

**FACT SHEET FOR HEALTHCARE PROVIDERS ADMINISTERING
VACCINE (VACCINATION PROVIDERS)
EMERGENCY USE AUTHORIZATION (EUA) OF
THE MODERNA COVID-19 VACCINE TO PREVENT CORONAVIRUS DISEASE 2019
(COVID-19)**

The U.S. Food and Drug Administration (FDA) has issued an Emergency Use Authorization (EUA) to permit the emergency use of the unapproved product, **MODERNA COVID-19 VACCINE**, for active immunization to prevent COVID-19 in individuals 18 years of age and older.

SUMMARY OF INSTRUCTIONS FOR COVID-19 VACCINATION PROVIDERS

Vaccination providers enrolled in the federal COVID-19 Vaccination Program must report all vaccine administration errors, all serious adverse events, cases of Multisystem Inflammatory Syndrome (MIS) in adults, and cases of COVID-19 that result in hospitalization or death following administration of the Moderna COVID-19 Vaccine. See “MANDATORY REQUIREMENTS FOR THE MODERNA COVID-19 VACCINE ADMINISTRATION UNDER EMERGENCY USE [AUTHORIZATION](#)” for reporting requirements.

The Moderna COVID-19 Vaccine is a suspension for intramuscular injection administered as a series of two doses (0.5 mL each) 1 month apart.

See this Fact Sheet for instructions for preparation and administration. For the most recent Fact Sheet, please see www.modernatx.com/covid19vaccine-eua.

For information on clinical trials that are testing the use of the Moderna COVID-19 Vaccine for active immunization against COVID-19, please see www.clinicaltrials.gov.

DESCRIPTION OF COVID-19

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by the novel coronavirus, SARS-CoV-2, that appeared in late 2019. It is predominantly a respiratory illness that can affect other organs. People with COVID-19 have reported a wide range of symptoms, ranging from mild symptoms to severe illness. Symptoms may appear 2 to 14 days after exposure to the virus. Symptoms may include: fever or chills; cough; shortness of breath; fatigue; muscle and body aches; headache; new loss of taste or smell; sore throat; congestion or runny nose; nausea or vomiting; diarrhea.

DOSAGE AND ADMINISTRATION

Storage and Handling

The storage and handling information in this Fact Sheet supersedes the storage and handling information on the vial and carton labels.

~~Do not store on dry ice or below -40°C (-40°F).~~

Commented [A1]: SPONSOR COMMENT: Moderna has accepted FDA comments in the Fact Sheet for Providers received December 15, 2020, and provided additional changes as noted below. Also, the Full EUA Prescribing Information has been added to this document with changes provided based on comments from separate reviews received December 13-14, 2020.

Commented [A2]: FDA COMMENT: Moderna, please confirm if this is where you want this statement to be listed.

SPONSOR RESPONSE: Moderna would like to place this statement below in the Additional Storage Information section.

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Storage Prior to Use

As Displayed on the Vial Labels and Cartons

The Moderna COVID-19 Vaccine multiple-dose vials are stored frozen between -25° to -15°C (-13° to 5°F). Store in the original carton to protect from light.

Additional Storage Information Not Displayed on the Vial Labels and Cartons

Do not store on dry ice or below -40°C (-40°F).

Vials can be stored refrigerated between 2° to 8°C (36° to 46°F) for up to 30 days prior to first use.

Unpunctured vials may be stored between 8° to 25°C (46° to 77°F) for up to 12 hours. Do not refreeze.

Storage After First Puncture of the Vaccine Vial

After the first dose has been withdrawn, the vial should be held between 2° to 25°C (36° to 77°F). Discard vial after 6 hours. Do not refreeze.

Dosing and Schedule

The Moderna COVID-19 Vaccine is administered intramuscularly as a series of two doses (0.5 mL each) 1 month apart.

There are no data available on the interchangeability of the Moderna COVID-19 Vaccine with other COVID-19 vaccines to complete the vaccination series. Individuals who have received one dose of the Moderna COVID-19 Vaccine should receive a second dose of the Moderna COVID-19 Vaccine to complete the vaccination series.

Dose Preparation

- The Moderna COVID-19 Vaccine multiple-dose vial contains a frozen suspension that does not contain a preservative and must be thawed prior to administration.
- Remove the required number of vial(s) from storage and thaw each vial before use.
- Thaw in refrigerated conditions between 2° to 8°C (36° to 46°F) for 2 hours and 30 minutes. After thawing, let vial stand at room temperature for 15 minutes before administering.
- Alternatively, thaw at room temperature between 15° to 25°C (59° to 77°F) for 1 hour.
- After thawing, do not refreeze.
- Swirl vial gently after thawing and between each withdrawal. **Do not shake.** Do not dilute the vaccine.
- The Moderna COVID-19 Vaccine is a white to off-white suspension. It may contain white or translucent product-related particulates. Visually inspect the Moderna COVID-19 Vaccine vials for other particulate matter and/or discoloration prior to administration. If either of these conditions exists, the vaccine should not be administered.

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- A maximum of 10 doses can be withdrawn from the multiple-dose vial.
- After the first dose has been withdrawn, the vial should be held between 2° to 25°C (36° to 77°F). Record the date and time of first use on the Moderna COVID-19 Vaccine vial label. Discard vial after 6 hours. Do not refreeze.

Administration

Visually inspect each dose of the Moderna COVID-19 Vaccine in the dosing syringe prior to administration. The white to off-white suspension may contain white or translucent product-related particulates. During the visual inspection,

- verify the final dosing volume of 0.5 mL.
- confirm there are no other particulates and that no discoloration is observed.
- do not administer if vaccine is discolored or contains other particulate matter.

Administer the Moderna COVID-19 Vaccine intramuscularly.

CONTRAINDICATION

Do not administer the Moderna COVID-19 Vaccine to individuals with a known history of a severe allergic reaction (e.g., anaphylaxis) to ~~a previous dose of the Moderna COVID-19 Vaccine or~~ any component of the Moderna COVID-19 Vaccine (see Full EUA Prescribing Information).

Commented [A3]: SPONSOR COMMENT: Moderna has deleted this text to align with the change to the Contraindications section in the PI.

WARNINGS

Appropriate medical treatment to manage immediate allergic reactions must be immediately available in the event an acute anaphylactic reaction occurs following administration of the Moderna COVID-19 Vaccine.

Immunocompromised persons, including individuals receiving immunosuppressant therapy, may have a diminished immune response to the Moderna COVID-19 Vaccine.

The Moderna COVID-19 Vaccine may not protect all vaccine recipients.

ADVERSE REACTIONS

Adverse reactions reported in a clinical trial following administration of the Moderna COVID-19 Vaccine include pain at the injection site, fatigue, headache, myalgia, arthralgia, chills, gastrointestinal symptoms, ~~lymphadenopathy~~ axillary swelling/tenderness, fever, swelling at the injection site, and erythema at the injection site. (See Full EUA Prescribing Information)

Commented [A4]: SPONSOR COMMENT: Moderna has replaced the term “lymphadenopathy” in the solicited adverse reactions content of the Overall Safety Summary in the PI with “axillary swelling/tenderness” to accurately reflect the reaction data that was collected. This term has been updated here to align with the PI changes.

Additional adverse reactions, some of which may be serious, may become apparent with more widespread use of the Moderna COVID-19 Vaccine.

USE WITH OTHER VACCINES

There is no information on the co-administration of the Moderna COVID-19 Vaccine with other vaccines.

INFORMATION TO PROVIDE TO VACCINE RECIPIENTS/CAREGIVERS

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As the vaccination provider, you must communicate to the recipient or their caregiver, information consistent with the “Fact Sheet for Recipients and Caregivers” (and provide a copy or direct the individual to the website www.modernatx.com/covid19vaccine-eua to obtain the Fact Sheet) prior to the individual receiving the Moderna COVID-19 Vaccine, including:

- FDA has authorized the emergency use of the Moderna COVID-19 Vaccine, which is not an FDA-approved vaccine.
- The recipient or their caregiver has the option to accept or refuse the Moderna COVID-19 Vaccine.
- The significant known and potential risks and benefits of the Moderna COVID-19 Vaccine, and the extent to which such risks and benefits are unknown.
- Information about available alternative vaccines and the risks and benefits of those alternatives

For information on clinical trials that are evaluating the use of the Moderna COVID-19 Vaccine to prevent COVID-19, please see www.clinicaltrials.gov.

Provide a vaccination card to the recipient or their caregiver with the date when the recipient needs to return for the second dose of Moderna COVID-19 Vaccine.

Provide the **v-safe** information sheet to vaccine recipients/caregivers and encourage vaccine recipients to participate in **v-safe**. **V-safe** is a new voluntary smartphone-based tool that uses text messaging and web surveys to check in with people who have been vaccinated to identify potential side effects after COVID-19 vaccination. **V-safe** asks questions that help CDC to monitor the safety of COVID-19 vaccines. **V-safe** also provides second-dose reminders if needed and live telephone follow-up by CDC if participants report a significant health impact following COVID-19 vaccination. For more information, visit: www.cdc.gov/vsafe.

MANDATORY REQUIREMENTS FOR MODERNA COVID-19 VACCINE ADMINISTRATION UNDER EMERGENCY USE AUTHORIZATION

In order to mitigate the risks of using this unapproved product under EUA and to optimize the potential benefit of the Moderna COVID-19 Vaccine, the following items are required. Use of unapproved Moderna COVID-19 Vaccine for active immunization to prevent COVID-19 under this EUA is limited to the following (all requirements **must** be met):

1. The Moderna COVID-19 Vaccine is authorized for use in individuals 18 years of age and older.
2. The vaccination provider must communicate to the individual receiving the Moderna COVID-19 Vaccine or their caregiver, information consistent with the “Fact Sheet for Recipients and Caregivers” prior to the individual receiving the Moderna COVID-19 Vaccine.
3. The vaccination provider must include vaccination information in the state/local jurisdiction’s Immunization Information System (IIS) or other designated system. [Advise recipient or caregiver that more information about IISs can be found at: https://www.cdc.gov/vaccines/programs/iis/about.html](https://www.cdc.gov/vaccines/programs/iis/about.html).

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Commented [A5]: SPONSOR COMMENT: CDC has requested Moderna include an additional sentence for this bullet.

4. The vaccination provider is responsible for mandatory reporting of the following to the Vaccine Adverse Event Reporting System (VAERS):
 - vaccine administration errors whether or not associated with an adverse event,
 - serious adverse events* (irrespective of attribution to vaccination),
 - cases of Multisystem Inflammatory Syndrome (MIS) in adults, and
 - cases of COVID-19 that result in hospitalization or death.

Complete and submit reports to VAERS online at <https://vaers.hhs.gov/reportevent.html>. For further assistance with reporting to VAERS, call 1-800-822-7967. The reports should include the words “Moderna COVID- 19 Vaccine EUA” in the description section of the report.

5. The vaccination provider is responsible for responding to FDA requests for information about vaccine administration errors, adverse events, cases of MIS in adults and cases of COVID-19 that result in hospitalization or death following administration of the Moderna COVID-19 Vaccine to recipients.

*Serious adverse events are defined as:

- Death;
- A life-threatening adverse event;
- Inpatient hospitalization or prolongation of existing hospitalization;
- A persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions;
- A congenital anomaly/birth defect;
- An important medical event that based on appropriate medical judgement may jeopardize the individual and may require medical or surgical intervention to prevent one of the outcomes listed above.

OTHER ADVERSE EVENT REPORTING TO VAERS AND MODERNA

Vaccination providers may report to VAERS other adverse events that are not required to be reported using the contact information above.


To the extent feasible, report adverse events to Moderna using the contact information below or by providing a copy of the VAERS form to Moderna.

Email	Fax number	Telephone number
ModernaPV@modernatx.com	1-866-599-1342	1-866-MODERNA (1-866-663-3762)

ADDITIONAL INFORMATION

For general questions, visit the website or call the telephone number provided below.

To access the most recent Moderna COVID-19 Vaccine Fact Sheets, please scan the QR code or visit the website provided below.

Website	Telephone number
www.modernatx.com/covid19vaccine-eua 	1-866-MODERNA (1-866-663-3762)

AVAILABLE ALTERNATIVES

There is no approved alternative vaccine to prevent COVID-19. There may be clinical trials or availability under EUA of other COVID-19 vaccines.

AUTHORITY FOR ISSUANCE OF THE EUA

The Secretary of the Department of Health and Human Services (HHS) has declared a public health emergency that justifies the emergency use of drugs and biological products during the COVID-19 Pandemic. In response, the FDA has issued an EUA for the unapproved product, Moderna COVID-19 Vaccine, for active immunization to prevent COVID-19 in individuals 18 years of age and older.

FDA issued this EUA, based on Moderna's request and submitted data.

Although limited scientific information is available, based on the totality of the scientific evidence available to date, it is reasonable to believe that the Moderna COVID-19 Vaccine may be effective for the prevention of COVID-19 in individuals as specified in the *Full EUA Prescribing Information*.

This EUA for the Moderna COVID-19 Vaccine will end when the Secretary of HHS determines that the circumstances justifying the EUA no longer exist or when there is a change in the approval status of the product such that an EUA is no longer needed.

For additional information about Emergency Use Authorization visit FDA at:
<https://www.fda.gov/emergency-preparedness-and-response/mcm-legal-regulatory-and-policy-framework/emergency-use-authorization>.

COUNTERMEASURES INJURY COMPENSATION PROGRAM

The Countermeasures Injury Compensation Program (CICP) is a federal program that has been created to help pay for related costs of medical care and other specific expenses to compensate people injured after use of certain medical countermeasures. Medical countermeasures are specific vaccines, medications, devices, or other items used to prevent, diagnose, or treat the public during a public health emergency or a security threat. For more information about CICP regarding the vaccines to prevent COVID-19, visit <http://www.hrsa.gov/cicp>, email

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cicp@hrsa.gov, or call: 1-855-266-2427.

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Patent(s): www.modernatx.com/patents

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END SHORT VERSION FACT SHEET

Long Version (Full EUA Prescribing Information) Begins On Next Page

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FULL EMERGENCY USE AUTHORIZATION (EUA) PRESCRIBING INFORMATION

MODERNA COVID-19 VACCINE

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FULL EMERGENCY USE AUTHORIZATION (EUA) PRESCRIBING INFORMATION

1 AUTHORIZED USE

Moderna COVID-19 Vaccine is authorized for use under an Emergency Use Authorization (EUA) for active immunization to prevent coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in individuals 18 years of age and older.

2 DOSAGE AND ADMINISTRATION

For intramuscular injection only.

2.1 Preparation ~~For~~ Administration

- The Moderna COVID-19 Vaccine multiple-dose vial contains a frozen suspension that does not contain a preservative and must be thawed prior to administration. ~~Vials may be thawed in the refrigerator or at room temperature:~~
- Remove the required number of vial(s) from storage and thaw each vial before use.
- Thaw in ~~refrigerator~~ refrigerated conditions between +2° to 8°C (36° to 46°F) for 2 hours and 30 minutes. ~~After thawing, let~~ vial stand at room temperature for 15 minutes before administering.
- Alternatively, ~~Thaw~~ thaw at room temperature between 15° to 25°C (59° to 77°F) for 1 hour.
- Swirl vial gently after thawing and between each withdrawal. Do not shake. Do not

Commented [A6]: FDA COMMENT: Moderna, please make this section consistent with the Fact Sheet for HCPs

SPONSOR RESPONSE: Moderna has updated sections 2.1, 2.2, and 2.3 to align with the Fact Sheet for Providers as requested.

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dilute the vaccine.

- ~~Once at room temperature, the vaccine is ready for use. The vial can be held between 2° to 25°C (36° to 77°F) for up to 6 hours. Discard vial after 6 hours.~~
- ~~Swirl vial gently and inspect contents of vial.~~ The Moderna COVID-19 Vaccine is a white to off-white suspension and may contain white or translucent product-related particulates. Visually inspect the Moderna COVID-19 Vaccine vials for other particulate matter and/or discoloration prior to administration. If either of these conditions exists, the vaccine should not be administered. If there is any other particulate matter and/or discoloration do not administer.
- ~~The Moderna COVID-19 Vaccine multiple dose vial contains a~~ maximum of ~~ten~~ 0.5 mL ~~10~~ doses can be withdrawn from the multiple dose vial.
- After the first dose has been withdrawn, the vial should be held between 2° to 25°C (36° to 77°F). Record the date and time of first use on the Moderna COVID-19 Vaccine vial label. Discard vial after 6 hours. Do not refreeze.
- ~~Swirl vial gently between each withdrawal. Do not shake.~~
- ~~Record the date and time of first withdrawal on the vial label.~~

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2.2 Administration

Visually inspect each dose of the Moderna COVID-19 Vaccine in the dosing syringe prior to administration. The white to off-white suspension may contain white or translucent product-related particulates. During the visual inspection,

- verify the final dosing volume of 0.5 mL.
- confirm there are no other particulates and that no discoloration is observed.
- do not administer if vaccine is discolored or contains other particulate matter.

Administer the Moderna COVID-19 Vaccine intramuscularly.

2.2.3 Dose Dosing and Schedule

~~Administer~~ The Moderna COVID-19 Vaccine is administered as a series of two doses (0.5 mL each) ~~given one~~ month apart.

There are no data available on the interchangeability of the Moderna COVID-19 Vaccine with other COVID-19 vaccines to complete the vaccination series. Individuals who have received one dose of Moderna COVID-19 Vaccine should receive a second dose of Moderna COVID-19 Vaccine to complete the vaccination series.

3 DOSAGE FORMS AND STRENGTHS

Moderna COVID-19 Vaccine is a suspension for intramuscular injection. A single dose is 0.5 mL.

4 CONTRAINDICATIONS

Do not administer the Moderna COVID-19 Vaccine to individuals with a known history of severe allergic reaction (e.g., anaphylaxis) to any component of the Moderna COVID-19 Vaccine [see Description (13)].

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5 WARNINGS AND PRECAUTIONS

5.1 Managing Allergic Reactions

Appropriate medical treatment to manage immediate allergic reactions must be immediately available in the event an acute anaphylactic reaction occurs following administration of the Moderna COVID-19 Vaccine.

5.2 Altered Immunocompetence

Immunocompromised persons, including individuals receiving immunosuppressive therapy, may have a diminished response to the Moderna COVID-19 Vaccine.

5.3 Limitations of Vaccine Effectiveness

The Moderna COVID-19 Vaccine may not protect all vaccine recipients.

6 OVERALL SAFETY SUMMARY

It is MANDATORY for vaccination providers to report to the Vaccine Adverse Event Reporting System (VAERS) all vaccine administration errors, all serious adverse events, cases of Multi-inflammatory Syndrome (MIS) in adults, and hospitalized or fatal cases of COVID-19 following vaccination with the Moderna COVID-19 Vaccine. To the extent feasible, provide a copy of the VAERS form to Moderna. Please see the REQUIREMENTS AND INSTRUCTIONS FOR REPORTING ADVERSE EVENTS AND VACCINE ADMINISTRATION ERRORS section for details on reporting to VAERS and Moderna.

In clinical studies, the adverse reactions in participants 18 years of age and older were pain at the injection site (91.692.0%), fatigue (68.570.0%), headache (63.064.7%), myalgia (59.661.5%), arthralgia (44.846.4%), chills (43.445.4%), gastrointestinal symptoms (22.223.0%), lymphadenopathy/axillary swelling/tenderness (19.28%), fever (14.815.5%), swelling at the injection site (14.47%), and erythema at the injection site (9.710.0%).

6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a vaccine cannot be directly compared with rates in the clinical trials of another vaccine and may not reflect the rates observed in practice.

Overall, 15,419 subjects-participants aged 18 years and older received at least one dose of Moderna COVID-19 Vaccine in three clinical trials (NCT04283461, NCT04405076, and NCT04470427).

The safety of Moderna COVID-19 Vaccine was evaluated in an ongoing Phase 3 randomized, placebo-controlled, observer-blind clinical trial conducted in the United States involving 30,350-351 subjects-participants 18 years of age and older who received at least one dose of Moderna COVID-19 Vaccine (n=15,184-185) or placebo (n=15,166) (NCT04470427). At the time of vaccination, the mean age of the population was 51.452 years (range 18-95); 22,830-831 (75.2%) subjects-of participants were 18 to 64 years of age and 7,520 (24.8%) subjects-of participants

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Commented [A7]: SPONSOR COMMENT: Moderna has updated demographics and solicited adverse reactions data to Data Snapshot 2 per the Division's email request dated December 15, 2020.

Commented [A8]: Source: EUA 27073 SN0006 DS2 - Table 14.3.1.1.3 Summary of Subjects with Solicited Adverse Reactions Within 7 Days After Any Injection by Grade Solicited Safety Set

Commented [A9]: FDA COMMENT: Moderna, Please use consistent terminology (participants or subjects) throughout

SPONSOR RESPONSE: Moderna has updated all instances of "subjects" to "participants" throughout the document as requested.

Commented [A10]: SPONSOR COMMENT: Moderna has replaced the term "lymphadenopathy" here, and in the solicited adverse reactions tables, with "axillary swelling/tenderness" to accurately reflect the reaction data that was collected. This term was also updated in the solicited adverse reactions listing in the Fact Sheet for Providers.

were 65 years of age and older. Overall, 52.7% were male, 47.3% were female, 20.5% were Hispanic or Latino, 79.2% were White, 10.2% were African American, 4.6% were Asian, 0.8% were American Indian or Alaska Native, 0.2% were Native Hawaiian or Pacific Islander, 2.1% were Other, and 2.1% were Multiracial. Demographic characteristics were similar among participants who received Moderna COVID-19 Vaccine and those who received placebo.

Solicited Adverse Reactions

Data on solicited local and systemic adverse reactions and use of antipyretic medication were collected using standardized diary cards for 7 days following each injection ~~of vaccine or placebo~~ (i.e., day of vaccination and the next 6 days) ~~among participants (n=15,176 receiving Moderna COVID-19 Vaccine (n=15,179) and participants, n=15,162 receiving placebo (n=15,163) with at least 1 documented dose).~~ Solicited adverse reactions were reported more frequently among vaccine ~~subjects-participants~~ than placebo ~~subjects-participants~~.

The reported ~~frequencies-number and percentage~~ of the solicited local and systemic adverse ~~reactions~~ by age group and ~~overall-dose~~ by subject are presented in Table 1 and Table 2, respectively.

Table 1: Number and Percentage of Participants ~~with-With~~ Solicited Local and Systemic Adverse Reactions Within 7 Days* After Each Dose in Participants 18-64 Years (Solicited Safety Set, Dose 1 and Dose 2)

	Moderna COVID-19 Vaccine		Placebo ^a	
	Dose 1 (N=11,405,406) n (%)	Dose 2 (N=10,358,985) n (%)	Dose 1 (N=11,406,407) n (%)	Dose 2 (N=10,321,918) n (%)
Local Adverse Reactions				
Pain	9,908 (86.9)	9,335,873 (90,189.9)	2,177,9 (19.1)	1,942,040 (18.87)
Pain, Grade 3 ^b	367,366 (3.2)	479,506 (4.6)	23 (0.2)	21,22 (0.2)
LymphadenopathyAxillary swelling/tenderness	1,322 (11.6)	1,654,1,775 (16.02)	567 (5.0)	444,470 (4.3)
LymphadenopathyAxillary swelling/tenderness, Grade 3 ^b	3637 (0.3)	4546 (0.4)	13 (0.1)	4011 (<0.1)
Swelling (hardness) ≥25 mm	768,767 (6.7)	1,309,389 (12.6)	3334 (0.3)	3536 (0.3)
Swelling (hardness), Grade 3 ^c	62 (0.5)	176,182 (1.7)	3 (<0.1)	4 (<0.1)
Erythema (redness) ≥25 mm	345,344 (3.0)	928,982 (9.08.9)	4647 (0.4)	4243 (0.4)
Erythema (redness), Grade 3 ^c	34 (0.3)	206,210 (2.01.9)	11 (<0.1)	12 (0.1)
Systemic Adverse Reactions				
Fatigue	4,384 (38.54)	7,002,430 (67.6)	3,282 (28.8)	2,530,687 (24.56)

Commented [A11]: Source: EUA 27073 SN0006
DS2 - Table 14.3.1.1.4 Summary of Subjects with Solicited Adverse Reactions Within 7 Days After First Injection by Age Group and Grade First Injection Solicited Safety Set
DS2 - Table 14.3.1.1.5 Summary of Subjects with Solicited Adverse Reactions Within 7 Days After Second Injection by Age Group and Grade Second Injection Solicited Safety Set

DS2 - Ad-hoc Table VRBPAC AR 2.1 Summary of Medications for Solicited Adverse Events after First Vaccination First Injection Solicited Safety Set

DS2 - Ad-hoc Table VRBPAC AR 2.2 Summary of Medications for Solicited Adverse Events after Second Vaccination Second Injection Solicited Safety Set

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	Moderna COVID-19 Vaccine		Placebo ^a	
	Dose 1 (N=11,405,406) n (%)	Dose 2 (N=10,358,985) n (%)	Dose 1 (N=11,406,407) n (%)	Dose 2 (N=10,324,918) n (%)
Fatigue, Grade 3 ^d	120 (1.1)	1,099,174 (10.67)	83 (0.7)	81,86 (0.8)
Fatigue, Grade 4 ^e	1 (<0.1)	0 (0)	0 (0)	0 (0)
Headache	4,034,030 (35.43)	6,500,898 (62.8)	3,303,304 (29.0)	2,617,760 (25.43)
Headache, Grade 3 ^f	219 (1.9)	515,553 (5.0)	162 (1.4)	124,129 (1.2)
Myalgia	2,698,699 (23.7)	6,353,769 (61.36)	1,626,628 (14.3)	1,312,411 (12.79)
Myalgia, Grade 3 ^d	73 (0.6)	1,032,113 (10.01)	38 (0.3)	39,42 (0.4)
Arthralgia	1,892,893 (16.6)	4,685,993 (45.25)	1,327 (11.6)	1,087,172 (10.57)
Arthralgia, Grade 3 ^d	47 (0.4)	603,476,47 (5.89)	29 (0.3)	36,37 (0.3)
Arthralgia, Grade 4 ^e	1 (<0.1)	0 (0)	0 (0)	0 (0)
Chills	1,051 (9.2)	5,004,341 (48.36)	730 (6.4)	611,658 (5.96.0)
Chills, Grade 3 ^g	17 (0.1)	45,164 (1.5)	8 (<0.1)	44,15 (0.1)
Gastrointestinal Symptoms ^h	1,069,068 (9.4)	2,209,348 (21.34)	908 (8.0)	754,801 (7.3)
Gastrointestinal symptoms, Grade 3 ^{h,i}	6 (<0.1)	810 (<0.1)	8 (<0.1)	8 (<0.1)
Fever	105 (0.9)	1,806,908 (17.4)	3937 (0.3)	3839 (0.4)
Fever, Grade 3 ^j	10 (<0.1)	468,184 (1.67)	1 (<0.1)	12 (<0.1)
Fever, Grade 4 ^k	4 (<0.1)	4012 (<0.1)	4 (<0.1)	2 (<0.1)
Use of antipyretic or pain medication	2,656 (23.3)	6,292 (57.3)	1,523 (13.4)	1,2498 (11.4)

* 7 days included day of vaccination and the subsequent 6 days. Events and use of antipyretic or pain medication were collected in the electronic diary (e-diary).

^a Placebo was a saline solution.

^b Grade 3 pain and lymphadenopathy/axillary swelling/tenderness: Defined as any use of prescription pain reliever; prevents daily activity.

^c Grade 3 swelling and erythema: Defined as >100 mm / >10 cm.

^d Grade 3 fatigue, myalgia, arthralgia: Defined as significant; prevents daily activity.

^e Grade 4 fatigue, arthralgia: Defined as requires emergency room visit or hospitalization.

^f Grade 3 headache: Defined as significant; any use of prescription pain reliever or prevents daily activity.

^g Grade 3 chills: Defined as prevents daily activity and requires medical intervention.

^h Gastrointestinal symptoms = nausea, vomiting, diarrhea, and/or abdominal pain.

ⁱ Grade 3 gastrointestinal symptoms: Defined as prevents daily activity, requires outpatient intravenous hydration.

^j Grade 3 fever: Defined as $\geq 39.0 - \leq 40.0^{\circ}\text{C}$ / $\geq 102.1 - \leq 104.0^{\circ}\text{F}$.

^k Grade 4 fever: Defined as $>40.0^{\circ}\text{C}$ / $>104.0^{\circ}\text{F}$.

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Table 2: Number and Percentage of Participants ~~with~~ With Solicited Local and Systemic Adverse Reactions Within 7 Days* After Each Dose in Participants 65 Years and Older (Solicited Safety Set, Dose 1 and Dose 2)

	Moderna COVID-19 Vaccine		Placebo ^a	
	Dose 1 (N=3,762) n (%)	Dose 2 (N=3, 589 692) n (%)	Dose 1 (N=3,748) n (%)	Dose 2 (N=3, 549 648) n (%)
Local Adverse Reactions				
Pain	2,782 (74.0)	2,990 3,070 (83.42)	481 (12.8)	421 437 (11.912.0)
Pain, Grade 3 ^b	50 (1.3)	96 98 (2.7)	32 (0.9)	17 18 (0.5)
Lymphadenopathy Axillary swelling/tenderness	231 (6.1)	302 315 (8.45)	155 (4.1)	90 97 (2.57)
Lymphadenopathy Axillary swelling/tenderness, Grade 3 ^b	12 (0.3)	21 (0.6)	14 (0.4)	8 (0.2)
Swelling (hardness) \geq 25 mm	166 165 (4.4)	386 400 (10.8)	19 18 (0.5)	13 (0.4)
Swelling (hardness), Grade 3 ^c	20 (0.5)	69 72 (1.92.0)	3 (<0.1)	7 (0.2)
Erythema (redness) \geq 25 mm	86 (2.3)	265 275 (7.45)	19 20 (0.5)	13 (0.4)
Erythema (redness), Grade 3 ^c	8 (0.2)	75 77 (2.1)	2 (<0.1)	3 (<0.1)
Systemic Adverse Reactions				
Fatigue	1,251 (33.3)	2,094 152 (58.43)	851 (22.7)	695 716 (19.6)
Fatigue, Grade 3 ^d	30 (0.8)	248 254 (6.9)	23 22 (0.6)	20 (0.65)
Headache	921 (24.5)	1,665 704 (46.42)	724 723 (19.3)	635 650 (17.98)
Headache, Grade 3 ^e	52 (1.4)	107 106 (3.02.9)	34 (0.9)	32 33 (0.9)
Myalgia	743 742 (19.87)	1,683 739 (46.947.1)	443 (11.8)	385 398 (10.89)
Myalgia, Grade 3 ^d	17 (0.5)	201 205 (5.6)	9 (0.2)	10 (0.3)
Arthralgia	618 (16.4)	1,252 291 (34.935.0)	456 (12.2)	381 397 (10.79)
Arthralgia, Grade 3 ^d	13 (0.3)	122 123 (3.43)	8 (0.2)	7 (0.2)
Chills	202 (5.4)	1,099 141 (30.69)	148 (4.0)	144 151 (4.1)
Chills, Grade 3 ^f	7 (0.2)	27 (0.87)	6 (0.2)	2 (<0.1)
Gastrointestinal symptoms ^g	194 (5.2)	425 437 (11.8)	166 (4.4)	129 133 (3.6)

Commented [A12]: Source: EUA 27073 SN0006
DS2 - Table 14.3.1.1.4 Summary of Subjects with Solicited Adverse Reactions Within 7 Days After First Injection by Age Group and Grade First Injection Solicited Safety Set
DS2 - Table 14.3.1.1.5 Summary of Subjects with Solicited Adverse Reactions Within 7 Days After Second Injection by Age Group and Grade Second Injection Solicited Safety Set

DS2 - Ad-hoc Table VRBPAC AR 2.1 Summary of Medications for Solicited Adverse Events after First Vaccination First Injection Solicited Safety Set
DS2 - Ad-hoc Table VRBPAC AR 2.2 Summary of Medications for Solicited Adverse Events after Second Vaccination Second Injection Solicited Safety Set

	Moderna COVID-19 Vaccine		Placebo ^a	
	Dose 1 (N=3,762) n (%)	Dose 2 (N=3,589 692) n (%)	Dose 1 (N=3,748) n (%)	Dose 2 (N=3,549 648) n (%)
Gastrointestinal symptoms, Grade 3 ^{g,h}	4 (0.1)	10 (0.3)	4 (0.1)	3 (<0.1)
Gastrointestinal symptoms, Grade 4 ^{g,i}	0 (0)	1 (<0.1)	0 (0)	0 (0)
Fever	10 (0.3)	366 370 (10.2 0)	7 (0.2)	54 (0.1)
Fever, Grade 3 ^j	1 (<0.1)	18 (0.5)	1 (<0.1)	0 (0)
Fever, Grade 4 ^k	0 (0)	1 (<0.1)	2 (<0.1)	1 (<0.1)
Use of antipyretic or pain medication	673 (17.9)	1,546 (41.9)	477 (12.7)	329 (9.0)

* 7 days included day of vaccination and the subsequent 6 days. Events and use of antipyretic or pain medication were collected in the electronic diary (e-diary).

^a Placebo was a saline solution.

^b Grade 3 pain and [lymphadenopathy/axillary swelling/tenderness](#): Defined as any use of prescription pain reliever; prevents daily activity.

^c Grade 3 swelling and erythema: Defined as >100 mm / >10 cm.

^d Grade 3 fatigue, myalgia, arthralgia: Defined as significant; prevents daily activity.

^e Grade 3 headache: Defined as significant; any use of prescription pain reliever or prevents daily activity.

^f Grade 3 chills: Defined as prevents daily activity and requires medical intervention.

^g Gastrointestinal symptoms = nausea, vomiting, diarrhea, and/or abdominal pain.

^h Grade 3 gastrointestinal symptoms: Defined as prevents daily activity, requires outpatient intravenous hydration.

ⁱ Grade 4 gastrointestinal symptoms: Defined as requires emergency room visit or hospitalization for hypotensive shock.

^j Grade 3 fever: Defined as $\geq 39.0 - \leq 40.0^{\circ}\text{C}$ / $\geq 102.1 - \leq 104.0^{\circ}\text{F}$.

^k Grade 4 fever: Defined as $>40.0^{\circ}\text{C}$ / $>104.0^{\circ}\text{F}$.

Solicited local and systemic adverse reactions reported following [administration of](#) Moderna COVID-19 Vaccine had a median duration of 2 to 3 days.

Grade 3 solicited local adverse reactions were more frequently reported after Dose 2 than Dose 1. Solicited systemic adverse reactions were more frequently reported by vaccine ~~subjects~~ [recipients](#) after Dose 2 than after Dose 1.

Unsolicited Adverse Events

Participants were monitored for unsolicited ~~AEs~~ [adverse events](#) for up to 28 days following each dose and follow-up is ongoing. Serious adverse events and medically attended adverse events will be recorded for the entire study duration of 2 years. As of November 25, 2020, among participants who had received at least 1 dose of vaccine or placebo (vaccine=~~15,484~~185, placebo=~~15,465~~166), unsolicited adverse events that occurred within 28 days following each vaccination were reported by 23.9% of [subjects-participants](#) (n=3,632) who received Moderna COVID-19 Vaccine and 21.6% of [subjects-participants](#) (n=3,277) who received placebo. In these analyses, 87.9% of study participants had at least 28 days of follow-up after Dose 2.

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Reports of lymphadenopathy-related events that were not necessarily captured in the 7-day e-Diary diary were numerically imbalanced between treatment groups; (1.14% of vaccine recipients and 0.63% of placebo recipients) reporting such events, which are plausibly related to vaccination. These events included lymphadenopathy, lymphadenitis, lymph node pain, vaccination-site lymphadenopathy, injection-site lymphadenopathy, and axillary mass, which were plausibly related to vaccination. All of these events are similar to the axillary swelling/tenderness in the injected arm reported as solicited adverse reactions.

Commented [A13]: SPONSOR COMMENT: Can the Division advise on the source of these numbers and/or the calculation used?

There was a numerical imbalance in hypersensitivity adverse events, reported in 1.5% of vaccine recipients and 1.1% of placebo recipients. Hypersensitivity events in the vaccine group included injection site rash and injection site urticaria, which are likely related to vaccination.

Throughout the same period, there were three reports of Bell's palsy in the Moderna COVID-19 Vaccine group (one of which was a serious adverse event), which occurred 22, 28, and 32 days after vaccination, and one in the placebo group which occurred 17 days after vaccination. Currently available information on Bell's palsy is insufficient to determine a causal relationship with the vaccine.

There were no other notable patterns or numerical imbalances between treatment groups for specific categories of adverse events (including other neurologic, neuro-inflammatory, and thrombotic events) that would suggest a causal relationship to Moderna COVID-19 Vaccine.

Serious Adverse Events

As of November 25, 2020, serious adverse events were reported by 1.0% (n=147) of subjects-participants who received Moderna COVID-19 Vaccine and 1.0% (n=153) of subjects-participants who received placebo, one of which was the case of Bell's Palsy-palsy which occurred 32 days following receipt of vaccine.

In these analyses, 87.9% of study participants had at least 28 days of follow-up after Dose 2, and the median follow-up time for all participants was 9 weeks after Dose 2.

~~Among Moderna COVID-19 Vaccine recipients, there were two serious adverse events of facial swelling in vaccine recipients with a history of injection of dermatological fillers. The onset of swelling was reported 1 and 2 days, respectively, after vaccination that and were was likely related to vaccination.~~

~~One Moderna COVID-19 Vaccine recipient reported a serious adverse event of intractable nausea and vomiting with onset 1 day after vaccination which was likely related to vaccination.~~

There were no other notable patterns or imbalances between treatment groups for specific categories of serious adverse events (including neurologic, neuro-inflammatory, and thrombotic events) that would suggest a causal relationship to Moderna COVID-19 Vaccine.

Commented [A14]: SPONSOR COMMENT: Moderna proposes to delete this sentence. This participant had a history of vomiting and headaches. It is Moderna's position that this information as written lacks proper context and is not a generalizable concern to providers, placing undue focus on this single event.

8. REQUIREMENTS AND INSTRUCTIONS FOR REPORTING ADVERSE EVENTS AND VACCINE ADMINISTRATION ERRORS

See Overall Safety Summary (Section 6) for additional information.

The vaccination provider enrolled in the federal COVID-19 Vaccination Program is responsible

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for the MANDATORY reporting of the listed events following Moderna COVID-19 Vaccine to the Vaccine Adverse Event Reporting System (VAERS)

- Vaccine administration errors whether or not associated with an adverse event
- Serious adverse events* (irrespective of attribution to vaccination)
- Cases of multisystem inflammatory syndrome (MIS) in adults
- Cases of COVID-19 that results in hospitalization or death

*Serious Adverse Events are defined as:

- Death;
- A life-threatening adverse event;
- Inpatient hospitalization or prolongation of existing hospitalization;
- A persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions;
- A congenital anomaly/birth defect;
- An important medical event that based on appropriate medical judgement may jeopardize the individual and may require medical or surgical intervention to prevent one of the outcomes listed above.

Instructions for reporting to VAERS

The vaccination provider enrolled in the federal COVID-19 Vaccination Program should complete and submit a VAERS form to FDA using one of the following methods:

- Complete and submit the report online: <https://vaers.hhs.gov/reportevent.html> or <https://vaers.hhs.gov/reportevent.html>, or
- If you are unable to submit this form electronically, you may fax it to VAERS at 1-877-721-0366. If you need additional help submitting a report, you may call the VAERS toll-free information line at 1-800-822-7967 or send an email to info@vaers.org.

IMPORTANT: When reporting adverse events or vaccine administration errors to VAERS, please complete the entire form with detailed information. It is important that the information reported to FDA be as detailed and complete as possible. Information to include:

- Patient demographics (e.g., patient name, date of birth)
- Pertinent medical history
- Pertinent details regarding admission and course of illness
- Concomitant medications
- Timing of adverse event(s) in relationship to administration of Moderna COVID-19 Vaccine
- Pertinent laboratory and virology information
- Outcome of the event and any additional follow-up information if it is available at the time of the VAERS report. Subsequent reporting of follow-up information should be completed if additional details become available.

The following steps are highlighted to provide the necessary information for safety tracking:

1. In Box 17, provide information on Moderna COVID-19 Vaccine and any other vaccines

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administered on the same day; and in Box 22, provide information on any other vaccines received within one month prior.

2. In Box 18, description of the event:
 - a. Write “Moderna COVID-19 Vaccine EUA” as the first line
 - b. Provide a detailed report of vaccine administration error and/or adverse event. It is important to provide detailed information regarding the patient and adverse event/medication error for ongoing safety evaluation of this unapproved vaccine. Please see information to include listed above.
3. Contact information:
 - a. In Box 13, provide the name and contact information of the prescribing healthcare provider or institutional designee who is responsible for the report.
 - b. In Box 14, provide the name and contact information of the best doctor/healthcare professional to contact about the adverse event.
 - c. In Box 15, provide the address of the facility where vaccine was given (NOT the healthcare provider’s office address).

Other Reporting Instructions

Vaccination providers may report to VAERS other adverse events that are not required to be reported using the contact information above.

To the extent feasible, report adverse events to Moderna using the contact information below or by providing a copy of the VAERS form to Moderna.

<u>WebsiteEmail</u>	<u>Fax number</u>	<u>Telephone number</u>
ModernaPV@modernatx.com www.xxx.com	1-866-599-1342 *****	1-866-MODERNA (1-866-663-3762) *****

10 DRUG INTERACTIONS

There are no data to assess the concomitant administration of the Moderna COVID-19 Vaccine with other vaccines.

11 USE IN SPECIFIC POPULATIONS

11.1 Pregnancy

Pregnancy Exposure Registry

There is a pregnancy exposure registry that monitors pregnancy outcomes in women exposed to Moderna COVID-19 Vaccine during pregnancy. Women who are vaccinated with Moderna COVID-19 Vaccine during pregnancy are encouraged to enroll in the registry by calling 1-866-MODERNA (1-866-663-3762).

Risk Summary

All pregnancies have a risk of birth defect, loss, or other adverse outcomes. In the U.S. general

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population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively. Available data on Moderna COVID-19 Vaccine administered to pregnant women are insufficient to inform vaccine-associated risks in pregnancy.

Data

Animal Data

A combined developmental and perinatal/postnatal reproductive toxicity study of Moderna COVID-19 Vaccine was conducted in rats. Intramuscular administration of a 100 mcg dose of Moderna COVID-19 Vaccine at 28 and 14 days prior to mating and on gestation days 1 and 13 did not result in any adverse effects on female reproduction, embryo-fetal development, or postnatal development.

11.2 Lactation

Risk Summary

Data are not available to assess the effects of Moderna COVID-19 Vaccine on the breastfed infant or on milk production/excretion.

11.3 Pediatric Use

Safety and effectiveness have not been assessed in persons less than 18 years of age. Emergency Use Authorization of Moderna COVID-19 Vaccine does not include use in individuals younger than 18 years of age.

11.4 Geriatric Use

Clinical studies of Moderna COVID-19 Vaccine included participants 65 years of age and older receiving vaccine or placebo, and their data contribute to the overall assessment of safety and efficacy. In an ongoing Phase 3 clinical study, 24.8% (n=7,520) of participants were 65 years of age and older and 4.6% (n=1,400,399) of participants were 75 years of age and older. Vaccine efficacy in participants 65 years of age and older was 86.4% (95% CI 61.4, 95.52) compared to 99.5.6% (95% CI 90.6, 97.9) in participants 18 to <65 years of age [see *Clinical Trial Results and Supporting Data for EUA (18)*]. Overall, there were no notable differences in the safety profiles observed in participants 65 years of age and older ~~compared and to~~ younger participants [see *Clinical Trials Experience (6.1)*].

13 DESCRIPTION

Moderna COVID-19 Vaccine is provided as a white to off-white suspension for intramuscular injection. Each 0.5 mL dose of Moderna COVID-19 Vaccine contains 100 mcg of messenger ribonucleic acid (mRNA) encoding the pre-fusion stabilized Spike glycoprotein (S) of SARS-CoV-2 virus.

The Moderna COVID-19 Vaccine contains the following ingredients: lipids (SM-102, polyethylene glycol [PEG] 2000 dimyristoyl glycerol [DMG], cholesterol, and 1,2-distearoyl-sn-glycero-3-phosphocholine [DSPC]), tromethamine, tromethamine hydrochloride, acetic acid,

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Commented [A15]: FDA COMMENT: Moderna, in this section, please include a summary of the DART study for our review.

SPONSOR RESPONSE: Moderna has added a summary of the DART study as requested.

Source: IND 019745 SN0084
Study No. 20248897 A GLP Intramuscular Combined Developmental and Perinatal/Postnatal reproductive toxicity study of mRNA-1273 in Rats

Commented [A16]: Source: EUA 27073 SN0006 DS2 - Table 14.1.3.1.2 Baseline Demographics and Characteristics by Age Group Full Analysis Set

sodium acetate, and sucrose.

Moderna COVID-19 Vaccine does not [a](#) contain preservative.

The vial stoppers are not made with natural rubber latex.

14 CLINICAL PHARMACOLOGY

14.1 Mechanism of Action

The mRNA in the Moderna COVID-19 Vaccine is formulated in lipid [nanoparticles](#), which enable delivery of the mRNA into host cells to allow expression of the SARS-CoV-2 S antigen. The vaccine elicits an immune response to the S antigen, which protects against COVID-19.

18 CLINICAL TRIAL RESULTS AND SUPPORTING DATA FOR EUA

A Phase 3 randomized, placebo-controlled, observer-blind clinical trial to evaluate the efficacy, safety, and immunogenicity of the Moderna COVID-19 Vaccine in participants 18 years of age and older is ongoing in the United States (NCT04470427). Randomization was stratified by age and health risk: 18 to <65 years of age without comorbidities (not at risk for progression to severe COVID-19), 18 to <65 years of age with comorbidities (at risk for progression to severe COVID-19), and 65 years of age and older with or without comorbidities. Participants who were immunocompromised and those with a known history of SARS-CoV-2 infection were excluded from the study. Participants with no known history of SARS-CoV-2 infection but with positive laboratory results indicative of infection at study entry were included. The study allowed for the inclusion of participants with stable pre-existing medical conditions, defined as disease not requiring significant change in therapy or hospitalization for worsening disease during the 3 months before enrollment, as well as participants with stable human immunodeficiency virus (HIV) infection. A total of 30,418 participants were randomized equally to receive 2 doses of the Moderna COVID-19 Vaccine or saline placebo 1 month apart. Participants will be followed for efficacy and safety until 24 months after the second dose.

The primary efficacy analysis population (referred to as the Per-Protocol Set), included [27,817](#) participants who received two doses (at 0 and 1 month) of either Moderna COVID-19 Vaccine (n=[13,934](#)) or placebo (n=[13,883](#)), and had a negative baseline SARS-CoV-2 status. In the Per-Protocol Set, 47.4% were female, [20.7](#)% were Hispanic or Latino; 79.4% were white, 9.7% were African American, 4.7% were Asian, and 3.1% other races. The median age of participants was 53 years (range 18-95) and 25.3% of participants were 65 years of age and older. Of the study participants in the Per Protocol Set, [22.3](#)% were at increased risk of severe COVID-19 due to at least one pre-existing medical condition (chronic lung disease, significant cardiac disease, severe obesity, diabetes, liver disease, or HIV infection) regardless of age. Between participants who received Moderna COVID-19 Vaccine and those who received placebo, there were no notable differences in demographics or pre-existing medical conditions.

Efficacy Against COVID-19

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Commented [A17]: SPONSOR COMMENT: The accurate term for the lipid component of the formulation is "nanoparticles." The lipid component meets the specification of 80-180 nm and FDA guidance for nanoparticles.

Commented [A18]: FDA COMMENT: Moderna, please revise this section to reflect the primary analysis based on Nov 21, 2020, efficacy cut off.

SPONSOR RESPONSE: Moderna has updated demographics and efficacy data to Data Snapshot 2 as requested.

Commented [A19]: Source: EUA 27073 SN0006 DS2 - Table 14.1.2.2 Number of Subjects in Each Analysis Set by Age Group Randomization Set – Per Protocol Set

Commented [A20]: Source: EUA 27073 SN0006 DS2 - Table 14.1.3.4.2 Baseline Demographics and Characteristics by Age Group Per-Protocol Set

COVID-19 was defined based on the following criteria: The participant must have experienced at least two of the following systemic symptoms: fever ($\geq 38^{\circ}\text{C}$), chills, myalgia, headache, sore throat, new olfactory and taste disorder(s); or the participant must have experienced at least one of the following respiratory signs/symptoms: cough, shortness of breath or difficulty breathing, or clinical or radiographical evidence of pneumonia; and the participant must have at least one NP swab, nasal swab, or saliva sample (or respiratory sample, if hospitalized) positive for SARS-CoV-2 by RT-PCR. COVID-19 cases were adjudicated by a Clinical Adjudication Committee.

At the time of the interim analysis,† The median length of follow up for efficacy for participants in the study was 7 weeks post Dose 2. There were 5-11 COVID-19 cases in the Moderna COVID-19 Vaccine group and 90-185 cases in the placebo group, with a vaccine efficacy of 94.51% (95% confidence interval of 86.589.3% to 97.896.8%).

Table 3: Interim Primary Efficacy Analysis: COVID-19* in Participants 18 Years of Age and Older Starting 14 Days After Dose 2 per Adjudication Committee Assessments – Per-Protocol Set

Moderna COVID-19 Vaccine			Placebo			% Vaccine Efficacy (95% CI)†
Participants (N)	COVID-19 Cases (n)	Incidence Rate of COVID-19 per 1,000 Person-Years	Participants (N)	COVID-19 Cases (n)	Incidence Rate of COVID-19 per 1,000 Person-Years	
<u>14,134</u> <u>+3,934</u>	<u>511</u>	<u>3.328</u> <u>+1.840</u>	<u>14,073</u> <u>+3,883</u>	<u>185</u> <u>90</u>	<u>56.510</u> <u>33.36</u> <u>5</u>	<u>94.1</u> (89.3, 96.8) <u>94.5</u> (86.5, 97.8) <u>p<0.0001</u> ‡

* COVID-19: symptomatic COVID-19 requiring positive RT-PCR result and at least two systemic symptoms or one respiratory symptom. Cases starting 14 days after Dose 2.

† 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 $\text{VE} \leq 30\%$

The subgroup analyses of vaccine efficacy are presented in Table 34.

Table 4: Interim Subgroup Analyses of Vaccine Efficacy: COVID-19* Cases Starting 14 Days After Dose 2 per Adjudication Committee Assessments – Per-Protocol Set

Age Subgroup (Years)	Moderna COVID-19 Vaccine			Placebo			% Vaccine Efficacy (95% CI)*
	Participants (N)	COVID-19 Cases (n)	Incidence Rate of COVID-19 per 1,000 Person-Years	Participants (N)	COVID-19 Cases (n)	Incidence Rate of COVID-19 per 1,000 Person-Years	

Commented [A21]: Source: EUA 27073 SN0006 DS2 - Table 14.2.2.1.1.1.1 Analysis of Vaccine Efficacy of mRNA-1273 to Prevent COVID-19 Based on Adjudication Committee Assessments Starting 14 Days After Second Injection Per-Protocol Set

Commented [A22]: SPONSOR COMMENT: Moderna would like to retain the p value as Data Snapshot 2 is the primary analysis.

Commented [A23]: Source: EUA 27073 SN0006 DS2 - Table 14.2.2.1.1.6.1.1 Subgroup Analysis of Vaccine Efficacy of mRNA-1273 to Prevent COVID-19 Based on Adjudication Committee Assessments Starting 14 Days After Second Injection by Age Group (≥ 18 and < 65 Years, ≥ 65 Years) Per-Protocol Set

18 to <65	10,551 40,407	57	2,875 2,504	10,521 40,384	156 75	64,625 37,788	95.6 (90.6, 97.9) 93.4 (83.7, 97.3)
≥65	3,583 3,527	04	4,595 —	3,552 3,499	29 15	33,728 21,046	86.4 (61.4, 95.2) 100

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* COVID-19: symptomatic COVID-19 requiring positive RT-PCR result and at least two systemic symptoms or one respiratory symptom. Cases starting 14 days after Dose 2.

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

Severe COVID-19 was defined based on confirmed COVID-19 as per the primary efficacy endpoint case definition, plus any of the following: Clinical signs indicative of severe systemic illness, respiratory rate ≥ 30 per minute, heart rate ≥ 125 beats per minute, SpO₂ $\leq 93\%$ on room air at sea level or PaO₂/FIO₂ < 300 mm Hg; or respiratory failure or ARDS, (defined as needing high-flow oxygen, non-invasive or mechanical ventilation, or ECMO), evidence of shock (systolic blood pressure < 90 mmHg, diastolic BP < 60 mmHg or requiring vasopressors); or significant acute renal, hepatic, or neurologic dysfunction; or admission to an intensive care unit or death.

Among all participants in the Per-Protocol Set ~~interim~~ analysis, no cases of severe COVID-19 were reported in the Moderna COVID-19 Vaccine group compared with ~~44~~[30](#) cases reported in the placebo group (incidence rate [9.138](#)~~4,072~~ per 1,000 person-years).

Commented [A24]: Source: EUA 27073 SN0006 DS2 - Table 14.2.2.1.1.1 Analysis of Vaccine Efficacy of mRNA-1273 to Prevent Severe COVID-19 Based on Adjudication Committee Assessments Starting 14 Days After Second Injection Per-Protocol Set

19 HOW SUPPLIED/STORAGE AND HANDLING

Moderna COVID-19 Vaccine Suspension for Intramuscular Injection, Multiple-Dose Vials are supplied as a carton of 10 multiple-dose vials (NDC 80777-273-99) each containing ten 0.5 mL doses of vaccine.

Store frozen between -25° to -15°C (-13° to 5°F). Store in the original carton to protect from light. Do not store on dry ice or below -40°C (-40°F).

Vials can be stored refrigerated between 2° to 8°C (36° to 46°F) for up to 30 days prior to first use. Do not refreeze.

Unopened vials may be stored between 8° to 25°C (46° to 77°F) for up to 12 hours. Do not refreeze.

After the first dose has been withdrawn, the vial should be held between 2° to 25°C (36° to 77°F). Discard vial after 6 hours. Do not refreeze.

20 PATIENT COUNSELING INFORMATION

Advise the recipient or caregiver to read the Fact Sheet for Recipients and Caregivers.

21 CONTACT INFORMATION

For general questions, send an email, visit the website or call the telephone number provided below.

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<u>Email</u>	<u>Telephone number</u>
medinfo@modernatx.com	1-866-MODERNA (1-866-663-3762)

This EUA Prescribing Information may have been updated. For the most recent Full EUA Prescribing Information, please visit www.modernatx.com/covid19vaccine-eua.

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Patent(s): www.modernatx.com/patents

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