NOVARTIS

Clinical Trial Results Website

Sponsor

Novartis Pharmaceuticals

Generic Drug Name

Secukinumab (AIN457)

Trial Indication(s)

Moderate to severe palmoplantar plaque psoriasis

Protocol Number

CAIN457A2312

Protocol Title

A randomized, double-blind, placebo-controlled, multicenter study to demonstrate the efficacy at 16 weeks of secukinumab 150 and 300 mg s.c. and to assess safety, tolerability and long-term efficacy up to 132 weeks in subjects with moderate to severe palmoplantar psoriasis

Clinical Trial Phase

Phase 3

Phase of Drug Development

Phase IIIb

Study Start/End Dates

Study Start Date: June 2013 (Actual)
Primary Completion Date: November 2016 (Actual)
Study Completion Date: November 2016 (Actual)

Reason for Termination (If applicable)

Study Design/Methodology

This was a multicenter, randomized, double-blind, comparator-controlled, parallelgroup superiority study. The study consisted of 4 periods: Screening (up to 4 weeks), Treatment Period 1 (16 weeks), Treatment Period 2 (116 weeks), and Post-Treatment Follow-up (8 weeks [12 weeks after last dose of study treatment]).
Treatment Period 1 was defined as Baseline to Week 16 pre-dose. At the start of Treatment Period 1, eligible patients were randomized in a 1:1:1 ratio into one of 3 treatment groups (secukinumab 150 mg, secukinumab 300 mg, or placebo). Randomization was stratified by body weight at Baseline Visit (< 90 kg or ≥ 90 kg). During Treatment Period 1, all 3 treatment groups received subcutaneous (sc) study treatment weekly for 5 weeks (Baseline and Weeks 1, 2, 3 and 4) and then 1 dose of study treatment at Weeks 8 and 12 (last dose of Treatment Period 1). Assessments for the primary endpoint were performed at Week 16 for all treatment arms prior to dosing.
During Treatment Period 1, there were a total of 8 visits (Baseline, Weeks 1, 2, 3, 4, 8, 12, and 16).
Treatment Period 2 was defined as Week 16 to Week 132. Protocol amendment 1 extended Treatment Period 2 from Week 80 to Week 132. Patients who did not consent to have their treatment extended received the last dose of investigational treatment at Week 76. At Week 16, patients treated with placebo who were not ppIGA responders (i.e., who did not achieve a ppIGA 0 or 1 and at least 2-point reduction on the ppIGA scale from baseline), were re-randomized in a 1:1 ratio, to receive either secukinumab 150 mg or 300 mg starting at the Week 16 visit. Patients in the secukinumab treatment groups remained on the same secukinumab regimen. Patients in the placebo treatment group who were ppIGA responders (i.e., achieved a ppIGA of 0 or 1 and a reduction of at least 2 points from Baseline on the ppIGA scale) remained on placebo treatment until Week 76 inclusive.
Patients in the placebo arm who consented to have their treatment extended after drug administration at Week 76 and who were not ppIGA 0 or 1 responders were re-randomized in a 1:1 ratio, to receive either secukinumab 150 mg or 300 mg starting at the Week 80 visit. Patients in the placebo arm who were ppIGA 0 or 1 responders at Week 76 entered the treatment-free Follow-up period and attended End-of-treatment and End-of-study visits (at Weeks 80 and 88, respectively).
During Treatment Period 2, there were a total of 14 visits (Weeks 20, 24, 28, 32, 40, 52, 64, 76, 80, 92, 104, 116, 128, and 132).
Patients who completed Treatment Period 2, entered the treatment-free Follow-up period (Week 132 to Week 140).

Centers

56 centers in 15 countries: Netherlands(3), Spain(3), Slovakia (Slovak Republic)(3), Norway(1), Finland(2), Turkey(5), Australia(4), Belgium(2), Russia(4), Canada(5), Portugal(5), Hungary(4), United States(8), Israel(5), United Kingdom(2)

Objectives:

The primary objective was to demonstrate the superiority of secukinumab 150 mg and/or 300 mg compared to placebo in patients with moderate to severe palmoplantar psoriasis as assessed by the palmoplantar Investigator's Global Assessment (ppIGA) at Week 16.
Secondary objectives were:

- To assess the efficacy of secukinumab 150 mg and 300 mg in patients with moderate to severe palmoplantar psoriasis as assessed by ppIGA over time up to Week 16 compared to placebo, and over time up to Week 132
- To assess the efficacy of secukinumab 150 mg and 300 mg in patients with moderate to severe palmoplantar psoriasis as assessed by the palmoplantar Psoriasis Area and Severity Index (ppPASI) over time up to Week 16 compared to placebo, and over time up to Week 132
- To investigate the overall safety and tolerability of secukinumab 150 mg and 300 mg as assessed by vital signs, clinical laboratory variables, electrocardiograms (ECGs), and adverse events (AEs) monitoring
- To investigate the development of immunogenicity against secukinumab

Test Product (s), Dose(s), and Mode(s) of Administration

Secukinumab 150 mg for sc injection provided in a 1 mL PFS. Each secukinumab 300 mg dose was given as 2 sc injections of secukinumab 150 mg.

Statistical Methods

The statistical hypothesis being tested was that there was no difference between either of the secukinumab groups and placebo in the proportion of patients with ppIGA response at Week 16.
Let pj denote the proportion of ppIGA responders at Week 16 for treatment group *j*, *j*=0, 1, 2, where

- 0 corresponds to placebo
- 1 corresponds to secukinumab 150 mg
- 2 corresponds to secukinumab 300 mg

The following hypotheses were tested
H1: p1 – p0 = 0 versus HA1: p1 – p0 ≠ 0
H2: p2 –p0 = 0 versus HA2: p2 – p0 ≠ 0
The occurrence of ppIGA response to treatment at Week 16 was analyzed using the stratified Cochran-Mantel-Haenszel-test. The test was stratified by body-weight category (<90 kg or ≥90 kg). Each of the secukinumab groups was compared with the placebo group. The family-wise error was set to α=5% (two-sided). Each hypothesis, H1 or H2 was tested at α/2. If a hypothesis was rejected, the corresponding type-I-error probability could have been passed on to the hypothesis that had not been rejected and could have been retested at α. No other hypotheses than H1 and H2 were included in the testing strategy.
Efficacy analyses were performed using the Full analysis set (all patients randomized at Baseline who had been assigned a treatment). For the secondary efficacy variable of ppIGA response to treatment by visit, summary statistics for ppIGA response by visit by treatment group for Treatment Period 2 and the entire treatment period were presented in contingency tables and included absolute and relative frequencies. For ppPASI score by visit, summary statistics of change and percentage change in the ppPASI from Baseline were presented by visit by treatment group for Treatment Period 2 and the entire treatment period. For NAPSI, summary statistics for NAPSI score over time by visit were presented by treatment group. For PASI 75, PASI 90, PASI 100, and IGA mod 2011 0 or 1 response by visit, summary statistics were presented in contingency tables and included absolute and relative frequencies. For PASI score over time, summary statistics were provided for absolute PASI scores as well as for percentage change from baseline by visit and treatment group. The number and percentage of patients experiencing rebound and rebound-like events were presented by visit and treatment group at 4 weeks and 12 weeks after last injection. Patient-reported outcomes were summarized with summary statistics, percentage change from Baseline, and/or number and percentage of patients within a given category.
Safety analyses for this final CSR were performed using the Safety set (all patients who took at least one dose of study treatment during the treatment period). Safety variables were evaluated for the entire treatment period with the exception of summaries of change from Baseline for clinical laboratory values and vital signs, which were performed for Treatment Period 2.
Treatment-emergent AEs (events started after the first dose of study treatment or events that were present prior to the first dose of study treatment but that increased in severity based on preferred term (PT); and events started prior to the last dose plus 84 days (inclusive)) were summarized by presenting for each treatment group: the number and percentage of patients having any AE, having an AE in each primary system organ class (SOC), and having each individual AE (PT). Summaries were also presented for AEs by severity and for study treatment-related AEs. Separate summaries were provided for death, SAEs, and AEs leading to study treatment discontinuation.
The summary of laboratory evaluations was presented for 3 groups of laboratory tests: hematology, clinical chemistry, and urinalysis. Descriptive summary statistics for the change from baseline to each study visit were presented by test group, laboratory test, and treatment group. In addition, shift tables were provided for all parameters. Laboratory parameters were analyzed with respect to Common Terminology Criteria for Adverse Events grades. Newly occurring liver enzymes abnormalities were also summarized.

Study Population: Key Inclusion/Exclusion Criteria

Inclusion Criteria:
• Subjects with chronic, moderate to severe plaque type psoriasis for at least 6 months prior to randomization and significant involvement of the palms and soles at baseline, defined as palmoplantar Investigator's Global Assessment (ppIGA) score of ≥ 3 on a 5-point scale, as well as at least one skin plaque at baseline which is not in the palmoplantar area
• Candidates for systemic therapy, i.e. psoriasis inadequately controlled by topical treatment (including super potent topical corticosteroids) and/or phototherapy and/or previous systemic therapy

Exclusion Criteria:
• Forms of psoriasis other than chronic plaque type psoriasis (e.g., pustular psoriasis, palmoplantar pustulosis, acrodermatitis of Hallopeau, erythrodermic and guttate psoriasis)
• Drug-induced psoriasis (e.g. new onset or current exacerbation from β-blockers, calcium channel inhibitors or lithium)
• Ongoing use of prohibited treatments (e.g. topical or systemic corticosteroids (CS), UV therapy). Washout periods do apply.
• Prior exposure to secukinumab (AIN457) or any other biological drug directly targeting IL-17 or the IL-17 receptor
• Use of any investigational drugs within 4 weeks prior to study treatment initiation or within a period of 5 half-lives of the investigational treatment, whichever is longer
• Active ongoing inflammatory diseases other than psoriasis that might confound the evaluation of the benefit of secukinumab therapy
• History of hypersensitivity to constituents of the study treatment

Participant Flow Table

Treatment Period 1

	AIN457 150mg	AIN457 300 mg	Placebo - AIN457 150 mg	Placebo - AIN457 300mg	Placebo	Any AIN457 dose
Started	68	69	0	0	68	0
Completed	63	64	0	0	63	0
Not Completed	5	5	0	0	5	0

Adverse Event	1	1	0	0	2	0
Lack of Efficacy	1	0	0	0	1	0
Protocol Violation	0	1	0	0	0	0
Withdrawal by Subject	3	2	0	0	2	0
Physician Decision	0	1	0	0	0	0

Treatment Period 2

	AIN457 150mg	AIN457 300 mg	Placebo - AIN457 150 mg	Placebo - AIN457 300mg	Placebo	Any AIN457 dose
Started	31	31	1	63	64	0
Completed	17	20	0	24	44	0
Not Completed	14	11	1	39	20	0
Adverse Event	9	6	4	3	1	0
Lack of Efficacy	12	5	3	1	0	0
Lost to Follow-up	2	0	0	0	0	0
Physician Decision	1	1	0	0	0	0
Protocol Violation	2	0	0	0	0	0
study terminated by sponsor	0	1	0	1	0	0

Withdrawal by Subject	10	5	6	5	0	0
non-compliance with study treatment	2	2	1	1	0	0
Death	1	0	0	0	0	0

Follow-up Period

	AIN457 150mg	AIN457 300 mg	Placebo - AIN457 150 mg	Placebo - AIN457 300mg	Placebo	Any AIN457 dose
Started	0	0	0	0	3	161
Completed	0	0	0	0	3	149
Not Completed	0	0	0	0	0	12
Withdrawal by Subject	0	0	0	0	0	5
Adverse Event	0	0	0	0	0	2
Lack of Efficacy	0	0	0	0	0	2
Lost to Follow-up	0	0	0	0	0	2
Physician Decision	0	0	0	0	0	1

Baseline Characteristics

	AIN457 150mg	AIN457 300 mg	Placebo	Total
Number of Participants [units: participants]	68	69	68	205
Age Continuous (units: years) Mean ± Standard Deviation	52.4±12.56	48.8±14.21	50.9±12.95	50.7±13.28
Gender, Male/Female (units: Participants)				
Female	28	31	34	93
Male	40	38	34	112

Summary of Efficacy

Primary Outcome Result(s)

Percentages of participants with palmoplantar Investigator Global Assessmnet (ppIGA) 0 or 1 response after 16 weeks of treatment

	AIN457 150mg	AIN457 300 mg	Placebo
Number of Participants Analyzed [units: participants]	69	68	68
Percentages of participants with palmoplantar Investigator Global Assessmnet (ppIGA) 0 or 1 response after 16 weeks of treatment (units: Percentages of	22	33.3	1.5

participants)

Statistical Analysis

Groups	AIN457 150mg, Placebo	Data at Week 16 was analyzed using the stratified Cochran-Mantel-Haenszel-test. The test was stratified by body-weight category (<90 kg or ≥90 kg).
Non-Inferiority/Equivalence Test	No	
P Value	0.0002	
Method	Cochran-Mantel-Haenszel	
Odds Ratio (OR)	19.3	
95 % Confidence Interval 2-Sided	2.4 to 154.6	

Statistical Analysis

Groups	AIN457 300 mg, Placebo	Data at Week 16 was analyzed using the stratified Cochran-Mantel-Haenszel-test. The test was stratified by body-weight category (<90 kg or ≥90 kg).
Non-Inferiority/Equivalence Test	No	
P Value	<0.0001	
Method	Cochran-Mantel-Haenszel	
Odds Ratio (OR)	29.4	

95
% Confidence Interval 4.1 to 211.9
2-Sided

Secondary Outcome Result(s)

Percentages of participants with palmoplantar Investigator Global Assessment (ppIGA) 0 or 1 response - treatment period I

	AIN457 150mg	AIN457 300 mg	Placebo
Number of Participants Analyzed [units: participants]	68	69	68
Percentages of participants with palmoplantar Investigator Global Assessment (ppIGA) 0 or 1 response - treatment period I (units: Percentages of participants)			
Week 1	1.5	1.4	0
Week 2	1.5	7.2	0
Week 4	4.4	8.7	0
Week 8	17.6	26.1	0
Week 12	20.6	33.3	1.5
Week 16	22.1	33.3	1.5

Percentages of subjects with ppIGA 0 or 1 response (observed cases) - treatment period II

AIN457 150mg	AIN457 300 mg	Placebo - AIN457 150 mg	Placebo - AIN457 300 mg	Placebo

Number of Participants Analyzed [units: participants]	68	69	31	31	1

Percentages of subjects with ppIGA 0 or 1 response (observed cases) - treatment period II
(units: Percentages of participants)

Week 16	22.1	33.3	0.0	0.0	100.0
Week 20	32.4	33.3	12.9	9.7	0.0
Week 28	29.4	44.9	32.3	51.6	100.0
Week 32	29.4	42.0	35.5	41.9	0.0
Week 64	26.5	46.4	29.0	48.4	0.0
Week 132	22.1	27.5	12.9	35.5	0.0

Percentages of subjects with ppIGA 0 or 1 response (observed cases) - entire treatment period

	AIN457 150mg	AIN457 300 mg	Placebo - AIN457 150 mg	Placebo - AIN457 300 mg	Placebo
Number of Participants Analyzed [units: participants]	68	69	31	31	6

Percentages of subjects with ppIGA 0 or 1 response (observed cases) - entire treatment period
(units: Percentages of participants)

Week 16	23.4	37.7	0.0	0.0	25.0
Week 24	40.7	44.1	20.0	36.7	100.0
Week 28	34.5	50.8	20.0	48.3	0.0
Week 80	41.7	65.3	45.0	68.2	NA[1]

[1] 0 subjects analyzed.

Absolute change from baseline for palmoplantar Psoriasis Area and Severity Index (ppPASI) score -treatment period I

	AIN457 150mg	AIN457 300 mg	Placebo
Number of Participants Analyzed [units: participants]	68	69	68
Absolute change from baseline for palmoplantar Psoriasis Area and Severity Index (ppPASI) score -treatment period I (units: Units on a scale) Mean ± Standard Deviation			
Week 1	-1.13 ± 4.797	-2.22 ± 4.334	-0.85 ± 3.355
Week 2	-3.11 ± 7.669	-5.32 ± 6.120	-1.90 ± 5.434
Week 4	-6.69 ± 9.890	-9.18 ± 9.734	-3.95 ± 7.424
Week 8	-9.74 ± 12.779	-11.30 ± 11.954	-3.22 ± 8.316
Week 12	-10.15 ± 14.409	-12.83 ± 12.286	-3.07 ± 8.479
Week 16	-9.41 ± 15.984	-13.35 ± 12.941	-2.43 ± 8.527

Absolute change from baseline for palmoplantar Psoriasis Area and Severity Index (ppPASI) score (observed cases) - entire treatment set

	AIN457 150mg	AIN457 300 mg	Placebo - AIN457 150 mg	Placebo - AIN457 300 mg	Placebo
Number of Participants Analyzed [units: participants]	68	69	31	31	6
Absolute change from baseline for palmoplantar Psoriasis Area and Severity Index (ppPASI) score (observed cases) - entire treatment set (units: Units on a scale) Mean ± Standard Deviation					
Week 16	-8.97 ± 15.624	-12.67 ± 12.074	-1.57 ± 8.880	-3.11 ± 7.983	-7.15 ± 4.479

Week 32	-16.29 ± 14.307	-17.43 ± 13.104	-15.49 ± 11.570	-15.09 ± 12.625	-11.40 ± NA[1]
Week 80	-18.05 ± 15.232	-19.27 ± 14.258	-13.71 ± 14.560	-16.70 ± 10.441	NA ± NA[2]
Week 132	-16.74 ± 14.658	-19.16 ± 11.688	-17.07 ± 11.728	-13.82 ± 5.844	NA ± NA[2]

[1] no SD because there was only 1 subject analyzed for this group.
[2] 0 subject were analyzed.

Number of participants developing anti-secukinumab antibodies

	AIN457 150mg	AIN457 300 mg	Placebo - AIN 150mg	Placebo - AIN457 300mg
Number of Participants Analyzed [units: participants]	68	69	31	31
Number of participants developing anti-secukinumab antibodies (units: Number of participants)	2	2	2	3

Summary of Safety

Safety Results

Serious Adverse Events by System Organ Class

Time Frame	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 treatment until Last Patient Last Visit.
Source Vocabulary for Table Default	MedDRA (19.1)

Assessment Type for Table Default Systematic Assessment

	Any AIN457 150 mg N = 99	Any AIN457 300 mg N = 100	Any AIN457 dose N = 199
Total participants affected	19 (19.19%)	13 (13.00%)	32 (16.08%)
Cardiac disorders			
Angina pectoris	1 (1.01%)	0 (0.00%)	1 (0.50%)
Coronary artery occlusion	1 (1.01%)	0 (0.00%)	1 (0.50%)
Gastrointestinal disorders			
Dyspepsia	1 (1.01%)	0 (0.00%)	1 (0.50%)
Small intestinal obstruction	0 (0.00%)	0 (0.00%)	0 (0.00%)
General disorders and administration site conditions			
Asthenia	0 (0.00%)	1 (1.00%)	1 (0.50%)
Non-cardiac chest pain	0 (0.00%)	1 (1.00%)	1 (0.50%)
Hepatobiliary disorders			
Hepatitis	0 (0.00%)	1 (1.00%)	1 (0.50%)
Infections and infestations			
Cellulitis of male external genital organ	1 (1.01%)	0 (0.00%)	1 (0.50%)
Diverticulitis	1 (1.01%)	0 (0.00%)	1 (0.50%)

Gastroenteritis	1 (1.01%)	0 (0.00%)	1 (0.50%)
Infective keratitis	1 (1.01%)	0 (0.00%)	1 (0.50%)
Pyelonephritis	0 (0.00%)	0 (0.00%)	0 (0.00%)
Sepsis	0 (0.00%)	1 (1.00%)	1 (0.50%)
Skin infection	1 (1.01%)	0 (0.00%)	1 (0.50%)
Injury, poisoning and procedural complications			
Fibula fracture	1 (1.01%)	0 (0.00%)	1 (0.50%)
Foot fracture	0 (0.00%)	1 (1.00%)	1 (0.50%)
Fracture displacement	1 (1.01%)	0 (0.00%)	1 (0.50%)
Humerus fracture	1 (1.01%)	0 (0.00%)	1 (0.50%)
Peripheral nerve injury	0 (0.00%)	1 (1.00%)	1 (0.50%)
Tendon injury	0 (0.00%)	1 (1.00%)	1 (0.50%)
Metabolism and nutrition disorders			
Dehydration	1 (1.01%)	0 (0.00%)	1 (0.50%)
Electrolyte imbalance	1 (1.01%)	0 (0.00%)	1 (0.50%)
Hypokalaemia	1 (1.01%)	0 (0.00%)	1 (0.50%)
Musculoskeletal and connective tissue disorders			
Intervertebral disc protrusion	0 (0.00%)	1 (1.00%)	1 (0.50%)
Musculoskeletal pain	1 (1.01%)	0 (0.00%)	1 (0.50%)
Osteoarthritis	0 (0.00%)	1 (1.00%)	1 (0.50%)
Psoriatic arthropathy	1 (1.01%)	0 (0.00%)	1 (0.50%)
Spinal column stenosis	0 (0.00%)	1 (1.00%)	1 (0.50%)

Tenosynovitis stenosans	0 (0.00%)	1 (1.00%)	1 (0.50%)
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Basal cell carcinoma	1 (1.01%)	0 (0.00%)	1 (0.50%)
Leiomyoma	0 (0.00%)	1 (1.00%)	1 (0.50%)
Uterine leiomyoma	1 (1.01%)	0 (0.00%)	1 (0.50%)
Nervous system disorders			
Cerebrovascular accident	0 (0.00%)	1 (1.00%)	1 (0.50%)
Hypoaesthesia	0 (0.00%)	1 (1.00%)	1 (0.50%)
Lumbar radiculopathy	0 (0.00%)	1 (1.00%)	1 (0.50%)
Paraesthesia	1 (1.01%)	0 (0.00%)	1 (0.50%)
Polyneuropathy	1 (1.01%)	0 (0.00%)	1 (0.50%)
Transient global amnesia	1 (1.01%)	0 (0.00%)	1 (0.50%)
Psychiatric disorders			
Completed suicide	1 (1.01%)	0 (0.00%)	1 (0.50%)
Reproductive system and breast disorders			
Benign prostatic hyperplasia	0 (0.00%)	1 (1.00%)	1 (0.50%)
Postmenopausal haemorrhage	1 (1.01%)	0 (0.00%)	1 (0.50%)
Respiratory, thoracic and mediastinal disorders			

Pneumothorax spontaneous	0 (0.00%)	1 (1.00%)	1 (0.50%)
Skin and subcutaneous tissue disorders			
Psoriasis	2 (2.02%)	1 (1.00%)	3 (1.51%)
Social circumstances			
Miscarriage of partner	1 (1.01%)	0 (0.00%)	1 (0.50%)

Other Adverse Events by System Organ Class

Time Frame	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 treatment until Last Patient Last Visit.
Source Vocabulary for Table Default	MedDRA (19.1)
Assessment Type for Table Default	Systematic Assessment
Frequent Event Reporting Threshold	2%

	Any AIN457 150 mg N = 99	**Any AIN457 300 mg N = 100**	**Any AIN457 dose N = 199**
Total participants affected	75 (75.76%)	68 (68.00%)	143 (71.86%)
Eye disorders			
Blepharitis	2 (2.02%)	0 (0.00%)	2 (1.01%)
Gastrointestinal disorders			
Abdominal pain	2 (2.02%)	2 (2.00%)	4 (2.01%)
Constipation	3 (3.03%)	0 (0.00%)	3 (1.51%)

Dental caries	2 (2.02%)	0 (0.00%)	2 (1.01%)
Diarrhoea	4 (4.04%)	4 (4.00%)	8 (4.02%)
Gastrooesophageal reflux disease	3 (3.03%)	3 (3.00%)	6 (3.02%)
Nausea	3 (3.03%)	1 (1.00%)	4 (2.01%)
Toothache	2 (2.02%)	2 (2.00%)	4 (2.01%)
General disorders and administration site conditions			
Chills	2 (2.02%)	0 (0.00%)	2 (1.01%)
Fatigue	4 (4.04%)	1 (1.00%)	5 (2.51%)
Influenza like illness	1 (1.01%)	3 (3.00%)	4 (2.01%)
Injection site haematoma	2 (2.02%)	1 (1.00%)	3 (1.51%)
Injection site reaction	2 (2.02%)	0 (0.00%)	2 (1.01%)
Oedema peripheral	5 (5.05%)	4 (4.00%)	9 (4.52%)
Peripheral swelling	2 (2.02%)	0 (0.00%)	2 (1.01%)
Pyrexia	4 (4.04%)	1 (1.00%)	5 (2.51%)
Hepatobiliary disorders			
Hepatic steatosis	2 (2.02%)	1 (1.00%)	3 (1.51%)
Infections and infestations			
Bronchitis	2 (2.02%)	2 (2.00%)	4 (2.01%)
Cellulitis	2 (2.02%)	2 (2.00%)	4 (2.01%)
Conjunctivitis	2 (2.02%)	3 (3.00%)	5 (2.51%)
Folliculitis	2 (2.02%)	0 (0.00%)	2 (1.01%)
Gastroenteritis	5 (5.05%)	4 (4.00%)	9 (4.52%)

Genital infection fungal	2 (2.02%)	0 (0.00%)	2 (1.01%)
Impetigo	2 (2.02%)	0 (0.00%)	2 (1.01%)
Influenza	4 (4.04%)	7 (7.00%)	11 (5.53%)
Localised infection	0 (0.00%)	3 (3.00%)	3 (1.51%)
Nasopharyngitis	14 (14.14%)	8 (8.00%)	22 (11.06%)
Oral candidiasis	0 (0.00%)	5 (5.00%)	5 (2.51%)
Oral herpes	3 (3.03%)	2 (2.00%)	5 (2.51%)
Pharyngitis	3 (3.03%)	6 (6.00%)	9 (4.52%)
Rhinitis	2 (2.02%)	2 (2.00%)	4 (2.01%)
Sinusitis	1 (1.01%)	3 (3.00%)	4 (2.01%)
Skin infection	2 (2.02%)	2 (2.00%)	4 (2.01%)
Tinea pedis	5 (5.05%)	1 (1.00%)	6 (3.02%)
Tonsillitis	1 (1.01%)	3 (3.00%)	4 (2.01%)
Tooth abscess	2 (2.02%)	0 (0.00%)	2 (1.01%)
Upper respiratory tract infection	10 (10.10%)	20 (20.00%)	30 (15.08%)
Urinary tract infection	3 (3.03%)	7 (7.00%)	10 (5.03%)
Viral upper respiratory tract infection	2 (2.02%)	1 (1.00%)	3 (1.51%)
Injury, poisoning and procedural complications			
Arthropod bite	2 (2.02%)	0 (0.00%)	2 (1.01%)
Muscle strain	2 (2.02%)	2 (2.00%)	4 (2.01%)
Procedural pain	1 (1.01%)	4 (4.00%)	5 (2.51%)
Investigations			
Weight increased	2 (2.02%)	0 (0.00%)	2 (1.01%)

Metabolism and nutrition disorders			
Decreased appetite	1 (1.01%)	0 (0.00%)	1 (0.50%)
Dyslipidaemia	1 (1.01%)	3 (3.00%)	4 (2.01%)
Musculoskeletal and connective tissue disorders			
Arthralgia	5 (5.05%)	4 (4.00%)	9 (4.52%)
Arthritis	3 (3.03%)	0 (0.00%)	3 (1.51%)
Back pain	2 (2.02%)	10 (10.00%)	12 (6.03%)
Muscle spasms	2 (2.02%)	2 (2.00%)	4 (2.01%)
Musculoskeletal pain	4 (4.04%)	3 (3.00%)	7 (3.52%)
Myalgia	4 (4.04%)	1 (1.00%)	5 (2.51%)
Osteoarthritis	4 (4.04%)	1 (1.00%)	5 (2.51%)
Pain in extremity	5 (5.05%)	1 (1.00%)	6 (3.02%)
Psoriatic arthropathy	1 (1.01%)	3 (3.00%)	4 (2.01%)
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Basal cell carcinoma	2 (2.02%)	0 (0.00%)	2 (1.01%)
Melanocytic naevus	2 (2.02%)	1 (1.00%)	3 (1.51%)
Seborrhoeic keratosis	4 (4.04%)	0 (0.00%)	4 (2.01%)
Nervous system disorders			
Dizziness	0 (0.00%)	1 (1.00%)	1 (0.50%)
Headache	10 (10.10%)	11 (11.00%)	21 (10.55%)
Paraesthesia	2 (2.02%)	1 (1.00%)	3 (1.51%)

Psychiatric disorders			
Anxiety	2 (2.02%)	0 (0.00%)	2 (1.01%)
Depression	2 (2.02%)	1 (1.00%)	3 (1.51%)
Renal and urinary disorders			
Nephrolithiasis	3 (3.03%)	2 (2.00%)	5 (2.51%)
Respiratory, thoracic and mediastinal disorders			
Cough	3 (3.03%)	2 (2.00%)	5 (2.51%)
Dyspnoea	3 (3.03%)	1 (1.00%)	4 (2.01%)
Oropharyngeal pain	2 (2.02%)	2 (2.00%)	4 (2.01%)
Skin and subcutaneous tissue disorders			
Acne	0 (0.00%)	1 (1.00%)	1 (0.50%)
Actinic keratosis	2 (2.02%)	0 (0.00%)	2 (1.01%)
Dermatitis	2 (2.02%)	0 (0.00%)	2 (1.01%)
Dermatitis contact	3 (3.03%)	0 (0.00%)	3 (1.51%)
Eczema	4 (4.04%)	2 (2.00%)	6 (3.02%)
Pruritus	2 (2.02%)	2 (2.00%)	4 (2.01%)
Psoriasis	12 (12.12%)	11 (11.00%)	23 (11.56%)
Pustular psoriasis	0 (0.00%)	0 (0.00%)	0 (0.00%)
Rash	2 (2.02%)	2 (2.00%)	4 (2.01%)
Skin mass	2 (2.02%)	0 (0.00%)	2 (1.01%)
Urticaria	2 (2.02%)	2 (2.00%)	4 (2.01%)
Vascular disorders			
Haematoma	2 (2.02%)	0 (0.00%)	2 (1.01%)

Hypertension	5 (5.05%)	3 (3.00%)	8 (4.02%)

Other Relevant Findings

Not applicable

Conclusion:

Results from the Week 16 primary analysis demonstrated that both doses of secukinumab (150 mg and 300 mg) have superior efficacy over placebo in the treatment of patients with moderate to severe palmoplantar psoriasis. Results for the final analysis now demonstrate that the efficacy of secukinumab was sustained following long-term administration of up to 132 weeks. The secukinumab 300 mg dose showed faster onset of response and greater efficacy than the secukinumab 150 mg dose in all efficacy endpoints, and there was no dose-dependent increases in the incidence of AEs between the secukinumab groups. For both doses of secukinumab, following long-term administration, the safety profile of secukinumab was consistent with the known safety profile of secukinumab and showed no new or unexpected safety signals.

Date of Clinical Trial Report

29 Sept 2017