Clinical trial results:
A two-year, phase III randomized, double-blind, parallel-group, placebo-controlled trial to evaluate the safety, efficacy, and tolerability of 300 mg s.c. secukinumab versus placebo, in combination with SoC therapy, in patients with active lupus nephritis

Summary

EudraCT number	2019-003211-57
Trial protocol	SK NO GB PT DE SE DK GR LV ES HR FR IT RO
Global end of trial date	13 September 2023

Results information

Result version number	v1 (current)
This version publication date	18 September 2024
First version publication date	18 September 2024

Trial information

Trial identification

Sponsor protocol code	CAIN457Q12301

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT04181762
WHO universal trial number (UTN)	-
Other trial identifiers	PACTR: PACTR202211748997845

Notes:

Sponsors

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

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	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	13 September 2023
Is this the analysis of the primary completion data?	Yes
Primary completion date	13 September 2023
Global end of trial reached?	Yes
Global end of trial date	13 September 2023
Was the trial ended prematurely?	Yes

Notes:

General information about the trial

Main objective of the trial:

The primary objective was to demonstrate that Secukinumab 300 mg was superior to placebo in Complete Renal Response (CRR) rate at Week 52 in active lupus nephritis (International Society of Nephrology/Renal Pathology Society (ISN/RPS) Class III or IV, with or without co-existing Class V features) patients on a background of Standard of Care (SoC) therapy

Protection of trial subjects:

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

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	07 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	Argentina: 12
Country: Number of subjects enrolled	Australia: 2
Country: Number of subjects enrolled	Brazil: 15
Country: Number of subjects enrolled	Canada: 2
Country: Number of subjects enrolled	Chile: 6
Country: Number of subjects enrolled	China: 40
Country: Number of subjects enrolled	Colombia: 19
Country: Number of subjects enrolled	Croatia: 2
Country: Number of subjects enrolled	Czechia: 5
Country: Number of subjects enrolled	Denmark: 1
Country: Number of subjects enrolled	France: 1
Country: Number of subjects enrolled	Germany: 2
Country: Number of subjects enrolled	Greece: 5
Country: Number of subjects enrolled	Guatemala: 10
Country: Number of subjects enrolled	India: 4
Country: Number of subjects enrolled	Italy: 1
Country: Number of subjects enrolled	Japan: 5
Country: Number of subjects enrolled	Korea, Republic of: 8

Country: Number of subjects enrolled	Mexico: 21
Country: Number of subjects enrolled	Norway: 1
Country: Number of subjects enrolled	Peru: 6
Country: Number of subjects enrolled	Philippines: 14
Country: Number of subjects enrolled	Portugal: 6
Country: Number of subjects enrolled	Romania: 6
Country: Number of subjects enrolled	Russian Federation: 7
Country: Number of subjects enrolled	Slovakia: 2
Country: Number of subjects enrolled	Spain: 3
Country: Number of subjects enrolled	Sweden: 1
Country: Number of subjects enrolled	Switzerland: 3
Country: Number of subjects enrolled	Taiwan: 5
Country: Number of subjects enrolled	Thailand: 13
Country: Number of subjects enrolled	Türkiye: 5
Country: Number of subjects enrolled	United States: 14
Country: Number of subjects enrolled	Viet Nam: 28
Worldwide total number of subjects	275
EEA total number of subjects	36

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)	273
From 65 to 84 years	2
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

This study was conducted in 106 centers in 34 countries worldwide.

Pre-assignment

Screening details:

At Baseline, all eligible subjects were randomized in a 1:1 ratio to secukinumab 300 mg s.c. or placebo via Interactive Response Technology (IRT).

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, Carer, Assessor

Arms

Are arms mutually exclusive?	Yes
Arm title	Secukinumab 300 mg

Arm description:

A blinded, weekly, subcutaneous (s.c.) secukinumab 300 mg loading regimen was administered for the first 4 weeks followed by a monthly maintenance dose in all randomized subjects thereafter (maximum treatment exposure during the core study: 786 days).

Arm type	Experimental
Investigational medicinal product name	Secukinumab
Investigational medicinal product code	
Other name	AIN457
Pharmaceutical forms	Solution for injection in pre-filled syringe
Routes of administration	Subcutaneous use

Dosage and administration details:

A blinded, weekly, subcutaneous (s.c.) secukinumab 300 mg loading regimen was administered for the first 4 weeks followed by a monthly maintenance dose in all randomized subjects thereafter.

Arm title	Placebo

Arm description:

A blinded, weekly, subcutaneous (s.c.) matching placebo loading regimen was administered for the first 4 weeks followed by a monthly maintenance dose in all randomized subjects thereafter (maximum treatment exposure during the core study: 794 days).

Arm type	Placebo
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection in pre-filled syringe
Routes of administration	Subcutaneous use

Dosage and administration details:

A blinded, weekly, subcutaneous (s.c.) matching placebo loading regimen was administered for the first 4 weeks followed by a monthly maintenance dose in all randomized subjects thereafter.

Number of subjects in period 1	Secukinumab 300 mg	Placebo
Started	137	138
Full Analysis Set 2	91	91
Pharmacokinetic Set	136	0 [1]
Completed	23	23
Not completed	114	115
Adverse event, serious fatal	1	1
Physician decision	1	3
Adverse event, non-fatal	1	3
Subject decision	11	4
Protocol deviation	1	-
Pregnancy	-	1
Study terminated by sponsor	95	97
Lost to follow-up	1	1
Withdrawal of informed consent	1	3
Lack of efficacy	2	2

Notes:

[1] - The number of subjects at this milestone seems inconsistent with the number of subjects in the arm. It is expected that the number of subjects will be greater than, or equal to the number that completed, minus those who left.
Justification: Pharmacokinetic Set = All subjects who had at least one PK/PD assessment and received at least one dose of study drug (Does not apply to Placebo arm

Baseline characteristics

Reporting groups	
Reporting group title	Secukinumab 300 mg
Reporting group description:	
A blinded, weekly, subcutaneous (s.c.) secukinumab 300 mg loading regimen was administered for the first 4 weeks followed by a monthly maintenance dose in all randomized subjects thereafter (maximum treatment exposure during the core study: 786 days).	
Reporting group title	Placebo
Reporting group description:	
A blinded, weekly, subcutaneous (s.c.) matching placebo loading regimen was administered for the first 4 weeks followed by a monthly maintenance dose in all randomized subjects thereafter (maximum treatment exposure during the core study: 794 days).	

Reporting group values	Secukinumab 300 mg	Placebo	Total
Number of subjects	137	138	275
Age Categorical Units: Participants			
< 30 years	55	64	119
>= 30 years	82	74	156
Age Continuous Units: Years			
arithmetic mean	34.1	33.2	
standard deviation	± 10.84	± 11.28	-
Sex: Female, Male Units: Participants			
Female	116	124	240
Male	21	14	35
Race (NIH/OMB) Units: Subjects			
American Indian or Alaska Native	21	21	42
Asian	67	56	123
Native Hawaiian or Other Pacific Islander	0	0	0
Black or African American	6	9	15
White	42	52	94
More than one race	1	0	1
Unknown or Not Reported	0	0	0

End points

End points reporting groups

Reporting group title	Secukinumab 300 mg
Reporting group description:	
A blinded, weekly, subcutaneous (s.c.) secukinumab 300 mg loading regimen was administered for the first 4 weeks followed by a monthly maintenance dose in all randomized subjects thereafter (maximum treatment exposure during the core study: 786 days).	
Reporting group title	Placebo
Reporting group description:	
A blinded, weekly, subcutaneous (s.c.) matching placebo loading regimen was administered for the first 4 weeks followed by a monthly maintenance dose in all randomized subjects thereafter (maximum treatment exposure during the core study: 794 days).	

Primary: Percentage of participants achieving Complete Renal Response (CRR) at Week 52

End point title	Percentage of participants achieving Complete Renal Response (CRR) at Week 52
End point description:	
Complete Renal Response (CRR) is a composite endpoint defined as: • Estimated Glomerular Filtration Rate (eGFR) >= 60 mL/min/1.73 m^2 or no less than 85% of core Baseline values and • 24-hour Urine-to-Protein Creatinine Ratio (UPCR) =< 0.5mg/mg • No treatment discontinuation before Week 52 • The subject did not receive more than 10 mg/day prednisone or equivalent for >= 3 consecutive days or for >= 7 days in total during Week 44 through Week 52. Non-responder imputation (NRI) was used for participants who did not have the required data to compute responses at Week 52 or who had discontinued study treatment before Week 52. A logistic regression model was used for the analysis of this endpoint.	
End point type	Primary
End point timeframe:	
Baseline, Week 52	

End point values	Secukinumab 300 mg	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	91	91		
Units: Percentage of participants				
number (confidence interval 95%)	25.9 (16.8 to 34.9)	38.6 (28.5 to 48.7)		

Statistical analyses

Statistical analysis title	Complete Renal Response (CRR) at Week 52
Comparison groups	Secukinumab 300 mg v Placebo

Number of subjects included in analysis	182
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0662
Method	Regression, Logistic
Parameter estimate	Mean difference (final values)
Point estimate	-12.7
Confidence interval	
level	95 %
sides	2-sided
lower limit	-26.3
upper limit	0.9

Secondary: Change from Baseline in 24-hour Urine Protein-to Creatinine Ratio (UPCR)

End point title	Change from Baseline in 24-hour Urine Protein-to Creatinine Ratio (UPCR)

End point description:

Urine Protein-to-Creatinine Ratio (UPCR) was determined by a central laboratory by dividing the protein concentration by the creatinine concentration as measured in the urine collected (24-hour urine collection sample).

End point type	Secondary

End point timeframe:

Baseline, Week 52

End point values	Secukinumab 300 mg	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	67	63		
Units: mg/mg				
arithmetic mean (standard deviation)	-2.204 (± 3.5162)	-2.741 (± 5.9448)		

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants achieving Partial Renal Response (PRR) at Week 52

End point title	Percentage of participants achieving Partial Renal Response (PRR) at Week 52

End point description:

Partial Renal Response (PRR) is a composite endpoint defined as:
● >= 50% reduction in 24-hour Urine-to-Protein Creatinine Ratio (UPCR) to sub-nephrotic levels (=< 3 mg/mg)
and
● Estimated Glomerular Filtration Rate (eGFR) >= 60 mL/min/1.73 m^2 or no less than 85% of Baseline

End point type	Secondary
End point timeframe:	
Baseline, Week 52	

End point values	Secukinumab 300 mg	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	73	72		
Units: Percentage of participants				
number (confidence interval 95%)	56.2 (44.1 to 67.8)	63.9 (51.7 to 74.9)		

Statistical analyses

Statistical analysis title	Partial Renal Response (PRR) at Week 52
Comparison groups	Secukinumab 300 mg v Placebo
Number of subjects included in analysis	145
Analysis specification	Pre-specified
Analysis type	
Parameter estimate	Mean difference (final values)
Point estimate	-7.7
Confidence interval	
level	95 %
sides	2-sided
lower limit	-23.7
upper limit	8.4

Secondary: Incidence rate of participants achieving Complete Renal Response (CRR) up to Week 52

End point title	Incidence rate of participants achieving Complete Renal Response (CRR) up to Week 52

End point description:

Time to achieve Complete Renal Response (CRR) up to week 52 was evaluated by 4-week interval by using Kaplan-Meier estimates. Participants who did not achieve CRR were censored at the date of their last non-missing CRR result (including participants who completed week 52 without achieving CRR).
* Subjects at risk = Subjects who did not achieve CRR and were not censored before or at the start of the specified interval. Participants had an event when achieving CRR.
* Incidence rate (%) = (number of subjects with event/number of subjects at risk) x 100.

End point type	Secondary
End point timeframe:	
Baseline to Week 52	

End point values	Secukinumab 300 mg	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	131	132		
Units: Percentage of participants				
number (not applicable)				
1 to 28 days	0.0	0.8		
29 to 56 days	0.0	0.0		
57 to 84 days	3.1	5.4		
85 to 112 days	11.7	16.8		
113 to 140 days	0.0	2.2		
141 to 168 days	0.0	3.4		
169 to 196 days	20.4	20.0		
197 to 224 days	1.4	0.0		
225 to 252 days	0.0	0.0		
253 to 280 days	14.8	3.6		
281 to 308 days	0.0	2.1		
309 to 336 days	0.0	0.0		
337 to 364 days	2.3	7.3		

Statistical analyses

No statistical analyses for this end point

Secondary: Average daily dose of oral corticosteroids

End point title	Average daily dose of oral corticosteroids

End point description:

Average daily dose of oral corticosteroids doses was used to assess efficacy of secukinumab compared to placebo in the averaged daily dose of oral corticosteroids administered between Week 16 and Week 52.

End point type	Secondary

End point timeframe:

Week 16 to Week 52

End point values	Secukinumab 300 mg	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	137	138		
Units: mg/day				
arithmetic mean (standard deviation)	8.1243 (± 6.38329)	7.4791 (± 5.61958)		

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants achieving Partial Renal Response (PRR) at Week 24

End point title	Percentage of participants achieving Partial Renal Response (PRR) at Week 24

End point description:

Partial Renal Response (PRR) is a composite endpoint defined as:
● >= 50% reduction in 24-hour Urine-to-Protein Creatinine Ratio (UPCR) to sub-nephrotic levels (=< 3 mg/mg)
and
● Estimated Glomerular Filtration Rate (eGFR) >= 60 mL/min/1.73 m^2 or no less than 85% of Baseline

End point type	Secondary

End point timeframe:

Baseline, Week 24

End point values	Secukinumab 300 mg	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	108	110		
Units: Percentage of participants				
number (confidence interval 95%)	52.8 (42.9 to 62.5)	43.6 (34.2 to 53.4)		

Statistical analyses

No statistical analyses for this end point

Secondary: Incidence rate of participants achieving Partial Renal Response (PRR) up to Week 52

End point title	Incidence rate of participants achieving Partial Renal Response (PRR) up to Week 52

End point description:

Time to achieve Partial Renal Response (PRR) up to week 52 was evaluated by 4-week interval by using Kaplan-Meier estimates. Participants who did not achieve PRR were censored at the date of their last non-missing PRR result (including participants who completed week 52 without achieving PRR). Participants had event when achieving PRR.
* Subjects at risk = Subjects who did not achieve PRR and were not censored before or at the start of the specified interval.
* Incidence rate (%) = (number of subjects with event/ number of subjects at risk) x 100.

End point type	Secondary

End point timeframe:

Baseline to Week 52

End point values	Secukinumab 300 mg	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	131	132		
Units: Percentage of participants				
number (not applicable)				
1 to 28 days	0.0	0.8		
29 to 56 days	0.0	0.0		
57 to 84 days	7.0	5.4		
85 to 112 days	27.8	30.5		
113 to 140 days	1.3	2.6		
141 to 168 days	0.0	4.1		
169 to 196 days	32.4	14.9		
197 to 224 days	2.4	0.0		
225 to 252 days	2.6	0.0		
253 to 280 days	11.8	16.3		
281 to 308 days	4.0	2.9		
309 to 336 days	0.0	0.0		
337 to 364 days	0.0	6.5		

Statistical analyses

No statistical analyses for this end point

Secondary: Time to achieve first morning void Urine Protein-to-Creatinine Ratio (UPCR) <= 0.5 mg/mg up to week 52

End point title	Time to achieve first morning void Urine Protein-to-Creatinine Ratio (UPCR) <= 0.5 mg/mg up to week 52

End point description:

Time to achieve first morning void Urine Protein-to-Creatinine Ratio (UPCR) <= 0.5 mg/mg up to week 52 was evaluated by 4-week interval by using Kaplan-Meier estimates. Participants who did not achieve UCPR were censored at the date of their last non-missing UCPR result (including participants who completed week 52 without achieving UCPR). Participants had event when achieving UCPR.
* Subjects at risk = Subjects who did not achieve UCPR and were not censored before or at the start of the specified interval.
* Incidence rate (%) = (number of subjects with event/ number of subjects at risk) x 100.

End point type	Secondary

End point timeframe:

Baseline to Week 52

End point values	Secukinumab 300 mg	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	135	136		
Units: Percentage of participants				
number (not applicable)				
1 to 28 days	19.3	21.3		
29 to 56 days	2.8	5.6		
57 to 84 days	8.7	7.0		

85 to 112 days	11.8	9.7		
113 to 140 days	7.6	7.4		
141 to 168 days	9.9	6.9		
169 to 196 days	9.7	3.2		
197 to 224 days	7.5	11.9		
225 to 252 days	4.2	6.0		
253 to 280 days	4.4	0.0		
281 to 308 days	12.2	4.5		
309 to 336 days	0.0	5.1		
337 to 364 days	3.1	2.9		

Statistical analyses

No statistical analyses for this end point

Secondary: Functional Assessment of Chronic Illness Therapy – Fatigue (FACIT-Fatigue) mean change from Baseline up to Week 52

End point title	Functional Assessment of Chronic Illness Therapy – Fatigue (FACIT-Fatigue) mean change from Baseline up to Week 52

End point description:

The FACIT-Fatigue is a 13-item questionnaire that assesses self-reported fatigue and its impact upon daily activities and function over the past week. The purpose of the FACIT-Fatigue in this study was to assess the impact of fatigue on subjects with lupus nephritis (LN). The level of fatigue was measured on a 5-point Likert scale (0 = not at all, 1 = a little bit, 2 = somewhat, 3 = quite a bit, 4 = very much) based on their experience of fatigue during the past 2 weeks. The scale score is computed by summing the item scores, after reversing those items that are worded in the negative direction. FACIT-Fatigue scale score range from 0 to 52, where higher scores represent less fatigue.

End point type	Secondary

End point timeframe:

Baseline, Week 12, Week 24, Week 36, Week 52

End point values	Secukinumab 300 mg	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	131	131		
Units: Unit on a scale				
arithmetic mean (standard deviation)				
Week 12	-2.8 (± 8.47)	-1.9 (± 8.46)		
Week 24	-1.4 (± 9.66)	-2.0 (± 8.93)		
Week 36	-2.6 (± 9.21)	-2.1 (± 9.67)		
Week 52	-2.0 (± 10.18)	-2.0 (± 9.51)		

Statistical analyses

No statistical analyses for this end point

Secondary: Short Form Health Survey (SF-36) Version 2 (Acute Form) mean change from Baseline in Physical Component Score (PCS) up to Week 52

End point title	Short Form Health Survey (SF-36) Version 2 (Acute Form) mean change from Baseline in Physical Component Score (PCS) up to Week 52

End point description:

The SF-36 questionnaire consists of eight scales yielding two summary measures: physical and mental health. The physical health measure includes four scales of physical functioning (10 items), role-physical (4 items), bodily pain (2 items), and general health (5 items). The mental health measure is composed of vitality (4 items), social functioning (2 items), role-emotional (3 items), and mental health (5 items). In this trial, SF-36-PCS responder (improvement of >= 2.5 points) were evaluated. Responses to items allow for direct calculation of scale scores, while the physical component summary (PCS) scores are computed from weighted scale scores. For all scales and summary measures, higher scores indicate better health outcomes (PCS scores range 0 to 100).

End point type	Secondary

End point timeframe:

Baseline, Week 12, Week 24, Week 36, Week 52

End point values	Secukinumab 300 mg	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	131	131		
Units: Unit on a scale				
arithmetic mean (standard deviation)				
Week 12	2.306 (± 6.4306)	2.210 (± 6.8760)		
Week 24	2.873 (± 6.4502)	1.687 (± 6.5346)		
Week 36	2.910 (± 6.8234)	3.152 (± 7.0623)		
Week 52	3.410 (± 7.7123)	2.707 (± 6.8887)		

Statistical analyses

No statistical analyses for this end point

Secondary: Lupus Quality of Life (LupusQoL) physical health score mean change from Baseline up to Week 52

End point title	Lupus Quality of Life (LupusQoL) physical health score mean change from Baseline up to Week 52

End point description:

The LupusQoL is a disease-specific, 34-item, self-report questionnaire designed to measure the health-related quality of life (HRQoL) of subjects with SLE within 8 domains (i.e., physical health (8 items), emotional health (6 items), body image (5 items), pain (3 items), planning (3 items), fatigue (4 items), intimate relationships (2 items), and burden to others (3 items)). Responses are based on a 5-point Likert scale where 0 (all of the time) to 4 (never). Each domain of the LupusQoL was scored separately. Transformed scores range from 0 (worst HRQoL) to 100 (best HRQoL).

End point type	Secondary

End point timeframe:

Baseline, Week 12, Week 24, Week 36, Week 52

End point values	Secukinumab 300 mg	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	131	131		
Units: Unit on a scale				
arithmetic mean (standard deviation)				
Week 12	5.32 (± 16.031)	6.18 (± 19.248)		
Week 24	4.84 (± 18.184)	5.55 (± 20.485)		
Week 36	5.59 (± 20.684)	7.89 (± 23.112)		
Week 52	7.62 (± 23.275)	8.55 (± 20.589)		

Statistical analyses

No statistical analyses for this end point

Secondary: Incidence of adverse events (AEs), serious adverse events (SAEs)

End point title	Incidence of adverse events (AEs), serious adverse events (SAEs)

End point description:

The distribution of adverse events was done via the analysis of frequencies for treatment emergent Adverse Event (TEAEs), Serious Adverse Event (TESAEs) and Deaths due to AEs, through the monitoring of relevant clinical and laboratory safety parameters.

End point type	Secondary

End point timeframe:

From first dose of study treatment up to approximately 2 years

End point values	Secukinumab 300 mg	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	137	138		
Units: Participants				
Deaths	1	1		
Serious Adverse Event (TESAEs)	30	39		
Treatment Emergent Adverse Event (TEAEs)	120	123		
TESAEs leading to study medication discontinuation	8	10		

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants with improved or maintained response (PRR or CRR) at Week 104 in those who had achieved at least PRR at Week 52 in the secukinumab group

End point title	Percentage of participants with improved or maintained response (PRR or CRR) at Week 104 in those who had achieved at least PRR at Week 52 in the secukinumab group[1]

End point description:

The percentage of participants with improved or maintained renal response (CRR) at Week 104 in the secukinumab group was evaluated

End point type	Secondary

End point timeframe:

Week 52 to Week 104

Notes:

[1] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: Only descriptive statistics performed

End point values	Secukinumab 300 mg			
Subject group type	Reporting group			
Number of subjects analysed	12			
Units: Participants				
Achieve PRR or CRR	11			
Not achieve PRR or CRR	1			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants with Complete Renal Response (CRR) at Week 104 within those who had achieved CRR at Week 52 in the secukinumab group

End point title	Percentage of participants with Complete Renal Response (CRR) at Week 104 within those who had achieved CRR at Week 52 in the secukinumab group[2]

End point description:

The percentage of participants with maintained renal response (CRR) at Week 104 in the secukinumab group was evaluated

End point type	Secondary

End point timeframe:

Week 52 to Week 104

Notes:

[2] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: Only descriptive statistics performed

End point values	Secukinumab 300 mg			
Subject group type	Reporting group			
Number of subjects analysed	6			
Units: Participants				
Achieve CRR	5			
Not Achieve CRR	1			

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

On-treatment adverse events and deaths were reported from first dose of study treatment to 84 days after last dose of study medication, assessed up to approximately 2 years.

Adverse event reporting additional description:

Any sign or symptom that occurred during the treatment and safety follow-up. The Safety Set included all subjects who received at least one dose of study treatment.

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	26.1

Reporting groups

Reporting group title	Placebo

Reporting group description:

Placebo

Reporting group title	AIN457 300 mg

Reporting group description:

AIN457 300 mg

Serious adverse events	Placebo	AIN457 300 mg	
Total subjects affected by serious adverse events			
subjects affected / exposed	39 / 138 (28.26%)	30 / 137 (21.90%)	
number of deaths (all causes)	1	1	
number of deaths resulting from adverse events	0	1	
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Anogenital warts			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Vascular disorders			
Hypertension			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hypertensive urgency			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

Deep vein thrombosis			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
General disorders and administration site conditions			
Pyrexia			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Generalised oedema			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Immune system disorders			
Anaphylactic reaction			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hypogammaglobulinaemia			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Drug hypersensitivity			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Reproductive system and breast disorders			
Endometriosis			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Genital tract inflammation			

subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory, thoracic and mediastinal disorders			
Pulmonary hypertension			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pulmonary congestion			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Haemoptysis			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Dyspnoea			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Psychiatric disorders			
Bipolar disorder			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Major depression			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Injury, poisoning and procedural complications			
Traumatic haemorrhage			

subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cardiac disorders			
Pericardial effusion			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 1	0 / 0	
Nervous system disorders			
Dyskinesia			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cerebral ischaemia			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Transient ischaemic attack			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Post herpetic neuralgia			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Intracranial pressure increased			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Incoherent			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Blood and lymphatic system disorders			

Pancytopenia			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Blood loss anaemia			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Anaemia			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Eye disorders			
Cataract			
subjects affected / exposed	1 / 138 (0.72%)	2 / 137 (1.46%)	
occurrences causally related to treatment / all	0 / 1	0 / 3	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastrointestinal disorders			
Dyspepsia			
subjects affected / exposed	1 / 138 (0.72%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastric ulcer			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastritis			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hepatobiliary disorders			
Drug-induced liver injury			

subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Renal and urinary disorders			
Nephrotic syndrome			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Lupus nephritis			
subjects affected / exposed	5 / 138 (3.62%)	4 / 137 (2.92%)	
occurrences causally related to treatment / all	0 / 7	0 / 4	
deaths causally related to treatment / all	0 / 0	0 / 0	
End stage renal disease			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Azotaemia			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Acute kidney injury			
subjects affected / exposed	4 / 138 (2.90%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 4	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Renal failure			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (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			
Osteonecrosis			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Systemic lupus erythematosus			
subjects affected / exposed	1 / 138 (0.72%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 1	0 / 0	
Infections and infestations			
COVID-19			
subjects affected / exposed	4 / 138 (2.90%)	3 / 137 (2.19%)	
occurrences causally related to treatment / all	0 / 4	3 / 3	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cellulitis			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Chronic sinusitis			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Dengue fever			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Haematological infection			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Diarrhoea infectious			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Endometritis			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Genital herpes			

subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastroenteritis			
subjects affected / exposed	1 / 138 (0.72%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Dengue haemorrhagic fever			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Herpes zoster			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Herpes zoster disseminated			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Influenza			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Meningitis			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	1 / 1	
deaths causally related to treatment / all	0 / 0	1 / 1	
Oesophageal candidiasis			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Parotitis			

subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (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	3 / 138 (2.17%)	5 / 137 (3.65%)	
occurrences causally related to treatment / all	2 / 3	2 / 5	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonia bacterial			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pyelonephritis			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pyelonephritis acute			
subjects affected / exposed	1 / 138 (0.72%)	2 / 137 (1.46%)	
occurrences causally related to treatment / all	1 / 1	1 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Renal cyst infection			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Urinary tract infection			
subjects affected / exposed	2 / 138 (1.45%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 3	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Soft tissue infection			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Septic shock			

subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory tract infection viral			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Metabolism and nutrition disorders			
Metabolic acidosis			
subjects affected / exposed	1 / 138 (0.72%)	0 / 137 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hypervolaemia			
subjects affected / exposed	0 / 138 (0.00%)	1 / 137 (0.73%)	
occurrences causally related to treatment / all	0 / 0	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	

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

Non-serious adverse events	Placebo	AIN457 300 mg	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	116 / 138 (84.06%)	111 / 137 (81.02%)	
Vascular disorders			
Hypertension			
subjects affected / exposed	8 / 138 (5.80%)	8 / 137 (5.84%)	
occurrences (all)	11	11	
Hypotension			
subjects affected / exposed	4 / 138 (2.90%)	5 / 137 (3.65%)	
occurrences (all)	5	6	
General disorders and administration site conditions			
Fatigue			
subjects affected / exposed	2 / 138 (1.45%)	4 / 137 (2.92%)	
occurrences (all)	3	4	
Chest discomfort			

subjects affected / exposed	0 / 138 (0.00%)	3 / 137 (2.19%)	
occurrences (all)	0	5	
Oedema			
subjects affected / exposed	4 / 138 (2.90%)	2 / 137 (1.46%)	
occurrences (all)	4	3	
Peripheral swelling			
subjects affected / exposed	2 / 138 (1.45%)	4 / 137 (2.92%)	
occurrences (all)	2	4	
Pyrexia			
subjects affected / exposed	3 / 138 (2.17%)	8 / 137 (5.84%)	
occurrences (all)	6	12	
Oedema peripheral			
subjects affected / exposed	8 / 138 (5.80%)	3 / 137 (2.19%)	
occurrences (all)	11	4	
Reproductive system and breast disorders			
Vaginal discharge			
subjects affected / exposed	3 / 138 (2.17%)	1 / 137 (0.73%)	
occurrences (all)	4	1	
Menstruation irregular			
subjects affected / exposed	1 / 138 (0.72%)	4 / 137 (2.92%)	
occurrences (all)	1	4	
Menstrual disorder			
subjects affected / exposed	1 / 138 (0.72%)	6 / 137 (4.38%)	
occurrences (all)	1	6	
Respiratory, thoracic and mediastinal disorders			
Rhinorrhoea			
subjects affected / exposed	4 / 138 (2.90%)	1 / 137 (0.73%)	
occurrences (all)	4	2	
Rhinitis allergic			
subjects affected / exposed	1 / 138 (0.72%)	3 / 137 (2.19%)	
occurrences (all)	1	3	
Oropharyngeal pain			
subjects affected / exposed	4 / 138 (2.90%)	4 / 137 (2.92%)	
occurrences (all)	5	5	
Cough			

subjects affected / exposed	14 / 138 (10.14%)	8 / 137 (5.84%)	
occurrences (all)	20	10	
Psychiatric disorders			
Insomnia			
subjects affected / exposed	6 / 138 (4.35%)	8 / 137 (5.84%)	
occurrences (all)	7	8	
Depression			
subjects affected / exposed	2 / 138 (1.45%)	3 / 137 (2.19%)	
occurrences (all)	2	3	
Anxiety			
subjects affected / exposed	4 / 138 (2.90%)	3 / 137 (2.19%)	
occurrences (all)	4	3	
Investigations			
Weight increased			
subjects affected / exposed	3 / 138 (2.17%)	4 / 137 (2.92%)	
occurrences (all)	3	5	
White blood cell count decreased			
subjects affected / exposed	3 / 138 (2.17%)	2 / 137 (1.46%)	
occurrences (all)	3	3	
Injury, poisoning and procedural complications			
Contusion			
subjects affected / exposed	4 / 138 (2.90%)	2 / 137 (1.46%)	
occurrences (all)	4	2	
Nervous system disorders			
Tremor			
subjects affected / exposed	2 / 138 (1.45%)	3 / 137 (2.19%)	
occurrences (all)	3	3	
Headache			
subjects affected / exposed	14 / 138 (10.14%)	21 / 137 (15.33%)	
occurrences (all)	26	34	
Dizziness			
subjects affected / exposed	3 / 138 (2.17%)	6 / 137 (4.38%)	
occurrences (all)	3	7	
Blood and lymphatic system disorders			
Leukopenia			

subjects affected / exposed	10 / 138 (7.25%)	6 / 137 (4.38%)	
occurrences (all)	12	9	
Lymphopenia			
subjects affected / exposed	1 / 138 (0.72%)	3 / 137 (2.19%)	
occurrences (all)	1	3	
Iron deficiency anaemia			
subjects affected / exposed	4 / 138 (2.90%)	3 / 137 (2.19%)	
occurrences (all)	5	3	
Anaemia			
subjects affected / exposed	13 / 138 (9.42%)	12 / 137 (8.76%)	
occurrences (all)	13	12	
Neutropenia			
subjects affected / exposed	3 / 138 (2.17%)	3 / 137 (2.19%)	
occurrences (all)	5	5	
Eye disorders			
Dry eye			
subjects affected / exposed	2 / 138 (1.45%)	3 / 137 (2.19%)	
occurrences (all)	2	4	
Vision blurred			
subjects affected / exposed	6 / 138 (4.35%)	3 / 137 (2.19%)	
occurrences (all)	6	3	
Gastrointestinal disorders			
Abdominal pain			
subjects affected / exposed	6 / 138 (4.35%)	3 / 137 (2.19%)	
occurrences (all)	8	3	
Abdominal pain upper			
subjects affected / exposed	4 / 138 (2.90%)	2 / 137 (1.46%)	
occurrences (all)	4	2	
Aphthous ulcer			
subjects affected / exposed	2 / 138 (1.45%)	3 / 137 (2.19%)	
occurrences (all)	2	4	
Constipation			
subjects affected / exposed	6 / 138 (4.35%)	1 / 137 (0.73%)	
occurrences (all)	7	1	
Diarrhoea			

subjects affected / exposed	21 / 138 (15.22%)	23 / 137 (16.79%)	
occurrences (all)	30	25	
Dyspepsia			
subjects affected / exposed	2 / 138 (1.45%)	5 / 137 (3.65%)	
occurrences (all)	2	7	
Gastritis			
subjects affected / exposed	2 / 138 (1.45%)	4 / 137 (2.92%)	
occurrences (all)	2	4	
Nausea			
subjects affected / exposed	5 / 138 (3.62%)	11 / 137 (8.03%)	
occurrences (all)	11	17	
Mouth ulceration			
subjects affected / exposed	3 / 138 (2.17%)	5 / 137 (3.65%)	
occurrences (all)	5	8	
Haemorrhoids			
subjects affected / exposed	1 / 138 (0.72%)	3 / 137 (2.19%)	
occurrences (all)	1	4	
Gastrooesophageal reflux disease			
subjects affected / exposed	5 / 138 (3.62%)	2 / 137 (1.46%)	
occurrences (all)	5	2	
Toothache			
subjects affected / exposed	2 / 138 (1.45%)	3 / 137 (2.19%)	
occurrences (all)	2	8	
Vomiting			
subjects affected / exposed	4 / 138 (2.90%)	7 / 137 (5.11%)	
occurrences (all)	5	9	
Skin and subcutaneous tissue disorders			
Skin hyperpigmentation			
subjects affected / exposed	1 / 138 (0.72%)	5 / 137 (3.65%)	
occurrences (all)	1	5	
Rash erythematous			
subjects affected / exposed	3 / 138 (2.17%)	0 / 137 (0.00%)	
occurrences (all)	3	0	
Rash			
subjects affected / exposed	5 / 138 (3.62%)	1 / 137 (0.73%)	
occurrences (all)	6	2	

Pruritus			
subjects affected / exposed	3 / 138 (2.17%)	4 / 137 (2.92%)	
occurrences (all)	3	8	
Erythema			
subjects affected / exposed	3 / 138 (2.17%)	1 / 137 (0.73%)	
occurrences (all)	4	1	
Dry skin			
subjects affected / exposed	0 / 138 (0.00%)	3 / 137 (2.19%)	
occurrences (all)	0	3	
Dermatitis allergic			
subjects affected / exposed	3 / 138 (2.17%)	0 / 137 (0.00%)	
occurrences (all)	3	0	
Alopecia			
subjects affected / exposed	11 / 138 (7.97%)	6 / 137 (4.38%)	
occurrences (all)	15	6	
Acne			
subjects affected / exposed	3 / 138 (2.17%)	1 / 137 (0.73%)	
occurrences (all)	4	1	
Renal and urinary disorders			
Lupus nephritis			
subjects affected / exposed	3 / 138 (2.17%)	2 / 137 (1.46%)	
occurrences (all)	4	2	
Acute kidney injury			
subjects affected / exposed	2 / 138 (1.45%)	6 / 137 (4.38%)	
occurrences (all)	3	7	
Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	19 / 138 (13.77%)	13 / 137 (9.49%)	
occurrences (all)	36	19	
Back pain			
subjects affected / exposed	4 / 138 (2.90%)	5 / 137 (3.65%)	
occurrences (all)	6	5	
Systemic lupus erythematosus			
subjects affected / exposed	4 / 138 (2.90%)	1 / 137 (0.73%)	
occurrences (all)	4	1	
Pain in extremity			

subjects affected / exposed	4 / 138 (2.90%)	0 / 137 (0.00%)	
occurrences (all)	5	0	
Muscle spasms			
subjects affected / exposed	2 / 138 (1.45%)	6 / 137 (4.38%)	
occurrences (all)	5	9	
Infections and infestations			
Pneumonia			
subjects affected / exposed	0 / 138 (0.00%)	6 / 137 (4.38%)	
occurrences (all)	0	6	
Bronchitis			
subjects affected / exposed	3 / 138 (2.17%)	3 / 137 (2.19%)	
occurrences (all)	4	3	
COVID-19			
subjects affected / exposed	22 / 138 (15.94%)	25 / 137 (18.25%)	
occurrences (all)	23	26	
Conjunctivitis			
subjects affected / exposed	4 / 138 (2.90%)	1 / 137 (0.73%)	
occurrences (all)	4	1	
Gastroenteritis			
subjects affected / exposed	7 / 138 (5.07%)	6 / 137 (4.38%)	
occurrences (all)	7	6	
Herpes zoster			
subjects affected / exposed	7 / 138 (5.07%)	10 / 137 (7.30%)	
occurrences (all)	7	10	
Influenza			
subjects affected / exposed	3 / 138 (2.17%)	3 / 137 (2.19%)	
occurrences (all)	6	4	
Nasopharyngitis			
subjects affected / exposed	11 / 138 (7.97%)	11 / 137 (8.03%)	
occurrences (all)	21	14	
Pharyngitis			
subjects affected / exposed	11 / 138 (7.97%)	4 / 137 (2.92%)	
occurrences (all)	12	4	
Oral herpes			
subjects affected / exposed	2 / 138 (1.45%)	5 / 137 (3.65%)	
occurrences (all)	3	6	

Oral candidiasis			
subjects affected / exposed	3 / 138 (2.17%)	8 / 137 (5.84%)	
occurrences (all)	4	12	
Upper respiratory tract infection			
subjects affected / exposed	26 / 138 (18.84%)	19 / 137 (13.87%)	
occurrences (all)	30	26	
Urinary tract infection			
subjects affected / exposed	30 / 138 (21.74%)	19 / 137 (13.87%)	
occurrences (all)	41	28	
Viral upper respiratory tract infection			
subjects affected / exposed	3 / 138 (2.17%)	1 / 137 (0.73%)	
occurrences (all)	3	1	
Metabolism and nutrition disorders			
Dyslipidaemia			
subjects affected / exposed	5 / 138 (3.62%)	7 / 137 (5.11%)	
occurrences (all)	5	7	
Hypercholesterolaemia			
subjects affected / exposed	1 / 138 (0.72%)	3 / 137 (2.19%)	
occurrences (all)	1	3	
Hyperlipidaemia			
subjects affected / exposed	1 / 138 (0.72%)	4 / 137 (2.92%)	
occurrences (all)	1	4	
Hyperuricaemia			
subjects affected / exposed	1 / 138 (0.72%)	7 / 137 (5.11%)	
occurrences (all)	1	7	
Hypocalcaemia			
subjects affected / exposed	3 / 138 (2.17%)	2 / 137 (1.46%)	
occurrences (all)	4	2	
Hypokalaemia			
subjects affected / exposed	11 / 138 (7.97%)	9 / 137 (6.57%)	
occurrences (all)	14	10	
Iron deficiency			
subjects affected / exposed	3 / 138 (2.17%)	1 / 137 (0.73%)	
occurrences (all)	3	1	
Vitamin D deficiency			

subjects affected / exposed occurrences (all)	3 / 138 (2.17%) 3	1 / 137 (0.73%) 1	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
17 February 2023	Amendment 1: The purpose of this amendment was to decrease the overall study sample size from 460 to 400 subjects based on literature reporting results of Phase 3 studies in adult lupus nephritis populations

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported