Clinical trial results:
A Single-arm, Open-label, Multiple-dose, Phase 3 Study to Evaluate Usability of Subcutaneous Auto-injector of CT-P47 in Patients with Moderate to Severe Active Rheumatoid Arthritis

Summary

EudraCT number	2022-002928-12
Trial protocol	PL
Global end of trial date	19 July 2023

Results information

Result version number	v1 (current)
This version publication date	24 August 2024
First version publication date	24 August 2024

Trial information

Trial identification

Sponsor protocol code	CT-P47 3.2

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT05725434
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	CELLTRION, Inc.
Sponsor organisation address	23, Acedemy-ro, Yeonsu-Gu, Incheon, Korea, Republic of, 22014
Public contact	Clinical Operation 2 Department, CELLTRION, Inc., +82 32 850 5782, yeajin.park@celltrion.com
Scientific contact	Clinical Planning 3 Department, CELLTRION, Inc., +82 32 850 4167, jeehye.suh@celltrion.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	19 July 2023
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	19 July 2023
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To evaluate usability of AI assessed by patient (POST-self-injection assessment questionnaire [SIAQ]) at Week 2

Protection of trial subjects:

For hypersensitivity monitoring, vital signs (including systolic and diastolic BP, heart rate, respiratory rate, and body temperature) will be monitored prior to the study drug injection (within 15 minutes) and at 1 hour (±15 minutes) after the study drug injection. In addition, any type of ECG will be performed for hypersensitivity monitoring 1 hour (±15 minutes) after the study drug injection. Emergency equipment, such as adrenaline, antihistamines, corticosteroids, and respiratory support including inhalational therapy, oxygen, and artificial ventilator will be available.
For patients who experienced anaphylaxis or other serious treatment-related hypersensitivity reaction, study drug must be stopped immediately and discontinue study drug. If patients develop laboratory abnormalities in liver enzyme (ALT and/or AST), ANC, or platelet, or develops a serious infection, an opportunistic infection, or sepsis, the dose of concomitant DMARDs should be modified or dosing stopped and/or study drug (CT-P47) dosing regimen modified until the clinical situation has been evaluated and controlled.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	27 February 2023
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	Poland: 33
Worldwide total number of subjects	33
EEA total number of subjects	33

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)	30
From 65 to 84 years	3
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

First patient enrolled: 27 February 2023.
This study was conducted at 3 study centers in Poland.

Pre-assignment

Screening details:

Male or female patients with moderate to severe active RA diagnosed according to the 2010 ACR/EULAR classification criteria for at least 24 weeks, who have inadequate response to one or more DMARDs, who had been receiving MTX for at least 12 weeks on a stable dose and route of 10 to 25 mg/week for at least 8 weeks prior administration.

Pre-assignment period milestones

Number of subjects started	33
Number of subjects completed	33

Period 1

Period 1 title	Treatment Period (overall period)
Is this the baseline period?	Yes
Allocation method	Not applicable
Blinding used	Not blinded

Arms

Arm title	CT-P47

Arm description:

CT-P47 (162mg/0.9mL) was administered by SC injection via AI at Week 0, Week 2 and then PFS EOW or weekly based on clinical response by investigator's discretion from Week 4 up to Week 10, in combination with MTX and folic acid. The dosing frequency may be increased to weekly based on clinical response by investigator's discretion.

Arm type	Experimental
Investigational medicinal product name	CT-P47
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection in pre-filled pen
Routes of administration	Solution for injection

Dosage and administration details:

A fixed dose of the study drug (162 mg) was administered EOW. Co-administered with MTX; 10 to 25 mg/week and folic acid (≥5 mg/week).

Number of subjects in period 1	CT-P47
Started	33
Completed	29
Not completed	4
Consent withdrawn by subject	2
Adverse event, non-fatal	1
Protocol deviation	1

Baseline characteristics

Reporting groups	
Reporting group title	CT-P47
Reporting group description:	
CT-P47 (162mg/0.9mL) was administered by SC injection via AI at Week 0, Week 2 and then PFS EOW or weekly based on clinical response by investigator's discretion from Week 4 up to Week 10, in combination with MTX and folic acid. The dosing frequency may be increased to weekly based on clinical response by investigator's discretion.	

Reporting group values	CT-P47	Total	
Number of subjects	33	33	
Age categorical Units: Subjects			
In utero	0	0	
Preterm newborn infants (gestational age < 37 wks)	0	0	
Newborns (0-27 days)	0	0	
Infants and toddlers (28 days-23 months)	0	0	
Children (2-11 years)	0	0	
Adolescents (12-17 years)	0	0	
Adults (18-64 years)	30	30	
From 65-84 years	3	3	
85 years and over	0	0	
Gender categorical Units: Subjects			
Female	24	24	
Male	9	9	

End points

End points reporting groups

Reporting group title	CT-P47

Reporting group description:

CT-P47 (162mg/0.9mL) was administered by SC injection via AI at Week 0, Week 2 and then PFS EOW or weekly based on clinical response by investigator's discretion from Week 4 up to Week 10, in combination with MTX and folic acid. The dosing frequency may be increased to weekly based on clinical response by investigator's discretion.

Primary: The Usability of AI as Assessed by Patients Rating Using POST-Self-Injection Assessment Questionnaire (SIAQ) at Week 2.

End point title	The Usability of AI as Assessed by Patients Rating Using POST-Self-Injection Assessment Questionnaire (SIAQ) at Week 2.[1]

End point description:

Usability was assessed using the SIAQ prior to and after self-injection of CT-P47 via AI at Week 0 and 2. The PRE module of the SIAQ is a 7-item questionnaire that investigates 3 domains such as feelings about injections, selfconfidence (regarding self-administration), and satisfaction with self-injection. The POST module of the SIAQ is a 27-item questionnaire that assesses 6 domains such as feelings about injection, self-image, self-confidence (regarding self-administration), pain and skin reactions during or after the injection (injection-site reactions), ease of use of the selfinjection device (AI), and satisfaction with self-injection. Item scores were transformed to obtain a score ranging from 0 (worst experience) to 10 (best experience) for each item.

End point type	Primary

End point timeframe:

Week 2

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: No statistical analysis have been conducted since it is an open-label study to evaluate patient usability of the device as a primary endpoint.

End point values	CT-P47			
Subject group type	Reporting group			
Number of subjects analysed	32			
Units: Domain score				
arithmetic mean (standard deviation)				
Feeling about injections (Post)	8.28 (± 1.974)			
Self-image (Post)	8.83 (± 2.288)			
Self-confidence (Post)	7.11 (± 2.138)			
Pain and skin reaction (Post)	9.62 (± 0.695)			
Ease of use of the self-injection (Post)	8.30 (± 1.641)			
Satisfaction with self-injection (Post)	7.98 (± 1.609)			

Statistical analyses

No statistical analyses for this end point

Secondary: Patients Rating Using PRE-SIAQ and POST-SIAQ at Week 0

End point title	Patients Rating Using PRE-SIAQ and POST-SIAQ at Week 0

End point description:

End point type	Secondary

End point timeframe:
Week 0

End point values	CT-P47			
Subject group type	Reporting group			
Number of subjects analysed	32			
Units: Domain score				
arithmetic mean (standard deviation)				
Feeling about injections (Pre)	8.44 (± 1.830)			
Feeling about injections (Post)	8.54 (± 1.745)			
Self-confidence (Pre)	6.15 (± 1.994)			
Self-confidence (Post)	6.59 (± 2.173)			
Self-image (Post)	8.36 (± 2.509)			
Pain and skin reaction (Post)	9.37 (± 1.127)			
Ease of use of the self-injection device	7.96 (± 1.758)			
Satisfaction with self-injection (Pre)	6.64 (± 1.863)			
Satisfaction with self-injection (Post)	7.63 (± 1.445)			

Statistical analyses

No statistical analyses for this end point

Secondary: Patients Rating Using PRE-SIAQ at Week 2

End point title	Patients Rating Using PRE-SIAQ at Week 2

End point description:

End point type	Secondary

End point timeframe:
Week 2

End point values	CT-P47			
Subject group type	Reporting group			
Number of subjects analysed	32			
Units: Domain score				
arithmetic mean (standard deviation)				
Feeling about injections (Pre)	8.26 (± 1.967)			
Self-confidence (Pre)	7.06 (± 1.693)			
Satisfaction with self-injection (Pre)	7.89 (± 1.570)			

Statistical analyses

No statistical analyses for this end point

Secondary: Successful Self-injection Rate and the Self-injection Assessments (N1 to N14)

End point title	Successful Self-injection Rate and the Self-injection Assessments (N1 to N14)

End point description:

Patient's ability to successfully follow the steps in the printed instruction for use to self-administer the study drug was assessed using the self-injection assessment checklist. The self-injection assessment was coded as successful if N7, N9, N10 and N11 of the self-injection assessment checklist were checked as "Yes". In addition, the successful completion of all 14 instructions will be assessed from the self-injection assessment checklist. The summary table displayed the number and percentage of patient's successful self-injection and patient's successful completion of all 14 instructions. All answers for checklists were listed along with whether the self-injection was successful, and all instructions were completed.

End point type	Secondary

End point timeframe:

Weeks 0 and 2

End point values	CT-P47			
Subject group type	Reporting group			
Number of subjects analysed	32			
Units: participants				
Successful self-injection (N7, 9, 10 and 11), W0	32			
Successful self-injection (N7, 9, 10 and 11), W2	32			
Successful completion of all 14 instructions, W0	32			
Successful completion of all 14 instructions, W2	32			

Statistical analyses

No statistical analyses for this end point

Secondary: Mean Change From Baseline in DAS28 (CRP and ESR)

End point title	Mean Change From Baseline in DAS28 (CRP and ESR)

End point description:

DAS28 (ESR) was calculated using the following formula: DAS28 (ESR) = 0.56 X SQRT(TJC28) + 0.28 X SQRT(SJC28) + 0.70 X ln(ESR) + 0.014 X GH on VAS. DAS28 (ESR) provides a number on a scale from 0 to 10 with higher values indicating greater RA disease activity.

DAS28 (CRP) was calculated using the following formula: DAS28 (CRP) = 0.56 X SQRT(TJC28) + 0.28 X SQRT(SJC28) + 0.36 X ln(CRP+1) + 0.014 X GH on VAS + 0.96. DAS28 (CRP) provides a number on a scale from 0 to 10 with higher values indicating greater RA disease activity.
Abbreviations: CRP, C-reactive protein; DAS28, Disease Activity Score using 28 joint counts; ESR, Erythrocyte sedimentation rate; GH, patient's global disease activity measured on 100 mm VAS; VAS, visual analogue scale.

End point type	Secondary

End point timeframe:

Weeks 2, 4, 8 and 12 (EOS)

End point values	CT-P47			
Subject group type	Reporting group			
Number of subjects analysed	33[2]			
Units: score on a scale				
arithmetic mean (standard deviation)				
DAS28 (ESR), Week 2, Change from baseline	-0.613 (± 0.6635)			
DAS28 (ESR), Week 4, Change from baseline	-1.565 (± 0.7534)			
DAS28 (ESR), Week 8, Change from baseline	-2.904 (± 1.0215)			
DAS28 (ESR), Week 12(EOS), Change from baseline	-3.659 (± 1.1341)			
DAS28 (CRP), Week 2, Change from baseline	-0.538 (± 0.6109)			
DAS28 (CRP), Week 4, Change from baseline	-1.236 (± 0.7683)			
DAS28 (CRP), Week 8, Change from baseline	-2.106 (± 0.8822)			
DAS28 (CRP), Week 12(EOS), Change from baseline	-2.810 (± 0.9458)			

Notes:

[2] - Number Analyzed:
Week 2: 32
Week 4: 30
Week 8: 29
Week 12(EOS): 29

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events:	
From the date the ICF is signed until the EOS or EW visit (up to Week 12)	
Assessment type	Systematic

Dictionary used	
Dictionary name	MedDRA
Dictionary version	26.0

Reporting groups	
Reporting group title	CT-P47

Reporting group description:

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Serious adverse events	CT-P47		
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 33 (3.03%)		
number of deaths (all causes)	0		
number of deaths resulting from adverse events	0		
Nervous system disorders			
Cerebrovascular disorder			
subjects affected / exposed	1 / 33 (3.03%)		
occurrences causally related to treatment / all	1 / 1		
deaths causally related to treatment / all	0 / 0		

Frequency threshold for reporting non-serious adverse events: 3 %

Non-serious adverse events	CT-P47		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	11 / 33 (33.33%)		
Investigations			
Alanine aminotransferase increased			
subjects affected / exposed	1 / 33 (3.03%)		
occurrences (all)	1		
Blood and lymphatic system disorders			

Leukopenia subjects affected / exposed occurrences (all) Neutropenia subjects affected / exposed occurrences (all) Thrombocytopenia subjects affected / exposed occurrences (all)	3 / 33 (9.09%) 3 3 / 33 (9.09%) 3 1 / 33 (3.03%) 1		
General disorders and administration site conditions Injection site reaction subjects affected / exposed occurrences (all)	3 / 33 (9.09%) 6		
Gastrointestinal disorders Glossodynia subjects affected / exposed occurrences (all)	1 / 33 (3.03%) 1		
Skin and subcutaneous tissue disorders Erythema subjects affected / exposed occurrences (all)	1 / 33 (3.03%) 1		
Infections and infestations Cystitis subjects affected / exposed occurrences (all) Rhinitis subjects affected / exposed occurrences (all) Upper respiratory tract infection subjects affected / exposed occurrences (all)	1 / 33 (3.03%) 1 1 / 33 (3.03%) 1 2 / 33 (6.06%) 2		
Metabolism and nutrition disorders Hypercholesterolaemia subjects affected / exposed occurrences (all)	1 / 33 (3.03%) 1		

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