Clinical trial results:
A Randomized, Double-Blind, Placebo-Controlled Study to Assess the Efficacy and Safety of Nemolizumab (CD14152) in Subjects with Prurigo Nodularis

Summary

EudraCT number	2019-004789-17
Trial protocol	FR BE NL PL
Global end of trial date	30 March 2022

Results information

Result version number	v1 (current)
This version publication date	10 July 2024
First version publication date	10 July 2024

Trial information

Trial identification

Sponsor protocol code	RD.06.SPR.203065

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	-
WHO universal trial number (UTN)	-
Other trial identifiers	IND number: 117122

Notes:

Sponsors

Sponsor organisation name	Galderma S.A.
Sponsor organisation address	Zahlerweg 10, , ZUG, Switzerland, 6300
Public contact	Clinical Trial Information Desk, Galderma S.A., CTA.coordinator@galderma.com
Scientific contact	Clinical Trial Information Desk, Galderma S.A., CTA.coordinator@galderma.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	30 March 2022
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	30 March 2022
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The primary objective is to assess the efficacy and safety of nemolizumab (CD14152) compared to placebo in subjects ≥ 18 years of age with PN after a 16 week treatment period.

Protection of trial subjects:

Subject protection was ensured by following high medical and ethical standards in accordance with the principles laid down in the Declaration of Helsinki, and that are consistent with Good Clinical Practice and applicable regulations.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	21 July 2020
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	Netherlands: 16
Country: Number of subjects enrolled	Poland: 88
Country: Number of subjects enrolled	Spain: 3
Country: Number of subjects enrolled	Belgium: 22
Country: Number of subjects enrolled	France: 43
Country: Number of subjects enrolled	Korea, Republic of: 22
Country: Number of subjects enrolled	Switzerland: 11
Country: Number of subjects enrolled	United States: 32
Country: Number of subjects enrolled	Canada: 37
Worldwide total number of subjects	274
EEA total number of subjects	172

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)	214
From 65 to 84 years	60
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

The study was conducted at 55 sites in 9 countries.

Pre-assignment

Screening details:

A total of 274 subjects were randomized and treated (183 subjects in Nemolizumab and 91 subjects in Placebo group) received treatment in this study.

Period 1

Period 1 title	Overall Study (overall period)
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	Nemolizumab

Arm description:

Subjects weighing less than (<) 90 kilogram (kg) received two subcutaneous (SC) injections of 30 milligrams (mg) nemolizumab (60 mg loading dose) at baseline then one SC injection once for every 4 weeks (Q4W). Subjects weighing greater than or equal to (>=) 90 kg received two SC injections of 30 mg nemolizumab (60 mg total) at baseline (no loading dose) and two SC injections Q4W throughout the treatment period of 16 weeks.

Nemolizumab: Subjects received either 30 mg or 60 mg dose of nemolizumab as SC injection.

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

Dosage and administration details:

Subjects weighing less than (<) 90 kilogram (kg) received two subcutaneous (SC) injections of 30 milligrams (mg) nemolizumab (60 mg loading dose) at baseline then one SC injection once for every 4 weeks (Q4W). Subjects weighing greater than or equal to (>=) 90 kg received two SC injections of 30 mg nemolizumab (60 mg total) at baseline (no loading dose) and two SC injections Q4W throughout the treatment period of 16 weeks.

Arm title	Placebo

Arm description:

Subjects weighing <90 kg received two SC injections of matching placebo at baseline, then one SC injection Q4W. Subjects weighing >=90 kg received two SC injections of matching placebo at baseline, then two SC injections Q4W throughout the treatment period of 16 weeks.

Placebo: Subjects received matching placebo as SC injection.

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

Dosage and administration details:

Subjects weighing < 90 kg received two SC injections of matching placebo at baseline, then one SC

injection Q4W. Subjects weighing >= 90 kg received two SC injections of matching placebo at baseline, then two SC injections Q4W throughout the treatment period of 16 weeks.

Number of subjects in period 1	Nemolizumab	Placebo
Started	183	91
Treated	183	91
Completed	174	88
Not completed	9	3
Consent withdrawn by subject	2	-
Physician decision	1	-
Adverse event, non-fatal	4	2
Pregnancy	-	1
Lost to follow-up	2	-

Baseline characteristics

Reporting groups	
Reporting group title	Nemolizumab

Reporting group description:

Subjects weighing less than (<) 90 kilogram (kg) received two subcutaneous (SC) injections of 30 milligrams (mg) nemolizumab (60 mg loading dose) at baseline then one SC injection once for every 4 weeks (Q4W). Subjects weighing greater than or equal to (>=) 90 kg received two SC injections of 30 mg nemolizumab (60 mg total) at baseline (no loading dose) and two SC injections Q4W throughout the treatment period of 16 weeks.

Nemolizumab: Subjects received either 30 mg or 60 mg dose of nemolizumab as SC injection.

Reporting group title	Placebo

Reporting group description:

Subjects weighing <90 kg received two SC injections of matching placebo at baseline, then one SC injection Q4W. Subjects weighing >=90 kg received two SC injections of matching placebo at baseline, then two SC injections Q4W throughout the treatment period of 16 weeks.

Placebo: Subjects received matching placebo as SC injection.

Reporting group values	Nemolizumab	Placebo	Total
Number of subjects	183	91	274
Age categorical Units: Subjects			
Age continuous Units: years			
arithmetic mean	53.7	50.8	
standard deviation	± 14.41	± 15.00	-
Gender categorical Units: Subjects			
Female	113	55	168
Male	70	36	106
Ethnicity (NIH/OMB) Units: Subjects			
Hispanic or Latino	5	7	12
Not Hispanic or Latino	173	79	252
Unknown or Not Reported	5	5	10
Race (NIH/OMB) Units: Subjects			
American Indian or Alaska Native	0	0	0
Asian	23	14	37
Native Hawaiian or Other Pacific Islander	2	0	2
Black or African American	5	7	12
White	147	68	215
Unknown or Not Reported	1	0	1
Others	5	2	7
Region of Enrollment Units: Subjects			
Europe	122	61	183
North America	47	22	69

Asia Pacific	14	8	22

End points

End points reporting groups

Reporting group title	Nemolizumab

Reporting group description:

Subjects weighing less than (<) 90 kilogram (kg) received two subcutaneous (SC) injections of 30 milligrams (mg) nemolizumab (60 mg loading dose) at baseline then one SC injection once for every 4 weeks (Q4W). Subjects weighing greater than or equal to (>=) 90 kg received two SC injections of 30 mg nemolizumab (60 mg total) at baseline (no loading dose) and two SC injections Q4W throughout the treatment period of 16 weeks.

Nemolizumab: Subjects received either 30 mg or 60 mg dose of nemolizumab as SC injection.

Reporting group title	Placebo

Reporting group description:

Subjects weighing <90 kg received two SC injections of matching placebo at baseline, then one SC injection Q4W. Subjects weighing >=90 kg received two SC injections of matching placebo at baseline, then two SC injections Q4W throughout the treatment period of 16 weeks.

Placebo: Subjects received matching placebo as SC injection.

Primary: Number of Subjects With Improvement of Greater Than or Equal to (>=) 4 From Baseline in Weekly Average PP NRS at Week 16

End point title	Number of Subjects With Improvement of Greater Than or Equal to (>=) 4 From Baseline in Weekly Average PP NRS at Week 16

End point description:

Peak Pruritus NRS (PP NRS) is a scale that was used by the subjects to report the intensity of their pruritus (itch) during the last 24 hours. For maximum itch intensity: the scores were provided on a scale of 0 to 10, with 0 being 'no itch' and 10 being 'worst itch imaginable'. Higher scores indicate worse outcome. Weekly values are calculated as average of 7 consecutive days data up to the target study day (excluding) and set to missing, if less than 4 days data are available. ITT population included all randomized subjects.

End point type	Primary

End point timeframe:

Baseline, Week 16

End point values	Nemolizumab	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	183	91		
Units: subjects	103	19		

Statistical analyses

Statistical analysis title	Nemolizumab versus Placebo
Comparison groups	Nemolizumab v Placebo

Number of subjects included in analysis	274
Analysis specification	Pre-specified
Analysis type	superiority[1]
P-value	< 0.0001 [2]
Method	Cochran-Mantel-Haenszel
Parameter estimate	Strata adjusted percentage difference
Point estimate	35.4
Confidence interval	
level	95 %
sides	2-sided
lower limit	24.4
upper limit	46.4

Notes:

[1] - A hierarchical testing procedure was used to control the overall type I error. Testing was then performed sequentially in order the outcome measures were reported and continued when previous outcome measure was statistically significant at two-sided 0.05.

[2] - CMH test using the randomized stratification variables (analysis center and body weight at randomization [< 90 kg,>= 90 kg]).

Primary: Number of Subjects With an Investigator Global Assessment (IGA) Success at Week 16

End point title	Number of Subjects With an Investigator Global Assessment (IGA) Success at Week 16

End point description:

IGA success is defined as clear (0) or almost clear (1), and a reduction from baseline of >=2 points at week 16. Full scale is scored from 0-4, higher score indicates more severe symptoms. ITT population included all randomized subjects.

End point type	Primary

End point timeframe:

Baseline, Week 16

End point values	Nemolizumab	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	183	91		
Units: subjects	69	10		

Statistical analyses

Statistical analysis title	Nemolizumab versus Placebo
Comparison groups	Nemolizumab v Placebo
Number of subjects included in analysis	274
Analysis specification	Pre-specified
Analysis type	superiority[3]
P-value	< 0.0001 [4]
Method	Cochran-Mantel-Haenszel
Parameter estimate	Strata adjusted percentage difference
Point estimate	26.7

Confidence interval	
level	95 %
sides	2-sided
lower limit	17.2
upper limit	36.2

Notes:

[3] - A hierarchical testing procedure was used to control the overall type I error. Testing was then performed sequentially in order the outcome measures were reported and continued when previous outcome measure was statistically significant at two-sided 0.05.

[4] - CMH test using the randomized stratification variables (analysis center and body weight at randomization [< 90 kg,>= 90 kg]).

Secondary: Number of Subjects With Adverse Events, Treatment Emergent Adverse Events (TEAEs), Adverse Events of Special Interest (AESIs), and Serious Adverse Events (SAEs)

End point title	Number of Subjects With Adverse Events, Treatment Emergent Adverse Events (TEAEs), Adverse Events of Special Interest (AESIs), and Serious Adverse Events (SAEs)

End point description:

An AE was any untoward medical occurrence, new or worsening of any pre-existing condition, in a clinical study subject administered a medicinal product and which did not necessarily had to have a causal relationship with the treatment. TEAEs: AES with an onset date on or after the start date of the IMP administration. AESIs: skin-related events (SRE) (except exacerbation and infective exacerbation of PN) or injection site reactions (ISRs) as per common terminology criteria for AEs (Grade 3: ulceration or necrosis; severe tissue damage; operative intervention indicated, Grade 4: life-threatening consequences; urgent intervention indicated, Grade 5: death). An SAE: AE that resulted in any of the following outcomes: death; life threatening; results in persistent disability; requires in-patient hospitalization congenital anomaly; is medically significant. Safety population included all randomized subjects who received at least 1 administration of study drug.

End point type	Secondary

End point timeframe:

From baseline up to end of treatment period (16 weeks)

End point values	Nemolizumab	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	183	91		
Units: subjects				
Adverse Events	112	49		
Treatment Emergent Adverse Events (TEAEs)	112	49		
Adverse Events of Special Interest (AESIs)	21	9		
Serious Adverse Events (SAEs)	4	6		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Subjects With an Improvement of >= 4 From Baseline in Weekly Average PP NRS at Week 4

End point title	Number of Subjects With an Improvement of >= 4 From Baseline in Weekly Average PP NRS at Week 4

End point description:

PP NRS is a scale that was used by the subjects to report the intensity of their pruritus (itch) during the last 24 hours. For maximum itch intensity: the scores were provided on a scale of 0 to 10, with 0 being 'no itch' and 10 being 'worst itch imaginable'. Higher scores indicate worse outcome. ITT population included all randomized subjects.

End point type	Secondary

End point timeframe:

Baseline, Week 4

End point values	Nemolizumab	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	183	91		
Units: subjects	75	7		

Statistical analyses

Statistical analysis title	Nemolizumab versus Placebo
Comparison groups	Nemolizumab v Placebo
Number of subjects included in analysis	274
Analysis specification	Pre-specified
Analysis type	superiority[5]
P-value	< 0.0001 [6]
Method	Cochran-Mantel-Haenszel
Parameter estimate	Strata adjusted percentage difference
Point estimate	33.4
Confidence interval	
level	95 %
sides	2-sided
lower limit	24.3
upper limit	42.4

Notes:

[5] - A hierarchical testing procedure was used to control the overall type I error. Testing was then performed sequentially in order the outcome measures were reported and continued when previous outcome measure was statistically significant at two-sided 0.05.

[6] - CMH test using the randomized stratification variables (analysis center and body weight at randomization [<90 kg,>=90 kg]).

Secondary: Number of Subjects With PP NRS < 2 at Week 16

End point title	Number of Subjects With PP NRS < 2 at Week 16

End point description:

Pruritus NRS is a scale that was used by the subjects to report the intensity of their pruritus (itch) during the last 24 hours. For maximum itch intensity: the scores were provided on a scale of 0 to 10, with 0 being 'no itch' and 10 being 'worst itch imaginable'. Higher scores indicate worse outcome. ITT population included all randomized subjects.

End point type	Secondary

End point timeframe:

Week 16

End point values	Nemolizumab	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	183	91		
Units: subjects	64	7		

Statistical analyses

Statistical analysis title	Nemolizumab versus Placebo
Comparison groups	Nemolizumab v Placebo
Number of subjects included in analysis	274
Analysis specification	Pre-specified
Analysis type	superiority[7]
P-value	< 0.0001 [8]
Method	Cochran-Mantel-Haenszel
Parameter estimate	Strata adjusted percentage difference
Point estimate	30
Confidence interval	
level	95 %
sides	2-sided
lower limit	21.3
upper limit	38.6

Notes:

[7] - A hierarchical testing procedure was used to control the overall type I error. Testing was then performed sequentially in order the outcome measures were reported and continued when previous outcome measure was statistically significant at two-sided 0.05.

[8] - CMH test using the randomized stratification variables (analysis center and body weight at randomization [<90 kg,>=90 kg].

Secondary: Number of Subjects With an Improvement of >=4 From Baseline in Sleep Disturbance Numeric Rating Scale (SD NRS) at Week 16

End point title	Number of Subjects With an Improvement of >=4 From Baseline in Sleep Disturbance Numeric Rating Scale (SD NRS) at Week 16

End point description:

The SD NRS is a scale to be used by the subjects to report the degree of their sleep loss related to PN. The baseline SD NRS was determined based on the average of daily SD NRS (score ranging from 0 to 10) during the 7 days up to the treatment start (including until treatment start time) (rounding to nearest whole number is not permitted). A minimum of 4 daily scores out of the 7 days up to baseline study day is required for this calculation. On a scale of 0 to 10, with 0 being 'no sleep loss related to the symptoms of my skin disease (prurigo nodularis)' and 10 being 'I did not sleep at all due to the symptoms of prurigo nodularis'. Higher scores indicate worse outcome. ITT population included all randomized subjects.

End point type	Secondary

End point timeframe:

Baseline, Week 16

End point values	Nemolizumab	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	183	91		
Units: subjects	95	19		

Statistical analyses

Statistical analysis title	Nemolizumab versus Placebo
Comparison groups	Nemolizumab v Placebo
Number of subjects included in analysis	274
Analysis specification	Pre-specified
Analysis type	superiority[9]
P-value	< 0.0001 [10]
Method	Cochran-Mantel-Haenszel
Parameter estimate	Strata adjusted percentage difference
Point estimate	31.9
Confidence interval	
level	95 %
sides	2-sided
lower limit	20.7
upper limit	43.2

Notes:

[9] - A hierarchical testing procedure was used to control the overall type I error. Testing was then performed sequentially in order the outcome measures were reported and continued when previous outcome measure was statistically significant at two-sided 0.05.
[10] - CMH test using the randomized stratification variables (analysis center and body weight at randomization [<90 kg,>=90 kg].

Secondary: Number of Subjects With an Improvement of >=4 From Baseline in SD NRS at Week 4

End point title	Number of Subjects With an Improvement of >=4 From Baseline in SD NRS at Week 4

End point description:

The SD NRS is a scale to be used by the subjects to report the degree of their sleep loss related to PN. The baseline SD NRS was determined based on the average of daily SD NRS (score ranging from 0 to 10) during the 7 days up to the treatment start (including until treatment start time) (rounding to nearest whole number is not permitted). A minimum of 4 daily scores out of the 7 days up to baseline study day is required for this calculation. On a scale of 0 to 10, with 0 being 'no sleep loss related to the symptoms of my skin disease (prurigo nodularis)' and 10 being 'I did not sleep at all due to the symptoms of prurigo nodularis'. Higher scores indicate worse outcome. ITT population included all randomized subjects.

End point type	Secondary

End point timeframe:

Baseline, Week 4

End point values	Nemolizumab	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	183	91		
Units: subjects	68	9		

Statistical analyses

Statistical analysis title	Nemolizumab versus Placebo
Comparison groups	Nemolizumab v Placebo
Number of subjects included in analysis	274
Analysis specification	Pre-specified
Analysis type	superiority[11]
P-value	< 0.0001 [12]
Method	Cochran-Mantel-Haenszel
Parameter estimate	Strata adjusted percentage difference
Point estimate	27.9
Confidence interval	
level	95 %
sides	2-sided
lower limit	18.4
upper limit	37.5

Notes:

[11] - A hierarchical testing procedure was used to control the overall type I error. Testing was then performed sequentially in order the outcome measures were reported and continued when previous outcome measure was statistically significant at two-sided 0.05.
[12] - CMH test using the randomized stratification variables (analysis center and body weight at randomization [<90 kg,>=90 kg].

Secondary: Number of Subjects With Weekly Average PP NRS < 2 at Week 4

End point title	Number of Subjects With Weekly Average PP NRS < 2 at Week 4

End point description:

Pruritus NRS is a scale that was used by the subjects to report the intensity of their pruritus (itch) during the last 24 hours. For maximum itch intensity: the scores were provided on a scale of 0 to 10, with 0 being 'no itch' and 10 being 'worst itch imaginable'. Higher scores indicate worse outcome. ITT population included all randomized subjects.

End point type	Secondary

End point timeframe:

Week 4

End point values	Nemolizumab	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	183	91		
Units: subjects	36	2		

Statistical analyses

Statistical analysis title	Nemolizumab versus Placebo
Comparison groups	Nemolizumab v Placebo
Number of subjects included in analysis	274
Analysis specification	Pre-specified
Analysis type	superiority[13]
P-value	< 0.0001 [14]
Method	Cochran-Mantel-Haenszel
Parameter estimate	Strata adjusted percentage difference
Point estimate	18.8
Confidence interval	
level	95 %
sides	2-sided
lower limit	12
upper limit	25.7

Notes:

[13] - A hierarchical testing procedure was used to control the overall type I error. Testing was then performed sequentially in order the outcome measures were reported and continued when previous outcome measure was statistically significant at two-sided 0.05.

[14] - CMH test using the randomized stratification variables (analysis center and body weight at randomization [<90 kg,>=90 kg].

Adverse events

Adverse events information

Timeframe for reporting adverse events:

From baseline up to end of treatment period (16 weeks)

Adverse event reporting additional description:

Safety population included all randomized subjects who received at least 1 administration of study drug. TEAEs during treatment period are defined as adverse events with onset date on or after the first dose date till 4 weeks after the last treatment or early discontinuation date whichever is earlier.

Assessment type	Non-systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	25.0

Reporting groups

Reporting group title	Nemolizumab

Reporting group description:

Subjects weighing less than (<) 90 kilogram (kg) received two subcutaneous (SC) injections of 30 milligrams (mg) nemolizumab (60 mg loading dose) at baseline then one SC injection once for every 4 weeks (Q4W). Subjects weighing greater than or equal to (>=) 90 kg received two SC injections of 30 mg nemolizumab (60 mg total) at baseline (no loading dose) and two SC injections Q4W throughout the treatment period of 16 weeks.
Nemolizumab: Subjects received either 30 mg or 60 mg dose of nemolizumab as SC injection.

Reporting group title	Placebo

Reporting group description:

Subjects weighing < 90 kg received two SC injections of matching placebo at baseline, then one SC injection Q4W. Subjects weighing >= 90 kg received two SC injections of matching placebo at baseline, then two SC injections Q4W throughout the treatment period of 16 weeks.
Placebo: Subjects received matching placebo as SC injection.

Serious adverse events	Nemolizumab	Placebo	
Total subjects affected by serious adverse events			
subjects affected / exposed	4 / 183 (2.19%)	5 / 91 (5.49%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
Cardiac disorders			
Atrial flutter			
alternative dictionary used: MedDRA 25.0			
subjects affected / exposed	0 / 183 (0.00%)	1 / 91 (1.10%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Coronary artery occlusion			
subjects affected / exposed	0 / 183 (0.00%)	1 / 91 (1.10%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Myocardial infarction			
subjects affected / exposed	0 / 183 (0.00%)	1 / 91 (1.10%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Supraventricular tachycardia			
subjects affected / exposed	1 / 183 (0.55%)	0 / 91 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Skin and subcutaneous tissue disorders			
Dermatitis contact			
subjects affected / exposed	1 / 183 (0.55%)	0 / 91 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Dermatitis exfoliative generalised			
subjects affected / exposed	0 / 183 (0.00%)	1 / 91 (1.10%)	
occurrences causally related to treatment / all	0 / 0	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pemphigoid			
subjects affected / exposed	1 / 183 (0.55%)	0 / 91 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Musculoskeletal and connective tissue disorders			
Osteoarthritis			
subjects affected / exposed	0 / 183 (0.00%)	1 / 91 (1.10%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Appendicitis			
subjects affected / exposed	0 / 183 (0.00%)	1 / 91 (1.10%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumococcal sepsis			

subjects affected / exposed	1 / 183 (0.55%)	0 / 91 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonia			
subjects affected / exposed	1 / 183 (0.55%)	0 / 91 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Postoperative wound infection			
subjects affected / exposed	0 / 183 (0.00%)	1 / 91 (1.10%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

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

Non-serious adverse events	Nemolizumab	Placebo	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	29 / 183 (15.85%)	13 / 91 (14.29%)	
Nervous system disorders			
Headache			
subjects affected / exposed	12 / 183 (6.56%)	4 / 91 (4.40%)	
occurrences (all)	17	4	
Skin and subcutaneous tissue disorders			
Dermatitis atopic			
subjects affected / exposed	10 / 183 (5.46%)	0 / 91 (0.00%)	
occurrences (all)	15	0	
Neurodermatitis			
subjects affected / exposed	7 / 183 (3.83%)	10 / 91 (10.99%)	
occurrences (all)	7	10	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
22 December 2020	This amendment was required as there was update in number of sites, inclusion criteria including clarification of contraception methods, females of non-childbearing potential must have a confirmed follicle-stimulating hormone level in the postmenopausal range, exclusion criteria including addition of positive confirmatory test for HCV, clarifying excluded prior treatments, current and history of untreated or inadequately treated active or latent TB, investigational drug exclusion period was 8 weeks, rescued with oral psoralen required discontinuation of study drug and rationale for placebo-controlled design.
19 November 2021	This amendment included addition of secondary efficacy endpoint of the proportion of subjects with PP NRS improvement ≥4, along with an update in restricted prior treatments, prohibited therapy, and ADA assay information to be harmonized with other protocols in the nemolizumab program and specified that ADA was to be determined using validated ECLIA (not ESLIA).

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported