Clinical trial results:
A Phase 3, Multicenter, Randomized, Double blind, Placebo controlled, Parallel group, Outpatient Study Evaluating the Pharmacokinetics, Efficacy, and Safety of Baricitinib in Pediatric Patients with Moderate to Severe Atopic Dermatitis

Summary

EudraCT number	2018-000349-38
Trial protocol	GB DE FR ES CZ AT PL HU
Global end of trial date	

Results information

Result version number	v1 (current)
This version publication date	10 May 2023
First version publication date	10 May 2023

Trial information

Trial identification

Sponsor protocol code	I4V-MC-JAIP

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT03952559
WHO universal trial number (UTN)	-
Other trial identifiers	Trial Number: 16966

Notes:

Sponsors

Sponsor organisation name	Eli Lilly and Company
Sponsor organisation address	Lilly Corporate Center, Indianapolis, IN, United States, 46285
Public contact	Available Mon Fri 9 AM 5 PM EST, Eli Lilly and Company, 1 877CTLilly,
Scientific contact	Available Mon Fri 9 AM 5 PM EST, Eli Lilly and Company, 1 8772854559,

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	Yes
EMA paediatric investigation plan number(s)	EMEA-001220-PIP03-16
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	Interim
Date of interim/final analysis	24 April 2022
Is this the analysis of the primary completion data?	Yes
Primary completion date	24 April 2022
Global end of trial reached?	No

Notes:

General information about the trial

Main objective of the trial:

The reason for this study is to see if the study drug called baricitinib works and is safe in children and teenage participants with atopic dermatitis.

Protection of trial subjects:

This study was conducted in accordance with International Conference on Harmonization (ICH) Good Clinical Practice, and the principles of the Declaration of Helsinki, in addition to following the laws and regulations of the country or countries in which a study is conducted.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	24 May 2019
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	Argentina: 70
Country: Number of subjects enrolled	Hungary: 13
Country: Number of subjects enrolled	Czechia: 22
Country: Number of subjects enrolled	Japan: 38
Country: Number of subjects enrolled	United Kingdom: 9
Country: Number of subjects enrolled	India: 5
Country: Number of subjects enrolled	Russian Federation: 45
Country: Number of subjects enrolled	Spain: 36
Country: Number of subjects enrolled	Austria: 7
Country: Number of subjects enrolled	Taiwan: 41
Country: Number of subjects enrolled	Brazil: 34
Country: Number of subjects enrolled	Poland: 89
Country: Number of subjects enrolled	Mexico: 34
Country: Number of subjects enrolled	Israel: 39
Country: Number of subjects enrolled	Australia: 10
Country: Number of subjects enrolled	France: 18
Country: Number of subjects enrolled	Germany: 6
Worldwide total number of subjects	516
EEA total number of subjects	191

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)	239
Adolescents (12-17 years)	277
Adults (18-64 years)	0
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Participants were randomized to one of the four double-blind treatment arms.

Pre-assignment

Screening details:

A separate group of 33 participants received open label baricitinib as part of Pharmacokinetics (PK) lead-in (not randomized).

Period 1

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

Blinding implementation details:

The PK lead-in was non-randomized and open-label.

Arms

Are arms mutually exclusive?	Yes
Arm title	Placebo Double-blind

Arm description:

Participants 10 to < 18 years received placebo tablets. Participants 2 to < 10 years received placebo as oral suspension.

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

Dosage and administration details:

Participants 10 to < 18 years received placebo tablets.

Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Oral suspension
Routes of administration	Oral use

Dosage and administration details:

Participants 2 to < 10 years received placebo as oral suspension.

Arm title	Baricitinib Double-blind Low Dose

Arm description:

Participants 10 to < 18 years received Baricitinib low dose (1 mg) and placebo to maintain the blind, administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib low dose (0.5 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Arm type	Experimental
Investigational medicinal product name	Baricitinib
Investigational medicinal product code	
Other name	LY3009104
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Participants 10 to < 18 years received Baricitinib low dose (1 mg) and placebo to maintain the blind, administered orally in tablet form QD.

Investigational medicinal product name	Baricitinib
Investigational medicinal product code	
Other name	LY3009104
Pharmaceutical forms	Oral suspension
Routes of administration	Oral use

Dosage and administration details:

Participants 2 to < 10 years received Baricitinib low dose (0.5 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Arm title	Baricitinib Double-blind Medium Dose

Arm description:

Participants 10 to < 18 years received Baricitinib medium dose (2 mg) and placebo to maintain the blind, administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib medium dose (1 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Arm type	Experimental
Investigational medicinal product name	Baricitinib
Investigational medicinal product code	
Other name	LY3009104
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Participants 10 to < 18 years received Baricitinib medium dose (2 mg) and placebo to maintain the blind, administered orally in tablet form QD.

Investigational medicinal product name	Baricitinib
Investigational medicinal product code	
Other name	LY3009104
Pharmaceutical forms	Oral suspension
Routes of administration	Oral use

Dosage and administration details:

Participants 2 to < 10 years received Baricitinib medium dose (1 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Arm title	Baricitinib Double-blind High Dose

Arm description:

Participants 10 to < 18 years received Baricitinib high dose (4 mg) and placebo to maintain the blind, administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib high dose (2 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Arm type	Placebo
Investigational medicinal product name	Baricitinib
Investigational medicinal product code	
Other name	LY3009104
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Participants 10 to < 18 years received Baricitinib high dose (4 mg) and placebo to maintain the blind, administered orally in tablet form QD.

Investigational medicinal product name	Baricitinib
Investigational medicinal product code	
Other name	LY3009104
Pharmaceutical forms	Oral suspension

Routes of administration	Oral use

Dosage and administration details:

Participants 2 to < 10 years received Baricitinib high dose (2 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Arm title	Baricitinib Open Label High Dose (PK Lead-in)

Arm description:

Participants 10 to < 18 years received Baricitinib high dose (4 mg) administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib high dose (2 mg) administered as oral suspension QD.

Arm type	Experimental
Investigational medicinal product name	Baricitinib
Investigational medicinal product code	LY3009104
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Participants 10 to < 18 years received Baricitinib high dose (4 mg) administered orally in tablet form QD.

Investigational medicinal product name	Baricitinib
Investigational medicinal product code	
Other name	LY3009104
Pharmaceutical forms	Oral suspension
Routes of administration	Oral use

Dosage and administration details:

Participants 2 to < 10 years received Baricitinib high dose (2 mg) administered as oral suspension QD.

Number of subjects in period 1	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose
Started	122	121	120
Received at Least One Dose of Study Drug	122	120	120
Completed	115	116	117
Not completed	7	5	3
Consent withdrawn by subject	1	2	2
Adverse event, non-fatal	2	1	-
Inadvertently randomized	-	1	-
Lack of efficacy	4	1	1

Number of subjects in period 1	Baricitinib Double-blind High Dose	Baricitinib Open Label High Dose (PK Lead-in)
Started	120	33
Received at Least One Dose of Study Drug	120	33
Completed	119	33
Not completed	1	0
Consent withdrawn by subject	-	-
Adverse event, non-fatal	1	-

Inadvertently randomized	-	-
Lack of efficacy	-	-

Baseline characteristics

Reporting groups	
Reporting group title	Placebo Double-blind
Reporting group description:	
Participants 10 to < 18 years received placebo tablets. Participants 2 to < 10 years received placebo as oral suspension.	
Reporting group title	Baricitinib Double-blind Low Dose
Reporting group description:	
Participants 10 to < 18 years received Baricitinib low dose (1 mg) and placebo to maintain the blind, administered orally in tablet form QD. Participants 2 to < 10 years received Baricitinib low dose (0.5 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.	
Reporting group title	Baricitinib Double-blind Medium Dose
Reporting group description:	
Participants 10 to < 18 years received Baricitinib medium dose (2 mg) and placebo to maintain the blind, administered orally in tablet form QD. Participants 2 to < 10 years received Baricitinib medium dose (1 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.	
Reporting group title	Baricitinib Double-blind High Dose
Reporting group description:	
Participants 10 to < 18 years received Baricitinib high dose (4 mg) and placebo to maintain the blind, administered orally in tablet form QD. Participants 2 to < 10 years received Baricitinib high dose (2 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.	
Reporting group title	Baricitinib Open Label High Dose (PK Lead-in)
Reporting group description:	
Participants 10 to < 18 years received Baricitinib high dose (4 mg) administered orally in tablet form QD. Participants 2 to < 10 years received Baricitinib high dose (2 mg) administered as oral suspension QD.	

Reporting group values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose
Number of subjects	122	121	120
Age categorical Units: Subjects			
In utero Preterm newborn infants (gestational age < 37 wks) Newborns (0-27 days) Infants and toddlers (28 days-23 months) Children (2-11 years) Adolescents (12-17 years) Adults (18-64 years) From 65-84 years 85 years and over			
Age continuous Units: years			
arithmetic mean	11.75	12.35	11.81
standard deviation	± 4.012	± 4.052	± 3.661

Gender categorical Units: Subjects			
Female	64	62	63
Male	58	59	57
Race (NIH/OMB) Units: Subjects			
American Indian or Alaska Native	1	3	1
Asian	16	18	18
Native Hawaiian or Other Pacific Islander	0	0	0
Black or African American	3	2	5
White	94	94	93
More than one race	0	0	1
Unknown or Not Reported	8	4	2
Region of Enrollment Units: Subjects			
Argentina	16	18	18
Hungary	4	5	2
Czechia	6	7	4
Japan	9	10	10
United Kingdom	2	1	3
India	1	1	2
Russia	12	13	11
Spain	7	6	6
Austria	1	3	1
Taiwan	5	4	3
Brazil	7	9	7
Poland	19	19	25
Mexico	13	7	7
Israel	8	11	10
Australia	3	1	6
France	8	4	2
Germany	1	2	3

Reporting group values	Baricitinib Double-blind High Dose	Baricitinib Open Label High Dose (PK Lead-in)	Total
Number of subjects	120	33	516
Age categorical Units: Subjects			
In utero			0
Preterm newborn infants (gestational age < 37 wks)			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)			0
From 65-84 years			0
85 years and over			0

Age continuous Units: years			
arithmetic mean	11.93	11.28	
standard deviation	± 3.829	± 4.296	-
Gender categorical Units: Subjects			
Female	53	20	262
Male	67	13	254
Race (NIH/OMB) Units: Subjects			
American Indian or Alaska Native	3	1	9
Asian	21	19	92
Native Hawaiian or Other Pacific Islander	0	0	0
Black or African American	4	0	14
White	88	13	382
More than one race	0	0	1
Unknown or Not Reported	4	0	18
Region of Enrollment Units: Subjects			
Argentina	18	0	70
Hungary	2	0	13
Czechia	5	0	22
Japan	9	0	38
United Kingdom	0	3	9
India	1	0	5
Russia	9	0	45
Spain	7	10	36
Austria	2	0	7
Taiwan	11	18	41
Brazil	11	0	34
Poland	26	0	89
Mexico	7	0	34
Israel	8	2	39
Australia	0	0	10
France	4	0	18
Germany	0	0	6

End points reporting groups

Reporting group title	Placebo Double-blind

Reporting group description:

Participants 10 to < 18 years received placebo tablets. Participants 2 to < 10 years received placebo as oral suspension.

Reporting group title	Baricitinib Double-blind Low Dose

Reporting group description:

Participants 10 to < 18 years received Baricitinib low dose (1 mg) and placebo to maintain the blind, administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib low dose (0.5 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Reporting group title	Baricitinib Double-blind Medium Dose

Reporting group description:

Participants 10 to < 18 years received Baricitinib medium dose (2 mg) and placebo to maintain the blind, administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib medium dose (1 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Reporting group title	Baricitinib Double-blind High Dose

Reporting group description:

Participants 10 to < 18 years received Baricitinib high dose (4 mg) and placebo to maintain the blind, administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib high dose (2 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Reporting group title	Baricitinib Open Label High Dose (PK Lead-in)

Reporting group description:

Participants 10 to < 18 years received Baricitinib high dose (4 mg) administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib high dose (2 mg) administered as oral suspension QD.

Subject analysis set title	Baricitinib Open Label High Dose (PK Lead-in)
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 10 to < 18 years received Baricitinib high dose (4 mg) administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib high dose (2 mg) administered as oral suspension QD.

Subject analysis set title	Placebo Double-blind
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 10 to < 18 years randomised to placebo tablets. Participants 2 to < 10 years randomised to placebo as oral suspension.

Subject analysis set title	Baricitinib Double-blind Low Dose
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 10 to < 18 years randomised to Baricitinib low dose (1 mg) and placebo to maintain the blind, administered orally in tablet form QD.
Participants 2 to < 10 years randomised to Baricitinib low dose (0.5 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Subject analysis set title	Baricitinib Double-blind Medium Dose
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 10 to < 18 years randomised to Baricitinib medium dose (2 mg) and placebo to maintain the blind, administered orally in tablet form QD.
Participants 2 to < 10 years randomised to Baricitinib medium dose (1 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Subject analysis set title	Baricitinib Double-blind High Dose
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 10 to < 18 years randomised to Baricitinib high dose (4 mg) and placebo to maintain the blind, administered orally in tablet form QD.
Participants 2 to < 10 years randomised to Baricitinib high dose (2 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Subject analysis set title	Baricitinib Open Label High Dose 2 to <6
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 2 to < 6 years received Baricitinib high dose (2 mg equivalent) administered oral suspension every day (QD).

Subject analysis set title	Baricitinib Open Label High Dose 6 to <10
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 6 to < 10 years received Baricitinib high dose (2 mg equivalent) administered oral suspension every day (QD).

Subject analysis set title	Baricitinib Open Label High Dose 10 to <18
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 10 to < 18 years received Baricitinib high dose (4 mg equivalent) administered orally every day (QD).

Subject analysis set title	Baricitinib (0.5mg): Low Dose (2 to<6 Years)
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 2 to < 6 years of age randomised to Baricitinib low dose (0.5 mg) administered as oral suspension QD.

Subject analysis set title	Baricitinib (1 mg): Medium Dose (2 to<6 Years)
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 2 to < 6 years randomised to Baricitinib medium dose (1 mg) administered as oral suspension QD.

Subject analysis set title	Baricitinib (2 mg): High Dose (2 to<6 Years)
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 2 to < 6 years recieved Baricitinib high dose (2 mg) administered as oral suspension QD.

Subject analysis set title	Baricitinib (0.5mg): Low Dose (6 to <10 Years)
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 6 to < 10 years randomised to Baricitinib low dose (0.5 mg) administered as oral suspension QD.

Subject analysis set title	Baricitinib (1 mg): Medium Dose (6 to <10 Years)
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 6 to < 10 years randomised to Baricitinib medium dose (1 mg) administered as oral suspension QD.

Subject analysis set title	Baricitinib (2 mg): High Dose (6 to <10 Years)
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 6 to < 10 years received Baricitinib high dose (2 mg) administered as oral suspension QD.

Subject analysis set title	Baricitinib (1 mg): Low Dose (10 to <18 Years)
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 10 to < 18 years randomised to Baricitinib low dose (1 mg) administered orally in tablet form QD.

Subject analysis set title	Baricitinib (2 mg): Medium Dose (10 to <18 Years)
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 10 to < 18 years randomised to Baricitinib medium dose (2 mg) administered orally in tablet form QD.

Subject analysis set title	Baricitinib (4 mg): High Dose (10 to <18 Years)
Subject analysis set type	Intention-to-treat

Subject analysis set description:

Participants 10 to < 18 years received Baricitinib high dose (4 mg) administered orally in tablet form QD.

Primary: Percentage of Participants Achieving Investigator's Global Assessment (IGA) of 0 or 1 with a ≥2 Point Improvement

End point title	Percentage of Participants Achieving Investigator's Global Assessment (IGA) of 0 or 1 with a ≥2 Point Improvement

End point description:

Percentage of participants achieving IGA of 0 or 1 with a ≥2 point improvement is presented. The IGA measures the investigator's global assessment of the participant's overall severity of their AD, based on a static, numeric 5-point scale from 0 (clear skin) to 4 (severe disease). The score is based on an overall assessment of the degree of erythema, papulation/induration, oozing/crusting, and lichenification. Analysis population description (APD): All randomized participants in the double-blind treatment period.

End point type	Primary

End point timeframe:

Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	122	121	120	120
Units: Percentage of participants				
number (not applicable)	16.4	18.2	25.8	41.7

Statistical analyses

Statistical analysis title	Statistical Analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	243
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.7261
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.13

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.58
upper limit	2.21

Statistical analysis title	Statistical Analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0718
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.8
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.95
upper limit	3.41

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.0001
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	3.73
Confidence interval	
level	95 %
sides	2-sided
lower limit	2.02
upper limit	6.89

Primary: Open Label Population Pharmacokinetics (Pop PK): Maximum Observed Drug Concentration at Steady State (Cmax,ss) of LY3009104

End point title	Open Label Population Pharmacokinetics (Pop PK): Maximum Observed Drug Concentration at Steady State (Cmax,ss) of LY3009104[1]

End point description:

Open label Pop PK: Cmax,ss was derived by a population pharmacokinetics approach.
APD: All participants who received at least one dose of study drug in the PK Lead-in (PK LI) period and had evaluable PK data.

End point type	Primary

End point timeframe:

Predose; 0.25- hours (h); 0.5 h; 1 h; 2-4 h; 4 h; 4-6 h post dose

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: No inferential statistics were planned for this endpoint.

End point values	Baricitinib Open Label High Dose 2 to <6	Baricitinib Open Label High Dose 6 to <10	Baricitinib Open Label High Dose 10 to <18	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	6	7	20	
Units: nanogram per milliliter (ng/mL)				
geometric mean (geometric coefficient of variation)	63.2 (± 30)	40.1 (± 32)	50.6 (± 29)	

Statistical analyses

No statistical analyses for this end point

Primary: Open Label Pop PK: Area Under the Concentration-Time Curve for Dosing Interval of LY3009104 at Steady State (AUCtau,ss) of LY3009104

End point title	Open Label Pop PK: Area Under the Concentration-Time Curve for Dosing Interval of LY3009104 at Steady State (AUCtau,ss) of LY3009104[2]

End point description:

Open label Pop PK: AUCtau,ss was reported for participants who received multiple doses of LY3009104 was derived by a population pharmacokinetics approach.
APD: All participants who received at least one dose of study drug in the PK Lead-in (PK LI) period and had evaluable PK data.

End point type	Primary

End point timeframe:

Predose; 0.25- hours (h); 0.5 h; 1 h; 2-4 h; 4 h; 4-6 h post dose

Notes:

[2] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: No inferential statistics were planned for this endpoint.

End point values	Baricitinib Open Label High Dose 2 to <6	Baricitinib Open Label High Dose 6 to <10	Baricitinib Open Label High Dose 10 to <18	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	6	7	20	
Units: hour*nanogram per milliliter (h*ng/mL)				
geometric mean (geometric coefficient of variation)	251 (± 18)	178 (± 18)	290 (± 44)	

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Participants Achieving Eczema Area and Severity Index 75 (EASI75)

End point title	Percentage of Participants Achieving Eczema Area and Severity Index 75 (EASI75)

End point description:

The EASI assesses objective physician estimates of 2 dimensions of atopic dermatitis - disease extent and clinical signs affected: 0 = 0%; 1 = 1-9%; 2 = 10-29%; 3 = 30-49%; 4 = 50-69%; 5 = 70-89%; 6 = 90-100% and the severity of 4 clinical signs: (1) erythema, (2) edema/papulation, (3) excoriation, and (4) lichenification each on a scale of 0 to 3 (0 = none, absent; 1 = mild; 2 = moderate; 3 = severe) at 4 body sites (head/neck, trunk, upper limbs, and lower limbs). Half scores are allowed between severities 1, 2, and 3. The final EASI score was obtained by weight-averaging these 4 scores and will range from 0 to 72 (severe). The EASI75 is defined as a ≥ 75% improvement from baseline in the EASI score. The results were analyzed using non-responder imputation (NRI). All participants who either discontinued the study treatment or discontinued the study for any reason at any time were defined as non-responders for the NRI analysis for categorical variables such as EASI75.

End point type	Secondary

End point timeframe:

Week 16
APD: All randomized participants in the double-blind treatment period.

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	122	121	120	120
Units: Percentage of participants				
number (not applicable)	32	32.2	40	52.5

Statistical analyses

Statistical analysis title	Statistical Analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	243
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.9615
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.01
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.59
upper limit	1.74

Statistical analysis title	Statistical Analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.201
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.42
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.83
upper limit	2.41

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0017
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	2.33
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.38
upper limit	3.95

Secondary: Percentage of Participants Achieving EASI90

End point title	Percentage of Participants Achieving EASI90

End point description:

The EASI assesses objective physician estimates of 2 dimensions of atopic dermatitis - disease extent and clinical signs affected: 0 = 0%; 1 = 1-9%; 2 = 10-29%; 3 = 30-49%; 4 = 50-69%; 5 = 70-89%; 6 = 90-100% and the severity of 4 clinical signs: (1) erythema, (2) edema/papulation, (3) excoriation, and (4) lichenification each on a scale of 0 to 3 (0 = none, absent; 1 = mild; 2 = moderate; 3 = severe) at 4 body sites (head/neck, trunk, upper limbs, and lower limbs). Half scores are allowed between severities 1, 2, and 3. The final EASI score was obtained by weight-averaging these 4 scores and will range from 0 to 72 (severe). The EASI90 is defined as a ≥ 90% improvement from baseline in the EASI score.
The results were analyzed using non-responder imputation (NRI). All participants who either discontinued the study treatment or discontinued the study for any reason at any time were defined as non-responders for the NRI analysis for categorical variables such as EASI90.

End point type	Secondary

End point timeframe:

Week 16
APD: All randomized participants in the double-blind treatment period.

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	122	121	120	120
Units: Percentage of participants				
number (not applicable)	12.3	11.6	21.7	30.0

Statistical analyses

Statistical analysis title	Statistical Analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	243
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.8544
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	0.93
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.43
upper limit	2.01

Statistical analysis title	Statistical Analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0561
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.96
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.98
upper limit	3.91

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0012
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	2.99
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.54
upper limit	5.82

Secondary: Change from Baseline in EASI Score

End point title	Change from Baseline in EASI Score

End point description:

The EASI assesses objective physician estimates of 2 dimensions of AD - disease extent and clinical signs affected: 0 = 0%; 1 = 1-9%; 2 = 10-29%; 3 = 30-49%; 4 = 50-69%; 5 = 70-89%; 6 = 90-100% and the severity of 4 clinical signs (1) erythema (2)edema/papulation, (3) excoriation, and (4) lichenification each on a scale of 0 to 3 (0 = none, absent; 1 = mild; 2 = moderate; 3 = severe) at 4 body sites (head/neck, trunk, upper limbs, and lower limbs). Half scores are allowed between severities 1, 2 and 3. The final EASI score is obtained by weight-averaging these 4 scores and will range from 0 to 72 (severe). Least Square (LS) Means were calculated using a mixed model repeated measures (MMRM) model with treatment, age cohort, region, baseline disease severity (IGA), visit, treatment-by-age cohort interaction and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by-visit-interaction as fixed continuous effects.

End point type	Secondary

End point timeframe:

Baseline, Week 16
APD: All randomized participants in the double-blind treatment period and had evaluable EASI data.

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	105	109	113	115
Units: Percentage of participants				
least squares mean (standard error)	-14.16 (± 1.001)	-15.67 (± 0.990)	-15.83 (± 0.978)	-16.88 (± 0.984)

Statistical analyses

Statistical analysis title	Statistical Analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	214
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.2627
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-1.51
Confidence interval	
level	95 %
sides	2-sided
lower limit	-4.16
upper limit	1.14
Variability estimate	Standard error of the mean
Dispersion value	1.349

Statistical analysis title	Statistical Analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	218
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.2135
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-1.67
Confidence interval	
level	95 %
sides	2-sided
lower limit	-4.31
upper limit	0.97
Variability estimate	Standard error of the mean
Dispersion value	1.342

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	220
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0443
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-2.72

Confidence interval	
level	95 %
sides	2-sided
lower limit	-5.36
upper limit	-0.07
Variability estimate	Standard error of the mean
Dispersion value	1.347

Secondary: Percentage of Participants Achieving SCORing Atopic Dermatitis 75 (SCORAD75)

End point title	Percentage of Participants Achieving SCORing Atopic Dermatitis 75 (SCORAD75)

End point description:

The SCORAD index uses the rule of nines to assess disease extent and evaluates 6 clinical characteristics to determine disease severity: (1) erythema, (2) edema/papulation, (3) oozing/crusts, (4) excoriation, (5) lichenification, and (6) dryness on a scale of 0 to 3 (0=absence, 1=mild, 2=moderate, 3=severe). The SCORAD index also assesses subjective symptoms of pruritus and sleep loss with visual analog scale (VAS) where 0 is no itching or no trouble sleeping and 10 is unbearable itching or a lot of trouble sleeping. These 3 aspects: extent of disease (A: 0-1-2), disease severity (B: 0-18), & subjective symptoms (C: 0-20) combine using A/5 + 7*B/2+ C to give a maximum possible score of 103, where 0 = no disease and 103 = severe disease. The SCORAD75 responder is defined as a participant who achieves a ≥ 75% improvement from baseline in the SCORAD score.
APD: All randomized participants in the double-blind treatment period.

End point type	Secondary

End point timeframe:

Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	122	121	120	120
Units: Percentage of participants				
number (not applicable)	9.8	7.4	15.8	20.0

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	243
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.4943
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	0.73

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.3
upper limit	1.78

Statistical analysis title	Statistical analysis 2
Comparison groups	Baricitinib Double-blind Medium Dose v Placebo Double-blind
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1677
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.72
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.8
upper limit	3.7

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0336
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	2.24
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.06
upper limit	4.7

Secondary: Percentage of Participants Achieving a 4-Point Improvement in Itch Numeric Rating Scale (NRS) for Participants 10 to <18 Years Old at Study Entry

End point title	Percentage of Participants Achieving a 4-Point Improvement in Itch Numeric Rating Scale (NRS) for Participants 10 to <18 Years Old at Study Entry

End point description:

The Itch Numeric Rating Scale (NRS) is a participant-administered, 11-point horizontal scale anchored at 0 and 10, with 0 representing "no itch" and 10 representing "worst itch imaginable." Overall severity of a participants itching is indicated by selecting the number, using a daily diary, that best describes the

worst level of itching in the past 24 hours.
APD: All randomized participants (10 to <18 years old) in the double-blind treatment period and with baseline itch score >= 4.

End point type	Secondary

End point timeframe:

Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	55	63	62	62
Units: Percentage of participants				
number (not applicable)	16.4	17.5	25.8	35.5

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	118
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.8866
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.07
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.42
upper limit	2.77

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	117
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.2316
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.73

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.7
upper limit	4.26

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	117
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0328
Method	Regression, Logistic
Parameter estimate	LS Mean difference (Final Values)
Point estimate	2.59
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.08
upper limit	6.22

Secondary: Percentage of Participants Achieving EASI50

End point title	Percentage of Participants Achieving EASI50

End point description:

The EASI assesses objective physician estimates of 2 dimensions of atopic dermatitis - disease extent and clinical signs affected: 0 = 0%; 1 = 1-9%; 2 = 10-29%; 3 = 30-49%; 4 = 50-69%; 5 = 70-89%; 6 = 90-100%) and the severity of 4 clinical signs (erythema, edema/papulation, excoriation, and lichenification) each on a scale of 0 to 3 (0 = none, absent; 1 = mild; 2 = moderate; 3 = severe) at 4 body sites (head and neck, trunk, upper limbs, and lower limbs). Half scores are allowed between severities 1, 2 and 3. The final EASI score was obtained by weight-averaging these 4 scores and will range from 0 to 72 (severe). The EASI50 is defined as a ≥ 50% improvement from baseline in EASI score.
APD: All randomized participants in the double-blind treatment period.

End point type	Secondary

End point timeframe:

Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	122	121	120	120
Units: Percentage of participants				
number (not applicable)	55.7	59.5	60.8	71.7

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	243
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.5361
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.18
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.7
upper limit	1.98

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.4417
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.23
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.73
upper limit	2.06

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose

Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0121
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	2
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.16
upper limit	3.43

Secondary: Percentage of Participants Achieving IGA of 0

End point title	Percentage of Participants Achieving IGA of 0

End point description:

The IGA measures the investigator's global assessment of the participant's overall severity of their AD, based on a static, numeric 5-point scale from 0 (clear skin) to 4 (severe disease). The score is based on an overall assessment of the degree of erythema, papulation/induration, oozing/crusting, and lichenification.
APD: All randomized participants in the double-blind treatment period.

End point type	Secondary

End point timeframe:

Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	122	121	120	120
Units: Percentage of participants				
number (not applicable)	4.1	5.0	5.0	12.5

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	243
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.7706
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.19

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.37
upper limit	3.78

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.7409
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.22
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.38
upper limit	3.86

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0253
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	3.15
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.15
upper limit	8.63

Secondary: Change from Baseline in SCORAD

End point title	Change from Baseline in SCORAD

End point description:

The SCORAD index uses the rule of nines to assess disease extent and evaluates 6 clinical characteristics to determine disease severity: (1) erythema, (2) edema/papulation, (3) oozing/crusts, (4) excoriation, (5) lichenification, and (6) dryness on a scale of 0 to 3 (0=absence, 1=mild, 2=moderate, 3=severe). The SCORAD index also assesses subjective symptoms of pruritus and sleep loss with VAS where 0 is no itching or no trouble sleeping and 10 is unbearable itching or a lot of trouble sleeping. These 3 aspects: extent of disease (A: 0-1-2), disease severity (B: 0-18), & subjective

symptoms (C: 0-20) combine using A/5 + 7*B/2+ C to give a maximum possible score of 103, where 0 = no disease and 103 = severe disease.
LS Means were calculated using a MMRM model with treatment, region, baseline disease severity (IGA), visit, and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by-visit-interaction as fixed continuous effects.

End point type	Secondary

End point timeframe:

Baseline, Week 16
APD: All randomized participants in the double-blind treatment period and had evaluable SCORAD data.

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	103	107	112	112
Units: units on a scale				
least squares mean (standard error)	-20.93 (± 1.894)	-24.82 (± 1.880)	-26.08 (± 1.857)	-28.55 (± 1.867)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	210
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1317
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-3.89
Confidence interval	
level	95 %
sides	2-sided
lower limit	-8.95
upper limit	1.17
Variability estimate	Standard error of the mean
Dispersion value	2.576

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose

Number of subjects included in analysis	215
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0451
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-5.15
Confidence interval	
level	95 %
sides	2-sided
lower limit	-10.19
upper limit	-0.11
Variability estimate	Standard error of the mean
Dispersion value	2.564

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	215
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0031
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-7.62
Confidence interval	
level	95 %
sides	2-sided
lower limit	-12.66
upper limit	-2.58
Variability estimate	Standard error of the mean
Dispersion value	2.566

Secondary: Percentage of Participants Achieving SCORAD90

End point title	Percentage of Participants Achieving SCORAD90

End point description:

The SCORAD index uses the rule of nines to assess disease extent and evaluates 6 clinical characteristics to determine disease severity: (1) erythema, (2) edema/papulation, (3) oozing/crusts, (4) excoriation, (5) lichenification, and (6) dryness on a scale of 0 to 3 (0=absence, 1=mild, 2=moderate, 3=severe). The SCORAD index also assesses subjective symptoms of pruritus and sleep loss with VAS where 0 is no itching or no trouble sleeping and 10 is unbearable itching or a lot of trouble sleeping. These 3 aspects: extent of disease (A: 0-1-2), disease severity (B: 0-18), & subjective symptoms (C: 0-20) combine using A/5 + 7*B/2+ C to give a maximum possible score of 103, where 0 = no disease and 103 = severe disease. SCORAD90 is defined as a ≥ 90% improvement from baseline in the SCORAD score.

End point type	Secondary

End point timeframe:

Week 16
APD: All randomized participants in the double-blind treatment period.

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	122	121	120	120
Units: Percentage of participants				
number (not applicable)	3.3	1.7	5.0	12.5

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	243
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.4238
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	0.53
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.11
upper limit	2.49

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.5118
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	1.5
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.44
upper limit	5.08

Statistical analysis title	Statistical Analysis 3

Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0129
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	3.92
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.34
upper limit	11.52

Secondary: Change from Baseline in Body Surface Area (BSA) Affected

End point title	Change from Baseline in Body Surface Area (BSA) Affected

End point description:

Body surface area affected by AD will be assessed for 4 separate body regions and is collected as part of the EASI assessment: head and neck, trunk (including genital region), upper extremities, and lower extremities (including the buttocks). LS Means calculated using MMRM model with treatment, age cohort, region, baseline disease severity (IGA), visit, treatment-by-age cohort interaction and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by-visit-interaction as fixed continuous effects.
APD: All randomized participants in the double-blind treatment period and had evaluable BSA data.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	105	109	113	115
Units: units on a scale				
least squares mean (standard error)	-20.31 (± 1.622)	-21.83 (± 1.608)	-22.06 (± 1.581)	-25.66 (± 1.593)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose

Number of subjects included in analysis	214
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.4852
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-1.51
Confidence interval	
level	95 %
sides	2-sided
lower limit	-5.77
upper limit	2.75
Variability estimate	Standard error of the mean
Dispersion value	2.168

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	218
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.4205
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-1.74
Confidence interval	
level	95 %
sides	2-sided
lower limit	-5.98
upper limit	2.5
Variability estimate	Standard error of the mean
Dispersion value	2.16

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	220
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0138
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-5.34
Confidence interval	
level	95 %
sides	2-sided
lower limit	-9.59
upper limit	-1.1

Variability estimate	Standard error of the mean
Dispersion value	2.161

Secondary: Percentage of Participants Developing Skin Infections Requiring Antibiotic Treatment

End point title	Percentage of Participants Developing Skin Infections Requiring Antibiotic Treatment

End point description:

Percentage of participants developing skin infections requiring antibiotic treatment.
APD: All randomized participants in the double-blind treatment period.

End point type	Secondary

End point timeframe:

Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	122	121	120	120
Units: Percentage of participants				
number (not applicable)	5.7	5.0	3.3	2.5

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	243
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 1
Method	Fisher exact

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.54
Method	Fisher exact

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.302
Method	Fisher exact

Secondary: Mean Number of Days without Use of Background Topical Corticosteroid (TCS)

End point title	Mean Number of Days without Use of Background Topical Corticosteroid (TCS)

End point description:

Mean number of days without use of background TCS was presented. The ANOVA model includes treatment, age cohort, region, and baseline disease severity (IGA) as factors.
APD: All randomized participants in the double-blind treatment period.

End point type	Secondary

End point timeframe:

Baseline through 16 Weeks

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	122	121	120	120
Units: days				
least squares mean (standard error)	27.74 (± 4.06)	32.22 (± 4.07)	30.86 (± 4.06)	39.91 (± 4.10)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	243
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.375
Method	ANOVA
Parameter estimate	LS Mean difference (Final Values)
Point estimate	4.47
Confidence interval	
level	95 %
sides	2-sided
lower limit	-5.41
upper limit	14.35

Variability estimate	Standard error of the mean
Dispersion value	5.03

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.536
Method	ANOVA
Parameter estimate	LS Mean difference (Final Values)
Point estimate	3.12
Confidence interval	
level	95 %
sides	2-sided
lower limit	-6.76
upper limit	13
Variability estimate	Standard error of the mean
Dispersion value	5.03

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.016
Method	ANOVA
Parameter estimate	LS Mean difference (Final Values)
Point estimate	12.17
Confidence interval	
level	95 %
sides	2-sided
lower limit	2.29
upper limit	22.05
Variability estimate	Standard error of the mean
Dispersion value	5.03

Secondary: Mean Gram Quantity of TCS Use (Tube Weights)

End point title	Mean Gram Quantity of TCS Use (Tube Weights)

End point description:

The dispensed TCS tubes were weighed with cap (without the carton) to determine the dispensed amount of TCS in grams. Returned tubes were weighed with cap (without the carton) to determine the amount of TCS in grams used at each visit. Analysis was done via analysis of variance (ANOVA), with geographic region, baseline disease severity, and treatment as factors in the model.
APD: All randomized participants in the double-blind treatment period.

End point type	Secondary
End point timeframe: Baseline through 16 Weeks	

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	122	121	120	120
Units: grams				
least squares mean (standard error)	265.79 (± 22.04)	216.60 (± 22.09)	228.41 (± 22.05)	185.42 (± 22.26)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	243
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.073
Method	ANOVA
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-49.19
Confidence interval	
level	95 %
sides	2-sided
lower limit	-102.81
upper limit	4.42
Variability estimate	Standard error of the mean
Dispersion value	27.28

Statistical analysis title	Statistical analysis 2
Comparison groups	Baricitinib Double-blind Medium Dose v Placebo Double-blind
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.172
Method	ANOVA
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-37.38

Confidence interval	
level	95 %
sides	2-sided
lower limit	-91
upper limit	16.23
Variability estimate	Standard error of the mean
Dispersion value	27.29

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	242
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.004
Method	ANOVA
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-80.37
Confidence interval	
level	95 %
sides	2-sided
lower limit	-133.98
upper limit	-26.75
Variability estimate	Standard error of the mean
Dispersion value	27.28

Secondary: Change From Baseline in Itch NRS for Participants 10 to <18 Years at Study Entry

End point title	Change From Baseline in Itch NRS for Participants 10 to <18 Years at Study Entry

End point description:

The Itch NRS is a participant-administered, 11-point horizontal scale, with 0 representing "no itch" and 10 representing "worst itch imaginable." Overall severity of a participant's itching is indicated by selecting the number, using a daily diary, that best describes the worst level of itching in the past 24 hours.

LS Means were calculated using mixed model repeated measures (MMRM) model includes treatment, age cohort, region, baseline disease severity (IGA), visit, treatment-by-age cohort interaction and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by-visit-interaction as fixed continuous effects.

APD: All randomized participants (10 to <18 years) in the double-blind treatment period and had evaluable Itch NRS data.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	65	69	78	79
Units: units on a scale				
least squares mean (standard deviation)	-1.15 (± 0.276)	-1.80 (± 0.266)	-1.65 (± 0.261)	-2.25 (± 0.258)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	134
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0829
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.65
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.38
upper limit	0.08
Variability estimate	Standard error of the mean
Dispersion value	0.372

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	143
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1752
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.5
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.22
upper limit	0.22
Variability estimate	Standard error of the mean
Dispersion value	0.368

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	144
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0029
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-1.1
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.82
upper limit	-0.38
Variability estimate	Standard error of the mean
Dispersion value	0.366

Secondary: Change From Baseline in the Parent-Reported Itch Severity Measure (PRISM) for Participants 2 to <10 Years at Study Entry

End point title	Change From Baseline in the Parent-Reported Itch Severity Measure (PRISM) for Participants 2 to <10 Years at Study Entry

End point description:

The Parent-Reported Itch Severity Measure (PRISM) is a single-item, parent/caregiver administered scale that reports the overall severity of their child's itching. Parent/Caregiver's report the overall severity of their child's itching based on observed actions of the child in the past 24 hours. Response options range include "No Itch," "Mild," "Moderate," "Severe," and "Very Severe." The PRISM will be completed for participants <10 years old by the parent/caregiver.
LS Means were calculated using mixed model repeated measures (MMRM) model includes treatment, age cohort, region, baseline disease severity (IGA), visit, treatment-by-age cohort interaction and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by-visit-interaction as fixed continuous effects.
APD: All randomized participants (2 to <10 years old) in the double-blind treatment period and had evaluable PRISM data.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	31	29	27	21
Units: units on a scale				
least squares mean (standard error)	-0.02 (± 0.139)	-0.24 (± 0.146)	-0.49 (± 0.145)	-0.37 (± 0.158)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	60
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.2688
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.21
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.6
upper limit	0.17
Variability estimate	Standard error of the mean
Dispersion value	0.193

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	58
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0166
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.47
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.85
upper limit	-0.09
Variability estimate	Standard error of the mean
Dispersion value	0.193

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	52
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0908
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.34

Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.75
upper limit	0.06
Variability estimate	Standard error of the mean
Dispersion value	0.202

Secondary: Change from Baseline on the Patient-Oriented Eczema Measure (POEM) Total Score

End point title	Change from Baseline on the Patient-Oriented Eczema Measure (POEM) Total Score

End point description:

The POEM is a simple, 7-item, patient-administered scale that assesses disease severity in children and adults. Participants respond to questions about the frequency of 7 symptoms (itching, sleep disturbance, bleeding, weeping/oozing, cracking, flaking, and dryness/roughness) over the last week on a scale ranging from 0-4 (0 = no days, 1 = 1-2 days, 2 = 3-4 days, 3 = 5-6 days, 4 = everyday). Scores range from 0-28 with higher total scores indicating greater disease severity.

LS Means were calculated using MMRM model includes treatment, age cohort, region, baseline disease severity (IGA), visit, treatment-by-age cohort interaction and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by-visit-interaction as fixed continuous effects.
APD: All randomized participants in the double-blind treatment period and had evaluable POEM data.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	104	107	112	112
Units: units on a scale				
least squares mean (standard error)	-3.02 (± 0.708)	-3.93 (± 0.704)	-4.58 (± 0.696)	-4.58 (± 0.702)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	211
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.3409
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.91

Confidence interval	
level	95 %
sides	2-sided
lower limit	-2.79
upper limit	0.97
Variability estimate	Standard error of the mean
Dispersion value	0.956

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	216
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1022
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-1.56
Confidence interval	
level	95 %
sides	2-sided
lower limit	-3.43
upper limit	0.31
Variability estimate	Standard error of the mean
Dispersion value	0.952

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	216
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1024
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-1.56
Confidence interval	
level	95 %
sides	2-sided
lower limit	-3.43
upper limit	0.31
Variability estimate	Standard deviation
Dispersion value	0.953

Secondary: Change From Baseline in Patient Global Impression of Severity–Atopic Dermatitis (PGI-S-AD) Score for Participants 10 to <18 Years at Study Entry

End point title	Change From Baseline in Patient Global Impression of Severity–Atopic Dermatitis (PGI-S-AD) Score for Participants 10 to <18 Years at Study Entry

End point description:

The PGI-S-AD is a single-item question asked to the participants on how they would rate their overall AD symptoms over the past 24 hours to evaluate the severity of the disease at that point in time. The 5 categories of responses range from "(0) no symptoms", "(1) very mild", "(2) mild" "(3) moderate", and "(4) severe".
LS Means were calculated using mixed model repeated measures (MMRM) model includes treatment, age cohort, region, baseline disease severity (IGA), visit, treatment-by-age cohort interaction and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by-visit-interaction as fixed continuous effects.
APD: All randomized participants (10 to <18 years old) in the double-blind treatment period and had evaluable PGI-S-AD data.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	65	68	78	79
Units: units on a scale				
least squares mean (standard error)	-0.33 (± 0.115)	-0.56 (± 0.112)	-0.64 (± 0.109)	-0.83 (± 0.108)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	133
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1436
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.23
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.54
upper limit	0.08
Variability estimate	Standard error of the mean
Dispersion value	0.157

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose

Number of subjects included in analysis	143
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0483
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.31
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.61
upper limit	0
Variability estimate	Standard error of the mean
Dispersion value	0.154

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	144
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0012
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.5
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.8
upper limit	-0.2
Variability estimate	Standard error of the mean
Dispersion value	0.154

Secondary: Change From Baseline in the Patient-Reported Outcomes Measurement Information System (PROMIS) - Pediatric Depression for Participants 5 to <18 Years at Study Entry

End point title	Change From Baseline in the Patient-Reported Outcomes Measurement Information System (PROMIS) - Pediatric Depression for Participants 5 to <18 Years at Study Entry

End point description:

PROMIS is a set of person-centered measures that evaluates and monitors physical, mental, and social health in adults and children. The PROMIS Depression item bank assesses self-reported negative mood, views on self, and social cognition, as well as decreased positive affect and engagement. The PROMIS Depression Short Form (8a v2.0 and 6a v2.0) is available in a pediatric self-report (ages 8 to <18 years) and for parents/caregivers serving as proxy reporters for their children (youth ages 5 to <8 years old). Children aged <5 years will not complete this assessment. Both pediatric self-report and proxy-report versions assess depression "in the past seven days." Response options range from 1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often; to 5 = Almost always. Total raw scores are converted to T-Scores with higher scores representing greater depression. LS Means were calculated using MMRM model.

End point type	Secondary

End point timeframe:

Baseline, Week 16
APD: All randomized participants (5 to <18 years old) in the double-blind treatment period and had evaluable (PROMIS) - Pediatric Depression data.

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	93[3]	102[4]	106[5]	107[6]
Units: T-score				
least squares mean (standard error)				
5 to <8 years old	-3.95 (± 2.629)	-2.54 (± 2.138)	-7.07 (± 2.644)	-2.83 (± 2.033)
8 to <18 years old	-3.60 (± 1.190)	-3.42 (± 1.343)	-4.68 (± 1.034)	-5.30 (± 1.436)

Notes:

[3] - 5 to <8 years old -> n=11
8 to <18 years old -> n=82

[4] - 5 to <8 years old -> n=17
8 to <18 years old -> n=85

[5] - 5 to <8 years old -> n=10
8 to <18 years old -> n=96
[6] - 5 to <8 years old -> n=18
8 to <18 years old -> n=89

Statistical analyses

Statistical analysis title	Statistical analysis 1

Statistical analysis description:

8 to <18 years old (Subjects in this analysis: 167)

Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	195
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.9183
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	0.18
Confidence interval	
level	95 %
sides	2-sided
lower limit	-3.27
upper limit	3.63
Variability estimate	Standard error of the mean
Dispersion value	1.755

Statistical analysis title	Statistical analysis 2

Statistical analysis description:
8 to <18 years old (Subjects in this analysis: 178)

Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	199
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.4805
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-1.08
Confidence interval	
level	95 %
sides	2-sided
lower limit	-4.09
upper limit	1.93
Variability estimate	Standard error of the mean
Dispersion value	1.529

Statistical analysis title	Statistical analysis 3

Statistical analysis description:
8 to <18 years old (Subjects in this analysis: 171)

Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	200
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.3488
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-1.7
Confidence interval	
level	95 %
sides	2-sided
lower limit	-5.26
upper limit	1.86
Variability estimate	Standard error of the mean
Dispersion value	1.812

Statistical analysis title	Statistical analysis 4

Statistical analysis description:
5 to <8 years old (Subjects in this analysis=28)

Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose

Number of subjects included in analysis	195
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.2388
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	1.4
Confidence interval	
level	95 %
sides	2-sided
lower limit	-4.85
upper limit	7.66
Variability estimate	Standard error of the mean
Dispersion value	3.12

Statistical analysis title	Statistical analysis 5
Statistical analysis description:	
5 to <8 years old (Subjects in this analysis=21)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	199
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0098
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-3.13
Confidence interval	
level	95 %
sides	2-sided
lower limit	-10.23
upper limit	3.98
Variability estimate	Standard error of the mean
Dispersion value	3.542

Statistical analysis title	Statistical analysis 6
Statistical analysis description:	
5 to <8 years old (Subjects in this analysis=29)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	200
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1698
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	1.12

Confidence interval	
level	95 %
sides	2-sided
lower limit	-5.18
upper limit	7.42
Variability estimate	Standard error of the mean
Dispersion value	3.14

Secondary: Change From Baseline in the PROMIS-Pediatric Anxiety for Participants 5 to <18 Years at Study Entry

End point title	Change From Baseline in the PROMIS-Pediatric Anxiety for Participants 5 to <18 Years at Study Entry

End point description:

PROMIS is a set of person-centered measures that evaluates and monitors physical, mental, and social health in adults and children. The PROMIS Anxiety item bank assesses self-reported fear, anxious misery, hyperarousal, and somatic symptoms related to arousal. The PROMIS Anxiety Short Form (8 questions, 8a v2.0) is available in a pediatric self-report (ages 8 to <18 years) and for parents/caregivers serving as proxy reporters for their children (youth ages 5 to <8 years old). Children aged <5 years will not complete this assessment. Both pediatric self-report and proxy-report versions assess anxiety in past seven days. Response options range from 1= Never; 2 = Rarely; 3 = Sometimes; 4 = Often; to 5 = Almost always. Total raw scores are converted to T-Scores with higher scores representing greater anxiety. LS Means were calculated using MMRM model.

End point type	Secondary

End point timeframe:

Baseline, Week 16
APD: All randomized participants (5 to <18 years old) in the double-blind treatment period and had evaluable (PROMIS) - Pediatric Anxiety data.

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	93[7]	102[8]	106[9]	107[10]
Units: T-score				
least squares mean (standard error)				
5 to <8 years old	-4.65 (± 2.864)	-3.03 (± 2.318)	-5.09 (± 2.931)	-3.15 (± 2.214)
8 to <18 years old	-4.40 (± 1.223)	-4.09 (± 1.394)	-5.44 (± 1.064)	-6.81 (± 1.486)

Notes:

[7] - 5 to <8 years old -> n=11
8 to <18 years old -> n=82
[8] - 5 to <8 years old -> n=17
8 to <18 years old -> n=85
[9] - 5 to <8 years old -> n=10
8 to <18 years old -> n=96
[10] - 5 to <8 years old -> n=18
8 to <18 years old -> n=89

Statistical analyses

Statistical analysis title	Statistical analysis 1

Statistical analysis description:	
8 to <18 years old (Subjects in this analysis: 167)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	195
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.8611
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	0.32
Confidence interval	
level	95 %
sides	2-sided
lower limit	-3.24
upper limit	3.88
Variability estimate	Standard error of the mean
Dispersion value	1.813

Statistical analysis title	Statistical analysis 2
Statistical analysis description:	
8 to <18 years old (Subjects in this analysis: 178)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	199
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.5098
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-1.04
Confidence interval	
level	95 %
sides	2-sided
lower limit	-4.12
upper limit	2.05
Variability estimate	Standard error of the mean
Dispersion value	1.571

Statistical analysis title	Statistical Analysis 3
Statistical analysis description:	
8 to <18 years old (Subjects in this analysis: 171)	
Comparison groups	Baricitinib Double-blind High Dose v Placebo Double-blind

Number of subjects included in analysis	200
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1997
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-2.4
Confidence interval	
level	95 %
sides	2-sided
lower limit	-6.08
upper limit	1.27
Variability estimate	Standard error of the mean
Dispersion value	1.87

Statistical analysis title	Statistical analysis 4
Statistical analysis description:	
5 to <8 years old (Subjects in this analysis=28)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	195
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1957
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	1.62
Confidence interval	
level	95 %
sides	2-sided
lower limit	-5.11
upper limit	8.35
Variability estimate	Standard error of the mean
Dispersion value	3.351

Statistical analysis title	Statistical analysis 5
Statistical analysis description:	
5 to <8 years old (Subjects in this analysis=21)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	199
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0881
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.44

Confidence interval	
level	95 %
sides	2-sided
lower limit	-8.19
upper limit	7.32
Variability estimate	Standard error of the mean
Dispersion value	3.864

Statistical analysis title	Statistical Analysis 6
Statistical analysis description:	
5 to <8 years old (Subjects in this analysis=29)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	200
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1604
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-3.15
Confidence interval	
level	95 %
sides	2-sided
lower limit	-5.27
upper limit	8.28
Variability estimate	Standard error of the mean
Dispersion value	3.379

Secondary: Change From Baseline in the Children’s Dermatology Life Quality Index (CDLQI) at Week 16 for Participants 4 to <18 Years at Study Entry

End point title	Change From Baseline in the Children’s Dermatology Life Quality Index (CDLQI) at Week 16 for Participants 4 to <18 Years at Study Entry

End point description:

CDLQI is a validated 10 question tool to measure impact of skin disease on QOL in children by assessing how much the skin problem has affected the subjects over past week. Nine questions were scored as follows: Very much = 3, Quite a lot = 2, Only a little = 1, Not at all or unanswered = 0. Question 7 has an added possible response, which was scored as 3. CDLQI equals the sum of the score of each question (max. = 30, min. = 0). Higher the score, the greater the impact on QOL. A negative change from baseline indicated improvement. LS Means were calculated using mixed model repeated measures (MMRM) model includes treatment, age cohort, region, baseline disease severity (IGA), visit, treatment-by-age cohort interaction and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by-visit-interaction as fixed continuous effects.
APD: All randomized participants (4 to <18 years old) in the double-blind treatment period and had evaluable CDLQI data.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	97	105	111	111
Units: Score on a Scale				
least squares mean (standard error)	-3.06 (± 0.480)	-3.73 (± 0.465)	-3.70 (± 0.451)	-3.36 (± 0.459)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	202
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.2987
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.67
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.93
upper limit	0.59
Variability estimate	Standard error of the mean
Dispersion value	0.647

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	208
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.3096
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.64
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.88
upper limit	0.6
Variability estimate	Standard error of the mean
Dispersion value	0.632

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	208
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.6341
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.3
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.55
upper limit	0.95
Variability estimate	Standard error of the mean
Dispersion value	0.635

Secondary: Change From Baseline in Infants' Dermatology Quality of Life Index (IDQOL) at Week 16 for Participants 2 to <4 Years at Study Entry

End point title	Change From Baseline in Infants' Dermatology Quality of Life Index (IDQOL) at Week 16 for Participants 2 to <4 Years at Study Entry

End point description:

Infants' Dermatitis Quality of Life Index (IDQOL) is used to evaluate quality of life for subjects of age less than 4 years. IDQOL questionnaires were designed for infants (below the age of 4 years) with atopic dermatitis. The IDQOL was calculated by summing the score of each question resulting in a maximum of 30 and a minimum of 0. The higher the score in each questionnaire, the more quality of life is impaired. A negative change from baseline indicated improvement. LS Means were calculated using mixed model repeated measures (MMRM) model includes treatment, age cohort, region, baseline disease severity (IGA), visit, treatment-by-age cohort interaction and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by-visit-interaction as fixed continuous effects.
APD: All randomized participants (2 to <4 years old) in the double-blind treatment period and had evaluable IDQOL data.

End point type	Secondary

End point timeframe:

Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	5	2	1	1
Units: units on a scale				
least squares mean (standard error)	-1.40 (± 1.743)	3.87 (± 4.423)	3.33 (± 3.752)	-6.40 (± 3.601)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	7
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.2871
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	5.27
Confidence interval	
level	95 %
sides	2-sided
lower limit	-6.54
upper limit	17.09
Variability estimate	Standard error of the mean
Dispersion value	4.323

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	6
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.3093
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	4.73
Confidence interval	
level	95 %
sides	2-sided
lower limit	-7.83
upper limit	17.29
Variability estimate	Standard error of the mean
Dispersion value	3.835

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose

Number of subjects included in analysis	6
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.2912
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-5
Confidence interval	
level	95 %
sides	2-sided
lower limit	-18.22
upper limit	8.21
Variability estimate	Standard error of the mean
Dispersion value	3.788

Secondary: Change From Baseline in Infants' Dermatology Quality of Life Index (IDQOL) at Week 16 for Participants 2 to <4 Years at Study Entry

End point title	Change From Baseline in Infants' Dermatology Quality of Life Index (IDQOL) at Week 16 for Participants 2 to <4 Years at Study Entry

End point description:

Infants' Dermatitis Quality of Life Index (IDQOL) is used to evaluate quality of life for subjects of age less than 4 years. IDQOL questionnaires were designed for infants (below the age of 4 years) with atopic dermatitis. The IDQOL was calculated by summing the score of each question resulting in a maximum of 30 and a minimum of 0. The higher the score in each questionnaire, the more quality of life is impaired. A negative change from baseline indicated improvement. LS Means were calculated using mixed model repeated measures (MMRM) model includes treatment, age cohort, region, baseline disease severity (IGA), visit, treatment-by-age cohort interaction and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by-visit-interaction as fixed continuous effects.
APD: All randomized participants (2 to <4 years old) in the double-blind treatment period and had evaluable IDQOL data.

End point type	Secondary

End point timeframe:

Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	96[11]	104	106	109
Units: score on a scale				
least squares mean (standard error)				
Absenteeism	3.99 (± 2.367)	2.39 (± 2.135)	2.14 (± 2.107)	-0.94 (± 2.387)
Presenteeism	-4.69 (± 2.719)	-5.62 (± 2.452)	-9.99 (± 2.451)	-11.44 (± 2.797)
Overall Work Impairment	0.38 (± 3.473)	-3.80 (± 3.119)	-5.86 (± 3.086)	-11.15 (± 3.515)
Activity Impairment	-7.03 (± 2.372)	-11.45 (± 2.318)	-11.90 (± 2.293)	-14.05 (± 2.311)

Notes:
[11] - n for absenteeism=49, Presenteeism=55, Overall Work Impairment=49

Statistical analyses

Statistical analysis title	Statistical analysis 1
Statistical analysis description: Absenteeism (Subjects in this analysis: 115)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	200
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.6079
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-1.6
Confidence interval	
level	95 %
sides	2-sided
lower limit	-7.74
upper limit	4.54
Variability estimate	Standard error of the mean
Dispersion value	3.119

Statistical analysis title	Statistical analysis 2
Statistical analysis description: Absenteeism (Subjects in this analysis: 111)	
Comparison groups	Baricitinib Double-blind Medium Dose v Placebo Double-blind
Number of subjects included in analysis	202
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.5492
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-1.85
Confidence interval	
level	95 %
sides	2-sided
lower limit	-7.94
upper limit	4.24
Variability estimate	Standard error of the mean
Dispersion value	3.092

Statistical analysis title	Statistical Analysis 3
Statistical analysis description: Absenteeism (Subjects in this analysis: 104)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	205
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1338
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-4.93
Confidence interval	
level	95 %
sides	2-sided
lower limit	-11.39
upper limit	1.53
Variability estimate	Standard error of the mean
Dispersion value	3.281

Statistical analysis title	Statistical analysis 4
Statistical analysis description: Presenteeism (Subjects in this analysis: 126)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	200
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.7928
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.94
Confidence interval	
level	95 %
sides	2-sided
lower limit	-7.96
upper limit	6.08
Variability estimate	Standard error of the mean
Dispersion value	3.566

Statistical analysis title	Statistical analysis 5
Statistical analysis description: Presenteeism (Subjects in this analysis: 126)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose

Number of subjects included in analysis	202
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1366
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-5.3
Confidence interval	
level	95 %
sides	2-sided
lower limit	-12.3
upper limit	1.69
Variability estimate	Standard error of the mean
Dispersion value	3.553

Statistical analysis title	Statistical analysis 6
Statistical analysis description:	
Presenteeism (Subjects in this analysis: 114)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	205
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.076
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-6.75
Confidence interval	
level	95 %
sides	2-sided
lower limit	-14.21
upper limit	0.71
Variability estimate	Standard error of the mean
Dispersion value	3.792

Statistical analysis title	Statistical analysis 7
Statistical analysis description:	
Overall Work Impairment (Subjects in this analysis: 115)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	200
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.3602
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-4.18

Confidence interval	
level	95 %
sides	2-sided
lower limit	-13.16
upper limit	4.8
Variability estimate	Standard error of the mean
Dispersion value	4.561

Statistical analysis title	Statistical analysis 8
Statistical analysis description:	
Overall Work Impairment (Subjects in this analysis: 111)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	202
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1678
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-6.25
Confidence interval	
level	95 %
sides	2-sided
lower limit	-15.14
upper limit	2.65
Variability estimate	Standard error of the mean
Dispersion value	4.516

Statistical analysis title	Statistical analysis 9
Statistical analysis description:	
Overall Work Impairment (Subjects in this analysis: 104)	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	205
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.017
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-11.54
Confidence interval	
level	95 %
sides	2-sided
lower limit	-21
upper limit	-2.08
Variability estimate	Standard error of the mean
Dispersion value	4.808

Statistical analysis title	Statistical analysis 10
Statistical analysis description: Activity Impairment	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	200
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1645
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-4.42
Confidence interval	
level	95 %
sides	2-sided
lower limit	-10.66
upper limit	1.82
Variability estimate	Standard error of the mean
Dispersion value	3.174

Statistical analysis title	Statistical analysis 11
Statistical analysis description: Activity Impairment	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	202
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.124
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-4.87
Confidence interval	
level	95 %
sides	2-sided
lower limit	-11.07
upper limit	1.34
Variability estimate	Standard error of the mean
Dispersion value	3.158

Statistical analysis title	Statistical analysis 12
Statistical analysis description: Activity Impairment	
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose

Number of subjects included in analysis	205
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.027
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-7.02
Confidence interval	
level	95 %
sides	2-sided
lower limit	-13.23
upper limit	-0.8
Variability estimate	Standard error of the mean
Dispersion value	3.163

Secondary: Change From Baseline on the European Quality of Life–5 Dimensions–Youth (EQ-5D-Y) for Participants 4 to <18 Years at Study Entry

End point title	Change From Baseline on the European Quality of Life–5 Dimensions–Youth (EQ-5D-Y) for Participants 4 to <18 Years at Study Entry

End point description:

The EQ-5D-Y questionnaire is health status related and self-completed for pediatric participants ≥8 years old and completed by parents/caregivers for children 4 to <8 years old. Health state profile assessed health in 5 dimensions (Mobility,selfcare,usual activities,pain/discomfort, anxiety/depression) to obtain index score, each with three levels of response (no problems,some problems,a lot of problems). Participants indicated their health state by choosing appropriate level from each dimension. Visual analog scale on which participant rates their perceived health state from 0 ("worst health you can imagine") to 100 ("best health you can imagine") is presented.Higher the score the better the health status. LS Means uses MMRM model which includes treatment,age cohort,region,baseline disease severity(IGA),visit,treatment-by-age cohort interaction and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by-visit-interaction as fixed continuous effects.

End point type	Secondary

End point timeframe:

Baseline, Week 16
APD: All randomized participants (4 to <18 years old) in the double-blind treatment period with week 16 EQ-5D-Y data.

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	98	105	110	110
Units: score on a scale				
least squares mean (standard error)	3.15 (± 2.090)	5.12 (± 2.025)	5.16 (± 1.969)	7.67 (± 2.000)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	203
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.4778
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	1.97
Confidence interval	
level	95 %
sides	2-sided
lower limit	-3.49
upper limit	7.43
Variability estimate	Standard error of the mean
Dispersion value	2.778

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	208
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.4649
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	2.01
Confidence interval	
level	95 %
sides	2-sided
lower limit	-3.38
upper limit	7.39
Variability estimate	Standard error of the mean
Dispersion value	2.743

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	208
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.1013
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	4.52

Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.89
upper limit	9.94
Variability estimate	Standard error of the mean
Dispersion value	2.755

Secondary: Change From Baseline in the Score of Item 2 of the Atopic Dermatitis Sleep Scale (ADSS) for Participants 10 to <18 Years at Study Entry

End point title	Change From Baseline in the Score of Item 2 of the Atopic Dermatitis Sleep Scale (ADSS) for Participants 10 to <18 Years at Study Entry

End point description:

Atopic Dermatitis Sleep Scale (ADSS) is a 3-item, participant-administered questionnaire developed to assess the impact of itch on sleep including difficulty falling asleep, frequency of waking, and difficulty getting back to sleep last night. Item 2, frequency of waking last night is reported by selecting the number of times they woke up each night, ranging from 0 to 29 times, where the higher a number indicates a worse outcome. The ADSS is designed to be completed daily, using a daily diary, with respondents thinking about sleep "last night." Each item is scored individually.
LS Means were calculated using a MMRM model with treatment, region, baseline disease severity (IGA), visit, and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by- visit-interaction as fixed continuous effects.
APD: All randomized participants (10 to <18 years old) in the double-blind treatment period with week 16 ADSS Item 2 (frequency of waking) data.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	65	68	78	79
Units: score on a scale				
least squares mean (standard error)	-0.42 (± 0.130)	-0.35 (± 0.126)	-0.43 (± 0.123)	-0.55 (± 0.122)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose

Number of subjects included in analysis	133
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.6574
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	0.08
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.27
upper limit	0.42
Variability estimate	Standard error of the mean
Dispersion value	0.174

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	143
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.9488
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.01
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.35
upper limit	0.33
Variability estimate	Standard error of the mean
Dispersion value	0.172

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	144
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.4546
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.13
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.47
upper limit	0.21

Variability estimate	Standard error of the mean
Dispersion value	0.172

Secondary: Change From Baseline in Skin Pain NRS for Participants 10 to <18 Years at Study Entry

End point title	Change From Baseline in Skin Pain NRS for Participants 10 to <18 Years at Study Entry

End point description:

Skin Pain NRS is a participant-administered, 11-point horizontal scale anchored at 0 and 10, with 0 representing "no pain" and 10 representing "worst pain imaginable." Overall severity of a participant's skin pain is indicated by selecting the number, using a daily diary, that best describes the worst level of skin pain in the past 24 hours.

LS Means were calculated using a MMRM model with treatment, age cohort, region, baseline disease severity (IGA), visit, treatment-by-age cohort interaction and treatment-by-visit-interaction as fixed categorical effects and baseline and baseline-by-visit-interaction as fixed continuous effects.
APD: All randomized participants (10 to <18 years old) in the double-blind treatment period with Week 16 Skin Pain NRS data.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Medium Dose	Baricitinib Double-blind High Dose
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	65	68	78	79
Units: score on a scale				
least squares mean (standard error)	-1.15 (± 0.267)	-1.23 (± 0.259)	-1.56 (± 0.254)	-1.77 (± 0.251)

Statistical analyses

Statistical analysis title	Statistical analysis 1
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Low Dose
Number of subjects included in analysis	133
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.8133
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.09
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.79
upper limit	0.62

Variability estimate	Standard error of the mean
Dispersion value	0.36

Statistical analysis title	Statistical analysis 2
Comparison groups	Placebo Double-blind v Baricitinib Double-blind Medium Dose
Number of subjects included in analysis	143
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.2517
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.41
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.11
upper limit	0.29
Variability estimate	Standard error of the mean
Dispersion value	0.355

Statistical analysis title	Statistical Analysis 3
Comparison groups	Placebo Double-blind v Baricitinib Double-blind High Dose
Number of subjects included in analysis	144
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.0803
Method	Mixed models analysis
Parameter estimate	LS Mean difference (Final Values)
Point estimate	-0.62
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.32
upper limit	0.08
Variability estimate	Standard error of the mean
Dispersion value	0.354

Secondary: Number of Participant Responses With Suspension Acceptability and Palatability Assessment (PK Lead-In) for Participants <10 Years Old

End point title	Number of Participant Responses With Suspension Acceptability and Palatability Assessment (PK Lead-In) for Participants <10 Years Old

End point description:

The questionnaire for Suspension acceptability and palatability assessed the participants ability to swallow the oral suspension product, experience relating to the taste, smell and ease of administering

and taking the suspension. The questionnaire contained following Questions: Question 1) How did you (your child) like the taste of the medicine? Question 2) How did you (your child) like the smell of the medicine? Question 3) How easy was it for you (your child) to take the medicine today? Question 4) How easy was it for you to use the oral syringe to give your child the dose today? Responses: Liked Very Much, Liked, Neither Liked nor Disliked, Disliked, Disliked Very Much, Very Easy, Easy, Neither Easy nor Hard, Difficult (or Hard) and Very Difficult (or Hard). The number of participants with these responses are presented. Data is presented as "Question Number-Response-Time point".

End point type	Secondary

End point timeframe:

Week 2
APD: All Pk lead-in participants (<10 years old) with data for suspension acceptability and palatability assessment at given time point.

End point values	Baricitinib Open Label High Dose (PK Lead-in)			
Subject group type	Subject analysis set			
Number of subjects analysed	13			
Units: Participant responses				
number (not applicable)				
Question 1- Liked Very Much:	8			
Question 1- Liked	1			
Question 1- Neither Liked nor Disliked	3			
Question 1- Disliked	1			
Question 1- Disliked Very Much	0			
Question 2- Liked Very Much:	6			
Question 2- Liked	1			
Question 2- Neither Liked nor Disliked	6			
Question 2- Disliked	0			
Question 2- Disliked Very Much	0			
Question 3- Very Easy	8			
Question 3- Easy	5			
Question 3- Neither Easy nor Hard	0			
Question 3- Difficult (or Hard)	0			
Question 3- Very Difficult (or Hard)	0			
Question 4- Very Easy	9			
Question 4- Easy	4			
Question 4- Neither Easy nor Hard	0			
Question 4- Difficult (or Hard)	0			
Question 4- Very Difficult (or Hard)	0			

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participant Responses With Tablet Acceptability and Palatability Assessment (PK Lead-In) for Participants >=10 Years Old

End point title	Number of Participant Responses With Tablet Acceptability and Palatability Assessment (PK Lead-In) for Participants >=10

	Years Old

End point description:

The questionnaire for tablet acceptability and palatability assessed the participants ability to swallow the tablet. The questionnaire contained the question 1) How easy was it for you (your child) to swallow the medicine today? Responses: Very Easy, Easy, Neither Easy nor Hard, Difficult (or Hard) and Very Difficult (or Hard). The number of participants with these responses are presented. Data is presented as "Question Number-Response-Time point".
APD: All PK Lead-In participants >=10 years old, who had data for tablet acceptability and palatability at given time point.

End point type	Secondary

End point timeframe:

Week 2

End point values	Baricitinib Open Label High Dose (PK Lead-in)			
Subject group type	Subject analysis set			
Number of subjects analysed	18			
Units: Participant responses				
number (not applicable)				
Question 1- Very Easy	18			
Question 1- Easy	0			
Question 1- Neither Easy nor Hard	0			
Question 1- Difficult (or Hard)	0			
Question 1- Very Difficult (or Hard)	0			

Statistical analyses

No statistical analyses for this end point

Secondary: Pop PK: Maximum Observed Drug Concentration at Steady State (Cmax,ss) of LY3009104

End point title	Pop PK: Maximum Observed Drug Concentration at Steady State (Cmax,ss) of LY3009104

End point description:

PK: Cmax of LY3009104
APD: All participants who received at least one dose of study drug in the open-label PK lead-in and double-blind treatment period and had evaluable PK data.

End point type	Secondary

End point timeframe:

Baseline through 16 Weeks

End point values	Baricitinib (0.5mg): Low Dose (2 to<6	Baricitinib (1 mg): Medium Dose (2 to<6 Years)	Baricitinib (2 mg): High Dose (2 to<6 Years)	Baricitinib (0.5mg): Low Dose (6 to <10 Years)
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	9	8	15	24
Units: nanograms per milliliter (ng/mL)				
geometric mean (geometric coefficient of variation)	18.9 (± 29)	35.1 (± 21)	64.8 (± 22)	11.6 (± 29)

End point values	Baricitinib (1 mg): Medium Dose (6 to <10 Years)	Baricitinib (2 mg): High Dose (6 to <10 Years)	Baricitinib (1 mg): Low Dose (10 to <18 Years)	Baricitinib (2 mg): Medium Dose (10 to <18 Years)
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	26	30	87	86
Units: nanograms per milliliter (ng/mL)				
geometric mean (geometric coefficient of variation)	23.1 (± 23)	44 (± 41)	13.2 (± 34)	27.8 (± 34)

End point values	Baricitinib (4 mg): High Dose (10 to <18 Years)			
Subject group type	Subject analysis set			
Number of subjects analysed	108			
Units: nanograms per milliliter (ng/mL)				
geometric mean (geometric coefficient of variation)	50.7 (± 28)			

Statistical analyses

No statistical analyses for this end point

Secondary: Pop PK: Area Under the Concentration-Time Curve for Dosing Interval at Steady State (AUCtau,ss) of LY3009104

End point title	Pop PK: Area Under the Concentration-Time Curve for Dosing Interval at Steady State (AUCtau,ss) of LY3009104

End point description:

Pop PK: AUCtau,ss was derived by a population pharmacokinetics approach.
APD: All participants who received at least one dose of study drug in the open-label PK lead-in and double-blind treatment period and had evaluable PK data.

End point type	Secondary

End point timeframe:

Baseline through 16 Weeks

End point values	Baricitinib (0.5mg): Low Dose (2 to<6	Baricitinib (1 mg): Medium Dose (2 to<6 Years)	Baricitinib (2 mg): High Dose (2 to<6 Years)	Baricitinib (0.5mg): Low Dose (6 to <10 Years)
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	9	8	15	24
Units: hour*nanogram per milliliter (h*ng/ mL)				
geometric mean (geometric coefficient of variation)	94.3 (± 108)	200 (± 63)	298 (± 51)	74.8 (± 64)

End point values	Baricitinib (1 mg): Medium Dose (6 to <10 Years)	Baricitinib (2 mg): High Dose (6 to <10 Years)	Baricitinib (1 mg): Low Dose (10 to <18 Years)	Baricitinib (2 mg): Medium Dose (10 to <18 Years)
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	26	30	87	86
Units: hour*nanogram per milliliter (h*ng/ mL)				
geometric mean (geometric coefficient of variation)	155 (± 65)	276 (± 76)	109 (± 63)	222 (± 66)

End point values	Baricitinib (4 mg): High Dose (10 to <18 Years)			
Subject group type	Subject analysis set			
Number of subjects analysed	108			
Units: hour*nanogram per milliliter (h*ng/ mL)				
geometric mean (geometric coefficient of variation)	383 (± 61)			

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Baseline Up to 16 Weeks

Adverse event reporting additional description:

All participants who received at least one dose of study drug in the PK Lead-in period (Study period 1) and double-blind treatment period (Study period 2).

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	25.0

Reporting groups

Reporting group title	Placebo Double-blind

Reporting group description:

All participants who received at least one dose of study drug in the PK Lead-in period (Study period 1) and double-blind treatment period (Study period 2). Gender specific events only occurring in male or female participants have had the number of participants at risk adjusted accordingly.

Reporting group title	Baricitinib Double-blind Low Dose

Reporting group description:

Participants 10 to < 18 years received Baricitinib low dose (1 mg) and placebo to maintain the blind, administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib low dose (0.5 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Reporting group title	Baricitinib Double-blind Mid Dose

Reporting group description:

Participants 10 to < 18 years received Baricitinib medium dose (2 mg) and placebo to maintain the blind, administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib medium dose (1 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Reporting group title	Baricitinib Double-blind High Dose

Reporting group description:

Participants 10 to < 18 years received Baricitinib high dose (4 mg) and placebo to maintain the blind, administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib high dose (2 mg) administered as oral suspension QD or placebo oral suspension QD to maintain the blind.

Reporting group title	Baricitinib Open-label High Dose PK Lead-in

Reporting group description:

Participants 10 to < 18 years received Baricitinib high dose (4 mg) administered orally in tablet form QD.
Participants 2 to < 10 years received Baricitinib high dose (2 mg) administered as oral suspension QD.

Serious adverse events	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Mid Dose
Total subjects affected by serious adverse events			
subjects affected / exposed	5 / 122 (4.10%)	2 / 120 (1.67%)	1 / 120 (0.83%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events	0	0	0
Nervous system disorders			
vertigo cns origin			

alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 122 (0.00%)	0 / 120 (0.00%)	1 / 120 (0.83%)
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			
bronchospasm			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 122 (0.00%)	1 / 120 (0.83%)	0 / 120 (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			
dermatitis atopic			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 122 (2.46%)	1 / 120 (0.83%)	0 / 120 (0.00%)
occurrences causally related to treatment / all	0 / 3	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Psychiatric disorders			
suicide attempt			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 122 (0.82%)	0 / 120 (0.00%)	0 / 120 (0.00%)
occurrences causally related to treatment / all	1 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
covid-19			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 122 (0.82%)	0 / 120 (0.00%)	0 / 120 (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
corneal abscess			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 122 (0.00%)	0 / 120 (0.00%)	0 / 120 (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
impetigo			

alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 122 (0.82%)	0 / 120 (0.00%)	0 / 120 (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
ophthalmic herpes simplex			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 122 (0.00%)	0 / 120 (0.00%)	0 / 120 (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

Serious adverse events	Baricitinib Double-blind High Dose	Baricitinib Open-label High Dose PK Lead-in	
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 120 (0.83%)	0 / 33 (0.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
Nervous system disorders			
vertigo cns origin			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 120 (0.00%)	0 / 33 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory, thoracic and mediastinal disorders			
bronchospasm			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 120 (0.00%)	0 / 33 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Skin and subcutaneous tissue disorders			
dermatitis atopic			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 120 (0.00%)	0 / 33 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Psychiatric disorders			

suicide attempt			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 120 (0.00%)	0 / 33 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
covid-19			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 120 (0.00%)	0 / 33 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
corneal abscess			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 120 (0.83%)	0 / 33 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
impetigo			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 120 (0.00%)	0 / 33 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
ophthalmic herpes simplex			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 120 (0.83%)	0 / 33 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

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

Non-serious adverse events	Placebo Double-blind	Baricitinib Double-blind Low Dose	Baricitinib Double-blind Mid Dose
Total subjects affected by non-serious adverse events			
subjects affected / exposed	42 / 122 (34.43%)	39 / 120 (32.50%)	44 / 120 (36.67%)
Nervous system disorders			

dizziness			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	2 / 122 (1.64%)	3 / 120 (2.50%)	0 / 120 (0.00%)
occurrences (all)	2	3	0
headache			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	10 / 122 (8.20%)	7 / 120 (5.83%)	11 / 120 (9.17%)
occurrences (all)	10	9	20
Blood and lymphatic system disorders			
lymphadenopathy			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 122 (0.00%)	3 / 120 (2.50%)	1 / 120 (0.83%)
occurrences (all)	0	4	1
General disorders and administration site conditions			
pyrexia			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 122 (0.82%)	3 / 120 (2.50%)	1 / 120 (0.83%)
occurrences (all)	1	3	2
Gastrointestinal disorders			
abdominal pain upper			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 122 (0.82%)	2 / 120 (1.67%)	2 / 120 (1.67%)
occurrences (all)	1	2	4
abdominal pain			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 122 (2.46%)	3 / 120 (2.50%)	5 / 120 (4.17%)
occurrences (all)	4	3	6
diarrhoea			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	2 / 122 (1.64%)	1 / 120 (0.83%)	2 / 120 (1.67%)
occurrences (all)	2	1	2
vomiting			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 122 (2.46%)	2 / 120 (1.67%)	2 / 120 (1.67%)
occurrences (all)	3	2	2

Chapped lips			
subjects affected / exposed	0 / 122 (0.00%)	0 / 120 (0.00%)	0 / 120 (0.00%)
occurrences (all)	0	0	0
Nausea			
subjects affected / exposed	0 / 122 (0.00%)	0 / 120 (0.00%)	0 / 120 (0.00%)
occurrences (all)	0	0	0
Reproductive system and breast disorders			
dysmenorrhoea			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed[1]	2 / 64 (3.13%)	0 / 62 (0.00%)	2 / 63 (3.17%)
occurrences (all)	3	0	5
Respiratory, thoracic and mediastinal disorders			
asthma			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	4 / 122 (3.28%)	1 / 120 (0.83%)	3 / 120 (2.50%)
occurrences (all)	7	1	5
cough			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 122 (2.46%)	1 / 120 (0.83%)	2 / 120 (1.67%)
occurrences (all)	3	1	2
Skin and subcutaneous tissue disorders			
acne			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	5 / 122 (4.10%)	3 / 120 (2.50%)	4 / 120 (3.33%)
occurrences (all)	5	3	4
dermatitis atopic			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 122 (2.46%)	1 / 120 (0.83%)	0 / 120 (0.00%)
occurrences (all)	3	1	0
Hair growth abnormal			
subjects affected / exposed	0 / 122 (0.00%)	0 / 120 (0.00%)	0 / 120 (0.00%)
occurrences (all)	0	0	0
Pruritus			
subjects affected / exposed	0 / 122 (0.00%)	0 / 120 (0.00%)	0 / 120 (0.00%)
occurrences (all)	0	0	0

Musculoskeletal and connective tissue disorders			
arthralgia			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 122 (0.00%)	4 / 120 (3.33%)	2 / 120 (1.67%)
occurrences (all)	0	4	2
Infections and infestations			
covid-19			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 122 (2.46%)	5 / 120 (4.17%)	5 / 120 (4.17%)
occurrences (all)	3	5	5
bronchitis			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 122 (0.82%)	6 / 120 (5.00%)	1 / 120 (0.83%)
occurrences (all)	1	6	1
gastroenteritis			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 122 (0.00%)	0 / 120 (0.00%)	2 / 120 (1.67%)
occurrences (all)	0	0	2
impetigo			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 122 (2.46%)	1 / 120 (0.83%)	2 / 120 (1.67%)
occurrences (all)	3	1	2
molluscum contagiosum			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 122 (2.46%)	0 / 120 (0.00%)	0 / 120 (0.00%)
occurrences (all)	3	0	0
influenza			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 122 (2.46%)	0 / 120 (0.00%)	1 / 120 (0.83%)
occurrences (all)	3	0	1
pharyngitis			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 122 (0.82%)	3 / 120 (2.50%)	3 / 120 (2.50%)
occurrences (all)	1	3	3
nasopharyngitis			

alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	6 / 122 (4.92%)	4 / 120 (3.33%)	5 / 120 (4.17%)
occurrences (all)	6	4	5
rhinitis			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	2 / 122 (1.64%)	3 / 120 (2.50%)	0 / 120 (0.00%)
occurrences (all)	2	3	0
urinary tract infection			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	6 / 122 (4.92%)	2 / 120 (1.67%)	0 / 120 (0.00%)
occurrences (all)	7	2	0
upper respiratory tract infection			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 122 (0.82%)	3 / 120 (2.50%)	4 / 120 (3.33%)
occurrences (all)	1	4	4
Folliculitis			
subjects affected / exposed	0 / 122 (0.00%)	0 / 120 (0.00%)	0 / 120 (0.00%)
occurrences (all)	0	0	0
Oral herpes			
subjects affected / exposed	0 / 122 (0.00%)	0 / 120 (0.00%)	0 / 120 (0.00%)
occurrences (all)	0	0	0
Metabolism and nutrition disorders			
decreased appetite			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 122 (0.00%)	0 / 120 (0.00%)	0 / 120 (0.00%)
occurrences (all)	0	0	0

Non-serious adverse events	Baricitinib Double-blind High Dose	Baricitinib Open-label High Dose PK Lead-in	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	41 / 120 (34.17%)	11 / 33 (33.33%)	
Nervous system disorders			
dizziness			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 120 (0.00%)	2 / 33 (6.06%)	
occurrences (all)	0	2	

headache			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	6 / 120 (5.00%)	1 / 33 (3.03%)	
occurrences (all)	6	1	
Blood and lymphatic system disorders			
lymphadenopathy			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 120 (0.00%)	0 / 33 (0.00%)	
occurrences (all)	0	0	
General disorders and administration site conditions			
pyrexia			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	2 / 120 (1.67%)	1 / 33 (3.03%)	
occurrences (all)	2	1	
Gastrointestinal disorders			
abdominal pain upper			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	4 / 120 (3.33%)	1 / 33 (3.03%)	
occurrences (all)	5	1	
abdominal pain			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	6 / 120 (5.00%)	0 / 33 (0.00%)	
occurrences (all)	6	0	
diarrhoea			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	5 / 120 (4.17%)	1 / 33 (3.03%)	
occurrences (all)	7	1	
vomiting			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 120 (0.83%)	0 / 33 (0.00%)	
occurrences (all)	1	0	
Chapped lips			
subjects affected / exposed	0 / 120 (0.00%)	1 / 33 (3.03%)	
occurrences (all)	0	1	
Nausea			

subjects affected / exposed	0 / 120 (0.00%)	1 / 33 (3.03%)	
occurrences (all)	0	1	
Reproductive system and breast disorders			
dysmenorrhoea			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed[1]	0 / 53 (0.00%)	0 / 33 (0.00%)	
occurrences (all)	0	0	
Respiratory, thoracic and mediastinal disorders			
asthma			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 120 (0.83%)	0 / 33 (0.00%)	
occurrences (all)	1	0	
cough			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	2 / 120 (1.67%)	0 / 33 (0.00%)	
occurrences (all)	3	0	
Skin and subcutaneous tissue disorders			
acne			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	6 / 120 (5.00%)	0 / 33 (0.00%)	
occurrences (all)	6	0	
dermatitis atopic			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 120 (0.00%)	0 / 33 (0.00%)	
occurrences (all)	0	0	
Hair growth abnormal			
subjects affected / exposed	0 / 120 (0.00%)	1 / 33 (3.03%)	
occurrences (all)	0	1	
Pruritus			
subjects affected / exposed	0 / 120 (0.00%)	1 / 33 (3.03%)	
occurrences (all)	0	1	
Musculoskeletal and connective tissue disorders			
arthralgia			
alternative dictionary used: MedDRA 25.0			

subjects affected / exposed	0 / 120 (0.00%)	0 / 33 (0.00%)	
occurrences (all)	0	0	
Infections and infestations			
covid-19			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 120 (2.50%)	0 / 33 (0.00%)	
occurrences (all)	3	0	
bronchitis			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 120 (2.50%)	0 / 33 (0.00%)	
occurrences (all)	3	0	
gastroenteritis			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 120 (2.50%)	1 / 33 (3.03%)	
occurrences (all)	3	1	
impetigo			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 120 (0.00%)	0 / 33 (0.00%)	
occurrences (all)	0	0	
molluscum contagiosum			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	2 / 120 (1.67%)	0 / 33 (0.00%)	
occurrences (all)	3	0	
influenza			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 120 (0.83%)	0 / 33 (0.00%)	
occurrences (all)	1	0	
pharyngitis			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	1 / 120 (0.83%)	0 / 33 (0.00%)	
occurrences (all)	1	0	
nasopharyngitis			
alternative dictionary used: MedDRA 25.0			

subjects affected / exposed	5 / 120 (4.17%)	2 / 33 (6.06%)	
occurrences (all)	6	2	
rhinitis			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	2 / 120 (1.67%)	0 / 33 (0.00%)	
occurrences (all)	3	0	
urinary tract infection			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 120 (0.00%)	0 / 33 (0.00%)	
occurrences (all)	0	0	
upper respiratory tract infection			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	5 / 120 (4.17%)	0 / 33 (0.00%)	
occurrences (all)	6	0	
Folliculitis			
subjects affected / exposed	0 / 120 (0.00%)	1 / 33 (3.03%)	
occurrences (all)	0	1	
Oral herpes			
subjects affected / exposed	0 / 120 (0.00%)	1 / 33 (3.03%)	
occurrences (all)	0	1	
Metabolism and nutrition disorders			
decreased appetite			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	3 / 120 (2.50%)	0 / 33 (0.00%)	
occurrences (all)	3	0	

Notes:

[1] - The number of subjects exposed to this adverse event is less than the total number of subjects exposed for the reporting group. These numbers are expected to be equal.
Justification: Gender specific events only occurring in male or female participants have had the number of participants at risk adjusted accordingly.

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
12 June 2019	Protocol (a): Updated Study Period 3 and Study Period 4 to a combination study design with topical corticosteroids (TCS) based on feedback from regulatory agencies; - Only participants who have moderate (IGA 3) or severe (IGA 4) atopic dermatitis was transitioned to open-label treatment after Study Period 3; - participants in Study Period 3 should tolerate TCS; - Eosinophilia (>5%) was removed from permanent discontinuation of investigational product (IP) criteria; Additional text was included to allow for required analyses to support regulatory submissions after participants have completed the primary endpoint.
06 August 2020	Protocol (b): Increased the treatment period from 2 to 4 years, additional exploratory objectives were included for timepoints in the extended treatment period, and relevant updates were included to describe possible termination of the study in a specific geography after commercial availability or negative regulatory opinion; - Added provisional language for participation in the study during exceptional circumstances such as the coronavirus disease 2019 (COVID-19) pandemic; - Included provision for home visits to collect laboratory tests.
14 February 2023	Protocol (c): Included Regulatory Agency Identifier Number(s); - Extended Study Period 4 by up to an additional 1 year for patients for whom a systemic selective Janus kinase (JAK) inhibitor or biologic treatment is not available; - Defined that sponsor will provide low- and moderate-potency topical corticosteroids through study specific to study visits; Defined that the collection of imaging (x-ray, MRI) is not required after the participant reaches 18 years of age; - Revised additional visits; - Added "Proportion of participants achieving SCORAD75 at 2, 3, 4, and 5 years during long-term extension." as exploratory objective ; - Addition of new appendix to describe additional procedures for countries participating in the PK Lead-in Period (Study Period 2), SoA content specific to EU-specific Requirements

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported