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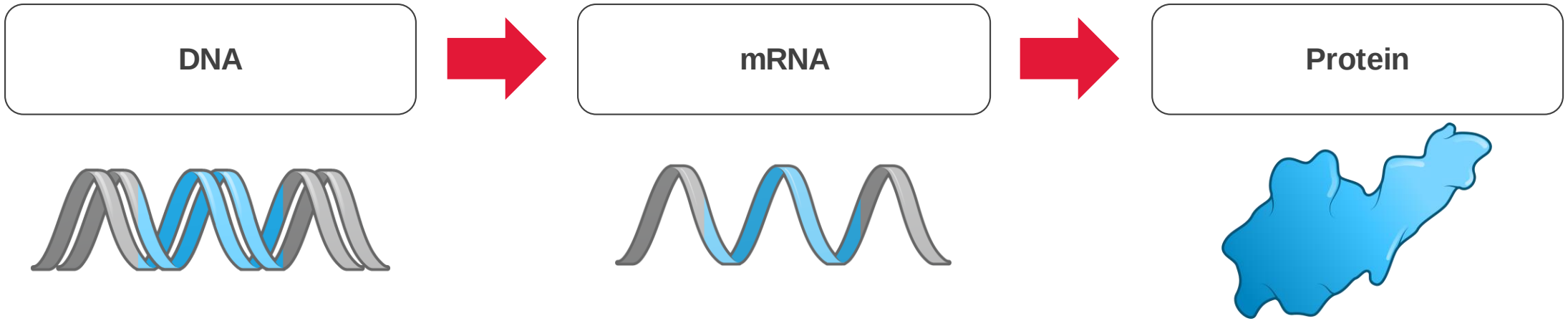

Business Updates and Third Quarter 2020 Financial Results

October 29, 2020

Forward-looking statements and Disclaimer

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including statements regarding: the timing of the first interim analysis and safety data for mRNA-1273, the disclosure of those events and subsequent actions to be taken by the Company; the potential for mRNA-1273 to generate binding and neutralizing antibodies, as well as the safety and tolerability of mRNA-1273; plans and timing for requesting regulatory approval for the use mRNA-1273 in the U.S. and other jurisdictions; the manufacturing, distribution, storage and administration of mRNA-1273; the timing, scale of and capacity for the production of mRNA-1273; sales and supply agreements with governments for mRNA-1273 and the terms of such agreements; the commencement of a Phase 3 trial for our CMV vaccine; anticipated clinical next steps and catalysts for each of our development programs; the Company's financial operations, including projections regarding net cash used in operating activities and for purchases of property and equipment; the application of accounting principles to the Company's operations; expectations regarding future cash balances, cash flow generation and capital efficiency; and future growth of the Company's pipeline and development programs, investments therein, as well as the Company's intellectual property portfolio and future partnership prospects. In some cases, forward-looking statements can be identified by terminology such as "will," "may," "should," "could," "expects," "intends," "plans," "aims," "anticipates," "believes," "estimates," "predicts," "potential," "continue," or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. The forward-looking statements in this presentation are neither promises nor guarantees, and you should not place undue reliance on these forward-looking statements because they involve known and unknown risks, uncertainties, and other factors, many of which are beyond Moderna's control and which could cause actual results to differ materially from those expressed or implied by these forward-looking statements. These risks, uncertainties, and other factors include, among others: preclinical and clinical development is lengthy and uncertain, especially for a new class of medicines such as mRNA, and therefore our preclinical programs or development candidates may be delayed, terminated, or may never advance to or in the clinic; no commercial product using mRNA technology has been approved and may never be approved; mRNA drug development has substantial clinical development and regulatory risks due to the novel and unprecedented nature of this new class of medicines; despite having ongoing interactions with the FDA or other regulatory agencies, the FDA or such other regulatory agencies may not agree with the Company's regulatory approval strategies, components of our filings, such as clinical trial designs, conduct and methodologies, or the sufficiency of data submitted; the fact that the rapid response technology in use by Moderna is still being developed and implemented; the fact that the safety and efficacy of mRNA-1273 has not yet been established; potential adverse impacts due to the global COVID-19 pandemic such as delays in clinical trials, preclinical work, overall operations, regulatory review, manufacturing and supply chain interruptions, adverse effects on healthcare systems and disruption of the global economy; and those risks and uncertainties described under the heading "Risk Factors" in Moderna's most recent Quarterly Report on Form 10-Q filed with the U.S. Securities and Exchange Commission (SEC) and in subsequent filings made by Moderna with the SEC, which are available on the SEC's website at www.sec.gov. Except as required by law, Moderna disclaims any intention or responsibility for updating or revising any forward-looking statements contained in this presentation in the event of new information, future developments or otherwise. These forward-looking statements are based on Moderna's current expectations and speak only as of the date hereof.

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Key business updates

COVID-19 vaccine (mRNA-1273)

- COVE Phase 3 study: Fully enrolled with 30,000 participants including 37% from diverse communities
- Moderna is committed to ensuring quality & transparency: COVE weekly reporting, recruitment from diverse communities, biopharma pledge and posting of Phase 3 protocol
- First interim analysis expected in November
- Post second dose 2-month median (15,000 participants) safety data available in second half of November
- Plan to file for EUA in the US upon positive efficacy and 2-month median safety data
- Rolling submissions ongoing in Canada and United Kingdom and received confirmation of eligibility in the EU
- Japan partnership with Takeda (order of 50 million doses)
- We have received $1.1B of cash payments in Q3, accounted for in our financials as "deferred revenues"

Pipeline updates

- CMV vaccine: Positive Phase 2 data announced in September, preparing for Phase 3 start in 2021
- OX40L: Enrolled and dosed first patients in Phase 2 expansion study in ovarian cancer
- PA: Study start-up activities have resumed following COVID-19 related pause and protocol amendment
- Other programs continue to enroll and move forward

Net cash provided by operating activities

- Positive cash flow driven by mRNA-1273 contract deposits, collaboration revenue
- 3Q cash provided by operating activities of $893 million after investments of approximately $300 million

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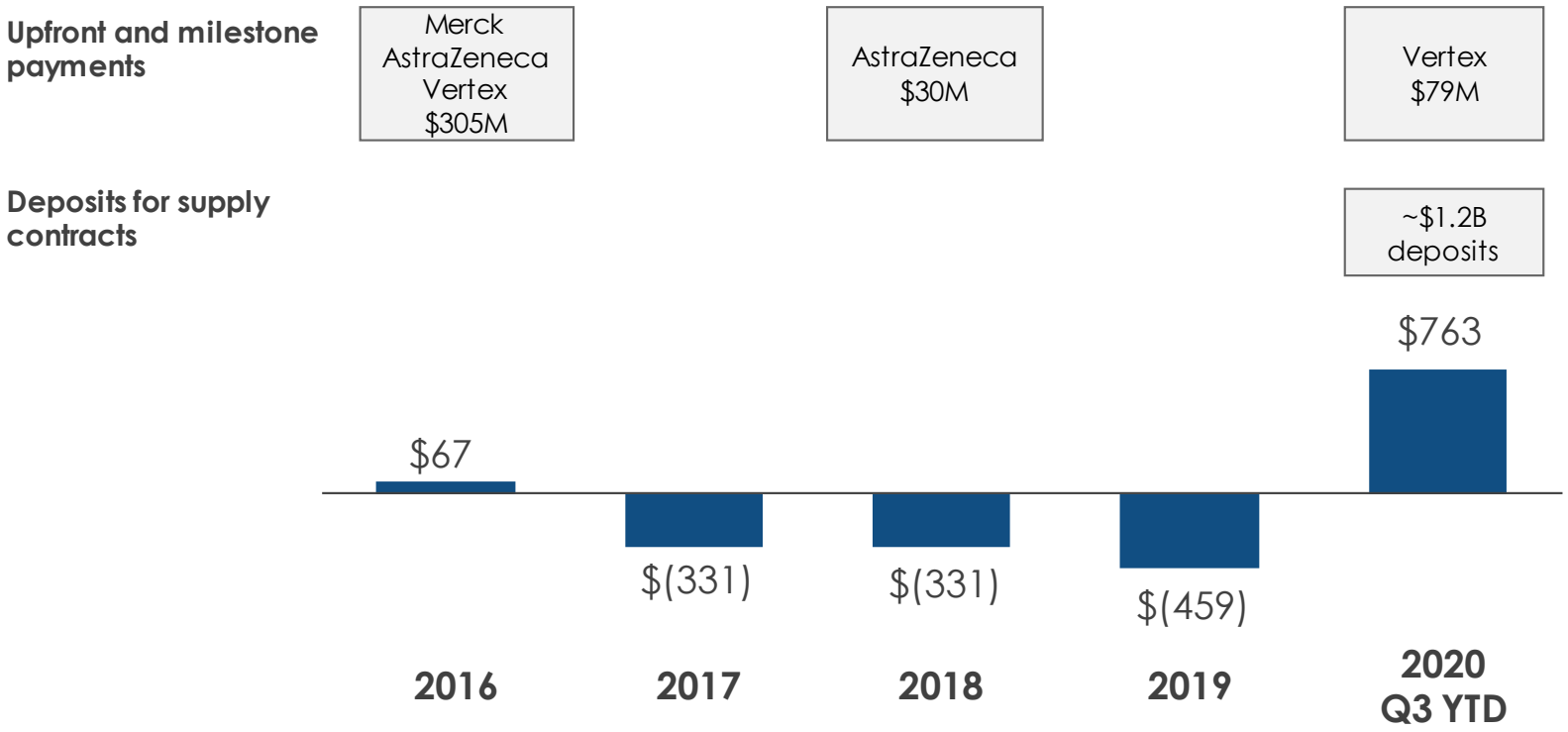
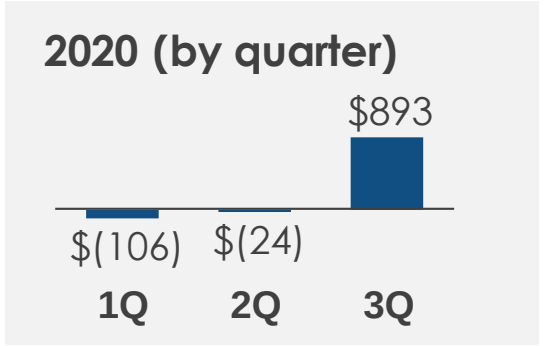
Evolution of net cash (used in) provided by operating activities (unaudited)

Net cash (used in) provided by operating activities in USD million





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Moderna in October 2020

Pipeline

Phase 3
COVID-19 vaccine
(30,000 fully enrolled)

Phase 2
CMV vaccine
PCV, OX40L
VEGF

Phase 1
7 programs

12
Positive Phase 1 readouts: 8 vaccines, PCV, OX40L, VEGF, anti-Chikungunya antibody

Programs in development

6
Vaccines for major unmet needs
- COVID-19 Phase 3 ongoing
- CMV in Phase 2, Phase 3 preparation
- hMPV/PIV3 Phase 1b age de-escalation study ongoing
- Pediatric RSV and Zika in Phase 1
- EBV in preclinical

5
Immuno-Oncology
- PCV in Phase 2
- OX40L in Phase 2
- Triplet, IL-12, KRAS in Phase 1

4
Rare disease
- PA open IND
- MMA, PKU, GSD1a in preclinical

2
Autoimmune disease
- IL-2 and PD-L1 in preclinical

Foundations

>32,000
Healthy volunteers and patients enrolled

>1,200
Employees

A fully-integrated **GMP site** in Massachusetts

Lonza

Strategic partners

MERCK
AstraZeneca
VERTEX

$4B
of cash and investments (unaudited)[1]

1. As of September 30, 2020; Cash and investments denotes cash, cash equivalents and investments

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3Q20 earnings call agenda

1. **Clinical programs update**
2. Financial update
3. Conclusion

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Clinical program updates in core modalities

Modality	Program	Program Update
Prophylactic vaccines 	**COVID-19 vaccine**	• Phase 2 fully enrolled; Phase 3 COVE study fully enrolled (30,000 participants) on October 22nd
	CMV vaccine	• Positive interim Phase 2 data announced during R&D Day (September 17th); pivotal Phase 3 trial expected to begin in 2021
	Zika vaccine	• Phase 1 trial fully enrolled across four dose levels (10, 30, 100 and 250 µg); preparing for Phase 2
	hMPV/PIV3 vaccine	• Resumed dosing pediatric participants (12-36 months of age) in Phase 1b age de-escalation study following COVID-19 disruptions; first mRNA vaccine in children
	Pediatric RSV vaccine	• First cohort of Phase 1 study of RSV vaccine candidate (mRNA-1345) fully enrolled
Systemic secreted & cell surface therapeutics 	**Antibody against Chikungunya virus**	• Positive Phase 1 data from additional cohorts announced during R&D Day

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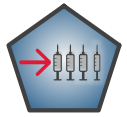
Clinical program updates in exploratory modalities

Modality	Program	Program Update
Cancer vaccines 	**PCV**	• Randomized Phase 2 in combination with KEYTRUDA® vs. KEYTRUDA® alone, partnered with Merck, is ongoing • Phase 1 cohorts A (resected solid tumors) and B (metastatic/locally advanced solid tumors) continue follow-up; cohorts C (PD1/PDL1i naïve) and D (Adjuvant melanoma) are ongoing
Intratumoral immuno-oncology 	**OX40L** **OX40L/IL-23/IL-36γ**	• Phase 2 dose expansion in combination with durvalumab in ovarian cancer patients has dosed first patients • Phase 1 dose escalation as a monotherapy and in combination with durvalumab is ongoing
Systemic intracellular therapeutics 	**PA** **MMA**	• Study start-up activities have resumed following COVID-19 related pause and protocol amendment – Publication in *Nature* shows mRNA therapy restores functional PCC enzyme and metabolic function in long term repeat dose studies in mice • Received rare pediatric disease designation for next generation MMA candidate (mRNA-3705)
Ongoing partner led programs		• KRAS (Merck), IL-12 (AstraZeneca) and VEGF (AstraZeneca)

1. Jiang, L., Park, J., Yin, L. *et al.* Dual mRNA therapy restores metabolic function in long-term studies in mice with propionic acidemia. *Nat Commun* 11, 5339 (2020). https://doi.org/10.1038/s41467-020-19156-3

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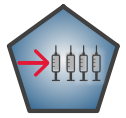
Development pipeline

October 2020

		Preclinical *(incl. Open IND)*	Phase 1	Phase 2	Phase 3	Commercial
Core modalities	Prophylactic vaccines 	EBV	Pediatric RSV, Zika, H7N9, hMPV/PIV3	*Phase 2 preparations Zika*, CMV	*Phase 3 preparations CMV*, COVID-19	*Launch preparation COVID-19*
	Systemic secreted & cell surface therapeutics 	Relaxin, PD-L1, IL-2	Chikungunya antibody			
	Cancer vaccines 		KRAS	Personalized Cancer Vax		
Exploratory modalities	Intratumoral immuno-oncology 		IL-12, OX40L/IL-23/IL-36γ	OX40L		
	Localized regenerative therapeutics 			VEGF		
	Systemic intracellular therapeutics 	MMA, PA *(open IND)*, PKU, GSD1a				

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COVID-19 vaccine (mRNA-1273) poised to deliver safety & efficacy readouts

Preclinical and clinical data show consistent and robust immune responses

Nonhuman primate data publication showed mRNA-1273 led to a robust immune response and protection against SARS-CoV-2 infection[1]

- Two-dose vaccination schedule rapid protection against SARS-CoV-2 infection in both the lungs and nose of non-human primates

Phase 1 clinical data showed mRNA-1273 has consistent immunogenicity across all age cohorts[2,3]

- Neutralizing antibody titers were observed in 100% of evaluated participants across all age groups
- In the pseudovirus (ID50) neutralization assay, at the 100 µg dose, mRNA-1273 induced consistently high levels of neutralizing antibody titers in all participants in the young adult and older adult cohorts
- In the live SARS-CoV-2 (PRNT80) neutralization assay in the younger adult cohort, the Day 43 geometric mean titer levels at the Phase 3 selected dose of 100 µg were above those seen in reference convalescent sera

Phase 3 COVE study fully enrolled with diversity and of major risk factors representative of the U.S.[4]

- COVE study fully enrolled on October 22nd with 37% of participants coming from communities of color
- 25% of participants over 65 years old; 17% with comorbidities

1. Corbett K, Flynn B, Foulds L, et al. Evaluation of the mRNA-1273 vaccine against SARS-CoV-2 in nonhuman primates. N Engl J. M ed. 28 Jul 2020; DOI: 10.1056/NEJMoa2024671
2. Jackson L, Anderson EJ, Rouphael NG, et al. An mRNA vaccine against SARS-CoV-2- preliminary report. N Engl J M ed. 14 Jul 2020; DOI: 10.1056/NEJMoa2022483
3. Jackson L, Anderson EJ, Rouphael NG, et al. Safety and immunogenicity of SARS-CoV-2 mRNA-1273 vaccine in older adults. N Engl J M ed. 29 Sept 2020; DOI: 10.1056/NEJMoa2028436
4. M oderna COVE study: https://www.modernatx.com/cove-study

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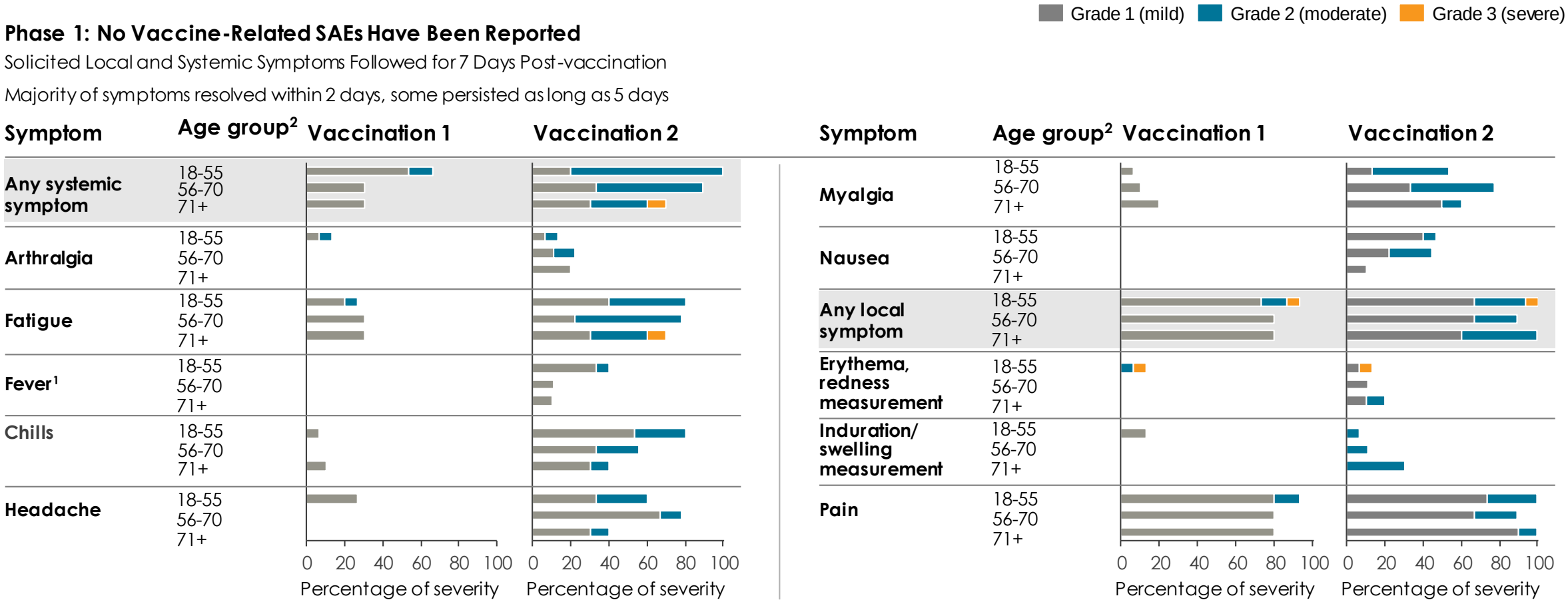
100 µg mRNA-1273 well-tolerated across age groups (Phase 1)

Phase 1: No Vaccine-Related SAEs Have Been Reported

Solicited Local and Systemic Symptoms Followed for 7 Days Post-vaccination

Majority of symptoms resolved within 2 days, some persisted as long as 5 days



1. Fever percentages reflect the number of subjects with at least one measurement available in the data system as the denominator. This denominator may differ from other systemic symptoms, which are solicited in-clinic at the post-dose assessment
2. 18-55: N=15; 56-70: N=10; 71+: N=10; N = All subjects receiving Dose 1 with any solicited event data recorded in the database

Jackson L, Anderson EJ, Rouphael NG, et al. An mRNA vaccine against SARS-CoV-2- preliminary report. N Engl J Med. 14 Jul 2020; DOI: 10.1056/NEJMoa2022483

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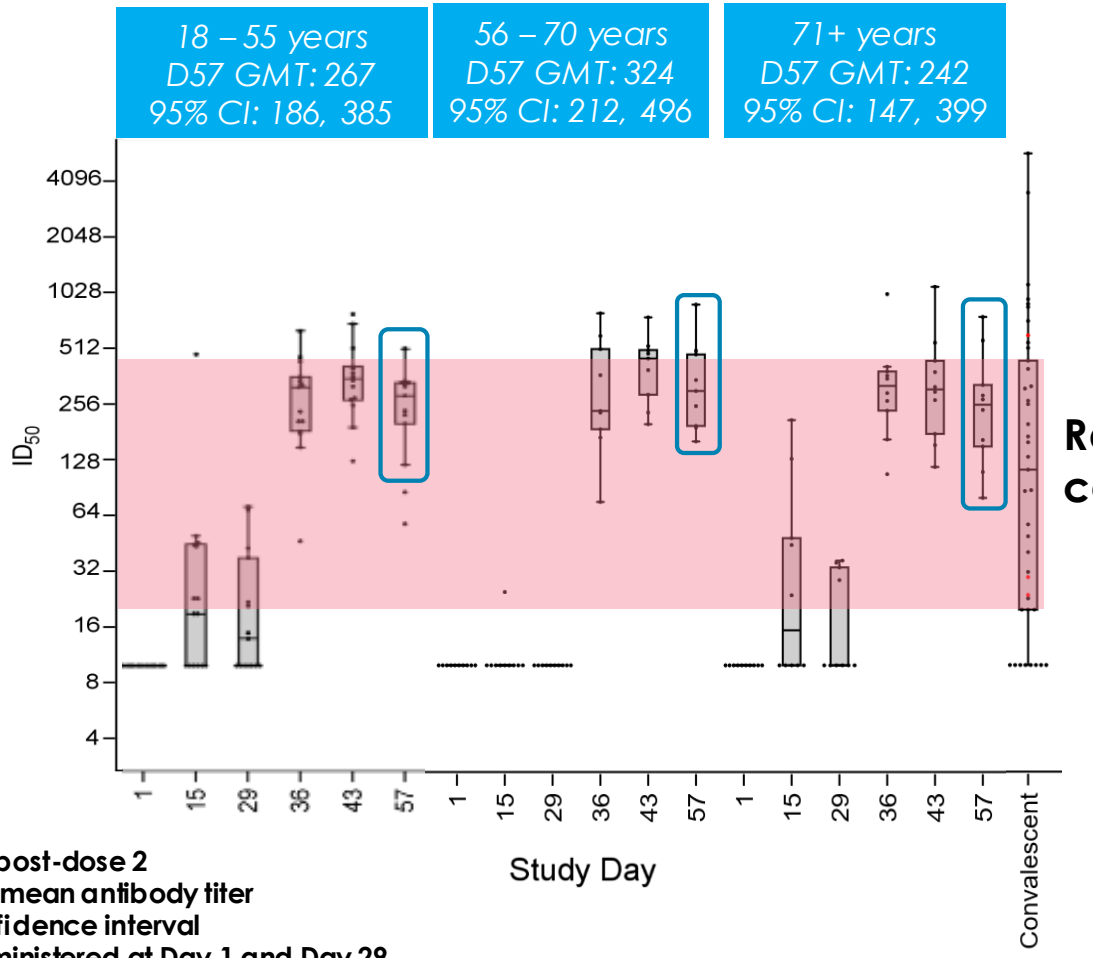
Distribution of antibody titers in pseudovirus neutralization assay comparable across age groups (Phase 1)

Pseudovirus neutralization assay titers (ID_{50})- 100 µg at Day 1 and Day 29



Range of convalescent sera

D57: one month post-dose 2
GMT: geometric mean antibody titer
95% CI: 95% confidence interval
Vaccination administered at Day 1 and Day 29

- After second vaccination, pseudovirus neutralization responses were detected in all participants
- Pseudovirus neutralization titers were comparable across age groups
- Pseudovirus neutralization titer for 56-70 and 71+ YOA above convalescent sera median titer at Day 57

Jackson L, Anderson EJ, Rouphael NG, et al. An mRNA vaccine against SARS-CoV-2- preliminary report. N Engl J Med. 14 Jul 2020; DOI: 10.1056/NEJMoa2022483
Interim Immunogenicity Report

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Pivotal Phase 3 efficacy, safety and immunogenicity study

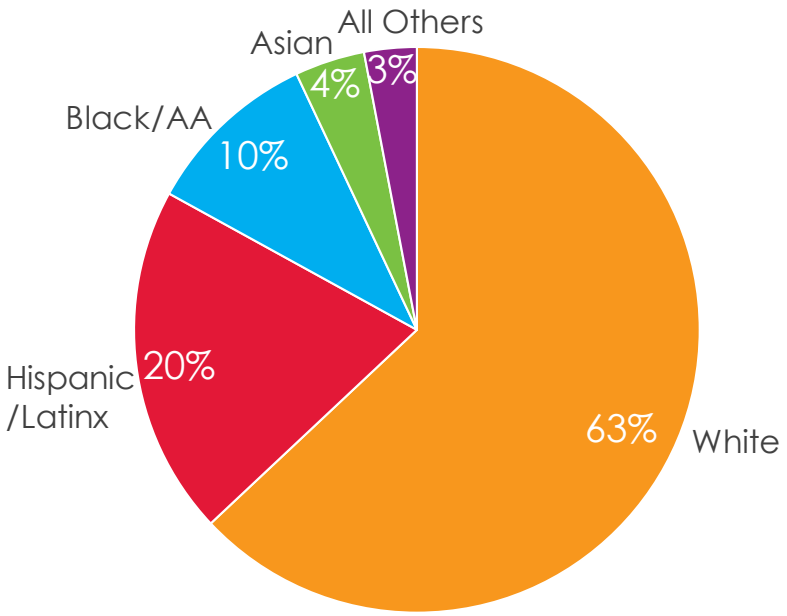
Fully enrolled (N=30,000) on October 22nd

Phase 3 trial overview (NCT04470427)

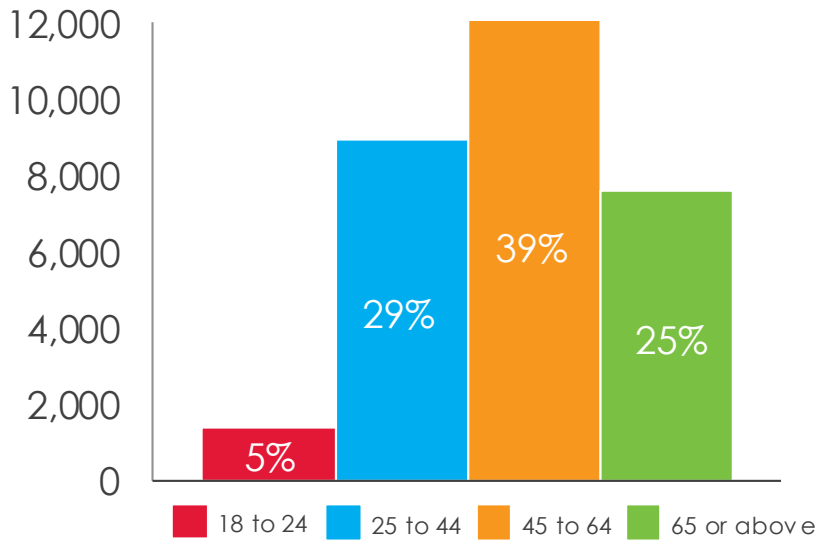
Protocol Title	A Phase 3, Randomized, Stratified, Observer-Blind, Placebo-Controlled Study to Evaluate the Efficacy, Safety, and Immunogenicity of mRNA-1273 SARS-CoV-2 Vaccine in Adults Aged 18 Years and Older			
Study Groups	**Strata**	**Dosage IM (D1, D29) 1:1**	**Sample Size**	**Enrollment status**
	≥ 65 years	100 µg, placebo	42%	Enrollment completed October 22
	< 65 years at increased risk for complication of COVID-19 ("at risk")	100 µg, placebo		
	< 65 years and not at risk	100 µg, placebo	58%	Enrollment completed October 22
Participant Population	Approximately 30,000 participants (case driven) whose locations or circumstances put them at appreciable risk of acquiring COVID-19 and/or SARS-CoV-2 infection "All-comers" with regard to SARS-CoV-2 serostatus (baseline serology will be collected)			
Study Objectives	To demonstrate the efficacy of mRNA-1273 to prevent COVID-19 To evaluate the safety and reactogenicity of 2 injections of the mRNA-1273 vaccine given 28 days apart			
Study Duration	Approximately 25 months for each participant corresponding to a 24-month follow up after the last vaccine administration			

COVE study successfully recruited diverse and representative participants

Race and ethnicity distribution

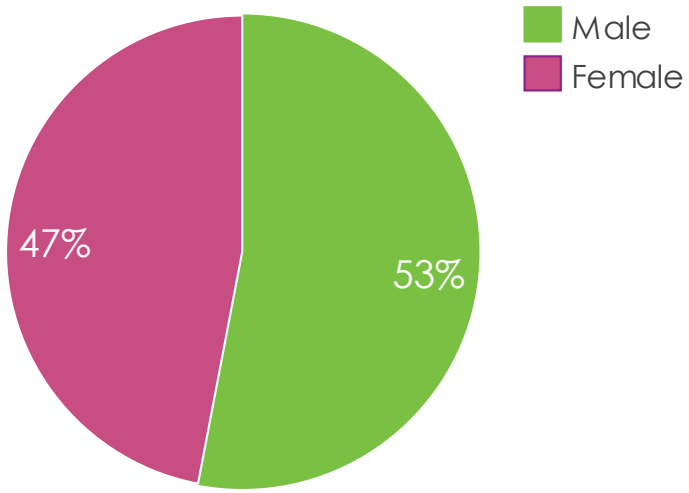


Age breakdown*



* Numbers may not add up to 100 due to rounding

Gender distribution

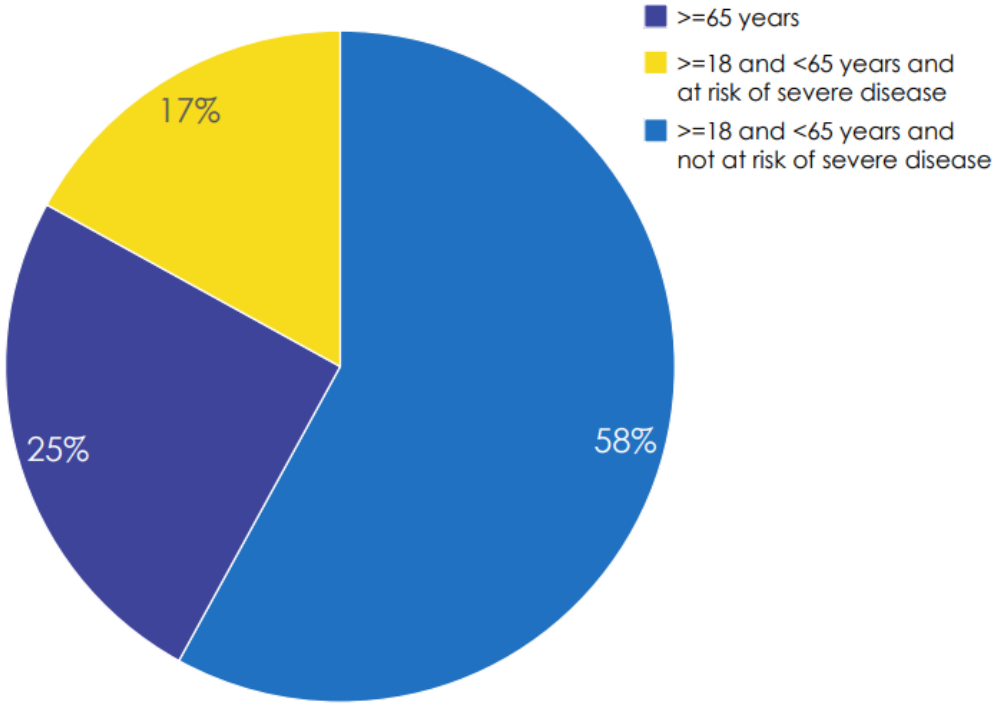


- 37% of the 30,000 participants are from communities of color, similar to diversity of the U.S. at large
- 6,000+ Hispanic/Latinx participants, 3,000+ Black/African American participants and 7,000+ participants over the age of 65

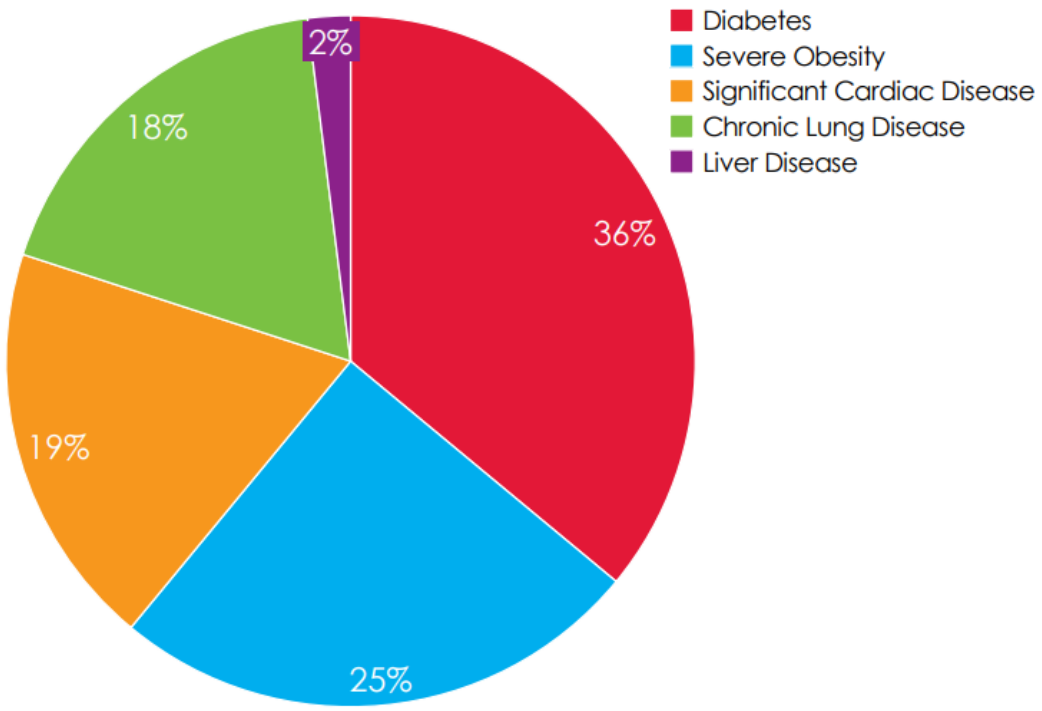
Interim data snapshot - October 21, 2020 - subject to change

COVE study successfully enrolled participants with risk factors for severe COVID-19 disease

Risk stratification



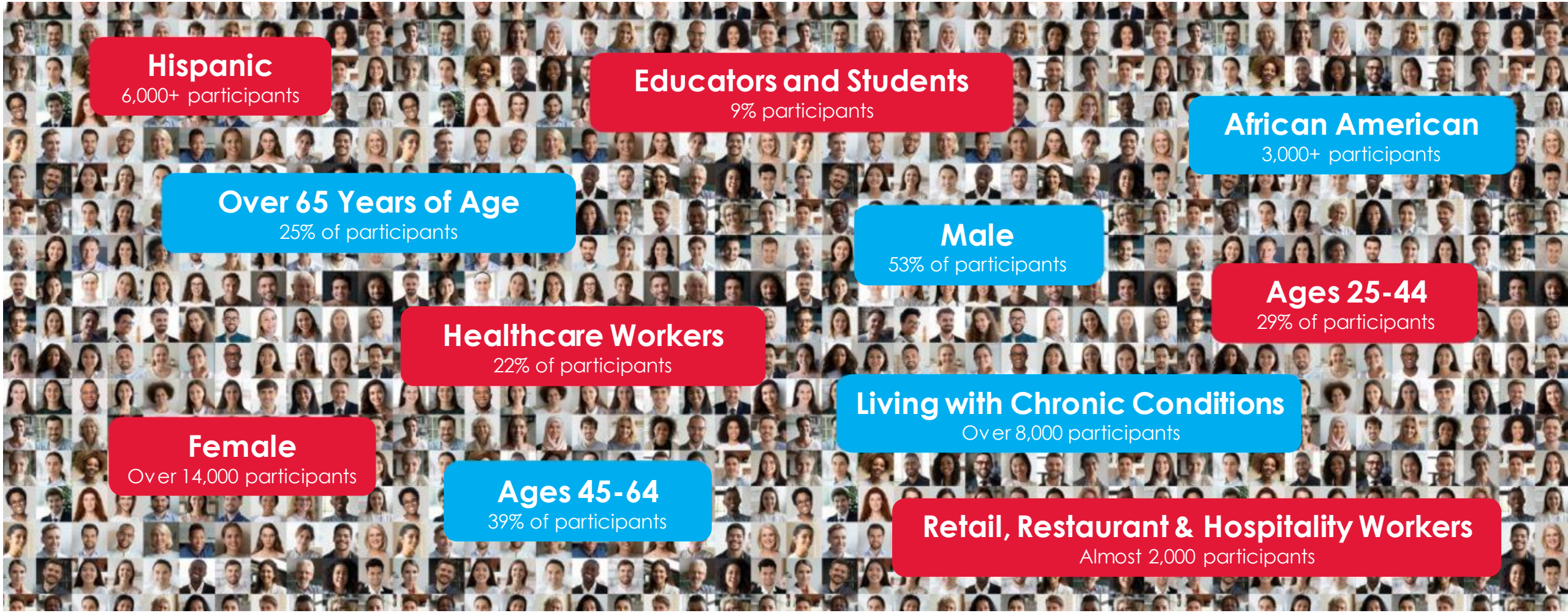
Comorbidities of at risk participants (all ages)



- 8,000+ participants who are living with chronic conditions

Interim data snapshot - October 21, 2020 - subject to change

A vaccine for everyone…find yourself in the COVE study



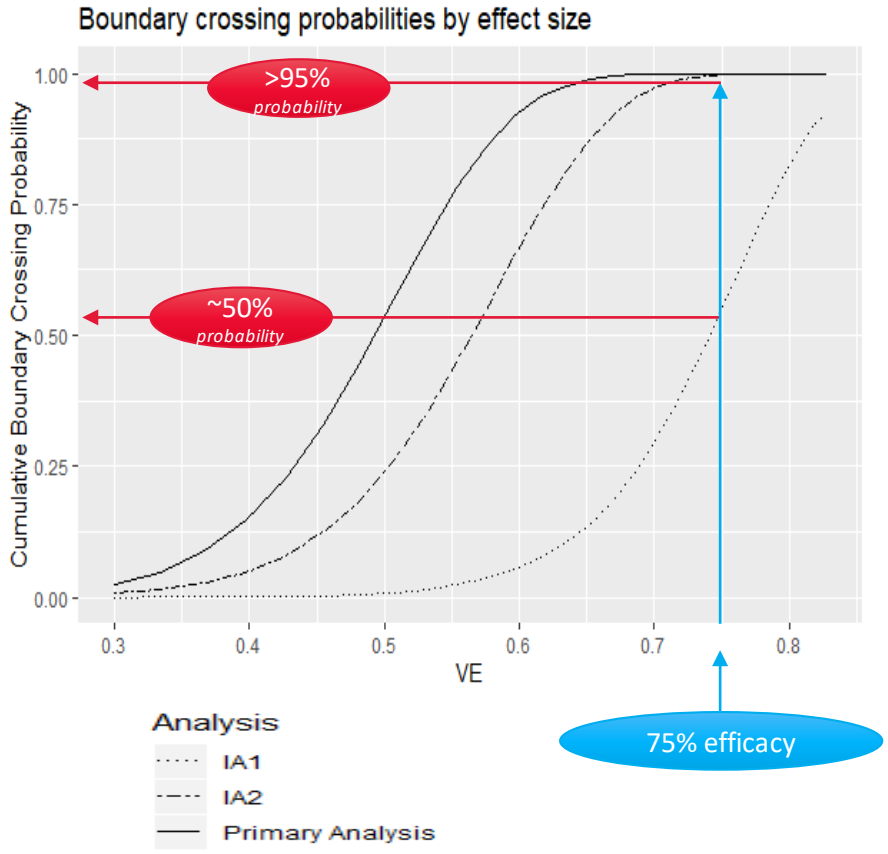
Interim data snapshot - October 21, 2020 - subject to change

Overview of primary efficacy endpoint

Interim Boundaries Using O'Brien-Fleming Spending Function

	Approximate # of cases	VE: Efficacy bound
Interim analysis #1	• 53	• ~0.74
Interim analysis #2	• 106	• ~0.57
Primary analysis	• 151	• ~0.50

Boundary Crossing Probabilities by Effect Size



Commitment to transparency of Phase 3 interim analyses

Three potential outcomes from the interim analyses

- Study meets statistical hurdle (>74% at first interim and >57% at second interim) and we will trigger the analyses required to determine whether to proceed with regulatory submissions while the trial remains blinded and data continue to accrue
- Study does not meet the statistical hurdle and the study continues
- Study is determined to be futile

Transparency around communication of Data and Safety Monitoring Board (DSMB) and oversight group recommendations

- Committed to full transparency and will share the outcome of each interim analysis

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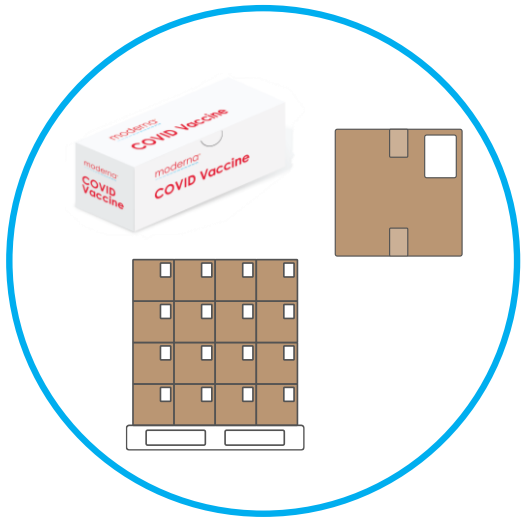
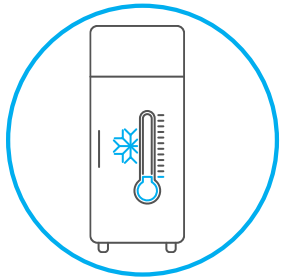
Distribution to any immunization locations using existing infrastructure



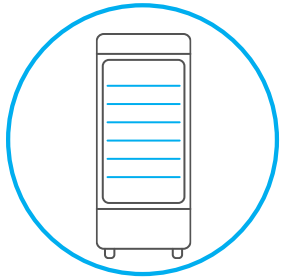
Ship any configuration using existing infrastructure

Storage Conditions*



Freezer: -20°C/-4°F for 6 months

+



Fridge: 2-8°C/~36-46°F for up to 7 days

+

Room temperature: 12 hours post thaw

Flexible and adaptable supply chain

Uses standard existing vaccination infrastructure

No dilution required

Currently anticipate production of mRNA-1273 will be ~20 million doses by end of 2020

*Shelf life is expected based on current data available; Product characteristics subject to regulatory review and approval

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3Q20 earnings call agenda

1 Clinical programs update

2 **Financial update**

3 Conclusion

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Third quarter 2020 financial results (Unaudited)

Balance Sheet Data	September 30, 2020	June 30, 2020
Cash, cash equivalents and investments [1]	$ 3.97 billion	$ 3.07 billion

Cash Flow Data	9 months ended September 30, 2020	9 months ended September 30, 2019
Net cash provided by (used in) operating activities [2]	$ 763 M	$ (360) M
Cash used for purchases of property and equipment	$ (44) M	$ (25) M
Total	$ 719 M	$ (385) M

Statement of Operations Data	3 months ended September 30, 2020	3 months ended September 30, 2019	9 months ended September 30, 2020	9 months ended September 30, 2019
Total revenue	$ 158 M	$ 17 M	$ 233 M	$ 46 M
Research and development expenses	$ 344 M	$ 120 M	$ 612 M	$ 378 M
General and administrative expenses	$ 49 M	$ 28 M	$ 109 M	$ 84 M
Total operating expenses	$ 393 M	$ 148 M	$ 721 M	$ 462 M
Net loss	$ (234) M	$ (123) M	$ (475) M	$ (391) M

1. Excludes restricted cash of $12 M at September 30, 2020 and June 30, 2020.
2. The nine months ended September 30, 2020 includes $1.17 billion in deferred revenue attributable to deposits received based on the Supply Agreements with the U.S. Government and several international government agencies for our future mRNA-1273 vaccine supply.

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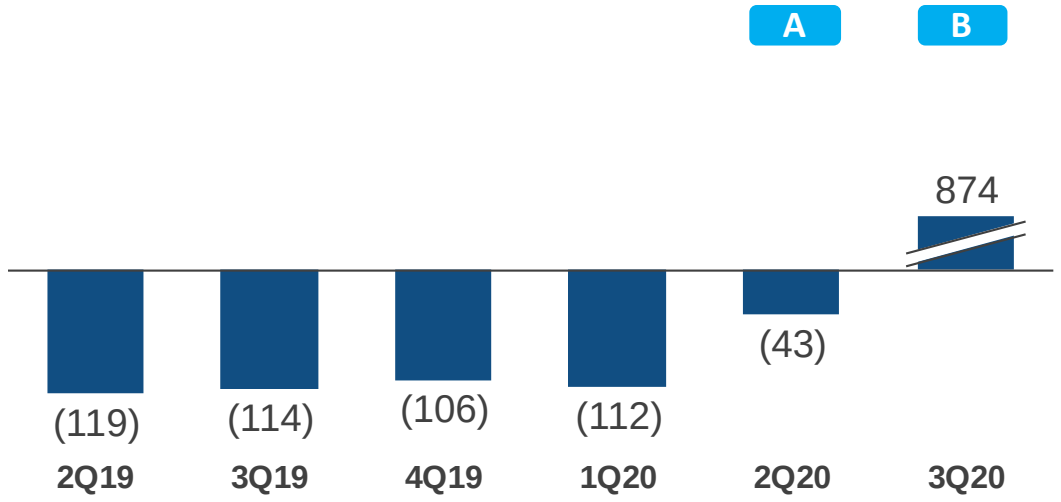
Selected cash flow information

Statements of Cash Flows	3 months ended March 31, 2019 (unaudited)	6 months ended June 30, 2019 (unaudited)	9 months ended Sept. 30, 2019 (unaudited)	Year ended Dec. 31, 2019 (audited)	3 months ended March 31, 2020 (unaudited)	6 months ended June 30, 2020 (unaudited)	9 months ended Sept. 30, 2020 (unaudited)
Net cash provided by (used in) operating activities	$ (144) M	$ (253) M	$ (360) M	$ (459) M	$ (106) M	$ (130) M	$ 763 M
Cash used for purchases of property and equipment	$ (8) M	$ (18) M	$ (25) M	$ (32) M	$ (6) M	$ (25) M	$ (44) M
Total	$ (152) M	$ (271) M	$ (385) M	$ (491) M	$ (112) M	$ (155) M	$ 719 M

Net cash (used in) provided by operating activities and for purchases of property and equipment

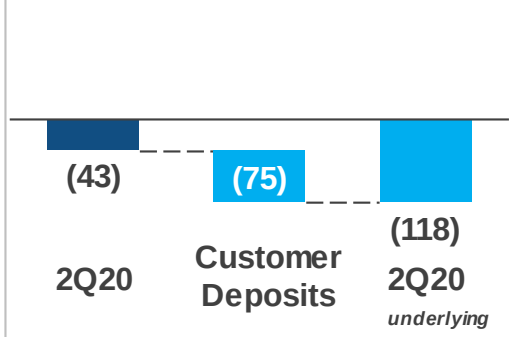
in USD M



Adjusted view in USD M

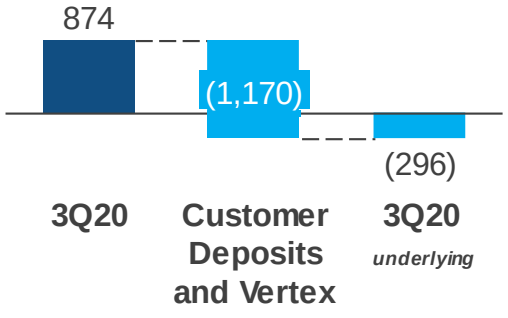
A

($118)M excluding customer deposits of $75M received in Q2 for potential supply of mRNA-1273



B

($296)M excluding customer deposits of $1.1B received in Q3 for potential supply of mRNA-1273 and the **Vertex upfront payment of $75M**



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Publicly announced supply agreements

On track to supply between 500 million and 1 billion doses in 2021
3Q20 deferred revenues: $1.1 billion

Deals signed

- United States (100 million doses with option for additional 400 million doses)
- Japan (50 million doses)
- Canada (20 million doses with option for additional 36 million doses)
- Switzerland
- Israel
- Qatar
- Several countries not announced

Deals in negotiation

- European Union (advanced discussions for 80-160 million doses)
- COVAX (tiered pricing proposal)
- Many other countries

Pricing of deals signed

- Smaller volume agreements executed at $32-37/dose
- US at ~$25/dose for the first 100 million doses when including BARDA grant and potential performance-based payments

U.S. press release; Japan press release; Canada press release; Switzerland press release; Israel signs agreement with Moderna for potential COVID-19 vaccine (Reuters); Qatar press release; European Union press release

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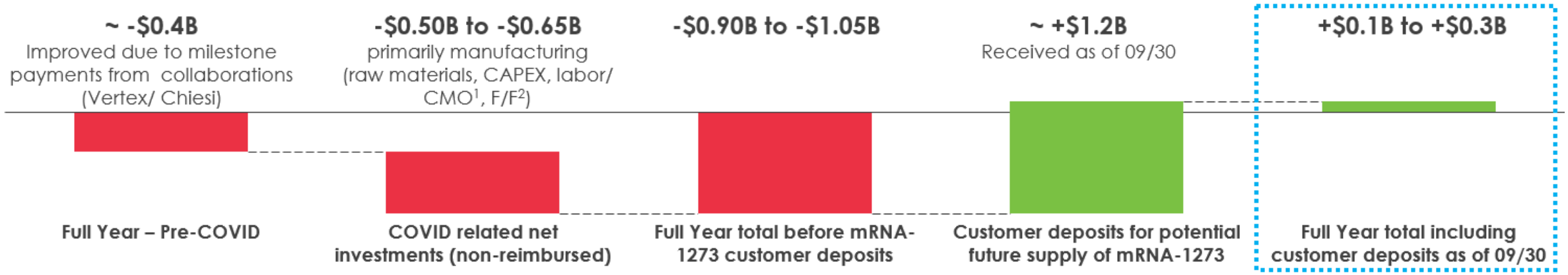
2020 Financial Update

2020 Financial Update: +$0.1 to +$0.3 billion
of net cash provided by operating activities and used for purchases of property and equipment, including ~$1.2B of customer deposits received as of Sept. 30

Net cash provided by operating activities and for purchases of property and equipment



- We expect net cash provided by operating activities and purchases of property and equipment in 2020 to continue to evolve as we receive additional customer deposits

[1] CMO expenses (Contract Manufacturing Organization); [2] F/F expenses (Fill and Finish)

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Key accounting issues related to mRNA-1273

		Accounting Practice		
		Current Practice (through approval event)	***Approval Event (Example – EUA)***	**Future Practice (post approval event)**
Balance Sheet	• **Commercial Inventory**	Expensed as R&D in the period incurred	→	Commence capitalization of inventory associated with probable sales
	• **PP&E** • **Leased Assets (Primarily Lonza)**	Expensed as R&D for items deemed to have no immediate alternative use	→	Commence capitalization of PP&E and potential long-term leased assets
P&L	• **Product Sales**	Customer deposits recorded as Deferred Revenue	→	Revenue recorded upon customer acceptance and control of product transferred
	• **BARDA award**	Revenue is recognized as we perform services under the agreement	→	Revenue is recognized as we perform services under the agreement
Tax	• **Net operating loss (NOLs) / Valuation Allowance**	No change to 100% Valuation Allowance expected in 2020	→	Valuation allowance expected to be reversed as NOL's are utilized (commencing in period we become profitable)

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3Q20 earnings call agenda

1. Clinical programs update
2. Financial update
3. **Conclusion**

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2021 should be a major inflection point in Moderna's history

We entered this crisis strong (YE 2019)

- Cash and investments of $1.26B
- Diverse clinical portfolio of vaccines and therapeutics across 6 modalities
- 20 development candidates
- Sustained investments in platform science
- Large IP portfolio
- Sustained investments in process development
- Moderna owned, fully integrated plant (from raw materials to filled vials)

We expect to exit this crisis stronger (YE 2021)*

- Cash: Large cash balance expected…$4B Sep 2020 + CF to be generated in 2021*
  - One of two mRNA companies with Operation Warp Speed (OWS) support
  - Moderna retains worldwide rights to develop and commercialize mRNA-1273; no profit sharing with a partner
- Programs in clinical development across 6 modalities
  - Focused on developing new modalities with delivery into the lung in cystic fibrosis
- Goal to increase development candidates to ~30
- Sustained investments in platform science
- Larger IP portfolio
- Sustained investments in process development
- International manufacturing network able to deliver up to 1B doses

* Assumes mRNA-1273 receives regulatory approval for use (e.g., Emergency Use Authorization, Biologics License Application or other regulatory approval)

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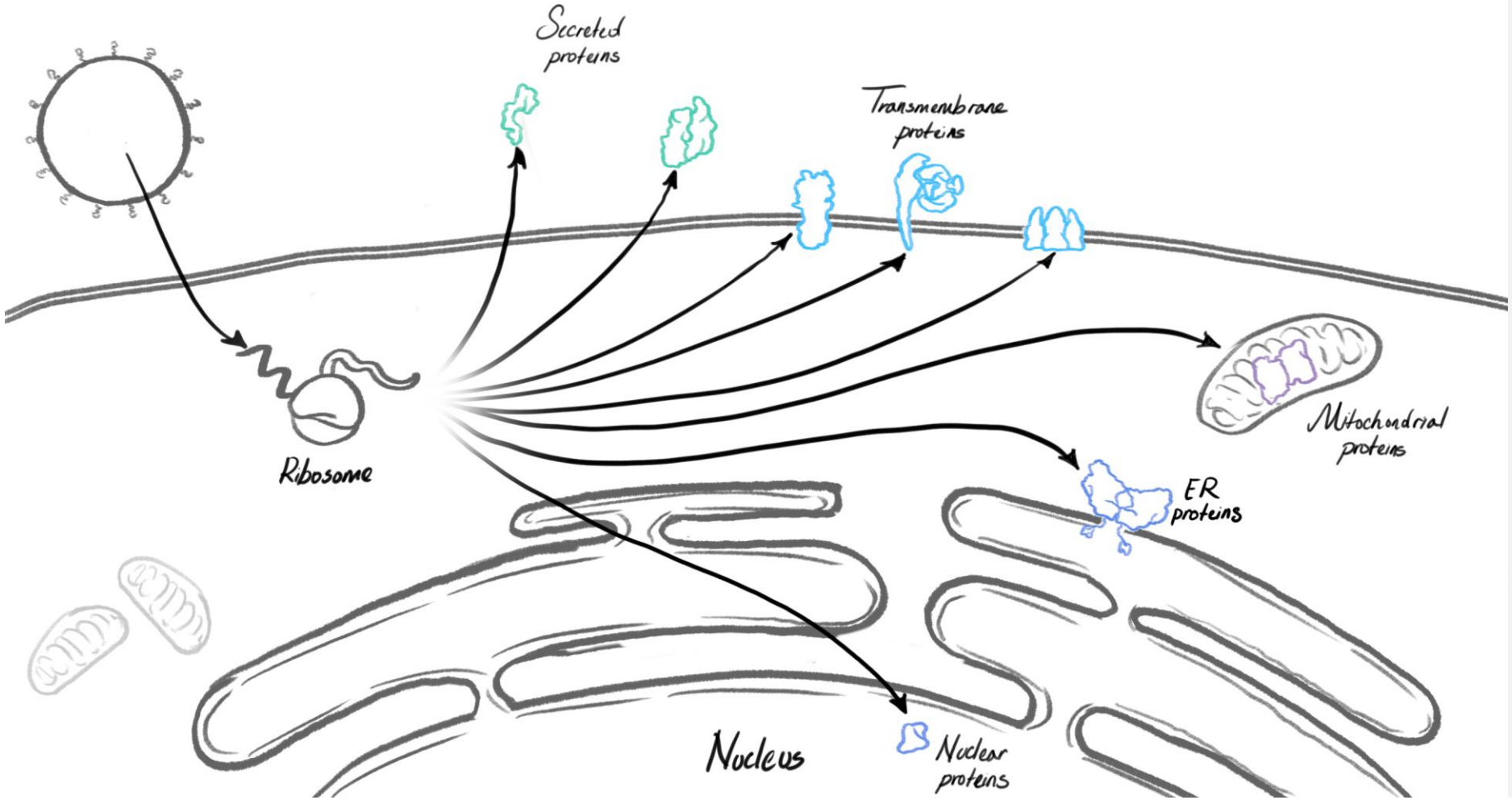
mRNA as a potential new class of medicines



1. Large product opportunity
2. Higher probability of technical success
3. Accelerated research and development timelines
4. Greater capital efficiency over time vs. recombinant technology

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Our mission

To deliver on the promise of mRNA science to create a new generation of transformative medicines for patients.

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