Clinical trial results:
A three-part randomized, double-blind, placebo-controlled study to investigate the efficacy and safety of secukinumab treatment in Juvenile Idiopathic arthritis subtypes of psoriatic and enthesitis-related arthritis.

Summary

EudraCT number	2016-003761-26
Trial protocol	DE GB ES BE PL IT
Global end of trial date	09 November 2020

Results information

Result version number	v1 (current)
This version publication date	23 May 2021
First version publication date	23 May 2021

Trial information

Trial identification

Sponsor protocol code	CAIN457F2304

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT03031782
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Novartis Pharma AG
Sponsor organisation address	CH-4002, Basel, Switzerland,
Public contact	Clinical Disclosure Office, Novartis Pharma AG, 41 613241111, novartis.email@novartis.com
Scientific contact	Clinical Disclosure Office, Novartis Pharma AG, 41 613241111, novartis.email@novartis.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	Yes
EMA paediatric investigation plan number(s)	EMEA-000380-PIP02-09
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	12 March 2021
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	09 November 2020
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To demonstrate that the time to flare in TP2 is longer with secukinumab for combined ERA and JPsA groups than with placebo

Protection of trial subjects:

The study was in compliance with the ethical principles derived from the Declaration of Helsinki and the International Conference on Harmonization (ICH) Good Clinical Practice (GCP) guidelines. All the local regulatory requirements pertinent to safety of trial subjects were also followed during the conduct of the trial

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	23 May 2017
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	Belgium: 4
Country: Number of subjects enrolled	Germany: 16
Country: Number of subjects enrolled	United Kingdom: 8
Country: Number of subjects enrolled	Italy: 2
Country: Number of subjects enrolled	Poland: 4
Country: Number of subjects enrolled	Russian Federation: 18
Country: Number of subjects enrolled	South Africa: 5
Country: Number of subjects enrolled	Spain: 6
Country: Number of subjects enrolled	Turkey: 17
Country: Number of subjects enrolled	United States: 6
Worldwide total number of subjects	86
EEA total number of subjects	32

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)	25
Adolescents (12-17 years)	61
Adults (18-64 years)	0
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

86 subjects entered TP1

Pre-assignment

Screening details:

AIN457 treatment group was all subjects who did not take any placebo before or during the period. Placebo in TP2 refers to all subjects who took placebo in TP2 and secukinumab in other periods. For ease of reading,

Period 1

Period 1 title	Treatment Period 1
Is this the baseline period?	Yes
Allocation method	Not applicable
Blinding used	Not blinded

Blinding implementation details:

Open-label: 86 subjects were enrolled in TP1 and 83 subjects (96.5%) of them completed TP1. The reason for discontinuing during TP1 was lack of efficacy (3 subjects). Eight (8) subjects who were JIA ACR 30 non-responders at the end of TP1, hence were discontinued and had their early termination visit. 75 JIA ACR 30 responders in TP1 were randomized to secukinumab (37 subjects) or placebo (38 subjects).

Arms

Arm title	AIN457 TP1

Arm description:

secukinumab in all 3 periods

Arm type	Experimental
Investigational medicinal product name	secukinumab
Investigational medicinal product code	AIN457
Other name	Open-label
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Secukinumab 75 mg or 150 mg subcutaneous injection

Number of subjects in period 1	AIN457 TP1
Started	86
Completed	83
Not completed	3
Lack of efficacy	3

Period 2

Period 2 title	Treatment Period 2
Is this the baseline period?	No
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Monitor, Data analyst, Carer, Assessor

Blinding implementation details:

Of these 75, 67 (89.3%) completed TP2, and 8 discontinued during TP2 (6 subjects [16.2%] in the secukinumab, and 2 [5.3%] in placebo group). Of the 6 who discontinued, 3 discontinued due to subject/guardian decision, and 1 each discontinued due to AE, lack of efficacy and physician decision. Both subjects in placebo group who discontinued during TP2, discontinued due to AEs. Subjects without disease flare remained in TP2 for duration of study and completed without entering TP3 (35 subjects).

Arms

Are arms mutually exclusive?	No
Arm title	AIN457 TP2

Arm description:

secukinumab in all 3 periods

Arm type	Experimental
Investigational medicinal product name	secukinumab
Investigational medicinal product code	AIN457
Other name	
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Secukinumab 75 mg or 150 mg subcutaneous injection

Arm title	Placebo TP2

Arm description:

Placebo for treatment period 2

Arm type	Placebo
Investigational medicinal product name	Placebo TP2
Investigational medicinal product code	Placebo
Other name	
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

75 mg or 150 mg subcutaneous injection

Number of subjects in period 2	AIN457 TP2	Placebo TP2
Started	37	38
Completed	31	36
Not completed	6	2
Physician decision	1	-
Consent withdrawn by subject	3	-
Adverse event, non-fatal	1	2
Lack of efficacy	1	-

Period 3

Period 3 title	Treatment Period 3
Is this the baseline period?	No
Allocation method	Not applicable
Blinding used	Not blinded

Blinding implementation details:

Open-label: 32 subjects entered TP3. Of these, 26 completed TP3 and 6 discontinued prior to week 104. 3 discontinued TP3 due to AEs. The 32 subjects who entered TP3 included 2 who were erroneously switched into TP3 but had no flare at TP2. These 2 were considered as not having flared for efficacy analysis. 1 subject flared on Day 127 at TP2 discontinuation visit; and was discontinued due to SAE and did not enter TP3. Subject was considered as having flared for efficacy analysis for time to flare

Arms

Arm title	AIN457 TP3

Arm description:

secukinumab in all 3 periods

Arm type	Experimental
Investigational medicinal product name	secukinumab
Investigational medicinal product code	AIN457
Other name	
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Secukinumab 75 mg or 150 mg subcutaneous injection

Number of subjects in period 3	AIN457 TP3
Started	11
Completed	10
Not completed	1
Consent withdrawn by subject	1

Baseline characteristics

Reporting groups	
Reporting group title	AIN457 TP1
Reporting group description: secukinumab in all 3 periods	

Reporting group values	AIN457 TP1	Total	
Number of subjects	86	86	
Age Categorical Units: participants			
<=18 years	86	86	
Between 18 and 65 years	0	0	
>=65 years	0	0	
Age Continuous			
Mean age of participants in years ERA + JPsA = Total			
Units: years			
arithmetic mean	13.1		
standard deviation	± 3.13	-	
Sex: Female, Male			
ERA + JPsA = Total			
Units:			
JIA Category: ERA|Female	11	11	
JIA Category: JPsA|Female	18	18	
JIA Category: ERA|Male	41	41	
JIA Category: JPsA|Male	16	16	
Race (NIH/OMB)			
ERA + JPsA = Total Unknown or Not Reported Row also means "Other" (none of the above)			
Units: Subjects			
JIA Category: ERA|American Indian/Alaska Native	0	0	
JIA Category: JPsA|American Indian/Alaska Native	0	0	
JIA Category: ERA|Asian	0	0	
JIA Category: JPsA|Asian	1	1	
JIA Category: ERA|Hawaiian/Pacific Islander	0	0	
JIA Category: JPsA|Hawaiian/Pacific Islander	0	0	
JIA Category: ERA|Black or African American	0	0	
JIA Category: JPsA|Black or African American	0	0	
JIA Category: ERA|White	51	51	
JIA Category: JPsA|White	31	31	
JIA Category: ERA|More than one race	0	0	
JIA Category: JPsA|More than one race	0	0	
JIA Category: ERA|Unknown or Not Reported	1	1	

JIA Category: JPsA|Unknown or Not Reported	2	2	

Age Continuous			
Mean age of participants in years ERA + JPsA = Total			
Units: years			
arithmetic mean	13.1		
standard deviation	± 3.13	-	

Subject analysis sets

Subject analysis set title	AIN457 in TP1
Subject analysis set type	Full analysis

Subject analysis set description:

to week 12
TP1 open-label: Secukinumab 75 mg or 150 mg based on the body weight (<50 kg or >= 50 kg) was administered s.c. At Week 12 (end of TP1), subject's response to study drug was determined (responders entered TP2 and non-responders entered post-treatment follow-up)

Subject analysis set title	AIN457 in TP2
Subject analysis set type	Full analysis

Subject analysis set description:

TP2 treatment withdrawal: Secukinumab (AIN457 - pre-filled syringe) for patients with a minimum American college of Rheumatology (ACR) 30 response at end of Treatment Period 1

Subject analysis set title	Placebo in TP2
Subject analysis set type	Full analysis

Subject analysis set description:

Placebo s.c. in double-blind Treatment Period 2: all subjects who took placebo in TP2 and AIN457 in other period/s with minimum ACR30 at end of TP1

Reporting group values	AIN457 in TP1	AIN457 in TP2	Placebo in TP2
Number of subjects	86	37	38
Age Categorical Units: participants			
<=18 years	86	37	38
Between 18 and 65 years	0	0	0
>=65 years	0	0	0
Age Continuous			
Mean age of participants in years ERA + JPsA = Total			
Units: years			
arithmetic mean	13.7	14.0	13.0
standard deviation	± 2.62	± 2.46	± 2.94
Sex: Female, Male			
ERA + JPsA = Total			
Units:			
JIA Category: ERA|Female	11	4	4
JIA Category: JPsA|Female	18	9	7
JIA Category: ERA|Male	41	18	18
JIA Category: JPsA|Male	16	6	9
Race (NIH/OMB)			
ERA + JPsA = Total Unknown or Not Reported Row also means "Other" (none of the above)			
Units: Subjects			

JIA Category: ERA|American Indian/Alaska Native	0	0	0
JIA Category: JPsA|American Indian/Alaska Native	0	0	0
JIA Category: ERA|Asian	0	0	0
JIA Category: JPsA|Asian	1	0	1
JIA Category: ERA|Hawaiian/Pacific Islander	0	0	0
JIA Category: JPsA|Hawaiian/Pacific Islander	0	0	0
JIA Category: ERA|Black or African American	0	0	0
JIA Category: JPsA|Black or African American	0	0	0
JIA Category: ERA|White	51	22	21
JIA Category: JPsA|White	31	14	14
JIA Category: ERA|More than one race	0	0	0
JIA Category: JPsA|More than one race	0	0	0
JIA Category: ERA|Unknown or Not Reported	1	0	1
JIA Category: JPsA|Unknown or Not Reported	2	1	1
Age Continuous			
Mean age of participants in years ERA + JPsA = Total			
Units: years			
arithmetic mean	12.2	13.1	10.6
standard deviation	± 3.66	± 3.14	± 3.70

End points

End points reporting groups

Reporting group title	AIN457 TP1
Reporting group description: secukinumab in all 3 periods	
Reporting group title	AIN457 TP2
Reporting group description: secukinumab in all 3 periods	
Reporting group title	Placebo TP2
Reporting group description: Placebo for treatment period 2	
Reporting group title	AIN457 TP3
Reporting group description: secukinumab in all 3 periods	
Subject analysis set title	AIN457 in TP1
Subject analysis set type	Full analysis
Subject analysis set description: to week 12 TP1 open-label: Secukinumab 75 mg or 150 mg based on the body weight (<50 kg or >= 50 kg) was administered s.c. At Week 12 (end of TP1), subject's response to study drug was determined (responders entered TP2 and non-responders entered post-treatment follow-up)	
Subject analysis set title	AIN457 in TP2
Subject analysis set type	Full analysis
Subject analysis set description: TP2 treatment withdrawal: Secukinumab (AIN457 - pre-filled syringe) for patients with a minimum American college of Rheumatology (ACR) 30 response at end of Treatment Period 1	
Subject analysis set title	Placebo in TP2
Subject analysis set type	Full analysis
Subject analysis set description: Placebo s.c. in double-blind Treatment Period 2: all subjects who took placebo in TP2 and AIN457 in other period/s with minimum ACR30 at end of TP1	

Primary: Number of flares per participant in Treatment Period 2 - total

End point title	Number of flares per participant in Treatment Period 2 - total
End point description: Survival analysis of time to flare in treatment period 2 (TP2) FAS2 ERA + JPsA = total	
End point type	Primary
End point timeframe: From Week 12 until max Week 104	

End point values	AIN457 in TP2	Placebo in TP2		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	37	38		
Units: days				
number (not applicable)	0.27	0.55		

Statistical analyses

Statistical analysis title	Flares per participant in TP2
Statistical analysis description: Survival analysis of time to flare – TP2 (FAS2)	
Comparison groups	AIN457 in TP2 v Placebo in TP2
Number of subjects included in analysis	75
Analysis specification	Pre-specified
Analysis type	
P-value	< 0.001
Method	Logrank
Parameter estimate	Cox proportional hazard
Point estimate	0.28
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.13
upper limit	0.63

Secondary: Percent of participants with Juvenile idiopathic arthritis (JIA) American college of rheumatology (ACR) 30/50/70/90/100 response at week 12 - by JIA category

End point title	Percent of participants with Juvenile idiopathic arthritis (JIA) American college of rheumatology (ACR) 30/50/70/90/100 response at week 12 - by JIA category

End point description:

Summary of JIA ACR 30/50/70/90/100 for all subjects and each JIA category – TP1 (FAS1)

The adapted ACR Pediatric 30/50/70/90/100 criteria was used to determine efficacy defined as improvement from baseline of at least 30/50/70/90/100% respectively in at least 3 of the following 6 components
- Physician's Global Assessment of disease activity on a 0-100 mm VAS from 0 mm = no disease activity to 100 mm = very severe disease activity.
- Parent's or patient's Global Assessment of Subject's overall wellbeing on a 0-100 mm VAS from 0 mm= very well to 100 mm= very poor.
- Functional ability: Childhood Health Assessment Questionnaire (CHAQ©)
- Number of joints with active arthritis using the ACR definition (The ACR definition of active arthritis is any joint with swelling, or in the absence of swelling, limitation of motion accompanied by either pain on motion or tenderness not due to deformity)
- Number of joints with limitation of motion
- Laboratory measure of inflammation: CRP (mg/L)

End point type	Secondary

End point timeframe:

baseline, week 12

End point values	AIN457 TP1	AIN457 in TP1		
Subject group type	Reporting group	Subject analysis set		
Number of subjects analysed	86[1]	86		
Units: percent of participants				
number (confidence interval 95%)				
ACR 30 ERA	86.3 (73.1 to 93.8)	86.3 (73.1 to 93.8)		
ACR 50 ERA	80.4 (66.5 to 89.7)	80.4 (66.5 to 89.7)		
ACR 70 ERA	66.7 (52.0 to 78.9)	66.7 (52.0 to 78.9)		
ACR 90 ERA	33.3 (21.1 to 48.0)	33.3 (21.1 to 48.0)		
ACR 100 ERA	27.5 (16.3 to 42.0)	27.5 (16.3 to 42.0)		
ACR 30 JPsA	96.9 (82.0 to 99.8)	96.9 (82.0 to 99.8)		
ACR 50 JPsA	96.9 (82.0 to 99.8)	96.9 (82.0 to 99.8)		
ACR 70 JPsA	75.0 (56.2 to 87.9)	75.0 (56.2 to 87.9)		
ACR 90 JPsA	50.0 (32.2 to 67.8)	50.0 (32.2 to 67.8)		
ACR 100 JPsA	21.9 (9.9 to 40.4)	21.9 (9.9 to 40.4)		

Notes:

[1] - ERA + JPsA=Total, 52+34=86

Statistical analyses

No statistical analyses for this end point

Secondary: Percent of Participants with Juvenile idiopathic arthritis (JIA) American college of rheumatology (ACR) 30/50/70/90/100 response at week 12 - total

End point title	Percent of Participants with Juvenile idiopathic arthritis (JIA) American college of rheumatology (ACR) 30/50/70/90/100 response at week 12 - total

End point description:

Summary of JIA ACR 30/50/70/90/100 for all subjects – TP1 (FAS1)

The adapted ACR Pediatric 30/50/70/90/100 criteria was used to determine efficacy defined as improvement from baseline of at least 30/50/70/90/100% respectively in at least 3 of the following 6 components
- Physician's Global Assessment of disease activity on a 0-100 mm VAS from 0 mm = no disease activity to 100 mm = very severe disease activity.
- Parent's or patient's Global Assessment of Subject's overall wellbeing on a 0-100 mm VAS from 0 mm= very well to 100 mm= very poor.
- Functional ability: Childhood Health Assessment Questionnaire (CHAQ©)
- Number of joints with active arthritis using the ACR definition (The ACR definition of active arthritis is any joint with swelling, or in the absence of swelling, limitation of
motion accompanied by either pain on motion or tenderness not due to deformity)
- Number of joints with limitation of motion
- Laboratory measure of inflammation: CRP (mg/L)

End point type	Secondary

End point timeframe:

baseline, week 12

End point values	AIN457 TP1	AIN457 in TP1		
Subject group type	Reporting group	Subject analysis set		
Number of subjects analysed	86	86		
Units: percent of participants				
number (confidence interval 95%)				
ACR 30	90.4 (81.4 to 95.4)	90.4 (81.4 to 95.4)		
ACR 50	86.7 (77.1 to 92.9)	86.7 (77.1 to 92.9)		
ACR 70	69.9 (58.7 to 79.2)	69.9 (58.7 to 79.2)		
ACR 90	39.8 (29.4 to 51.1)	39.8 (29.4 to 51.1)		
ACR 100	25.3 (16.7 to 36.2)	25.3 (16.7 to 36.2)		

Statistical analyses

No statistical analyses for this end point

Secondary: Percent Change from baseline for JIA ACR core components in TP1

End point title	Percent Change from baseline for JIA ACR core components in TP1

End point description:

Summary of JIA ACR core components for all subjects and each JIA category – Treatment period 1

Negative percent change indicates improvement

Physician global assessment of disease activity (VAS mm) 0 (no disease activity) - 100 (very severe); Parent or subject global assessment of overall well-being (VAS mm) 0 (very well) - 100 (very poor); CHAQ (Childhood Health Assessment Questionnaire)
0 - 3 (most severe); Number of joints with active arthritis 0 - 73; Number of joints with limited range of motion 0 - 69.

End point type	Secondary

End point timeframe:

baseline, week 12

End point values	AIN457 in TP1			
Subject group type	Subject analysis set			
Number of subjects analysed	86			
Units: percent change				
arithmetic mean (standard deviation)				
physician global assessment of disease activity	-77.4 (± 22.67)			
parent/subject global assessment of well-being	-53.1 (± 58.43)			

functional ability (CHAQ)	-53.776 (± 70.5034)			
number of joints with active arthritis	-79.3 (± 34.86)			
number of joints with limited range of motion	-72.5 (± 38.19)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percent Change in C-reactive protein standardized value (mg/L)

End point title	Percent Change in C-reactive protein standardized value (mg/L)

End point description:

Median Percent Change from baseline for C-reactive protein standardized value (mg/L)

End point type	Secondary

End point timeframe:

baseline, week 12

End point values	AIN457 in TP1			
Subject group type	Subject analysis set			
Number of subjects analysed	82			
Units: percent change				
median (standard deviation)	-13.587 (± 227.6901)			

Statistical analyses

No statistical analyses for this end point

Secondary: Change from baseline Juvenile Arthritis Disease Activity Score (JADAS) score

End point title	Change from baseline Juvenile Arthritis Disease Activity Score (JADAS) score

End point description:

JADAS change from baseline for all subjects in Treatment period 1. JADAS-27 (Juvenile Arthritis Disease Activity Score in 27 joints) ranges from 0 to 57 and JADAS-71 ranges from 0 to 101 (higher scores indicate more disease activity).

End point type	Secondary

End point timeframe:

12 weeks

End point values	AIN457 in TP1			
Subject group type	Subject analysis set			
Number of subjects analysed	86			
Units: score				
arithmetic mean (standard deviation)				
JADAS-27	-10.487 (± 7.2262)			
JADAS-71	-13.403 (± 9.7300)			

Statistical analyses

No statistical analyses for this end point

Secondary: Change from baseline in total enthesitis count - TP1 (FAS1)

End point title	Change from baseline in total enthesitis count - TP1 (FAS1)

End point description:

Enthesitis swollen joint count range is 0-16. Zero is worst, and 16 is best

A total of 16 entheseal sites were assessed for the presence or absence of tenderness of enthesitis.
This is the mean (SD) enthesitis count (range 0-16) for FAS subjects
A zero score for wither would mean they have no enthesitis, so a zero score is better for the patient

End point type	Secondary

End point timeframe:

Baseline and week 12

End point values	AIN457 in TP1			
Subject group type	Subject analysis set			
Number of subjects analysed	83			
Units: enthesitis count				
arithmetic mean (standard deviation)	-1.8 (± 2.31)			

Statistical analyses

No statistical analyses for this end point

Secondary: Change from baseline in total dactylitis count

End point title	Change from baseline in total dactylitis count

End point description:

Summary of total dactylitis count for all subjects and each JIA category – TP1 (FAS1)

Total dactylitis count ranges from 0 to 20. A zero score would mean they have no dactylitis, so a zero score is better for the patient

Mean (SD) total dactylitis count of the number of fingers and toes

End point type	Secondary

End point timeframe:
baseline, week 12

End point values	AIN457 in TP1			
Subject group type	Subject analysis set			
Number of subjects analysed	78			
Units: dactylitis count				
arithmetic mean (standard deviation)	-0.8 (± 1.83)			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of participants with anti-secukinumab anitbodies

End point title	Number of participants with anti-secukinumab anitbodies

End point description:

Blood samples for immunogenicity (anti-AIN457 antibodies) were taken pre-dose at the scheduled time points. In addition, if a subject discontinued from the study at any time, he/she provided a sample at the last visit. All blood samples were taken by either direct venipuncture or an indwelling cannula inserted in a forearm vein. An Electrochemiluminescence method was used for the detection of potential anti-secukinumab antibody formation.

No treatment emergent anti-drug antibodies (ADA) were detected in any sample of subjects of the secukinumab treatment groups. One subject was ADA-positive at Baseline only and negative during treatment.

End point type	Secondary

End point timeframe:
104 weeks

End point values	AIN457 in TP1			
Subject group type	Subject analysis set			
Number of subjects analysed	86			
Units: participants	0			

Statistical analyses

No statistical analyses for this end point

Secondary: Secukinumab serum concentration

End point title	Secukinumab serum concentration

End point description:

Summary of pharmacokinetic concentrations – Treatment period 1

End point type	Secondary

End point timeframe:
baseline, week 12

End point values	AIN457 in TP1			
Subject group type	Subject analysis set			
Number of subjects analysed	86			
Units: mcg/mL				
arithmetic mean (standard deviation)				
<50 kg >=50 kg	30.9 (± 12.9) 34.6 (± 11.2)			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of participants with inactive disease status for all subjects – TP1 (FAS1)

End point title	Number of participants with inactive disease status for all subjects – TP1 (FAS1)

End point description:
Summary of inactive disease status for all subjects – TP1 (FAS1)

Clinical inactive disease definition was adapted from the JIA ACR criteria.
All were required to be met:

- No joints with active arthritis

- No uveitis

- CRP value within normal limits for the laboratory where tested or, if elevated, not attributable to JIA

- Physician’s global assessment of disease activity score ≤ 10mm

- Duration of morning stiffness attributable to JIA ≤15 min

End point type	Secondary

End point timeframe:
week 12

End point values	AIN457 in TP1			
Subject group type	Subject analysis set			
Number of subjects analysed	83			
Units: partcipants				
number (confidence interval 95%)	30 (26.1 to 47.5)			

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events:	
Adverse events (AEs) were collected from first dose of study treatment until end of study treatment plus 12 weeks post treatment, up to maximum duration of 116 weeks.	
Adverse event reporting additional description:	
AEs are any untoward sign or symptom that occurred during the study treatment period	
Assessment type	Systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	23.1

Reporting groups	
Reporting group title	AIN457
Reporting group description:	
AIN457	
Reporting group title	Placebo in TP2
Reporting group description:	
Placebo in TP2	
Reporting group title	Total
Reporting group description:	
Total	

Serious adverse events	AIN457	Placebo in TP2	Total
Total subjects affected by serious adverse events			
subjects affected / exposed	7 / 48 (14.58%)	4 / 38 (10.53%)	11 / 86 (12.79%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events	0	0	0
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Cholesteatoma			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Injury, poisoning and procedural complications			
Abdominal injury			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastrointestinal disorders			
Crohn's disease			

subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	1 / 1	0 / 0	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Food poisoning			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory, thoracic and mediastinal disorders			
Adenoidal hypertrophy			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Musculoskeletal and connective tissue disorders			
Juvenile psoriatic arthritis			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	0 / 0	1 / 1	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Acute sinusitis			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Appendicitis			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Folliculitis			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pilonidal cyst			

subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pneumonia			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Postoperative wound infection			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Tonsillitis			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Frequency threshold for reporting non-serious adverse events: 2 %

Non-serious adverse events	AIN457	Placebo in TP2	Total
Total subjects affected by non-serious adverse events			
subjects affected / exposed	44 / 48 (91.67%)	35 / 38 (92.11%)	79 / 86 (91.86%)
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Papilloma			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Skin papilloma			
subjects affected / exposed	3 / 48 (6.25%)	0 / 38 (0.00%)	3 / 86 (3.49%)
occurrences (all)	3	0	3
Vascular disorders			
Cyanosis			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Hot flush			

subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
General disorders and administration site conditions			
Administration site reaction			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	2	2
Fatigue			
subjects affected / exposed	1 / 48 (2.08%)	2 / 38 (5.26%)	3 / 86 (3.49%)
occurrences (all)	2	2	4
Feeling hot			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Injection site erythema			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Injection site pain			
subjects affected / exposed	2 / 48 (4.17%)	1 / 38 (2.63%)	3 / 86 (3.49%)
occurrences (all)	23	1	24
Injection site pruritus			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Injection site reaction			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Medical device pain			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Non-cardiac chest pain			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Pain			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Peripheral swelling			

subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	2	1	3
Pyrexia			
subjects affected / exposed	6 / 48 (12.50%)	6 / 38 (15.79%)	12 / 86 (13.95%)
occurrences (all)	10	10	20
Immune system disorders			
Mite allergy			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Seasonal allergy			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Social circumstances			
Sexual abuse			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Reproductive system and breast disorders			
Dysmenorrhoea			
subjects affected / exposed	0 / 48 (0.00%)	2 / 38 (5.26%)	2 / 86 (2.33%)
occurrences (all)	0	2	2
Gynaecomastia			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Menstruation irregular			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Scrotal pain			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Testicular pain			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	3	0	3
Varicocele			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Respiratory, thoracic and mediastinal disorders			

Asthma			
subjects affected / exposed	2 / 48 (4.17%)	0 / 38 (0.00%)	2 / 86 (2.33%)
occurrences (all)	2	0	2
Cough			
subjects affected / exposed	8 / 48 (16.67%)	5 / 38 (13.16%)	13 / 86 (15.12%)
occurrences (all)	10	6	16
Dyspnoea			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	2	4	6
Epistaxis			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Haemoptysis			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Oropharyngeal pain			
subjects affected / exposed	7 / 48 (14.58%)	5 / 38 (13.16%)	12 / 86 (13.95%)
occurrences (all)	11	13	24
Pharyngeal erythema			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Productive cough			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Respiratory disorder			
subjects affected / exposed	2 / 48 (4.17%)	1 / 38 (2.63%)	3 / 86 (3.49%)
occurrences (all)	2	1	3
Rhinitis allergic			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Rhinorrhoea			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	3	4
Psychiatric disorders			
Anxiety			

subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Depressed mood			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Distractibility			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Euphoric mood			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Intentional self-injury			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	2	2
Mental disorder			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Post-traumatic stress disorder			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Investigations			
Alanine aminotransferase increased			
subjects affected / exposed	4 / 48 (8.33%)	0 / 38 (0.00%)	4 / 86 (4.65%)
occurrences (all)	4	0	4
Aspartate aminotransferase increased			
subjects affected / exposed	3 / 48 (6.25%)	1 / 38 (2.63%)	4 / 86 (4.65%)
occurrences (all)	3	1	4
Blood alkaline phosphatase increased			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Blood calcium increased			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Blood creatinine increased			

subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Blood glucose increased			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Blood phosphorus increased			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Blood pressure systolic increased			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Blood triglycerides increased			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Blood uric acid increased			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Body temperature increased			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
C-reactive protein increased			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	2	2
Eosinophil count increased			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Hepatic enzyme increased			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Liver function test increased			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Lymphocyte count decreased			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Neutrophil count decreased			

subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Platelet count increased			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Transaminases increased			
subjects affected / exposed	1 / 48 (2.08%)	2 / 38 (5.26%)	3 / 86 (3.49%)
occurrences (all)	1	2	3
Weight increased			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
White blood cell count decreased			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	2	0	2
White blood cells urine positive			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Injury, poisoning and procedural complications			
Arthropod bite			
subjects affected / exposed	2 / 48 (4.17%)	2 / 38 (5.26%)	4 / 86 (4.65%)
occurrences (all)	2	2	4
Concussion			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Contusion			
subjects affected / exposed	2 / 48 (4.17%)	4 / 38 (10.53%)	6 / 86 (6.98%)
occurrences (all)	3	5	8
Fall			
subjects affected / exposed	0 / 48 (0.00%)	2 / 38 (5.26%)	2 / 86 (2.33%)
occurrences (all)	0	3	3
Foot fracture			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Gingival injury			

subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Hand fracture			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Injection related reaction			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Joint injury			
subjects affected / exposed	1 / 48 (2.08%)	4 / 38 (10.53%)	5 / 86 (5.81%)
occurrences (all)	1	5	6
Ligament rupture			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Ligament sprain			
subjects affected / exposed	3 / 48 (6.25%)	3 / 38 (7.89%)	6 / 86 (6.98%)
occurrences (all)	5	3	8
Muscle strain			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Overdose			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Radius fracture			
subjects affected / exposed	0 / 48 (0.00%)	3 / 38 (7.89%)	3 / 86 (3.49%)
occurrences (all)	0	4	4
Road traffic accident			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Skin abrasion			
subjects affected / exposed	2 / 48 (4.17%)	1 / 38 (2.63%)	3 / 86 (3.49%)
occurrences (all)	3	1	4
Skin laceration			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Sunburn			

subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Tendon injury			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Thermal burn			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Venomous sting			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Congenital, familial and genetic disorders			
Gilbert's syndrome			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Hydrocele			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Cardiac disorders			
Sinus bradycardia			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Tachycardia			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Ventricular extrasystoles			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Nervous system disorders			
Dizziness			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Epilepsy			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Headache			

subjects affected / exposed	6 / 48 (12.50%)	6 / 38 (15.79%)	12 / 86 (13.95%)
occurrences (all)	12	7	19
Nerve compression			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Tremor			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Visual field defect			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	2	2
Blood and lymphatic system disorders			
Anaemia			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Iron deficiency anaemia			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	2	3
Leukopenia			
subjects affected / exposed	0 / 48 (0.00%)	2 / 38 (5.26%)	2 / 86 (2.33%)
occurrences (all)	0	2	2
Lymph node pain			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	2	2
Lymphopenia			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	3	3
Neutropenia			
subjects affected / exposed	2 / 48 (4.17%)	2 / 38 (5.26%)	4 / 86 (4.65%)
occurrences (all)	2	2	4
Splenomegaly			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Ear and labyrinth disorders			
Ear disorder			

subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Ear pain			
subjects affected / exposed	1 / 48 (2.08%)	2 / 38 (5.26%)	3 / 86 (3.49%)
occurrences (all)	2	2	4
Vertigo			
subjects affected / exposed	2 / 48 (4.17%)	1 / 38 (2.63%)	3 / 86 (3.49%)
occurrences (all)	3	4	7
Eye disorders			
Conjunctivitis allergic			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Eye haematoma			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Eye pain			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Myopia			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Ocular hyperaemia			
subjects affected / exposed	2 / 48 (4.17%)	0 / 38 (0.00%)	2 / 86 (2.33%)
occurrences (all)	2	0	2
Uveitis			
subjects affected / exposed	2 / 48 (4.17%)	0 / 38 (0.00%)	2 / 86 (2.33%)
occurrences (all)	3	0	3
Gastrointestinal disorders			
Abdominal distension			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Abdominal pain			
subjects affected / exposed	2 / 48 (4.17%)	6 / 38 (15.79%)	8 / 86 (9.30%)
occurrences (all)	2	8	10
Abdominal pain upper			

subjects affected / exposed	3 / 48 (6.25%)	2 / 38 (5.26%)	5 / 86 (5.81%)
occurrences (all)	4	6	10
Aphthous ulcer			
subjects affected / exposed	4 / 48 (8.33%)	1 / 38 (2.63%)	5 / 86 (5.81%)
occurrences (all)	5	1	6
Constipation			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Diarrhoea			
subjects affected / exposed	11 / 48 (22.92%)	6 / 38 (15.79%)	17 / 86 (19.77%)
occurrences (all)	14	12	26
Dyspepsia			
subjects affected / exposed	2 / 48 (4.17%)	2 / 38 (5.26%)	4 / 86 (4.65%)
occurrences (all)	2	2	4
Dysphagia			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Functional gastrointestinal disorder			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Gastritis			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Gastrooesophageal reflux disease			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Lip disorder			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Malpositioned teeth			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Mouth ulceration			
subjects affected / exposed	2 / 48 (4.17%)	0 / 38 (0.00%)	2 / 86 (2.33%)
occurrences (all)	3	0	3
Nausea			

subjects affected / exposed	11 / 48 (22.92%)	8 / 38 (21.05%)	19 / 86 (22.09%)
occurrences (all)	17	16	33
Noninfective gingivitis			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Odynophagia			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Oral mucosal blistering			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Salivary hypersecretion			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Toothache			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Vomiting			
subjects affected / exposed	5 / 48 (10.42%)	4 / 38 (10.53%)	9 / 86 (10.47%)
occurrences (all)	9	12	21
Hepatobiliary disorders			
Nonalcoholic fatty liver disease			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Skin and subcutaneous tissue disorders			
Acne			
subjects affected / exposed	1 / 48 (2.08%)	5 / 38 (13.16%)	6 / 86 (6.98%)
occurrences (all)	1	5	6
Alopecia			
subjects affected / exposed	1 / 48 (2.08%)	2 / 38 (5.26%)	3 / 86 (3.49%)
occurrences (all)	1	2	3
Blister			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Dermatitis			

subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Dermatitis contact			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	2	1	3
Diffuse alopecia			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Dry skin			
subjects affected / exposed	2 / 48 (4.17%)	0 / 38 (0.00%)	2 / 86 (2.33%)
occurrences (all)	2	0	2
Dyshidrotic eczema			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Eczema			
subjects affected / exposed	2 / 48 (4.17%)	1 / 38 (2.63%)	3 / 86 (3.49%)
occurrences (all)	2	1	3
Erythema			
subjects affected / exposed	0 / 48 (0.00%)	2 / 38 (5.26%)	2 / 86 (2.33%)
occurrences (all)	0	3	3
Exfoliative rash			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Hyperhidrosis			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Ingrowing nail			
subjects affected / exposed	0 / 48 (0.00%)	2 / 38 (5.26%)	2 / 86 (2.33%)
occurrences (all)	0	2	2
Pruritus			
subjects affected / exposed	2 / 48 (4.17%)	2 / 38 (5.26%)	4 / 86 (4.65%)
occurrences (all)	3	2	5
Psoriasis			
subjects affected / exposed	0 / 48 (0.00%)	4 / 38 (10.53%)	4 / 86 (4.65%)
occurrences (all)	0	4	4
Rash			

subjects affected / exposed	2 / 48 (4.17%)	2 / 38 (5.26%)	4 / 86 (4.65%)
occurrences (all)	2	4	6
Skin erosion			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Skin plaque			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Skin striae			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Urticaria			
subjects affected / exposed	1 / 48 (2.08%)	2 / 38 (5.26%)	3 / 86 (3.49%)
occurrences (all)	1	3	4
Renal and urinary disorders			
Haematuria			
subjects affected / exposed	3 / 48 (6.25%)	0 / 38 (0.00%)	3 / 86 (3.49%)
occurrences (all)	5	0	5
Proteinuria			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Renal colic			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	8 / 48 (16.67%)	4 / 38 (10.53%)	12 / 86 (13.95%)
occurrences (all)	17	7	24
Arthritis			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Back pain			
subjects affected / exposed	4 / 48 (8.33%)	3 / 38 (7.89%)	7 / 86 (8.14%)
occurrences (all)	8	3	11
Enthesopathy			

subjects affected / exposed	0 / 48 (0.00%)	2 / 38 (5.26%)	2 / 86 (2.33%)
occurrences (all)	0	2	2
Groin pain			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Intervertebral disc disorder			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Jaw disorder			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Joint effusion			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Joint stiffness			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Joint swelling			
subjects affected / exposed	2 / 48 (4.17%)	0 / 38 (0.00%)	2 / 86 (2.33%)
occurrences (all)	2	0	2
Juvenile psoriatic arthritis			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Muscle contracture			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Muscle spasms			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Musculoskeletal chest pain			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Musculoskeletal pain			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Musculoskeletal stiffness			

subjects affected / exposed	2 / 48 (4.17%)	1 / 38 (2.63%)	3 / 86 (3.49%)
occurrences (all)	2	3	5
Myalgia			
subjects affected / exposed	0 / 48 (0.00%)	2 / 38 (5.26%)	2 / 86 (2.33%)
occurrences (all)	0	2	2
Neck pain			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	2	2
Osteochondrosis			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Pain in extremity			
subjects affected / exposed	2 / 48 (4.17%)	4 / 38 (10.53%)	6 / 86 (6.98%)
occurrences (all)	5	5	10
Synovial cyst			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Temporomandibular joint syndrome			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	2	2
Tendonitis			
subjects affected / exposed	2 / 48 (4.17%)	0 / 38 (0.00%)	2 / 86 (2.33%)
occurrences (all)	2	0	2
Infections and infestations			
Acarodermatitis			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	2	0	2
Adenoiditis			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Bronchitis			
subjects affected / exposed	2 / 48 (4.17%)	0 / 38 (0.00%)	2 / 86 (2.33%)
occurrences (all)	3	0	3
Conjunctivitis			
subjects affected / exposed	3 / 48 (6.25%)	2 / 38 (5.26%)	5 / 86 (5.81%)
occurrences (all)	3	2	5

Enterobiasis			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Folliculitis			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Gastroenteritis			
subjects affected / exposed	2 / 48 (4.17%)	2 / 38 (5.26%)	4 / 86 (4.65%)
occurrences (all)	2	2	4
Gastrointestinal infection			
subjects affected / exposed	1 / 48 (2.08%)	2 / 38 (5.26%)	3 / 86 (3.49%)
occurrences (all)	1	2	3
Gastrointestinal viral infection			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Helminthic infection			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Herpes zoster			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Hordeolum			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Impetigo			
subjects affected / exposed	1 / 48 (2.08%)	3 / 38 (7.89%)	4 / 86 (4.65%)
occurrences (all)	1	5	6
Influenza			
subjects affected / exposed	5 / 48 (10.42%)	0 / 38 (0.00%)	5 / 86 (5.81%)
occurrences (all)	6	0	6
Lower respiratory tract infection			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Nail bed infection			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1

Nail infection			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	2	1	3
Nasopharyngitis			
subjects affected / exposed	16 / 48 (33.33%)	11 / 38 (28.95%)	27 / 86 (31.40%)
occurrences (all)	32	25	57
Onychomycosis			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Oral herpes			
subjects affected / exposed	1 / 48 (2.08%)	2 / 38 (5.26%)	3 / 86 (3.49%)
occurrences (all)	1	2	3
Oral viral infection			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Otitis externa			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	2	0	2
Otitis media			
subjects affected / exposed	1 / 48 (2.08%)	3 / 38 (7.89%)	4 / 86 (4.65%)
occurrences (all)	1	3	4
Paronychia			
subjects affected / exposed	3 / 48 (6.25%)	1 / 38 (2.63%)	4 / 86 (4.65%)
occurrences (all)	6	1	7
Pharyngitis			
subjects affected / exposed	6 / 48 (12.50%)	3 / 38 (7.89%)	9 / 86 (10.47%)
occurrences (all)	7	3	10
Pharyngotonsillitis			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Pilonidal cyst			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Pneumonia			
subjects affected / exposed	3 / 48 (6.25%)	0 / 38 (0.00%)	3 / 86 (3.49%)
occurrences (all)	3	0	3

Pulpitis dental			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Respiratory tract infection			
subjects affected / exposed	1 / 48 (2.08%)	4 / 38 (10.53%)	5 / 86 (5.81%)
occurrences (all)	1	4	5
Respiratory tract infection viral			
subjects affected / exposed	0 / 48 (0.00%)	2 / 38 (5.26%)	2 / 86 (2.33%)
occurrences (all)	0	2	2
Rhinitis			
subjects affected / exposed	3 / 48 (6.25%)	5 / 38 (13.16%)	8 / 86 (9.30%)
occurrences (all)	4	6	10
Sinusitis			
subjects affected / exposed	3 / 48 (6.25%)	0 / 38 (0.00%)	3 / 86 (3.49%)
occurrences (all)	3	0	3
Skin infection			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Soft tissue infection			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Staphylococcal infection			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Tinea pedis			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Tonsillitis			
subjects affected / exposed	4 / 48 (8.33%)	3 / 38 (7.89%)	7 / 86 (8.14%)
occurrences (all)	5	7	12
Tracheitis			
subjects affected / exposed	2 / 48 (4.17%)	1 / 38 (2.63%)	3 / 86 (3.49%)
occurrences (all)	2	1	3
Upper respiratory tract infection			
subjects affected / exposed	10 / 48 (20.83%)	9 / 38 (23.68%)	19 / 86 (22.09%)
occurrences (all)	13	17	30

Urinary tract infection			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Vaginal infection			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	2	2
Viral infection			
subjects affected / exposed	2 / 48 (4.17%)	0 / 38 (0.00%)	2 / 86 (2.33%)
occurrences (all)	3	0	3
Viral upper respiratory tract infection			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Vulvovaginal mycotic infection			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1
Metabolism and nutrition disorders			
Decreased appetite			
subjects affected / exposed	1 / 48 (2.08%)	1 / 38 (2.63%)	2 / 86 (2.33%)
occurrences (all)	1	1	2
Hypercholesterolaemia			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Lactose intolerance			
subjects affected / exposed	0 / 48 (0.00%)	1 / 38 (2.63%)	1 / 86 (1.16%)
occurrences (all)	0	1	1
Obesity			
subjects affected / exposed	1 / 48 (2.08%)	0 / 38 (0.00%)	1 / 86 (1.16%)
occurrences (all)	1	0	1

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
06 April 2017	To clarify and correct errors in the ILAR diagnostic criteria detailed in Appendix 7
04 June 2020	To adapt protocol to CIVID-19 pandemic related challengest to trial

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.

With regard to immunogenicity, no treatment emergent anti-drug antibodies (ADA) were detected in any sample of subjects of the secukinumab treatment groups. One subject (4201005) was ADA-positive at Baseline only and negative during treatment.

Notes: