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I. Summary of Clinical Data

Table 1: All Clinical Trials

Study Number	Type of Study (Efficacy, Safety, Nonclinical)	Population (N)	Study Design and Type of Control	Test Product(s); Dosing Regimens;	Study Status
P301	Efficacy, safety	30,418 randomized	A Phase 3, randomized, stratified, observer-blind, placebo-controlled study	mRNA-1273 100 µg	Ongoing, vaccine efficacy demonstrated at the 1 st interim analysis
P201	Safety, immunogenicity	600 randomized	A Phase 2a, randomized, observer-blind, placebo-controlled, dose-confirmation study	mRNA-1273 50, 100 µg	Ongoing, Day 57 primary analysis have completed

II. Human Clinical Efficacy

1. Subject Disposition

Table 2: Study Disposition - mRNA-1273-P301 (Source: Table 14.1.1.1.1.1, Table 4.1.2.1, Table 14.1.1.1.3.2, Table 14.1.6.2)

	Vaccine Group (N = 15208) n (%)	Placebo Group (N = 15210) n (%)	Total (N= 30418) n (%)
Enrolled	15208	15210	30418
Randomized	15208	15210	30418
Exposed	15184	15165	30350 (99.8)
Safety Set	15184	15165	30350 (99.8)
Completed at least 1 month follow up*	14354 (94.5)	14345 (94.6)	28700 (94.6)
Completed at least 2 months follow up*	12021 (79.2)	11974 (79.0)	23995 (79.1)
Completed at least 1 month follow up after dose 2*	11717 (77.2)	11559 (76.2)	23276 (76.7)
Completed at least 2 months follow up after dose 2*	3894 (25.7)	3773 (24.9)	7667 (25.3)
Full Analysis Set	15180 (99.8)	15170 (99.7)	30350 (99.8)

Per Protocol Set	13934 (91.6)	13883 (91.3)	27817 (91.4)
Completed at least 7 weeks follow up**	12410 (89.1)	12340 (88.9)	24750 (89.0)
Completed at least 8 weeks follow up**	11799 (84.7)	11692 (84.2)	23491 (84.5)
Completed at least 2 months follow up**	11117 (79.8)	11022 (79.4)	22139 (79.6)
Completed at least 7 weeks follow up after dose 2**	7293 (52.3)	7304 (52.6)	14597 (52.5)
Completed at least 8 weeks follow up after dose 2**	5237 (37.6)	5184 (37.3)	10421 (37.5)
Completed at least 2 months follow up after dose 2**	3669 (26.3)	3568 (25.7)	7237 (26.0)
Randomized Set			
Completed 1 dose	15180 (99.8)	15170 (99.7)	30350 (99.8)
Completed 2 doses	13982 (91.9)	13916 (91.5)	27898 (91.7)
Discontinued from Study	120 (0.8)	168 (1.1)	288 (0.9)
Reason for Discontinuation			
Adverse Event	3 (<0.1)	0	3 (<0.1)
Death	3 (<0.1)	4 (<0.1)	7 (<0.1)
Withdrawal by Subject	67 (0.4)	120 (0.8)	187 (0.6)
Lost to Follow-up	20 (0.1)	31 (0.2)	51 (0.2)
Protocol Deviation	1 (<0.1)	1 (<0.1)	2 (<0.1)
Physician Decision	17 (0.1)	2 (<0.1)	19 (<0.1)
Other	9 (<0.1)	10 (<0.1)	19 (<0.1)
Per-Protocol Set	13934	13883	27817
Completed 1 dose**	13934 (100)	13883 (100)	27817 (100)
Completed 2 doses**	13218 (94.9)	13164 (94.8)	26382 (94.8)
Discontinued from Study**	24 (0.2)	34 (0.2)	58 (0.2)
Reason for Discontinuation**			
Adverse Event	0	0	0
Death	0	1 (<0.1)	1 (<0.1)
Withdrawal by Subject	18 (0.1)	22 (0.2)	40 (0.1)
Lost to Follow-up	2 (<0.1)	9 (<0.1)	11 (<0.1)
Protocol Deviation	0	0	0
Physician Decision	2 (<0.1)	0	2 (<0.1)
Other	2 (<0.1)	2 (<0.1)	4 (<0.1)

*Percentage based on number of subjects in the Safety Set

**Percentage based on number of subjects in the Per-Protocol Set

2. Subject Demographics and Other Baseline Characteristics

Table 3: Demographic characteristics – Full Analysis Set (Source: 14.1.3.1.2)

	Vaccine Group	Placebo Group	Total
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	(N=15180) n (%)	(N= 15170) n (%)	(N=30350) n (%)
Sex			
Female	7252 (47.8)	7103 (46.8)	14355 (47.3)
Male	7928 (52.2)	8067 (53.2)	15995 (52.7)
Age (years)			
Mean (SD)	51.4 (15.50)	51.3 (15.60)	51.4 (15.55)
Median	53.0	52.0	52.0
Min, max	18, 95	18, 95	18, 95
Age- subgroups (years)			
18 to <65	11412 (75.2)	11418 (75.3)	22830 (75.2)
65 and older	3768 (24.8)	3752 (24.7)	7520 (24.8)
Race			
American Indian or Alaska Native	110 (0.7)	120 (0.8)	230 (0.8)
Asian	653 (4.3)	732 (4.8)	1385 (4.6)
Black or African American	1562 (10.3)	1528 (10.1)	3090 (10.2)
Native Hawaiian or Other Pacific Islander	34 (0.2)	32 (0.2)	66 (0.2)
White	12029 (79.2)	11994 (79.1)	24023 (79.2)
Other	321 (2.1)	315 (2.1)	636 (2.1)
Multiracial	314 (2.1)	320 (2.1)	634 (2.1)
Ethnicity			
Hispanic or Latino	3120 (20.6)	3114 (20.5)	6234 (20.5)
Not Hispanic or Latino	11917 (78.5)	11917 (78.6)	23834 (78.5)
Race and Ethnicity			
Non-Hispanic white	9532 (62.8)	9460 (62.4)	18992 (62.6)
Communities of color	5622 (37.0)	5683 (37.5)	11305 (37.2)
Occupational Risk*	12416 (81.8)	12491 (82.3)	24907 (82.1)
Healthcare worker	3784 (24.9)	3829 (25.2)	7613 (25.1)
High Risk Condition**			
One high risk condition present	3360 (22.1)	3382 (22.3)	6742 (22.2)
No high risk condition	11820 (77.9)	11788 (77.7)	23608 (77.8)

Age and Health Risk for Severe COVID-19***			
18 to <65 years and not at risk	8887 (58.5)	8886 (58.6)	17773 (58.6)
18 to <65 years and at risk	2530 (16.7)	2535 (16.7)	5065 (16.7)
≥ 65 years	3763 (24.8)	3749 (24.7)	7512 (24.8)

* Occupational risk includes: Healthcare Workers, Emergency Response, Retail/Restaurant Operations, Manufacturing and Production Operations, Warehouse Shipping and Fulfillment centers, Transportation and Delivery Services, Border Protection and Military Personnel, and Personal care and in-home services, Hospitality and Tourism Workers, Pastoral, Social or Public Health Workers, Educators and Students.**

High risk is defined as patients who meet at least one of the following criteria (protocol-defined):

- Chronic lung disease (eg, emphysema and chronic bronchitis, idiopathic pulmonary fibrosis, and cystic fibrosis) or moderate to severe asthma
- Significant cardiac disease (eg, heart failure, coronary artery disease, congenital heart disease, cardiomyopathies, and pulmonary hypertension)
- Severe obesity (body mass index ≥ 40 kg/m²)
- Diabetes (Type 1, Type 2 or gestational)
- Liver disease
- Human Immunodeficiency Virus (HIV) infection

*** Age and health risk for severe COVID-19 is used as stratification factor for randomization.

**Table 4: Demographic characteristics (all randomized) – Per-Protocol Set
(Source: 14.1.3.4.2)**

	Vaccine Group (N=13934) n (%)	Placebo Group (N= 13883) n (%)	Total (N=27817) n (%)
Sex			
Female	6661 (47.8)	6514 (46.9)	13175 (47.4)
Male	7273 (52.2)	7369 (53.1)	14642 (52.6)
Age (years)			
Mean (SD)	51.6 (15.45)	51.5 (15.55)	51.6 (15.50)
Median	53.0	52.0	53.0
Min, max	18, 95	18, 95	18, 95
Age- subgroups (years)			
18 to <65	10407 (74.7)	10384 (74.8)	20791 (74.7)
65 and older	3527 (25.3)	3499 (25.2)	7026 (25.3)
Race			
American Indian or Alaska Native	107 (0.8)	110 (0.8)	217 (0.8)
Asian	616 (4.4)	684 (4.9)	1300 (4.7)
Black or African American	1369 (9.8)	1338 (9.6)	2707 (9.7)
Native Hawaiian or Other Pacific Islander	33 (0.2)	30 (0.2)	63 (0.2)
White	11078 (79.5)	11005 (79.3)	22083 (79.4)
Other	298 (2.1)	293 (2.1)	591 (2.1)

Ethnicity			
Hispanic or Latino	2783 (20.0)	2769 (19.9)	5552 (20.0)
Not Hispanic or Latino	11019 (79.1)	10987 (79.1)	22006 (79.1)
Race and Ethnicity			
Non-Hispanic white	8858 (63.6)	8755 (63.1)	17613 (63.3)
Communities of color	5054 (36.3)	5102 (36.7)	10156 (36.5)
Occupational Risk*	11397 (81.8)	11408 (82.2)	22805 (82.0)
Healthcare worker	3541 (25.4)	3531 (25.4)	7072 (25.4)
High Risk Condition**			
One high risk condition present	3116 (22.4)	3075 (22.1)	6191 (22.3)
Two or more high risk conditions present	561 (4.0)	554 (4.0)	1115 (4.0)
No high risk condition	10818 (77.6)	10808 (77.9)	21626 (77.7)
Age and Health Risk for Severe COVID-19***			
18 to <65 years and not at risk	8097 (58.1)	8111 (58.4)	16208 (58.3)
18 to <65 years and at risk	2315 (16.6)	2276 (16.4)	4591 (16.5)
≥ 65 years	3522 (25.3)	3496 (25.2)	7018 (25.2)

* Occupational risk includes: Healthcare Workers, Emergency Response, Retail/Restaurant Operations, Manufacturing and Production Operations, Warehouse Shipping and Fulfillment centers, Transportation and Delivery Services, Border Protection and Military Personnel, and Personal care and in-home services, Hospitality and Tourism Workers, Pastoral, Social or Public Health Workers, Educators and Students.

** High risk is defined as patients who meet at least one of the following criteria (protocol-defined):

- Chronic lung disease (eg, emphysema and chronic bronchitis, idiopathic pulmonary fibrosis, and cystic fibrosis) or moderate to severe asthma
- Significant cardiac disease (eg, heart failure, coronary artery disease, congenital heart disease, cardiomyopathies, and pulmonary hypertension)
- Severe obesity (body mass index ≥ 40 kg/m²)
- Diabetes (Type 1, Type 2 or gestational)
- Liver disease
- Human Immunodeficiency Virus (HIV) infection

*** Age and health risk for severe COVID-19 is used as stratification factor for randomization.

3. Efficacy Results

Primary Endpoint (primary efficacy analysis set)

Table 5: Primary Efficacy Analysis : COVID-19 starting 14 days after the 2nd dose – Per-Protocol Set (Source: Table 14.2.2.1.1.1.1, Table 14.2.2.1.1.6.1.1)

	Vaccine Group N= 13934 Cases n (%) (incidence rate per 1,000 person-years)	Placebo Group N= 13883 Cases n (%) (incidence rate per 1,000 person-years)	Vaccine Efficacy (VE) % (95% confidence interval)*	Met Predefined Success Criterion**
Primary endpoint: COVID-19 (per adjudication committee assessment)				
All subjects	5 (<0.1) 1.840	90 (0.6) 33.365	94.5% (86.5%, 97.8%)	<i>p</i> -value < 0.0001 **
18 to <65 years	5 / 10407 (<0.1) 2.504	75 / 10384 (0.7) 37.788	93.4% (83.7%, 97.3%)	
65 years and older	0 / 3527	15 / 3499 (0.4) 21.046	100%	

COVID-19: symptomatic COVID-19 requiring positive RT-PCR result and at least 2 systemic symptoms or 1 respiratory symptom. Cases starting 14 days after the 2nd dose. All potential COVID-19 cases starting 14 days after the 2nd dose in the clinical database as of 07-Nov-2020 have been sent to adjudication committee, and have been adjudicated for this analysis (07-Nov-2020 is the data cutoff date for efficacy).

*VE and 95% CI from the stratified Cox proportional hazard model

**The one-sided *p*-value is <0.0001 from the stratified Cox proportional hazard model to test the null hypothesis of VE ≤ 30%, achieving the pre-specified efficacy boundary: the one-sided nominal alpha of 0.0049 based on 95 cases using the Lan-DeMets O'Brien-Fleming spending function.

Figure 1: CUMULATIVE INCIDENCE CURVE of COVID-19 cases over time (VACCINE VS PLACEBO) COVID-19 starting 14 days after the 2nd dose based on Adjudication Committee Assessments, Per-Protocol Set (Source: Figure 14.2.2.1.1.1)

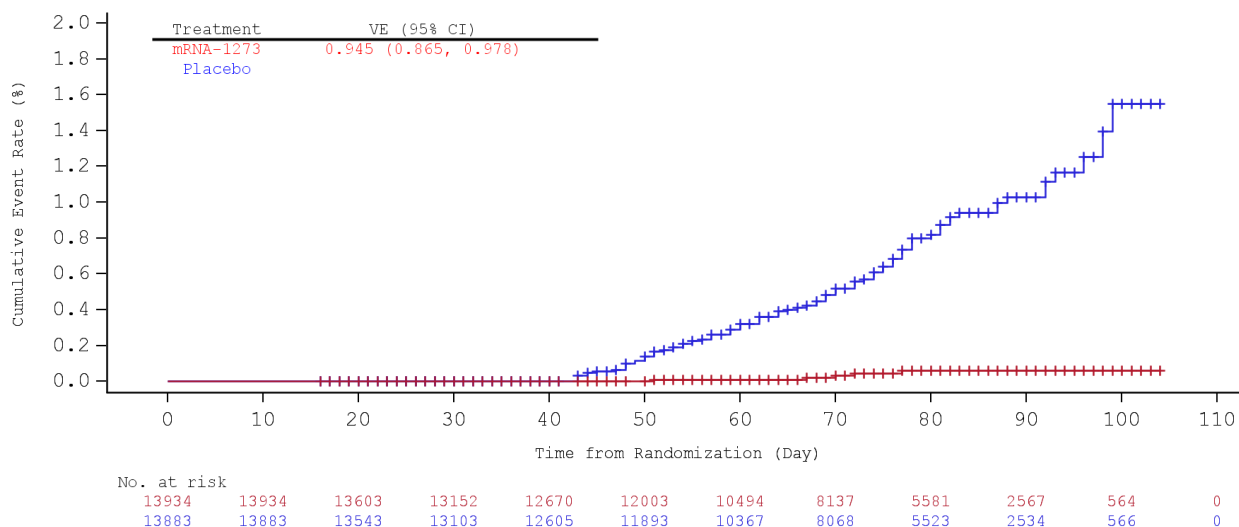


Table 6: Secondary Efficacy Analysis -Per-protocol Set (Source: Table 14.2.2.2.1.1.1, Table 14.2.2.1.2.3.1, Table 14.2.2.1.2.5.1, Table 14.2.2.2.5.1, Table 14.2.2.4.1.1, Table 14.2.2.7.1.1)

	Vaccine Group N= 13934 Cases n (%) (incidence rate per 1,000 person-years)	Placebo Group N= 13883 Cases n (%) (incidence rate per 1,000 person-years)	Vaccine Efficacy (VE) % (95% confidence interval)*
Severe cases 14 days after dose 2 based on Adjudication Committee Assessments			
All subjects	0	11 (<0.1) 4.072	100%
18 to <65 years	0	7 (<0.1)	100%
65 years and older	0	4 (<0.1)	100%
Symptomatic COVID-19 14 days after dose 1	6 (<0.1) 2.209	128 (0.9) 47.485	95.4% (89.5%, 98.0%)
Symptomatic COVID-19 after randomization	7 (<0.1) 2.577	128 (0.9) 47.485	94.6% (88.4%, 97.5%)
Severe cases after randomization	0	16 (0.1) 5.924	100%
Asymptomatic SARS- CoV-2 infection	Not available		
Symptomatic COVID-19 14 days after dose 2	6 / 15,180 (<0.1) 2.034	92 / 15,170 (0.6) 31.291	93.5% (85.2%, 97.2%)

regardless of prior SARS-CoV-2 infection based on Adjudication Committee Assessments (Full Analysis Set)			
Secondary definition of Symptomatic COVID-19 14 days after dose 2	6 (<0.1) 2.209	121 (0.9) 44.897	95.1% (88.9%, 97.8%)

Secondary efficacy endpoints to be tested at one-sided alpha=0.025, i.e. to compare the lower bound of the two-sided 95% CI with threshold such as 0%

Additional Analyses Conducted on the Individual Trial

Table 7: Subgroup Analyses of Vaccine Efficacy - COVID-19 14 days after dose 2 per Adjudication Committee Assessments (primary efficacy analysis set) – Per-protocol Set (Source: Table 14.2.2.1.1.6.1.1, Table 14.2.2.1.1.6.3.1, Table 4.2.2.1.1.6.7.1, Table Table 14.2.2.1.1.6.10.1, Table 14.2.2.1.1.6.4.1, Table 14.2.2.1.1.6.2.1, Table 14.2.2.1.1.6.5.1, Table 14.2.2.1.1.6.6.1)

Subgroup	Vaccine Group #Cases / N (%) Incidence rate in 1,000 person-years	Placebo Group #Cases / N (%) Incidence rate in 1,000 person-years	VE % (95% Confidence Interval)
Age (years)			
18 to <65	5 / 10407 (<0.1) 2.504	75 / 10384 (0.7) 37.788	93.4% (83.7%, 97.3%)
65 and older	0 / 3527	15 / 3499 (0.4) 21.046	100%
75 and older	0 / 623	3 / 676 (0.4) 21.726	100%
At risk for severe COVID-19 due to comorbidity, regardless of age*			
Yes	1 / 3116 (<0.1) 1.604	24 / 3075 (0.8) 39.177	95.9% (69.7%, 99.4%)
No	4 / 10,818 (<0.1) 1.911	66 / 10808 (0.6) 31.657	94.0% (83.5%, 97.8%)
Age and risk for severe COVID- 19**			
18 and <65 and not at risk	4 / 8309 (<0.1) 2.524	57 / 8323 (0.7) 36.034	93.0% (80.8%, 97.5%)
18 and <65 and at risk	1 / 2098 (<0.1) 2.428	18 / 2061 (0.9) 44.673	94.6% (59.4%, 99.3%)
≥65	0 / 3527	15 / 3499 (0.4) 21.046	100%
Baseline SARS-CoV-2			
Positive	0 / 341	1 / 334 (0.3) 17.038	100%
Negative	6 / 14312 (<0.1)	90 / 14370 (0.6)	93.4%

	2.154	32.298	(84.8%, 97.1%)
Sex			
Female	3 / 6661 (<0.1) 2.271	45 / 6514 (0.7) 34.991	93.5% (79.2%, 98.0%)
Male	2 / 7273 (<0.1) 1.433	45 / 7369 (0.6) 31.883	95.5% (81.5%, 98.9%)
Race and Ethnicity			
Non-Hispanic white	5 / 8858 (<0.1) 2.657	70 / 8755 (0.8) 37.721	93.0% (82.6%, 97.2%)
Communities of color	0 / 5054	20 / 5102 (0.4) 23.892	100%
Ethnicity			
Hispanic or Latino	0 / 2783	12 / 2769 (0.4) 26.346	100%
Not Hispanic or Latino	5 / 11019 (<0.1) 2.243	77 / 10987 (0.7) 34.729	93.6% (84.1%, 97.4%)
Race			
American Indian or Alaska Native	0 / 107	0 / 110	
Asian	0 / 616	3 / 684 (0.4) 26.549	100%
Black or African American	0 / 1,369	4 / 1338 (0.3) 18.566	100%
Native Hawaiian or Other Pacific Islander	0 / 33	0 / 30	
White	5 / 11078 (<0.1) 2.215	80 / 11005 (0.7) 35.821	93.8% (84.8%, 97.5%)
Multiple	0 / 293	1 / 304 (0.3)	100%
Other	0 / 298	2 / 293 (0.7) 45.645	100%

At risk for severe COVID-19 due to comorbidity, regardless of age. High risk is defined as patients who meet at least one of the following criteria (protocol-defined):

- Chronic lung disease (eg, emphysema and chronic bronchitis, idiopathic pulmonary fibrosis, and cystic fibrosis) or moderate to severe asthma
- Significant cardiac disease (eg, heart failure, coronary artery disease, congenital heart disease, cardiomyopathies, and pulmonary hypertension)
- Severe obesity (body mass index ≥ 40 kg/m²)
- Diabetes (Type 1, Type 2 or gestational)
- Liver disease
- Human Immunodeficiency Virus (HIV) infection

**used as stratification factor for randomization

III. Human Clinical Safety

4. Overall Exposure

mRNA-1273 is given as a 2-dose vaccination regimen with each dose administered one month apart. As of 11 NOV 2020, the median follow-up time in the study was 78 days after randomization, or 49 days after dose 2.

Table 8: Summary of Vaccine Exposure (Safety Set) (source: Table 14.1.6.2)

Total number of doses	Vaccine Group N= 15184 n (%)	Placebo Group N = 15165 n (%)
Received dose 1	15,184 (100)	15,165 (100)
Received dose 2	13,985 (92.1)	13,913 (91.7)

n= number of subjects in each group or in total included in the considered cohort
 n/% = number/percentage of subjects receiving the specified total number of doses

Table 9: Safety Population, Size and Denominators (Safety Set)

Safety Database for the Study Vaccine ¹ N=15384		
Clinical Trial Groups	Vaccine Group	Control Group
Controlled trials conducted for this indication ²		
Study P301	15,184	15,165
Study P201	200 ³	200

¹ study vaccine means the vaccine being considered for approval.

² Subjects in Phase 1 Study 20-0003 are not included in this table. A total of 120 subjects received mRNA-1273 in Study, and 35 of them received mRNA-1273 100µg

³ In Study P201, 200 subjects on mRNA-1273 100µg, 200 subjects on mRNA-1273 50µg

5. Safety Results

Table 10: Safety Overview (Safety Set) (Source: Table 14.3.1.1.3, Table 14.3.1.7.1, Table 14.3.1.7.3, Table 14.3.1.7.7)

Subjects reporting at least one	Vaccine Group n/N (%)	Placebo Group n/N (%)
Solicited Adverse Reactions after any injection	14,338 / 15,176 (94.5)	9,027 / 15,162 (59.5)
Solicited local adverse reaction	13,962 / 15,176 (92.0)	4,381 / 15,161 (28.9)
Grade 3 solicited injection site reaction	1,386 / 15,176 (9.1)	143 / 15,161 (0.9)
Solicited systemic adverse reaction	12,553 / 15,176 (82.7)	8032 / 15,162 (53.0)
Grade 3 or 4 solicited systemic adverse reaction	2,501 / 15,176 (16.5)	560 / 15,162 (3.7)
	N=15184	N=15165
Unsolicited Adverse Event up to 28 days after any injection	3325 (21.9)	2949 (19.4)
Baseline SARS-COV-2 negative	3204 / 14316 (22.4)	2846 / 14366 (19.8)
Baseline SARS-COV-2 positive	49 / 341 (14.4)	56 / 334 (16.8)
Unsolicited non-serious adverse event	3283 (21.6)	2902 (19.1)
Grade 3 non-serious unsolicited adverse event	187 (1.2)	148 (1.0)
Related unsolicited adverse events	1127 (7.4)	609 (4.0)
Baseline SARS-COV-2 negative	1095 / 14316 (7.6)	585 / 14366 (4.1)

Baseline SARS-COV-2 positive	16 / 341 (4.7)	14 / 334 (4.2)
Related Grade 3 non-serious unsolicited adverse event	69 (0.5)	28 (0.2)
Medically Attended Adverse Event	1215 (8.0)	1276 (8.4)
Baseline SARS-COV-2 negative	1167 / 14316 (8.2)	1243 / 14366 (8.7)
Baseline SARS-COV-2 positive	19 / 341 (5.6)	18 / 334 (5.4)
Related medically attended adverse events	122 (0.8)	73 (0.5)
Baseline SARS-COV-2 negative	118 / 14316 (0.8)	68 / 14366 (0.5)
Baseline SARS-COV-2 positive	0 / 341	5 / 334 (1.5)
Serious Adverse Event	82 (0.5)	86 (0.6)
Baseline SARS-COV-2 negative	79 / 14316 (0.6)	82 / 14366 (0.6)
Baseline SARS-COV-2 positive	0 / 341	3 / 334 (0.9)
Related serious adverse event	5 (<0.1)	4 (<0.1)
Baseline SARS-COV-2 negative	5 / 14316 (<0.1)	4 / 14366 (<0.1)
Baseline SARS-COV-2 positive	0 / 341	0 / 334
Death*	4 (<0.1)	4 (<0.1)
Related deaths	0	0
AE leading to discontinuation of the vaccine	41 (0.3)	71 (0.5)
Baseline SARS-COV-2 negative	34 / 14316 (0.2)	68 / 14366 (0.5)
Baseline SARS-COV-2 positive	4 / 341 (1.2)	3 / 334 (0.9)

*Deaths reported for entire study period

6. Solicited Adverse Events

Table 11: Solicited Local Reactions (Safety Set) (Source: Table 14.3.1.1.1, Table 14.3.1.1.2, Table 14.3.1.1.3)

	Vaccine Group Dose 1 n (%)	Placebo Group Dose 1 n(%)	Vaccine Group Dose 2 n (%)	Placebo Group Dose 2 n (%)	Vaccine Group Any Dose n (%)	Placebo Group Any Dose n (%)
Local Injection Site Reaction	N=15163	N=15150	N=13944	N=13866	N=15176	N=15161
≥ 1 Local – Any	12765 (84.2)	2998 (19.8)	12381 (88.8)	2607 (18.8)	13962 (92.0)	4381 (28.9)
≥ 1 Local-Grade 3 or 4	529 (3.5)	78 (0.5)	978 (7.0)	70 (0.5)	1386 (9.1)	143 (0.9)
Pain	N=15163	N=15150	N=13944	N=13866	N=15176	N=15161
Any	12690 (83.7)	2660 (17.6)	12325 (88.4)	2363 (17.0)	13901 (91.6)	3975 (26.2)
Grade 3 or 4 ^a	417 (2.8)	55(0.4)	575 (4.1)	38 (0.3)	901 (5.9)	90 (0.6)
Erythema	N=15162	N=15150	N=13944	N=13866	N=15176	N=15161
Any	431 (2.8)	65 (0.4)	1193 (8.6)	55 (0.4)	1470 (9.7)	114 (0.8)

Grade 3 or 4 ^b	42 (0.3)	13 (<0.1)	281 (2.0)	15 (0.1)	319 (2.1)	27 (0.2)
Swelling/Induration	N=15162	N=15150	N=13944	N=13866	N=15176	N=15161
Any	934 (6.2)	52 (0.3)	1695 (12.2)	48 (0.3)	2183 (14.4)	95 (0.6)
Grade 3 or 4 ^b	82 (0.5)	6 (<0.1)	245 (1.8)	11 (<0.1)	318 (2.1)	16 (0.1)
Axillary Swelling/Tenderness ^c	N=15162	N=15150	N=13944	N=13866	N=15176	N=15161
Any	1553 (10.2)	722 (4.8)	1956 (14.0)	534 (3.9)	2914 (19.2)	1074 (7.1)
Grade 3 or 4	48 (0.3)	27 (0.2)	66 (0.5)	18 (0.1)	108 (0.7)	44 (0.3)

*Safety Analyses Set: all randomized participants who received ≥1 vaccine or control dose.

Note: Adverse reaction data were collected on the electronic diary (e-Diary) by participants and those collected on the eCRF indicated as solicited adverse reactions.

n= # of participants with specified reaction

N= number of exposed subjects who submitted any data for the event, percentages are based on n/N.

a: Pain- Grade 3: any use of Rx pain reliever/prevents daily activity; Grade 4: requires E.R. visit or hospitalization

b: Erythema and Swelling/Induration- Grade 3: >100mm/>10cm; Grade 4: necrosis/exfoliative dermatitis

c: Axillary Swelling/Tenderness collected as solicited local adverse reaction (i.e. lymphadenopathy: localized axillary swelling or tenderness ipsilateral to the vaccination arm) - Grade 3: any use of Rx pain reliever/prevents daily activity; Grade 4: requires E.R. visit or hospitalization.

Table 12: Solicited Systemic Adverse Events (Safety Set*) (Source: Table 14.3.1.1.1, Table 14.3.1.1.2, Table 14.3.1.1.3)

	Vaccine Group Dose 1 n (%)	Placebo Group Dose 1 n (%)	Vaccine Group Dose 2 n (%)	Placebo Group Dose 2 n (%)	Vaccine Group Any Dose n (%)	Placebo Group Any Dose n (%)
Systemic adverse reaction	N=15166	N=15154	N=13947	N=13869	N=15176	N=15162
≥1 Systemic-Any	8321 (54.9)	6398 (42.2)	11064 (79.3)	5069 (36.5)	12553 (82.7)	8032 (53.0)
≥1 Systemic-Gr. 3 or 4	452 (3.0)	315 (2.1)	2200 (15.8)	276 (2.1)	2501 (16.5)	560 (3.7)
Fever	N=15163	N=15152	N=13939	N=13864	N=15175	N=15161
Any	115 (0.8)	46 (0.3)	2172 (15.6)	43 (0.3)	2252 (14.8)	88 (0.6)
Grade 3 or 4 ^a	15 (<0.1)	8 (<0.1)	197 (1.4)	4 (<0.1)	211 (1.4)	12 (<0.1)
Headache	N=15162	N=15149	N=13944	N=13866	N=15176	N=15161
Any	4952 (32.7)	4027 (26.6)	8165 (58.6)	3252 (23.5)	9566 (63.0)	5527 (36.5)
Grade 3 or 4 ^b	271 (1.8)	196 (1.3)	622 (4.5)	156 (1.1)	833 (5.5)	337 (2.2)
Fatigue	N=15162	N=15149	N=13944	N=13854	N=15176	N=15161
Any	5635 (37.2)	4133 (27.3)	9096 (65.2)	3225 (23.3)	10393 (68.5)	5470 (36.1)
Grade 3 or 4 ^c	151 (1.1)	106 (0.7)	1347 (9.7)	101 (0.7)	1452 (9.7)	197 (1.3)
Myalgia	N=15162	N=15149	N=13944	N=13864	N=15176	N=15161
Any	3441 (22.7)	2069 (13.7)	8036 (57.6)	1697 (12.2)	9039 (59.6)	3052 (20.1)

Grade 3 or 4 ^c	90 (0.6)	47 (0.3)	1233 (8.8)	49 (0.4)	1302 (8.6)	95 (0.6)
Arthralgia	N=15162	N=15149	N=13944	N=13864	N=15176	N=15161
Any	2510 (16.6)	1783 (11.8)	5937 (42.6)	1468 (10.6)	6803 (44.8)	2606 (17.2)
Grade 3 or 4 ^c	61 (0.5)	37 (0.2)	725 (5.2)	43 (0.3)	772 (5.2)	79 (0.5)
Nausea/Vo miting	N=15162	N=15149	N=13944	N=13864	N=15176	N=15161
Any	1263 (8.3)	1074 (7.1)	2634 (18.9)	883 (6.4)	3366 (22.2)	1679 (11.1)
Grade 3 or 4 ^d	10 (<0.1)	12 (<0.1)	19 (0.2)	11 (<0.1)	28 (0.3)	23 (0.2)
Chills	N=15162	N=15149	N=13944	N=13864	N=15176	N=15161
Any	1253 (8.3)	878 (5.8)	6100 (43.7)	755 (5.4)	6580 (43.4)	1439 (9.5)
Grade 3 or 4 ^e	24 (0.2)	14 (<0.1)	178 (1.3)	16 (0.1)	199 (1.3)	30 (0.2)

*Safety Analyses Set: all randomized participants who received ≥1 vaccine or control dose.

Note: Adverse reaction data were collected on the electronic diary (e-Diary) by participants and those collected on the eCRF indicated as solicited adverse reactions.

n= # of participants with specified reaction

N= = number of exposed subjects who submitted any data for the event, percentages are based on n/N

a: Fever - Grade 3: ≥39.0 – ≤ 40.0°C or ≥102.1 – ≤104.0°F; Grade 4: > 40.0°C > 104.0°F

b: Headache – Grade 3: Significant; any use of Rx pain reliever or prevents daily activity; Grade 4: Requires E.R. visit or hospitalization

c: Fatigue, Myalgia, Arthralgia – Grade 3: Significant; prevents daily activity; Grade 4: Requires E.R. visit or hospitalization

d: Nausea/Vomiting – Grade 3: Prevents daily activity, requires outpatient intravenous hydration; Grade 4: Requires E.R. visit or hospitalization for hypotensive shock

e: Chills – Grade 3: Prevents daily activity and requires medical intervention; Grade 4: Requires E.R. visit or hospitalization

Table 13: Percentage of subjects reporting the occurrence of more than 1% unsolicited AEs classified by MedDRA Primary System Organ Class and Preferred Term (safety analysis set) (Source: Table: 14.3.1.8.1, and 14.3.1.17.1)

Primary System Organ Class (Preferred Term)	Vaccine Group		Placebo Group	
(CODE)	(N=15184)		(N=15165)	
	Any	Severe	Any	Severe
	n (%)	n (%)	n (%)	n (%)
Infections and infestations (Adverse events in any PT)	521 (3.4)	13 (<0.1)	621 (4.1)	25 (0.2)
Vascular disorders (Adverse events in any PT)	149 (1.0)	28 (0.2)	138 (0.9)	39 (0.3)
Nervous system disorders (Adverse events in any PT; Headache)	624 (4.1)	27 (0.2)	552 (3.6)	21 (0.1)
	435 (2.9)	19 (0.1)	409 (2.7)	13 (<0.1)
Respiratory, thoracic and mediastinal disorders (Adverse events in any PT; Cough; Oropharyngeal pain)	480 (3.2)	8 (<0.1)	522 (3.4)	9 (<0.1)
	148 (1.0)	1 (<0.1)	143 (0.9)	1 (<0.1)
	137 (0.9)	1 (<0.1)	184 (1.2)	3 (<0.1)
Gastrointestinal disorders	426 (2.8)	14 (<0.1)	387 (2.6)	16 (0.1)

(Adverse events in any PT; Diarrhoea)	178 (1.2)	2 (<0.1)	147 (1.0)	1 (<0.1)
Skin and subcutaneous tissue disorders (Adverse events in any PT)	213 (1.4)	4 (<0.1)	158 (1.0)	2 (<0.1)
Musculoskeletal and connective tissue disorders (Adverse events in any PT; Arthralgia; Myalgia)	586 (3.9) 174 (1.1) 172 (1.1)	24 (0.2) 10 (<0.1) 11 (<0.1)	521 (3.4) 152 (1.0) 138 (0.9)	18 (0.1) 2 (<0.1) 0
General disorders and administration site (Adverse events in any PT; Fatigue; Injection site pain)	894 (5.9) 344 (2.3) 147 (1.0)	43 (0.3) 12 (<0.1) 6 (<0.1)	560 (3.7) 307 (2.0) 49 (0.3)	13 (<0.1) 7 (<0.1) 1 (<0.1)
Injury, poisoning and procedural complications (Adverse events in any PT)	238 (1.6)	16 (0.1)	262 (1.7)	13 (<0.1)

n (%)= number (percentage) of subjects reporting the adverse event at least once

Table 14: Percentage of subjects reporting the occurrence of more than 1% unsolicited MAAE up to 28 days after any injection classified by MedDRA Primary System Organ Class and Preferred Term (Safety Set) (Source: Table 14.3.1.19.1, Table 14.3.1.19.10)

Primary System Organ Class (Preferred Term)	Vaccine Group		Placebo Group	
	(N=15184)		(N=15165)	
(CODE)	Any n (%)	Severe n (%)	Any n (%)	Severe n (%)
Infections and infestations (Adverse events in any PT)	350 (2.3)	13 (<0.1)	437 (2.9)	22 (<0.1)
Respiratory, thoracic and mediastinal disorders (Adverse events in any PT)	129 (0.8)	5 (<0.1)	150 (1.0)	6 (<0.1)
Musculoskeletal and connective tissue disorders (Adverse events in any PT)	156 (1.0)	11 (<0.1)	126 (0.8)	13 (<0.1)

At least one adverse event = at least one adverse event experienced (regardless of the MedDRA Preferred Term)

N = number of treated subjects included in each treatment group

n/% = number/percentage of subjects reporting the adverse event at least once

There was no preferred term reported in >= 1% of subjects in either of the treatment group.

Table 15: Percentage of subjects reporting the occurrence SAEs (at least 3 subjects in either group) classified by MedDRA Primary System Organ Class and Preferred Term (Safety Set) (Source: Table 14.3.1.13.10, Table 14.3.1.13.3)

Primary System Organ Class (CODE)	Preferred Term (CODE)	Vaccine Group (N=15184) n (%) [n]	Placebo Group (N=15165) n (%) [n]
Infections and infestations	Adverse events in any PT	15 (<0.1) [15]	21 (0.1) [24]
	Pneumonia	3 (<0.1) [3]	5 (<0.1) [5]
	Appendicitis	2 (<0.1) [2]	3 (<0.1) [3]
Neoplasms benign, malignant and unspecified (incl cysts and polyps)	Adverse events in any PT	9 (<0.1) [9]	6 (<0.1) [6]
	Prostate cancer	2 (<0.1) [2]	3 (<0.1) [3]
Metabolism and nutrition disorders	Adverse events in any PT	3 (<0.1) [3]	5 (<0.1) [5]
	Dehydration	2 (<0.1) [2]	3 (<0.1) [3]
Nervous system disorders	Adverse events in any PT	11 (<0.1) [11]	9 (<0.1) [11]
	Syncope	2 (<0.1) [2]	4 (<0.1) [4]
Cardiac disorders	Adverse events in any PT	16 (0.1) [17]	19 (0.1) [22]
	Myocardial infarction	5 (<0.1) [5]	3 (<0.1) [3]
	Atrial fibrillation	3 (<0.1) [3]	4 (<0.1) [4]
	Coronary artery disease	3 (<0.1) [3]	2 (<0.1) [2]
	Acute myocardial infarction	1 (<0.1) [1]	3 (<0.1) [3]
Respiratory, thoracic and mediastinal disorders	Adverse events in any PT	7 (<0.1) [7]	15 (<0.1) [16]
	Pulmonary embolism	3 (<0.1) [3]	4 (<0.1) [4]
Renal and urinary disorders	Adverse events in any PT	4 (<0.1) [5]	3 (<0.1) [3]
	Nephrolithiasis	4 (<0.1) [5]	0 [0]

At least one adverse event = at least one adverse event experienced (regardless of the MedDRA Preferred Term)

N = number of treated subjects included in each treatment group

n (%) = number (percentage) of subjects reporting the adverse event at least once

[n] = number of events reported

There was no preferred term reported in >=10 subjects in either of the treatment group.

7. SMQ analyses

Table 16: Summary of Vasculitis (Safety Set) (Source: Table 14.3.1.22.1)

Dictionary Derived Term Number of subjects (%)	Vaccine Group (N=15184)	Placebo Group (N=15165)
Subjects with any TEAE within SMQ	0	1 (<0.1)
Polymyalgia rheumatica	0	1 (<0.1)

Table 17: Summary of Hypersensitivity (safety analysis set) (Source: Table 14.3.1.22.2)

Dictionary Derived Term Number of subjects (%)	Vaccine Group (N=15184)	Placebo Group (N=15165)
Subjects with any TEAE within SMQ	176 (1.2)	130 (0.9)
Allergic sinusitis	1 (<0.1)	1 (<0.1)
Anaphylactic reaction	0	1 (<0.1)
Angioedema	1 (<0.1)	3 (<0.1)
Bronchospasm	1 (<0.1)	0
Conjunctivitis allergic	1 (<0.1)	2 (<0.1)
Dermatitis	7 (<0.1)	5 (<0.1)
Dermatitis allergic	2 (<0.1)	2 (<0.1)
Dermatitis atopic	4 (<0.1)	6 (<0.1)
Dermatitis bullous	0	2 (<0.1)
Dermatitis contact	16 (0.1)	25 (0.2)
Drug hypersensitivity	3 (<0.1)	3 (<0.1)
Eczema	3 (<0.1)	1 (<0.1)
Exfoliative rash	1 (<0.1)	0
Eye swelling	2 (<0.1)	2 (<0.1)
Hand dermatitis	2 (<0.1)	0
Hypersensitivity	6 (<0.1)	2 (<0.1)
Idiopathic urticaria	0	1 (<0.1)
Injection related reaction	1 (<0.1)	1 (<0.1)
Injection site rash	30 (0.2)	1 (<0.1)
Injection site urticaria	7 (<0.1)	0
Laryngeal oedema	0	1 (<0.1)
Lip swelling	2 (<0.1)	1 (<0.1)
Palatal oedema	0	1 (<0.1)
Periorbital oedema	0	1 (<0.1)
Periorbital swelling	0	2 (<0.1)
Rash	42 (0.3)	30 (0.2)
Rash erythematous	6 (<0.1)	2 (<0.1)
Rash macular	0	1 (<0.1)
Rash maculo-papular	1 (<0.1)	3 (<0.1)
Rash pruritic	4 (<0.1)	2 (<0.1)

Rash vesicular	1 (<0.1)	0
Rhinitis allergic	9 (<0.1)	10 (<0.1)
Swelling face	4 (<0.1)	2 (<0.1)
Swelling of eyelid	2 (<0.1)	1 (<0.1)
Swollen tongue	2 (<0.1)	0
Type IV hypersensitivity reaction	1 (<0.1)	0
Urticaria	18 (0.1)	14 (<0.1)
Urticaria papular	2 (<0.1)	4 (<0.1)
Vaccination site rash	1 (<0.1)	0

Table 18: Summary of Arthritis (Safety Set) (Source: Table 14.3.1.22.3)

Dictionary Derived Term	Number of subjects	Vaccine Group	Placebo Group
(%)		(N=15184)	(N=15165)
Subjects with any TEAE within SMQ		23 (0.2)	26 (0.2)
Arthritis		6 (<0.1)	1 (<0.1)
Chondrocalcinosis pyrophosphate		1 (<0.1)	0
Gout		4 (<0.1)	9 (<0.1)
Osteoarthritis		6 (<0.1)	13 (<0.1)
Periarthritis		1 (<0.1)	1 (<0.1)
Polyarthritis		1 (<0.1)	0
Rheumatoid arthritis		1 (<0.1)	0
Spinal osteoarthritis		2 (<0.1)	1 (<0.1)
Spondylitis		1 (<0.1)	0
Temporomandibular joint Syndrome		1 (<0.1)	1 (<0.1)

Table 19: Summary of Angioedema (Safety Set) (Source: Table 14.3.1.22.4)

Dictionary Derived Term	Number of subjects	Vaccine Arm	Placebo Arm
(%)		(N=15184)	(N=15165)
Subjects with any TEAE within SMQ		32 (0.2)	31 (0.2)
Angioedema		1 (<0.1)	3 (<0.1)
Eye swelling		2 (<0.1)	2 (<0.1)
Idiopathic urticaria		0	1 (<0.1)
Laryngeal oedema		0	1 (<0.1)
Lip swelling		2 (<0.1)	1 (<0.1)
Palatal oedema		0	1 (<0.1)
Periorbital oedema		0	1 (<0.1)
Periorbital swelling		0	2 (<0.1)
Swelling face		4 (<0.1)	2 (<0.1)

Swelling of eyelid	2 (<0.1)	1 (<0.1)
Swollen tongue	2 (<0.1)	0
Urticaria	18 (0.1)	14 (<0.1)
Urticaria papular	2 (<0.1)	4 (<0.1)

Table 20: Summary of Peripheral Neuropathy (safety analysis set) (Source: Table 14.3.1.22.5)

Dictionary Derived Term Number of subjects (%)	Vaccine Arm (N=15184)	Placebo Arm (N=15165)
Subjects with any TEAE within SMQ	5 (<0.1)	1 (<0.1)
Neuralgia	2 (<0.1)	1 (<0.1)
Neuropathy peripheral	1 (<0.1)	0
Peripheral sensory neuropathy	1 (<0.1)	0
Small fibre neuropathy	1 (<0.1)	0

Table 21: Summary of Demyelinating Disease of Central Nervous System (safety analysis set) (Source: Table 14.3.1.22.6)

No observations for this table.

Table 22: Summary of Convulsions (safety analysis set) (Source: Table 14.3.1.22.7)

Dictionary Derived Term Number of subjects (%)	Vaccine Group (N=15184)	Placebo Group (N=15165)
Subjects with any TEAE within SMQ	3 (<0.1)	1 (<0.1)
Seizure	3 (<0.1)	1 (<0.1)