	45.2 (31.8 to 58.6)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having PASI 90 response at Week 4

End point title	Having PASI 90 response at Week 4
End point description: FAS	
End point type	Secondary
End point timeframe: Week 4	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	28.7 (16.7 to 40.8)	9.2 (1.4 to 16.9)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having PASI 90 response at Week 8

End point title	Having PASI 90 response at Week 8
End point description: FAS	
End point type	Secondary
End point timeframe: Week 8	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	60.2 (46.8 to 73.7)	24.9 (13.1 to 36.7)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having PASI 90 response at Week 28

End point title	Having PASI 90 response at Week 28

End point description: FAS	
End point type	Secondary
End point timeframe: Week 28	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	69.8 (57.4 to 82.2)	44.7 (31.2 to 58.2)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having IGA of 0 at Week 16

End point title	Having IGA of 0 at Week 16
End point description: FAS	
End point type	Secondary
End point timeframe: Week 16	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	55.5 (42.3 to 68.7)	35.6 (22.8 to 48.3)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having IGA of 0 at Week 28

End point title	Having IGA of 0 at Week 28
End point description: FAS	

End point type	Secondary
End point timeframe: Week 28	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	62.4 (49.5 to 75.3)	41.2 (28.1 to 54.3)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having IGA of 0 or 1 at Week 16

End point title	Having IGA of 0 or 1 at Week 16
End point description: FAS	
End point type	Secondary
End point timeframe: Week 16	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	78.5 (67.5 to 89.5)	52.5 (39.1 to 66.0)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having IGA of 0 or 1 at Week 28

End point title	Having IGA of 0 or 1 at Week 28
End point description: FAS	
End point type	Secondary

End point timeframe:

Week 28

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	82.1 (71.8 to 92.4)	65.4 (52.7 to 78.2)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having DLQI total score of 0 or 1 at Week 4

End point title	Having DLQI total score of 0 or 1 at Week 4

End point description:

FAS

End point type	Secondary

End point timeframe:

Week 4

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	67.8 (54.9 to 80.8)	34.3 (21.1 to 47.6)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having DLQI total score of 0 or 1 at Week 8

End point title	Having DLQI total score of 0 or 1 at Week 8

End point description:

FAS

End point type	Secondary

End point timeframe:

Week 8

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	68.8 (56.2 to 81.3)	66.8 (53.7 to 79.8)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having DLQI total score of 0 or 1 at Week 12

End point title	Having DLQI total score of 0 or 1 at Week 12

End point description:

End point type	Secondary

End point timeframe:

Week 12

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	78.4 (66.8 to 89.9)	66.0 (52.7 to 79.2)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having DLQI total score of 0 or 1 at Week 16

End point title	Having DLQI total score of 0 or 1 at Week 16

End point description:

FAS

End point type	Secondary

End point timeframe:

Week 16

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	80.2 (69.7 to 90.8)	71.6 (59.7 to 83.4)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having DLQI total score of 0 or 1 at Week 20

End point title	Having DLQI total score of 0 or 1 at Week 20
End point description:	
FAS	
End point type	Secondary
End point timeframe:	
Week 20	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	80.0 (69.0 to 90.9)	68.9 (56.3 to 81.4)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having DLQI total score of 0 or 1 at Week 24

End point title	Having DLQI total score of 0 or 1 at Week 24
End point description:	
FAS	
End point type	Secondary
End point timeframe:	
Week 24	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	75.7 (64.0 to 87.3)	70.6 (58.3 to 82.9)		

Statistical analyses

No statistical analyses for this end point

Secondary: Having DLQI total score of 0 or 1 at Week 28

End point title	Having DLQI total score of 0 or 1 at Week 28
End point description:	
FAS	
End point type	Secondary
End point timeframe:	
Week 28	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: % of subjects				
least squares mean (confidence interval 95%)	79.3 (68.3 to 90.3)	66.6 (53.9 to 79.3)		

Statistical analyses

No statistical analyses for this end point

Secondary: Change in SF-36v2 Physical component summary measure at Week 4

End point title	Change in SF-36v2 Physical component summary measure at Week 4
End point description:	
FAS	
End point type	Secondary
End point timeframe:	
Week 4	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: Score				
least squares mean (confidence interval 95%)	3.3 (1.9 to 4.7)	1.9 (0.4 to 3.3)		

Statistical analyses

No statistical analyses for this end point

Secondary: Change in SF-36v2 Physical component summary measure at Week 8

End point title	Change in SF-36v2 Physical component summary measure at Week 8
End point description: FAS	
End point type	Secondary
End point timeframe: Week 8	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: Score				
least squares mean (confidence interval 95%)	3.8 (2.5 to 5.1)	3.0 (1.6 to 4.4)		

Statistical analyses

No statistical analyses for this end point

Secondary: Change in SF-36v2 Physical component summary measure at Week 16

End point title	Change in SF-36v2 Physical component summary measure at Week 16
End point description: FAS	
End point type	Secondary
End point timeframe: Week 16	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: Score				
least squares mean (confidence interval 95%)	4.2 (2.7 to 5.6)	3.7 (2.2 to 5.1)		

Statistical analyses

No statistical analyses for this end point

Secondary: Change in SF-36v2 Physical component summary measure at Week 28

End point title	Change in SF-36v2 Physical component summary measure at Week 28
End point description: FAS	
End point type	Secondary
End point timeframe: Week 28	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: Score				
least squares mean (confidence interval 95%)	3.9 (2.5 to 5.3)	3.9 (2.5 to 5.3)		

Statistical analyses

No statistical analyses for this end point

Secondary: Change in SF-36v2 Mental component summary measure at Week 4

End point title	Change in SF-36v2 Mental component summary measure at Week 4
End point description: FAS	
End point type	Secondary
End point timeframe: Week 4	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: Score				
least squares mean (confidence interval 95%)	2.7 (1.3 to 4.1)	2.6 (1.2 to 4.0)		

Statistical analyses

No statistical analyses for this end point

Secondary: Change in SF-36v2 Mental component summary measure at Week 8

End point title	Change in SF-36v2 Mental component summary measure at Week 8
End point description: FAS	
End point type	Secondary
End point timeframe: Week 8	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: Score				
least squares mean (confidence interval 95%)	3.8 (2.3 to 5.2)	3.7 (2.2 to 5.2)		

Statistical analyses

No statistical analyses for this end point

Secondary: Change in SF-36v2 Mental component summary measure at Week 16

End point title	Change in SF-36v2 Mental component summary measure at Week 16
End point description: FAS	
End point type	Secondary
End point timeframe: Week 16	

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: Score				
least squares mean (confidence interval 95%)	3.0 (1.5 to 4.4)	3.6 (2.1 to 5.1)		

Statistical analyses

No statistical analyses for this end point

Secondary: Change in SF-36v2 Mental component summary measure at Week 28

End point title	Change in SF-36v2 Mental component summary measure at Week 28

End point description:

FAS

End point type	Secondary

End point timeframe:

Week 28

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: Score				
least squares mean (confidence interval 95%)	3.1 (1.3 to 4.9)	4.0 (2.2 to 5.8)		

Statistical analyses

No statistical analyses for this end point

Secondary: Occurrence of TEAEs

End point title	Occurrence of TEAEs

End point description:

End point type	Secondary

End point timeframe:

From baseline to Week 28

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: subjects	42	31		

Statistical analyses

No statistical analyses for this end point

Secondary: Time to PASI 100 response

End point title	Time to PASI 100 response

End point description:

The outcome measure is summarized using the cumulative percentage of subjects with PASI 100 response (stratified by weight) at each timepoint.

End point type	Secondary

End point timeframe:

From baseline to Week 28

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: Percentage of subjects				
number (confidence interval 95%)				
<=100 kg Week 1	0 (0 to 0)	0 (0 to 0)		
<=100 kg Week 2	4.5 (0.8 to 13.7)	0 (0 to 0)		
<=100 kg Week 4	22.7 (11.7 to 36.0)	2.3 (0.2 to 10.7)		
<=100 kg Week 6	34.1 (20.5 to 48.1)	14.0 (5.6 to 26.1)		
<=100 kg Week 8	40.9 (26.3 to 55.0)	23.3 (11.9 to 36.8)		
<=100 kg Week 10	45.5 (30.2 to 59.5)	27.9 (15.4 to 41.8)		
<=100 kg Week 12	61.4 (45.1 to 74.1)	27.9 (15.4 to 41.8)		
<=100 kg Week 14	61.4 (45.1 to 74.1)	30.2 (17.2 to 44.3)		
<=100 kg Week 16	63.6 (47.4 to 76.1)	39.5 (24.9 to 53.8)		
<=100 kg Week 18	63.6 (47.4 to 76.1)	46.5 (31.0 to 60.6)		
<=100 kg Week 20	65.9 (49.6 to 78.0)	46.5 (31.0 to 60.6)		

<=100 kg Week 22	65.9 (49.6 to 78.0)	46.5 (31.0 to 60.6)		
<=100 kg Week 24	68.2 (51.9 to 80.0)	46.5 (31.0 to 60.6)		
<=100 kg Week 26	68.2 (51.9 to 80.0)	46.5 (31.0 to 60.6)		
<=100 kg Week 28	70.5 (54.2 to 81.9)	48.8 (33.1 to 62.8)		
>100 kg Week 1	0 (0 to 0)	0 (0 to 0)		
>100 kg Week 2	8.3 (0.4 to 32.3)	0 (0 to 0)		
>100 kg Week 4	25.0 (5.5 to 51.6)	0 (0 to 0)		
>100 kg Week 6	25.0 (5.5 to 51.6)	7.7 (0.4 to 30.3)		
>100 kg Week 8	41.7 (14.1 to 67.6)	7.7 (0.4 to 30.3)		
>100 kg Week 10	50.0 (19.2 to 74.7)	15.4 (2.2 to 39.8)		
>100 kg Week 12	50.0 (19.2 to 74.7)	15.4 (2.2 to 39.8)		
>100 kg Week 14	58.3 (24.8 to 81.2)	23.1 (5.1 to 48.5)		
>100 kg Week 16	58.3 (24.8 to 81.2)	30.8 (8.8 to 56.5)		
>100 kg Week 18	58.3 (24.8 to 81.2)	30.8 (8.8 to 56.5)		
>100 kg Week 20	58.3 (24.8 to 81.2)	30.8 (8.8 to 56.5)		
>100 kg Week 22	58.3 (24.8 to 81.2)	30.8 (8.8 to 56.5)		
>100 kg Week 24	66.7 (30.2 to 87.2)	30.8 (8.8 to 56.5)		
>100 kg Week 26	66.7 (30.2 to 87.2)	30.8 (8.8 to 56.5)		
>100 kg Week 28	66.7 (30.2 to 87.2)	30.8 (8.8 to 56.5)		

Statistical analyses

No statistical analyses for this end point

Secondary: Time to PASI 90 response

End point title	Time to PASI 90 response

End point description:

The outcome measure is summarized using the cumulative percentage of subjects with PASI 100 response (stratified by weight) at each timepoint.

End point type	Secondary

End point timeframe:

From baseline to Week 28

End point values	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	56	56		
Units: Percentage of subjects				
number (confidence interval 95%)				
<=100 kg Week 1	0 (0 to 0)	0 (0 to 0)		
<=100 kg Week 2	6.8 (1.7 to 16.9)	0 (0 to 0)		
<=100 kg Week 4	27.3 (15.1 to 41.0)	9.3 (2.9 to 20.3)		
<=100 kg Week 6	56.8 (40.8 to 70.0)	23.3 (11.9 to 36.8)		
<=100 kg Week 8	65.9 (49.6 to 78.0)	34.9 (21.0 to 49.1)		
<=100 kg Week 10	68.2 (51.9 to 79.9)	39.5 (24.9 to 53.8)		
<=100 kg Week 12	72.7 (56.6 to 83.7)	41.9 (26.9 to 56.1)		
<=100 kg Week 14	72.7 (56.6 to 83.7)	44.2 (29.0 to 58.4)		
<=100 kg Week 16	75.0 (59.0 to 85.5)	48.8 (33.1 to 62.8)		
<=100 kg Week 18	75.0 (59.0 to 85.5)	51.2 (35.3 to 65.0)		
<=100 kg Week 20	81.8 (66.2 to 90.7)	55.8 (39.6 to 69.3)		
<=100 kg Week 22	81.8 (66.2 to 90.7)	55.8 (39.6 to 69.3)		
<=100 kg Week 24	81.8 (66.2 to 90.7)	55.8 (39.6 to 69.3)		
<=100 kg Week 26	81.8 (66.2 to 90.7)	55.8 (39.6 to 69.3)		
<=100 kg Week 28	81.8 (66.2 to 90.7)	55.8 (39.6 to 69.3)		
>100 kg Week 1	0 (0 to 0)	0 (0 to 0)		
>100 kg Week 2	16.7 (2.4 to 42.4)	7.7 (0.4 to 30.3)		
>100 kg Week 4	33.3 (9.4 to 60.0)	15.4 (2.2 to 39.8)		
>100 kg Week 6	58.3 (25.1 to 81.1)	23.1 (5.1 to 48.5)		
>100 kg Week 8	58.3 (25.1 to 81.1)	23.1 (5.1 to 48.5)		
>100 kg Week 10	58.3 (25.1 to 81.1)	23.1 (5.1 to 48.5)		
>100 kg Week 12	58.3 (25.1 to 81.1)	23.1 (5.1 to 48.5)		
>100 kg Week 14	66.7 (30.8 to 87.0)	30.8 (8.8 to 56.5)		
>100 kg Week 16	66.7 (30.8 to 87.0)	46.2 (17.9 to 70.7)		
>100 kg Week 18	66.7 (30.8 to 87.0)	46.2 (17.9 to 70.7)		
>100 kg Week 20	66.7 (30.8 to 87.0)	46.2 (17.9 to 70.7)		
>100 kg Week 22	75.0 (35.5 to 92.3)	46.2 (17.9 to 70.7)		
>100 kg Week 24	75.0 (35.5 to 92.3)	53.8 (23.1 to 77.0)		

>100 kg Week 26	75.0 (35.5 to 92.3)	53.8 (23.1 to 77.0)		
>100 kg Week 28	75.0 (35.5 to 92.3)	53.8 (23.1 to 77.0)		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events:	
28 Weeks	
Adverse event reporting additional description:	
Treatment-emergent adverse events	
Assessment type	Systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	25.1

Reporting groups	
Reporting group title	Brodalumab 210 mg Q2W
Reporting group description: -	
Reporting group title	Guselkumab 100 mg Q8W
Reporting group description: -	

Serious adverse events	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W	
Total subjects affected by serious adverse events			
subjects affected / exposed	4 / 56 (7.14%)	4 / 56 (7.14%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Colon cancer			
subjects affected / exposed	0 / 56 (0.00%)	1 / 56 (1.79%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Vascular disorders			
Arterial stenosis			
subjects affected / exposed	0 / 56 (0.00%)	1 / 56 (1.79%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Nervous system disorders			
Syncope			
subjects affected / exposed	2 / 56 (3.57%)	0 / 56 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hepatobiliary disorders			

Hepatic mass			
subjects affected / exposed	0 / 56 (0.00%)	1 / 56 (1.79%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Psychiatric disorders			
Suicidal ideation			
subjects affected / exposed	1 / 56 (1.79%)	0 / 56 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Alcohol abuse			
subjects affected / exposed	0 / 56 (0.00%)	1 / 56 (1.79%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Infection			
subjects affected / exposed	1 / 56 (1.79%)	0 / 56 (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	Brodalumab 210 mg Q2W	Guselkumab 100 mg Q8W	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	37 / 56 (66.07%)	25 / 56 (44.64%)	
Vascular disorders			
Hypertension			
subjects affected / exposed	5 / 56 (8.93%)	2 / 56 (3.57%)	
occurrences (all)	5	2	
Nervous system disorders			
Headache			
subjects affected / exposed	5 / 56 (8.93%)	3 / 56 (5.36%)	
occurrences (all)	10	4	
General disorders and administration site conditions			
Fatigue			

subjects affected / exposed	2 / 56 (3.57%)	3 / 56 (5.36%)	
occurrences (all)	2	3	
Gastrointestinal disorders			
Dyspepsia			
subjects affected / exposed	3 / 56 (5.36%)	0 / 56 (0.00%)	
occurrences (all)	3	0	
Skin and subcutaneous tissue disorders			
Psoriasis			
subjects affected / exposed	3 / 56 (5.36%)	0 / 56 (0.00%)	
occurrences (all)	3	0	
Psychiatric disorders			
Depression			
subjects affected / exposed	3 / 56 (5.36%)	5 / 56 (8.93%)	
occurrences (all)	3	5	
Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	10 / 56 (17.86%)	2 / 56 (3.57%)	
occurrences (all)	14	4	
Back pain			
subjects affected / exposed	5 / 56 (8.93%)	1 / 56 (1.79%)	
occurrences (all)	5	1	
Pain in extremity			
subjects affected / exposed	4 / 56 (7.14%)	0 / 56 (0.00%)	
occurrences (all)	4	0	
Myalgia			
subjects affected / exposed	3 / 56 (5.36%)	0 / 56 (0.00%)	
occurrences (all)	4	0	
Infections and infestations			
COVID-19			
subjects affected / exposed	8 / 56 (14.29%)	6 / 56 (10.71%)	
occurrences (all)	8	6	
Nasopharyngitis			
subjects affected / exposed	7 / 56 (12.50%)	4 / 56 (7.14%)	
occurrences (all)	7	4	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
19 August 2020	The main reasons for this amendment, based on input provided during the Voluntary Harmonisation Procedure in EU, are: • to add the discontinuation criterion for subjects who show no response after 16 weeks of treatment. • to add an evaluation by a specialist in case of a positive QuantiFERON® test. • to add an additional sensitivity analysis to assess the robustness of the results of the primary analysis with respect to the use of prohibited medication and procedures among subjects not discontinuing IMP. Furthermore, capturing of 'lack of efficacy' in case of aggravation/exacerbation/worsening of the trial disease has been clarified, and albumin-to-creatinine test at screening was changed to only be performed in case of abnormal urine dipstick test.
22 January 2021	The main reason for this amendment is to provide a possibility to perform minimum safety and efficacy assessments via the use of electronic communications followed by delivery of IMP to subjects for self-injections in case of emergency COVID-19 pandemic restrictions.
10 March 2022	The main reason for this amendment is to reduce the sample size and amend the eligibility criteria to ease recruitment.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported