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Fourth Quarter & Full Year 2021 Financial Results

February 24, 2022

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 Company's development of vaccines against COVID-19, including efforts to develop variant-specific and multivalent vaccines against variant strains of SARS-CoV-2 and for booster doses; the ability of the Moderna COVID-19 Vaccine and booster doses to provide protection against COVID-19 and variants of concern, including Omicron, and the anticipated timing for waning protection; the timing for a transition into an endemic phase of the COVID-19 pandemic; the estimated impact of annual disease caused by endemic coronaviruses and other respiratory diseases; the potential for booster doses of the Moderna COVID-19 Vaccine and variant-specific and bivalent vaccine candidates to trigger neutralizing antibodies; the need for boosters against COVID-19 and the timing of that need; the safety profile associated with COVID-19 booster candidates; the Company's plan to submit data regarding use of its COVID-19 vaccine in adolescents and pediatrics to regulators and the status of approvals for these populations; the conduct and timing of clinical trials for programs in the Company's pipeline, including its vaccine candidates against seasonal flu, combination flu and COVID-19, hMPV + PIV3, RSV + hMPV, CMV, RSV, HIV, Nipah virus, EBV, triplet, IL-12, KRAS, VEGF-A, IL-2, PA and MMA, as well as the Company's personalized cancer vaccine candidate; the ability of an mRNA vaccine against HSV-2 to improve quality of life; the potential for a vaccine against varicella-zoster virus to differentiate against existing treatments; the potential to combine different vaccines into a single dose; the potential market associated with commercial vaccines; the Company's capital allocation priorities, including its intention to reinvest in the business, accelerate investment, seek external investment opportunities and return capital to shareholders; estimated R&D expense and capital expenditure in 2022; anticipated deliveries under advance purchase agreements and options in 2022 and the associated dollar amounts to be received, which should not be construed as expected 2022 revenue; the global market for fall 2022 booster vaccines and the impact of timing for 2022 deliveries; the likelihood that options for purchases of the Company's COVID-19 vaccine will be exercised; the anticipated cost of sales associated with the Moderna COVID-19 Vaccine for 2022; expected full year operating expenses and capital investments in 2022; the Company's expected effective tax rate for 2022; the Company's ability to execute on its product strategy; and new manufacturing capacity expected to come online in 2022; plans to add commercial subsidiaries in Europe and Asia; anticipated sales for 2023; the potential for the establishment of collaborations with governments (including in Australia and Canada) to establish local manufacturing capabilities and long-term supply agreements; plans to achieve carbon neutrality by 2030; plans to establish a manufacturing facility in Africa; and the Company's commercial rights to its development candidates. 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, those risks and uncertainties described under the heading "Risk Factors" in Moderna's most recent Annual Report on Form 10-K 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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Today's Agenda

4Q21 Earnings Call

1. **Business Review – Stéphane Bancel, CEO**
2. Spikevax® COVID-19 Vaccine Update – Paul Burton, M.D., Ph.D., CMO
3. Clinical Program Review – Stephen Hoge, M.D., President
4. Financials – David Meline, CFO
5. Looking Forward – Stéphane Bancel, CEO

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Fiscal year 2021 GAAP financial highlights

Fiscal year 2021 GAAP financial results:

- Revenue: $18.5B
- Net income: $12.2B
- Diluted EPS: $28.29
- Cash and investments: $17.6B (as of 12/31/21)

Share buyback:

- Previous program of $1B announced in August 2021 has been fully utilized[1]
- Average diluted share count decreased during the fourth quarter due to our share buyback program

(1) Share repurchase program completed in January 2022

Development pipeline advances and expands

Respiratory Vaccines

- **Received full U.S. FDA approval for COVID-19 Vaccine Spikevax®** to prevent COVID-19 in individuals 18+ years of age
- **COVID-19 Vaccine for adolescents ages 12 to 17:** Approved in key markets globally; studying heterologous boost (50 µg)
- **COVID-19 Vaccine for pediatric ages 6 to 11:** Received primary series authorization in Australia (50 µg)
- **Omicron-containing candidates:** Dosed first participants in Omicron-specific vaccine (mRNA-1273.529); announcing bivalent vaccine development program (mRNA-1273.214), combining wild-type + Omicron
- **RSV vaccine:** Started Phase 3 pivotal trial (ConquerRSV) in older adults
- **Quadrivalent seasonal flu vaccine:** Announced positive Phase 1 data; Phase 2 fully enrolled

Latent Vaccines

- **CMV vaccine:** Enrollment ongoing in Phase 3 pivotal study (CMVictory)
- **EBV and HIV vaccine:** Started Phase 1 studies
- **HSV and VZV vaccine:** Announced new vaccine development programs against Herpes Simplex Virus type-2 and against varicella zoster virus that causes shingles

Therapeutics

- **PA and MMA:** Enrollment ongoing in Phase 1/2 studies for PA (Paramount Study) and MMA (Landmark Study)
- **Checkpoint vaccine:** Announced cancer vaccine development program encoding for PD-L1 and IDO checkpoint proteins
- **KRAS vaccine:** Moderna has regained all rights to mutant KRAS vaccine (mRNA-4671) from Merck; evaluating next steps for the program

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Moderna as of February 2022

Pipeline

Commercial
Moderna COVID-19 Vaccine/Spikevax®

Phase 3
CMV, RSV

Phase 2
Flu, COVID-19 boosters, Zika, PCV, VEGF-A

44 development programs

Programs in development

Respiratory vaccines
- **COVID-19 variant boosters (Omicron, Wild-type/Omicron, and Delta)** in development
- **Older adults RSV** in Phase 3; **Pediatric RSV** in Phase 1
- **Flu** in Phase 2; Phase 3 expected to start in 2022
- **hMPV + PIV3** in Phase 1b age de-escalation study
- **Flu + COVID, RSV + hMPV** in preclinical

Latent vaccines
- **CMV** in Phase 3
- **EBV and HIV** in Phase 1
- **HSV**, **VZV** in preclinical

Public health vaccines
- **Zika** in Phase 2
- **Nipah** in preclinical

mRNA therapeutics
15 medicines in 4 therapeutic areas

- **5 Immuno-Oncology**: PCV in Ph 2; KRAS, Triplet, IL-12 in Ph 1; Checkpoint in preclinical
- **6 Rare Diseases**: PA, MMA in Ph 1; GSD1a, PKU, CN-1, CF in preclinical
- **2 Cardiovascular Diseases**: VEGF-A in Phase 2; Relaxin in preclinical
- **2 Autoimmune Diseases**: IL-2 in Ph 1; PD-L1 in preclinical

Foundations

~3,000
employees

Science 2021 TOP EMPLOYER

7th
Consecutive year top employer by *Science*

11 commercial
subsidiaries across North America, Europe and Asia Pacific[1]

~$17.6B
of cash and investments[2]

(1) Does not include Moderna Poland sp. zo.o, which operates the Moderna International Business Services (MIBS) Center in Poland
(2) As of December 31, 2021; Cash and investments denotes cash, cash equivalents and investments

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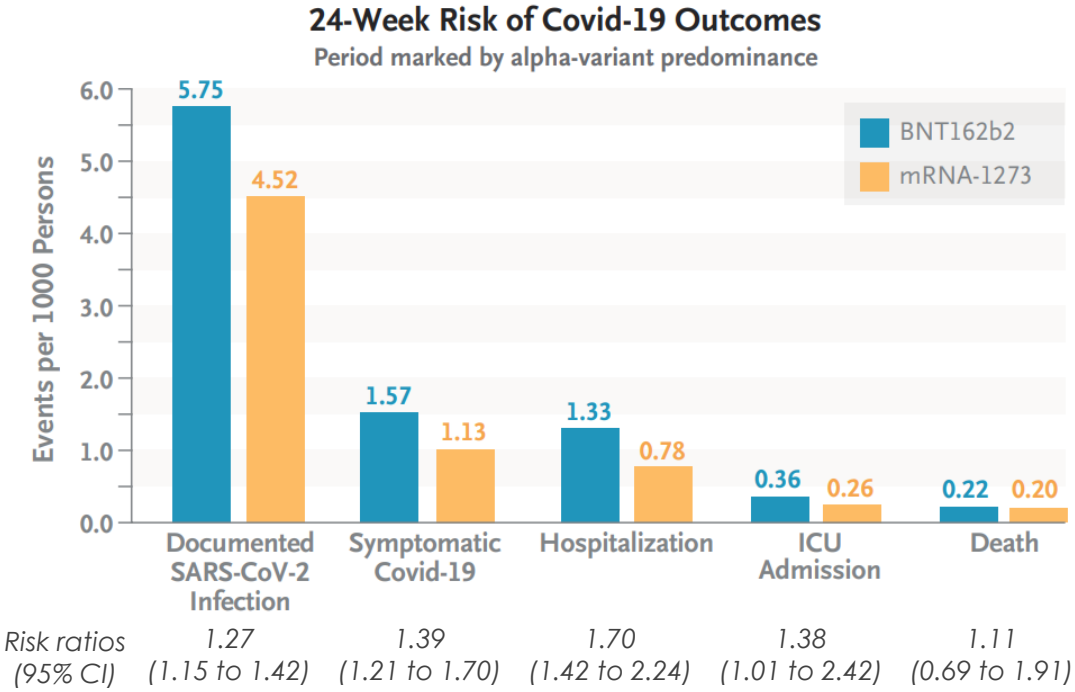
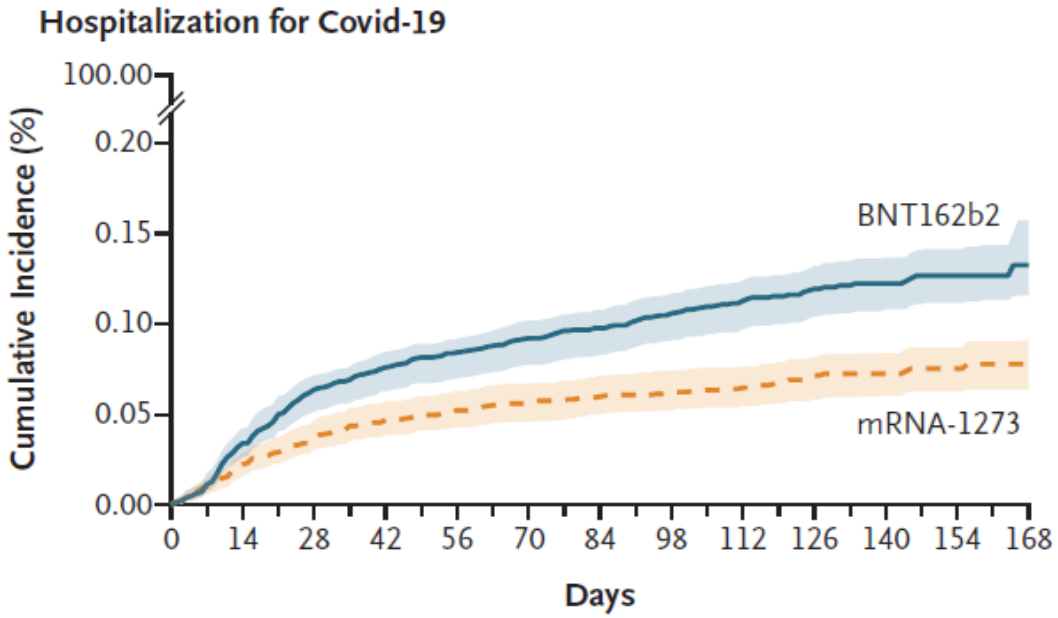
After two doses, independent, real-world evidence continues to demonstrate the strong effectiveness of mRNA-1273/Spikevax®

ORIGINAL ARTICLE

Comparative Effectiveness of BNT162b2 and mRNA-1273 Vaccines in U.S. Veterans





Dickerman et al, *New England Journal of Medicine* (Jan 2022), https:doi.org//10.1056/NEJMoa2115463
This study was not designed as a prospective, randomized, head-to-head comparison and no comparative conclusions regarding vaccine efficacy should be drawn.

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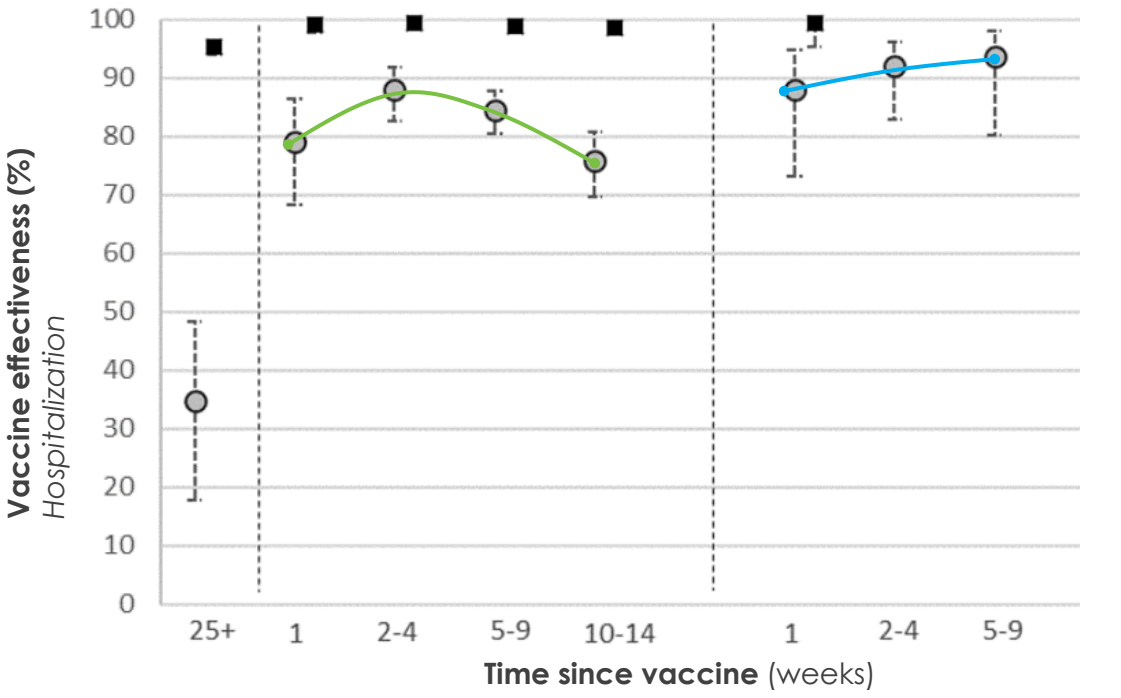
Spikevax® booster is highly effective against hospitalization regardless of primary series, but waning is expected

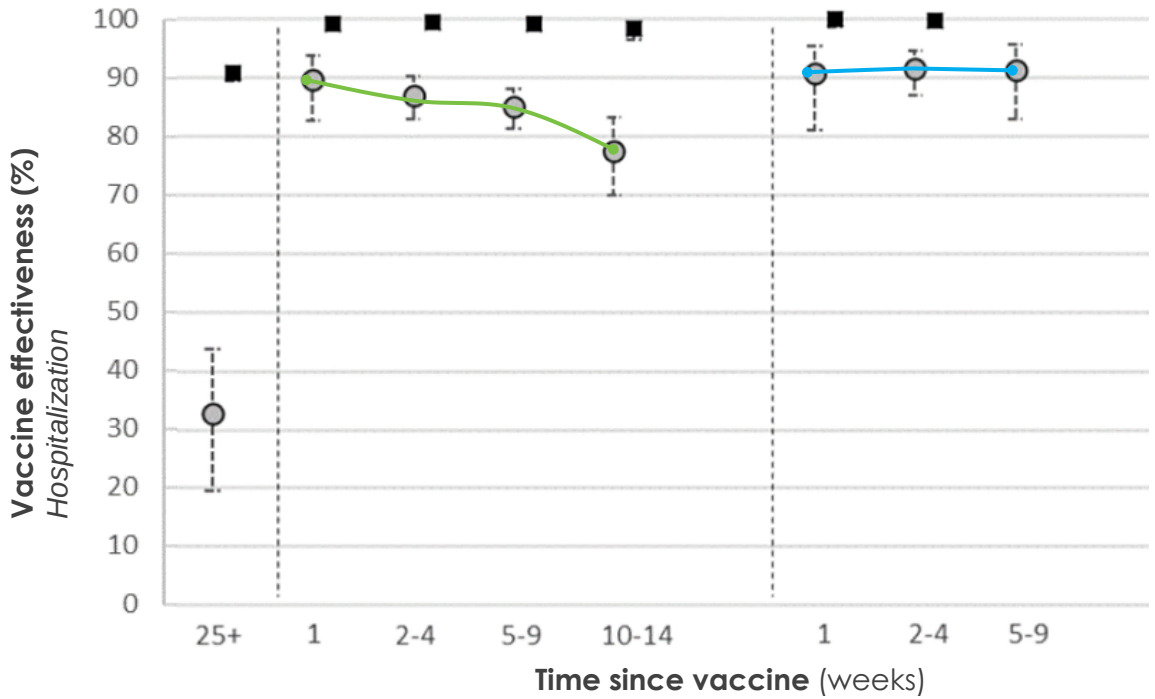
Booster effectiveness against hospitalization

Omicron
Delta

After BNT162b2 primary series



After ChAdOx1-S primary series



UK Health Security Agency, "COVID-19 vaccine surveillance report, week 6"
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1054071/vaccine-surveillance-report-week-6.pdf

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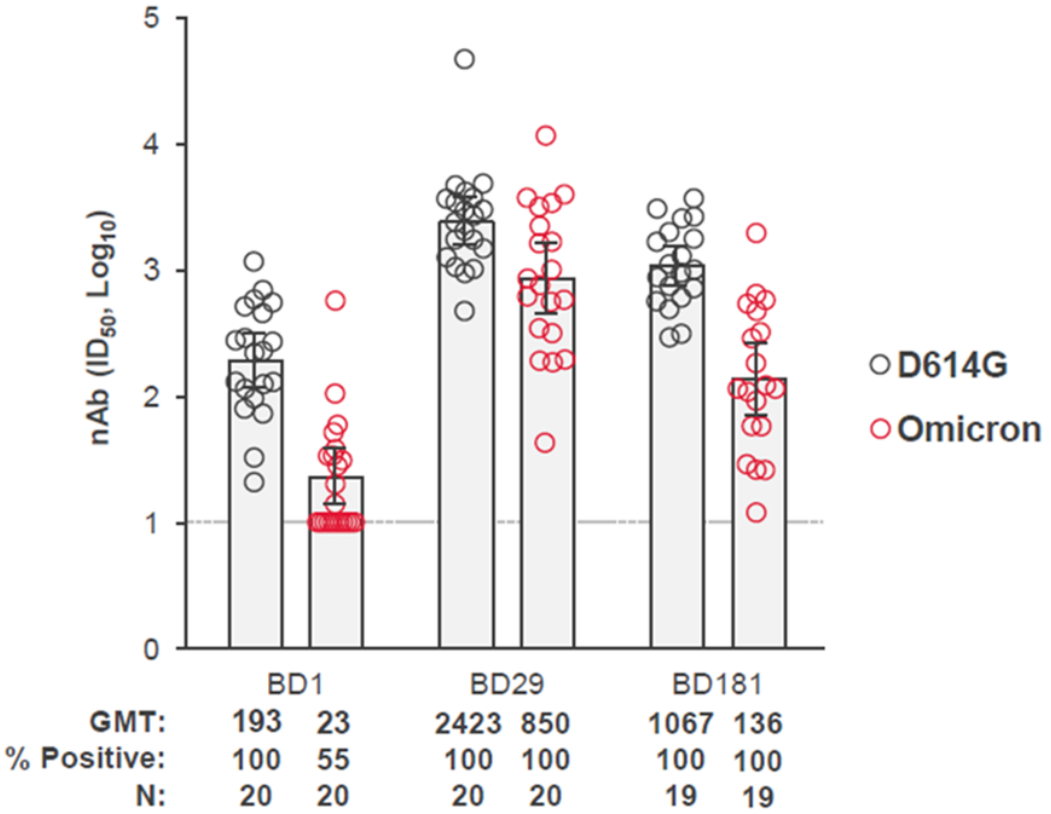
Neutralization of the ancestral virus, and Omicron, wanes by 6-months, particularly accelerated for Omicron



- Omicron PsVNT remains detectable for all tested recipients 6 months post-boost
- Omicron PsVNT declines significantly by 6 months post-boost; approaching dose 2 levels
- Antigen matched wild-type PsVNT shows slower decay following booster dose compared to dose 2

- Wild-type D641G data are based on a validated assay; Omicron data are based on a research-grade assay
- Samples randomly selected for Omicron testing; median interval between primary vaccination and 50 µg booster = 5.9 months

BD1, before booster dose day 1; BD29, after booster dose day 29; BD181, after booster dose day 181; GMT, geometric mean titers; ID50, 50% inhibitory dilution; nAb, neutralizing antibodies; PsVNT, pseudovirus neutralization titer

New England Journal of Medicine (2022), https://doi.org/10.1056/NEJMc2119912

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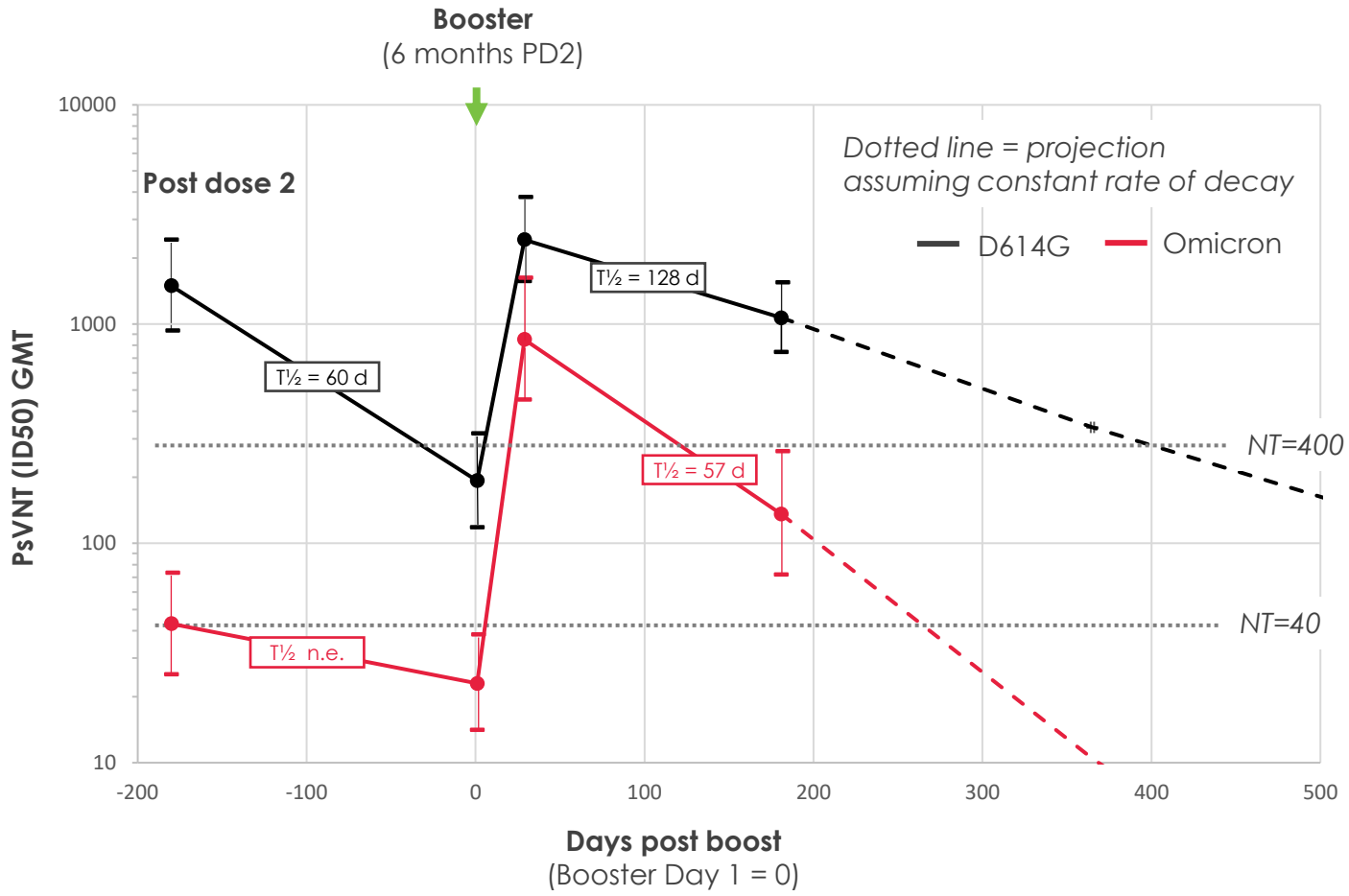
We predict antibody titers will continue to wane, underpinning the need for a fall 2022 booster to provide protection



Six months after booster dose, **neutralizing titers against**:

- **Omicron declined 6.3-fold**
- **Wild-type declined 2.3-fold**

Chart based on data found in: *New England Journal of Medicine (2022),* https://doi.org/10.1056/NEJMc2119912

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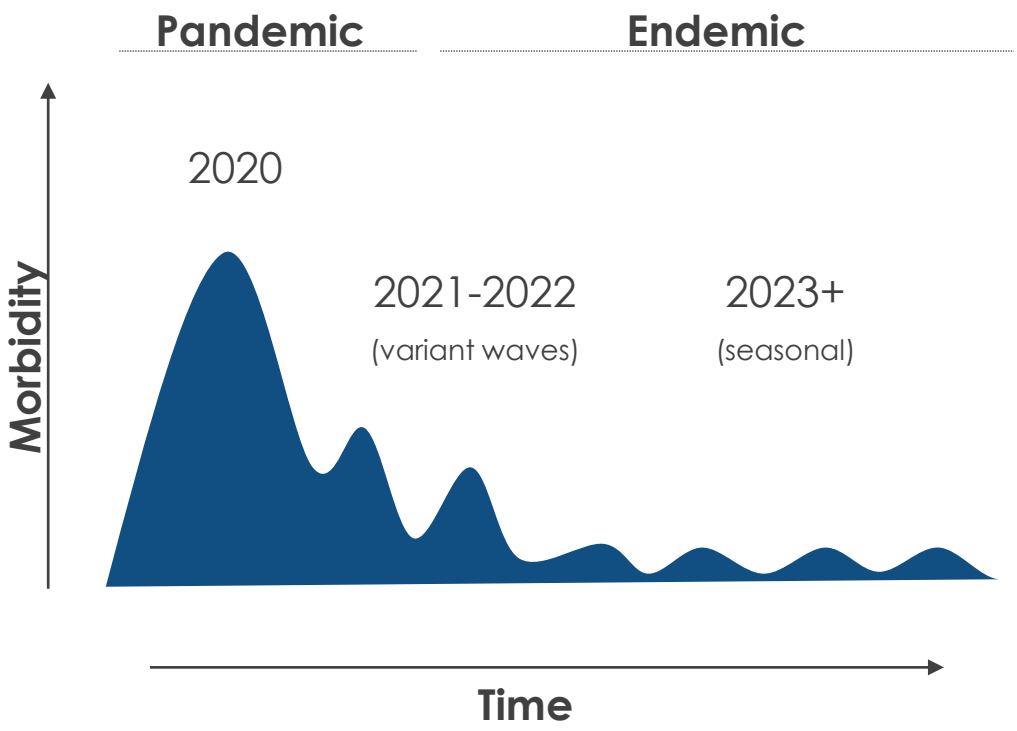
Transitioning into an endemic phase

ILLUSTRATIVE



Stage	Focus for vaccines
Pandemic *Initial waves*	• Heavy focus on protecting high-risk populations • Mostly ancestral virus vaccine
Variant *Reinfection waves*	• Focus on suppressing transmission of variants • Speed & adaptability are critical
Endemic *Seasonal*	• Focus on seasonal protection against waning immunity in high-risk • Multi-valent approaches with broadest immunity

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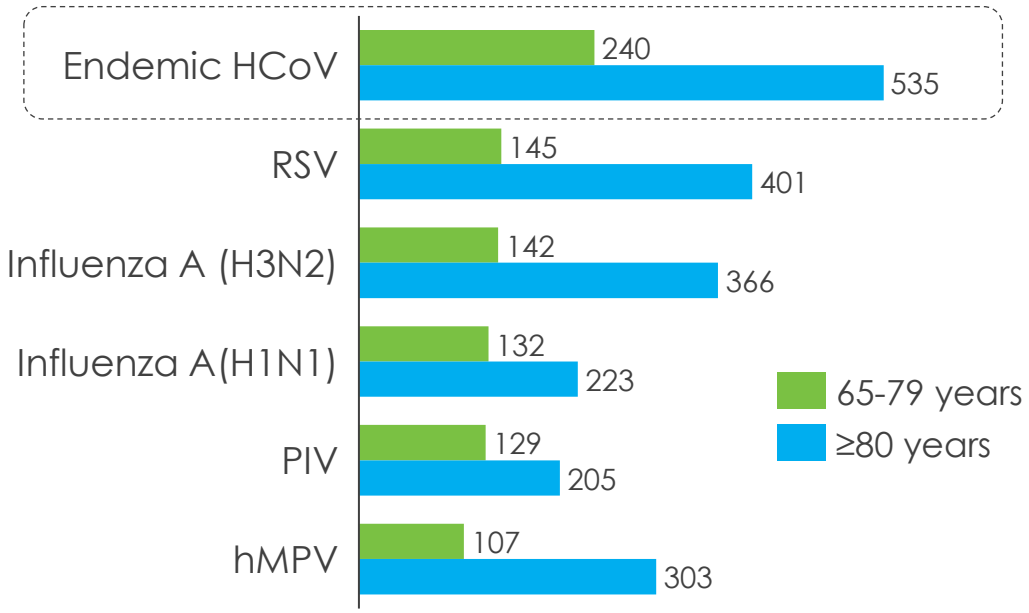
Endemic coronaviruses cause significant annual disease

Incidence of Community-onset Respiratory Viruses Associated with Hospitalization per 100,000 Persons

NYC, 10/2018 – 9/2019



Estimated impact of endemic HCoV in 65+ across OECD markets

Over 1 million outpatient visits

Approximately 350,000 hospitalizations

Approximately 20,000 deaths

Sieling. *Influenza Other Respi Viruses*. 2021; 00:1, Rae. *Potential Costs of Coronavirus Treatment for People with Employer Coverage*. 2020. Peterson-KFF Health System Tracker, Kozak. *Journal of Clinical Virology*. 2020; 126:104338, Fischer. *Lancet Microbe*. 2021; doi.org/10.1016/S2666-5247(20)30221-4, Gilca. *J Infect Dis*. 2020; jiaa477

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Key takeaways

Importance of Vaccination	• After the primary series (two doses), mRNA-1273/Spikevax® has been demonstrated to be highly effective in real-world settings
Current mRNA-1273 Booster	• Real-world evidence shows a 50-µg booster dose of mRNA-1273/ Spikevax® provides protection against hospitalization caused by Omicron, but we note waning of antibody titers by 6-months post boosting
Fall 2022 Booster	• We believe a Fall 2022 booster will be needed globally and the development of that vaccine gives an opportunity to protect against Omicron and other future variants

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COVID-19 booster development for endemic phase

Strategic rationale for seasonal booster	• Neutralizing titers (NT) will wane, similar to endemic HCoV • Decline in NT will increase risk of breakthrough hospitalization for those at higher risk (e.g., older adults, immune compromised) • Emergence of new variants of concern (VOC) could accelerate waning and broaden risk of breakthrough
Desired features for the northern hemisphere (NH) Fall/Winter '22-23 booster	• Improve durability of protective neutralizing antibodies against Omicron to 6+ months (i.e., the full NH fall-winter infection season) • Retain high and durable protection against Delta and ancestral strains • Broaden cross-protective immunity to increase potential for protection against a new (emergent) VOC mid-year

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Strategy to develop Omicron-containing booster for Fall '22

Moderna is evaluating 3 booster strategies for adults aged 18+

- Bivalent booster (prototype + Omicron; mRNA-1273.214)
- Omicron-specific booster (mRNA-1273.529)
- mRNA-1273 (prototype booster)

U.S. Phase 2 (P205)

- ~750 participants
- Evaluating Omicron-containing candidates (bivalent and .529)
- Following mRNA-1273 primary series as a *third or fourth* dose

U.K. Phase 3 (P305)

- ~3,000 participants
- Evaluating Omicron-containing candidates (bivalent and .529)
- Following any primary series vaccination (heterologous, incl. non-mRNA) as a *third or fourth* dose
- Compared to Spikevax® booster as a third or fourth dose

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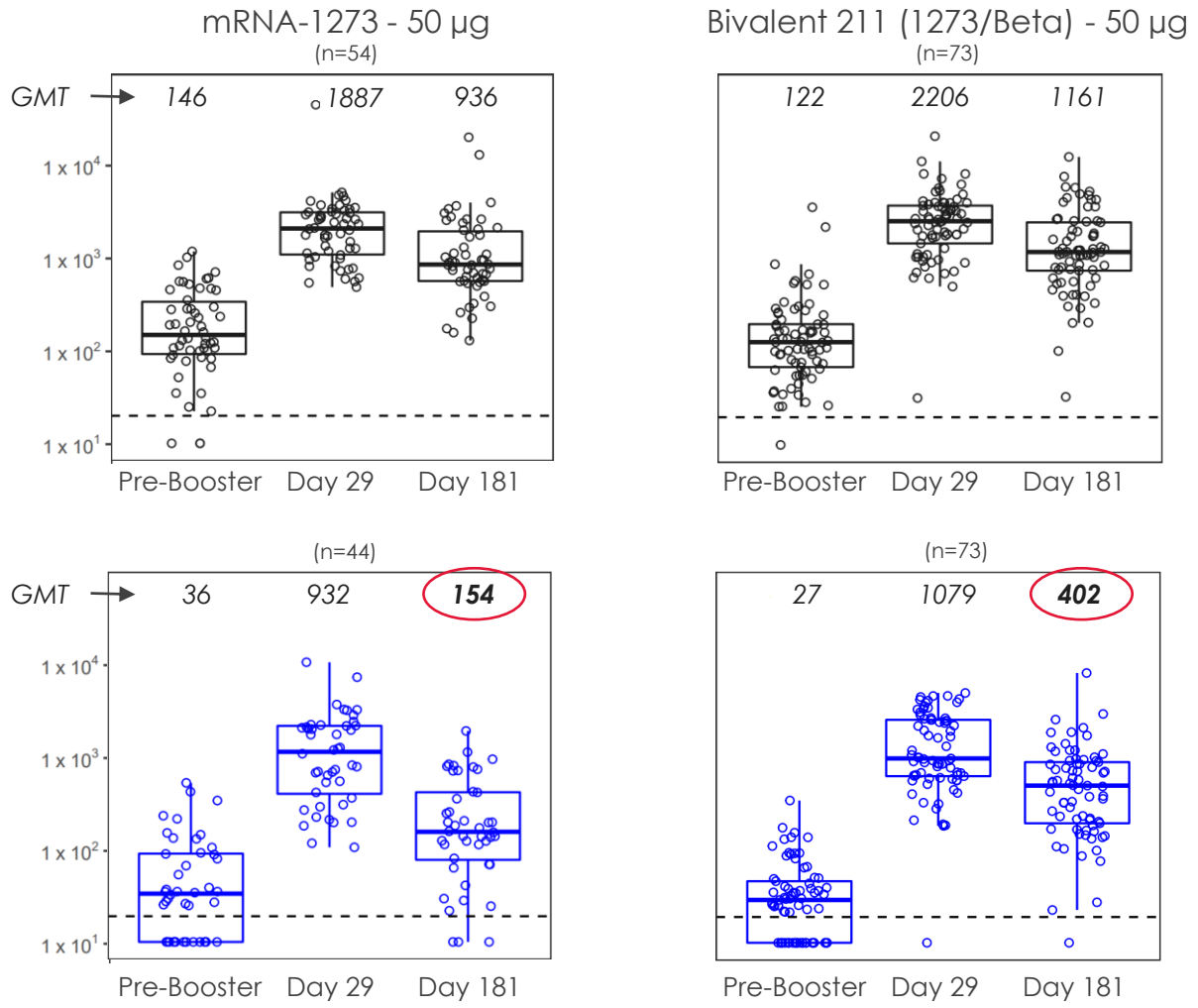
Emerging data suggests bivalent booster may improve durability against VOC while preserving activity against ancestral virus



- Six months after .211 bivalent booster, neutralizing titers against Beta VOC appear to be more durable than with prototype
- Durability (rate of decline) for Beta NT more closely matches that seen for ancestral virus (D614G) following bivalent .211 booster

Boosting after 100 µg mRNA-1273 prime series; ID50 neutralizing antibody titers; Manuscript in preparation

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Emerging data suggests bivalent booster may improve durability against VOC while preserving activity against ancestral virus

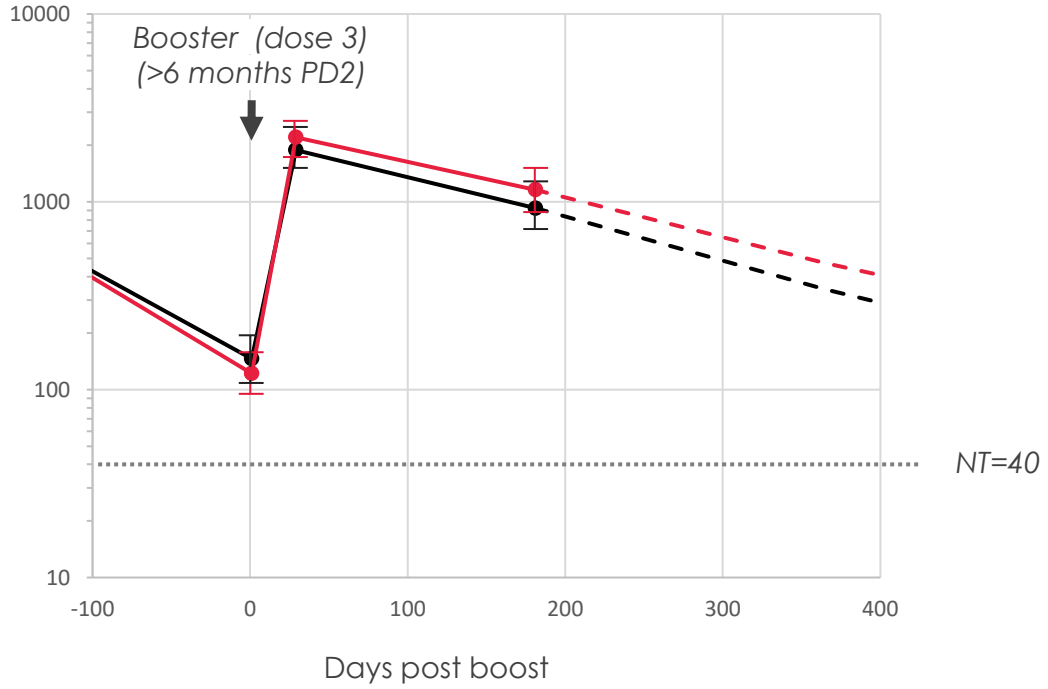
Ancestral: Bivalent .211 booster (prototype / Beta) retains activity against D614G virus

VOC: Bivalent shows potentially improved durability against included VOC (Beta)

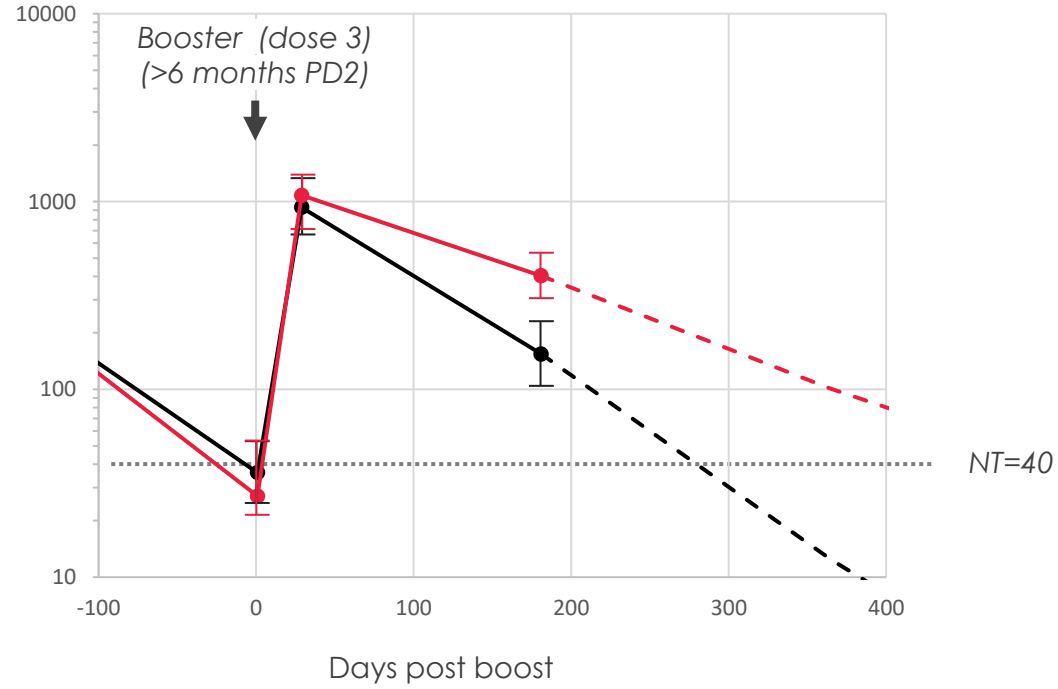
Booster (dose 3)
- mRNA-1273
- Bivalent (Beta/1273)

Dotted line = projection assuming constant decay

D614G PsVNT (ID50)GMT



Beta PsVNT (ID50)GMT



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Summary: COVID-19 booster development for Fall '22

- Moderna believes a seasonal (fall) booster will be necessary to prevent breakthrough disease, including hospitalizations in vulnerable populations as SARS-CoV-2 becomes endemic
- Continued viral evolution may put pressure on pre-existing immunity
- Fall '22 booster should reflect the diversity of circulating mutations and seek to achieve 6+ month neutralizing titers durability to increase potential for protection throughout the season (Sept-Feb)
- Moderna is developing an Omicron-containing bivalent booster based on data from prior bivalent candidates suggesting the potential for longer durability against VOC

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Other COVID-19 vaccine updates: Primary series and booster in adolescent and pediatric populations

Indication	Regulatory update
Adolescents (12 to 17 years old)	• Received regulatory approvals for Spikevax® (100 µg primary series dose) in Europe, U.K., Australia, Canada and other countries • In the U.S., plan to submit EUA for 100 µg mRNA-1273 in adolescents that are immune compromised or at elevated risk of severe outcomes; evaluating a lower dose (50 µg) primary series • Preparing to submit data for 50 µg booster dose (including heterologous boost)
Pediatrics (6 to 11 years old)	• Received provisional approval for Spikevax® (50 µg primary series dose) in Australia • Submitted international regulatory authorizations for primary series at 50 µg dose • U.S. submission pending alignment on adolescent application; also evaluating 25 µg dose
Pediatrics (6 months to 5 years old)	• Data on 25 µg (2 dose) primary series expected in Q1; plan to submit to regulators • Also evaluating potential for lower doses and a third dose

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Moderna's respiratory vaccines

Pipeline Highlights

COVID-19 variant boosters (Omicron, Wild-type/Omicron, and Delta) and next generation in development

Flu Phase 2 fully enrolled, data expected in early 2022; Phase 3 expected to start in 2022

Combination Flu + COVID in preclinical, expected to start Phase 1 in 2022

Older adults RSV started Phase 3 portion of pivotal Phase 2/3 study; **Pediatric RSV** in Phase 1

Human metapneumovirus (hMPV) + parainfluenza type 3 (PIV3) Phase 1b fully enrolled

RSV + hMPV vaccine in preclinical

Modality	Program	ID #	Preclinical development	Phase 1	Phase 2	Phase 3	Commercial	Moderna rights
Adults	COVID-19 vaccine	mRNA-1273/Spikevax®						Worldwide
		mRNA-1273.351	Beta variant					Worldwide
		mRNA-1273.617	Delta variant					Worldwide
		mRNA-1273.211	Beta variant + wild-type					Worldwide
		mRNA-1273.213	Beta + Delta variant					Worldwide
		mRNA-1273.529	Omicron variant					Worldwide
		mRNA-1273.214	Omicron + wild-type					Worldwide
		mRNA-1283	Next generation (2-5 °C)					Worldwide
	Flu vaccine	mRNA-1010			Phase 3 prep			Worldwide
		mRNA-1011						Worldwide
		mRNA-1012						Worldwide
		mRNA-1020						Worldwide
		mRNA-1030						Worldwide
	COVID + Flu vaccine	mRNA-1073						Worldwide
	Older adults RSV vaccine	mRNA-1345						Worldwide
Adolescents & Pediatrics	COVID-19 vaccine (adolescents)	mRNA-1273	TeenCOVE					Worldwide
	COVID-19 vaccine (pediatrics)	mRNA-1273	KidCOVE					Worldwide
	Pediatric RSV vaccine	mRNA-1345						Worldwide
	Pediatric hMPV + PIV3 vaccine	mRNA-1653	Phase 1b					Worldwide
	Pediatric RSV + hMPV vaccine	mRNA-1365						Worldwide

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Moderna's latent & public health vaccines

Pipeline Highlights

CMV vaccine pivotal Phase 3 study, known as CMVictory, is ongoing

EBV vaccine (to prevent infectious mononucleosis) Phase 1 is ongoing; **EBV vaccine (to prevent EBV sequelae)** is in preclinical

Announcing HSV and VZV development candidates

HIV vaccine (mRNA-1644) in Phase 1; **HIV vaccine (mRNA-1574)** in preclinical

Zika vaccine ongoing in a Phase 2 study

Nipah vaccine in preclinical

Modality	Program	ID #	Preclinical development	Phase 1	Phase 2	Phase 3	Commercial	Moderna rights
Latent vaccines	CMV vaccine	**mRNA-1647**						Worldwide
	EBV vaccine *(to prevent infectious mononucleosis)*	**mRNA-1189**						Worldwide
	EBV vaccine *(to prevent EBV sequelae)*	**mRNA-1195**						Worldwide
	HSV vaccine	**mRNA-1608**						Worldwide
	VZV vaccine	**mRNA-1468**						Worldwide
	HIV vaccines	**mRNA-1644**						Worldwide ***IAVI/others** funded*
		mRNA-1574						Worldwide ***BMGF/NIAID/ others** funded*
Public health vaccines	Zika vaccine	**mRNA-1893**						Worldwide ***BARDA** funded*
	Nipah vaccine	**mRNA-1215**						Worldwide ***NIH** funded*

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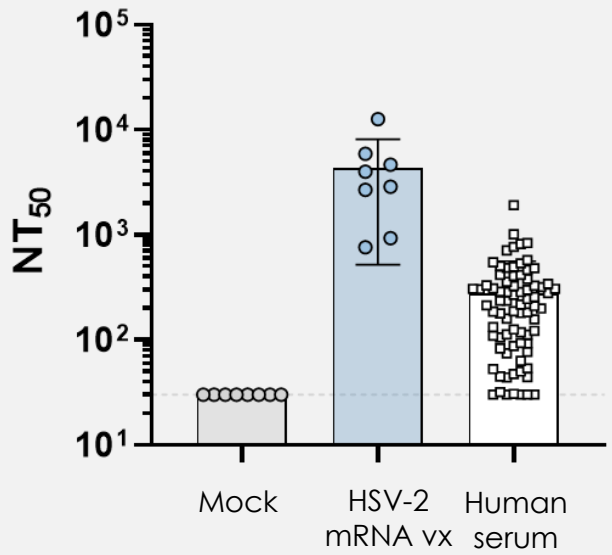
New development program: Vaccine against HSV-2 (mRNA-1608)

HSV-2 (Herpes) disease overview

- Herpes simplex virus type 2 (HSV-2) primarily infects the genitals
- HSV-2 establishes **life-long latent infections** within sensory neurons from which it can reactivate
- Significant burden of disease from HSV infections
  - Estimated **18.6 M HSV-2⁺ people** aged 18-49 in the US[1]
  - Globally, ~5% of the population in the 18-49 range is HSV-2 seropositive[2]
- Burden of disease includes a **reduction in quality of life**

mRNA vaccine containing HSV-2 antigens induces strong immune response in preclinical animal studies



Naïve c57/Bl6 mice were immunized twice at 3 weeks interval with either PBS (mock) or HSV-2 mRNA vaccine. Each group contained 8 animals, and neutralizing activity was measured 2 weeks after the second immunization

(1) Spicknall et al, *Sexually Transmitted Diseases* (2021), https://doi.org/10.1097/OLQ.0000000000001375
(2) Looker et al, *BMJ Global Health* (2020), https://doi.org/10.1136/bmjgh-2019-001875

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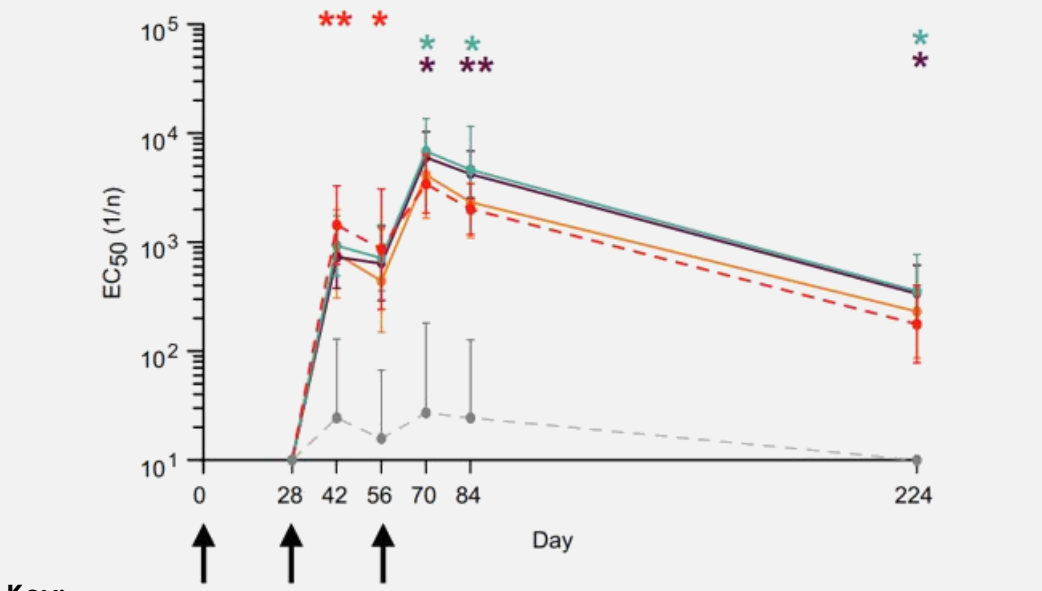
New development program: Vaccine against herpes zoster/shingles (mRNA-1468)

Herpes Zoster (shingles) disease overview

- Herpes zoster is caused by **reactivation of latent varicella-zoster virus** (VZV)
- **Declining immunity in older adults** decreases immunity against VZV, allowing reactivation of the virus from latently infected neurons, causing painful and itchy lesions
- Herpes Zoster occurs in **1 out of 3 adults in their lifetime** and incidence dramatically increases at approximately 50 years of age[1]

mRNA vaccine generated similar anti-gE titers compared to an adjuvanted subunit gE vaccine (proxy for Shingrix™)[2] in NHP



(1) CDC, Shingles, https://www.cdc.gov/shingles/about/index.html
(2) Monslow et al., Vaccine 38 (2020) 5793–5802, https://doi.org/10.1016/j.vaccine.2020.06.062

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Moderna's therapeutics

Pipeline Highlights

Immuno-oncology
- **PCV** Phase 1 ongoing; Phase 2 fully enrolled, data expected in 4Q 2022
- **KRAS** regained rights from Merck; evaluating next steps for the program
- **Checkpoint vaccine** announced as new development program
- **Triplet, IL-12** ongoing in Phase 1

Cardiovascular
- **VEGF** moving to Phase 2b (AstraZeneca)
- **Relaxin** in preclinical

Autoimmune
- **IL-2** Phase 1 ongoing
- **PD-L1** in preclinical

Rare diseases
- **PA** Phase 1 cohort fully enrolled; enrolling additional cohorts
- **MMA** ongoing in Phase 1
- **GSD1a** open IND
- **PKU, CN-1** and **CF** in preclinical

Modality	Program	ID #	Preclinical development	Phase 1	Phase 2	Phase 3	Commercial	Moderna rights
Systemic secreted & cell surface therapeutics	IL-2 *Autoimmune disorders*	mRNA-6231						Worldwide
	Relaxin *Heart failure*	mRNA-0184						Worldwide
	PD-L1 *Autoimmune hepatitis*	mRNA-6981						Worldwide
Cancer vaccines	Personalized cancer vaccine (PCV)	mRNA-4157						50-50 global profit sharing with **Merck**
	KRAS vaccine	mRNA-4671						Worldwide
	Checkpoint vaccine	mRNA-4359						Worldwide
Intratumoral Immuno-oncology	OX40L/IL-23/IL-36γ (Triplet) *Solid tumors/lymphoma*	mRNA-2752						Worldwide
	IL-12 *Solid tumors*	MEDI1191						50-50 U.S. profit sharing; **AZ** to pay royalties on ex-U.S. sales
Localized Regenerative Therapeutics	VEGF-A *Myocardial ischemia*	AZD8601						**AZ** to pay milestones and royalties
	Propionic acidemia (PA)	mRNA-3927						Worldwide
	Methylmalonic acidemia (MMA)	mRNA-3705						Worldwide
Systemic Intracellular Therapeutics	Glycogen storage disease type 1a (GSD1a)	mRNA-3745	Open IND					Worldwide
	Phenylketonuria (PKU)	mRNA-3283						Worldwide
Inhaled Pulmonary Therapeutics	Crigler-Najjar syndrome type 1 (CN-1)	mRNA-3351						Provided to **ILCM** free of charge
	Cystic fibrosis (CF)	VXc-522						**Vertex** to pay milestones and royalties

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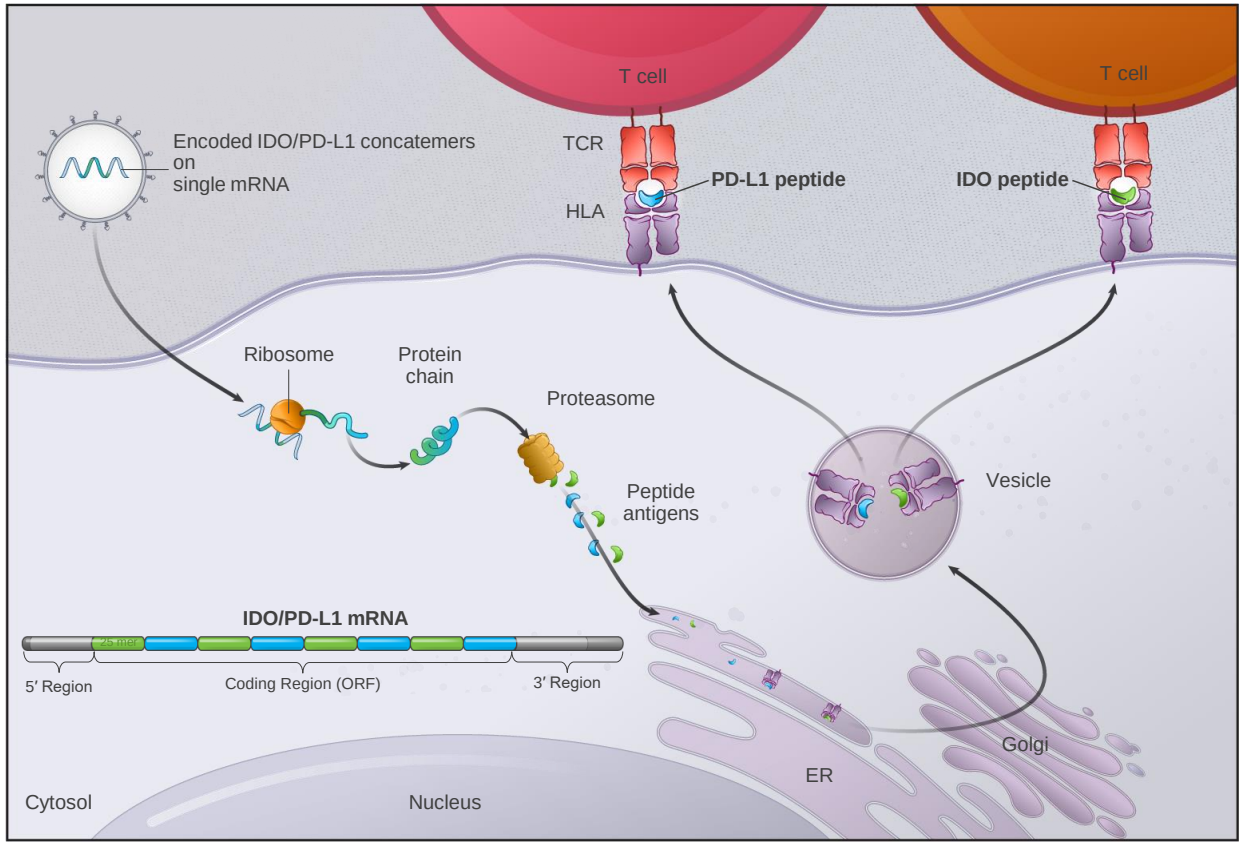
New development program: Checkpoint vaccine to promote anti-checkpoint T-cell responses (mRNA-4359)

- **Program objective**: Stimulate effector T cells that target and kill suppressive immune and cancer cells that express high levels of target checkpoint antigens:
  - Pre-existing IDO- and PD-L1 specific T cells have been identified in cancer patients
  - IDO- and PD-L1-specific T cells can kill immunosuppressive (regulatory) immune cells and cancer cells that overexpress IDO and PD-L1 checkpoints
  - Our vaccine can expand IDO- and PD-L1 specific T cells in pre-clinical models
  - Vaccine induced direct tumor killing can facilitate recognition of tumor-associated antigens by other cytotoxic T cells leading to more tumor killing
  - Systemic PD-1/PD-L1 blockade may further amplify the effect
- **Initial indications:** 1L cutaneous melanoma stage IIIB+ and 1L NSCLC



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Today's Agenda

4Q21 Earnings Call

1. Business Review – Stéphane Bancel, CEO
2. Spikevax® COVID-19 Vaccine Update – Paul Burton, M.D., Ph.D., CMO
3. Clinical Program Review – Stephen Hoge, M.D., President
4. **Financials – David Meline, CFO**
5. Looking Forward – Stéphane Bancel, CEO

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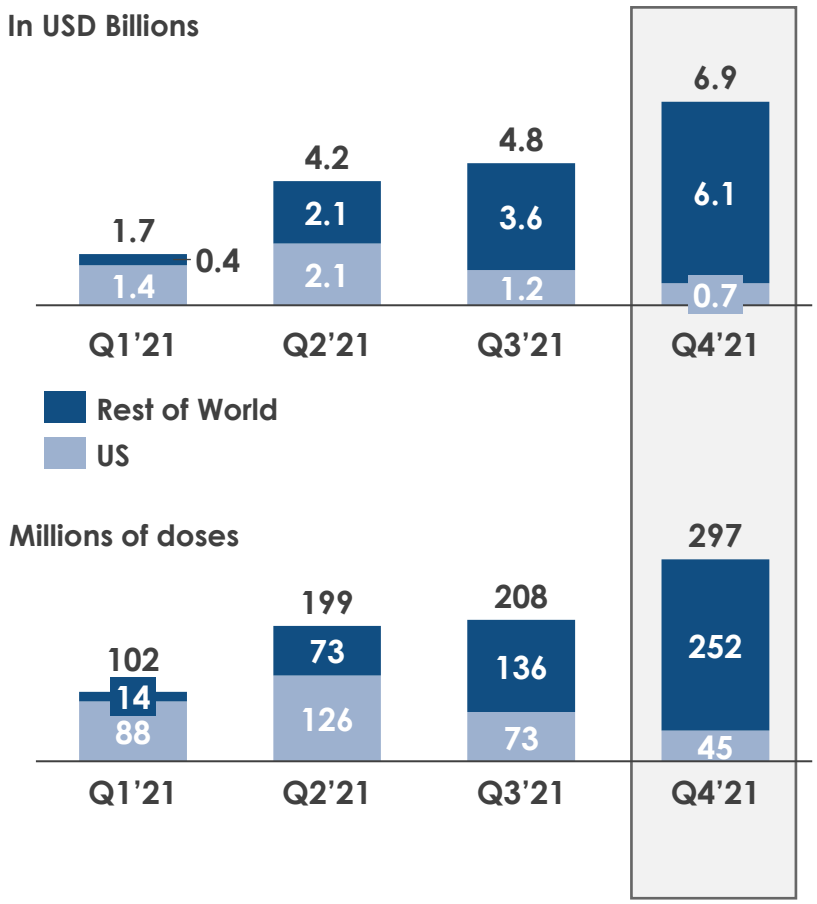
Product sales of $6.9 billion in the fourth quarter and $17.7 billion for the full year 2021

Product Sales by Quarter 2021



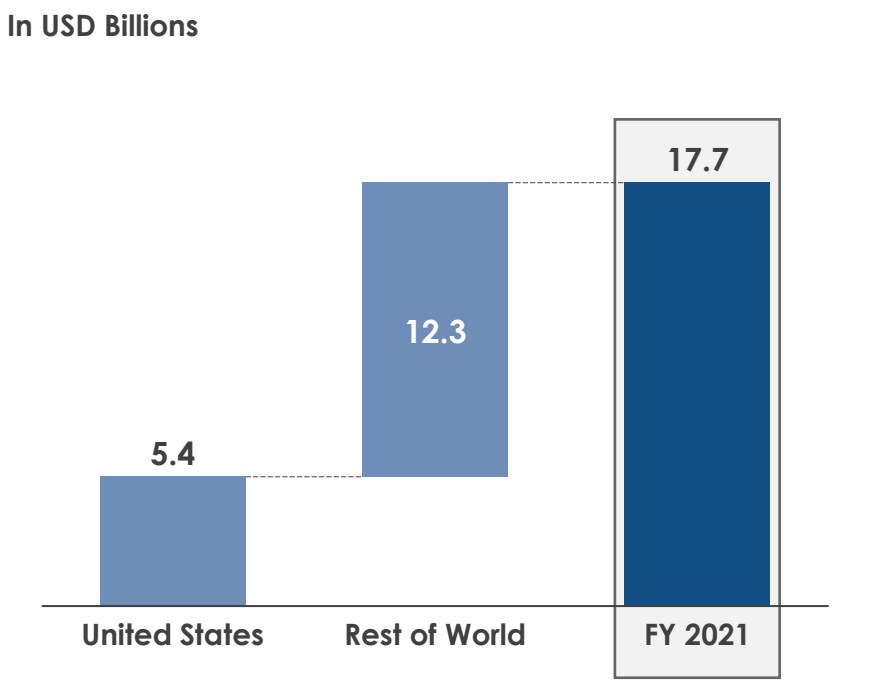
Q4 2021 Product Sales: $6.9B

- $6.1B Rest of World
- $0.7B US

Q4 2021 doses delivered: 297M

- 252M doses to Rest of World
- 45M doses to US

Product Sales Full Year 2021



FY 2021 Product Sales: $17.7B

FY 2021 Delivered doses: 807M

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Fourth quarter 2021 financial results

In $ millions, except per share amounts (unaudited)	Q4 2021	Q3 2021	Q4 2020	QoQ Change (Q4'21 vs. Q3'21)	
Product sales[1]	**$ 6,935**	**$ 4,810**	**$ 200**	**$ 2,125**	**44 %**
Grant revenue	262	140	341	122	87 %
Collaboration revenue	14	19	30	(5)	(26) %
Total revenue	**7,211**	**4,969**	**571**	**2,242**	**45 %**
Cost of sales	952	722	8	230	32 %
Research and development	648	521	759	127	24 %
Selling, general and administrative	201	168	79	33	20 %
Total operating expenses	**1,801**	**1,411**	**846**	**390**	**28 %**
Income (loss) from operations	**5,410**	**3,558**	**(275)**	**1,852**	**52 %**
Other (expense) income	—	(6)	4	6	(100) %
Provision for income taxes	542	219	1	323	147 %
Net income (loss)	**$ 4,868**	**$ 3,333**	**$ (272)**	**$ 1,535**	**46 %**
Earnings (loss) per share – Diluted	$ 11.29	$ 7.70	$ (0.69)	$ 3.59	47 %
Weighted average shares – Diluted	431	434	397	(3)	(1) %
Effective tax rate	10 %	6 %	— %		

1. In December 2020, we began to recognize product sales from sales of our COVID-19 vaccine to the U.S Government and international governments

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Full year 2021 financial results

In $ millions, except per share amounts

	FY 2021 (unaudited)	FY 2020	YoY Change	
Product sales[1]	**$ 17,675**	**$ 200**	**$ 17,475**	**NM**
Grant revenue[2]	735	529	206	39 %
Collaboration revenue	61	74	(13)	(18) %
Total revenue	**18,471**	**803**	**17,668**	**2,200 %**
Cost of sales	2,617	8	2,609	NM
Research and development	1,991	1,370	621	45 %
Selling, general and administrative	567	188	379	202 %
Total operating expenses	**5,175**	**1,566**	**3,609**	**230 %**
Income (loss) from operations	**13,296**	**(763)**	**14,059**	**1,843 %**
Other (expense) income	(11)	19	(30)	(158) %
Provision for income taxes	1,083	3	1,080	NM
Net income (loss)	**$ 12,202**	**$ (747)**	**$ 12,949**	**1,733 %**
Earnings (loss) per share – Diluted	$ 28.29	$ (1.96)	$ 30.25	NM
Weighted average shares – Diluted	431	381	50	13 %
Effective tax rate	8 %	— %		

1. In December 2020, we began to recognize product sales from sales of our COVID-19 vaccine to the U.S Government and international governments
2. Grant revenue increased in 2021, primarily related to the BARDA Agreement to accelerate development of our COVID-19 vaccine (mRNA-1273)

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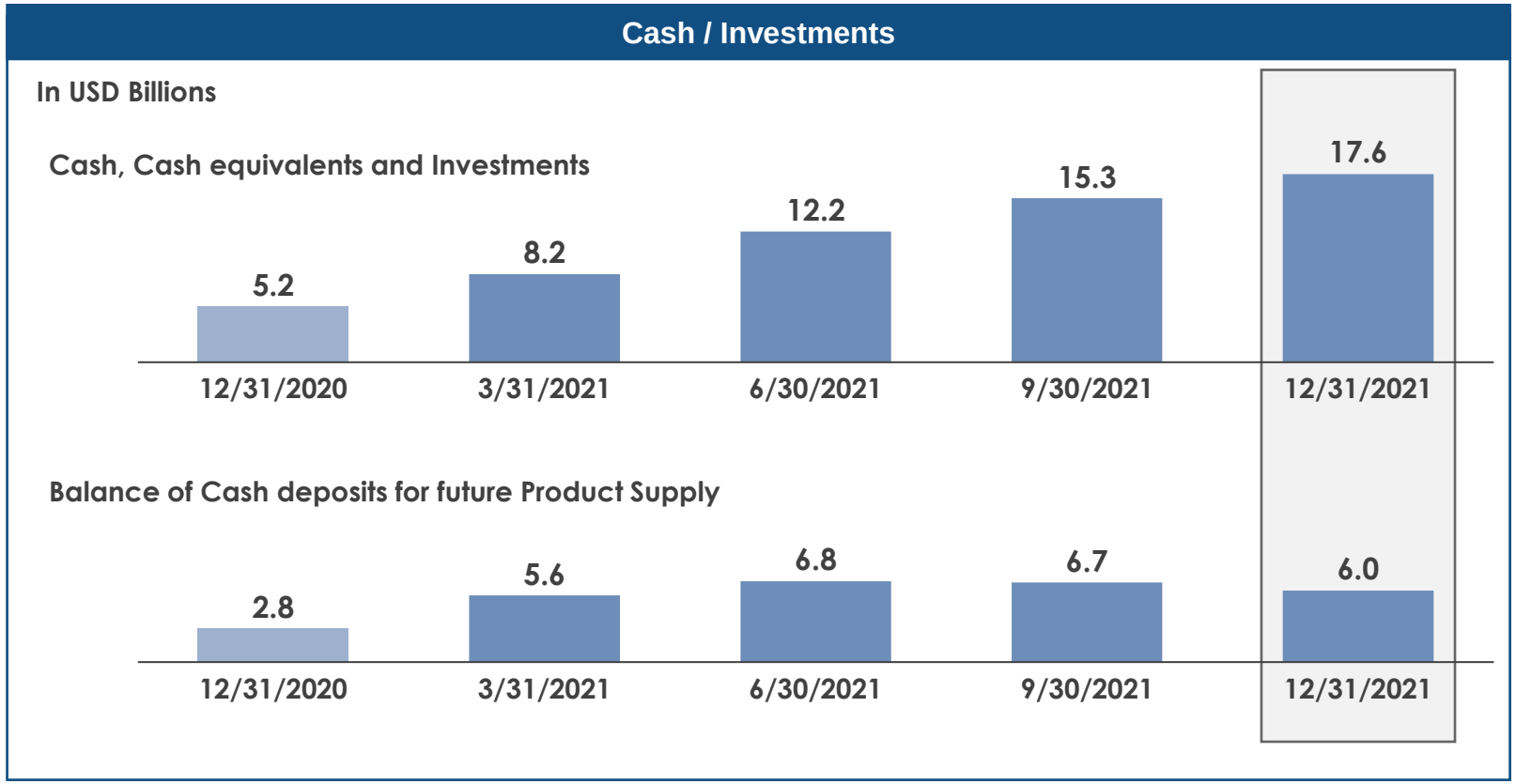
Cash/ investments and cash deposits



- Cash, Cash equivalents and Investments as of December 31, 2021 at $17.6B, up from $15.3B as of September 30, 2021
- Balance of Cash deposits for future Product Supply as of December 31, 2021 at $6B, below prior quarter driven by commercial deliveries against commitments

Cash and investments increased, driven by commercial activities

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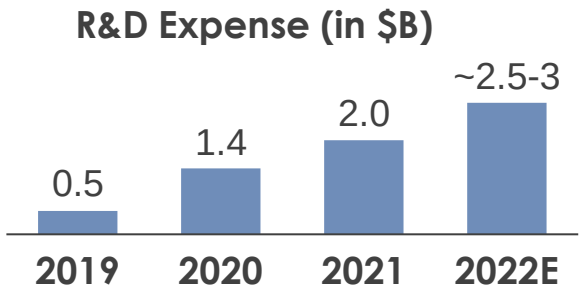
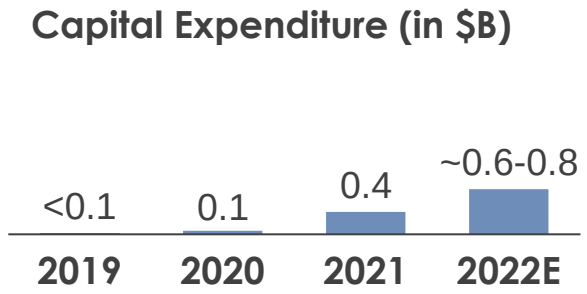
Moderna's capital allocation priorities

1. **Reinvest in the business** & accelerate investment in R&D, manufacturing infrastructure and company buildout





2. **Seek attractive external investment opportunities (licenses and/or M&A)** to further expand the reach of Moderna's technology

METAGENOMI

carisma THERAPEUTICS

3. **Return capital to shareholders**

- **Completed share buyback program of $1 billion announced in August 2021**
- **Repurchased 3.5 million shares in 2021 and 0.6 million in 2022**
- **Announcing a new share buyback program of $3 billion**

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2022 financial framework

Sales	▪ For expected delivery in FY 2022: Advance Purchase Agreements (APAs) currently signed for product sales of ~$19 billion and ~$3B of signed options (probabilized) ▪ We expect sales to be larger in the second half of 2022 than in the first half as SARS-CoV-2 becomes endemic
Cost of sales	▪ We expect full year 2022 reported cost of sales in the low-to-mid 20s percentage range
R&D and SG&A Expenses	▪ We expect full year R&D and SG&A expenses of approximately $4 billion
Tax rate	▪ We expect an Effective Tax Rate for the full year in the mid-teen percentage range
Capital Expenditures	▪ We expect capital expenditures in the range of $0.6-$0.8 billion

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Executing on Moderna's product strategy

1	Bring to market a **pan-respiratory annual booster vaccine** (which we will continuously customize) *Waiting for Flu Phase 2 data to pick dose for Phase 3 AND to pick dose for mRNA-1073 (COVID+Flu) for Phase 1*
2	Bring to market **first-in-class vaccines for latent viruses** *Announced two new development candidates against latent viruses, HSV and VZV*
3	Bring to market **therapeutics based on mRNA-encoded proteins** *Announced new checkpoint vaccine development candidate*
4	**Expand our portfolio through strategic investments** that leverage or enhance our platform *Established collaborations with Metagenomi and Carisma*

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Material change in commercial momentum in 2021 as we built the organization

Early 2021	Early 2022
• At the time of EUA, Phase 3 showed mRNA-1273 vaccine efficacy (VE) of approximately 95%; at ~6 months mRNA-1273 VE of ~93%	• Multiple, independent RWE studies confirm the strong effectiveness of Spikevax®
• mRNA-1273 was supply constrained (100 µg dose is 3.3x more mass)	• ~300M doses shipped in Q4 → annual run rate of 1.2B; new capacity coming online in 1Q22
• Minimal commercial infrastructure	• Currently have 11 commercial subsidiaries across North America, Europe and Asia-Pacific

11 Commercial Subsidiaries

Canada
United States

France
Germany
Italy
Spain
Switzerland
United Kingdom

Australia
Japan
South Korea

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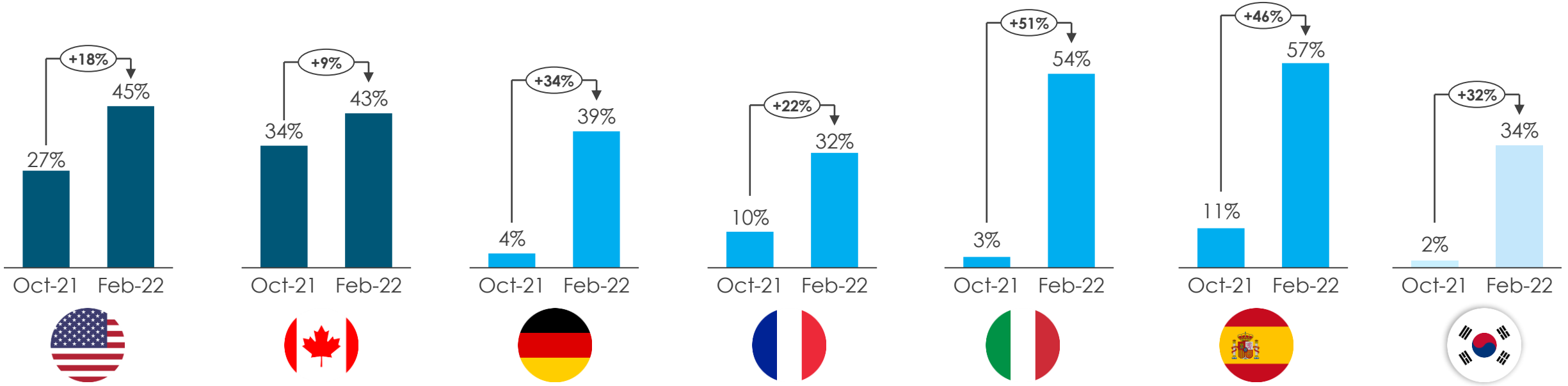
Spikevax's® market share has increased across key markets

- Booster market in OECD countries is an mRNA vaccine market
- Booster approvals, supply and real-world evidence have been the key factors

Spikevax® Booster/Third Dose Market Share



Sources (Data snapshot was downloaded on 2/16/22 from each country's website (except Canada - 2/21/22); all the historical data might be restated in the future)

- US: Booster authorized in ages 65+, high-risk individuals on Oct. 20; Booster authorized in ages 18+ on Nov. 19; https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdi/unsk-b7fc
- CA: Booster authorized in 18+ years old on Nov. 15, 2021: https://health-infobase.canada.ca/covid-19/vaccine-administration/
- EU: Booster recommended in ages 18+ on Oct. 25; https://www.ecdc.europa.eu/en/publications-data/data-covid-19-vaccination-eu-eea
- SK: Moderna vaccine granted EUA on Oct. 26, 2021; https://ncv.kdca.go.kr/vaccineStatus.es?mid=a11710000000

Methodology:

- Oct '21 = Cumulative Moderna share of administered 3rd doses 10/3-10/31/21
- Feb '22 = Cumulative Moderna share of administered 3rd doses 10/3/21-2/13/22
- Share is calculated for Third Dose (vast majority is booster; may include 3rd for immuno-compromised)
- Share is only calculated for doses where manufacturer has been identified in the public data source

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Spikevax® commercial outlook in 2022

Spikevax® 2022 commercial outlook

- Signed APAs: ~$19B
- Options (probability weighted): ~$3B
- Discussions ongoing with countries around the world, including the U.S.
- Expect that SARS-CoV-2 will become endemic this year with sales larger in the second half of the year as the Northern Hemisphere enters the Fall/Winter

	3Q21 Earnings Call (Nov. 4th, 2021)	J.P. Morgan Conference (Jan. 10th, 2022)	4Q21 Earnings Call (Feb. 24th, 2022)
Signed APAs	~$17B	~$18.5B	~$19B
Options (probability weighted)	Up to $3B	~$3.5B	~$3B

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We are expanding Moderna commercial network in 2022: 10 new commercial subsidiaries planned this year

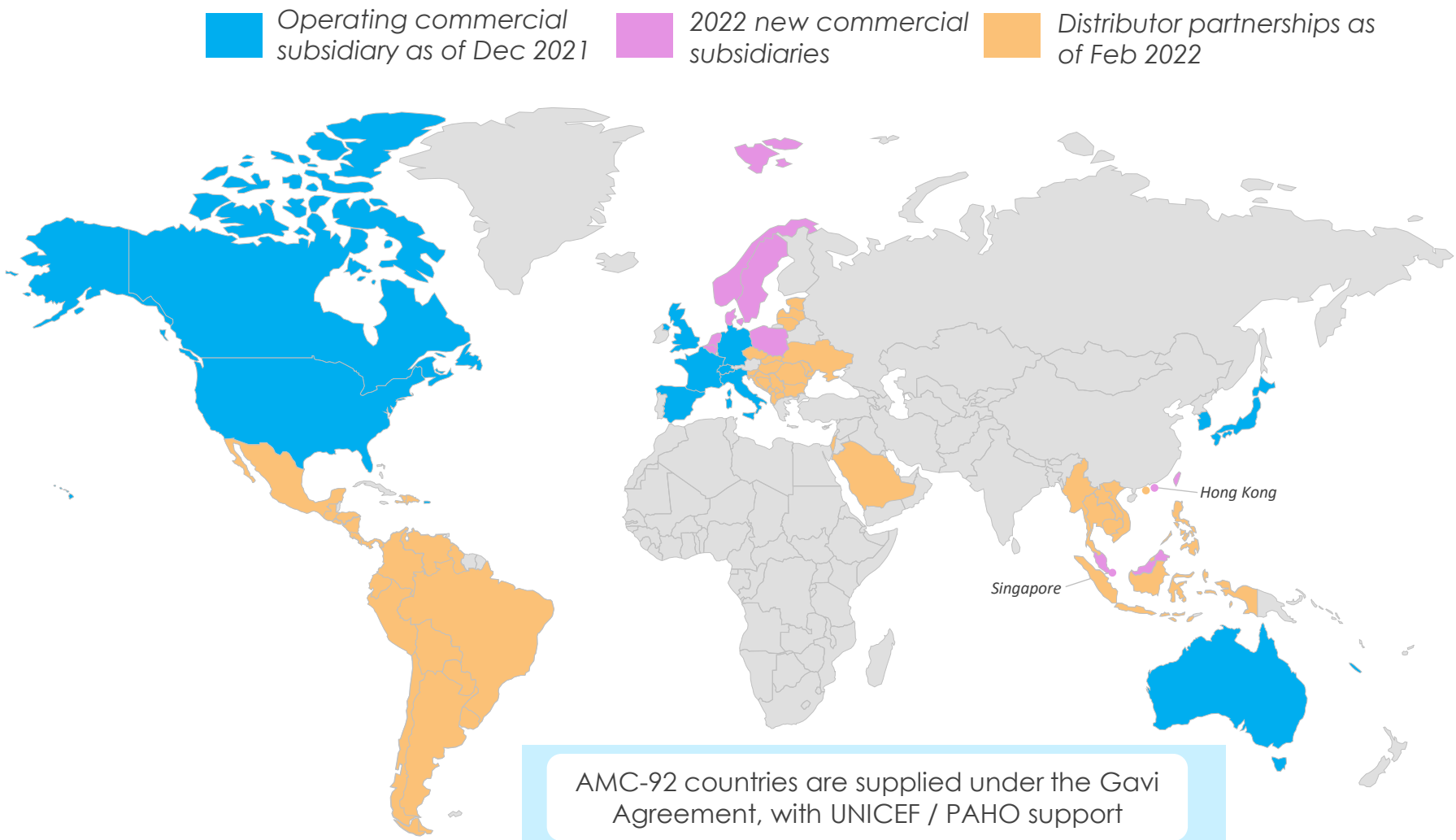
Commercial expansion

Europe

- Poland
- Netherlands
- Belgium
- Sweden
- Denmark
- Norway

Asia

- Malaysia
- Taiwan
- Hong Kong
- Singapore



AMC-92 countries are supplied under the Gavi Agreement, with UNICEF / PAHO support

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Commercial outlook in 2023 and driving to a service/subscription model for our pan-respiratory franchise

Spikevax® 2023 commercial outlook

- Firm orders for delivery in 2023 from:
  - United Kingdom
  - Canada
  - Taiwan
  - Kuwait

10-year agreements with strategic countries

- **Strategic supply agreements** with governments
- Announced in **principle agreements with Australia and Canada** and in discussions with additional countries around the world

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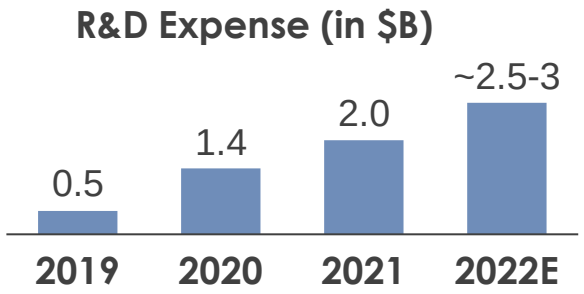

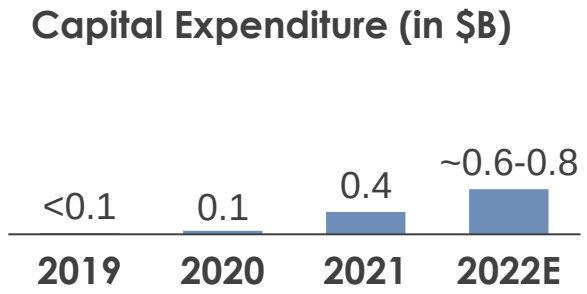

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- **Announcing a new share buyback program of $3 billion**

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We will make progress on important expansions announced in 2021

In 2021, ~**25% of doses were shipped to low- and middle-income countries**

Investing in **Moderna Science Center** and launched **AI Academy**

Pledge to **achieve net-zero carbon emissions** globally by 2030

Announced **Moderna Charitable Foundation** and **global fellowship program**

Announced plans to invest up to $500M in **manufacturing facility in Africa**

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Save the Date
Events in 2022

Vaccines Day
March 24th

Science Day
May 17th

R&D Day
September 8th

ESG Day
November 10th

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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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Moderna's Respiratory Vaccines (Pipeline 1/3)

Modality	Program	ID #	Preclinical development / Phase 1 / Phase 2 / Phase 3 / Commercial	Moderna rights
Adults — Prophylactic vaccines	COVID-19 vaccine	mRNA-1273/Spikevax®		Worldwide
		mRNA-1273.351	Beta variant	Worldwide
		mRNA-1273.617	Delta variant	Worldwide
		mRNA-1273.211	Beta variant + wild-type	Worldwide
		mRNA-1273.213	Beta + Delta variant	Worldwide
		mRNA-1273.529	Omicron variant	Worldwide
		mRNA-1273.214	Omicron + wild-type	Worldwide
		mRNA-1283	Next generation (2-5 °C)	Worldwide
	Flu vaccine	mRNA-1010	Phase 3 prep	Worldwide
		mRNA-1011		Worldwide
		mRNA-1012		Worldwide
		mRNA-1020		Worldwide
		mRNA-1030		Worldwide
	COVID + Flu vaccine	mRNA-1073		Worldwide
	Older adults RSV vaccine	mRNA-1345		Worldwide
Adolescents & Pediatrics	COVID-19 vaccine (adolescents)	mRNA-1273	TeenCOVE	Worldwide
	COVID-19 vaccine (pediatrics)	mRNA-1273	KidCOVE	Worldwide
	Pediatric RSV vaccine	mRNA-1345		Worldwide
	Pediatric hMPV + PIV3 vaccine	mRNA-1653	Phase 1b	Worldwide
	Pediatric RSV + hMPV vaccine	mRNA-1365		Worldwide

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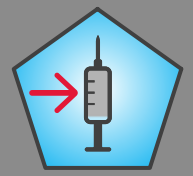
Moderna's Latent & Public Health Vaccines (Pipeline 2/3)

Modality	Program	ID #	Preclinical development	Phase 1	Phase 2	Phase 3	Commercial	Moderna rights
Latent vaccines  Prophylactic vaccines	CMV vaccine	**mRNA-1647**						Worldwide
	EBV vaccine *(to prevent infectious mononucleosis)*	**mRNA-1189**						Worldwide
	EBV vaccine *(to prevent EBV sequelae)*	**mRNA-1195**						Worldwide
	HSV vaccine	**mRNA-1608**						Worldwide
	VZV vaccine	**mRNA-1468**						Worldwide
	HIV vaccines	**mRNA-1644**						Worldwide ***IAVI/others*** *funded*
		mRNA-1574						Worldwide ***BMGF/NIAID/ others*** *funded*
Public health vaccines	Zika vaccine	**mRNA-1893**						Worldwide ***BARDA*** *funded*
	Nipah vaccine	**mRNA-1215**						Worldwide ***NIH*** *funded*

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Moderna's Therapeutics (Pipeline 3/3)

Modality	Program	ID #	Preclinical development	Phase 1	Phase 2	Phase 3	Commercial	Moderna rights
Systemic secreted & cell surface therapeutics	IL-2 *Autoimmune disorders*	**mRNA-6231**						Worldwide
	Relaxin *Heart failure*	**mRNA-0184**						Worldwide
	PD-L1 *Autoimmune hepatitis*	**mRNA-6981**						Worldwide
Cancer vaccines	Personalized cancer vaccine (PCV)	**mRNA-4157**						50-50 global profit sharing with **Merck**
	KRAS vaccine	**mRNA-4671**						Worldwide
	Checkpoint vaccine	**mRNA-4359**						Worldwide
Intratumoral Immuno-oncology	OX40L/IL-23/IL-36γ (Triplet) *Solid tumors/lymphoma*	**mRNA-2752**						Worldwide
	IL-12 *Solid tumors*	**MEDI1191**						50-50 U.S. profit sharing; **AZ** to pay royalties on ex-U.S. sales
Localized Regenerative Therapeutics	VEGF-A *Myocardial ischemia*	**AZD8601**						**AZ** to pay milestones and royalties
	Propionic acidemia (PA)	**mRNA-3927**						Worldwide
	Methylmalonic acidemia (MMA)	**mRNA-3705**						Worldwide
Systemic Intracellular Therapeutics	Glycogen storage disease type 1a (GSD1a)	**mRNA-3745**	Open IND					Worldwide
	Phenylketonuria (PKU)	**mRNA-3283**						Worldwide
Inhaled Pulmonary Therapeutics	Crigler-Najjar syndrome type 1 (CN-1)	**mRNA-3351**						Provided to **ILCM** free of charge
	Cystic fibrosis (CF)	**VXc-522**						**Vertex** to pay milestones and royalties

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