



Clinical trial results:

A Phase 3, Multicenter, Randomized, Placebo-Controlled, Double-Blind Study of the Efficacy and Safety of Apremilast (CC-10004) in Subjects with Moderate to Severe Genital Psoriasis

Summary

EudraCT number	2018-002608-15
Trial protocol	FR BE IT
Global end of trial date	09 February 2022

Results information

Result version number	v1 (current)
This version publication date	15 December 2022
First version publication date	15 December 2022

Trial information

Trial identification

Sponsor protocol code	CC-10004-PSOR-025
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Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT03777436
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Amgen Inc.
Sponsor organisation address	One Amgen Center Drive, Thousand Oaks, CA, United States,
Public contact	Study Director, Amgen Inc., +1 866-572-6436, medinfo@amgen.com
Scientific contact	Study Director, Amgen Inc., +1 866-572-6436, medinfo@amgen.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	09 February 2022
Is this the analysis of the primary completion data?	No
Global end of trial reached?	Yes
Global end of trial date	09 February 2022
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The primary objective of the study was to evaluate the clinical efficacy of oral apremilast 30 mg twice daily (BID), compared to placebo, in participants with moderate to severe genital psoriasis during the 16-week Placebo-controlled Phase.

Protection of trial subjects:

This study was conducted in accordance with International Council for Harmonisation (ICH) Good Clinical Practice (GCP) guidelines and in accordance with the general ethical principles outlined in the Declaration of Helsinki. Essential documents will be retained in accordance with ICH GCP. The study sponsor declares that the information provided in this report is an accurate representation of the data captured and analyses performed for this study.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	11 February 2019
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Belgium: 7
Country: Number of subjects enrolled	Canada: 45
Country: Number of subjects enrolled	Germany: 66
Country: Number of subjects enrolled	France: 11
Country: Number of subjects enrolled	Italy: 19
Country: Number of subjects enrolled	United States: 141
Worldwide total number of subjects	289
EEA total number of subjects	103

Notes:

Subjects enrolled per age group

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

Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	255
From 65 to 84 years	34
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Participants were enrolled at 49 centers in Belgium, Canada, France, Germany, Italy, and the United States from February 2019 to February 2022.

Pre-assignment

Screening details:

Participants were randomized in a 1:1 ratio to receive either apremilast or matched placebo for the first 16 weeks (Placebo-controlled Phase) of the study. At Week 16, eligible participants may have continued on active treatment by entering a 16-week extension phase (Apremilast Extension Phase). Total treatment duration = 32 weeks.

Period 1

Period 1 title	Placebo-controlled Phase
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator

Arms

Are arms mutually exclusive?	Yes
Arm title	Placebo-controlled Phase: Placebo

Arm description:

Participants received placebo as oral tablets twice daily (BID) for up to 16 weeks (Week 0 to Week 16).

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

Dosage and administration details:

Administered orally.

Arm title	Placebo-controlled Phase: Apremilast 30 mg
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Arm description:

Participants received apremilast 30 mg as oral tablets BID for up to 16 weeks (Week 0 to Week 16).

Arm type	Experimental
Investigational medicinal product name	Apremilast
Investigational medicinal product code	CC-10004
Other name	Otezla
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Administered orally.

Number of subjects in period 1	Placebo-controlled Phase: Placebo	Placebo-controlled Phase: Apremilast 30 mg
Started	146	143
Took at Least 1 Dose of IP	145	143
Completed	111	119
Not completed	35	24
Consent withdrawn by subject	19	3
Physician decision	-	1
Due to COVID-19 control measures	1	-
Adverse event, non-fatal	8	10
Non-compliance with study drug	-	2
Lost to follow-up	7	7
Lack of efficacy	-	1

Period 2

Period 2 title	Apremilast Extension Phase
Is this the baseline period?	No
Allocation method	Not applicable
Blinding used	Not blinded

Arms

Arm title	Apremilast Extension Phase: Apremilast 30 mg
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Arm description:

Eligible participants who completed the Placebo-controlled Phase entered the Apremilast Extension Phase and received apremilast 30 mg as oral tablets BID for up to an additional 16 weeks (Week 16 to Week 32).

Arm type	Experimental
Investigational medicinal product name	Apremilast
Investigational medicinal product code	CC-10004
Other name	Otezla
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Administered orally.

Number of subjects in period 2^[1]	Apremilast Extension Phase: Apremilast 30 mg
Started	229
Took at Least 1 Dose of IP	228
Completed	201
Not completed	28
Consent withdrawn by subject	13
Adverse event, non-fatal	6
Miscellaneous	1
Lost to follow-up	7
Lack of efficacy	1

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: 1 participant did not enter the Apremilast Extension Phase as they were lost to follow-up.

Baseline characteristics

Reporting groups

Reporting group title	Placebo-controlled Phase: Placebo
Reporting group description:	
Participants received placebo as oral tablets twice daily (BID) for up to 16 weeks (Week 0 to Week 16).	
Reporting group title	Placebo-controlled Phase: Apremilast 30 mg
Reporting group description:	
Participants received apremilast 30 mg as oral tablets BID for up to 16 weeks (Week 0 to Week 16).	

Reporting group values	Placebo-controlled Phase: Placebo	Placebo-controlled Phase: Apremilast 30 mg	Total
Number of subjects	146	143	289
Age categorical			
Units: Subjects			

Age Continuous			
Units: years			
arithmetic mean	46.4	43.5	
standard deviation	± 14.38	± 13.36	-
Sex: Female, Male			
Units:			
Female	44	43	87
Male	102	100	202
Race (NIH/OMB)			
Units: Subjects			
American Indian or Alaska Native	0	0	0
Asian	8	4	12
Native Hawaiian or Other Pacific Islander	1	0	1
Black or African American	3	6	9
White	131	131	262
More than one race	0	0	0
Unknown or Not Reported	3	2	5
Ethnicity (NIH/OMB)			
Units: Subjects			
Hispanic or Latino	13	18	31
Not Hispanic or Latino	131	125	256
Unknown or Not Reported	2	0	2
Modified Static Physician Global Assessment of Genitalia (sPGA-G) Score			
The modified sPGA-G is the assessment by the Investigator of the participant's psoriasis lesions' overall disease severity in the genital area at the time of evaluation. The modified sPGA-G is a 5-point scale ranging from clear (0), almost clear (1), mild (2), moderate (3), to severe (4), incorporating an assessment of the severity of the three primary signs of the disease: erythema, plaque elevation, and scaling.			
Units: Subjects			
3 (Moderate)	128	123	251
4 (Severe)	18	20	38

End points

End points reporting groups

Reporting group title	Placebo-controlled Phase: Placebo
Reporting group description: Participants received placebo as oral tablets twice daily (BID) for up to 16 weeks (Week 0 to Week 16).	
Reporting group title	Placebo-controlled Phase: Apremilast 30 mg
Reporting group description: Participants received apremilast 30 mg as oral tablets BID for up to 16 weeks (Week 0 to Week 16).	
Reporting group title	Apremilast Extension Phase: Apremilast 30 mg
Reporting group description: Eligible participants who completed the Placebo-controlled Phase entered the Apremilast Extension Phase and received apremilast 30 mg as oral tablets BID for up to an additional 16 weeks (Week 16 to Week 32).	

Primary: Percentage of Participants With a Modified sPGA-G Response at Week 16

End point title	Percentage of Participants With a Modified sPGA-G Response at Week 16
End point description: The modified sPGA-G is the assessment by the Investigator of the participant's psoriasis lesions' overall disease severity in the genital area at the time of evaluation. The modified sPGA-G is a 5-point scale ranging from clear (0), almost clear (1), mild (2), moderate (3), to severe (4), incorporating an assessment of the severity of the 3 primary signs of the disease: erythema, plaque elevation, and scaling. A modified sPGA-G response is defined as modified sPGA-G score of clear (0) or almost clear (1) and with ≥ 2 -point reduction from Baseline at Week 16. Missing values were imputed using the multiple imputation (MI) method. Two-sided 95% confidence intervals (CIs) for the within-group proportions were based on the Wilson-score method. The intent-to-treat (ITT) analysis set consisted of all participants who are randomized regardless of whether the participant received investigational product (IP).	
End point type	Primary
End point timeframe: Baseline and Week 16 of the Placebo-controlled Phase	

End point values	Placebo-controlled Phase: Placebo	Placebo-controlled Phase: Apremilast 30 mg		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	146	143		
Units: Percentage of participants				
number (confidence interval 95%)	19.1 (12.4 to 25.7)	38.7 (30.4 to 47.0)		

Statistical analyses

Statistical analysis title	Placebo versus (vs.) Apremilast 30 mg
Comparison groups	Placebo-controlled Phase: Placebo v Placebo-controlled Phase: Apremilast 30 mg
Number of subjects included in analysis	289
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0003
Method	Cochran-Mantel-Haenszel
Parameter estimate	Adjusted difference
Point estimate	19.6
Confidence interval	
level	95 %
sides	2-sided
lower limit	9
upper limit	30.3

Secondary: Percentage of Participants With a Static Physician Global Assessment (sPGA) Response at Week 16

End point title	Percentage of Participants With a Static Physician Global Assessment (sPGA) Response at Week 16
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End point description:

The sPGA is the assessment by the Investigator of the overall disease severity at the time of evaluation. The sPGA is a 5-point scale ranging from 0 (clear), 1 (almost clear), 3 (moderate) to 4 (severe), incorporating an assessment of the severity of the 3 primary signs of the disease: erythema, scaling and plaque elevation.

An sPGA response is defined as sPGA score of clear (0) or almost clear (1) and with ≥ 2 -point reduction from Baseline at Week 16.

Missing values were imputed using the MI method. Two-sided 95% CIs for the within-group proportions were based on the Wilson-score method.

The ITT analysis set consisted of all participants who are randomized regardless of whether the participant received IP.

End point type	Secondary
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End point timeframe:

Baseline and Week 16 of the placebo-controlled phase

End point values	Placebo-controlled Phase: Placebo	Placebo-controlled Phase: Apremilast 30 mg		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	146	143		
Units: Percentage of participants				
number (confidence interval 95%)	7.2 (2.9 to 11.5)	21.5 (14.4 to 28.5)		

Statistical analyses

Statistical analysis title	Placebo vs. Apremilast 30 mg
Comparison groups	Placebo-controlled Phase: Placebo v Placebo-controlled Phase: Apremilast 30 mg
Number of subjects included in analysis	289
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0007
Method	Cochran-Mantel-Haenszel
Parameter estimate	Adjusted difference
Point estimate	14.3
Confidence interval	
level	95 %
sides	2-sided
lower limit	6
upper limit	22.5

Secondary: Percentage of Participants With a Genital Psoriasis Itch Numeric Rating Scale (GPI-NRS) Response at Week 16

End point title	Percentage of Participants With a Genital Psoriasis Itch Numeric Rating Scale (GPI-NRS) Response at Week 16
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End point description:

The GPI-NRS is a self-reported measure where participants were asked to assess their psoriasis symptoms in the genital area and select a number on a scale of 0-10, where 0 represents no itch, and 10 represents the worst imaginable itch.

A GPI-NRS response is defined as ≥ 4 point reduction (improvement) from Baseline.

Missing values were imputed using the MI method. Two-sided 95% CIs for the within-group proportions were based on the Wilson-score method.

ITT analysis set with Baseline GPI-NRS score ≥ 4 .

End point type	Secondary
End point timeframe:	
Baseline and Week 16 of the placebo-controlled phase	

End point values	Placebo-controlled Phase: Placebo	Placebo-controlled Phase: Apremilast 30 mg		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	121	122		
Units: Percentage of participants				
number (confidence interval 95%)	19.6 (12.2 to 27.0)	46.0 (36.8 to 55.3)		

Statistical analyses

Statistical analysis title	Placebo vs. Apremilast 30 mg
Comparison groups	Placebo-controlled Phase: Placebo v Placebo-controlled Phase: Apremilast 30 mg
Number of subjects included in analysis	243
Analysis specification	Pre-specified
Analysis type	
P-value	< 0.0001
Method	Cochran-Mantel-Haenszel
Parameter estimate	Adjusted difference
Point estimate	26.2
Confidence interval	
level	95 %
sides	2-sided
lower limit	14.5
upper limit	38

Secondary: Change from Baseline in Affected Body Surface Area (BSA) at Week 16

End point title	Change from Baseline in Affected Body Surface Area (BSA) at Week 16
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End point description:

The BSA is a measurement of involved skin over the whole body. The overall BSA affected by psoriasis is estimated based on the palm area of the participant's hand. The surface area of the whole body is made up of approximately 100 palms or "handprints" (each entire palmar surface or "handprint" equates to approximately 1% of total BSA).

A negative change from Baseline indicates a reduction of affected BSA.

Based on mixed-effect model for repeated measures (MMRM) model.

ITT analysis set with Baseline and at least one post-baseline value at Week 16.

End point type	Secondary
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End point timeframe:

Baseline and Week 16 of the placebo-controlled phase

End point values	Placebo-controlled Phase: Placebo	Placebo-controlled Phase: Apremilast 30 mg		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	111	120		
Units: Change in percentage of affected BSA				
least squares mean (standard error)	-0.79 ($\pm$ 0.669)	-4.12 ($\pm$ 0.664)		

Statistical analyses

Statistical analysis title	Placebo vs. Apremilast 30 mg
Comparison groups	Placebo-controlled Phase: Placebo v Placebo-controlled Phase: Apremilast 30 mg
Number of subjects included in analysis	231
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0005
Method	MMRM
Parameter estimate	Least squares mean difference
Point estimate	-3.33
Confidence interval	
level	95 %
sides	2-sided
lower limit	-5.18
upper limit	-1.47
Variability estimate	Standard error of the mean
Dispersion value	0.942

Secondary: Change from Baseline in Dermatology Life Quality Index (DLQI) at Week 16

End point title	Change from Baseline in Dermatology Life Quality Index (DLQI) at Week 16
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End point description:

The DLQI is a 10 item questionnaire dealing with the participant's skin. With the exception of Item Number 7, the participant responds on a four-point scale, ranging from 0 (not at all) to 3 (very much). Item Number 7 is a multi-part item, the first part of which ascertains whether the participant's skin prevented them from working or studying (Yes or No), and if "No," then the participant is asked how much of a problem the skin has been at work or study over the past week, with response alternatives being 0 (not at all), 1 (a little) and 2 (a lot).

Total scores have a possible range of 0-30, where 0 represents the best score, and 30 represents the worst health-related quality of life.

A negative change from Baseline indicates an improvement in health-related quality of life scores.

Based on MMRM model.

ITT analysis set with Baseline and at least one post-baseline value at Week 16.

End point type	Secondary
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End point timeframe:

Baseline and Week 16 of the placebo-controlled phase

End point values	Placebo-controlled Phase: Placebo	Placebo-controlled Phase: Apremilast 30 mg		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	107	117		
Units: Scores on a scale				
least squares mean (standard error)	-2.6 ($\pm$ 0.57)	-5.3 ($\pm$ 0.55)		

Statistical analyses

Statistical analysis title	Placebo vs. Apremilast 30 mg
Comparison groups	Placebo-controlled Phase: Placebo v Placebo-controlled Phase: Apremilast 30 mg
Number of subjects included in analysis	224
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0008
Method	MMRM
Parameter estimate	Least squares mean difference
Point estimate	-2.7
Confidence interval	
level	95 %
sides	2-sided
lower limit	-4.2
upper limit	-1.1
Variability estimate	Standard error of the mean
Dispersion value	0.79

Secondary: Change From Baseline in Genital Psoriasis Symptoms Scale (GPSS) Total Score at Week 16

End point title	Change From Baseline in Genital Psoriasis Symptoms Scale (GPSS) Total Score at Week 16
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End point description:

The GPSS is a self-reported measure where participants were asked to assess each of their psoriasis symptoms (itch, pain, discomfort, stinging, burning, redness, scaling, and cracking) in the genital area and select a number on a scale of 0-10, where 0 represents no, and 10 represents the worst imaginable.

Results from each symptom assessment were summed to generate a total GPSS score ranging from 0 (no genital psoriasis symptoms) to 80 (worst imaginable genital psoriasis symptoms).

A negative change from Baseline indicates an improvement in genital psoriasis symptoms.

Based on MMRM model.

ITT analysis set with Baseline and at least one post-baseline value at Week 16.

End point type	Secondary
End point timeframe:	
Baseline and Week 16 of the placebo-controlled phase	

End point values	Placebo-controlled Phase: Placebo	Placebo-controlled Phase: Apremilast 30 mg		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	107	116		
Units: Score on a scale				
least squares mean (standard error)	-5.3 ($\pm$ 1.85)	-20.5 ($\pm$ 1.83)		

Statistical analyses

Statistical analysis title	Placebo vs. Apremilast 30 mg
Comparison groups	Placebo-controlled Phase: Placebo v Placebo-controlled Phase: Apremilast 30 mg
Number of subjects included in analysis	223
Analysis specification	Pre-specified
Analysis type	
P-value	< 0.0001
Method	MMRM
Parameter estimate	Difference
Point estimate	-15.1
Confidence interval	
level	95 %
sides	2-sided
lower limit	-20.3
upper limit	-10
Variability estimate	Standard error of the mean
Dispersion value	2.6

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Up to a maximum of 41.4 weeks

Adverse event reporting additional description:

The safety analysis set consisted of all participants who were randomized and received at least one dose of IP.

Assessment type	Systematic
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Dictionary used

Dictionary name	MedDRA
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Dictionary version	24.1
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Reporting groups

Reporting group title	Placebo-controlled Phase: Placebo
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Reporting group description:

Participants received placebo as oral tablets BID for up to 16 weeks (Week 0 to Week 16).

Reporting group title	Apremilast Extension Phase: Apremilast 30 mg
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Reporting group description:

Eligible participants who completed the Placebo-controlled Phase entered the Apremilast Extension Phase and received apremilast 30 mg as oral tablets BID for up to an additional 16 weeks (Week 16 to Week 32).

Reporting group title	Placebo-controlled Phase: Apremilast 30 mg
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Reporting group description:

Participants received apremilast 30 mg as oral tablets BID for up to 16 weeks (Week 0 to Week 16).

Serious adverse events	Placebo-controlled Phase: Placebo	Apremilast Extension Phase: Apremilast 30 mg	Placebo-controlled Phase: Apremilast 30 mg
Total subjects affected by serious adverse events			
subjects affected / exposed	2 / 145 (1.38%)	2 / 229 (0.87%)	3 / 143 (2.10%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events			
Injury, poisoning and procedural complications			
Ankle fracture			
subjects affected / exposed	1 / 145 (0.69%)	0 / 229 (0.00%)	0 / 143 (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
Clavicle fracture			
subjects affected / exposed	0 / 145 (0.00%)	0 / 229 (0.00%)	1 / 143 (0.70%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Skin and subcutaneous tissue disorders			

Actinic keratosis			
subjects affected / exposed	0 / 145 (0.00%)	1 / 229 (0.44%)	0 / 143 (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
Psoriasis			
subjects affected / exposed	0 / 145 (0.00%)	0 / 229 (0.00%)	1 / 143 (0.70%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Appendicitis			
subjects affected / exposed	0 / 145 (0.00%)	1 / 229 (0.44%)	0 / 143 (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
Clostridium difficile infection			
subjects affected / exposed	1 / 145 (0.69%)	0 / 229 (0.00%)	0 / 143 (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
Gastroenteritis			
subjects affected / exposed	1 / 145 (0.69%)	0 / 229 (0.00%)	0 / 143 (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
Herpes zoster			
subjects affected / exposed	0 / 145 (0.00%)	0 / 229 (0.00%)	1 / 143 (0.70%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Urinary tract infection			
subjects affected / exposed	1 / 145 (0.69%)	0 / 229 (0.00%)	0 / 143 (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
Metabolism and nutrition disorders			
Dehydration			
subjects affected / exposed	1 / 145 (0.69%)	0 / 229 (0.00%)	0 / 143 (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

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

Non-serious adverse events	Placebo-controlled Phase: Placebo	Apremilast Extension Phase: Apremilast 30 mg	Placebo-controlled Phase: Apremilast 30 mg
Total subjects affected by non-serious adverse events subjects affected / exposed	39 / 145 (26.90%)	53 / 229 (23.14%)	73 / 143 (51.05%)
Nervous system disorders Headache subjects affected / exposed occurrences (all)	16 / 145 (11.03%) 18	15 / 229 (6.55%) 18	33 / 143 (23.08%) 41
Gastrointestinal disorders Diarrhoea subjects affected / exposed occurrences (all) Nausea subjects affected / exposed occurrences (all)	12 / 145 (8.28%) 13 11 / 145 (7.59%) 12	27 / 229 (11.79%) 28 17 / 229 (7.42%) 17	37 / 143 (25.87%) 38 32 / 143 (22.38%) 32
Infections and infestations Nasopharyngitis subjects affected / exposed occurrences (all)	12 / 145 (8.28%) 13	11 / 229 (4.80%) 14	12 / 143 (8.39%) 14

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
22 May 2019	- Specified that use of strong cytochrome P450 3A4 (CYP3A4) enzyme inducers is not recommended during the study. - Specified prohibitive concomitant use of antifungal and antiseptic treatment in the genital area. - Removed blinded language in reference to the apremilast extension phase and added dispensation of IP bottles at Week 20.
01 May 2020	- Updated to reflect the change in sponsor from Celgene to Amgen. - Updated safety reporting and product complaints information to align with Amgen processes.
03 March 2021	- Specified that the strata with BSA $\geq 10\%$ would be $\geq 40\%$ of the total enrollment (and the strata with BSA $< 10\%$ would comprise $\leq 60\%$ of the total enrollment). - Updated the sample size from approximately 332 participants to approximately 286 participants. - Updated the power calculation based on the change in sample size.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? Yes

Date	Interruption	Restart date
01 April 2020	In April 2020, screening and enrollment were temporarily paused at all participating countries/sites to limit potential COVID-19 exposure for study participants, sponsor employees, and staff at clinical study sites.	01 June 2020

Notes:

Limitations and caveats

None reported