Clinical trial results:
A randomized, double-blind, placebo-controlled phase III multicenter study of secukinumab to demonstrate the efficacy at 16 weeks and to assess the long-term safety, tolerability and efficacy up to 3 years in subjects with active ankylosing spondylitis

Summary

EudraCT number	2013-001090-24
Trial protocol	DE CZ ES PT GR GB BE NO
Global end of trial date	11 December 2017

Results information

Result version number	v1 (current)
This version publication date	01 December 2018
First version publication date	01 December 2018

Trial information

Trial identification

Sponsor protocol code	CAIN457F2314

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT02008916
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Novartis Pharma AG
Sponsor organisation address	CH-4002, 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	11 December 2017
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	11 December 2017
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The primary objective was to demonstrate that at least one dose of secukinumab (150 mg s.c. or 300 mg s.c.) at Week 16 is superior to placebo in patients with active AS (despite current or previous NSAID, DMARD and/or anti-TNFα therapy) based on the proportion of patients achieving an ASAS 20 (Assessment of Spondyloarthritis International Society criteria) response.

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	14 January 2014
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	Belgium: 12
Country: Number of subjects enrolled	Czech Republic: 42
Country: Number of subjects enrolled	United Kingdom: 9
Country: Number of subjects enrolled	Greece: 8
Country: Number of subjects enrolled	Mexico: 27
Country: Number of subjects enrolled	Portugal: 8
Country: Number of subjects enrolled	Russian Federation: 34
Country: Number of subjects enrolled	Spain: 15
Country: Number of subjects enrolled	United States: 24
Country: Number of subjects enrolled	Germany: 47
Worldwide total number of subjects	226
EEA total number of subjects	141

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)	221
From 65 to 84 years	5
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Patients were randomized to one of three treatment groups (1:1:1) and planned to be treated for 156 weeks.
At Week 16, subjects who were randomized to placebo were re-randomized to secukinumab 150 mg or 300 mg.
Patients were enrolled in 54 centers in Germany, Spain, United States, Czech Republic, Belgium, Greece, Mexico, Portugal, Russia and UK

Pre-assignment

Screening details:

A screening period (SCR) running up to 10 weeks before randomization was used to assess eligibility.

Period 1

Period 1 title	Primary Assessment (up to Week 16)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Monitor, Data analyst

Blinding implementation details:

This study was a double-blind, double-dummy, randomized treatment trial until the Week 52 analysis was completed and thereafter was open label.

Arms

Are arms mutually exclusive?	Yes
Arm title	Secukinumab 10 mg/kg i.v. / 150 mg s.c.

Arm description:

Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection every four weeks until the end of the study.

Arm type	Experimental
Investigational medicinal product name	secukinumab
Investigational medicinal product code	AIN457
Other name	Cosentyx®
Pharmaceutical forms	Solution for infusion, Solution for injection in pre-filled syringe
Routes of administration	Intravenous use, Subcutaneous use

Dosage and administration details:

secukinumab i.v. (10 mg/kg) at BSL, Weeks 2 and 4, followed by secukinumab 150 mg s.c. (1.0 mL) plus placebo s.c. (1.0 mL) every 4 weeks starting at Week 8 through Week 152

Arm title	Secukinumab 10 mg/kg i.v. / 300 mg s.c.

Arm description:

Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection every four weeks until the end of the study.

Arm type	Experimental
Investigational medicinal product name	secukinumab
Investigational medicinal product code	AIN457
Other name	Cosentyx®
Pharmaceutical forms	Solution for infusion, Solution for injection in pre-filled syringe
Routes of administration	Intravenous use, Subcutaneous use

Dosage and administration details:

secukinumab i.v. (10 mg/kg) at BSL, Weeks 2 and 4, followed by secukinumab 300 mg s.c. (2 x 1.0 mL) every 4 weeks starting at Week 8 through Week 152

Arm title	Placebo i.v. and s.c.

Arm description:

Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection at weeks 8 and 12. At week 16, 36 patients were re-randomised to Secukinumab 150mg and 37 patients to Secukinumab 300mg until the end of the study.

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

Dosage and administration details:

placebo i.v. at BSL, Weeks 2 and 4, followed by placebo s.c. at Weeks 8 and 12. At Week 16 subjects were re-randomized to receive secukinumab 150 mg plus placebo or secukinumab 300 mg (1:1) every 4 weeks through Week 152.

Number of subjects in period 1	Secukinumab 10 mg/kg i.v. / 150 mg s.c.	Secukinumab 10 mg/kg i.v. / 300 mg s.c.	Placebo i.v. and s.c.
Started	74	76	76
FAS	74	76	76
Safety Set	74	76	75
Completed	74	75	73
Not completed	0	1	3
Consent withdrawn by subject	-	1	3

Period 2

Period 2 title	Week 16 - 156
Is this the baseline period?	No
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Monitor, Data analyst

Blinding implementation details:

This study was a double-blind, double-dummy, randomized treatment trial until the Week 52 analysis was completed and thereafter was open label.

Arms

Are arms mutually exclusive?	Yes
Arm title	Secukinumab 10 mg/kg i.v. / 150 mg s.c.

Arm description:

Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection every four weeks until the end of the study.

Arm type	Experimental

Investigational medicinal product name	secukinumab
Investigational medicinal product code	AIN457
Other name	Cosentyx®
Pharmaceutical forms	Solution for infusion, Solution for injection in pre-filled syringe
Routes of administration	Intravenous use, Subcutaneous use

Dosage and administration details:

secukinumab iv (10 mg/kg) at BSL, Weeks 2 and 4, followed by secukinumab 150 mg sc (1.0 mL) plus placebo sc (1.0 mL) every 4 weeks starting at Week 8 through Week 152

Arm title	Secukinumab 10 mg/kg i.v. / 300 mg s.c.

Arm description:

Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection every four weeks until the end of the study.

Arm type	Experimental
Investigational medicinal product name	secukinumab
Investigational medicinal product code	AIN457
Other name	Cosentyx®
Pharmaceutical forms	Solution for infusion, Solution for injection in pre-filled syringe
Routes of administration	Intravenous use, Subcutaneous use

Dosage and administration details:

secukinumab i.v. (10 mg/kg) at BSL, Weeks 2 and 4, followed by secukinumab 300 mg s.c. (2 x 1.0 mL) every 4 weeks starting at Week 8 through Week 152

Arm title	Placebo i.v. and s.c.

Arm description:

Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection at weeks 8 and 12. At week 16, 36 patients were re-randomised to Secukinumab 150mg and 37 patients to Secukinumab 300mg until the end of the study.

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

Dosage and administration details:

placebo i.v. at BSL, Weeks 2 and 4, followed by placebo s.c. at Weeks 8 and 12. At Week 16 subjects were re-randomized to receive secukinumab 150 mg plus placebo or secukinumab 300 mg (1:1) every 4 weeks through Week 152.

Number of subjects in period 2	Secukinumab 10 mg/kg i.v. / 150 mg s.c.	Secukinumab 10 mg/kg i.v. / 300 mg s.c.	Placebo i.v. and s.c.
Started	74	75	73
Completed	55	62	63
Not completed	19	13	10
Consent withdrawn by subject	7	3	5
Physician decision	-	1	-
Adverse event, non-fatal	4	2	3
Pregnancy	-	1	-
Lost to follow-up	5	-	-
No longer requires treatment	-	1	-

Lack of efficacy	3	5	2

Baseline characteristics

Reporting groups	
Reporting group title	Secukinumab 10 mg/kg i.v. / 150 mg s.c.
Reporting group description:	
Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection every four weeks until the end of the study.	
Reporting group title	Secukinumab 10 mg/kg i.v. / 300 mg s.c.
Reporting group description:	
Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection every four weeks until the end of the study.	
Reporting group title	Placebo i.v. and s.c.
Reporting group description:	
Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection at weeks 8 and 12. At week 16, 36 patients were re-randomised to Secukinumab 150mg and 37 patients to Secukinumab 300mg until the end of the study.	

Reporting group values	Secukinumab 10 mg/kg i.v. / 150 mg s.c.	Secukinumab 10 mg/kg i.v. / 300 mg s.c.	Placebo i.v. and s.c.
Number of subjects	74	76	76
Age categorical Units: Subjects			
In utero	0	0	0
Preterm newborn infants (gestational age < 37 wks)	0	0	0
Newborns (0-27 days)	0	0	0
Infants and toddlers (28 days-23 months)	0	0	0
Children (2-11 years)	0	0	0
Adolescents (12-17 years)	0	0	0
Adults (18-64 years)	72	74	75
From 65-84 years	2	2	1
85 years and over	0	0	0
Age Continuous Units: Years			
arithmetic mean	42.9	42.1	42.7
standard deviation	± 11.11	± 11.81	± 11.43
Sex: Female, Male Units: Subjects			
Female	28	26	36
Male	46	50	40
Race/Ethnicity, Customized Units: Subjects			
White|	54	52	58
Black or African American|	2	2	1
Asian|	1	2	0
American Indian or Alaska Native|	4	6	5
Unknown|	0	1	0
Other|	13	13	12

Reporting group values	Total		

Number of subjects	226		
Age categorical Units: Subjects			
In utero	0		
Preterm newborn infants (gestational age < 37 wks)	0		
Newborns (0-27 days)	0		
Infants and toddlers (28 days-23 months)	0		
Children (2-11 years)	0		
Adolescents (12-17 years)	0		
Adults (18-64 years)	221		
From 65-84 years	5		
85 years and over	0		
Age Continuous Units: Years			
arithmetic mean			
standard deviation	-		
Sex: Female, Male Units: Subjects			
Female	90		
Male	136		
Race/Ethnicity, Customized Units: Subjects			
White|	164		
Black or African American|	5		
Asian|	3		
American Indian or Alaska Native|	15		
Unknown|	1		
Other|	38		

End points

End points reporting groups

Reporting group title	Secukinumab 10 mg/kg i.v. / 150 mg s.c.
Reporting group description:	
Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection every four weeks until the end of the study.	
Reporting group title	Secukinumab 10 mg/kg i.v. / 300 mg s.c.
Reporting group description:	
Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection every four weeks until the end of the study.	
Reporting group title	Placebo i.v. and s.c.
Reporting group description:	
Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection at weeks 8 and 12. At week 16, 36 patients were re-randomised to Secukinumab 150mg and 37 patients to Secukinumab 300mg until the end of the study.	
Reporting group title	Secukinumab 10 mg/kg i.v. / 150 mg s.c.
Reporting group description:	
Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection every four weeks until the end of the study.	
Reporting group title	Secukinumab 10 mg/kg i.v. / 300 mg s.c.
Reporting group description:	
Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection every four weeks until the end of the study.	
Reporting group title	Placebo i.v. and s.c.
Reporting group description:	
Three i.v. infusions: at Baseline and weeks 2 and 4, followed by one s.c. injection at weeks 8 and 12. At week 16, 36 patients were re-randomised to Secukinumab 150mg and 37 patients to Secukinumab 300mg until the end of the study.	

Primary: Assessment of Spondyloarthritis International Society criteria / ASAS 20 response

End point title	Assessment of Spondyloarthritis International Society criteria / ASAS 20 response
End point description:	
ASAS 20 response is a validated composite assessment, reflecting the proportion of treated patients who achieve within a defined time frame at least 20% improvement in score in at least 3 of a conventional set of 4 clinical domains relevant to AS and no worsening in the fourth domain. In this study, ASAS 20 was used to assess the efficacy of at least one dose of secukinumab versus placebo.	
End point type	Primary
End point timeframe:	
16 weeks	

End point values	Secukinumab 10 mg/kg i.v. / 150 mg s.c.	Secukinumab 10 mg/kg i.v. / 300 mg s.c.	Placebo i.v. and s.c.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	74	76	76	
Units: Participants				
Responder	43	46	28	

Non-Responder	31	30	48	

Statistical analyses

Statistical analysis title	ASAS 20 response
Comparison groups	Secukinumab 10 mg/kg i.v. / 150 mg s.c. v Placebo i.v. and s.c.
Number of subjects included in analysis	150
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0093
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	2.41
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.24
upper limit	4.69

Statistical analysis title	ASAS 20 response
Comparison groups	Secukinumab 10 mg/kg i.v. / 300 mg s.c. v Placebo i.v. and s.c.
Number of subjects included in analysis	152
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0037
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	2.68
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.38
upper limit	5.21

Secondary: ASAS 40 response

End point title	ASAS 40 response

End point description:

ASAS 40 response is a validated composite assessment, reflecting the proportion of treated patients who achieve within a defined time frame at least 40% improvement in score in at least 3 of a conventional set of 4 clinical domains relevant to AS and no worsening in the fourth domain. In this study, ASAS 40 was used to assess the efficacy of at least one dose of secukinumab versus placebo.

End point type	Secondary
End point timeframe: 16 weeks	

End point values	Secukinumab 10 mg/kg i.v. / 150 mg s.c.	Secukinumab 10 mg/kg i.v. / 300 mg s.c.	Placebo i.v. and s.c.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	74	76	76	
Units: Participants				
Responder	30	32	16	
Non-Responder	44	44	60	

Statistical analyses

Statistical analysis title	ASAS 40 response
Comparison groups	Secukinumab 10 mg/kg i.v. / 150 mg s.c. v Placebo i.v. and s.c.
Number of subjects included in analysis	150
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.01
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	2.59
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.26
upper limit	5.35

Statistical analysis title	ASAS 40 response
Comparison groups	Secukinumab 10 mg/kg i.v. / 300 mg s.c. v Placebo i.v. and s.c.
Number of subjects included in analysis	152
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0051
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	2.81

Confidence interval	
level	95 %
sides	2-sided
lower limit	1.36
upper limit	5.78

Secondary: Serum hsCRP

End point title	Serum hsCRP

End point description:

Blood levels of C-reactive protein (CRP), an acute phase reactant, are indicative of inflammation and of its severity, and can be used to monitor treatment response. A high sensitivity CRP (hsCRP) test was implemented in this study, to assess the efficacy of at least one dose of secukinumab versus placebo in reducing AS elicited systemic inflammation over the time.

End point type	Secondary

End point timeframe:

16 weeks

End point values	Secukinumab 10 mg/kg i.v. / 150 mg s.c.	Secukinumab 10 mg/kg i.v. / 300 mg s.c.	Placebo i.v. and s.c.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	74	76	76	
Units: mg/L				
arithmetic mean (standard deviation)				
Baseline|	15.79 (± 21.075)	11.08 (± 13.285)	13.91 (± 19.999)	
Week 16|	7.68 (± 13.277)	4.34 (± 5.433)	15.34 (± 21.694)	
Change from Baseline to Week 16|	-8.06 (± 21.132)	-6.75 (± 13.778)	0.57 (± 11.629)	

Statistical analyses

Statistical analysis title	Serum hsCRP
Comparison groups	Secukinumab 10 mg/kg i.v. / 300 mg s.c. v Placebo i.v. and s.c.
Number of subjects included in analysis	152
Analysis specification	Pre-specified
Analysis type	
P-value	< 0.0001
Method	Mixed models analysis
Parameter estimate	Relative treatment effect
Point estimate	0.44

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.33
upper limit	0.6

Statistical analysis title	Serum hsCRP
Comparison groups	Secukinumab 10 mg/kg i.v. / 150 mg s.c. v Placebo i.v. and s.c.
Number of subjects included in analysis	150
Analysis specification	Pre-specified
Analysis type	
P-value	< 0.0001
Method	Mixed models analysis
Parameter estimate	Relative treatment effect
Point estimate	0.51
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.38
upper limit	0.68

Secondary: ASAS 5/6 response

End point title	ASAS 5/6 response

End point description:

ASAS 5/6 response is a validated composite assessment, reflecting the proportion of treated patients who achieve within a defined time frame at least 20% improvement in score in at least 5 of a conventional set of 6 clinical domains relevant to AS and no worsening in the remaining domain. In this study, ASAS 5/6 was used to assess the efficacy of at least one dose of secukinumab versus placebo.

End point type	Secondary

End point timeframe:

16 weeks

End point values	Secukinumab 10 mg/kg i.v. / 150 mg s.c.	Secukinumab 10 mg/kg i.v. / 300 mg s.c.	Placebo i.v. and s.c.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	74	76	76	
Units: Participants				
Responder	31	30	11	
Non-Responder	43	46	65	

Statistical analyses

Statistical analysis title	ASAS 5/6 response
Comparison groups	Secukinumab 10 mg/kg i.v. / 300 mg s.c. v Placebo i.v. and s.c.
Number of subjects included in analysis	152
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0004
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	4.21
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.89
upper limit	9.38

Statistical analysis title	ASAS 5/6 response
Comparison groups	Secukinumab 10 mg/kg i.v. / 150 mg s.c. v Placebo i.v. and s.c.
Number of subjects included in analysis	150
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0002
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	4.46
Confidence interval	
level	95 %
sides	2-sided
lower limit	2.01
upper limit	9.92

Secondary: Bath Ankylosing Spondylitis Disease Activity Index / BASDAI

End point title	Bath Ankylosing Spondylitis Disease Activity Index / BASDAI

End point description:

BASDAI is a validated assessment tool using 0 through 10 scales (0 indicating "no problem" and 10 indicating "worst problem"), to characterise six clinical domains pertaining to five major symptoms of AS perceived by the patients. Computed composite scores of 4 or greater indicate suboptimal disease control. In this study, the BASDAI index was used to assess the efficacy of at least one dose of secukinumab versus placebo.

End point type	Secondary

End point timeframe:

16 weeks

End point values	Secukinumab 10 mg/kg i.v. / 150 mg s.c.	Secukinumab 10 mg/kg i.v. / 300 mg s.c.	Placebo i.v. and s.c.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	74	76	76	
Units: Points				
arithmetic mean (standard deviation)				
Baseline|	6.958 (± 1.3913)	6.963 (± 1.3766)	6.907 (± 1.2600)	
Week 16|	4.451 (± 2.5623)	4.178 (± 2.7038)	5.369 (± 2.2574)	
Change from Baseline to Week 16|	-2.548 (± 2.4559)	-2.796 (± 2.6374)	-1.590 (± 2.0084)	

Statistical analyses

Statistical analysis title	BASDAI
Comparison groups	Secukinumab 10 mg/kg i.v. / 150 mg s.c. v Placebo i.v. and s.c.
Number of subjects included in analysis	150
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0347
Method	Mixed models analysis
Parameter estimate	Mean difference (final values)
Point estimate	-0.83
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.6
upper limit	-0.06
Variability estimate	Standard error of the mean
Dispersion value	0.39

Statistical analysis title	BASDAI
Comparison groups	Secukinumab 10 mg/kg i.v. / 300 mg s.c. v Placebo i.v. and s.c.
Number of subjects included in analysis	152
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0018
Method	Mixed models analysis
Parameter estimate	Mean difference (final values)
Point estimate	-1.23
Confidence interval	
level	95 %
sides	2-sided
lower limit	-2
upper limit	-0.46

Variability estimate	Standard error of the mean
Dispersion value	0.39

Secondary: Pre-filled syringe usability

End point title	Pre-filled syringe usability

End point description:

Successful self-administration is defined as success in steps P8 (Removed Needle Cap from Safety Syringe), P10 (Pinched the Skin at Injection Site), P11 (Inserted the Needle into Skin), P12 (Held onto the Finger Flange), P13 (Fully Depressed Plunger until End Point), and P14 (Held Plunger Down and Syringe in Place) of the Instructions for Use, as observed by the site staff at applicable visits.

End point type	Secondary

End point timeframe:

Week 8 and Week 12

End point values	Secukinumab 10 mg/kg i.v. / 150 mg s.c.	Secukinumab 10 mg/kg i.v. / 300 mg s.c.	Placebo i.v. and s.c.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	74	76	75	
Units: Participants				
Week 8|Successful Self-administration	72	73	71	
Week 12|Successful Self-administration	74	75	72	
Week 8|Unsuccessful Self-administration	0	0	1	
Week 12|Unsuccessful Self-administration	0	0	0	
Week 8|Missing	2	3	3	
Week 12|Missing	0	1	3	

Statistical analyses

No statistical analyses for this end point

Secondary: Pre-filled syringe possible hazard

End point title	Pre-filled syringe possible hazard

End point description:

The number and percentage of subjects who experience any of the defined possible hazards are summarized, as defined in the Possible Hazard assessment check list and as observed by the site staff at applicable visits.

End point type	Secondary

End point timeframe:

Week 8 and Week 12

End point values	Secukinumab 10 mg/kg i.v. / 150 mg s.c.	Secukinumab 10 mg/kg i.v. / 300 mg s.c.	Placebo i.v. and s.c.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	74	76	75	
Units: Participants				
Wk8: Was needle stick in a critical area|Yes	0	0	0	
Wk8: Was needle stick in a non-critical area|Yes	2	5	3	
Wk8: Was any part of the device swallowed|Yes	0	0	0	
Wk8: Was allergic reaction to device noticed|Yes	0	0	0	
Wk8: Was pain increased due to bent needle|Yes	0	0	0	
Wk8: Was there breakage of device observed|Yes	0	0	0	
Wk8:Was swallowing of debris observed|Yes	0	0	0	
Wk8:Was any other problem observed|Yes	1	0	0	
Wk8:Was less than the full dose administered|Yes	0	0	0	
Wk12: Was needle stick in a critical area|Yes	0	0	0	
Wk12: Was needle stick in a non-critical area|Yes	1	4	3	
Wk12: Was any part of the device swallowed|Yes	0	0	0	
Wk12: Was allergic reaction to device noticed|Yes	0	0	0	
Wk12: Was pain increased due to bent needle|Yes	0	0	0	
Wk12: Was there breakage of device observed|Yes	0	0	0	
Wk12: Was swallowing of debris observed|Yes	0	0	0	
Wk12: Was any other problem observed|Yes	1	1	0	
Wk12: Was less than the full dose administered|Yes	0	0	0	
Wk8:Was needle stick in a critical area|No	73	73	72	
Wk8: Was needle stick in a non-critical area|No	71	68	69	
Wk8: Was any part of the device swallowed|No	73	73	72	
Wk8: Was allergic reaction to device noticed|No	73	73	72	
Wk8: Was pain increased due to bent needle|No	73	73	72	
Wk8: Was there breakage of device observed|No	73	73	72	
Wk8:Was swallowing of debris observed|No	73	73	72	
Wk8:Was any other problem observed|No	72	73	72	
Wk8:Was less than the full dose administered|No	73	73	72	
Wk12: Was needle stick in a critical area|No	74	75	72	

Wk12: Was needle stick in a non-critical area|No	73	71	69	
Wk12: Was any part of the device swallowed|No	74	75	72	
Wk12: Was allergic reaction to device noticed|No	74	75	72	
Wk12: Was pain increased due to bent needle|No	74	75	72	
Wk12: Was there breakage of device observed|No	74	75	72	
Wk12: Was swallowing of debris observed|No	74	75	72	
Wk12: Was any other problem observed|No	73	74	72	
Wk12: Was less than the full dose administered|No	74	75	72	
Wk8:Was needle stick in a critical area|NA	1	3	3	
Wk8: Was needle stick in a non-critical area|NA	1	3	3	
Wk8: Was any part of the device swallowed|NA	1	3	3	
Wk8: Was allergic reaction to device noticed|NA	1	3	3	
Wk8: Was pain increased due to bent needle|NA	1	3	3	
Wk8: Was there breakage of device observed|NA	1	3	3	
Wk8:Was swallowing of debris observed|NA	1	3	3	
Wk8:Was any other problem observed|NA	1	3	3	
Wk8:Was less than the full dose administered|NA	1	3	3	
Wk12: Was needle stick in a critical area|NA	0	1	3	
Wk12: Was needle stick in a non-critical area|NA	0	1	3	
Wk12: Was any part of the device swallowed|NA	0	1	3	
Wk12: Was allergic reaction to device noticed|NA	0	1	3	
Wk12: Was pain increased due to bent needle|NA	0	1	3	
Wk12: Was there breakage of device observed|NA	0	1	3	
Wk12: Was swallowing of debris observed|NA	0	1	3	
Wk12: Was any other problem observed|NA	0	1	3	
Wk12: Was less than the full dose administered|NA	0	1	3	

Statistical analyses

No statistical analyses for this end point

Secondary: Prefilled syringe patient satisfaction assessment

End point title	Prefilled syringe patient satisfaction assessment

End point description:

The self-injection assessment questionnaire (SIAQ) measures overall patient experience with subcutaneous self-injection at applicable visits. Domain scores ranging from 0 (worst experience) to 10 (best experience) are presented: Feeling about injections, Self-confidence, Satisfaction with self-injection.

End point type	Secondary

End point timeframe:

16 Weeks

End point values	Secukinumab 10 mg/kg i.v. / 150 mg s.c.	Secukinumab 10 mg/kg i.v. / 300 mg s.c.	Placebo i.v. and s.c.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	74	76	75	
Units: Points				
arithmetic mean (standard deviation)				
Week 0: Feeling about injections|	7.97 (± 1.946)	7.66 (± 2.369)	8.01 (± 1.927)	
Week 8: Feeling about injections|	7.96 (± 2.538)	7.68 (± 2.296)	8.24 (± 2.082)	
Week 12: Feeling about injections|	8.45 (± 1.968)	7.93 (± 2.201)	8.25 (± 1.997)	
Week 16: Feeling about injections|	8.15 (± 2.337)	7.99 (± 2.269)	8.41 (± 2.037)	
Week 0: Self-confidence|	6.27 (± 2.811)	6.66 (± 2.315)	6.52 (± 2.273)	
Week 8: Self-confidence|	7.08 (± 2.520)	6.66 (± 2.855)	7.41 (± 2.198)	
Week 12: Self-confidence|	7.01 (± 2.603)	7.28 (± 2.231)	7.42 (± 2.230)	
Week 16: Self-confidence|	7.51 (± 2.388)	7.23 (± 2.566)	7.64 (± 2.192)	
Week 0: Satisfaction with self-injection|	5.34 (± 2.692)	6.12 (± 2.429)	5.30 (± 2.694)	
Week 8: Satisfaction with self-injection|	7.67 (± 1.734)	7.50 (± 1.667)	7.39 (± 2.002)	
Week 12: Satisfaction with self-injection|	7.68 (± 1.483)	7.50 (± 1.816)	7.46 (± 1.780)	
Week 16: Satisfaction with self-injection|	7.57 (± 1.741)	7.82 (± 1.933)	7.67 (± 1.577)	

Statistical analyses

No statistical analyses for this end point

Secondary: ASAS partial remission

End point title	ASAS partial remission

End point description:

ASAS partial remission is a composite assessment, reflecting the proportion of treated patients who achieve within a defined time frame a value not above 2 units in each of the 4 ASAS domains on a scale of 10. In this study, ASAS partial remission was used to assess the efficacy of at least one dose of secukinumab versus placebo.

End point type	Secondary

End point timeframe:

16 weeks

End point values	Secukinumab 10 mg/kg i.v. / 150 mg s.c.	Secukinumab 10 mg/kg i.v. / 300 mg s.c.	Placebo i.v. and s.c.	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	74	76	76	
Units: Participants				
Responder	7	16	1	
Non-Responder	67	60	75	

Statistical analyses

Statistical analysis title	ASAS partial remission
Comparison groups	Secukinumab 10 mg/kg i.v. / 150 mg s.c. v Placebo i.v. and s.c.
Number of subjects included in analysis	150
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0593
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	7.71
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.92
upper limit	64.42

Statistical analysis title	ASAS partial remission
Comparison groups	Secukinumab 10 mg/kg i.v. / 300 mg s.c. v Placebo i.v. and s.c.
Number of subjects included in analysis	152
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.0046
Method	Regression, Logistic
Parameter estimate	Odds ratio (OR)
Point estimate	19.39
Confidence interval	
level	95 %
sides	2-sided
lower limit	2.49
upper limit	150.79

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Adverse Events (AEs) are collected from First Patient First Visit (FPFV) until Last Patient Last Visit (LPLV). All AEs reported in this
record are from date of First Patient First Treatment until Last Patient Last Visit up to approximately 3 years.

Adverse event reporting additional description:

Patients randomized to Placebo at Baseline are reported under Placebo for AEs starting before re-randomization to Secukinumab
(Week 16) and under the respective Secukinumab arm for AEs starting after re-randomization to Secukinumab (Week 16).

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	20.1

Reporting groups

Reporting group title	Any AIN457 150 mg

Reporting group description:

Includes Patients randomized to Secukinumab 150 mg at baseline + patients re-randomized to Secukinumab 150 mg at week 16 (for AEs occurring after re-randomization)

Reporting group title	Any AIN457 300 mg

Reporting group description:

Includes Patients randomized to Secukinumab 300 mg at baseline + patients re-randomized to Secukinumab 300 mg at week 16 (for AEs occurring after re-randomization)

Reporting group title	Any AIN457

Reporting group description:

Any Secukinumab 150 mg + Any Secukinumab 300 mg

Reporting group title	Placebo

Reporting group description:

Includes Patients randomized to Placebo for AEs until time of rerandomization (Week 16) to Secukinumab.

Serious adverse events	Any AIN457 150 mg	Any AIN457 300 mg	Any AIN457
Total subjects affected by serious adverse events			
subjects affected / exposed	11 / 110 (10.00%)	11 / 113 (9.73%)	22 / 223 (9.87%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events	0	0	0
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Breast cancer			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	1 / 1	0 / 0	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Malignant melanoma			

subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	1 / 1	0 / 0	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Vascular disorders			
Deep vein thrombosis			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
General disorders and administration site conditions			
Fatigue			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Reproductive system and breast disorders			
Cervical dysplasia			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	1 / 1	0 / 0	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory, thoracic and mediastinal disorders			
Pneumothorax			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory failure			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	1 / 1	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Psychiatric disorders			
Schizophrenia			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	1 / 1	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Injury, poisoning and procedural complications			

Ankle fracture			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cervical vertebral fracture			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Fall			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Hand fracture			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Limb injury			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Rib fracture			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Tibia fracture			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cardiac disorders			
Coronary artery disease			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Myocardial infarction			

subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Sinus node dysfunction			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Supraventricular extrasystoles			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Supraventricular tachycardia			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Nervous system disorders			
Loss of consciousness			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	0 / 2	0 / 2
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Migraine			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Syncope			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Ear and labyrinth disorders			
Vertigo			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Eye disorders			

Cataract			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Iridocyclitis			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Vogt-Koyanagi-Harada syndrome			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	1 / 1	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastrointestinal disorders			
Haemorrhoids			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Nausea			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Musculoskeletal and connective tissue disorders			
Ankylosing spondylitis			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	1 / 1	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Arthralgia			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	1 / 1	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Osteoarthritis			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Sacroiliitis			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Spinal pain			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	1 / 1	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Pneumonia			
subjects affected / exposed	0 / 110 (0.00%)	1 / 113 (0.88%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 0	1 / 1	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pyelonephritis acute			
subjects affected / exposed	1 / 110 (0.91%)	0 / 113 (0.00%)	1 / 223 (0.45%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Urinary tract infection			
subjects affected / exposed	1 / 110 (0.91%)	1 / 113 (0.88%)	2 / 223 (0.90%)
occurrences causally related to treatment / all	1 / 1	2 / 2	3 / 3
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Serious adverse events	Placebo		
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 75 (1.33%)		
number of deaths (all causes)	0		
number of deaths resulting from adverse events	0		
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Breast cancer			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Malignant melanoma			

subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Vascular disorders			
Deep vein thrombosis			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
General disorders and administration site conditions			
Fatigue			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Reproductive system and breast disorders			
Cervical dysplasia			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Respiratory, thoracic and mediastinal disorders			
Pneumothorax			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Respiratory failure			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Psychiatric disorders			
Schizophrenia			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Injury, poisoning and procedural complications			

Ankle fracture				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Cervical vertebral fracture				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Fall				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Hand fracture				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Limb injury				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Rib fracture				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Tibia fracture				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Cardiac disorders				
Coronary artery disease				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Myocardial infarction				

subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Sinus node dysfunction			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Supraventricular extrasystoles			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Supraventricular tachycardia			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Nervous system disorders			
Loss of consciousness			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Migraine			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Syncope			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Ear and labyrinth disorders			
Vertigo			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Eye disorders			

Cataract				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Iridocyclitis				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Vogt-Koyanagi-Harada syndrome				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Gastrointestinal disorders				
Haemorrhoids				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Nausea				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Musculoskeletal and connective tissue disorders				
Ankylosing spondylitis				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Arthralgia				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			
Osteoarthritis				
subjects affected / exposed	0 / 75 (0.00%)			
occurrences causally related to treatment / all	0 / 0			
deaths causally related to treatment / all	0 / 0			

Sacroiliitis			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Spinal pain			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Infections and infestations			
Pneumonia			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Pyelonephritis acute			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences causally related to treatment / all	0 / 0		
deaths causally related to treatment / all	0 / 0		
Urinary tract infection			
subjects affected / exposed	1 / 75 (1.33%)		
occurrences causally related to treatment / all	1 / 1		
deaths causally related to treatment / all	0 / 0		

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

Non-serious adverse events	Any AIN457 150 mg	Any AIN457 300 mg	Any AIN457
Total subjects affected by non-serious adverse events			
subjects affected / exposed	86 / 110 (78.18%)	89 / 113 (78.76%)	175 / 223 (78.48%)
Vascular disorders			
Hypertension			
subjects affected / exposed	7 / 110 (6.36%)	5 / 113 (4.42%)	12 / 223 (5.38%)
occurrences (all)	7	5	12
General disorders and administration site conditions			
Fatigue			
subjects affected / exposed	5 / 110 (4.55%)	4 / 113 (3.54%)	9 / 223 (4.04%)
occurrences (all)	5	4	9

Influenza like illness			
subjects affected / exposed	2 / 110 (1.82%)	1 / 113 (0.88%)	3 / 223 (1.35%)
occurrences (all)	2	1	3
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	6 / 110 (5.45%)	6 / 113 (5.31%)	12 / 223 (5.38%)
occurrences (all)	7	8	15
Oropharyngeal pain			
subjects affected / exposed	7 / 110 (6.36%)	7 / 113 (6.19%)	14 / 223 (6.28%)
occurrences (all)	7	11	18
Rhinitis allergic			
subjects affected / exposed	3 / 110 (2.73%)	1 / 113 (0.88%)	4 / 223 (1.79%)
occurrences (all)	3	1	4
Psychiatric disorders			
Depression			
subjects affected / exposed	3 / 110 (2.73%)	3 / 113 (2.65%)	6 / 223 (2.69%)
occurrences (all)	4	3	7
Investigations			
Alanine aminotransferase increased			
subjects affected / exposed	3 / 110 (2.73%)	2 / 113 (1.77%)	5 / 223 (2.24%)
occurrences (all)	4	3	7
Injury, poisoning and procedural complications			
Sunburn			
subjects affected / exposed	0 / 110 (0.00%)	3 / 113 (2.65%)	3 / 223 (1.35%)
occurrences (all)	0	3	3
Nervous system disorders			
Dizziness			
subjects affected / exposed	2 / 110 (1.82%)	4 / 113 (3.54%)	6 / 223 (2.69%)
occurrences (all)	2	5	7
Headache			
subjects affected / exposed	12 / 110 (10.91%)	14 / 113 (12.39%)	26 / 223 (11.66%)
occurrences (all)	19	21	40
Hypoaesthesia			
subjects affected / exposed	2 / 110 (1.82%)	0 / 113 (0.00%)	2 / 223 (0.90%)
occurrences (all)	3	0	3
Migraine			

subjects affected / exposed	5 / 110 (4.55%)	1 / 113 (0.88%)	6 / 223 (2.69%)
occurrences (all)	5	1	6
Paraesthesia			
subjects affected / exposed	4 / 110 (3.64%)	0 / 113 (0.00%)	4 / 223 (1.79%)
occurrences (all)	4	0	4
Eye disorders			
Iritis			
subjects affected / exposed	0 / 110 (0.00%)	3 / 113 (2.65%)	3 / 223 (1.35%)
occurrences (all)	0	6	6
Uveitis			
subjects affected / exposed	3 / 110 (2.73%)	5 / 113 (4.42%)	8 / 223 (3.59%)
occurrences (all)	3	6	9
Gastrointestinal disorders			
Abdominal pain			
subjects affected / exposed	1 / 110 (0.91%)	3 / 113 (2.65%)	4 / 223 (1.79%)
occurrences (all)	1	4	5
Abdominal pain upper			
subjects affected / exposed	5 / 110 (4.55%)	3 / 113 (2.65%)	8 / 223 (3.59%)
occurrences (all)	5	4	9
Diarrhoea			
subjects affected / exposed	11 / 110 (10.00%)	9 / 113 (7.96%)	20 / 223 (8.97%)
occurrences (all)	14	10	24
Food poisoning			
subjects affected / exposed	2 / 110 (1.82%)	3 / 113 (2.65%)	5 / 223 (2.24%)
occurrences (all)	2	3	5
Gastritis			
subjects affected / exposed	3 / 110 (2.73%)	1 / 113 (0.88%)	4 / 223 (1.79%)
occurrences (all)	3	1	4
Nausea			
subjects affected / exposed	3 / 110 (2.73%)	4 / 113 (3.54%)	7 / 223 (3.14%)
occurrences (all)	3	4	7
Toothache			
subjects affected / exposed	3 / 110 (2.73%)	2 / 113 (1.77%)	5 / 223 (2.24%)
occurrences (all)	3	2	5
Vomiting			

subjects affected / exposed	0 / 110 (0.00%)	4 / 113 (3.54%)	4 / 223 (1.79%)
occurrences (all)	0	4	4
Skin and subcutaneous tissue disorders			
Pruritus			
subjects affected / exposed	1 / 110 (0.91%)	3 / 113 (2.65%)	4 / 223 (1.79%)
occurrences (all)	2	3	5
Musculoskeletal and connective tissue disorders			
Ankylosing spondylitis			
subjects affected / exposed	5 / 110 (4.55%)	3 / 113 (2.65%)	8 / 223 (3.59%)
occurrences (all)	5	4	9
Arthralgia			
subjects affected / exposed	14 / 110 (12.73%)	13 / 113 (11.50%)	27 / 223 (12.11%)
occurrences (all)	35	22	57
Arthritis			
subjects affected / exposed	4 / 110 (3.64%)	3 / 113 (2.65%)	7 / 223 (3.14%)
occurrences (all)	4	3	7
Back pain			
subjects affected / exposed	7 / 110 (6.36%)	12 / 113 (10.62%)	19 / 223 (8.52%)
occurrences (all)	8	16	24
Fibromyalgia			
subjects affected / exposed	1 / 110 (0.91%)	3 / 113 (2.65%)	4 / 223 (1.79%)
occurrences (all)	1	3	4
Muscle spasms			
subjects affected / exposed	3 / 110 (2.73%)	5 / 113 (4.42%)	8 / 223 (3.59%)
occurrences (all)	4	5	9
Myalgia			
subjects affected / exposed	3 / 110 (2.73%)	1 / 113 (0.88%)	4 / 223 (1.79%)
occurrences (all)	4	1	5
Osteoarthritis			
subjects affected / exposed	2 / 110 (1.82%)	4 / 113 (3.54%)	6 / 223 (2.69%)
occurrences (all)	3	4	7
Pain in extremity			
subjects affected / exposed	4 / 110 (3.64%)	2 / 113 (1.77%)	6 / 223 (2.69%)
occurrences (all)	5	2	7
Spinal pain			

subjects affected / exposed	4 / 110 (3.64%)	4 / 113 (3.54%)	8 / 223 (3.59%)
occurrences (all)	4	4	8
Spondylitis			
subjects affected / exposed	0 / 110 (0.00%)	3 / 113 (2.65%)	3 / 223 (1.35%)
occurrences (all)	0	3	3
Tendonitis			
subjects affected / exposed	3 / 110 (2.73%)	1 / 113 (0.88%)	4 / 223 (1.79%)
occurrences (all)	3	1	4
Infections and infestations			
Bronchitis			
subjects affected / exposed	14 / 110 (12.73%)	9 / 113 (7.96%)	23 / 223 (10.31%)
occurrences (all)	20	13	33
Conjunctivitis			
subjects affected / exposed	1 / 110 (0.91%)	3 / 113 (2.65%)	4 / 223 (1.79%)
occurrences (all)	1	5	6
Ear infection			
subjects affected / exposed	0 / 110 (0.00%)	3 / 113 (2.65%)	3 / 223 (1.35%)
occurrences (all)	0	3	3
Gastroenteritis viral			
subjects affected / exposed	1 / 110 (0.91%)	3 / 113 (2.65%)	4 / 223 (1.79%)
occurrences (all)	1	3	4
Influenza			
subjects affected / exposed	3 / 110 (2.73%)	9 / 113 (7.96%)	12 / 223 (5.38%)
occurrences (all)	3	9	12
Nasopharyngitis			
subjects affected / exposed	27 / 110 (24.55%)	27 / 113 (23.89%)	54 / 223 (24.22%)
occurrences (all)	61	54	115
Oral herpes			
subjects affected / exposed	1 / 110 (0.91%)	3 / 113 (2.65%)	4 / 223 (1.79%)
occurrences (all)	1	4	5
Pharyngitis			
subjects affected / exposed	3 / 110 (2.73%)	6 / 113 (5.31%)	9 / 223 (4.04%)
occurrences (all)	3	11	14
Pharyngotonsillitis			
subjects affected / exposed	0 / 110 (0.00%)	3 / 113 (2.65%)	3 / 223 (1.35%)
occurrences (all)	0	4	4

Pneumonia			
subjects affected / exposed	1 / 110 (0.91%)	3 / 113 (2.65%)	4 / 223 (1.79%)
occurrences (all)	1	3	4
Pulpitis dental			
subjects affected / exposed	4 / 110 (3.64%)	1 / 113 (0.88%)	5 / 223 (2.24%)
occurrences (all)	4	2	6
Respiratory tract infection			
subjects affected / exposed	12 / 110 (10.91%)	10 / 113 (8.85%)	22 / 223 (9.87%)
occurrences (all)	21	24	45
Rhinitis			
subjects affected / exposed	6 / 110 (5.45%)	4 / 113 (3.54%)	10 / 223 (4.48%)
occurrences (all)	7	4	11
Sinusitis			
subjects affected / exposed	8 / 110 (7.27%)	1 / 113 (0.88%)	9 / 223 (4.04%)
occurrences (all)	12	1	13
Tonsillitis			
subjects affected / exposed	4 / 110 (3.64%)	4 / 113 (3.54%)	8 / 223 (3.59%)
occurrences (all)	4	4	8
Upper respiratory tract infection			
subjects affected / exposed	12 / 110 (10.91%)	16 / 113 (14.16%)	28 / 223 (12.56%)
occurrences (all)	15	20	35
Urinary tract infection			
subjects affected / exposed	4 / 110 (3.64%)	6 / 113 (5.31%)	10 / 223 (4.48%)
occurrences (all)	4	8	12
Metabolism and nutrition disorders			
Hypercholesterolaemia			
subjects affected / exposed	4 / 110 (3.64%)	3 / 113 (2.65%)	7 / 223 (3.14%)
occurrences (all)	4	3	7

Non-serious adverse events	Placebo		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	28 / 75 (37.33%)		
Vascular disorders			
Hypertension			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
General disorders and administration site conditions			

Fatigue subjects affected / exposed occurrences (all)	0 / 75 (0.00%) 0		
Influenza like illness subjects affected / exposed occurrences (all)	2 / 75 (2.67%) 2		
Respiratory, thoracic and mediastinal disorders			
Cough subjects affected / exposed occurrences (all)	2 / 75 (2.67%) 2		
Oropharyngeal pain subjects affected / exposed occurrences (all)	0 / 75 (0.00%) 0		
Rhinitis allergic subjects affected / exposed occurrences (all)	0 / 75 (0.00%) 0		
Psychiatric disorders			
Depression subjects affected / exposed occurrences (all)	1 / 75 (1.33%) 1		
Investigations			
Alanine aminotransferase increased subjects affected / exposed occurrences (all)	0 / 75 (0.00%) 0		
Injury, poisoning and procedural complications			
Sunburn subjects affected / exposed occurrences (all)	0 / 75 (0.00%) 0		
Nervous system disorders			
Dizziness subjects affected / exposed occurrences (all)	1 / 75 (1.33%) 2		
Headache subjects affected / exposed occurrences (all)	5 / 75 (6.67%) 5		
Hypoaesthesia			

subjects affected / exposed	2 / 75 (2.67%)		
occurrences (all)	2		
Migraine			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Paraesthesia			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Eye disorders			
Iritis			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Uveitis			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Gastrointestinal disorders			
Abdominal pain			
subjects affected / exposed	2 / 75 (2.67%)		
occurrences (all)	2		
Abdominal pain upper			
subjects affected / exposed	1 / 75 (1.33%)		
occurrences (all)	2		
Diarrhoea			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Food poisoning			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Gastritis			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Nausea			
subjects affected / exposed	1 / 75 (1.33%)		
occurrences (all)	2		
Toothache			

subjects affected / exposed	1 / 75 (1.33%)		
occurrences (all)	1		
Vomiting			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Skin and subcutaneous tissue disorders			
Pruritus			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Musculoskeletal and connective tissue disorders			
Ankylosing spondylitis			
subjects affected / exposed	2 / 75 (2.67%)		
occurrences (all)	2		
Arthralgia			
subjects affected / exposed	2 / 75 (2.67%)		
occurrences (all)	3		
Arthritis			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Back pain			
subjects affected / exposed	2 / 75 (2.67%)		
occurrences (all)	2		
Fibromyalgia			
subjects affected / exposed	1 / 75 (1.33%)		
occurrences (all)	1		
Muscle spasms			
subjects affected / exposed	1 / 75 (1.33%)		
occurrences (all)	1		
Myalgia			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Osteoarthritis			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Pain in extremity			

subjects affected / exposed	1 / 75 (1.33%)		
occurrences (all)	1		
Spinal pain			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Spondylitis			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Tendonitis			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Infections and infestations			
Bronchitis			
subjects affected / exposed	1 / 75 (1.33%)		
occurrences (all)	1		
Conjunctivitis			
subjects affected / exposed	1 / 75 (1.33%)		
occurrences (all)	1		
Ear infection			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Gastroenteritis viral			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Influenza			
subjects affected / exposed	0 / 75 (0.00%)		
occurrences (all)	0		
Nasopharyngitis			
subjects affected / exposed	2 / 75 (2.67%)		
occurrences (all)	2		
Oral herpes			
subjects affected / exposed	1 / 75 (1.33%)		
occurrences (all)	1		
Pharyngitis			
subjects affected / exposed	1 / 75 (1.33%)		
occurrences (all)	1		

Pharyngotonsillitis subjects affected / exposed occurrences (all)	0 / 75 (0.00%) 0		
Pneumonia subjects affected / exposed occurrences (all)	0 / 75 (0.00%) 0		
Pulpitis dental subjects affected / exposed occurrences (all)	2 / 75 (2.67%) 2		
Respiratory tract infection subjects affected / exposed occurrences (all)	4 / 75 (5.33%) 4		
Rhinitis subjects affected / exposed occurrences (all)	0 / 75 (0.00%) 0		
Sinusitis subjects affected / exposed occurrences (all)	2 / 75 (2.67%) 2		
Tonsillitis subjects affected / exposed occurrences (all)	0 / 75 (0.00%) 0		
Upper respiratory tract infection subjects affected / exposed occurrences (all)	2 / 75 (2.67%) 2		
Urinary tract infection subjects affected / exposed occurrences (all)	2 / 75 (2.67%) 2		
Metabolism and nutrition disorders Hypercholesterolaemia subjects affected / exposed occurrences (all)	0 / 75 (0.00%) 0		

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported