Clinical trial results:
A Phase 3, observer-blind, randomized, placebo-controlled study to evaluate the non-inferiority of the immune response and safety of the RSVPreF3 OA investigational vaccine in adults 50-59 years of age, including adults at increased risk of respiratory syncytial virus lower respiratory tract disease, compared to older adults >=60 years of age

Summary

EudraCT number	2022-001981-36
Trial protocol	DE ES NL PL
Global end of trial date	12 February 2024

Results information

Result version number	v2 (current)
This version publication date	27 February 2025
First version publication date	26 June 2024
Version creation reason	

Trial information

Trial identification

Sponsor protocol code	219238

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	GlaxoSmithKline
Sponsor organisation address	Rue de l'Institut 89, Rixensart, Belgium, B-1330
Public contact	GSK Response Center, GlaxoSmithKline, 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?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	13 March 2023
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	12 February 2024
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

• To demonstrate the non-inferiority (NI) of the humoral immune response in healthy participants 50-59 years of age (YOA) compared to OA (>=60 YOA) for the RSV-A strain after RSVPreF3 OA investigational vaccine administration.
• To demonstrate the NI of the humoral immune response in healthy participants 50-59 YOA compared to OA for the RSV-B strain after RSVPreF3 OA investigational vaccine administration.
• To demonstrate the NI of the humoral immune response in participants 50-59 YOA at increased risk of RSV-LRTD compared to OA for the RSV-A strain after RSVPreF3 OA investigational vaccine administration.
• To demonstrate the NI of the humoral immune response in participants 50-59 YOA at increased risk of RSV-LRTD compared to OA for the RSV-B strain after RSVPreF3 OA investigational vaccine administration.

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 or syncope.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	28 October 2022
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	Argentina: 179
Country: Number of subjects enrolled	Canada: 223
Country: Number of subjects enrolled	Germany: 248
Country: Number of subjects enrolled	Japan: 152
Country: Number of subjects enrolled	Netherlands: 39
Country: Number of subjects enrolled	Poland: 144
Country: Number of subjects enrolled	Spain: 199
Country: Number of subjects enrolled	United States: 360
Worldwide total number of subjects	1544
EEA total number of subjects	630

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)	1273
From 65 to 84 years	264
85 years and over	7

Subject disposition

Recruitment

Recruitment details:

Out of 1544 participants enrolled in this study, 1534 participants received at least one study intervention, from which 1 participant in OA-RSV group received placebo instead of RSVPreF3 OA vaccine and was excluded from the group. Therefore, the Exposed set included 1533 participants.

Pre-assignment

Screening details:

The exposed set included 1533 participants.

Period 1

Period 1 title	Overall Study (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Monitor, Carer, Data analyst, Assessor

Arms

Are arms mutually exclusive?	Yes
Arm title	Adults HA-RSV Group

Arm description:

Healthy adults or adults with chronic stable conditions with or without treatment that do not lead to an increased risk of RSV-Lower respiratory tract disease (RSV-LRTD), aged 50-59 years old received 1 dose of RSVPreF3 OA vaccine at Day 1 and were followed until study end.

Arm type	Experimental
Investigational medicinal product name	RSVPreF3 OA vaccine
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Powder for suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

One 0.5mL dose administered at Day 1 in the deltoid of the non-dominant arm.

Arm title	Adults HA-Placebo Group

Arm description:

Healthy adults or adults with chronic stable conditions with or without treatment that do not lead to an increased risk of RSV-LRTD, aged 50-59 years old received 1 dose of placebo at Day 1 and were followed until study end.

Arm type	Placebo
Investigational medicinal product name	Sodium chloride (NaCl)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

One dose of approximately 0.7 mL of NaCl solution administered at Day 1 in the deltoid of the non-dominant arm.

Arm title	Adults AIR-RSV Group

Arm description:

Adults at increased risk of RSV-Lower respiratory tract disease (RSV-LRTD) aged 50-59 years old received 1 dose of RSVPreF3 OA vaccine at Day 1 and were followed until study end.

Arm type	Experimental

Investigational medicinal product name	RSVPreF3 OA vaccine
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Powder for suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

One 0.5mL dose administered at Day 1 in the deltoid of the non-dominant arm.

Arm title	Adults AIR-Placebo Group

Arm description:

Adults at increased risk of RSV-LRTD aged 50-59 years old received 1 dose of placebo at Day 1 and were followed until study end.

Arm type	Placebo
Investigational medicinal product name	Sodium chloride (NaCl)
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

One dose of approximately 0.7 mL of NaCl solution administered at Day 1 in the deltoid of the non-dominant arm.

Arm title	OA-RSV Group

Arm description:

Older adults aged 60 years old and above received 1 dose of RSVPreF3 OA vaccine at Day 1 and were followed until study end.

Arm type	Experimental
Investigational medicinal product name	RSVPreF3 OA vaccine
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Powder for suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

One 0.5mL dose administered at Day 1 in the deltoid of the non-dominant arm.

Number of subjects in period 1[1]	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group
Started	383	192	386
Completed	363	184	369
Not completed	20	8	17
Migrated / moved from the study area	1	1	-
Not specified	2	-	2
Lost to follow-up	13	1	7
Consent withdrawal, not due to a (S)AE	4	6	4
Adverse event requiring expedited reporting	-	-	4

Number of subjects in period 1[1]	Adults AIR-Placebo Group	OA-RSV Group

Started	191	381
Completed	180	369
Not completed	11	12
Migrated / moved from the study area	3	1
Not specified	2	-
Lost to follow-up	3	4
Consent withdrawal, not due to a (S)AE	2	7
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: The baseline period is reporting the number of participants included in the Exposed set, the worldwide number of participants is reporting the number of participants included in the Enrolled set.

Baseline characteristics

Reporting groups	
Reporting group title	Adults HA-RSV Group
Reporting group description:	
Healthy adults or adults with chronic stable conditions with or without treatment that do not lead to an increased risk of RSV-Lower respiratory tract disease (RSV-LRTD), aged 50-59 years old received 1 dose of RSVPreF3 OA vaccine at Day 1 and were followed until study end.	
Reporting group title	Adults HA-Placebo Group
Reporting group description:	
Healthy adults or adults with chronic stable conditions with or without treatment that do not lead to an increased risk of RSV-LRTD, aged 50-59 years old received 1 dose of placebo at Day 1 and were followed until study end.	
Reporting group title	Adults AIR-RSV Group
Reporting group description:	
Adults at increased risk of RSV-Lower respiratory tract disease (RSV-LRTD) aged 50-59 years old received 1 dose of RSVPreF3 OA vaccine at Day 1 and were followed until study end.	
Reporting group title	Adults AIR-Placebo Group
Reporting group description:	
Adults at increased risk of RSV-LRTD aged 50-59 years old received 1 dose of placebo at Day 1 and were followed until study end.	
Reporting group title	OA-RSV Group
Reporting group description:	
Older adults aged 60 years old and above received 1 dose of RSVPreF3 OA vaccine at Day 1 and were followed until study end.	

Reporting group values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group
Number of subjects	383	192	386
Age categorical Units: Subjects			
Adults (50-59 years)	383	192	386
Adults (60-69 years)	0	0	0
Adults (70-70 years)	0	0	0
80 years and above	0	0	0
Age continuous Units: years			
median	54.8	54.7	55.3
standard deviation	± 2.8	± 2.8	± 2.8
Sex: Female, Male Units: Participants			
MALE	162	73	200
FEMALE	221	119	186
Race/Ethnicity, Customized Units: Subjects			
Hispanic or Latino	48	23	63
Not Hispanic or Latino	335	168	323
Unknown	0	1	0
Age, Continuous Units: YEARS			
arithmetic mean	54.8	54.7	55.3
standard deviation	± 2.8	± 2.8	± 2.8

Reporting group values	Adults AIR-Placebo Group	OA-RSV Group	Total
Number of subjects	191	381	1533
Age categorical Units: Subjects			
Adults (50-59 years)	191	0	1152
Adults (60-69 years)	0	202	202
Adults (70-70 years)	0	130	130
80 years and above	0	49	49
Age continuous Units: years			
median	55.6	69.5	
standard deviation	± 2.8	± 6.9	-
Sex: Female, Male Units: Participants			
MALE	106	193	734
FEMALE	85	188	799
Race/Ethnicity, Customized Units: Subjects			
Hispanic or Latino	35	50	219
Not Hispanic or Latino	156	330	1312
Unknown	0	1	2
Age, Continuous Units: YEARS			
arithmetic mean	55.6	64.1	
standard deviation	± 2.8	± 2.9	-

End points

End points reporting groups

Reporting group title	Adults HA-RSV Group

Reporting group description:

Healthy adults or adults with chronic stable conditions with or without treatment that do not lead to an increased risk of RSV-Lower respiratory tract disease (RSV-LRTD), aged 50-59 years old received 1 dose of RSVPreF3 OA vaccine at Day 1 and were followed until study end.

Reporting group title	Adults HA-Placebo Group

Reporting group description:

Healthy adults or adults with chronic stable conditions with or without treatment that do not lead to an increased risk of RSV-LRTD, aged 50-59 years old received 1 dose of placebo at Day 1 and were followed until study end.

Reporting group title	Adults AIR-RSV Group

Reporting group description:

Adults at increased risk of RSV-Lower respiratory tract disease (RSV-LRTD) aged 50-59 years old received 1 dose of RSVPreF3 OA vaccine at Day 1 and were followed until study end.

Reporting group title	Adults AIR-Placebo Group

Reporting group description:

Adults at increased risk of RSV-LRTD aged 50-59 years old received 1 dose of placebo at Day 1 and were followed until study end.

Reporting group title	OA-RSV Group

Reporting group description:

Older adults aged 60 years old and above received 1 dose of RSVPreF3 OA vaccine at Day 1 and were followed until study end.

Primary: RSV-A neutralization titers expressed as group geometric mean titer (GMT) in healthy participants compared to OA-RSV Group

End point title	RSV-A neutralization titers expressed as group geometric mean titer (GMT) in healthy participants compared to OA-RSV Group[1]

End point description:

Serological assays for the determination of antibodies against RSV-A were performed by neutralization assay. The corresponding antibody titers were expressed in Estimated Dilution 60 (ED60) and were measured on blood samples collected from vaccinated subjects. The ANCOVA model used to calculate the adjusted GMTs for RSV-A neutralizing antibodies included the baseline value as covariate (i.e. GMTs are adjusted for the PRE timepoint values) and only included Adult HA-RSV and OA-RSV groups in the model as fixed effect, as specified in Statistical Analysis Plan. Analysis was performed on the per protocol set (PPS) for humoral analysis which included all eligible participants who received the study intervention as per protocol, had RSV-A immunogenicity results pre- and post-dose, complied with blood draw intervals, without intercurrent conditions that may interfere with immunogenicity and without prohibited concomitant medication/vaccination.

End point type	Primary

End point timeframe:

At 1 month after the RSVPreF3 OA vaccine administration (Day 31)

Notes:

[1] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: The purpose of this endpoint was to present analysis only for Adults HA-RSV Group compared to OA-RSV Group.

End point values	Adults HA-RSV Group	OA-RSV Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	326	343		
Units: Titer				
geometric mean (confidence interval 95%)	7906.0 (7178.1 to 8707.7)	7518.9 (6843.2 to 8261.3)		

Statistical analyses

Statistical analysis title	RSV-A ratio in OA-RSV over Adults-HA-RSV groups

Statistical analysis description:

To demonstrate the non-inferiority of the RSVPreF3 OA vaccine when administered to healthy adults aged 50-59 years of age compared with older adults aged 60 years of age or above.

Comparison groups	Adults HA-RSV Group v OA-RSV Group
Number of subjects included in analysis	669
Analysis specification	Pre-specified
Analysis type	
Parameter estimate	GMT Ratio
Point estimate	0.95
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.83
upper limit	1.09

Primary: RSV-A neutralization titers expressed as group seroresponse rate (SRR) difference in healthy participants compared to OA-RSV group

End point title	RSV-A neutralization titers expressed as group seroresponse rate (SRR) difference in healthy participants compared to OA-RSV group[2]

End point description:

The SRR is defined as the proportion of participants having a fold increase in neutralization titers (1 month post-study intervention administration over pre-study intervention administration) greater than or equal to 4 (>=4). Analysis was performed on PPS for humoral analysis. Analysis per group is based on the administered intervention.

End point type	Primary

End point timeframe:

At 1 month after the RSVPreF3 OA investigational vaccine administration (Day 31) compared to baseline (Day 1)

Notes:

[2] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: The purpose of this endpoint was to present analysis only for Adults HA-RSV Group compared to OA-RSV Group.

End point values	Adults HA-RSV Group	OA-RSV Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	270	275		
Units: Percentage of participants				
number (confidence interval 95%)	82.8 (78.3 to 86.8)	80.2 (75.6 to 84.3)		

Statistical analyses

Statistical analysis title	SRR ratio in OA-RSV minus Adults-HA-RSV groups

Statistical analysis description:

To demonstrate the non-inferiority of the RSVPreF3 OA vaccine when administered to healthy adults aged 50-59 years of age compared with older adults aged 60 years of age or above.

Comparison groups	Adults HA-RSV Group v OA-RSV Group
Number of subjects included in analysis	545
Analysis specification	Pre-specified
Analysis type	
Parameter estimate	Difference in percentage
Point estimate	-2.65
Confidence interval	
level	95 %
sides	2-sided
lower limit	-8.54
upper limit	3.28

Primary: RSV-B neutralization titers expressed as group GMT in healthy participants compared to OA-RSV Group

End point title	RSV-B neutralization titers expressed as group GMT in healthy participants compared to OA-RSV Group[3]

End point description:

Serological assays for the determination of antibodies against RSV-B were performed by neutralization assay. The corresponding antibody titers were expressed in ED60. The ANCOVA model used to calculate the adjusted GMTs for RSV-B neutralizing antibodies included the baseline value as covariate (i.e. GMTs are adjusted for the PRE timepoint values) and only included Adult HA-RSV and OA-RSV groups in the model as fixed effect, as specified in Statistical Analysis Plan. Analysis was performed on PPS for humoral analysis. Analysis per group is based on the administered intervention.

End point type	Primary

End point timeframe:

At 1 month after the RSVPreF3 OA vaccine administration (Day 31)

Notes:

[3] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: The purpose of this endpoint was to present analysis only for Adults HA-RSV Group compared to OA-RSV Group.

End point values	Adults HA-RSV Group	OA-RSV Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	326	342		
Units: Titer				
geometric mean (confidence interval 95%)	9024.8 (8240.8 to 9883.3)	8070.3 (7385.2 to 8819.1)		

Statistical analyses

Statistical analysis title	RSV-B ratio in OA-RSV over Adults-HA-RSV groups

Statistical analysis description:

To demonstrate the non-inferiority of the RSVPreF3 OA vaccine when administered to healthy adults aged 50-59 years of age compared with older adults aged 60 years of age or above.

Comparison groups	Adults HA-RSV Group v OA-RSV Group
Number of subjects included in analysis	668
Analysis specification	Pre-specified
Analysis type	
Parameter estimate	GMT Ratio
Point estimate	0.89
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.79
upper limit	1.02

Primary: RSV-B neutralization titers expressed as group SRR in healthy participants compared to OA-RSV Group

End point title	RSV-B neutralization titers expressed as group SRR in healthy participants compared to OA-RSV Group[4]

End point description:

The SRR is defined as the proportion of participants having a fold increase in neutralization titers (1 month post-study intervention administration over pre-study intervention administration) >=4. Analysis was performed on PPS for humoral analysis. Analysis per group is based on the administered intervention.

End point type	Primary

End point timeframe:

At 1 month after the RSVPreF3 OA vaccine administration (Day 31) compared to baseline (Day 1)

Notes:

[4] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: The purpose of this endpoint was to present analysis only for Adults HA-RSV Group compared to OA-RSV Group.

End point values	Adults HA-RSV Group	OA-RSV Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	255	254		
Units: Percentage of participants				
number (confidence interval 95%)	78.2 (73.3 to 82.6)	74.3 (69.3 to 78.8)		

Statistical analyses

Statistical analysis title	SRR ratio in OA-RSV minus Adults-HA-RSV groups

Statistical analysis description:

To demonstrate the non-inferiority of the RSVPreF3 OA vaccine when administered to healthy adults aged 50-59 years of age compared with older adults aged 60 years of age or above.

Comparison groups	Adults HA-RSV Group v OA-RSV Group
Number of subjects included in analysis	509
Analysis specification	Pre-specified
Analysis type	
Parameter estimate	Difference in percentage
Point estimate	-3.95
Confidence interval	
level	95 %
sides	2-sided
lower limit	-10.39
upper limit	2.53

Primary: RSV-A neutralization titers expressed as group GMT titer in participants at increased risk of RSV-LRTD (Adults-AIR-RSV group) compared to OA-RSV group

End point title	RSV-A neutralization titers expressed as group GMT titer in participants at increased risk of RSV-LRTD (Adults-AIR-RSV group) compared to OA-RSV group[5]

End point description:

Serological assays for the determination of antibodies against RSV-A are performed by neutralization assay. The corresponding antibody titers were expressed in ED60. The ANCOVA model used to calculate the adjusted GMTs for RSV-A neutralizing antibodies included the baseline value as covariate (i.e. GMTs are adjusted for the PRE timepoint values) and only included Adult AIR-RSV and OA-RSV groups in the model as fixed effect, as specified in Statistical Analysis Plan. Analysis was performed on PPS for humoral analysis. Analysis per group is based on the administered intervention.

End point type	Primary

End point timeframe:

At 1 month after the RSVPreF3 OA investigational vaccine administration (Day 31)

Notes:

[5] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: The purpose of this endpoint was to present analysis only for Adults-AIR-RSV Group compared to OA-RSV Group.

End point values	Adults AIR-RSV Group	OA-RSV Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	342	343		
Units: Titer				
geometric mean (confidence interval 95%)	8925.1 (8117.9 to 9812.6)	7460.7 (6786.8 to 8201.5)		

Statistical analyses

Statistical analysis title	RSV-A ratio in OA-RSV over Adults-AIR-RSV groups

Statistical analysis description:

To demonstrate the non-inferiority of the RSVPreF3 OA vaccine when administered to adults at increased risk of RSV-LRTD aged 50-59 years of age compared with older adults aged 60 years of age or above.

Comparison groups	Adults AIR-RSV Group v OA-RSV Group
Number of subjects included in analysis	685
Analysis specification	Pre-specified
Analysis type	
Parameter estimate	GMT Ratio
Point estimate	0.84
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.73
upper limit	0.96

Primary: RSV-A neutralization titers expressed as group SRR in participants at increased risk of RSV-LRTD (Adults-AIR-RSV group) compared to OA-RSV group

End point title	RSV-A neutralization titers expressed as group SRR in participants at increased risk of RSV-LRTD (Adults-AIR-RSV group) compared to OA-RSV group[6]

End point description:

The SRR is defined as the proportion of participants having a fold increase in neutralization titers (1 month post-study intervention administration over pre-study intervention administration) >=4. Analysis was performed on PPS for humoral analysis. Analysis per group is based on the administered intervention.

End point type	Primary

End point timeframe:

At 1 month after the RSVPreF3 OA vaccine administration (Day 31) compared to baseline (Day 1)

Notes:

[6] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: The purpose of this endpoint was to present analysis only for Adults-AIR-RSV Group compared to OA-RSV Group.

End point values	Adults AIR-RSV Group	OA-RSV Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	297	275		
Units: Percentage of participants				
number (confidence interval 95%)	86.8 (82.8 to 90.2)	80.2 (75.6 to 84.3)		

Statistical analyses

Statistical analysis title	SRR ratio in OA-RSV minus Adults-AIR-RSV groups

Statistical analysis description:

To demonstrate the non-inferiority of the RSVPreF3 OA vaccine when administered to adults at increased risk of RSV-LRTD aged 50-59 years of age compared with older adults aged 60 years of age or above.

Comparison groups	Adults AIR-RSV Group v OA-RSV Group
Number of subjects included in analysis	572
Analysis specification	Pre-specified
Analysis type	
Parameter estimate	Difference in percentage
Point estimate	-6.67
Confidence interval	
level	95 %
sides	2-sided
lower limit	-12.26
upper limit	-1.12

Primary: RSV-B neutralization titers expressed as group GMT in participants at increased risk of RSV-LRTD (Adults-AIR-RSV group) compared to OA-RSV group

End point title	RSV-B neutralization titers expressed as group GMT in participants at increased risk of RSV-LRTD (Adults-AIR-RSV group) compared to OA-RSV group[7]

End point description:

Serological assays for the determination of antibodies against RSV-B are performed by neutralization assay. The corresponding antibody titers were expressed in ED60. The ANCOVA model used to calculate the adjusted GMTs for RSV-B neutralizing antibodies included the baseline value as covariate (i.e. GMTs are adjusted for the PRE timepoint values) and only included Adult AIR-RSV and OA-RSV groups in the model as fixed effect, as specified in Statistical Analysis Plan. Analysis was performed on PPS for humoral analysis. Analysis per group is based on the administered intervention.

End point type	Primary

End point timeframe:

At 1 month after the RSVPreF3 OA vaccine administration (Day 31)

Notes:

[7] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: The purpose of this endpoint was to present analysis only for Adults-AIR-RSV Group compared to OA-RSV Group.

End point values	Adults AIR-RSV Group	OA-RSV Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	342	342		
Units: Titer				
geometric mean (confidence interval 95%)	10048.6 (9218.4 to 10953.5)	8073.4 (7406.4 to 8800.4)		

Statistical analyses

Statistical analysis title	RSV-B ratio in OA-RSV over Adults AIR-RSV groups

Statistical analysis description:

To demonstrate the non-inferiority of the RSVPreF3 OA vaccine when administered to adults at increased risk of RSV-LRTD aged 50-59 years of age compared with older adults aged 60 years of age or above.

Comparison groups	Adults AIR-RSV Group v OA-RSV Group
Number of subjects included in analysis	684
Analysis specification	Pre-specified
Analysis type	
Parameter estimate	GMT Ratio
Point estimate	0.8
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.71
upper limit	0.91

Primary: RSV-B neutralization titers expressed as group SRR in participants at increased risk of RSV-LRTD (Adults-AIR-RSV group) compared to OA-RSV group

End point title	RSV-B neutralization titers expressed as group SRR in participants at increased risk of RSV-LRTD (Adults-AIR-RSV group) compared to OA-RSV group[8]

End point description:

The SRR is defined as the proportion of participants having a fold increase in neutralization titers (1 month post-study intervention administration over pre-study intervention administration) >=4. Analysis was performed on PPS for humoral analysis. Analysis per group is based on the administered intervention.

End point type	Primary

End point timeframe:

At 1 month after the RSVPreF3 OA investigational vaccine administration (Day 31) compared to baseline (Day 1)

Notes:

[8] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: The purpose of this endpoint was to present analysis only for Adults-AIR-RSV Group compared to OA-RSV Group.

End point values	Adults AIR-RSV Group	OA-RSV Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	279	254		
Units: Percentage of participants				
number (confidence interval 95%)	81.6 (77.1 to 85.5)	74.3 (69.3 to 78.8)		

Statistical analyses

Statistical analysis title	SRR ratio in OA-RSV minus Adults AIR-RSV groups

Statistical analysis description:

To demonstrate the non-inferiority of the RSVPreF3 OA vaccine when administered to adults at increased risk of RSV-LRTD aged 50-59 years of age compared with older adults aged 60 years of age or above.

Comparison groups	Adults AIR-RSV Group v OA-RSV Group
Number of subjects included in analysis	533
Analysis specification	Pre-specified
Analysis type	
Parameter estimate	Difference in percentage
Point estimate	-7.31
Confidence interval	
level	95 %
sides	2-sided
lower limit	-13.52
upper limit	-1.09

Secondary: Percentage of participants reporting each solicited administration site event (pain, redness and swelling)

End point title	Percentage of participants reporting each solicited administration site event (pain, redness and swelling)

End point description:

Assessed solicited administration site events were pain, erythema and swelling. Any = occurrence of the symptom regardless of intensity grade. Any erythema and swelling symptom = symptom reported with a surface diameter greater than 0 millimeters. Analysis was based on the Exposed Set (ES), which included all participants who received the study intervention and had data for solicited administration site events analysis at the assessed timeframe.

End point type	Secondary

End point timeframe:

During the 4-day follow up period after vaccination (vaccine or placebo administered on Day 1)

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	377	191	379	189
Units: Percentage of participants				
number (confidence interval 95%)				
Erythema	11.9 (8.8 to 15.6)	0.5 (0.0 to 2.9)	14.5 (11.1 to 18.5)	0.5 (0.0 to 2.9)
Pain	76.7 (72.1 to 80.8)	10.5 (6.5 to 15.7)	75.2 (70.5 to 79.5)	14.3 (9.6 to 20.1)
Swelling	9.3 (6.6 to 12.7)	1.0 (0.1 to 3.7)	11.6 (8.6 to 15.3)	0.5 (0.0 to 2.9)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	379			
Units: Percentage of participants				
number (confidence interval 95%)				
Erythema	12.1 (9.0 to 15.9)			
Pain	61.2 (56.1 to 66.1)			
Swelling	7.7 (5.2 to 10.8)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants reporting each solicited systemic event (fever, headache, muscle pain, joint pain, tiredness)

End point title	Percentage of participants reporting each solicited systemic event (fever, headache, muscle pain, joint pain, tiredness)

End point description:

Assessed solicited systemic events were arthralgia, fatigue, headache, myalgia and fever [temperature equal to or above (>=) 38 degrees Celsius (°C)]. Any = occurrence of the symptom regardless of intensity grade or relation to study intervention. Analysis was based on the Exposed Set (ES), which included all participants who received the study intervention and had data for solicited administration site events analysis at the assessed timeframe.

End point type	Secondary

End point timeframe:

During the 4-day follow up period after vaccination (vaccine or placebo administered on Day 1)

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	377	191	379	190
Units: Percentage of participants				
number (confidence interval 95%)				
Arthralgia	26.0 (21.6 to 30.7)	5.8 (2.9 to 10.1)	20.8 (16.9 to 25.3)	10.0 (6.1 to 15.2)
Fatigue	44.0 (39.0 to 49.2)	17.3 (12.2 to 23.4)	36.1 (31.3 to 41.2)	19.5 (14.1 to 25.8)
Headache	35.8 (31.0 to 40.9)	16.8 (11.8 to 22.8)	27.7 (23.3 to 32.5)	17.4 (12.3 to 23.5)
Myalgia	39.3 (34.3 to 44.4)	5.8 (2.9 to 10.1)	32.5 (27.8 to 37.4)	14.2 (9.6 to 20.0)
Fever	3.7 (2.0 to 6.2)	1.0 (0.1 to 3.7)	2.6 (1.3 to 4.8)	1.1 (0.1 to 3.8)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	379			
Units: Percentage of participants				
number (confidence interval 95%)				
Arthralgia	12.9 (9.7 to 16.7)			
Fatigue	24.0 (19.8 to 28.6)			
Headache	21.1 (17.1 to 25.6)			
Myalgia	21.4 (17.4 to 25.8)			
Fever	1.6 (0.6 to 3.4)			

Statistical analyses

No statistical analyses for this end point

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

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

End point description:

Unsolicited AEs are defined as 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 will be reported as an unsolicited adverse event. Analysis was based on the Exposed Set (ES), which included all participants who received the study intervention and had data for assessed timeframe and unsolicited events analysis.

End point type	Secondary

End point timeframe:

During the 30-day follow up period after vaccination (vaccine or placebo administered on Day 1)

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	383	192	386	191
Units: Percentage of participants				
number (confidence interval 95%)	13.6 (10.3 to 17.4)	13.5 (9.0 to 19.2)	15.3 (11.8 to 19.3)	10.5 (6.5 to 15.7)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	381			
Units: Percentage of participants				
number (confidence interval 95%)	16.3 (12.7 to 20.4)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants reporting any serious adverse events (SAEs) within 6 months of vaccination

End point title	Percentage of participants reporting any serious adverse events (SAEs) within 6 months of vaccination

End point description:

An SAE is any untoward medical occurrence that results in death, is life-threatening, requires hospitalization or prolongation of existing hospitalization, results in disability/incapacity, is a congenital anomaly/birth defect in the offspring of a study participant, or results in an abnormal pregnancy outcome. Analysis was based on the ES, which included all participants who received the study intervention. Analysis per group is based on the administered intervention.

End point type	Secondary

End point timeframe:

From the day of the vaccination up to 6 months after vaccination (vaccine or placebo administered on Day 1)

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	383	192	386	191
Units: Percentage of participants				
number (confidence interval 95%)	0.8 (0.2 to 2.3)	2.1 (0.6 to 5.2)	3.9 (2.2 to 6.3)	2.1 (0.6 to 5.3)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	381			
Units: Percentage of participants				
number (confidence interval 95%)	2.4 (1.1 to 4.4)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants reporting any onset potential immune mediated diseases (pIMDs) within 6 months of vaccination

End point title	Percentage of participants reporting any onset potential immune mediated diseases (pIMDs) within 6 months of vaccination

End point description:

pIMDs are a subset of AEs of special interest that include autoimmune diseases and other inflammatory and/or neurologic disorders of interest which may or may not have an autoimmune etiology. Analysis was based on the ES, which included all participants who received the study intervention. Analysis per group is based on the administered intervention.

End point type	Secondary

End point timeframe:

From the day of the vaccination up to 6 months after vaccination (vaccine or placebo administered on Day 1)

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	383	192	386	191
Units: Percentage of participants				
number (confidence interval 95%)	0 (0 to 1.0)	0 (0 to 1.9)	1.0 (0.3 to 2.6)	0.5 (0.0 to 2.9)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	381			
Units: Percentage of participants				
number (confidence interval 95%)	0.8 (0.2 to 2.3)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants reporting SAEs related to study intervention administration within 12 months of vaccination

End point title	Percentage of participants reporting SAEs related to study intervention administration within 12 months of vaccination

End point description:

An SAE is any untoward medical occurrence that results in death, is life-threatening, requires hospitalization or prolongation of existing hospitalization, results in disability/incapacity, is a congenital anomaly/birth defect in the offspring of a study participant, or results in an abnormal pregnancy outcome. Analysis was based on the ES, which included all participants who received the study intervention. Analysis per group is based on the administered intervention.

End point type	Secondary

End point timeframe:

From the day of the vaccination up to 12 months after vaccination (vaccine or placebo administered on Day 1)

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	383	192	386	191
Units: Percentage of participants				
number (confidence interval 95%)	0 (0 to 1.0)	0 (0 to 1.9)	0 (0 to 1.0)	0 (0.0 to 1.9)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	381			
Units: Percentage of participants				
number (confidence interval 95%)	0.3 (0.0 to 1.5)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants reporting pIMDs related to study intervention administration within 12 months of vaccination

End point title	Percentage of participants reporting pIMDs related to study intervention administration within 12 months of vaccination

End point description:

pIMDs are a subset of AEs of special interest that include autoimmune diseases and other inflammatory and/or neurologic disorders of interest which may or may not have an autoimmune etiology. Analysis was based on the ES, which included all participants who received the study intervention. Analysis per group is based on the administered intervention.

End point type	Secondary

End point timeframe:

From the day of the vaccination up to 12 months after vaccination (vaccine or placebo administered on Day 1)

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	383	192	386	191
Units: Percentage of participants				
number (confidence interval 95%)	0 (0 to 1.0)	0 (0 to 1.9)	0 (0 to 1.0)	0 (0.0 to 1.9)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	381			
Units: Percentage of participants				
number (confidence interval 95%)	0.3 (0.0 to 1.5)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants reporting any fatal SAEs

End point title	Percentage of participants reporting any fatal 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, results in disability/incapacity, is a congenital anomaly/birth defect in the offspring of a study participant, or results in an abnormal pregnancy outcome. Analysis was based on the ES, which included all participants who received the study intervention. Analysis per group is based on the administered intervention.

End point type	Secondary

End point timeframe:

From the day of the vaccination up to 12 months after vaccination (vaccine or placebo administered on Day 1)

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	383	192	386	191
Units: Percentage of participants				
number (confidence interval 95%)	0 (0 to 1.0)	0 (0 to 1.9)	1.0 (0.3 to 2.6)	0.5 (0.0 to 2.9)

End point values	OA-RSV Group			

Subject group type	Reporting group			
Number of subjects analysed	381			
Units: Percentage of participants				
number (confidence interval 95%)	0 (0 to 1.0)			

Statistical analyses

No statistical analyses for this end point

Secondary: RSV-A neutralization titers expressed as GMT, up to one month post-intervention

End point title	RSV-A neutralization titers expressed as GMT, up to one month post-intervention

End point description:

Serological assays for the determination of antibodies against RSV-A are performed by neutralization assay. The corresponding antibody titers were expressed in ED60. Unadjusted GMTs were provided for Adult HA-RSV, Adults HA-Placebo, Adult AIR-RSV, Adult AIR-Placebo and OA-RSV groups. Analysis was performed on PPS for humoral analysis. Only those participants with data available at the time of the analysis were reported in this outcome measure.

End point type	Secondary

End point timeframe:

At pre-study intervention administration (Day 1) and 1 month after study intervention administration (Day 31)

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	347	181	364	186
Units: Titer				
geometric mean (confidence interval 95%)				
Day 1	768.8 (704.7 to 838.9)	772.0 (677.9 to 879.1)	779.5 (725.5 to 837.6)	729.8 (648.6 to 821.0)
Day 31	7925.4 (7125.6 to 8815.0)	796.9 (696.4 to 912.0)	8804.1 (7953.3 to 9746.0)	774.7 (683.0 to 878.6)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	364			
Units: Titer				
geometric mean (confidence interval 95%)				
Day 1	775.7 (709.9 to 847.5)			
Day 31	7498.8 (6759.5 to 8319.1)			

Statistical analyses

No statistical analyses for this end point

Secondary: RSV-A neutralization titers expressed as GMT at Month 6 and Month 12 post-intervention

End point title	RSV-A neutralization titers expressed as GMT at Month 6 and Month 12 post-intervention

End point description:

Serological assays for the determination of antibodies against RSV-A are performed by neutralization assay. The corresponding antibody titers were expressed in ED60. Unadjusted GMTs were provided for Adult HA-RSV, Adults HA-Placebo, Adult AIR-RSV, Adult AIR-Placebo and OA-RSV groups. Analysis was performed on PPS for humoral analysis. Only those participants with data available at the time of the analysis were reported in this outcome measure.

End point type	Secondary

End point timeframe:

At 6 months and at 12 months after study intervention administration

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	317	171	345	178
Units: Titer				
geometric mean (confidence interval 95%)				
Month 6	3850.7 (3448.6 to 4299.7)	849.6 (748.9 to 963.9)	3980.6 (3608.6 to 4391.1)	854.2 (756.2 to 965.0)
Month 12	3192.9 (2855.1 to 3570.7)	965.1 (846.8 to 1099.9)	3075.1 (2772.2 to 3411.0)	971.8 (864.6 to 1092.4)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	355			
Units: Titer				
geometric mean (confidence interval 95%)				
Month 6	3846.3 (3469.7 to 4263.7)			
Month 12	3080.4 (2764.8 to 3432.0)			

Statistical analyses

No statistical analyses for this end point

Secondary: RSV-B neutralization titers expressed as GMT, up to one month post-intervention

End point title	RSV-B neutralization titers expressed as GMT, up to one month post-intervention

End point description:

Serological assays for the determination of antibodies against RSV-B are performed by neutralization assay. The corresponding antibody titers were expressed in ED60. Unadjusted GMTs were provided for Adult HA-RSV, Adults HA-Placebo, Adult AIR-RSV, Adult AIR-Placebo and OA-RSV groups. Analysis was performed on PPS for humoral analysis. Only those participants with data available at the time of the analysis were reported in this outcome measure.

End point type	Secondary

End point timeframe:

At pre-study intervention administration (Day 1) and 1 month after study intervention administration (Day 31)

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	347	181	364	186
Units: Titer				
geometric mean (confidence interval 95%)				
Day 1	1091.1 (1000.3 to 1190.2)	1197.7 (1055.7 to 1358.8)	1141.4 (1050.5 to 1240.0)	1167.2 (1035.0 to 1316.1)
Day 31	8971.9 (8109.6 to 9925.8)	1145.3 (1012.4 to 1295.5)	9943.0 (9035.8 to 10941.4)	1141.8 (1007.4 to 1294.2)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	364			
Units: Titer				
geometric mean (confidence interval 95%)				
Day 1	1109.1 (1020.6 to 1205.3)			
Day 31	8169.3 (7412.6 to 9003.3)			

Statistical analyses

No statistical analyses for this end point

Secondary: RSV-B neutralization titers expressed as GMT, at Month 6 and Month 12 post-intervention

End point title	RSV-B neutralization titers expressed as GMT, at Month 6 and Month 12 post-intervention

End point description:

Serological assays for the determination of antibodies against RSV-B are performed by neutralization assay. The corresponding antibody titers were expressed in ED60. Unadjusted GMTs were provided for Adult HA-RSV, Adults HA-Placebo, Adult AIR-RSV, Adult AIR-Placebo and OA-RSV groups. Analysis was performed on PPS for humoral analysis. Only those participants with data available at the time of the analysis were reported in this outcome measure.

End point type	Secondary

End point timeframe:

At 6 months and at 12 months after study intervention administration

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	317	171	345	178
Units: Titer				
geometric mean (confidence interval 95%)				
Month 6	3880.7 (3488.4 to 4317.0)	1003.2 (875.5 to 1149.4)	4020.8 (3635.9 to 4446.5)	942.1 (825.4 to 1075.3)
Month 12	3562.8 (3176.0 to 3996.7)	1218.6 (1038.8 to 1429.5)	3669.9 (3287.1 to 4097.3)	1153.5 (996.6 to 1335.2)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	355			
Units: Titer				
geometric mean (confidence interval 95%)				
Month 6	3710.4 (3361.0 to 4096.1)			
Month 12	3527.7 (3177.5 to 3916.4)			

Statistical analyses

No statistical analyses for this end point

Secondary: Frequency of RSVPreF3-specific cluster of differentiation (CD)4+ T cells expressing at least 2 activation markers up to one month post-intervention

End point title	Frequency of RSVPreF3-specific cluster of differentiation (CD)4+ T cells expressing at least 2 activation markers up to one month post-intervention

End point description:

Among markers expressed are interleukin-2/13/17 (IL-2, IL-13, IL-17), cluster of 40 ligand (CD40L), 41BB, tumour necrosis factor alpha (TNF-α) and interferon gamma (IFN-γ), in vitro upon stimulation with RSVPreF3 peptide preparations. Analysis was performed on Cell-Mediated immune (CMI) sub-cohort of the PPS,which included all eligible participants who received the study intervention as per protocol,had immunogenicity results pre- and post-dose for RSVPreF3 OA specific CD4+T cells, complied with blood draw intervals,without intercurrent conditions that may interfere with immunogenicity and without prohibited concomitant medication/vaccination.Only the participants with data available at the time of the analysis were reported.

End point type	Secondary

End point timeframe:

At pre-study intervention administration (Day 1) and 1 month after study intervention administration (Day 31)

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	47	28	55	27
Units: CD4+ T cells/million cells				
geometric mean (standard deviation)				
Day 1	102.7 (± 0.9)	125.6 (± 0.9)	161.5 (± 0.6)	114.7 (± 0.9)
Day 31	1282.5 (± 0.4)	167.7 (± 0.8)	1043.6 (± 0.6)	131.9 (± 0.8)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	26			
Units: CD4+ T cells/million cells				
geometric mean (standard deviation)				
Day 1	111.3 (± 0.9)			
Day 31	1016.9 (± 0.8)			

Statistical analyses

No statistical analyses for this end point

Secondary: Frequency of RSVPreF3-specific CD4+ T cells expressing at least 2 activation markers, at Month 6 and Month 12 post-intervention

End point title	Frequency of RSVPreF3-specific CD4+ T cells expressing at least 2 activation markers, at Month 6 and Month 12 post-intervention

End point description:

Among markers expressed are interleukin-2/13/17 (IL-2, IL-13, IL-17), cluster of 40 ligand (CD40L), 41BB, tumour necrosis factor alpha (TNF-α) and interferon gamma (IFN-γ), in vitro upon stimulation with RSVPreF3 peptide preparations. Analysis was performed on Cell-Mediated immune (CMI) sub-cohort of the PPS,which included all eligible participants who received the study intervention as per protocol,had immunogenicity results pre- and post-dose for RSVPreF3 OA specific CD4+T cells, complied with blood draw intervals,without intercurrent conditions that may interfere with immunogenicity and without prohibited concomitant medication/vaccination.Only the participants with data available at the time of the analysis were reported.

End point type	Secondary

End point timeframe:

At 6 months and at 12 months after study intervention administration

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	58	36	56	27
Units: CD4+ T cells/million cells				
geometric mean (standard deviation)				
Month 6	825.6 (± 0.3)	140.5 (± 0.8)	662.9 (± 0.3)	39.2 (± 1.0)
Month 12	492.0 (± 0.6)	175.8 (± 0.5)	335.5 (± 0.7)	59.4 (± 1.0)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	31			
Units: CD4+ T cells/million cells				
geometric mean (standard deviation)				
Month 6	763.5 (± 0.5)			
Month 12	414.1 (± 0.7)			

Statistical analyses

No statistical analyses for this end point

Secondary: Frequency of RSVPreF3-specific CD8+ T cells expressing at least 2 activation markers, up to one month post-intervention

End point title	Frequency of RSVPreF3-specific CD8+ T cells expressing at least 2 activation markers, up to one month post-intervention

End point description:

Among markers expressed are IL-2, IL-13, IL-17, CD40L, 41BB, TNF-α and IFN-γ, in vitro upon stimulation with RSVPreF3 peptide preparations. Analysis was performed on Cell-Mediated immune (CMI) sub-cohort of the PPS,which included all eligible participants who received the study intervention as per protocol,had immunogenicity results pre- and post-dose for RSVPreF3 OA specific CD4+T cells, complied with blood draw intervals,without intercurrent conditions that may interfere with immunogenicity and without prohibited concomitant medication/vaccination.Only the participants with data available at the time of the analysis were reported.

End point type	Secondary

End point timeframe:

At pre-study intervention administration (Day 1) and 1 month after study intervention administration (Day 31)

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	46	28	55	27
Units: CD8+ T cells/million cells				
geometric mean (standard deviation)				
Day 1	10.1 (± 1.1)	6.0 (± 0.9)	15.5 (± 1.0)	10.8 (± 1.1)
Day 31	15.2 (± 1.1)	11.9 (± 1.1)	18.1 (± 1.1)	4.8 (± 1.1)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	26			
Units: CD8+ T cells/million cells				
geometric mean (standard deviation)				
Day 1	12.0 (± 1.0)			
Day 31	12.0 (± 1.2)			

Statistical analyses

No statistical analyses for this end point

Secondary: Frequency of RSVPreF3-specific CD8+ T cells expressing at least 2 activation markers, at Month 6 and Month 12

End point title	Frequency of RSVPreF3-specific CD8+ T cells expressing at least 2 activation markers, at Month 6 and Month 12

End point description:

Among markers expressed are IL-2, IL-13, IL-17, CD40L, 41BB, TNF-α and IFN-γ, in vitro upon stimulation with RSVPreF3 peptide preparations. Analysis was performed on Cell-Mediated immune (CMI) sub-cohort of the PPS,which included all eligible participants who received the study intervention as per protocol,had immunogenicity results pre- and post-dose for RSVPreF3 OA specific CD4+T cells, complied with blood draw intervals,without intercurrent conditions that may interfere with immunogenicity and without prohibited concomitant medication/vaccination.Only the participants with data available at the time of the analysis were reported.

End point type	Secondary

End point timeframe:

At 6 months and at 12 months after study intervention administration

End point values	Adults HA-RSV Group	Adults HA-Placebo Group	Adults AIR-RSV Group	Adults AIR-Placebo Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	58	36	56	27
Units: CD8+ T cells/million cells				
geometric mean (standard deviation)				
Month 6	23.1 (± 1.0)	12.2 (± 1.1)	27.6 (± 1.0)	14.0 (± 1.0)
Month 12	15.2 (± 1.0)	23.0 (± 0.9)	16.2 (± 1.0)	6.6 (± 1.1)

End point values	OA-RSV Group			
Subject group type	Reporting group			
Number of subjects analysed	31			
Units: CD8+ T cells/million cells				
geometric mean (standard deviation)				
Month 6	14.8 (± 1.1)			
Month 12	14.9 (± 1.0)			

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Solicited AEs: from Day 1 up to Day 4 post-dose. Unsolicited AEs: from Day 1 up to Day 30 post-dose. SAEs, pIMDs: from Day 1 up to Month 6 post dose-administration. Related SAEs, related pIMDs, fatal SAEs: from Day 1 up to study end (Month 12).

Adverse event reporting additional description:

Solicited and unsolicited events were reported per participant at any dose for the assessed timeframe (within 30 days after any vaccine dose administration) according to occurence of each event, as pre-specified in Statistical Analysis Plan.

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	27.0

Reporting groups

Reporting group title	Adults HA-Placebo Group

Reporting group description:

Healthy adults or adults with chronic stable conditions with or without treatment that do not lead to an increased risk of RSV-LRTD, aged 50-59 years old received 1 dose of placebo at Day 1 and were followed until study end.

Reporting group title	Adults HA-RSV Group

Reporting group description:

Healthy adults or adults with chronic stable conditions with or without treatment that do not lead to an increased risk of RSV-LRTD, aged 50-59 years old received 1 dose of RSVPreF3 OA vaccine at Day 1 and were followed until study end.

Reporting group title	Adults AIR-Placebo Group

Reporting group description:

Adults at increased risk of RSV-LRTD aged 50-59 years old received 1 dose of placebo at Day 1 and were followed until study end.

Reporting group title	OA-RSV Group

Reporting group description:

Older adults aged 60 years old and above received 1 dose of RSVPreF3 OA vaccine at Day 1 and were followed until study end.

Reporting group title	Adults AIR-RSV Group

Reporting group description:

Adults at increased risk of RSV-Lower respiratory tract disease (RSV-LRTD) aged 50-59 years old received 1 dose of RSVPreF3 OA vaccine at Day 1 and were followed until study end.

Serious adverse events	Adults HA-Placebo Group	Adults HA-RSV Group	Adults AIR-Placebo Group
Total subjects affected by serious adverse events			
subjects affected / exposed	4 / 192 (2.08%)	3 / 383 (0.78%)	4 / 191 (2.09%)
number of deaths (all causes)	0	0	1
number of deaths resulting from adverse events			
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Adenocarcinoma of colon			

subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Breast cancer			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Invasive ductal breast carcinoma			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
General disorders and administration site conditions			
Death			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 1
Respiratory, thoracic and mediastinal disorders			
Asthma			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Chronic obstructive pulmonary disease			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Acute respiratory failure			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Psychiatric disorders			
Depression			

subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Injury, poisoning and procedural complications			
Hip fracture			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Femur fracture			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Alcohol poisoning			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Kyphosis postoperative			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cardiac disorders			
Pericarditis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Atrial fibrillation			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Nervous system disorders			
Cerebellar stroke			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Cerebrovascular accident			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Blood and lymphatic system disorders			
Cold type haemolytic anaemia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastrointestinal disorders			
Inguinal hernia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Hepatobiliary disorders			
Non-alcoholic fatty liver			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Musculoskeletal and connective tissue disorders			
Gouty arthritis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Osteoarthritis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Abscess oral			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Acute sinusitis			

subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cellulitis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
COVID-19			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Osteomyelitis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infective exacerbation of chronic obstructive airways disease			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pneumonia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Enterococcal bacteraemia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Metabolism and nutrition disorders			
Obesity			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Serious adverse events	OA-RSV Group	Adults AIR-RSV Group	
Total subjects affected by serious adverse events			
subjects affected / exposed	9 / 381 (2.36%)	15 / 386 (3.89%)	
number of deaths (all causes)	0	1	
number of deaths resulting from adverse events			
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Adenocarcinoma of colon			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Breast cancer			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Invasive ductal breast carcinoma			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
General disorders and administration site conditions			
Death			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 1	
Respiratory, thoracic and mediastinal disorders			
Asthma			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Chronic obstructive pulmonary disease			
subjects affected / exposed	0 / 381 (0.00%)	2 / 386 (0.52%)	
occurrences causally related to treatment / all	0 / 0	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Acute respiratory failure			

subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Psychiatric disorders			
Depression			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Injury, poisoning and procedural complications			
Hip fracture			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Femur fracture			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Alcohol poisoning			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Kyphosis postoperative			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cardiac disorders			
Pericarditis			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Atrial fibrillation			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

Nervous system disorders			
Cerebellar stroke			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cerebrovascular accident			
subjects affected / exposed	1 / 381 (0.26%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Blood and lymphatic system disorders			
Cold type haemolytic anaemia			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastrointestinal disorders			
Inguinal hernia			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hepatobiliary disorders			
Non-alcoholic fatty liver			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Musculoskeletal and connective tissue disorders			
Gouty arthritis			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Osteoarthritis			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (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			
Abscess oral			

subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Acute sinusitis			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cellulitis			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
COVID-19			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Osteomyelitis			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infective exacerbation of chronic obstructive airways disease			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonia			
subjects affected / exposed	2 / 381 (0.52%)	3 / 386 (0.78%)	
occurrences causally related to treatment / all	0 / 2	0 / 3	
deaths causally related to treatment / all	0 / 0	0 / 0	
Enterococcal bacteraemia			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Metabolism and nutrition disorders			
Obesity			

subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Frequency threshold for reporting non-serious adverse events: 0 %

Non-serious adverse events	Adults HA-Placebo Group	Adults HA-RSV Group	Adults AIR-Placebo Group
Total subjects affected by non-serious adverse events			
subjects affected / exposed	76 / 192 (39.58%)	325 / 383 (84.86%)	74 / 191 (38.74%)
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Uterine leiomyoma			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Vascular disorders			
Hypertension			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
General disorders and administration site conditions			
Administration site bruise			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Administration site warmth			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Asthenia			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Influenza like illness			
subjects affected / exposed	1 / 192 (0.52%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	1	1	0
Fatigue			
subjects affected / exposed	34 / 192 (17.71%)	166 / 383 (43.34%)	37 / 191 (19.37%)
occurrences (all)	34	167	37
Chills			

subjects affected / exposed	0 / 192 (0.00%)	2 / 383 (0.52%)	0 / 191 (0.00%)
occurrences (all)	0	2	0
Chest pain			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Injection site pain			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Injection site induration			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Injection site erythema			
subjects affected / exposed	1 / 192 (0.52%)	40 / 383 (10.44%)	1 / 191 (0.52%)
occurrences (all)	1	40	1
Injection site bruising			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Injection site pruritus			
subjects affected / exposed	0 / 192 (0.00%)	3 / 383 (0.78%)	0 / 191 (0.00%)
occurrences (all)	0	3	0
Injection site swelling			
subjects affected / exposed	2 / 192 (1.04%)	32 / 383 (8.36%)	1 / 191 (0.52%)
occurrences (all)	2	32	1
Peripheral swelling			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0
Pyrexia			
subjects affected / exposed	2 / 192 (1.04%)	14 / 383 (3.66%)	3 / 191 (1.57%)
occurrences (all)	2	14	3
Administration site erythema			
subjects affected / exposed	1 / 192 (0.52%)	40 / 383 (10.44%)	1 / 191 (0.52%)
occurrences (all)	1	40	1
Administration site pain			
subjects affected / exposed	20 / 192 (10.42%)	289 / 383 (75.46%)	27 / 191 (14.14%)
occurrences (all)	20	289	27
Administration site swelling			

subjects affected / exposed	0 / 192 (0.00%)	32 / 383 (8.36%)	0 / 191 (0.00%)
occurrences (all)	0	32	0
Reproductive system and breast disorders			
Dysmenorrhoea			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0
Respiratory, thoracic and mediastinal disorders			
Bronchospasm			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Asthma			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Chronic obstructive pulmonary disease			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Cough			
subjects affected / exposed	0 / 192 (0.00%)	3 / 383 (0.78%)	1 / 191 (0.52%)
occurrences (all)	0	3	1
Oropharyngeal pain			
subjects affected / exposed	0 / 192 (0.00%)	2 / 383 (0.52%)	2 / 191 (1.05%)
occurrences (all)	0	2	2
Epistaxis			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Nasal congestion			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Dyspnoea			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0
Rhinorrhoea			
subjects affected / exposed	0 / 192 (0.00%)	3 / 383 (0.78%)	0 / 191 (0.00%)
occurrences (all)	0	3	0
Sinus congestion			

subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Throat irritation			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Psychiatric disorders			
Anxiety			
subjects affected / exposed	0 / 192 (0.00%)	2 / 383 (0.52%)	0 / 191 (0.00%)
occurrences (all)	0	2	0
Insomnia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Investigations			
Helicobacter test positive			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Blood pressure increased			
subjects affected / exposed	1 / 192 (0.52%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	1	1	0
Injury, poisoning and procedural complications			
Contusion			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Immunisation reaction			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Meniscus injury			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0
Post-traumatic pain			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Rib fracture			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Soft tissue injury			

subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Epicondylitis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Cardiac disorders			
Angina pectoris			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Cardiac failure			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Atrial fibrillation			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Cardiac failure chronic			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Palpitations			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Supraventricular tachycardia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Nervous system disorders			
Dizziness			
subjects affected / exposed	1 / 192 (0.52%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	1	2	0
Carotid arteriosclerosis			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0
Carpal tunnel syndrome			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Headache			

subjects affected / exposed	34 / 192 (17.71%)	137 / 383 (35.77%)	33 / 191 (17.28%)
occurrences (all)	35	139	34
Migraine			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Taste disorder			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0
Sciatica			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Sinus headache			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Post herpetic neuralgia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Cervicobrachial syndrome			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Blood and lymphatic system disorders			
Lymphadenitis			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Lymphadenopathy			
subjects affected / exposed	1 / 192 (0.52%)	3 / 383 (0.78%)	0 / 191 (0.00%)
occurrences (all)	1	3	0
Eye disorders			
Cataract			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Ocular retrobulbar haemorrhage			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Vision blurred			

subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Vitreous floaters			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Diabetic retinopathy			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Gastrointestinal disorders			
Abdominal pain upper			
subjects affected / exposed	1 / 192 (0.52%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	1	1	0
Abdominal pain			
subjects affected / exposed	0 / 192 (0.00%)	2 / 383 (0.52%)	0 / 191 (0.00%)
occurrences (all)	0	2	0
Abdominal wall haematoma			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Diarrhoea			
subjects affected / exposed	1 / 192 (0.52%)	3 / 383 (0.78%)	2 / 191 (1.05%)
occurrences (all)	1	3	2
Dry mouth			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Dyspepsia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Haemorrhoids			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Hiatus hernia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Inguinal hernia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0

Large intestine polyp			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Nausea			
subjects affected / exposed	0 / 192 (0.00%)	3 / 383 (0.78%)	0 / 191 (0.00%)
occurrences (all)	0	3	0
Poor dental condition			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Odynophagia			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Noninfective sialoadenitis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Vomiting			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Toothache			
subjects affected / exposed	1 / 192 (0.52%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	1	1	0
Hepatobiliary disorders			
Hepatic fibrosis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Hepatic steatosis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Skin and subcutaneous tissue disorders			
Dermatitis allergic			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Actinic keratosis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Dermatitis			

subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Dermatitis atopic			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Dry skin			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	1 / 191 (0.52%)
occurrences (all)	0	1	1
Eczema nummular			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0
Rash			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Macule			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Psoriasis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Erythema			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Skin lesion			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Urticaria			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0
Renal and urinary disorders			
Acute kidney injury			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Dysuria			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0

Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	12 / 192 (6.25%)	101 / 383 (26.37%)	19 / 191 (9.95%)
occurrences (all)	12	102	19
Muscle spasms			
subjects affected / exposed	0 / 192 (0.00%)	2 / 383 (0.52%)	0 / 191 (0.00%)
occurrences (all)	0	2	0
Joint swelling			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Muscle contracture			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Back pain			
subjects affected / exposed	1 / 192 (0.52%)	4 / 383 (1.04%)	0 / 191 (0.00%)
occurrences (all)	1	4	0
Musculoskeletal chest pain			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Myalgia			
subjects affected / exposed	12 / 192 (6.25%)	149 / 383 (38.90%)	27 / 191 (14.14%)
occurrences (all)	13	150	27
Rotator cuff syndrome			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Tendon pain			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Infections and infestations			
Chronic sinusitis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
COVID-19			
subjects affected / exposed	1 / 192 (0.52%)	2 / 383 (0.52%)	1 / 191 (0.52%)
occurrences (all)	1	2	1
Bronchitis			

subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Conjunctivitis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Ear infection			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Gastrointestinal viral infection			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0
Herpes simplex			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	2	0
Influenza			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Labyrinthitis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Laryngitis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Nasopharyngitis			
subjects affected / exposed	3 / 192 (1.56%)	5 / 383 (1.31%)	0 / 191 (0.00%)
occurrences (all)	3	5	0
Otitis media			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Oral herpes			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Pharyngitis streptococcal			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Respiratory tract infection			

subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0
Pharyngitis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Respiratory tract infection viral			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Rhinitis			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0
Sinusitis			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Suspected COVID-19			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Tooth infection			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	1 / 191 (0.52%)
occurrences (all)	0	0	1
Upper respiratory tract infection			
subjects affected / exposed	0 / 192 (0.00%)	2 / 383 (0.52%)	2 / 191 (1.05%)
occurrences (all)	0	2	2
Urinary tract infection			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Viral infection			
subjects affected / exposed	2 / 192 (1.04%)	1 / 383 (0.26%)	1 / 191 (0.52%)
occurrences (all)	2	2	1
Viral upper respiratory tract infection			
subjects affected / exposed	1 / 192 (0.52%)	2 / 383 (0.52%)	0 / 191 (0.00%)
occurrences (all)	1	2	0
Hordeolum			
subjects affected / exposed	0 / 192 (0.00%)	1 / 383 (0.26%)	0 / 191 (0.00%)
occurrences (all)	0	1	0
Candida infection			

subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Metabolism and nutrition disorders			
Dyslipidaemia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Electrolyte imbalance			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Diabetes mellitus inadequate control			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Gout			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Hyperglycaemia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Type 2 diabetes mellitus			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Hypokalaemia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Impaired fasting glucose			
subjects affected / exposed	1 / 192 (0.52%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	1	0	0
Hyperphagia			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0
Vitamin B12 deficiency			
subjects affected / exposed	0 / 192 (0.00%)	0 / 383 (0.00%)	0 / 191 (0.00%)
occurrences (all)	0	0	0

Non-serious adverse events	OA-RSV Group	Adults AIR-RSV Group	
Total subjects affected by non-serious adverse events			

subjects affected / exposed	279 / 381 (73.23%)	318 / 386 (82.38%)	
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Uterine leiomyoma			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Vascular disorders			
Hypertension			
subjects affected / exposed	1 / 381 (0.26%)	1 / 386 (0.26%)	
occurrences (all)	1	1	
General disorders and administration site conditions			
Administration site bruise			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Administration site warmth			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Asthenia			
subjects affected / exposed	3 / 381 (0.79%)	1 / 386 (0.26%)	
occurrences (all)	3	1	
Influenza like illness			
subjects affected / exposed	2 / 381 (0.52%)	0 / 386 (0.00%)	
occurrences (all)	2	0	
Fatigue			
subjects affected / exposed	92 / 381 (24.15%)	136 / 386 (35.23%)	
occurrences (all)	92	136	
Chills			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Chest pain			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Injection site pain			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Injection site induration			

subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Injection site erythema			
subjects affected / exposed	42 / 381 (11.02%)	55 / 386 (14.25%)	
occurrences (all)	42	55	
Injection site bruising			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Injection site pruritus			
subjects affected / exposed	0 / 381 (0.00%)	3 / 386 (0.78%)	
occurrences (all)	0	3	
Injection site swelling			
subjects affected / exposed	25 / 381 (6.56%)	43 / 386 (11.14%)	
occurrences (all)	25	43	
Peripheral swelling			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Pyrexia			
subjects affected / exposed	7 / 381 (1.84%)	11 / 386 (2.85%)	
occurrences (all)	7	11	
Administration site erythema			
subjects affected / exposed	42 / 381 (11.02%)	55 / 386 (14.25%)	
occurrences (all)	42	55	
Administration site pain			
subjects affected / exposed	232 / 381 (60.89%)	285 / 386 (73.83%)	
occurrences (all)	232	285	
Administration site swelling			
subjects affected / exposed	0 / 381 (0.00%)	3 / 386 (0.78%)	
occurrences (all)	0	3	
Reproductive system and breast disorders			
Dysmenorrhoea			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Respiratory, thoracic and mediastinal disorders			

Bronchospasm			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Asthma			
subjects affected / exposed	1 / 381 (0.26%)	2 / 386 (0.52%)	
occurrences (all)	1	2	
Chronic obstructive pulmonary disease			
subjects affected / exposed	2 / 381 (0.52%)	0 / 386 (0.00%)	
occurrences (all)	2	0	
Cough			
subjects affected / exposed	2 / 381 (0.52%)	0 / 386 (0.00%)	
occurrences (all)	2	0	
Oropharyngeal pain			
subjects affected / exposed	1 / 381 (0.26%)	2 / 386 (0.52%)	
occurrences (all)	1	2	
Epistaxis			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Nasal congestion			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Dyspnoea			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Rhinorrhoea			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Sinus congestion			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Throat irritation			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Psychiatric disorders			

Anxiety			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Insomnia			
subjects affected / exposed	1 / 381 (0.26%)	1 / 386 (0.26%)	
occurrences (all)	1	1	
Investigations			
Helicobacter test positive			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Blood pressure increased			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Injury, poisoning and procedural complications			
Contusion			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Immunisation reaction			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Meniscus injury			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Post-traumatic pain			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Rib fracture			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Soft tissue injury			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Epicondylitis			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Cardiac disorders			

Angina pectoris			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Cardiac failure			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Atrial fibrillation			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Cardiac failure chronic			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Palpitations			
subjects affected / exposed	1 / 381 (0.26%)	2 / 386 (0.52%)	
occurrences (all)	1	2	
Supraventricular tachycardia			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Nervous system disorders			
Dizziness			
subjects affected / exposed	0 / 381 (0.00%)	2 / 386 (0.52%)	
occurrences (all)	0	2	
Carotid arteriosclerosis			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Carpal tunnel syndrome			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Headache			
subjects affected / exposed	81 / 381 (21.26%)	106 / 386 (27.46%)	
occurrences (all)	81	106	
Migraine			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Taste disorder			

subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Sciatica			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Sinus headache			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Post herpetic neuralgia			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Cervicobrachial syndrome			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Blood and lymphatic system disorders			
Lymphadenitis			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Lymphadenopathy			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Eye disorders			
Cataract			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Ocular retrobulbar haemorrhage			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Vision blurred			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Vitreous floaters			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Diabetic retinopathy			

subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Gastrointestinal disorders			
Abdominal pain upper			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Abdominal pain			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Abdominal wall haematoma			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Diarrhoea			
subjects affected / exposed	3 / 381 (0.79%)	4 / 386 (1.04%)	
occurrences (all)	3	4	
Dry mouth			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Dyspepsia			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Haemorrhoids			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Hiatus hernia			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Inguinal hernia			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Large intestine polyp			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Nausea			
subjects affected / exposed	0 / 381 (0.00%)	3 / 386 (0.78%)	
occurrences (all)	0	3	

Poor dental condition			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Odynophagia			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Noninfective sialoadenitis			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Vomiting			
subjects affected / exposed	2 / 381 (0.52%)	2 / 386 (0.52%)	
occurrences (all)	2	2	
Toothache			
subjects affected / exposed	1 / 381 (0.26%)	1 / 386 (0.26%)	
occurrences (all)	1	1	
Hepatobiliary disorders			
Hepatic fibrosis			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Hepatic steatosis			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Skin and subcutaneous tissue disorders			
Dermatitis allergic			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Actinic keratosis			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Dermatitis			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Dermatitis atopic			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Dry skin			

subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Eczema nummular			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Rash			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Macule			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Psoriasis			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Erythema			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Skin lesion			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Urticaria			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Renal and urinary disorders			
Acute kidney injury			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Dysuria			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	50 / 381 (13.12%)	80 / 386 (20.73%)	
occurrences (all)	51	81	
Muscle spasms			

subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Joint swelling			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Muscle contracture			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Back pain			
subjects affected / exposed	3 / 381 (0.79%)	1 / 386 (0.26%)	
occurrences (all)	3	1	
Musculoskeletal chest pain			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Myalgia			
subjects affected / exposed	83 / 381 (21.78%)	123 / 386 (31.87%)	
occurrences (all)	84	123	
Rotator cuff syndrome			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Tendon pain			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Infections and infestations			
Chronic sinusitis			
subjects affected / exposed	2 / 381 (0.52%)	0 / 386 (0.00%)	
occurrences (all)	2	0	
COVID-19			
subjects affected / exposed	5 / 381 (1.31%)	1 / 386 (0.26%)	
occurrences (all)	5	1	
Bronchitis			
subjects affected / exposed	2 / 381 (0.52%)	1 / 386 (0.26%)	
occurrences (all)	2	1	
Conjunctivitis			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	

Ear infection			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Gastrointestinal viral infection			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Herpes simplex			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Influenza			
subjects affected / exposed	2 / 381 (0.52%)	0 / 386 (0.00%)	
occurrences (all)	2	0	
Labyrinthitis			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Laryngitis			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Nasopharyngitis			
subjects affected / exposed	5 / 381 (1.31%)	7 / 386 (1.81%)	
occurrences (all)	5	7	
Otitis media			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Oral herpes			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Pharyngitis streptococcal			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Respiratory tract infection			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Pharyngitis			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	

Respiratory tract infection viral			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Rhinitis			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Sinusitis			
subjects affected / exposed	1 / 381 (0.26%)	3 / 386 (0.78%)	
occurrences (all)	1	3	
Suspected COVID-19			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Tooth infection			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Upper respiratory tract infection			
subjects affected / exposed	5 / 381 (1.31%)	3 / 386 (0.78%)	
occurrences (all)	5	3	
Urinary tract infection			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Viral infection			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Viral upper respiratory tract infection			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Hordeolum			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Candida infection			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Metabolism and nutrition disorders			
Dyslipidaemia			

subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Electrolyte imbalance			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Diabetes mellitus inadequate control			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Gout			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Hyperglycaemia			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	
Type 2 diabetes mellitus			
subjects affected / exposed	0 / 381 (0.00%)	2 / 386 (0.52%)	
occurrences (all)	0	2	
Hypokalaemia			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Impaired fasting glucose			
subjects affected / exposed	0 / 381 (0.00%)	0 / 386 (0.00%)	
occurrences (all)	0	0	
Hyperphagia			
subjects affected / exposed	1 / 381 (0.26%)	0 / 386 (0.00%)	
occurrences (all)	1	0	
Vitamin B12 deficiency			
subjects affected / exposed	0 / 381 (0.00%)	1 / 386 (0.26%)	
occurrences (all)	0	1	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
25 May 2023	The purpose of this amendment was to record events of atrial fibrillation (AF) as Adverse Events of Special Interest (AESIs).

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported