Clinical trial results:
A Phase 2a/2b, Multicenter, Randomized, Placebo and Active Comparator-controlled, Double-Blind, Dose-ranging Study to Evaluate the Safety and Efficacy of Bermekimab (JNJ-77474462) for the Treatment of Subjects with Moderate to Severe Hidradenitis Suppurativa

Summary

EudraCT number	2020-002607-19
Trial protocol	DE NL ES
Global end of trial date	12 October 2022

Results information

Result version number	v1 (current)
This version publication date	29 October 2023
First version publication date	29 October 2023

Trial information

Trial identification

Sponsor protocol code	CR109063

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT04988308
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Janssen Research & Development, LLC
Sponsor organisation address	Welsh & McKeanRoads, P.O. Box 776, Spring House, United States, PA 19477
Public contact	Clinical Registry Group, Janssen Research & Development, LLC, ClinicalTrialsEU@its.jnj.com
Scientific contact	Clinical Registry Group, Janssen Research & Development, LLC, ClinicalTrialsEU@its.jnj.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	12 October 2022
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	12 October 2022
Was the trial ended prematurely?	Yes

Notes:

General information about the trial

Main objective of the trial:

The main objective of this trial was to evaluate the clinical efficacy of bermekimab in subjects with moderate to severe hidradenitis suppurativa (HS).

Protection of trial subjects:

This study was conducted in accordance with the ethical principles that have their origin in the Declaration of Helsinki and that are consistent with Good Clinical Practices and applicable regulatory requirements.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	02 November 2021
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	Yes

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Australia: 9
Country: Number of subjects enrolled	Canada: 14
Country: Number of subjects enrolled	Germany: 32
Country: Number of subjects enrolled	Spain: 5
Country: Number of subjects enrolled	Japan: 8
Country: Number of subjects enrolled	Netherlands: 1
Country: Number of subjects enrolled	Poland: 20
Country: Number of subjects enrolled	United States: 62
Worldwide total number of subjects	151
EEA total number of subjects	58

Notes:

Subjects enrolled per age group

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

Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	149
From 65 to 84 years	2
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

As per change in planned analysis, part 2 of this study was not conducted due to early termination because interim analysis 1 efficacy results met the prespecified futility criteria related to the primary endpoint. Hence, data for Part 2 and some secondary efficacy outcome measures (Parts 1 and 2) were not reported in this results summary.

Period 1

Period 1 title	Placebo Controlled Period (Week 0-16)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator

Arms

Are arms mutually exclusive?	Yes
Arm title	Part 1: Placebo (Week 0-16)

Arm description:

Subjects received placebo as subcutaneous (SC) injection from Week 0 through Week 15 and then subjects received bermekimab 1050 milligrams (mg) as SC injection at Week 16 in Part 1.

Arm type	Experimental
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subjects received placebo as SC injection from Week 0 through Week 15 in Part 1.

Investigational medicinal product name	Bermekimab
Investigational medicinal product code	
Other name	JNJ-77474462
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subjects received bermekimab 1050 mg as SC injection at Week 16 in Part 1.

Arm title	Part 1: Bermekimab (Week 0-16)

Arm description:

Subjects received bermekimab 1050 mg (3*350 mg) and 1 placebo SC injection at Week 0 followed by bermekimab 1050 mg (3*350 mg) as SC injection at Week 1 and every week thereafter through Week 16 in Part 1.

Arm type	Experimental
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subjects received 1 placebo as SC injection at Week 0.

Investigational medicinal product name	Bermekimab
Investigational medicinal product code	
Other name	JNJ-77474462
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subjects received bermekimab 1050 mg (3*350 mg) at Week 0 followed by bermekimab 1050 mg (3*350 mg) as SC injections at Week 1 and every week thereafter through Week 16 in Part 1.

Arm title	Part 1: Adalimumab (Week 0-16)

Arm description:

Subjects received adalimumab 160 mg (4*40 mg) as SC injection at Week 0 and 3 placebo SC injections at Week 1 followed by adalimumab 80 mg (2*40 mg) as SC injection at Week 2 and 3 placebo SC injections at Week 3. Subjects received adalimumab 40 mg (1*40 mg) SC injection and 2 placebo SC injections at Week 4 and every week thereafter through Week 16 in Part 1.

Arm type	Experimental
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subjects received 3 placebo SC injections at Week 1 followed by 3 placebo SC injections at Week 3. Subjects received 2 placebo SC injections at Week 4 and every week thereafter through Week 16 in Part 1.

Investigational medicinal product name	Adalimumab
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subjects received adalimumab 160 mg (4*40 mg) as SC injection at Week 0 followed by adalimumab 80 mg (2*40 mg) as SC injection at Week 2. Subjects received adalimumab 40 mg (1*40 mg) SC injection at Week 4 and every week thereafter through Week 16 in Part 1.

Number of subjects in period 1	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Adalimumab (Week 0-16)
Started	50	51	50
Completed	28	30	28
Not completed	22	21	22
Consent withdrawn by subject	2	4	4
Death	-	-	1
Study terminated by sponsor	6	4	3
Unspecified	10	9	14
Lost to follow-up	4	4	-

Period 2

Period 2 title	Active Treatment+Safety F-U (Week 17-36)
Is this the baseline period?	No
Allocation method	Randomised - controlled
Blinding used	Not blinded

Arms

Are arms mutually exclusive?	Yes
Arm title	Part 1: Placebo then Bermekimab (Week 17-36)

Arm description:

Subjects who received placebo during placebo controlled period and then received bermekimab 1050 mg (3*350 mg) at Week 16 entered into active treatment + safety follow up (FU) period and received bermekimab 1050 mg as SC injection weekly through Week 31 in Part 1. All subjects were followed for safety through Week 36.

Arm type	Experimental
Investigational medicinal product name	Bermekimab
Investigational medicinal product code	
Other name	JNJ-77474462
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

At Week 16, subjects received 1050 mg as SC injection weekly through Week 31 in Part 1.

Arm title	Part 1: Bermekimab (Week 17-36)

Arm description:

Subjects who received bermekimab 1050 mg at Week 16 during placebo controlled period entered into active treatment + safety FU period and continued to receive bermekimab 1050 mg (3*350 mg) as SC injection every week thereafter through Week 31. All subjects were followed for safety through Week 36.

Arm type	Experimental
Investigational medicinal product name	Bermekimab
Investigational medicinal product code	
Other name	JNJ-77474462
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subjects received bermekimab 1050 mg (3*350 mg) as SC injection every week thereafter through Week 31.

Arm title	Part 1: Adalimumab (Week 17-36)

Arm description:

Subjects who received adalimumab 40 mg as SC injection during placebo controlled period entered into active treatment + safety FU period and continued to receive adalimumab 40 mg as SC injection and 2 placebo SC injections weekly through Week 31 in Part 1. All subjects were followed for safety through Week 36.

Arm type	Experimental
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subjects received 2 placebo SC injections weekly through Week 31 in Part 1.

Investigational medicinal product name	Adalimumab
Investigational medicinal product code	
Other name	

Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Subjects received adalimumab 40 mg as SC injection weekly through Week 31 in Part 1.

Number of subjects in period 2	Part 1: Placebo then Bermekimab (Week 17-36)	Part 1: Bermekimab (Week 17-36)	Part 1: Adalimumab (Week 17-36)
Started	28	30	28
Completed	7	9	10
Not completed	21	21	18
Consent withdrawn by subject	3	2	1
Study terminated by sponsor	5	6	2
Unspecified	10	10	14
Lost to follow-up	3	3	1

Baseline characteristics

Reporting groups	
Reporting group title	Part 1: Placebo (Week 0-16)
Reporting group description:	
Subjects received placebo as subcutaneous (SC) injection from Week 0 through Week 15 and then subjects received bermekimab 1050 milligrams (mg) as SC injection at Week 16 in Part 1.	
Reporting group title	Part 1: Bermekimab (Week 0-16)
Reporting group description:	
Subjects received bermekimab 1050 mg (3*350 mg) and 1 placebo SC injection at Week 0 followed by bermekimab 1050 mg (3*350 mg) as SC injection at Week 1 and every week thereafter through Week 16 in Part 1.	
Reporting group title	Part 1: Adalimumab (Week 0-16)
Reporting group description:	
Subjects received adalimumab 160 mg (4*40 mg) as SC injection at Week 0 and 3 placebo SC injections at Week 1 followed by adalimumab 80 mg (2*40 mg) as SC injection at Week 2 and 3 placebo SC injections at Week 3. Subjects received adalimumab 40 mg (1*40 mg) SC injection and 2 placebo SC injections at Week 4 and every week thereafter through Week 16 in Part 1.	

Reporting group values	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Adalimumab (Week 0-16)
Number of subjects	50	51	50
Title for AgeCategorical			
Units: subjects			
Children (2-11 years)	0	0	0
Adolescents (12-17 years)	0	0	0
Adults (18-64 years)	49	51	49
From 65 to 84 years	1	0	1
85 years and over	0	0	0
Title for AgeContinuous			
Units: years			
arithmetic mean	38.1	36.7	35.7
standard deviation	± 12.55	± 9.67	± 12.2
Title for Gender			
Units: subjects			
Female	25	30	28
Male	25	21	22

Reporting group values	Total		
Number of subjects	151		
Title for AgeCategorical			
Units: subjects			
Children (2-11 years)	0		
Adolescents (12-17 years)	0		
Adults (18-64 years)	149		
From 65 to 84 years	2		
85 years and over	0		
Title for AgeContinuous			
Units: years			
arithmetic mean			
standard deviation	-		

Title for Gender Units: subjects			
Female	83		
Male	68		

End points

End points reporting groups

Reporting group title	Part 1: Placebo (Week 0-16)

Reporting group description:

Subjects received placebo as subcutaneous (SC) injection from Week 0 through Week 15 and then subjects received bermekimab 1050 milligrams (mg) as SC injection at Week 16 in Part 1.

Reporting group title	Part 1: Bermekimab (Week 0-16)

Reporting group description:

Subjects received bermekimab 1050 mg (3*350 mg) and 1 placebo SC injection at Week 0 followed by bermekimab 1050 mg (3*350 mg) as SC injection at Week 1 and every week thereafter through Week 16 in Part 1.

Reporting group title	Part 1: Adalimumab (Week 0-16)

Reporting group description:

Subjects received adalimumab 160 mg (4*40 mg) as SC injection at Week 0 and 3 placebo SC injections at Week 1 followed by adalimumab 80 mg (2*40 mg) as SC injection at Week 2 and 3 placebo SC injections at Week 3. Subjects received adalimumab 40 mg (1*40 mg) SC injection and 2 placebo SC injections at Week 4 and every week thereafter through Week 16 in Part 1.

Reporting group title	Part 1: Placebo then Bermekimab (Week 17-36)

Reporting group description:

Subjects who received placebo during placebo controlled period and then received bermekimab 1050 mg (3*350 mg) at Week 16 entered into active treatment + safety follow up (FU) period and received bermekimab 1050 mg as SC injection weekly through Week 31 in Part 1. All subjects were followed for safety through Week 36.

Reporting group title	Part 1: Bermekimab (Week 17-36)

Reporting group description:

Subjects who received bermekimab 1050 mg at Week 16 during placebo controlled period entered into active treatment + safety FU period and continued to receive bermekimab 1050 mg (3*350 mg) as SC injection every week thereafter through Week 31. All subjects were followed for safety through Week 36.

Reporting group title	Part 1: Adalimumab (Week 17-36)

Reporting group description:

Subjects who received adalimumab 40 mg as SC injection during placebo controlled period entered into active treatment + safety FU period and continued to receive adalimumab 40 mg as SC injection and 2 placebo SC injections weekly through Week 31 in Part 1. All subjects were followed for safety through Week 36.

Subject analysis set title	Part 1: Bermekimab (Week 0-36)
Subject analysis set type	Per protocol

Subject analysis set description:

Subjects received bermekimab 1050 mg (3*350 mg) and 1 placebo as SC injection at Week 0 followed by bermekimab 1050 mg (3*350 mg) as SC injection at Week 1 and every week thereafter through Week 16 in Part 1. Subjects who received bermekimab 1050 mg (3*350 mg) at Week 16 entered into active treatment + safety follow up (FU) period and received bermekimab 1050 mg as SC injection weekly through Week 36 in Part 1.

Primary: Part 1: Percentage of Subjects who Achieved Hidradenitis Suppurativa Clinical Response-50 (HiSCR50) at Week 16

End point title	Part 1: Percentage of Subjects who Achieved Hidradenitis Suppurativa Clinical Response-50 (HiSCR50) at Week 16[1]

End point description:

HiSCR50 was defined as at least 50 percent (%) reduction in total abscess and inflammatory nodule counts (AN count) with no increase in abscess count and no increase in draining fistula count relative to baseline. The full analysis set (FAS) included all randomised subjects who received at least one administration of study intervention.

End point type	Primary

End point timeframe:

Week 16

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: Descriptive statistics was done, no inferential statistical analysis was performed.

End point values	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Adalimumab (Week 0-16)	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	35	35	35	
Units: Percentage of subjects				
number (not applicable)	37.1	37.1	57.1	

Statistical analyses

No statistical analyses for this end point

Secondary: Part 1: Percentage of Subjects who Achieved HiSCR75 at Week 16

End point title	Part 1: Percentage of Subjects who Achieved HiSCR75 at Week 16

End point description:

HiSCR75 was defined as at least 75% reduction in total abscess and inflammatory nodule counts (AN count) with no increase in abscess count and no increase in draining fistula count relative to baseline. The FAS included all randomised subjects who received at least one administration of study intervention.

End point type	Secondary

End point timeframe:

Week 16

End point values	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Adalimumab (Week 0-16)	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	35	35	35	
Units: Percentage of subjects				
number (not applicable)	25.7	25.7	40.0	

Statistical analyses

No statistical analyses for this end point

Secondary: Part 1: Percentage of Subjects who Achieved HiSCR90 at Week 16

End point title	Part 1: Percentage of Subjects who Achieved HiSCR90 at Week 16

End point description:

HiSCR90 was defined as at least 90% reduction in total abscess and inflammatory nodule counts (AN count) with no increase in abscess count and no increase in draining fistula count relative to baseline. The FAS included all randomised subjects who received at least one administration of study intervention.

End point type	Secondary
End point timeframe: Week 16	

End point values	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Adalimumab (Week 0-16)	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	35	35	35	
Units: Percentage of subjects				
number (not applicable)	14.3	17.1	22.9	

Statistical analyses

No statistical analyses for this end point

Secondary: Part 1: Change from Baseline in Number of Abscess at Week 16

End point title	Part 1: Change from Baseline in Number of Abscess at Week 16
End point description: Change from baseline in number of abscess at Week 16 was reported. The FAS included all randomised subjects who received at least one administration of study intervention. Here, 'N' (number of subjects analysed) signifies number of subjects who were evaluable for this endpoint.	
End point type	Secondary
End point timeframe: Baseline, Week 16	

End point values	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Adalimumab (Week 0-16)	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	28	29	28	
Units: Abscess				
arithmetic mean (standard deviation)	-0.86 (± 1.900)	-0.83 (± 3.071)	-1.46 (± 2.333)	

Statistical analyses

No statistical analyses for this end point

Secondary: Part 1: Change from Baseline in the Abscess and Inflammatory Nodule (AN) Count at Week 16

End point title	Part 1: Change from Baseline in the Abscess and Inflammatory Nodule (AN) Count at Week 16

End point description:

Change from baseline in the AN count at Week 16 was reported. Abscess and inflammatory nodule were counted for the hidradenitis suppurativa (HS) affected anatomical regions. The AN count is the sum of number of abscess and inflammatory nodules across anatomical regions. The FAS included all randomised subjects who received at least one administration of study intervention. Here, 'N' (number of subjects analysed) signifies number of subjects who were evaluable for this endpoint.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Adalimumab (Week 0-16)	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	28	29	28	
Units: Abscess and inflammatory nodule				
arithmetic mean (standard deviation)	-4.50 (± 5.088)	-5.31 (± 8.594)	-7.25 (± 4.774)	

Statistical analyses

No statistical analyses for this end point

Secondary: Part 1: Change from Baseline in Number of Draining Fistula at Week 16

End point title	Part 1: Change from Baseline in Number of Draining Fistula at Week 16

End point description:

Change from baseline in number of draining fistula at Week 16 was reported. Draining fistula was defined as fistulas that drain serous or purulent fluid, either spontaneously or by gentle palpation. The FAS included all randomised subjects who received at least one administration of study intervention. Here, 'N' (number of subjects analysed) signifies number of subjects who were evaluable for this endpoint.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Adalimumab (Week 0-16)	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	28	29	28	
Units: Fistulas				
arithmetic mean (standard deviation)	-0.04 (± 1.915)	-1.00 (± 1.626)	-0.96 (± 1.575)	

Statistical analyses

No statistical analyses for this end point

Secondary: Part 1: Change from Baseline in Number of Inflammatory Nodules at Week 16

End point title	Part 1: Change from Baseline in Number of Inflammatory Nodules at Week 16

End point description:

Change from baseline in number of inflammatory nodules at Week 16 was reported. Inflammatory nodules arise from inflamed blood vessels (vasculitis) or adipose tissue (panniculitis). The FAS included all randomised subjects who received at least one administration of study intervention. Here, 'N' (number of subjects analysed) signifies number of subjects who were evaluable for this endpoint.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Adalimumab (Week 0-16)	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	28	29	28	
Units: inflammatory nodule				
arithmetic mean (standard deviation)	-3.64 (± 5.258)	-4.48 (± 7.689)	-5.79 (± 4.306)	

Statistical analyses

No statistical analyses for this end point

Secondary: Part 1: Change from Baseline in International Hidradenitis Suppurativa Severity Score System (IHS4) Score at Week 16

End point title	Part 1: Change from Baseline in International Hidradenitis Suppurativa Severity Score System (IHS4) Score at Week 16

End point description:

HS4 was a dynamic severity assessment of HS. IHS4 score was arrived at by the number of nodules (multiplied by 1) plus the number of abscesses (multiplied by 2) plus the number of draining tunnels (multiplied by 4). A total score of 3 or less signifies mild, 4-10 signifies moderate and 11 or higher signifies severe disease. Higher scores indicate more severity. The FAS included all randomised subjects who received at least one administration of study intervention. Here, 'N' (number of subjects analysed) signifies number of subjects who were evaluable for this endpoint.

End point type	Secondary

End point timeframe:

Baseline up to Week 16

End point values	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Adalimumab (Week 0-16)	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	28	29	28	
Units: scores on a scale				
arithmetic mean (standard deviation)	-5.5 (± 10.38)	-10.1 (± 13.36)	-12.6 (± 9.15)	

Statistical analyses

No statistical analyses for this end point

Secondary: Part 1: Percentage of Subjects with Hidradenitis Suppurativa-Investigator's Global Assessment (HS-IGA) Score of Inactive (0), Almost Inactive (1), or Mild Activity (2) and with at least 2-grade Improvement Relative to Baseline at Week 16

End point title	Part 1: Percentage of Subjects with Hidradenitis Suppurativa-Investigator's Global Assessment (HS-IGA) Score of Inactive (0), Almost Inactive (1), or Mild Activity (2) and with at least 2-grade Improvement Relative to Baseline at Week 16

End point description:

The HS-IGA documents the investigator's assessment of the subject's HS at a given timepoint. The anatomic region with the most severe HS activity at the baseline was evaluated for erythema, drainage, and pain and/or tenderness to palpation for each subject. Among subjects with score of moderate activity (3) or severe activity (4) at baseline, the same anatomic site selected for evaluation at the baseline were re-evaluated at Week 16. The subject's HS was assessed as inactive (0), almost inactive (1), mild activity (2), moderate activity (3), or severe activity (4). A higher score indicates more severe disease. The FAS included all randomised subjects who received at least one administration of study intervention. Here, 'N' (number of subjects analysed) signifies number of subjects who were evaluable for this endpoint.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Adalimumab (Week 0-16)	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	35	35	34	
Units: Percentage of subjects				
number (not applicable)				
HS-IGA scores of 0	11.4	17.1	20.6	
HS-IGA scores of 0 or 1	25.7	25.7	38.2	
HS-IGA scores of 0, 1, or 2	28.6	28.6	38.2	

Statistical analyses

No statistical analyses for this end point

Secondary: Part 1: Change from Baseline in Hidradenitis Suppurativa (HS)-Related Pain Symptom Score in the Past 24 Hours Based on Hidradenitis Suppurativa Symptom Diary (HSSD) Questionnaire at Week 16

End point title	Part 1: Change from Baseline in Hidradenitis Suppurativa (HS)-Related Pain Symptom Score in the Past 24 Hours Based on Hidradenitis Suppurativa Symptom Diary (HSSD) Questionnaire at Week 16

End point description:

HSSD is 7-item patient self-reported questionnaire that assesses 5 HS-related symptoms(pain, tenderness, hot skin feeling, odor, and itchiness). Subjects were asked to rate severity of each symptom on a 0-10 numerical rating scale, with 0=no symptom experience and 10=worst possible symptom experience. All 5 symptoms have a recall period of past 7 days, except for additional questions on pain which evaluate current pain and pain in past 24 hours with score range from 0=no symptom experience to 10=worst possible symptom experience. Total symptom score ranged from 0=no symptom to 10=worst possible symptom, was derived by averaging 5 individual scale scores that utilize past 7-day recall period. The FAS included all randomised subjects who received at least one administration of study intervention. Here, 'N'(number of subjects analysed)=number of subjects who were evaluable for this endpoint.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Adalimumab (Week 0-16)	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	20	22	20	
Units: scores on a scale				
arithmetic mean (standard deviation)	-1.00 (± 2.461)	-0.41 (± 2.374)	-1.96 (± 2.326)	

Statistical analyses

No statistical analyses for this end point

Secondary: Serum Concentration of Bermekimab

End point title	Serum Concentration of Bermekimab

End point description:

Serum concentration of bermekimab was reported. As per planned analysis, this outcome measure was analyzed in a single arm for subjects who received bermekimab from Week 0 to Week 36. The pharmacokinetic (PK) analysis set included all subjects who received at least 1 dose of bermekimab and had at least 1 valid blood sample drawn for PK analysis. Here, 'N' (number of subjects analysed) signifies number of subjects who were evaluable for this endpoint and 'n' (number analysed) signifies subjects who were evaluated at each specified timepoint.

End point type	Secondary

End point timeframe:

Weeks 0, 1, 4, 8, 12, 16, 20, 24, 28, 32, 36

End point values	Part 1: Bermekimab (Week 0-36)			
Subject group type	Subject analysis set			
Number of subjects analysed	50			
Units: micrograms per milliliter (mcg/mL)				
arithmetic mean (standard deviation)				
Week 0 (n=0)	0.0 (± 0.0)			
Week 1(n= 47)	51.36 (± 20.354)			
Week 4 (n= 36)	78.46 (± 43.897)			
Week 8 (n= 22)	73.14 (± 37.583)			
Week 12 (n= 22)	72.45 (± 39.185)			
Week 16 (n= 14)	61.81 (± 42.092)			
Week 20 (n= 12)	74.68 (± 59.300)			
Week 24 (n= 10)	89.75 (± 50.940)			
Week 28 (n= 7)	66.30 (± 66.30)			
Week 32 (n= 4)	34.53 (± 36.160)			
Week 36 (n= 4)	4.63 (± 7.576)			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Subjects with Antibodies to Bermekimab

End point title	Number of Subjects with Antibodies to Bermekimab

End point description:

Number of subjects with antibodies to bermekimab was reported. As per planned analysis, this outcome measure was analyzed in a single arm for participants who received bermekimab from Week 0 to Week 36. The immunogenicity analysis set included all subjects who received at least 1 dose of bermekimab and who had at least 1 sample obtained after their first dose of bermekimab for the detection of antibodies to bermekimab.

End point type	Secondary

End point timeframe:

From baseline up to Week 36

End point values	Part 1: Bermekimab (Week 0-36)			
Subject group type	Subject analysis set			
Number of subjects analysed	51			
Units: Subjects	16			

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Part 1: Placebo Controlled Period: From Week 0 to Week 16; Active Treatment + Safety Follow-up Period: Week 17 to Week 36

Adverse event reporting additional description:

The safety analysis set included all randomised subjects who received at least 1 dose of study intervention.

Assessment type	Non-systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	24.1

Reporting groups

Reporting group title	Part 1: Placebo (Week 0-16)

Reporting group description:

Subjects received placebo as subcutaneous Subjects received placebo as subcutaneous (SC) injection from Weeks 0 through Week 15 and then subjects received bermekimab 1050 milligrams (mg) as SC injection at Week 16 in Part 1.

Reporting group title	Part 1: Bermekimab (Week 0-16)

Reporting group description:

Subjects received bermekimab 1050 mg (3*350 mg) and 1 placebo as SC injection at Week 0 followed by bermekimab 1050 mg (3*350 mg) as SC injections at Week 1 and every week thereafter through Week 16 in Part 1.

Reporting group title	Part 1: Bermekimab (Week 17-36)

Reporting group description:

Subjects who received Bermekimab 1050 mg at Week 16 during placebo controlled period entered into active treatment + safety FU period and continued to receive bermekimab 1050 mg (3*350 mg) as SC injection every week thereafter through Week 31. All subjects were followed for safety through Week 36.

Reporting group title	Part 1: Placebo then Bermekimab (Week 17-36)

Reporting group description:

Subjects who received placebo during placebo controlled period and then received bermekimab 1050 mg (3*350 mg) at Week 16 entered into active treatment + safety follow up (FU) period and received 1050 mg as SC injection weekly through Week 31 in Part 1. All subjects were followed for safety through Week 36.

Reporting group title	Part 1: Adalimumab (Week 17-36)

Reporting group description:

Subjects who received adalimumab 40 mg as SC injection during placebo controlled period entered into active treatment + safety FU period and continued to receive adalimumab 40 mg as SC injection and 2 placebo SC injections weekly through Week 31 in Part 1. All subjects were followed for safety through Week 36.

Reporting group title	Part 1: Adalimumab (Week 0-16)

Reporting group description:

Subjects received adalimumab 160 mg (4*40 mg) as SC injection at Week 0 and 3 placebo SC injections at Week 1 followed by adalimumab 80 mg (2*40 mg) as SC injection at Week 2 and 3 placebo SC injections at Week 3. Subjects received adalimumab 40 mg (1*40 mg) SC injection and 2 placebo SC injections at Week 4 and every week thereafter through Week 16 in Part 1.

Serious adverse events	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Bermekimab (Week 17-36)
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 50 (2.00%)	1 / 51 (1.96%)	1 / 30 (3.33%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events			
Investigations			
Alanine Aminotransferase Increased			
subjects affected / exposed	1 / 50 (2.00%)	0 / 51 (0.00%)	0 / 30 (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
Injury, poisoning and procedural complications			
Toxicity to Various Agents			
subjects affected / exposed	0 / 50 (0.00%)	0 / 51 (0.00%)	0 / 30 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Vascular disorders			
Arterial Occlusive Disease			
subjects affected / exposed	0 / 50 (0.00%)	1 / 51 (1.96%)	0 / 30 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cardiac disorders			
Cardiac Failure Congestive			
subjects affected / exposed	0 / 50 (0.00%)	1 / 51 (1.96%)	0 / 30 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
General disorders and administration site conditions			
Chest Pain			
subjects affected / exposed	0 / 50 (0.00%)	0 / 51 (0.00%)	0 / 30 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory, thoracic and mediastinal disorders			
Pleural Effusion			
subjects affected / exposed	0 / 50 (0.00%)	0 / 51 (0.00%)	0 / 30 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Skin and subcutaneous tissue disorders			
Hidradenitis			
subjects affected / exposed	0 / 50 (0.00%)	0 / 51 (0.00%)	0 / 30 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Covid-19			
subjects affected / exposed	0 / 50 (0.00%)	0 / 51 (0.00%)	1 / 30 (3.33%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cellulitis			
subjects affected / exposed	0 / 50 (0.00%)	0 / 51 (0.00%)	0 / 30 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pneumonia Mycoplasmal			
subjects affected / exposed	0 / 50 (0.00%)	0 / 51 (0.00%)	0 / 30 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Skin Bacterial Infection			
subjects affected / exposed	0 / 50 (0.00%)	1 / 51 (1.96%)	0 / 30 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Serious adverse events	Part 1: Placebo then Bermekimab (Week 17-36)	Part 1: Adalimumab (Week 17-36)	Part 1: Adalimumab (Week 0-16)
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 28 (0.00%)	1 / 28 (3.57%)	4 / 50 (8.00%)
number of deaths (all causes)	0	0	1
number of deaths resulting from adverse events			
Investigations			
Alanine Aminotransferase Increased			
subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	0 / 50 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Injury, poisoning and procedural complications			

Toxicity to Various Agents			
subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	1 / 50 (2.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 1
Vascular disorders			
Arterial Occlusive Disease			
subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	0 / 50 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cardiac disorders			
Cardiac Failure Congestive			
subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	0 / 50 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
General disorders and administration site conditions			
Chest Pain			
subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	1 / 50 (2.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory, thoracic and mediastinal disorders			
Pleural Effusion			
subjects affected / exposed	0 / 28 (0.00%)	1 / 28 (3.57%)	0 / 50 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Skin and subcutaneous tissue disorders			
Hidradenitis			
subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	1 / 50 (2.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Covid-19			
subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	0 / 50 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cellulitis			

subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	1 / 50 (2.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pneumonia Mycoplasmal			
subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	1 / 50 (2.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Skin Bacterial Infection			
subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	0 / 50 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

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

Non-serious adverse events	Part 1: Placebo (Week 0-16)	Part 1: Bermekimab (Week 0-16)	Part 1: Bermekimab (Week 17-36)
Total subjects affected by non-serious adverse events			
subjects affected / exposed	21 / 50 (42.00%)	31 / 51 (60.78%)	12 / 30 (40.00%)
Investigations			
C-Reactive Protein Increased			
subjects affected / exposed	1 / 50 (2.00%)	3 / 51 (5.88%)	0 / 30 (0.00%)
occurrences (all)	1	3	0
Nervous system disorders			
Headache			
subjects affected / exposed	3 / 50 (6.00%)	6 / 51 (11.76%)	0 / 30 (0.00%)
occurrences (all)	3	9	0
General disorders and administration site conditions			
Fatigue			
subjects affected / exposed	2 / 50 (4.00%)	1 / 51 (1.96%)	0 / 30 (0.00%)
occurrences (all)	2	2	0
Injection Site Erythema			
subjects affected / exposed	0 / 50 (0.00%)	16 / 51 (31.37%)	1 / 30 (3.33%)
occurrences (all)	0	42	4
Injection Site Pruritus			
subjects affected / exposed	0 / 50 (0.00%)	9 / 51 (17.65%)	0 / 30 (0.00%)
occurrences (all)	0	16	0

Gastrointestinal disorders			
Nausea			
subjects affected / exposed	1 / 50 (2.00%)	5 / 51 (9.80%)	0 / 30 (0.00%)
occurrences (all)	3	8	0
Vomiting			
subjects affected / exposed	3 / 50 (6.00%)	0 / 51 (0.00%)	0 / 30 (0.00%)
occurrences (all)	4	0	0
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	1 / 50 (2.00%)	3 / 51 (5.88%)	0 / 30 (0.00%)
occurrences (all)	1	3	0
Oropharyngeal Pain			
subjects affected / exposed	1 / 50 (2.00%)	3 / 51 (5.88%)	0 / 30 (0.00%)
occurrences (all)	1	3	0
Skin and subcutaneous tissue disorders			
Hidradenitis			
subjects affected / exposed	6 / 50 (12.00%)	3 / 51 (5.88%)	4 / 30 (13.33%)
occurrences (all)	7	6	4
Infections and infestations			
Bacterial Vaginosis			
subjects affected / exposed	0 / 50 (0.00%)	1 / 51 (1.96%)	2 / 30 (6.67%)
occurrences (all)	0	2	2
Covid-19			
subjects affected / exposed	5 / 50 (10.00%)	4 / 51 (7.84%)	2 / 30 (6.67%)
occurrences (all)	5	4	2
Nasopharyngitis			
subjects affected / exposed	2 / 50 (4.00%)	4 / 51 (7.84%)	2 / 30 (6.67%)
occurrences (all)	2	4	2
Upper Respiratory Tract Infection			
subjects affected / exposed	2 / 50 (4.00%)	4 / 51 (7.84%)	3 / 30 (10.00%)
occurrences (all)	2	5	3

Non-serious adverse events	Part 1: Placebo then Bermekimab (Week 17-36)	Part 1: Adalimumab (Week 17-36)	Part 1: Adalimumab (Week 0-16)
Total subjects affected by non-serious adverse events			
subjects affected / exposed	12 / 28 (42.86%)	11 / 28 (39.29%)	22 / 50 (44.00%)
Investigations			

C-Reactive Protein Increased			
subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	1 / 50 (2.00%)
occurrences (all)	0	0	1
Nervous system disorders			
Headache			
subjects affected / exposed	1 / 28 (3.57%)	0 / 28 (0.00%)	6 / 50 (12.00%)
occurrences (all)	1	0	9
General disorders and administration site conditions			
Fatigue			
subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	3 / 50 (6.00%)
occurrences (all)	0	0	3
Injection Site Erythema			
subjects affected / exposed	5 / 28 (17.86%)	0 / 28 (0.00%)	3 / 50 (6.00%)
occurrences (all)	16	0	6
Injection Site Pruritus			
subjects affected / exposed	5 / 28 (17.86%)	0 / 28 (0.00%)	1 / 50 (2.00%)
occurrences (all)	21	0	1
Gastrointestinal disorders			
Nausea			
subjects affected / exposed	0 / 28 (0.00%)	1 / 28 (3.57%)	4 / 50 (8.00%)
occurrences (all)	0	20	5
Vomiting			
subjects affected / exposed	2 / 28 (7.14%)	1 / 28 (3.57%)	3 / 50 (6.00%)
occurrences (all)	2	1	3
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	1 / 28 (3.57%)	1 / 28 (3.57%)	0 / 50 (0.00%)
occurrences (all)	1	1	0
Oropharyngeal Pain			
subjects affected / exposed	0 / 28 (0.00%)	1 / 28 (3.57%)	0 / 50 (0.00%)
occurrences (all)	0	1	0
Skin and subcutaneous tissue disorders			
Hidradenitis			
subjects affected / exposed	0 / 28 (0.00%)	1 / 28 (3.57%)	1 / 50 (2.00%)
occurrences (all)	0	1	1
Infections and infestations			

Bacterial Vaginosis			
subjects affected / exposed	0 / 28 (0.00%)	0 / 28 (0.00%)	0 / 50 (0.00%)
occurrences (all)	0	0	0
Covid-19			
subjects affected / exposed	1 / 28 (3.57%)	4 / 28 (14.29%)	3 / 50 (6.00%)
occurrences (all)	1	4	3
Nasopharyngitis			
subjects affected / exposed	2 / 28 (7.14%)	3 / 28 (10.71%)	4 / 50 (8.00%)
occurrences (all)	2	3	4
Upper Respiratory Tract Infection			
subjects affected / exposed	1 / 28 (3.57%)	2 / 28 (7.14%)	3 / 50 (6.00%)
occurrences (all)	1	2	3

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
08 July 2021	The purpose of this amendment-1 was to update overall protocol to make the FibroTx Patch assessment optional due to the potential unavailability of the FibroTx Patch kits; removed Hidradenitis Suppurativa Investigator's Global Assessment from screening period; added electrocardiogram at Week 16; and updated inclusion/exclusion criteria.
12 August 2022	The purpose of this amendment-2 was to change the prospective dose regimens in Part 2 based on the emerging Phase 1 pharmacokinetic (PK) information on bermekimab as well as to test the every 2 weeks (q2w) regimen.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

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

Part 2 of this study was not conducted due to early termination as interim analysis 1 efficacy results met prespecified futility criteria related to primary endpoint. So, data for Part 2 and some secondary endpoint (Parts 1, 2) were not reported.

Notes: