Clinical trial results:
A Phase 3 Open-label Study to Assess the Efficacy, Safety, and Pharmacokinetics of Subcutaneously Administered Ustekinumab in the Treatment of Moderate to Severe Chronic Plaque Psoriasis in Pediatric Subjects 6 to <12 Years of Age

Summary

EudraCT number	2016-000121-40
Trial protocol	BE HU DE PL FR NL Outside EU/EEA
Global end of trial date	06 October 2020

Results information

Result version number	v1 (current)
This version publication date	16 April 2021
First version publication date	16 April 2021

Trial information

Trial identification

Sponsor protocol code	CNTO1275PSO3013

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT02698475
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Janssen Research & Development, LLC
Sponsor organisation address	920 Route202, Raritan, United States, 08869
Public contact	Clinical Registry Group, Janssen Research and Development, ClinicalTrialsEU@its.jnj.com
Scientific contact	Clinical Registry Group, Janssen Research and Development, ClinicalTrialsEU@its.jnj.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	Yes
EMA paediatric investigation plan number(s)	EMEA-000311-PIP01-08
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	06 October 2020
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	06 October 2020
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The purpose of this study was to evaluate the efficacy and safety of ustekinumab in pediatric subjects greater than or equal to (>=) 6 years to less than (<) 12 years of age with moderate to severe chronic plaque psoriasis.

Protection of trial subjects:

This study was conducted in accordance with the ethical principles that have their origin in the Declaration of Helsinki and that are consistent with Good Clinical Practices and applicable regulatory requirements. Safety evaluations were based on the incidence and type of adverse events (AEs), laboratory analyte values, vital sign measurements, physical examinations, concomitant medication review, injection-site reactions, allergic reactions, tuberculosis evaluations reported during the study.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	07 June 2016
Long term follow-up planned	Yes
Long term follow-up rationale	Safety, Efficacy
Long term follow-up duration	52 Months
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Belgium: 4
Country: Number of subjects enrolled	Canada: 2
Country: Number of subjects enrolled	Germany: 7
Country: Number of subjects enrolled	Hungary: 10
Country: Number of subjects enrolled	Netherlands: 1
Country: Number of subjects enrolled	Poland: 12
Country: Number of subjects enrolled	United States: 8
Worldwide total number of subjects	44
EEA total number of subjects	34

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37	0

wk	
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	44
Adolescents (12-17 years)	0
Adults (18-64 years)	0
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

A total of 52 subjects were screened, of which 44 subjects were enrolled in the study and 39 subjects completed the main study period. 28 subjects entered the long-term extension period.

Period 1

Period 1 title	Ustekinumab Standard Dosage (Main Study)
Is this the baseline period?	Yes
Allocation method	Not applicable
Blinding used	Not blinded

Arms

Arm title	Ustekinumab Standard Dosage (Main Study)

Arm description:

Subjects received ustekinumab standard weight-based dose at Weeks 0 and 4 followed by every 12 weeks (q12w) dosing up to Week 40. Ustekinumab was administered as subcutaneous (SC) injections of 0.75 milligrams per kilogram (mg/kg) for subjects with weight less than (<) 60 kilograms (kg), 45 mg for subjects with weight greater than or equal to (>=) 60 kg to less than or equal to (<=) 100 kg, and 90 mg for subjects with weight >100 kg. Subjects had a safety follow-up till Week 56.

Arm type	Experimental
Investigational medicinal product name	Ustekinumab
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Cutaneous liquid
Routes of administration	Subcutaneous use

Dosage and administration details:

Subjects received weight-based dose of ustekinumab as SC injections at Week 0 and 4 followed by q12w dosing up to Week 40.

Number of subjects in period 1	Ustekinumab Standard Dosage (Main Study)
Started	44
Completed	41
Not completed	3
Lack of efficacy	1
Protocol deviation	2

Period 2

Period 2 title	Ustekinumab Standard Dosage (LTE)
Is this the baseline period?	No
Allocation method	Not applicable
Blinding used	Not blinded

Arms

Arm title	Ustekinumab Standard Dosage (Long-term extension [LTE])

Arm description:

Subjects who had a beneficial response from Ustekinumab treatment continued receiving ustekinumab weight based dose in a every 12 weeks (q12w) regimen from Week 56 onwards until commercially available or up to Week 264. Ustekinumab was administered as SC injections of 0.75 mg/kg for subjects with weight <60 kg, 45 mg for subjects with weight >=60 kg to <=100 kg, and 90 mg for subjects with with weight >100 kg.

Arm type	Experimental
Investigational medicinal product name	Ustekinumab
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Cutaneous liquid
Routes of administration	Subcutaneous use

Dosage and administration details:

Subjects received weight-based dose of ustekinumab as SC injections at Week 56 followed by q12w dosing until commercially available or up to Week 264.

Number of subjects in period 2[1]	Ustekinumab Standard Dosage (Long-term extension [LTE])
Started	28
Completed	0
Not completed	28
Trial site terminated by sponsor	1
Other	1
LTE protocol-specified criteria 9.1.5	22
Lost to follow-up	1
Withdrawal by subject	3

Notes:

[1] - The number of subjects starting the period is not consistent with the number completing the preceding period. It is expected the number of subjects starting the subsequent period will be the same as the number completing the preceding period.
Justification: The number of subjects starting the long-term extension (LTE) period is different from the main study period as per study design because only few subjects entered the LTE period.

Baseline characteristics

Reporting groups

Reporting group title	Ustekinumab Standard Dosage (Main Study)

Reporting group description:

Subjects received ustekinumab standard weight-based dose at Weeks 0 and 4 followed by every 12 weeks (q12w) dosing up to Week 40. Ustekinumab was administered as subcutaneous (SC) injections of 0.75 milligrams per kilogram (mg/kg) for subjects with weight less than (<) 60 kilograms (kg), 45 mg for subjects with weight greater than or equal to (>=) 60 kg to less than or equal to (<=) 100 kg, and 90 mg for subjects with weight >100 kg. Subjects had a safety follow-up till Week 56.

Reporting group values	Ustekinumab Standard Dosage (Main Study)	Total	
Number of subjects	44	44	
Title for AgeCategorical Units: subjects			
Children (2-11 years)	44	44	
Adolescents (12-17 years)	0	0	
Adults (18-64 years)	0	0	
From 65 to 84 years	0	0	
85 years and over	0	0	
Title for AgeContinuous Units: years			
arithmetic mean	8.9		
standard deviation	± 1.74	-	
Title for Gender Units: subjects			
Female	27	27	
Male	17	17	

End points

End points reporting groups

Reporting group title	Ustekinumab Standard Dosage (Main Study)

Reporting group description:

Subjects received ustekinumab standard weight-based dose at Weeks 0 and 4 followed by every 12 weeks (q12w) dosing up to Week 40. Ustekinumab was administered as subcutaneous (SC) injections of 0.75 milligrams per kilogram (mg/kg) for subjects with weight less than (<) 60 kilograms (kg), 45 mg for subjects with weight greater than or equal to (>=) 60 kg to less than or equal to (<=) 100 kg, and 90 mg for subjects with weight >100 kg. Subjects had a safety follow-up till Week 56.

Reporting group title	Ustekinumab Standard Dosage (Long-term extension [LTE])

Reporting group description:

Subjects who had a beneficial response from Ustekinumab treatment continued receiving ustekinumab weight based dose in a every 12 weeks (q12w) regimen from Week 56 onwards until commercially available or up to Week 264. Ustekinumab was administered as SC injections of 0.75 mg/kg for subjects with weight <60 kg, 45 mg for subjects with weight >=60 kg to <=100 kg, and 90 mg for subjects with with weight >100 kg.

Primary: Percentage of Subjects With Physician’s Global Assessment (PGA) Score of Cleared (0) or Minimal (1) at Week 12

End point title	Percentage of Subjects With Physician’s Global Assessment (PGA) Score of Cleared (0) or Minimal (1) at Week 12[1]

End point description:

The PGA is used to determine the subject's psoriasis at a given time point. Overall lesions are graded for induration, erythema, and scaling. The subject's psoriasis was assessed as cleared (0), minimal (1), mild (2), moderate (3), marked (4), or severe (5). Higher scores indicated worse disease. Analysis set: Full analysis set (FAS), consisted of all enrolled and treated participants who received at least 1 injection of ustekinumab (partial or complete). Treatment Failure (TF) criteria: discontinued study agent due to lack of efficacy or adverse event (AE) of worsening of psoriasis or who started protocol-prohibited medication/therapy. Participants who met TF criteria prior to Week 12 or with missing data at Week 12 were considered non-responders at Week 12.

End point type	Primary

End point timeframe:

Week 12

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: Descriptive statistics was done, no inferential statistical analysis was performed.

End point values	Ustekinumab Standard Dosage (Main Study)			
Subject group type	Reporting group			
Number of subjects analysed	44			
Units: percentage of subjects				
number (confidence interval 95%)	77.3 (62.2 to 88.5)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Subjects who Achieved Psoriasis Area and Severity Index (PASI) 75 Response at Week 12

End point title	Percentage of Subjects who Achieved Psoriasis Area and Severity Index (PASI) 75 Response at Week 12

End point description:

PASI system is used for assessing and grading the severity of psoriatic lesions and their response to therapy. The body is divided into 4 regions: head, trunk, upper and lower extremities. Each of these areas is assessed separately for the percentage of area involved and gives a a numeric score ranging from 0 (no involvement) to 6 (90%-100% involvement). For erythema, induration, and scaling, which are each rated on a scale of 0 (None) to 4 (very severe). PASI produces a numeric score ranging from 0 (no psoriasis) to 72 (disease severity). Higher score indicates more severe disease. Subjects with >=75 % improvement in PASI from Baseline were considered PASI 75 responders. Analysis set: FAS. TF criteria- discontinued study agent due to lack of efficacy or AE of worsening of psoriasis or who started protocol-prohibited medication/therapy. Subjects who met TF criteria prior to Week 12 or with missing data at Week 12 were considered non-responders at Week 12.

End point type	Secondary

End point timeframe:

Week 12

End point values	Ustekinumab Standard Dosage (Main Study)			
Subject group type	Reporting group			
Number of subjects analysed	44			
Units: percentage of subjects				
number (confidence interval 95%)	84.1 (69.9 to 93.4)			

Statistical analyses

No statistical analyses for this end point

Secondary: Change from Baseline in Children Dermatology Life Quality Index (CDLQI) Score at Week 12

End point title	Change from Baseline in Children Dermatology Life Quality Index (CDLQI) Score at Week 12

End point description:

CDLQI was used to assess the impact of psoriasis on subject health-related quality of life. The CDLQI has 10 items assessing health-related quality of life (HRQOL) in subjects with skin disease each measured on a scale from 0 (Not at all) to 3 (Very much). The total score ranges from 0 to 30, with lower scores indicating better quality of life. The higher the score, the greater the impairment in quality of life (QoL). Analysis set: FAS. TF criteria- discontinued study agent due to lack of efficacy or AE of worsening of psoriasis or who started protocol-prohibited medication/therapy. For subjects meeting one or more TF criteria, were considered to have 0 improvement from baseline. Here "N" (number of subjects analyzed) signifies subjects who were evaluable for this outcome measure at both baseline and Week 12.

End point type	Secondary

End point timeframe:

Baseline and Week 12

End point values	Ustekinumab Standard Dosage (Main Study)			
Subject group type	Reporting group			
Number of subjects analysed	42			
Units: units on a scale				
arithmetic mean (standard deviation)	-6.3 (± 6.43)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Subjects who Achieved PASI 90 Response at Week 12

End point title	Percentage of Subjects who Achieved PASI 90 Response at Week 12

End point description:

PASI system is used for assessing and grading the severity of psoriatic lesions and their response to therapy. The body is divided into 4 regions: head, trunk, upper and lower extremities. Each of these areas is assessed separately for the percentage of area involved and gives a a numeric score ranging from 0 (no involvement) to 6 (90%-100% involvement). For erythema, induration, and scaling, which are each rated on a scale of 0 (None) to 4 (very severe). PASI produces a numeric score ranging from 0 (no psoriasis) to 72 (disease severity). Higher score indicates more severe disease. Subjects with >=90 % improvement in PASI from Baseline were considered PASI 90 responders. Analysis set: FAS. TF criteria- discontinued study agent due to lack of efficacy or AE of worsening of psoriasis or who started protocol-prohibited medication/therapy. Subjects who met TF criteria prior to Week 12 or with missing data at Week 12 were considered non-responders at Week 12.

End point type	Secondary

End point timeframe:

Week 12

End point values	Ustekinumab Standard Dosage (Main Study)			
Subject group type	Reporting group			
Number of subjects analysed	44			
Units: percentage of subjects				
number (confidence interval 95%)	63.6 (47.8 to 77.6)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Subjects with a PGA Score of Cleared (0), Cleared (0) or Minimal (1), Mild or Better (<=2) at Weeks 4, 8, 12, 16, 28, 40, and 52

End point title	Percentage of Subjects with a PGA Score of Cleared (0), Cleared (0) or Minimal (1), Mild or Better (<=2) at Weeks 4, 8, 12, 16, 28, 40, and 52

End point description:

The PGA is used to determine the subject's psoriasis at a given time point. Overall lesions are graded for induration, erythema, and scaling. The subject's psoriasis is assessed as cleared (0), minimal (1), mild (2), moderate (3), marked (4), or severe (5). Higher scores indicate worse disease. Analysis set: FAS. TF criteria- discontinued study agent due to lack of efficacy or AE of worsening of psoriasis or who started protocol-prohibited medication/therapy. Subjects who met 1 or more TF criteria were considered as non-responders after TF. In addition, subjects with missing data at Week 12 were also considered as non-responders at Week 12. 'n' (number analyzed): subjects evaluated at given timepoints.

End point type	Secondary

End point timeframe:

Weeks 4, 8, 12, 16, 28, 40, and 52

End point values	Ustekinumab Standard Dosage (Main Study)			
Subject group type	Reporting group			
Number of subjects analysed	44			
Units: percentage of subjects				
number (not applicable)				
Week 4: PGA Score 0 (n=42)	4.8			
Week 4: PGA Score 0 or 1 (n=42)	33.3			
Week 4: PGA Score 0 or 1 or 2 (n=42)	66.7			
Week 8: PGA Score 0 (n=41)	26.8			
Week 8: PGA Score 0 or 1 (n=41)	63.4			
Week 8: PGA Score 0 or 1 or 2 (n=41)	85.4			
Week 12: PGA Score 0 (n=44)	38.6			
Week 12: PGA Score 0 or 1 (n=44)	77.3			
Week 12: PGA Score 0 or 1 or 2 (n=44)	90.9			
Week 16: PGA Score 0 (n=42)	45.2			
Week 16: PGA Score 0 or 1 (n=42)	85.7			
Week 16: PGA Score 0 or 1 or 2 (n=42)	95.2			
Week 28: PGA Score 0 (n=42)	45.2			
Week 28: PGA Score 0 or 1 (n=42)	83.3			
Week 28: PGA Score 0 or 1 or 2 (n=42)	95.2			
Week 40: PGA Score 0 (n=42)	52.4			
Week 40: PGA Score 0 or 1 (n=42)	76.2			
Week 40: PGA Score 0 or 1 or 2 (n=42)	90.5			
Week 52: PGA Score 0 (n=41)	56.1			
Week 52: PGA Score 0 or 1 (n=41)	75.6			
Week 52: PGA Score 0 or 1 or 2 (n=41)	90.2			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Subjects who Achieved a PASI 50, PASI 75, PASI 90 and PASI 100 Response at Weeks 4, 8, 12, 16, 28, 40, and 52

End point title	Percentage of Subjects who Achieved a PASI 50, PASI 75, PASI 90 and PASI 100 Response at Weeks 4, 8, 12, 16, 28, 40, and 52

End point description:

PASI system is used for assessing and grading the severity of psoriatic lesions and their response to therapy. The body is divided into 4 regions: head, trunk, upper and lower extremities. Each of these areas is assessed separately for the percentage of area involved and gives a numeric score ranging from 0 (no involvement) to 6 (90%-100% involvement). For erythema, induration, and scaling, which are each rated on a scale of 0 (None) to 4 (very severe). PASI produces a numeric score ranging from 0 (no psoriasis) to 72 (disease severity). PASI 50, 75, 90, and 100 refers to >=50%, >=75%, >=90%, and 100% improvement in PASI from Baseline respectively. Analysis set: FAS. TF criteria- discontinued study agent due to lack of efficacy or AE of worsening of psoriasis or who started protocol-prohibited medication/therapy. Subjects who met TF criteria prior to Week 12 or with missing data were considered non-responders at Week 12. 'n' (number analyzed): subjects evaluated at given timepoints.

End point type	Secondary

End point timeframe:

Weeks 4, 8, 12, 16, 28, 40, and 52

End point values	Ustekinumab Standard Dosage (Main Study)			
Subject group type	Reporting group			
Number of subjects analysed	44			
Units: percentage of subjects				
number (not applicable)				
Week 4: PASI 100 (n=42)	2.4			
Week 4: PASI 90 (n=42)	16.7			
Week 4: PASI 75 (n=42)	26.2			
Week 4: PASI 50 (n=42)	52.4			
Week 8: PASI 100 (n=41)	17.1			
Week 8: PASI 90 (n=41)	43.9			
Week 8: PASI 75 (n=41)	58.5			
Week 8: PASI 50 (n=41)	82.9			
Week 12: PASI 100 (n=44)	34.1			
Week 12: PASI 90 (n=44)	63.6			
Week 12: PASI 75 (n=44)	84.1			
Week 12: PASI 50 (n=44)	93.2			
Week 16: PASI 100 (n=42)	40.5			
Week 16: PASI 90 (n=42)	66.7			
Week 16: PASI 75 (n=42)	83.3			
Week 16: PASI 50 (n=42)	97.6			
Week 28: PASI 100 (n=42)	38.1			
Week 28: PASI 90 (n=42)	81.0			
Week 28: PASI 75 (n=42)	92.9			
Week 28: PASI 50 (n=42)	92.9			
Week 40: PASI 100 (n=42)	42.9			
Week 40: PASI 90 (n=42)	78.6			

Week 40: PASI 75 (n=42)	90.5			
Week 40: PASI 50 (n=42)	92.9			
Week 52: PASI 100 (n=41)	53.7			
Week 52: PASI 90 (n=41)	70.7			
Week 52: PASI 75 (n=41)	87.8			
Week 52: PASI 50 (n=41)	92.7			

Statistical analyses

No statistical analyses for this end point

Secondary: Percent Change from Baseline in PASI Score at Weeks 4, 8, 12, 16, 28, 40, and 52

End point title	Percent Change from Baseline in PASI Score at Weeks 4, 8, 12, 16, 28, 40, and 52

End point description:

PASI system is used for assessing and grading the severity of psoriatic lesions and their response to therapy. The body is divided into 4 regions: head, trunk, upper and lower extremities. Each of these areas is assessed separately for the percentage of area involved and gives a a numeric score ranging from 0 (no involvement) to 6 (90%-100% involvement). For erythema, induration, and scaling, which are each rated on a scale of 0 (None) to 4 (very severe). PASI produces a numeric score ranging from 0 (no psoriasis) to 72 (disease severity). PASI 100 responders were defined as 100% improvement in PASI from Baseline respectively. Analysis set: FAS. TF criteria- discontinued study agent due to lack of efficacy or AE of worsening of psoriasis or who started protocol-prohibited medication/therapy. For subjects meeting one or more TF criteria, were considered to have 0% improvement from baseline. 'n' (number analyzed): subjects evaluated at given timepoints.

End point type	Secondary

End point timeframe:

Baseline and Weeks 4, 8, 12, 16, 28, 40, 52

End point values	Ustekinumab Standard Dosage (Main Study)			
Subject group type	Reporting group			
Number of subjects analysed	44			
Units: percent change				
arithmetic mean (standard deviation)				
Week 4 (n=42)	52.9 (± 27.33)			
Week 8 (n=41)	78.9 (± 21.44)			
Week 12 (n=42)	89.7 (± 13.80)			
Week 16 (n=42)	90.4 (± 13.77)			
Week 28 (n=42)	90.4 (± 21.55)			
Week 40 (n=42)	89.9 (± 23.01)			
Week 52 (n=41)	89.1 (± 24.28)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Subjects who Achieved PASI 100, PASI 90, PASI 75 or PASI 50 Response in PASI Components (Induration, Erythema, and Scaling) and Region Components (Head, Trunk, Upper Extremities, and Lower Extremities) at Week 12

End point title	Percentage of Subjects who Achieved PASI 100, PASI 90, PASI 75 or PASI 50 Response in PASI Components (Induration, Erythema, and Scaling) and Region Components (Head, Trunk, Upper Extremities, and Lower Extremities) at Week 12

End point description:

PASI system is used for assessing and grading the severity of psoriatic lesions and their response to therapy. The body is divided into 4 regions: head, trunk, upper and lower extremities. Each of these areas is assessed separately for the percentage of area involved and gives a numeric score ranging from 0 (no involvement) to 6 (90%-100% involvement). For erythema, induration, and scaling, which are each rated on a scale of 0 (None) to 4 (very severe). PASI produces a numeric score ranging from 0 (no psoriasis) to 72 (disease severity). PASI 50, 75, 90, and 100 refers to >=50%, >=75%, >=90%, and 100% improvement in PASI from Baseline respectively. Analysis set: FAS. TF criteria- discontinued study agent due to lack of efficacy or AE of worsening of psoriasis or who started protocol-prohibited medication/therapy. Subjects meeting one or more TF criteria were considered as non-responders.

End point type	Secondary

End point timeframe:

Week 12

End point values	Ustekinumab Standard Dosage (Main Study)			
Subject group type	Reporting group			
Number of subjects analysed	44			
Units: percentage of subjects				
number (not applicable)				
Induration: PASI 100	43.2			
Induration: PASI 90	61.4			
Induration: PASI 75	77.3			
Induration: PASI 50	93.2			
Scaling: PASI 100	38.6			
Scaling: PASI 90	63.6			
Scaling: PASI 75	84.1			
Scaling: PASI 50	90.9			
Erythema: PASI 100	38.6			
Erythema: PASI 90	61.4			
Erythema: PASI 75	81.8			
Erythema: PASI 50	93.2			
Head: PASI 100	52.3			
Head: PASI 90	65.9			
Head: PASI 75	79.5			
Head: PASI 50	93.2			
Trunk: PASI 100	61.4			
Trunk: PASI 90	61.4			
Trunk: PASI 75	79.5			
Trunk: PASI 50	88.6			
Upper extremities: PASI 100	65.9			

Upper extremities: PASI 90	65.9			
Upper extremities: PASI 75	79.5			
Upper extremities: PASI 50	84.1			
Lower extremities: PASI 100	68.2			
Lower extremities: PASI 90	68.2			
Lower extremities: PASI 75	72.7			
Lower extremities: PASI 50	93.2			

Statistical analyses

No statistical analyses for this end point

Secondary: Change from Baseline in CDLQI Score at Weeks 4, 12, 28, and 52

End point title	Change from Baseline in CDLQI Score at Weeks 4, 12, 28, and 52

End point description:

CDLQI was used to assess the impact of psoriasis on subject health-related quality of life. The CDLQI has 10 items assessing health-related quality of life (HRQOL) in patients with skin disease each measured on a scale from 0 (Not at all) to 3 (Very much). The total score ranges from 0 to 30. The higher the score, the greater the impairment in quality of life (QoL). Analysis set: FAS. TF criteria-discontinued study agent due to lack of efficacy or AE of worsening of psoriasis or who started protocol-prohibited medication/therapy. Subjects who met TF criteria prior to Week 12 were assigned 0 change. 'n' (number analyzed): subjects evaluated at given timepoints.

End point type	Secondary

End point timeframe:

Baseline and Weeks 4, 12, 28, 52

End point values	Ustekinumab Standard Dosage (Main Study)			
Subject group type	Reporting group			
Number of subjects analysed	44			
Units: units on a scale				
arithmetic mean (standard deviation)				
Week 4 (n=42)	-4.1 (± 4.88)			
Week 12 (n=42)	-6.3 (± 6.43)			
Week 28 (n=42)	-6.6 (± 5.79)			
Week 52 (n=41)	-6.4 (± 6.10)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Subjects with a CDLQI Score of 0 or 1 at Week 12 in Subjects with a Baseline CDLQI Score Greater than (>) 1

End point title	Percentage of Subjects with a CDLQI Score of 0 or 1 at Week

	12 in Subjects with a Baseline CDLQI Score Greater than (>) 1

End point description:

CDLQI was used to assess the impact of psoriasis on subject health-related quality of life. The CDLQI has 10 items assessing health-related quality of life (HRQOL) in patients with skin disease each measured on a scale from 0 (Not at all) to 3 (Very much). The total score ranges from 0 to 30. The higher the score, the greater impairment in quality of life. Analysis set: FAS with CDLQI score >1 at baseline. TF criteria- discontinued study agent due to lack of efficacy or AE of worsening of psoriasis or who started protocol-prohibited medication/therapy. Subjects who met 1 or more TF criteria prior to Week 12 or with missing data were considered as nonresponders. Here "N" (number of subjects analyzed) signifies subjects who were evaluable for this endpoint.

End point type	Secondary

End point timeframe:

Week 12

End point values	Ustekinumab Standard Dosage (Main Study)			
Subject group type	Reporting group			
Number of subjects analysed	39			
Units: percentage of subjects				
number (confidence interval 95%)	61.5 (44.6 to 76.6)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Subjects with a CDLQI Score of 0 or 1 at Weeks 4, 12, 28 and 52 in Subjects with a Baseline CDLQI Score >1

End point title	Percentage of Subjects with a CDLQI Score of 0 or 1 at Weeks 4, 12, 28 and 52 in Subjects with a Baseline CDLQI Score >1

End point description:

CDLQI was used to assess the impact of psoriasis on subject health-related quality of life. The CDLQI has 10 items assessing health-related quality of life (HRQOL) in patients with skin disease each measured on a scale from 0 (Not at all) to 3 (Very much). The total score ranges from 0 to 30. The total score ranges from 0 to 30. The higher the score, the greater impairment in quality of life. Analysis set: FAS with CDLQI >1 at baseline.TF criteria- discontinued study agent due to lack of efficacy or AE of worsening of psoriasis or who started protocol-prohibited medication/therapy. Subjects who met 1 or more TF criteria were considered as nonresponders after TF. Here "N" (number of subjects analyzed) signifies subjects who were evaluable for this endpoint and 'n' (number analyzed): subjects evaluated at given timepoints.

End point type	Secondary

End point timeframe:

Weeks 4, 12, 28, and 52

End point values	Ustekinumab Standard Dosage (Main Study)			
Subject group type	Reporting group			
Number of subjects analysed	39			
Units: percentage of subjects				
number (not applicable)				
Week 4 (n=37)	38.7			
Week 12 (n=39)	61.5			
Week 28 (n=37)	62.2			
Week 52 (n=36)	58.3			

Statistical analyses

No statistical analyses for this end point

Secondary: Change from Baseline in CDLQI Component Scores at Week 12

End point title	Change from Baseline in CDLQI Component Scores at Week 12

End point description:

CDLQI was used to assess the impact of psoriasis on subject health-related quality of life. The CDLQI has 10 items assessing health-related quality of life (HRQOL) in patients with skin disease each measured on a scale from 0 (Not at all) to 3 (Very much). The total score ranges from 0 to 30. The total score ranges from 0 to 30. The higher the score, the greater impairment in quality of life. Analysis set: FAS. TF criteria- discontinued study agent due to lack of efficacy or AE of worsening of psoriasis or who started protocol-prohibited medication/therapy. Subjects who met TF criteria prior to Week 12 were assigned 0 change. Here 'N' (number of subjects analyzed) included all subjects who were evaluable for this endpoint.

End point type	Secondary

End point timeframe:

Baseline and Week 12

End point values	Ustekinumab Standard Dosage (Main Study)			
Subject group type	Reporting group			
Number of subjects analysed	42			
Units: units on a scale				
arithmetic mean (standard deviation)				
Symptoms and feelings	-1.9 (± 1.81)			
Leisure	-1.7 (± 2.19)			
School or holidays	-0.5 (± 0.80)			
Personal relationships	-0.8 (± 1.71)			
Sleep	-0.4 (± 0.91)			
Treatment	-0.9 (± 1.14)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of Subjects Achieving a PGA Score of Cleared (0), Cleared (0) or Minimal (1), Mild or Better (<=2) at Weeks 80, 104, 128, 152 and 176

End point title	Percentage of Subjects Achieving a PGA Score of Cleared (0), Cleared (0) or Minimal (1), Mild or Better (<=2) at Weeks 80, 104, 128, 152 and 176

End point description:

The PGA is used to determine the subject's psoriasis at a given time point. Overall lesions are graded for induration, erythema, and scaling. The subject's psoriasis was assessed as cleared (0), minimal (1), mild (2), moderate (3), marked (4), or severe (5). Higher scores indicated worse disease. Analysis set: FAS; all subjects enrolled in the LTE who received at least an injection of ustekinumab at Week 56 (partial or complete). Here "N" (number of subjects analyzed) signifies subjects who were evaluable for this endpoint and 'n' (number analyzed): subjects evaluated at given timepoints.

End point type	Secondary

End point timeframe:

Weeks 80, 104, 128, 152, 176

End point values	Ustekinumab Standard Dosage (Long-term extension [LTE])			
Subject group type	Reporting group			
Number of subjects analysed	25			
Units: percentage of subjects				
number (not applicable)				
Week 80: PGA score 0 (n=25)	64			
Week 80: PGA score 0 or 1 (n=25)	80			
Week 80: PGA score 0 or 1 or 2 (n=25)	100			
Week 104: PGA score 0 (n=20)	50			
Week 104: PGA score 0 or 1 (n=20)	70			
Week 104: PGA score 0 or 1 or 2 (n=20)	100			
Week 128: PGA score 0 (n=20)	60			
Week 128: PGA score 0 or 1 (n=20)	80			
Week 128: PGA score 0 or 1 or 2 (n=20)	95			
Week 152: PGA score 0 (n=13)	53.8			
Week 152: PGA score 0 or 1 (n=13)	61.5			
Week 152: PGA score 0 or 1 or 2 (n=13)	100			
Week 176: PGA score 0 (n=3)	33.3			
Week 176: PGA score 0 or 1 (n=3)	66.7			
Week 176: PGA score 0 or 1 or 2 (n=3)	100			

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Up to Week 264

Adverse event reporting additional description:

Safety analysis set consisted of all enrolled subjects who received at least 1 injection of ustekinumab (partial or complete) during the study.

Assessment type	Non-systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	22.0

Reporting groups

Reporting group title	Ustekinumab Standard Dosage (Main Study)

Reporting group description:

Subjects received ustekinumab standard weight-based dose at Weeks 0 and 4 followed by every 12 weeks (q12w) dosing up to Week 40. Ustekinumab was administered as subcutaneous (SC) injections of 0.75 milligrams per kilogram (mg/kg) for subjects with weight less than (<) 60 kilograms (kg), 45 mg for subjects with weight greater than or equal to (>=) 60 kg to less than or equal to (<=) 100 kg, and 90 mg for subjects with weight >100 kg. Subjects had a safety follow-up till Week 56.

Reporting group title	Ustekinumab Standard Dosage (LTE)

Reporting group description:

Subjects who had a beneficial response from Ustekinumab treatment continued receiving ustekinumab weight based dose in a every 12 weeks (q12w) regimen from Week 56 onwards until commercially available or up to Week 264. Ustekinumab was administered as SC injections of 0.75 mg/kg for subjects with weight <60 kg, 45 mg for subjects with weight >=60 kg to <=100 kg, and 90 mg for subjects with with weight >100 kg.

Serious adverse events	Ustekinumab Standard Dosage (Main Study)	Ustekinumab Standard Dosage (LTE)	
Total subjects affected by serious adverse events			
subjects affected / exposed	3 / 44 (6.82%)	1 / 28 (3.57%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
Injury, poisoning and procedural complications			
Eyelid Injury			
subjects affected / exposed	1 / 44 (2.27%)	0 / 28 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Psychiatric disorders			
Attention Deficit/Hyperactivity Disorder			

subjects affected / exposed	1 / 44 (2.27%)	0 / 28 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	0 / 44 (0.00%)	1 / 28 (3.57%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Infectious Mononucleosis			
subjects affected / exposed	1 / 44 (2.27%)	0 / 28 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

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

Non-serious adverse events	Ustekinumab Standard Dosage (Main Study)	Ustekinumab Standard Dosage (LTE)	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	27 / 44 (61.36%)	17 / 28 (60.71%)	
General disorders and administration site conditions			
Injection Site Erythema			
subjects affected / exposed	6 / 44 (13.64%)	2 / 28 (7.14%)	
occurrences (all)	16	2	
Gastrointestinal disorders			
Abdominal Pain			
subjects affected / exposed	3 / 44 (6.82%)	0 / 28 (0.00%)	
occurrences (all)	4	0	
Vomiting			
subjects affected / exposed	0 / 44 (0.00%)	2 / 28 (7.14%)	
occurrences (all)	0	3	
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	2 / 44 (4.55%)	3 / 28 (10.71%)	
occurrences (all)	2	4	

Oropharyngeal Pain			
subjects affected / exposed	1 / 44 (2.27%)	3 / 28 (10.71%)	
occurrences (all)	1	3	
Skin and subcutaneous tissue disorders			
Psoriasis			
subjects affected / exposed	3 / 44 (6.82%)	0 / 28 (0.00%)	
occurrences (all)	4	0	
Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	0 / 44 (0.00%)	3 / 28 (10.71%)	
occurrences (all)	0	3	
Infections and infestations			
Gastroenteritis			
subjects affected / exposed	3 / 44 (6.82%)	3 / 28 (10.71%)	
occurrences (all)	3	3	
Nasopharyngitis			
subjects affected / exposed	11 / 44 (25.00%)	8 / 28 (28.57%)	
occurrences (all)	12	11	
Otitis Media			
subjects affected / exposed	3 / 44 (6.82%)	2 / 28 (7.14%)	
occurrences (all)	3	2	
Pharyngitis			
subjects affected / exposed	6 / 44 (13.64%)	1 / 28 (3.57%)	
occurrences (all)	11	2	
Respiratory Tract Infection			
subjects affected / exposed	0 / 44 (0.00%)	2 / 28 (7.14%)	
occurrences (all)	0	3	
Tonsillitis			
subjects affected / exposed	4 / 44 (9.09%)	0 / 28 (0.00%)	
occurrences (all)	4	0	
Upper Respiratory Tract Infection			
subjects affected / exposed	6 / 44 (13.64%)	2 / 28 (7.14%)	
occurrences (all)	12	17	
Viral Upper Respiratory Tract Infection			
subjects affected / exposed	1 / 44 (2.27%)	2 / 28 (7.14%)	
occurrences (all)	1	3	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
18 May 2017	The overall reason for this amendment was to allow pediatric subjects who demonstrated clinical benefit through Week 52 of the main study to continue receiving ustekinumab. Additionally, longer-term safety and efficacy data in this patient population was collected.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

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

Due to the study design, the population was limited in the long-term extension period and decreased over time as subjects met discontinuation criteria and exited the study.

Notes: