



## Clinical trial results:

**A multicentre phase IIa study to evaluate the efficacy and tolerability of ModraDoc006/r in patients with recurrent or metastatic HER-2 negative breast cancer, suitable for treatment with a taxane**

### Summary

EudraCT number	2018-003249-41
Trial protocol	BE DK ES
Global end of trial date	13 February 2020

### Results information

Result version number	v1 (current)
This version publication date	06 November 2022
First version publication date	06 November 2022

### Trial information

#### Trial identification

Sponsor protocol code	M18DMB
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#### Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT03890744
WHO universal trial number (UTN)	-

Notes:

### Sponsors

Sponsor organisation name	Modra Pharmaceuticals
Sponsor organisation address	Barbara Strozziilaan 201, Amsterdam, Netherlands, 1083 HN
Public contact	Project Director, Modra Pharmaceuticals, +31 2050188, info@modrapharmaceuticals.com
Scientific contact	Project Director, Modra Pharmaceuticals, +31 2050188, info@modrapharmaceuticals.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	12 May 2020
Is this the analysis of the primary completion data?	No
Global end of trial reached?	Yes
Global end of trial date	13 February 2020
Was the trial ended prematurely?	No

Notes:

## General information about the trial

Main objective of the trial:

To determine the efficacy of ModraDoc006/r (oral docetaxel formulation given as ModraDoc006 10 mg tablets in combination with ritonavir 100 mg tablets) as measured by RECIST v1.1 criteria of objective response rate (ORR) in patients with histologically and cytologically confirmed, recurrent or metastatic HER-2 negative breast cancer suitable for treatment with a taxane.

Protection of trial subjects:

To minimize the risk to patients and maximize safety, the following factors were incorporated into the trial design:

- Detailed safety and laboratory assessments were performed.
- As anti-emetic therapy, all subjects were given bi-daily 1 mg of granisetron 1 hour prior to oral ModraDoc006/r administration during the first two cycles. In subsequent cycles, granisetron premedication could be given if indicated. All subjects were provided by the site with a home prescription for anti-emetics (metoclopramide 10 mg maximum four times daily) and received instructions on how to use this medication in case nausea/vomiting occurred at home. If this proved insufficient, dexamethasone and lorazepam could be added as anti-emetic treatment. In case of vomiting after intake, the subjects did not take any new anti-emetic therapy
- Patients were provided with diet and hydration instructions and a home prescription for loperamide, with instructions on how to use this medication in case diarrhea occurred at home
- All clinical observations were evaluated by the Investigator on an ongoing basis.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	01 November 2018
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	Belgium: 7
Country: Number of subjects enrolled	Spain: 2
Country: Number of subjects enrolled	Denmark: 4
Worldwide total number of subjects	13
EEA total number of subjects	13

Notes:

### Subjects enrolled per age group

In utero	0
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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)	5
From 65 to 84 years	8
85 years and over	0

## Subject disposition

### Recruitment

Recruitment details:

Prior to obtaining informed consent, the purpose and nature of the trial as well as possible adverse effects resulting from trial drug administration were explained to each subject. Written informed consent was obtained, before any trial-specific procedures were performed.

### Pre-assignment

Screening details:

Between 11Feb2019 and 09Jul2019, informed consent was obtained from 13 subjects with metastatic HER-2-negative breast cancer. One subject experienced elevated liver enzymes outside the allowed range for inclusion prior to investigational medicinal product (IMP) administration and was therefore excluded from receiving the trial drug.

### Pre-assignment period milestones

Number of subjects started	13
Number of subjects completed	12

### Pre-assignment subject non-completion reasons

Reason: Number of subjects	Adverse event, non-fatal: 1
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### Period 1

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

### Arms

Arm title	ModraDoc006/r
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Arm description:

Patients received ModraDoc006 30 mg in combination with ritonavir 100 mg in the morning and ModraDoc006 20 mg in combination with 100 mg ritonavir in the afternoon (7 to 12 hours after the morning dose), on Day 1 of weekly cycles (BIDW: bi-daily once weekly dosing).

Arm type	Experimental
Investigational medicinal product name	ModraDoc006
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Coated tablet
Routes of administration	Oral use

Dosage and administration details:

Bi-daily once weekly (BIDW) 30 mg in in the morning and 20 mg in the afternoon

Investigational medicinal product name	ritonavir
Investigational medicinal product code	/r
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Bi-daily once weekly (BIDW) 100 mg in the morning and 100 mg in the evening

<b>Number of subjects in period 1</b> <sup>[1]</sup>	ModraDoc006/r
Started	12
Completed	12

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Notes:

[1] - The number of subjects reported to be in the baseline period are not the same as the worldwide number enrolled in the trial. It is expected that these numbers will be the same.

Justification: One patient was enrolled, but did not start treatment due to elevated liver enzymes outside the allowed range for inclusion experienced prior to IMP administration.

## Baseline characteristics

### Reporting groups

Reporting group title	Treated
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Reporting group description: -

Reporting group values	Treated	Total	
Number of subjects	12	12	
Age categorical			
Units: Subjects			
Adults (18-64 years)	5	5	
From 65-84 years	7	7	
Age continuous			
Units: years			
median	66.0		
full range (min-max)	48 to 76	-	
Gender categorical			
Units: Subjects			
Female	12	12	
Male	0	0	
Child-bearing potential			
Units: Subjects			
Yes	0	0	
No	12	12	
Ethnicity			
Units: Subjects			
Hispanic or Latino	1	1	
Not Hispanic or Latino	10	10	
Unknown	1	1	
Race			
Units: Subjects			
White	12	12	
Staging at primary cancer diagnosis			
Units: Subjects			
Ia	2	2	
II	2	2	
IIa	1	1	
IIb	1	1	
IIIa	3	3	
IV	2	2	
Missing	1	1	
Occurrence of metastasis			
Units: Subjects			
Yes	12	12	
No	0	0	
WHO Performance Status			
Units: Subjects			
PS 0	8	8	

PS 1	4	4	
Location of metastasis: Bone Units: Subjects			
Yes	9	9	
No	3	3	
Location of metastasis: Liver Units: Subjects			
Yes	4	4	
No	8	8	
Location of metastasis: Lungs Units: Subjects			
Yes	1	1	
No	11	11	
Previous cancer therapy: Radiotherapy Units: Subjects			
Yes	8	8	
No	4	4	
Previous cancer therapy: Surgery Units: Subjects			
Yes	9	9	
No	3	3	
Previous cancer therapy: Systemic regimen (adjuvant) Units: Subjects			
Yes	9	9	
No	3	3	
Previous cancer therapy: Systemic regimen (Metastatic) Units: Subjects			
Yes	11	11	
No	1	1	
Previous cancer therapy: Chemotherapy (adjuvant) Units: Subjects			
Yes	8	8	
No	4	4	
Previous cancer therapy: Chemotherapy (metastatic) Units: Subjects			
Yes	3	3	
No	9	9	
Previous cancer therapy: Taxane (adjuvant) Units: Subjects			
Yes	3	3	
No	9	9	
Height Units: centimetre			
median	157.5		
full range (min-max)	141 to 173	-	
Weight Units: kilogram(s)			
median	62.0		

full range (min-max)	38.4 to 83.0	-	
Body Mass Index (BMI)			
Units: kilogram(s)/square metre			
median	24.2		
full range (min-max)	18.4 to 34.1	-	
Body Surface Area (BSA)			
Units: square metre			
median	1.63		
full range (min-max)	1.22 to 1.86	-	
Median volumetric tumor size			
Sum of diameters of target lesions			
Units: millimetre(s)			
median	63.0		
full range (min-max)	22.6 to 79.0	-	
Median biomarker level CA 15-3			
Units: unit(s)/millilitre			
median	224.35		
full range (min-max)	21.48 to 447.30	-	

## End points

### End points reporting groups

Reporting group title	ModraDoc006/r
Reporting group description: Patients received ModraDoc006 30 mg in combination with ritonavir 100 mg in the morning and ModraDoc006 20 mg in combination with 100 mg ritonavir in the afternoon (7 to 12 hours after the morning dose), on Day 1 of weekly cycles (BIDW: bi-daily once weekly dosing).	
Subject analysis set title	Evaluable for Radiological Response (ERR)
Subject analysis set type	Sub-group analysis
Subject analysis set description: The population evaluable for radiological response (ERR) was defined as subjects who received at least six weekly administrations of ModraDoc006/r, who had measurable lesions according to RECIST v1.1, and whose response had been evaluated using RECIST v1.1	

### Primary: Overall Response Rate (ORR)

End point title	Overall Response Rate (ORR) <sup>[1]</sup>
End point description: ORR according to RECIST v1.1	
End point type	Primary
End point timeframe: During study period; radiological assessment at baseline, Week 8 and 12, and every 6 weeks thereafter until the end of treatment.	

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: The objective response rate, ORR, was calculated as the proportion of subjects who achieved a CR or PR recorded from the start of the trial treatment until the end of treatment. ORR was summarised with 95% Clopper-Pearson Confidence Interval. PR = 37.5 % (8.52 - 75.5).

End point values	Evaluable for Radiological Response (ERR)			
Subject group type	Subject analysis set			
Number of subjects analysed	8			
Units: 0-12				
Complete response	0			
Partial response	3			
Stable disease	4			
Progressive disease	1			

### Statistical analyses

No statistical analyses for this end point

### Secondary: Duration of Response

End point title	Duration of Response
End point description: The DOR, calculated in the subpopulation of patients experiencing a CR or PR, is presented for patients that were evaluable for radiological response for the overall study.	

End point type	Secondary
End point timeframe:	
Overall study	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Progression Free Survival

End point title	Progression Free Survival
End point description:	PFS was calculated as the time between the date of first dose of trial treatment (Day 1 of Cycle 1) and the first documented tumor progression or death from any cause. Tumor progression was defined as the occurrence of PD based on RECIST v1.1.
End point type	Secondary
End point timeframe:	
Overall study	

End point values	Evaluable for Radiological Response (ERR)			
Subject group type	Subject analysis set			
Number of subjects analysed	8			
Units: month				
median (full range (min-max))	5.7 (1.64 to 13.77)			

### Statistical analyses

No statistical analyses for this end point

## Adverse events

### Adverse events information

Timeframe for reporting adverse events:

Adverse events were monitored and collected from the time the patient gave informed consent and throughout the study until 30 days after the last ModraDoc006/r administration.

Adverse event reporting additional description:

Safety analysis population assessed for all adverse events

Assessment type	Systematic
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### Dictionary used

Dictionary name	CTCAE
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Dictionary version	5.0
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### Reporting groups

Reporting group title	Safety population (SAF)
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Reporting group description: -

<b>Serious adverse events</b>	Safety population (SAF)		
Total subjects affected by serious adverse events			
subjects affected / exposed	4 / 12 (33.33%)		
number of deaths (all causes)	1		
number of deaths resulting from adverse events	1		
Blood and lymphatic system disorders			
Febrile neutropenia			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences causally related to treatment / all	1 / 1		
deaths causally related to treatment / all	0 / 0		
General disorders and administration site conditions			
Mucosal inflammation			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences causally related to treatment / all	1 / 1		
deaths causally related to treatment / all	0 / 0		
Gastrointestinal disorders			
Colitis			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences causally related to treatment / all	1 / 1		
deaths causally related to treatment / all	0 / 0		
Respiratory, thoracic and mediastinal disorders			

Chylothorax			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences causally related to treatment / all	1 / 1		
deaths causally related to treatment / all	0 / 0		
Pneumonia aspiration			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences causally related to treatment / all	1 / 1		
deaths causally related to treatment / all	1 / 1		
Infections and infestations			
Clostridium difficile infection			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		
Diverticulitis			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences causally related to treatment / all	0 / 1		
deaths causally related to treatment / all	0 / 0		

Frequency threshold for reporting non-serious adverse events: 5 %

<b>Non-serious adverse events</b>	Safety population (SAF)		
Total subjects affected by non-serious adverse events			
subjects affected / exposed	12 / 12 (100.00%)		
General disorders and administration site conditions			
Asthenia			
subjects affected / exposed	5 / 12 (41.67%)		
occurrences (all)	7		
Chest discomfort			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Fatigue			
subjects affected / exposed	6 / 12 (50.00%)		
occurrences (all)	17		
Localised oedema			

subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Mucosal inflammation subjects affected / exposed occurrences (all)	2 / 12 (16.67%) 4		
Mucosal toxicity subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 2		
Oedema peripheral subjects affected / exposed occurrences (all)	6 / 12 (50.00%) 9		
Respiratory, thoracic and mediastinal disorders			
Cough subjects affected / exposed occurrences (all)	4 / 12 (33.33%) 5		
Dysphonia subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 2		
Dyspnoea subjects affected / exposed occurrences (all)	6 / 12 (50.00%) 10		
Epistaxis subjects affected / exposed occurrences (all)	4 / 12 (33.33%) 8		
Nasal dryness subjects affected / exposed occurrences (all)	2 / 12 (16.67%) 2		
Pleural effusion subjects affected / exposed occurrences (all)	4 / 12 (33.33%) 4		
Psychiatric disorders			
Anxiety subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 2		
Apathy			

subjects affected / exposed occurrences (all)	2 / 12 (16.67%) 2		
Insomnia subjects affected / exposed occurrences (all)	2 / 12 (16.67%) 2		
Investigations			
Alanine aminotransferase increased subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Aspartate aminotransferase increased subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 2		
Blood alkaline phosphatase increased subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Blood urine present subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Electrocardiogram QT prolonged subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Haematocrit decreased subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Platelet count decreased subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 2		
Weight decreased subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 2		
White blood cell count decreased subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Injury, poisoning and procedural complications			

Overdose subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Cardiac disorders Atrial fibrillation subjects affected / exposed occurrences (all)  Palpitations subjects affected / exposed occurrences (all)  Ventricular arrhythmia subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1  1 / 12 (8.33%) 1  1 / 12 (8.33%) 1		
Nervous system disorders Dysgeusia subjects affected / exposed occurrences (all)  Facial paralysis subjects affected / exposed occurrences (all)  Headache subjects affected / exposed occurrences (all)  Hypoaesthesia subjects affected / exposed occurrences (all)  Peripheral sensory neuropathy subjects affected / exposed occurrences (all)  Polyneuropathy subjects affected / exposed occurrences (all)	5 / 12 (41.67%) 5  1 / 12 (8.33%) 1  1 / 12 (8.33%) 1  1 / 12 (8.33%) 1  2 / 12 (16.67%) 5		
Blood and lymphatic system disorders Anaemia subjects affected / exposed occurrences (all)  Lymphopenia	4 / 12 (33.33%) 4		

subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 2		
Neutropenia subjects affected / exposed occurrences (all)	3 / 12 (25.00%) 4		
Thrombocytopenia subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 4		
Ear and labyrinth disorders Vertigo subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Eye disorders Eye pruritus subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Lacrimation increased subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Gastrointestinal disorders Abdominal distension subjects affected / exposed occurrences (all)	3 / 12 (25.00%) 4		
Abdominal pain subjects affected / exposed occurrences (all)	9 / 12 (75.00%) 15		
Abdominal pain upper subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Anal fissure subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Aphthous ulcer subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 2		
Ascites			

subjects affected / exposed	2 / 12 (16.67%)		
occurrences (all)	2		
Constipation			
subjects affected / exposed	6 / 12 (50.00%)		
occurrences (all)	10		
Diarrhoea			
subjects affected / exposed	10 / 12 (83.33%)		
occurrences (all)	21		
Dry mouth			
subjects affected / exposed	3 / 12 (25.00%)		
occurrences (all)	3		
Dysphagia			
subjects affected / exposed	2 / 12 (16.67%)		
occurrences (all)	2		
Faeces soft			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Flatulence			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Gastrointestinal pain			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Gingival pain			
subjects affected / exposed	2 / 12 (16.67%)		
occurrences (all)	2		
Mouth ulceration			
subjects affected / exposed	2 / 12 (16.67%)		
occurrences (all)	2		
Nausea			
subjects affected / exposed	11 / 12 (91.67%)		
occurrences (all)	21		
Odynophagia			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Oral toxicity			

subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 2		
Stomatitis subjects affected / exposed occurrences (all)	2 / 12 (16.67%) 7		
Tongue erythema subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Vomiting subjects affected / exposed occurrences (all)	9 / 12 (75.00%) 18		
<b>Skin and subcutaneous tissue disorders</b>			
Alopecia subjects affected / exposed occurrences (all)	9 / 12 (75.00%) 11		
Dry skin subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Madarosis subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Nail discolouration subjects affected / exposed occurrences (all)	2 / 12 (16.67%) 2		
Nail ridging subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Nail toxicity subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Onycholysis subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Palmar-plantar erythrodysesthesia syndrome			

subjects affected / exposed occurrences (all)	3 / 12 (25.00%) 9		
Rash subjects affected / exposed occurrences (all)	3 / 12 (25.00%) 3		
Renal and urinary disorders Renal failure subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Urinary incontinence subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 2		
Musculoskeletal and connective tissue disorders Arthralgia subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Back pain subjects affected / exposed occurrences (all)	2 / 12 (16.67%) 3		
Dactylitis subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 3		
Groin pain subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Muscle fatigue subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Muscle spasms subjects affected / exposed occurrences (all)	1 / 12 (8.33%) 1		
Pain in extremity subjects affected / exposed occurrences (all)	2 / 12 (16.67%) 2		
Infections and infestations			

Conjunctivitis			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	2		
Cystitis			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	3		
Laryngitis			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Lung infection			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Paronychia			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	2		
Skin infection			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Urinary tract infection			
subjects affected / exposed	2 / 12 (16.67%)		
occurrences (all)	2		
Vaginal infection			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Metabolism and nutrition disorders			
Decreased appetite			
subjects affected / exposed	9 / 12 (75.00%)		
occurrences (all)	20		
Dehydration			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Hypoalbuminaemia			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Hypocalcaemia			

subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Hypokalaemia			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Hyponatraemia			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	1		
Hypoproteinaemia			
subjects affected / exposed	1 / 12 (8.33%)		
occurrences (all)	3		

## **More information**

### **Substantial protocol amendments (globally)**

Were there any global substantial amendments to the protocol? No

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### **Interruptions (globally)**

Were there any global interruptions to the trial? No

### **Limitations and caveats**

None reported