Clinical trial results:
A 16-week randomized, open-label, multicenter study to assess the superiority of secukinumab over guselkumab in the complete treatment of ustekinumab-resistant psoriatic plaques – ARROW

Summary

EudraCT number	2018-001048-70
Trial protocol	DE
Global end of trial date	28 January 2020

Results information

Result version number	v1 (current)
This version publication date	06 February 2021
First version publication date	06 February 2021

Trial information

Trial identification

Sponsor protocol code	CAIN457A2403

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT03553823
WHO universal trial number (UTN)	-
Other trial identifiers	EudraCT: 2018-001048-70

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	Study Director, Novartis Pharma AG, 1 8627788300, 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	28 January 2020
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	28 January 2020
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To assess the superiority of secukinumab over guselkumab in controlling clinical activity in psoriatic plaques resistant to treatment with ustekinumab

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 2019
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Canada: 4
Country: Number of subjects enrolled	Germany: 28
Country: Number of subjects enrolled	United States: 8
Worldwide total number of subjects	40
EEA total number of subjects	28

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)	36
From 65 to 84 years	4

85 years and over	0

Subject disposition

Recruitment

Recruitment details:

The Screening Phase was completed by 40 (95.2%) of the 42 subjects screened. One (2.4%) subject was rescreened and 2 (4.8%) subjects failed screening

Pre-assignment

Screening details:

39 (97.5%) subjects completed this trial

Period 1

Period 1 title	Overall Study (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Not blinded

Blinding implementation details:

open-label

Arms

Are arms mutually exclusive?	Yes
Arm title	secukinumab

Arm description:

20 subjects with plaque psoriasis with an inadequate response to ustekinumab self-administered 300 mg secukinumab as two 150-mg s.c. injections at Baseline, Weeks 1, 2, 3, 4 and then every 4 weeks until Week 12 inclusive

Arm type	Experimental
Investigational medicinal product name	secukinumab
Investigational medicinal product code	
Other name	AIN457
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

150 mg s.c.

Arm title	guselkumab

Arm description:

20 subjects with plaque psoriasis with an inadequate response to ustekinumab self-administered guselkumab as 100 mg s.c. injections at Baseline, Weeks 4, and 12.

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

Dosage and administration details:

100 mg s.c.

Number of subjects in period 1	secukinumab	guselkumab
Started	20	20
Completed	20	19
Not completed	0	1
Physician decision	-	1

Baseline characteristics

Reporting groups	
Reporting group title	secukinumab
Reporting group description:	
20 subjects with plaque psoriasis with an inadequate response to ustekinumab self-administered 300 mg secukinumab as two 150-mg s.c. injections at Baseline, Weeks 1, 2, 3, 4 and then every 4 weeks until Week 12 inclusive	
Reporting group title	guselkumab
Reporting group description:	
20 subjects with plaque psoriasis with an inadequate response to ustekinumab self-administered guselkumab as 100 mg s.c. injections at Baseline, Weeks 4, and 12.	

Reporting group values	secukinumab	guselkumab	Total
Number of subjects	20	20	40
Age Categorical Units:			
<=18 years	0	0	0
Between 18 and 65 years	17	19	36
>=65 years	3	1	4
Age Continuous Units: Mean			
arithmetic mean	47.6	48.5	
standard deviation	± 15.10	± 12.30	-
Sex: Female, Male Units:			
Female	6	5	11
Male	14	15	29
Race/Ethnicity, Customized Units: Subjects			
White	17	20	37
Black or African American	2	0	2
Asian	1	0	1

End points

End points reporting groups

Reporting group title	secukinumab
Reporting group description:	
20 subjects with plaque psoriasis with an inadequate response to ustekinumab self-administered 300 mg secukinumab as two 150-mg s.c. injections at Baseline, Weeks 1, 2, 3, 4 and then every 4 weeks until Week 12 inclusive	
Reporting group title	guselkumab
Reporting group description:	
20 subjects with plaque psoriasis with an inadequate response to ustekinumab self-administered guselkumab as 100 mg s.c. injections at Baseline, Weeks 4, and 12.	

Primary: Proportion of subjects whose plaque achieves "clear" or "almost clear" status (TCS = 0-2)

End point title	Proportion of subjects whose plaque achieves "clear" or "almost clear" status (TCS = 0-2)
End point description:	
Total clinical score: number (%) of subjects who responded at Week 16 (FAS)	
End point type	Primary
End point timeframe:	
16 week	

End point values	secukinumab	guselkumab		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	20	20		
Units: participants	12	8		

Statistical analyses

Statistical analysis title	Subjects with "clear" or "almost clear"(TCS = 0-2)
Statistical analysis description:	
Proportion of Subjects whose plaque achieves "clear" or "almost clear" status (TCS = 0-2)	
Comparison groups	secukinumab v guselkumab
Number of subjects included in analysis	40
Analysis specification	Pre-specified
Analysis type	
P-value	= 0.1715
Method	Fisher exact
Parameter estimate	Difference secukinumab vs guselkumab
Point estimate	20

Confidence interval	
level	95 %
sides	2-sided
lower limit	-13.3
upper limit	50.3

Adverse events

Adverse events information	
Timeframe for reporting adverse events:	
Adverse Events (AEs) were collected for duration of study to week 16	
Adverse event reporting additional description:	
Adverse Events are any untoward sign or symptom that occurs during the study treatment period	
Assessment type	Systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	20.1

Reporting groups	
Reporting group title	Secukinumab
Reporting group description:	
Secukinumab	
Reporting group title	Guselkumab
Reporting group description:	
Guselkumab	

Serious adverse events	Secukinumab	Guselkumab	
Total subjects affected by serious adverse events			
subjects affected / exposed	2 / 20 (10.00%)	1 / 20 (5.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
Gastrointestinal disorders			
Gastritis			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hepatobiliary disorders			
Cholelithiasis			
subjects affected / exposed	0 / 20 (0.00%)	1 / 20 (5.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Pneumonia			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

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

Non-serious adverse events	Secukinumab	Guselkumab	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	11 / 20 (55.00%)	5 / 20 (25.00%)	
Investigations			
Blood bilirubin increased			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Injury, poisoning and procedural complications			
Wound dehiscence			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Eye disorders			
Dacryostenosis acquired			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Reproductive system and breast disorders			
Balanoposthitis			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Respiratory, thoracic and mediastinal disorders			
Asthma			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Skin and subcutaneous tissue disorders			
Dyshidrotic eczema			
subjects affected / exposed	0 / 20 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	
Eczema			
subjects affected / exposed	0 / 20 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	
Hyperhidrosis			

subjects affected / exposed	0 / 20 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	
Miliaria			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Renal and urinary disorders			
Acute kidney injury			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Musculoskeletal and connective tissue disorders			
Back pain			
subjects affected / exposed	0 / 20 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	
Infections and infestations			
Bronchitis			
subjects affected / exposed	0 / 20 (0.00%)	1 / 20 (5.00%)	
occurrences (all)	0	1	
Erysipelas			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Herpes zoster			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Nasopharyngitis			
subjects affected / exposed	2 / 20 (10.00%)	1 / 20 (5.00%)	
occurrences (all)	3	1	
Postoperative wound infection			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Sepsis			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Vulvovaginal mycotic infection			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	0	
Metabolism and nutrition disorders			

Gout			
subjects affected / exposed	2 / 20 (10.00%)	0 / 20 (0.00%)	
occurrences (all)	2	0	
Hyperglycaemia			
subjects affected / exposed	1 / 20 (5.00%)	0 / 20 (0.00%)	
occurrences (all)	1	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