

Mfr Report #	(b) (6)
UF/Importer Report #	
FDA Use Only	

A. PATIENT INFORMATION			
1. Patient Identifier US3552053	2. Age at Time of Event: 65 Years or Date of Birth: (b) (6)/1955	3. Sex <input checked="" type="checkbox"/> Female <input type="checkbox"/> Male	4. Weight ____ lbs or ____ kgs
In confidence			
B. ADVERSE EVENT OR PRODUCT PROBLEM			
1. <input checked="" type="checkbox"/> Adverse Event and/or <input type="checkbox"/> Product Problem (e.g., defects/malfunctions)			
2. Outcomes Attributed to Adverse Event (Check all that apply)			
<input type="checkbox"/> Death: _____ (mm/dd/yyyy)			
<input type="checkbox"/> Life-threatening			
<input checked="" type="checkbox"/> Hospitalization - initial or prolonged			
<input type="checkbox"/> Required Intervention to Prevent Permanent Impairment/Damage (Devices)			
<input type="checkbox"/> Disability or Permanent Damage			
<input type="checkbox"/> Congenital Anomaly/Birth Defect			
<input type="checkbox"/> Other Serious (Important Medical Events)			
3. Date of Event (mm/dd/yyyy) 09/15/2020		4. Date of This Report (mm/dd/yyyy) 11/22/2020	
5. Describe Event or Problem Event Verbatim [LOWER LEVEL TERM] (Related symptoms if any separated by commas) INTRACTABLE VOMITING [Vomiting] NAUSEA [Nausea] Case Description: This 65-year-old, White, female subject (US3552053) was participating A Phase 3, Randomized, Stratified, Observer-Blind, Placebo-Controlled Study to Evaluate the Efficacy, Safety, and Immunogenicity of mRNA-1273 SARS-CoV-2 Vaccine in Adults Aged 18 Years and Older (mRNA-1273-P301) and experienced intractable vomiting and nausea. The subject's medical history, as provided by the investigator, included headaches with nausea that led to hospitalization, hysterectomy, synovial cyst removal, endometriosis, bilateral first and fifth metatarsal continued in additional info section...			
6. Relevant Tests/Laboratory Data, Including Dates #1 09/17/2020 Blood albumin 4.4 g/dL #2 09/18/2020 Blood albumin 3.8 g/dL #3 09/17/2020 Blood alkaline phosphatase (continued) #4 09/18/2020 Blood alkaline phosphatase (continued) #5 09/17/2020 Blood calcium 9.6 mg/dl #6 09/18/2020 Blood calcium 9.0 mg/dl continued in additional info section...			
7. Other Relevant History, Including Preexisting Medical Conditions (e.g. allergies, race, pregnancy, smoking and alcohol use, hepatic/renal dysfunction, etc.) Race: White #1 --/--/1985 to 08/--/1996 Historical Condition, (Continued) #2 --/--/1989 to Ongoing Current Condition, (Continued) #3 08/--/1996 to 08/--/1996 Historical Condition, (Continued) continued in additional info section...			

C. SUSPECT PRODUCT(S)			
1. Name (Give labeled strength & mfr/labeler) (Regimens Continued)			
#1. mRNA-1273 vs Placebo (Code not broken)			
#2.			
2. Dose, Frequency & Route Used		3. Therapy Dates (if unknown, give duration) from/to (or best estimate)	
#1. Blinded, Information withheld.		#1. 08/17/2020 to 08/17/2020	
#2.		#2.	
4. Diagnosis for Use (Indication)		5. Event Abated After Use Stopped or Dose Reduced?	
#1. COVID-19 (Continued)		#1. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Doesn't Apply	
#2.		#2. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Doesn't Apply	
6. Lot #	7. Exp. Date	8. Event Reappeared After Reintroduction?	
#1. Blinded	#1. Blinded	#1. <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Doesn't Apply	
#2.	#2.	#2. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Doesn't Apply	
9. NDC# or Unique ID			
10. Concomitant Medical Products and Therapy Dates (Exclude treatment of event)			
1) MELATONIN (MELATONIN) --/--/2015 to ongoing			
2) BENADRYL /00000402/ continued in additional info section...			
G. ALL MANUFACTURERS			
1. Contact Office (and Manufacturing Site for Devices)		2. Phone Number	
Name ModernaTX, Inc. David Martin MD.		617-335-1804	
Address 200 Technology Square Cambridge, MA 02139 United States of America		3. Report Source (Check all that apply)	
Email Address		<input type="checkbox"/> Foreign	
		<input checked="" type="checkbox"/> Study	
		<input type="checkbox"/> Literature	
		<input type="checkbox"/> Consumer	
		<input checked="" type="checkbox"/> Health Professional	
		<input type="checkbox"/> User Facility	
		<input type="checkbox"/> Company Representative	
		<input type="checkbox"/> Distributor	
		<input type="checkbox"/> Other: _____	
4. Date Received by Manufacturer (mm/dd/yyyy) 10/20/2020		5. (A)NDA # _____	
6. If IND, Give Protocol # mRNA-1273-P301		IND # 019635	
7. Type of Report (Check all that apply)		BLA # _____	
<input type="checkbox"/> 5-day <input type="checkbox"/> 30-day		PMA/ 510(k) # _____	
<input type="checkbox"/> 7-day <input type="checkbox"/> Periodic		Combination Product <input type="checkbox"/> Yes	
<input type="checkbox"/> 10-day <input type="checkbox"/> Initial		Pre-1938 <input type="checkbox"/> Yes	
<input type="checkbox"/> 15-day <input checked="" type="checkbox"/> Follow-up #4		OTC Product <input type="checkbox"/> Yes	
9. Manufacturer Report Number (b) (6)		8. Adverse Event Term(s) Vomiting, Nausea	
E. INITIAL REPORTER			
1. Name and Address Dr. SHARON FREY Saint Louis University Saint Louis, MO UNITED STATES			
Phone # (b) (6)		Email Address (b) (6) @health.slu.edu	
2. Health Professional? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3. Occupation Physician	
		4. Initial Reporter Also Sent Report to FDA <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unk	

Submission of a report does not constitute an admission that medical personnel, user facility, distributor, manufacturer or product caused or contributed to the event

ADDITIONAL INFORMATION**B5. EVENT DESCRIPTION (Continued)**

unionectomies, mitral valve prolapse, irritable bowel disease, benign synovial cyst, spinal fusion surgery, insomnia, chronic right uveitis, left sided weakness, left calf numbness, kidney stones, and left meniscus tear with arthroscopic repair. Concomitant medications included melatonin, diphenhydramine hydrochloride, prednisolone acetate, and cefalexin (last dose 04 Sep 2020).

The subject received the first dose of intramuscular mRNA-1273 or placebo for SARS-CoV-2 vaccination on 17 Aug 2020. The subject's final dose of study drug was administered one day prior to event onset, on 14 Sep 2020. The Day 29 nasopharyngeal swab test, collected prior to administration of study drug on 14 Sep 2020, showed COVID-19 as negative.

On 15 Sep 2020, the subject experienced intractable vomiting and nausea. She had a fever, with a maximum temperature of 101 degrees Fahrenheit, moderate headache, and mild nausea. She had not been able to drink much and was not able to keep food down. She drank 22 ounces of fluid with no food and she experienced an interference with activity.

On 16 Sep 2020, the subject reported mild headache and severe nausea and stated that, through the time of contact with the site that day, her oral intake was "only a few sips of fluids". Her fever had resolved with a recorded temperature of 98 degrees Fahrenheit. That evening, the subject visited an urgent care, where she received treatment with fluids and ondansetron for the event of intractable nausea with vomiting. She was provided a prescription for ondansetron for ongoing treatment at home.

On the morning of 17 Sep 2020, the subject reported feeling much better and that both the headache and nausea had improved to mild. She also mentioned that she had not filled the ondansetron prescription she had been provided the day before. That evening, the subject's symptoms had worsened again. Her husband reported that she was unable to keep fluids down and that they wanted to go to the emergency room. The ondansetron prescription had been filled and the subject had taken a dose "a few minutes" before the call to the site without any improvement. The subject's husband also reported that the subject had a prior history of headaches with severe nausea that had led to hospital admissions in the past. This information had not been previously provided.

On the evening of 17 Sep 2020, the subject presented to the emergency department with intractable nausea and vomiting and was admitted to the hospital. Vital signs included blood pressure 162/70 mmHg, respiratory rate 18/min, and heart rate 63/min. Laboratory results included glucose 121 mg/dL (high), urinalysis revealed hazy clarity and trace ketones, but was otherwise within normal limits, white blood cell count (WBC) 6.2 K/uL, red blood cell count (RBC) 4.40 M/uL, hemoglobin (Hgb) 13.5 g/dL, hematocrit (Hct) 40%, platelet count 228 K/uL, potassium 4.2 mmol/L, blood urea nitrogen (BUN) 13 mg/dL, creatinine 0.8 mg/dL, calcium 9.6 mg/dL, albumin 4.4 g/dL, and alkaline phosphate 86 U/L. While hospitalized, no COVID testing was done. Treatment for the event included intravenous fluids and ondansetron.

On 18 Sep 2020, the subject's symptoms had improved, and she was discharged from the hospital. Relevant laboratory results included WBC 7.2 K/uL, RBC 4.07 M/uL, Hgb 12.4 g/dL, Hct 37.3%, platelet count 203 K/uL, potassium 4.2 mmol/L, BUN 11 mg/dL, creatinine 0.9 mg/dL, calcium 9.0 mg/dL, albumin 3.8 g/dL, and alkaline phosphatase 74 U/L. Ongoing treatment prescribed at discharge included metoclopramide and ondansetron. The subject reported that she did not take the treatment medications prescribed at discharge.

On 21 Sep 2020, the subject became free of symptoms. Throughout the course of illness, the subject denied taking any over the counter or prescription medications to treat symptoms at home, outside of the single dose of ondansetron on 17 Sep 2020.

Action taken with study drug was reported as not applicable in response to the events of intractable vomiting and nausea, as the subject had already received both scheduled doses.

The events, intractable vomiting and nausea, were considered resolved on 21 Sep 2020.

The investigator assessed the events, intractable vomiting and nausea, as related to study drug. Per the investigator, the events were related to study drug because the subject developed a headache during the "diary card period" (designated period to collect solicited reactogenicity events) after receiving the second injection. The headache contributed to the nausea and vomiting, which necessitated the hospitalization. Since the headache was experienced in the "diary card" (reactogenicity) period this caused her to assess the events as related. The investigator assessed the events, intractable vomiting and nausea, as not related to study procedure.

Follow-up information received on 25 Sep 2020 and 29 Sep 2020 included updated event term, start date, action taken with study drug, medical history and other event details; site confirmed cephalexin stop date as 04 Sep 2020; the subject reported that there had been no prior medical investigation into her headaches with severe nausea leading to past hospitalizations and it was confirmed the subject did not take any over the counter medication for headache.

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Follow-up information received on 05 Oct 2020 and 07 Oct 2020 included updated event term (previously intractable nausea) and event details.

Follow-up received on 09 Oct 2020, 13 Oct 2020 and 14 Oct 2020 included no new information. The single verbatim event term reported was updated from intractable vomiting with nausea to two separate verbatim event terms, intractable vomiting and nausea, which had no impact on the coded events previously reported.

Follow-up received on 20 Oct 2020 included no new information. The reported action taken with study drug of "None" was updated to "Not applicable", which had no impact on the actual action taken with study drug, as the subject had already received both scheduled doses, per protocol.

Analysis of Similar Events: On 14-Oct-2020, the safety database was searched for events similar to intractable vomiting and nausea using the following search criteria: PTs: Nausea, Vomiting.

As of 14-Oct-2020 under IND 019745 for mRNA-1273 vs Placebo, five similar events (occurring in 3 patients) were retrieved, including the current index case. Three of the events were non-IND Safety Reports (unexpected and unrelated to the IMP) reporting the following events: nausea (2) (b) (6), (b) (6); and vomiting (1) (b) (6).

Based on review of available data, the Sponsor cannot rule out a possible cause and effect relationship between administration of blinded mRNA-1273 / placebo and the occurrence of intractable vomiting and nausea. The index case involves a 65 year old female who developed transient fever and headache following the second dose of study drug, which evolved to include nausea and vomiting requiring hospitalization 3 days following the second dose of study medication. A definitive causal association cannot be made at this time due to limited information regarding the etiology of the transient fever and lack of SARS-CoV-2 diagnostic test results following event onset; and is confounded by reports of history of similar headaches with associated nausea and vomiting that required hospitalization in the past.

After review of the clinical details and investigator comments pertaining to this adverse event, and based upon experience to date, the Sponsor does not believe that changes to the conduct of this clinical trial are warranted. The Company will continue to monitor these and other serious adverse events reported in association with the IMP and will communicate any relevant changes to the protocol, Informed Consent Form, Investigator's Brochure, and/or Core Safety Information.

Case Comment/Sender's Comment:

This case concerns a 65 year old female subject, who experienced the unexpected events of intractable vomiting with nausea. The events occurred during 29 days after administration of the first dose of study drug and 1 day after the last dose administration. The event was considered related to the study medication in agreement with the Investigator's assessment given the temporal correlation. The report of prior history of headaches associated with severe nausea requiring hospital admission suggest that it is possible that a pre-existing condition could be associated with the current symptoms.

B6. LABORATORY DATA

#	Date	Test / Assessment / Notes	Results	Normal High / Low
3	09/17/2020	Blood alkaline phosphatase	86 U/L	
4	09/18/2020	Blood alkaline phosphatase	74 U/L	
7	09/17/2020	Blood creatinine	0.8 mg/dl	
8	09/18/2020	Blood creatinine	0.9 mg/dl	
9	09/17/2020	Blood glucose High at 19:50	121 mg/dl	
10	09/17/2020	Blood potassium	4.2 millimole per litre	
11	09/18/2020	Blood potassium	4.2 millimole per litre	
12	09/17/2020	Blood pressure measurement	162/70 mmHg	FDA CBER 2022 1614 4434475

13	09/17/2020	Blood urea	13 mg/dl
14	09/18/2020	Blood urea	11 mg/dl
15	09/15/2020	Body temperature	101 °F
16	09/16/2020	Body temperature	98.0 °F
17	09/17/2020	Haematocrit	40 percent
18	09/18/2020	Haematocrit	37.3 percent
19	09/17/2020	Haemoglobin	13.5 g/dL
20	09/18/2020	Haemoglobin	12.4 g/dL
21	09/17/2020	Heart rate	63 /min
22	09/17/2020	Platelet count K/uL	228
23	09/18/2020	Platelet count K/uL	203
24	09/17/2020	Red blood cell count M/uL	4.40
25	09/18/2020	Red blood cell count M/uL	4.07
26	09/17/2020	Respiratory rate	18 /min
27	09/14/2020	SARS-CoV-2 test Negative Day 29 results showed COVID-19 as negative.	
28	09/17/2020	Urine analysis at 19:50	hazy
29	09/17/2020	Urine ketone body at 19:50	Trace
30	09/17/2020	White blood cell count K/uL	6.2
31	09/18/2020	White blood cell count K/uL	7.2

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B7. OTHER RELEVANT HISTORY

#	Start/Stop Date	Condition Type / Condition	Notes
1	--/--/1985 08/--/1996	Historical Condition Endometriosis	
2	--/--/1989 Ongoing	Current Condition Uveitis	chronic right
3	08/--/1996 08/--/1996	Historical Condition Hysterectomy	
4	01/--/2007 Ongoing	Current Condition Insomnia	
5	01/--/2007 Ongoing	Current Condition Hemiparesis	
6	10/--/2007 10/--/2007	Historical Condition Synovial cyst removal	
7	10/--/2007 10/--/2007	Historical Condition Spinal fusion surgery	
8	10/--/2007 Ongoing	Current Condition Hypoaesthesia	left calf
9	10/--/2007 Ongoing	Current Condition Nephrolithiasis	
10	10/--/2007 Ongoing	Current Condition Headache	
11	10/--/2007 10/--/2007	Historical Condition Synovial cyst	BENIGN
12	--/--/2018 --/--/2018	Procedure Bunion operation	LEFT FIRST METATARSAL AND 5TH METATARSAL
13	--/--/2018 --/--/2018	Procedure Bunion operation	RIGHT FIRST METATARSAL AND 5TH METATARSAL
14	--/--/2018 --/--/2018	Historical Condition Foot deformity	LEFT FIRST METATARSAL AND 5TH METATARSAL, RIGHT FIRST METATARSAL AND 5TH METATARSAL
15	01/--/2020 05/--/2020	Historical Condition Meniscus injury	left
16	05/--/2020 05/--/2020	Procedure Arthroscopic surgery	LEFT MENISCUS REPAIR

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17	Ongoing	Current Condition Mitral valve prolapse	
18	Ongoing	Current Condition Irritable bowel syndrome	disease
19	Ongoing	Current Condition Nausea	

C4. DIAGNOSIS FOR USE (Continued)

#1:COVID-19 vaccination (COVID-19 immunisation)

C10. CONCOMITANT MEDICAL PRODUCTS (Continued)

(DIPHENHYDRAMINE HYDROCHLORIDE) --/--/2015 to ongoing

3) PRED FORTE (PREDNISOLONE ACETATE) , 1 percent --/--/1989 to ongoing

4) KEFLEX /00145501/ (CEFALEXIN) 08/28/2020 to 09/04/2020

Block C - Additional Dosage Regimens

Suspect Product	2. Dose, frequency & route used	3. Therapy dates (if unknown, give duration)	6. Lot #	7. Exp. date
#1 mRNA-1273 vs Placebo Regimen # 2	Blinded, Information withheld.	09/14/2020 to 09/14/2020	Blinded	Blinded