Clinical trial results:
A phase III, open-label, randomized, controlled study to evaluate the immunogenicity and safety of inactivated poliovirus vaccine (IPV) when co-administered with Porcine circovirus (PCV)-free liquid formulation of an oral live attenuated human rotavirus (HRV) vaccine in healthy Chinese infants.

Summary

EudraCT number	2022-000708-36
Trial protocol	Outside EU/EEA
Global end of trial date	22 October 2024

Results information

Result version number	v1 (current)
This version publication date	23 October 2025
First version publication date	23 October 2025

Trial information

Trial identification

Sponsor protocol code	218485

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT06331156
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	GlaxoSmithKline
Sponsor organisation address	79 New Oxford Street, London, WC1A 1DG,, United Kingdom, TW8 9GS
Public contact	GSK Response Center, GSK Response Center, 44 8664357343, GSKClinicalSupportHD@gsk.com
Scientific contact	GSK Response Center, GlaxoSmithKline, 44 8664357343, GSKClinicalSupportHD@gsk.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?	Yes

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	07 May 2025
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	22 October 2024
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The objective of this study is to evaluate the immunogenicity and safety of inactivated poliovirus vaccine (IPV) when co-administered with GSK's HRV PCV-free vaccine in healthy Chinese infants.

Protection of trial subjects:

Study participants were observed closely for at least 30 minutes after the administration of the study interventions. Appropriate medical treatment was readily available during the observation period in case of anaphylaxis and/or syncope.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	22 March 2024
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	China: 400
Worldwide total number of subjects	400
EEA total number of subjects	0

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)	400
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	0
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

This study was conducted in China.

Pre-assignment

Screening details:

A total of 400 participants were included in Enrolled set, out of which only 392 were included in Exposed set and started the study.

Period 1

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

Arms

Are arms mutually exclusive?	Yes
Arm title	Staggered Group

Arm description:

Participants received 2 doses of Porcine circovirus (PCV)-free liquid formulation of GSK's oral live attenuated human rotavirus (HRV) vaccine at Day 1 and Month 1, and 3 doses of Inactivated poliovirus vaccine (IPV) vaccine administered at Month 0.5, Month 1.5, and Month 2.5.

Arm type	Active comparator
Investigational medicinal product name	Inactivated Poliomyelitis Vaccine (IPV)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

3 doses per participant

Investigational medicinal product name	Rotarix PCV-free (HRV PCV-free)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Oral liquid
Routes of administration	Oral use

Dosage and administration details:

2 doses per participant

Arm title	Co-administration Group

Arm description:

Participants received 2 doses of PCV-free liquid formulation of GSK's oral live attenuated HRV vaccine co-administered with the first 2 doses of IPV vaccine at Month 0.5 and Month 1.5, followed by the third dose of IPV vaccine administered at Month 2.5.

Arm type	Experimental
Investigational medicinal product name	Rotarix PCV-free (HRV PCV-free)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Oral liquid
Routes of administration	Oral use

Dosage and administration details:

2 doses per participant

Investigational medicinal product name	Inactivated Poliomyelitis Vaccine (IPV)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

3 doses per participant

Number of subjects in period 1[1]	Staggered Group	Co-administration Group
Started	199	193
Completed	186	189
Not completed	13	4
Adverse event, non-fatal	1	-
Other	7	-
Lost to follow-up	1	-
Migrated / Moved from the study area	4	3
Adverse event requiring expedited reporting	-	1

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: Number of participants enrolled were 400 out of which only 392 participants started the study and were considered as the Exposed set.

Baseline characteristics

Reporting groups	
Reporting group title	Staggered Group
Reporting group description:	
Participants received 2 doses of Porcine circovirus (PCV)-free liquid formulation of GSK's oral live attenuated human rotavirus (HRV) vaccine at Day 1 and Month 1, and 3 doses of Inactivated poliovirus vaccine (IPV) vaccine administered at Month 0.5, Month 1.5, and Month 2.5.	
Reporting group title	Co-administration Group
Reporting group description:	
Participants received 2 doses of PCV-free liquid formulation of GSK's oral live attenuated HRV vaccine co-administered with the first 2 doses of IPV vaccine at Month 0.5 and Month 1.5, followed by the third dose of IPV vaccine administered at Month 2.5.	

Reporting group values	Staggered Group	Co-administration Group	Total
Number of subjects	199	193	392
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)	199	193	392
Children (2-11 years)	0	0	0
Adolescents (12-17 years)	0	0	0
Adults (18-64 years)	0	0	0
From 65-84 years	0	0	0
85 years and over	0	0	0
Sex: Female, Male Units: Participants			
MALE	103	101	204
FEMALE	96	92	188
Race/Ethnicity, Customized Units: Subjects			
ASIAN	199	193	392

End points

End points reporting groups

Reporting group title	Staggered Group
Reporting group description:	
Participants received 2 doses of Porcine circovirus (PCV)-free liquid formulation of GSK's oral live attenuated human rotavirus (HRV) vaccine at Day 1 and Month 1, and 3 doses of Inactivated poliovirus vaccine (IPV) vaccine administered at Month 0.5, Month 1.5, and Month 2.5.	
Reporting group title	Co-administration Group
Reporting group description:	
Participants received 2 doses of PCV-free liquid formulation of GSK's oral live attenuated HRV vaccine co-administered with the first 2 doses of IPV vaccine at Month 0.5 and Month 1.5, followed by the third dose of IPV vaccine administered at Month 2.5.	

Primary: Percentage of participants with seroconversion for anti-poliovirus types 1, 2 and 3 neutralizing antibody (Ab)

End point title	Percentage of participants with seroconversion for anti-poliovirus types 1, 2 and 3 neutralizing antibody (Ab)
End point description:	
Seroconversion for anti-poliovirus types 1, 2 and 3 neutralizing Ab is defined as: - Ab titer greater than or equal to (>=) 1:8 at 1 month after the 3 dose primary vaccination schedule of IPV in participants with Ab titer lower than (<) 1:8 at pre-vaccination, >= 4-fold increase in Ab titer at 1 month after the 3 dose primary vaccination schedule of IPV in participants with Ab titer >= 1:8 at pre-vaccination. Analysis was performed on the per protocol set (PPS) for IPV, comprising participants who adhered to their assigned intervention schedule without conditions affecting immunogenicity or using prohibited treatments. For anti-poliovirus types 1, 2, and 3 at 1 month post-Dose 3, participants must have pre- and post-vaccination immunogenicity data for at least one antigen and adhered to the interval between Dose 3 and blood sample at the specified timepoint.	
End point type	Primary
End point timeframe:	
At Month 3.5 (1 month post-Dose 3 of IPV)	

End point values	Staggered Group	Co-administration Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	125	143		
Units: Percentage of participants				
number (confidence interval 95%)				
anti-poliovirus serotype1	99.2 (95.6 to 100)	99.3 (96.2 to 100)		
anti-poliovirus serotype2	100 (97.1 to 100)	99.3 (96.2 to 100)		
anti-poliovirus serotype3	100 (97.1 to 100)	100 (97.5 to 100)		

Statistical analyses

Statistical analysis title	Between-group analysis

Statistical analysis description:

To demonstrate the immunological non-inferiority of IPV when co-administered with HRV PCV-free compared with IPV administered alone in terms of seroconversion rates 1-month post-Dose 3 of IPV (Month 3.5).

Comparison groups	Staggered Group v Co-administration Group
Number of subjects included in analysis	268
Analysis specification	Pre-specified
Analysis type	
Parameter estimate	Difference in seroconversion rate
Point estimate	0.1
Confidence interval	
level	95 %
sides	2-sided
lower limit	-3.14
upper limit	3.76

Statistical analysis title	Between-group analysis

Statistical analysis description:

To demonstrate the immunological non-inferiority of IPV when co-administered with HRV PCV-free compared with IPV administered alone in terms of seroconversion rates 1-month post-Dose 3 of IPV (Month 3.5).

Comparison groups	Staggered Group v Co-administration Group
Number of subjects included in analysis	268
Analysis specification	Pre-specified
Analysis type	
Parameter estimate	Difference in seroconversion rate
Point estimate	0
Confidence interval	
level	95 %
sides	2-sided
lower limit	-2.63
upper limit	2.99

Statistical analysis title	Between-group analysis

Statistical analysis description:

To demonstrate the immunological non-inferiority of IPV when co-administered with HRV PCV-free compared with IPV administered alone in terms of seroconversion rates 1-month post-Dose 3 of IPV (Month 3.5).

Comparison groups	Staggered Group v Co-administration Group
Number of subjects included in analysis	268
Analysis specification	Pre-specified
Analysis type	
Parameter estimate	Difference in seroconversion rate
Point estimate	-0.7

Confidence interval	
level	95 %
sides	2-sided
lower limit	-3.86
upper limit	2.3

Secondary: Geometric mean titers (GMTs) of anti-poliovirus types 1, 2 and 3 neutralizing Ab

End point title	Geometric mean titers (GMTs) of anti-poliovirus types 1, 2 and 3 neutralizing Ab

End point description:

Analysis was performed on the PPS for IPV. Only participants with data available at the specified timepoints were included in the analysis.

End point type	Secondary

End point timeframe:

At Month 3.5 (1 month post-Dose 3 of IPV)

End point values	Staggered Group	Co-administration Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	125	143		
Units: Titers				
arithmetic mean (confidence interval 95%)				
anti-poliovirus serotype1	1369.71 (1140.65 to 1644.78)	1374.44 (1148.21 to 1645.25)		
anti-poliovirus serotype2	194.95 (168.13 to 226.06)	190.44 (164.90 to 219.94)		
anti-poliovirus serotype3	451.36 (389.37 to 523.23)	450.15 (395.92 to 511.79)		

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants with anti-poliovirus types 1, 2 and 3 neutralizing Ab titers >=1:8 and >=1:64

End point title	Percentage of participants with anti-poliovirus types 1, 2 and 3 neutralizing Ab titers >=1:8 and >=1:64

End point description:

Analysis was performed on the PPS for IPV. Only participants with data available at the specified timepoints were included in the analysis.

End point type	Secondary

End point timeframe:

At Month 3.5 (1 month post-Dose 3 of IPV)

End point values	Staggered Group	Co-administration Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	125	143		
Units: Percentage of participants				
number (confidence interval 95%)				
anti-poliovirus serotype1, Percentage (%) >= 8	100 (97.1 to 100)	100 (97.5 to 100)		
anti-poliovirus serotype1, % >= 64	100 (97.1 to 100)	100 (97.5 to 100)		
anti-poliovirus serotype2, % >= 8	100 (97.1 to 100)	100 (97.5 to 100)		
anti-poliovirus serotype2, % >= 64	91.2 (84.8 to 95.5)	91.6 (85.8 to 95.6)		
anti-poliovirus serotype3, % >= 8	100 (97.1 to 100)	100 (97.5 to 100)		
anti-poliovirus serotype3, % >= 64	98.4 (94.3 to 99.8)	99.3 (96.2 to 100)		

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants with seroconversion for anti-rotavirus (RV) immunoglobulin A (IgA) Ab

End point title	Percentage of participants with seroconversion for anti-rotavirus (RV) immunoglobulin A (IgA) Ab

End point description:

Seroconversion for anti-RV IgA Ab is defined as: anti-RV IgA Ab concentration >= 20 unit per milliliter (U/mL) at 1 month post-Dose 2 of HRV PCV-free vaccine, in participants who were initially seronegative (i.e., with anti-RV IgA Ab concentration < 20 U/mL prior to the first dose of HRV PCV-free vaccine). Analysis was performed on the PPS for RV, comprising participants who adhered to their assigned intervention schedule without conditions affecting immunogenicity or using prohibited treatments. For anti-RV IgA analyses at 1 month post Dose 2 of HRV PCV-free, participants should have pre- and post-vaccination immunogenicity results and should have complied with the interval between HRV Dose 2 and the post HRV PCV-free Dose 2 blood sample at the specified timepoint.

End point type	Secondary

End point timeframe:

At 1 month post-Dose 2 of HRV PCV-free vaccine (Month 2 for Staggered Group and Month 2.5 for Co-administration Group)

End point values	Staggered Group	Co-administration Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	130	146		
Units: Percentage of participants				
number (confidence interval 95%)	78.5 (70.4 to 85.2)	90.4 (84.4 to 94.7)		

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants with anti-RV IgA Ab concentrations >= 90 U/mL

End point title	Percentage of participants with anti-RV IgA Ab concentrations >= 90 U/mL

End point description:

Analysis was performed on the PPS for RV. Only participants with data available at the specified timepoints were included in the analysis.

End point type	Secondary

End point timeframe:

At 1 month post-Dose 2 of HRV PCV-free vaccine (Month 2 for Staggered Group and Month 2.5 for Co-administration Group)

End point values	Staggered Group	Co-administration Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	130	146		
Units: Percentage of participants				
number (confidence interval 95%)	63.8 (55.0 to 72.1)	68.5 (60.3 to 75.9)		

Statistical analyses

No statistical analyses for this end point

Secondary: Geometric mean concentrations (GMCs) of Anti-RV IgA Ab

End point title	Geometric mean concentrations (GMCs) of Anti-RV IgA Ab

End point description:

Analysis was performed on the PPS for RV. Only participants with data available at the specified timepoints were included in the analysis.

End point type	Secondary

End point timeframe:

At 1 month post-Dose 2 of HRV PCV-free vaccine (Month 2 for Staggered Group and Month 2.5 for Co-administration Group)

End point values	Staggered Group	Co-administration Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	130	146		
Units: U/mL				
arithmetic mean (confidence interval 95%)	160.59 (114.49 to 225.25)	222.15 (165.98 to 297.34)		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of participants reporting any solicited systemic events

End point title	Number of participants reporting any solicited systemic events

End point description:

Solicited systemic events include cough/runny nose, diarrhoea, fever (pyrexia), irritability/fussiness, loss of appetite and vomiting. Fever is defined as body temperature >= 37.5 degrees Celsius (°C) and the preferred location for measuring temperature is the axilla. Any = occurrence of the event regardless of intensity grade or relation to the study vaccination. Analysis was performed on the Exposed set, which includes all participants who received at least one dose of any of the 2 study interventions and for whom solicited systemic events data were available after the corresponding vaccination for the specified timepoint.

End point type	Secondary

End point timeframe:

Within 14 days after Dose 1 & 2: HRV PCV-free vaccine administered at Day 1 & Month 1 (Staggered group) and at Month 0.5 & Month 1.5 (Co-administration group); IPV administered at Month 0.5 & Month 1.5 (Staggered and Co-administration group)

End point values	Staggered Group	Co-administration Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	197	193		
Units: Participants				
Cough, post vaccination at Day 1	21	0		
Cough, post vaccination at Month 0.5	28	27		
Cough, post vaccination at Month 1	27	0		
Cough, post vaccination at Month 1.5	23	22		
Diarrhea, post vaccination at Day 1	8	0		
Diarrhea, post vaccination at Month 0.5	10	9		
Diarrhea, post vaccination at Month 1	11	0		
Diarrhea, post vaccination at Month 1.5	7	12		
Fever, post vaccination at Day 1	15	0		
Fever, post vaccination at Month 0.5	46	23		
Fever, post vaccination at Month 1	33	0		

Fever, post vaccination at Month 1.5	25	21		
Irritability, post vaccination at Day 1	15	0		
Irritability, post vaccination at Month 0.5	11	19		
Irritability, post vaccination at Month 1	6	0		
Irritability, post vaccination at Month 1.5	6	7		
Loss of appetite, post vaccination at Day 1	14	0		
Loss of appetite, post vaccination at Month 0.5	10	20		
Loss of appetite, post vaccination at Month 1	5	0		
Loss of appetite, post vaccination at Month 1.5	5	4		
Vomiting, post vaccination at Day 1	12	0		
Vomiting, post vaccination at Month 0.5	6	18		
Vomiting, post vaccination at Month 1	6	0		
Vomiting, post vaccination at Month 1.5	1	7		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of participants reporting any unsolicited adverse events (AEs)

End point title	Number of participants reporting any unsolicited adverse events (AEs)

End point description:

Unsolicited AEs include any AE reported in addition to those solicited during the clinical study. Also, any 'solicited' symptom with onset outside the specified period of follow-up for solicited symptoms is reported as an unsolicited adverse event. Any = occurrence the event regardless of intensity grade or relation to the study vaccination. Analysis was performed on the Exposed set, which includes all participants who received at least one dose of any of the 2 study interventions and for whom unsolicited AEs data were available after the corresponding vaccination for the specified timepoint.

End point type	Secondary

End point timeframe:

Within 31 days after each dose of HRV PCV-free vaccine (administered at Day 1 and Month 1 for Staggered Group and at Month 0.5 and Month 1.5 for Co-administration group)

End point values	Staggered Group	Co-administration Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	199	193		
Units: Participants				
HRV PCV-free: post-Dose 1	38	45		
HRV PCV-free: post-Dose 2	39	34		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of participants reporting any serious adverse events (SAEs)

End point title	Number of participants reporting any serious adverse events (SAEs)

End point description:

An SAE is any untoward medical occurrence that results in death, is life-threatening, requires hospitalization or prolongation of existing hospitalization or results in disability/incapacity or in other situations that are considered serious per medical or scientific judgment. Any = occurrence the event regardless of intensity grade or relation to the study vaccination. Analysis was performed on the Exposed set, which includes all participants who received at least one dose of any of the 2 study interventions and for whom SAE data were available after the corresponding vaccinations for the specified duration.

End point type	Secondary

End point timeframe:

From the first dose of the study intervention (Day 1 for Staggered group and Month 0.5 for Co-administration group) up to study end (Month 3.5)

End point values	Staggered Group	Co-administration Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	199	193		
Units: Participants	30	30		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Solicited AEs: From Day 1 to Day 14 after any vaccination and unsolicited AEs: Day 1 to Day 31 after any vaccination. All-cause mortality and SAEs were collected throughout the study period (From Day 1 to Month 3.5).

Adverse event reporting additional description:

SAEs, solicited AEs and unsolicited AEs were reported for the Exposed set.

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	v27.1

Reporting groups

Reporting group title	Co-administration Group

Reporting group description:

Participants received 2 doses of PCV-free liquid formulation of GSK's oral live attenuated HRV vaccine co-administered with the first 2 doses of IPV vaccine at Month 0.5 and Month 1.5, followed by the third dose of IPV vaccine administered at Month 2.5.

Reporting group title	Staggered Group

Reporting group description:

Participants received 2 doses of Porcine circovirus (PCV)-free liquid formulation of GSK's oral live attenuated human rotavirus (HRV) vaccine at Day 1 and Month 1, and 3 doses of Inactivated poliovirus vaccine (IPV) vaccine administered at Month 0.5, Month 1.5, and Month 2.5.

Serious adverse events	Co-administration Group	Staggered Group	
Total subjects affected by serious adverse events			
subjects affected / exposed	30 / 193 (15.54%)	30 / 199 (15.08%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
Cardiac disorders			
Myocardial injury			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cardiac failure acute			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Blood and lymphatic system disorders			
Secondary thrombocytosis			

subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastrointestinal disorders			
Functional gastrointestinal disorder			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Enteritis			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Diarrhoea			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Renal and urinary disorders			
Pelvi-ureteric obstruction			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Pneumonia			
subjects affected / exposed	16 / 193 (8.29%)	17 / 199 (8.54%)	
occurrences causally related to treatment / all	0 / 17	0 / 17	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pharyngitis			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Exanthema subitum			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

Pneumonia mycoplasmal			
subjects affected / exposed	0 / 193 (0.00%)	2 / 199 (1.01%)	
occurrences causally related to treatment / all	0 / 0	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Febrile infection			
subjects affected / exposed	5 / 193 (2.59%)	4 / 199 (2.01%)	
occurrences causally related to treatment / all	0 / 5	0 / 4	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pertussis			
subjects affected / exposed	2 / 193 (1.04%)	0 / 199 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Laryngitis			
subjects affected / exposed	0 / 193 (0.00%)	3 / 199 (1.51%)	
occurrences causally related to treatment / all	0 / 0	0 / 3	
deaths causally related to treatment / all	0 / 0	0 / 0	
Bronchitis			
subjects affected / exposed	1 / 193 (0.52%)	2 / 199 (1.01%)	
occurrences causally related to treatment / all	0 / 1	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Upper respiratory tract infection			
subjects affected / exposed	2 / 193 (1.04%)	3 / 199 (1.51%)	
occurrences causally related to treatment / all	0 / 2	0 / 3	
deaths causally related to treatment / all	0 / 0	0 / 0	
COVID-19			
subjects affected / exposed	1 / 193 (0.52%)	1 / 199 (0.50%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Urosepsis			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonia bacterial			

subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Bacterial infection			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Sepsis			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonia escherichia			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (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: 0 %

Non-serious adverse events	Co-administration Group	Staggered Group	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	129 / 193 (66.84%)	141 / 199 (70.85%)	
General disorders and administration site conditions			
Pyrexia			
subjects affected / exposed	48 / 193 (24.87%)	66 / 199 (33.17%)	
occurrences (all)	49	74	
Reproductive system and breast disorders			
Testicular swelling			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	11 / 193 (5.70%)	4 / 199 (2.01%)	
occurrences (all)	11	4	
Rhinorrhoea			

subjects affected / exposed	7 / 193 (3.63%)	3 / 199 (1.51%)	
occurrences (all)	7	3	
Nasal obstruction			
subjects affected / exposed	2 / 193 (1.04%)	5 / 199 (2.51%)	
occurrences (all)	2	6	
Nasal congestion			
subjects affected / exposed	2 / 193 (1.04%)	1 / 199 (0.50%)	
occurrences (all)	2	1	
Asthma			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Productive cough			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Dyspnoea			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	1	
Increased upper airway secretion			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	1	
Investigations			
Myocardial necrosis marker increased			
subjects affected / exposed	3 / 193 (1.55%)	1 / 199 (0.50%)	
occurrences (all)	3	1	
Injury, poisoning and procedural complications			
Head injury			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Arthropod bite			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	1	
Cardiac disorders			
Myocardial injury			
subjects affected / exposed	2 / 193 (1.04%)	2 / 199 (1.01%)	
occurrences (all)	2	2	
Blood and lymphatic system disorders			

Anaemia			
subjects affected / exposed	1 / 193 (0.52%)	2 / 199 (1.01%)	
occurrences (all)	1	2	
Eosinophilia			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Coagulopathy			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	1	
Gastrointestinal disorders			
Diarrhoea			
subjects affected / exposed	6 / 193 (3.11%)	1 / 199 (0.50%)	
occurrences (all)	6	1	
Constipation			
subjects affected / exposed	7 / 193 (3.63%)	6 / 199 (3.02%)	
occurrences (all)	7	7	
Dyspepsia			
subjects affected / exposed	2 / 193 (1.04%)	1 / 199 (0.50%)	
occurrences (all)	2	2	
Abdominal distension			
subjects affected / exposed	1 / 193 (0.52%)	1 / 199 (0.50%)	
occurrences (all)	1	1	
Functional gastrointestinal disorder			
subjects affected / exposed	1 / 193 (0.52%)	1 / 199 (0.50%)	
occurrences (all)	1	1	
Enteritis			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Intestinal obstruction			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Colitis			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	1	
Hepatobiliary disorders			

Liver injury			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Skin and subcutaneous tissue disorders			
Rash			
subjects affected / exposed	3 / 193 (1.55%)	6 / 199 (3.02%)	
occurrences (all)	3	6	
Eczema			
subjects affected / exposed	2 / 193 (1.04%)	7 / 199 (3.52%)	
occurrences (all)	2	9	
Dermatitis allergic			
subjects affected / exposed	0 / 193 (0.00%)	2 / 199 (1.01%)	
occurrences (all)	0	2	
Eczema infantile			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	1	
Rash papular			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	1	
Renal and urinary disorders			
Ureteric dilatation			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Nephrolithiasis			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Infections and infestations			
Upper respiratory tract infection			
subjects affected / exposed	9 / 193 (4.66%)	7 / 199 (3.52%)	
occurrences (all)	9	8	
Respiratory tract infection			
subjects affected / exposed	29 / 193 (15.03%)	51 / 199 (25.63%)	
occurrences (all)	30	62	
Pharyngitis			
subjects affected / exposed	2 / 193 (1.04%)	6 / 199 (3.02%)	
occurrences (all)	2	6	
Oral candidiasis			

subjects affected / exposed	1 / 193 (0.52%)	2 / 199 (1.01%)	
occurrences (all)	1	2	
Gastroenteritis			
subjects affected / exposed	0 / 193 (0.00%)	2 / 199 (1.01%)	
occurrences (all)	0	2	
Candida infection			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Gastrointestinal infection			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Bacterial infection			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	1	
Conjunctivitis			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	1	
Conjunctivitis viral			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	1	
Herpes simplex			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	1	
Pneumonia			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	1	
Bronchitis			
subjects affected / exposed	1 / 193 (0.52%)	4 / 199 (2.01%)	
occurrences (all)	1	4	
Nasopharyngitis			
subjects affected / exposed	2 / 193 (1.04%)	4 / 199 (2.01%)	
occurrences (all)	2	4	
Metabolism and nutrition disorders			
Hyponatraemia			
subjects affected / exposed	0 / 193 (0.00%)	2 / 199 (1.01%)	
occurrences (all)	0	2	

Electrolyte imbalance			
subjects affected / exposed	0 / 193 (0.00%)	2 / 199 (1.01%)	
occurrences (all)	0	2	
Decreased appetite			
subjects affected / exposed	2 / 193 (1.04%)	0 / 199 (0.00%)	
occurrences (all)	2	0	
Hypercalcaemia			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Hyperkalaemia			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Lactose intolerance			
subjects affected / exposed	1 / 193 (0.52%)	0 / 199 (0.00%)	
occurrences (all)	1	0	
Lactic acidosis			
subjects affected / exposed	0 / 193 (0.00%)	1 / 199 (0.50%)	
occurrences (all)	0	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