First Quarter 2023 Financial Results

May 4, 2023

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: anticipated sales, including the timing of sales, under advance purchase agreements in 2023, which may not be realized; expected new contracts for COVID-19 vaccines; Moderna's expectations regarding the commercial COVID-19 market and its preparations for and ability to effectively compete in such a market; Moderna's preparations for potential RSV and flu vaccine launches in 2024; the estimated addressable markets for Moderna's respiratory franchise and expected timing for the franchise to generate cash; the potential for an updated formulation of mRNA-1010 to lead to improved immune responses against influenza B strains and enable licensure through accelerated approval; Moderna's plans with respect to its individualized neoantigen therapy (INT), including plans to initiate a Phase 3 study in adjuvant melanoma in 2023 and rapidly expand to additional tumor types, including non-small cell lung cancer; Moderna's ability to rapidly make mRNA-4157 available to patients and to identify populations that could benefit from INT; the timing of data from Moderna's ongoing clinical trials; Moderna's capital allocation priorities, including anticipated spending on R&D for 2023; and Moderna's 2023 financial framework. 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 Annual Report on Form 10-K for the fiscal year ended December 31, 2022, 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 of this presentation.

Financial figures in this presentation as of, and for the quarterly periods ended, March 31, 2023, and March 31, 2022, are unaudited.

1Q23 earnings call agenda

Business Review
Stéphane Bancel, CEO

R&D/Clinical Programs
Stephen Hoge, M.D., President

Commercial Market
Arpa Garay, CCO

Financials
Jamey Mock, CFO

Looking Forward
Stéphane Bancel, CEO

1Q23 financial highlights

1Q23 GAAP financial results

Revenue: $1.9 billion

Net income: $79 million

Diluted earnings per share: $0.19

Cash and investments: $16.4 billion

Capital allocation highlights

Reinvest in the business

- $1.1 billion R&D
- $0.3 billion SG&A
- $0.1 billion capital expenditures

External investment opportunities (licenses and/or M&A)

2023: OriCiro, CytomX, Life Edit, Generation Bio

Return capital to shareholders

Repurchased 3.6 million shares for $526 million in 1Q23 (avg. price ~$145/share)

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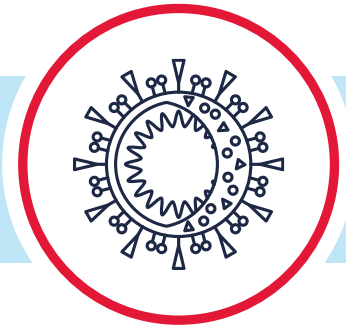
Commercial 1Q23 updates



2023 COVID market

- Reiterating a minimum of ~$5 billion in COVID vaccine sales from previously announced APAs
- In active negotiations with key customers in major markets
  - U.S. (commercial & government)
  - Japan
  - EU
  - Other key countries

RSV pre-launch and medical activity

- Educating medical community on the health burden of RSV
- Manufacturing mRNA-1345 in pre-filled syringes for 2024 launch

Individualized Neoantigen Therapy (INT)

- Scaling manufacturing to support clinical development and commercial markets
- Commercial team working to prioritize additional cancer indications

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Pipeline highlights and advances

Respiratory vaccines

- **RSV:** Topline data released in Q1; additional updates presented at major medical meetings - RSVVW & ECCMID
- **Flu:** mRNA-1010 Phase 3 P303 initiated
- **COVID-19:** mRNA-1283 Phase 3 initiated
- **New combination program:** mRNA-1083 (COVID-19 + flu) dosing participants
- **Pandemic influenza**: mRNA-1018

Latent vaccines

- **CMV:** Phase 3 trial continued progress >50% enrolled
- **EBV**: mRNA-1189 Phase 1 adult and adolescent studies fully enrolled. mRNA-1195 dosing participants in Phase 1
- **HIV:** Presented interim Phase 1 data at Vaccines Day

Emerging vaccines

- **Norovirus:** Program announced
- **Lyme:** Program announced, our first example of applying mRNA technology to a bacterial pathogen

Therapeutics

- **Individualized Neoantigen Therapy (INT)**: Presented detailed data from our Phase 2 study in adjuvant melanoma patients at AACR; received FDA Breakthrough Designation and EMA PRIME designation
- **PA**: Dose expansion ongoing; ASGCT abstract released

RSVVW: Respiratory Syncytial Virus Foundation; ECCMID: European Society of Clinical Microbiology and Infectious Diseases; AACR: American Association for Cancer Research; ASGCT: American Society of Gene & Cell Therapy

Moderna as of May 2023

Pipeline

Commercial

Moderna COVID-19 Vaccine/Spikevax®

5 in Phase 3

COVID boosters, Flu, RSV, CMV, Next-generation COVID-19

8 in Phase 2

INT, Zika, PA, VEGF-A, Next-gen Flu

47 development programs

Programs in development

Respiratory vaccines

- COVID-19; next-gen COVID-19
- Older adults RSV; pediatric RSV
- Flu; next-gen flu; pandemic flu
- Flu + COVID-19, flu + COVID-19 + RSV and flu + RSV
- Next-gen combinations
- hMPV + PIV3
- RSV + hMPV, endemic HCoV

Latent vaccines

- CMV
- EBV
- HIV
- VZV
- HSV

Emerging vaccines

- Zika
- Nipah
- Norovirus
- Lyme

mRNA therapeutics

15 medicines in 4 therapeutic areas

- 5 Immuno-Oncology
- 7 Rare Diseases
- 2 Cardiovascular Diseases
- 1 Autoimmune Diseases

Foundations

~4,350 employees[1]

Great Place To Work.® Officially recognized as a Great Place to Work in the U.S. by Great Place To Work®

17 commercial subsidiaries across North America, Europe and Asia Pacific

~$16.4B of cash and investments [1]

1. As of March 31, 2023

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Respiratory vaccines pipeline overview

Commercial and Phase 3 programs

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

COVID-19 (mRNA-1273.214/.222)

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

Older adults RSV (mRNA-1345)

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

Flu (mRNA-1010)

Next-gen programs

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

COVID-19 variant boosters and next-gen booster (mRNA-1283)

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

Flu (mRNA-1011/-1012)

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

Flu (mRNA-1020/-1030)

Combination programs

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

COVID-19 + flu (mRNA-1073/-1083)

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

COVID-19 + flu + RSV (mRNA-1230)

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

RSV + flu (mRNA-1045)

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

Pediatric hMPV + PIV3 (mRNA-1653)

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

Pediatric RSV + hMPV (mRNA-1365)

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Current FDA COVID-19 vaccination update; new recommendations expected on June 15

FDA COVID-19 vaccines update

- Omicron-targeting bivalent COVID-19 vaccine (targeting the original and BA.4/5 strains) is now the only authorized formulation in the U.S.
- Individuals 65+ years of age and those with certain kinds of immunocompromise are eligible for additional doses of the bivalent vaccine
- New recommendations are expected following the June 15 strain-selection meeting

We are preparing to share data with regulators on multiple potential strains and formulations

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RSV: mRNA-1345 older adult program updates

Phase 3 RSV clinical data shared at recent medical meetings

- mRNA-1345 showed consistently high efficacy across the clinical spectrum of RSV disease in adults aged ≥60 years
  - Demonstrated vaccine efficacy of 83.7%[1] against RSV lower respiratory tract disease, defined by two or more symptoms in older adults
  - Detailed data at medical presentations show that vaccine is consistently high across all age groups and in participants with pre-existing comorbidities[1]
- mRNA-1345 has a favorable tolerability profile with adverse events (AEs) mostly grade 1 and 2
- No cases of Guillain-Barré syndrome (GBS) or other demyelinating events have been reported to date
- Rates of serious adverse events (SAEs) were balanced between vaccine and placebo groups

1 RSVVW data

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Flu: Preliminary immunogenicity data from Phase 3 P302 efficacy trial for mRNA-1010 confirm Phase 2 data

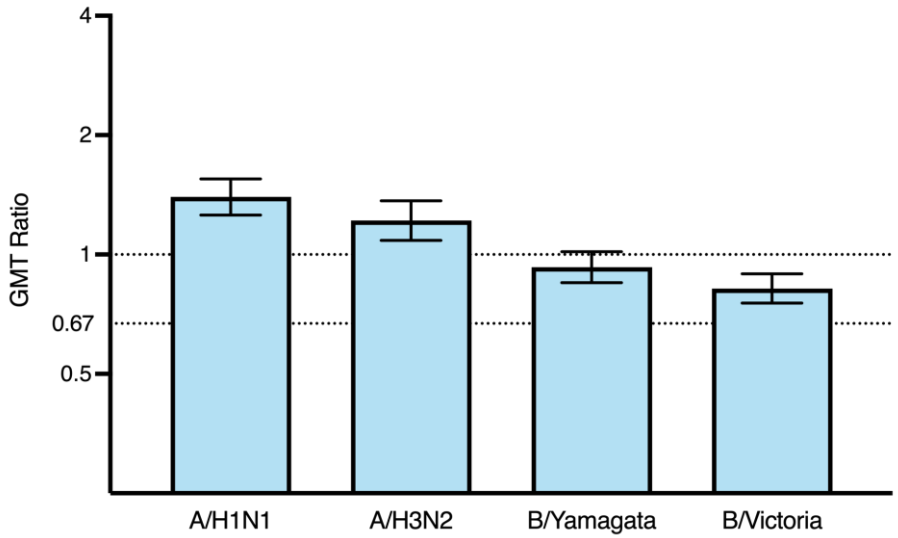
P302 interim analysis did not accrue sufficient cases to declare early success and the independent DSMB recommended continuation of the efficacy follow-up

Samples of approximately 900 study participants from the U.S. were collected for immunogenicity analysis

The lower bound of the 95% confidence intervals exceeded 0.667 for all 4 strains, further exceeding a value of 1 for both influenza A/H1N1 and A/H3N2

Given that primary intent of P302 is demonstration of efficacy, **success criteria for immunogenicity endpoints were not pre-specified**

P302 geometric mean titer ratio over standard dose comparator (50 µg; 50 years and older)



Study will follow participants until the end of season according to the protocol

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Flu: mRNA-1010 Phase 3 P303 study dosing participants

Design
Randomized, observer-blind, active-controlled study

Number of participants
2,400 medically stable adults ≥ 18 years old

Vaccination schedule
Randomization 1:1 to mRNA-1010 or active comparator

Duration: 6 months
Enrollment period: April –June 2023

Study participants will be followed up for 6 months after study injection

Site location
Northern Hemisphere (United States)

P303 will test the immunogenicity of an updated formulation of mRNA-1010 that is expected to lead to improved immune responses against influenza B strains and is intended to enable licensure of mRNA-1010 through accelerated approval

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Latent vaccines

Phase 3 CMVictory study is >50% enrolled; study of primary prevention in adolescents is enrolling

Phase 3 programs

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

CMV (mRNA-1647)

Early clinical programs

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

EBV (mRNA-1189; mRNA-1195)

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

HIV (mRNA-1644; mRNA-1574)

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

VZV (mRNA-1468)

Pre-clinical programs

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

HSV (mRNA-1608)

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mRNA therapeutics

Detailed INT data presented at AACR; PA dose expansion ongoing

Immuno-oncology

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

Individualized Neoantigen Therapy (INT)

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

Checkpoint vaccine

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

Triplet

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

IL-12

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

KRAS

Cardiovascular

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

Relaxin

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

VEGF-A

Autoimmune

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

PD-L1

Rare Disease

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

PA

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

MMA

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

GSD1a

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

CF

PC | Ph. 1 | Ph. 2 | Ph. 3 | Comm.

OTC, PKU, CN-1

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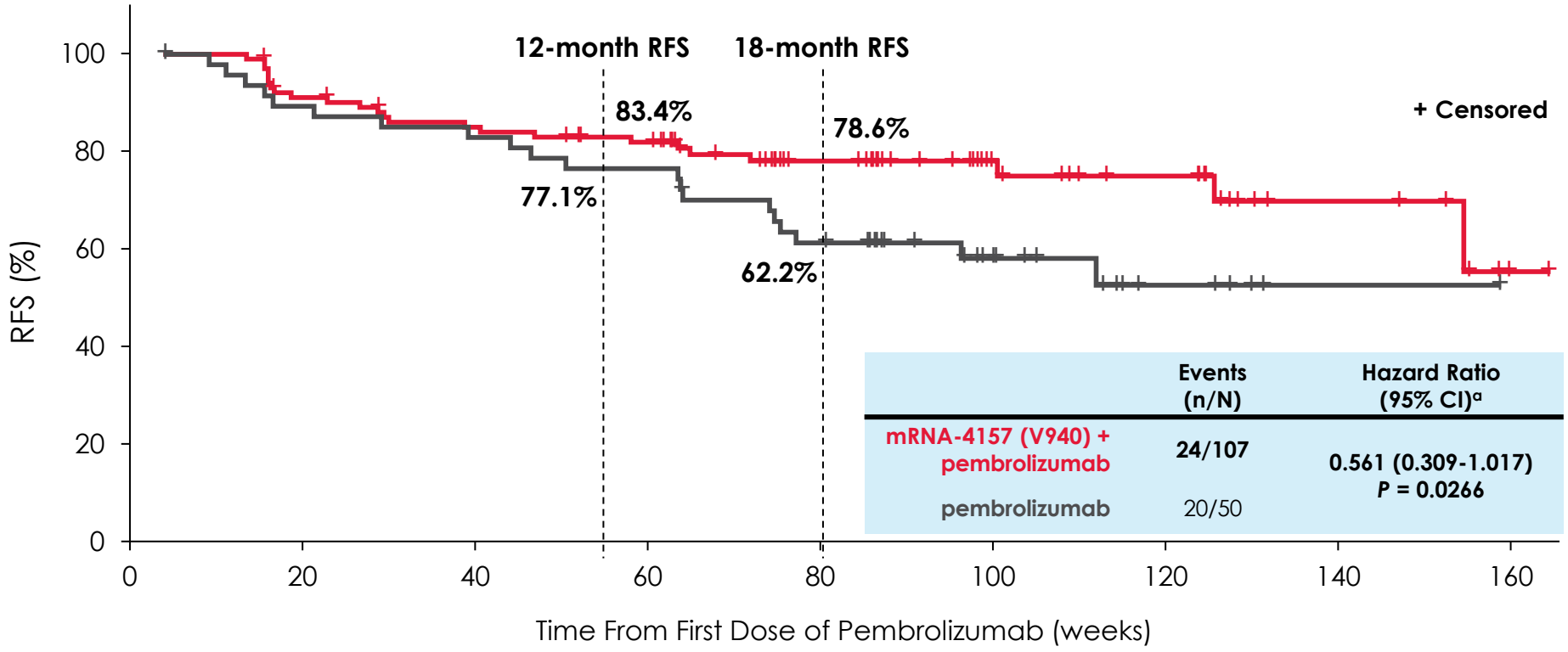
INT: mRNA-4157 (V940) and pembrolizumab demonstrated an improvement in recurrence-free survival (RFS) vs pembrolizumab



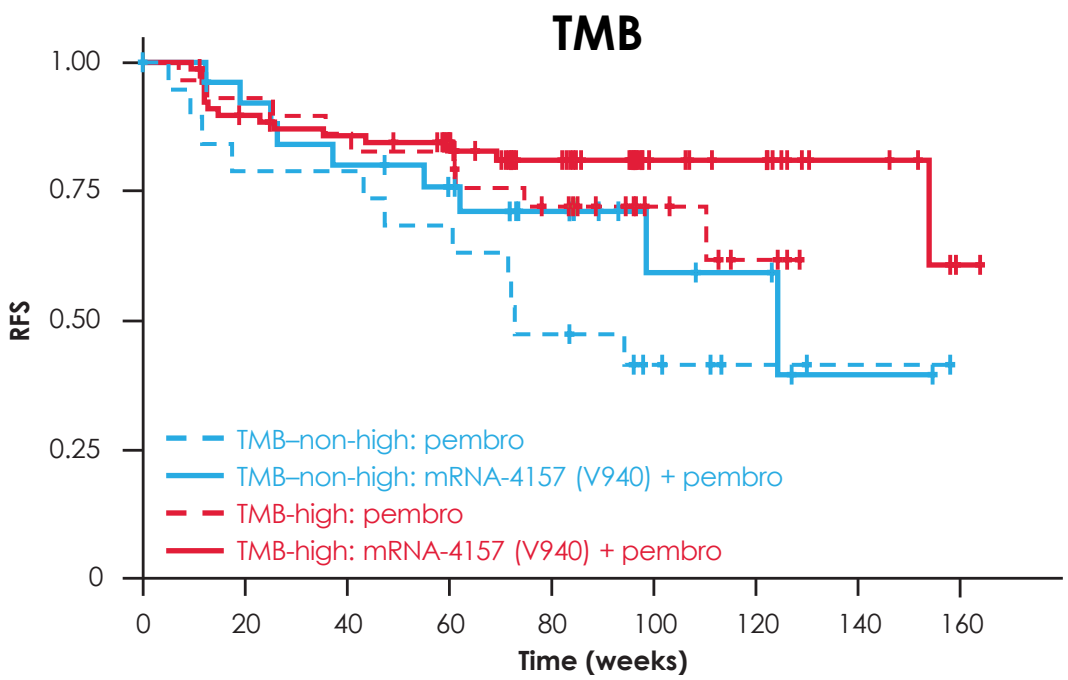
	Events (n/N)	Hazard Ratio (95% CI)[a]
mRNA-4157 (V940) + pembrolizumab	24/107	0.561 (0.309-1.017) *P* = 0.0266
pembrolizumab	20/50	

Number at Risk

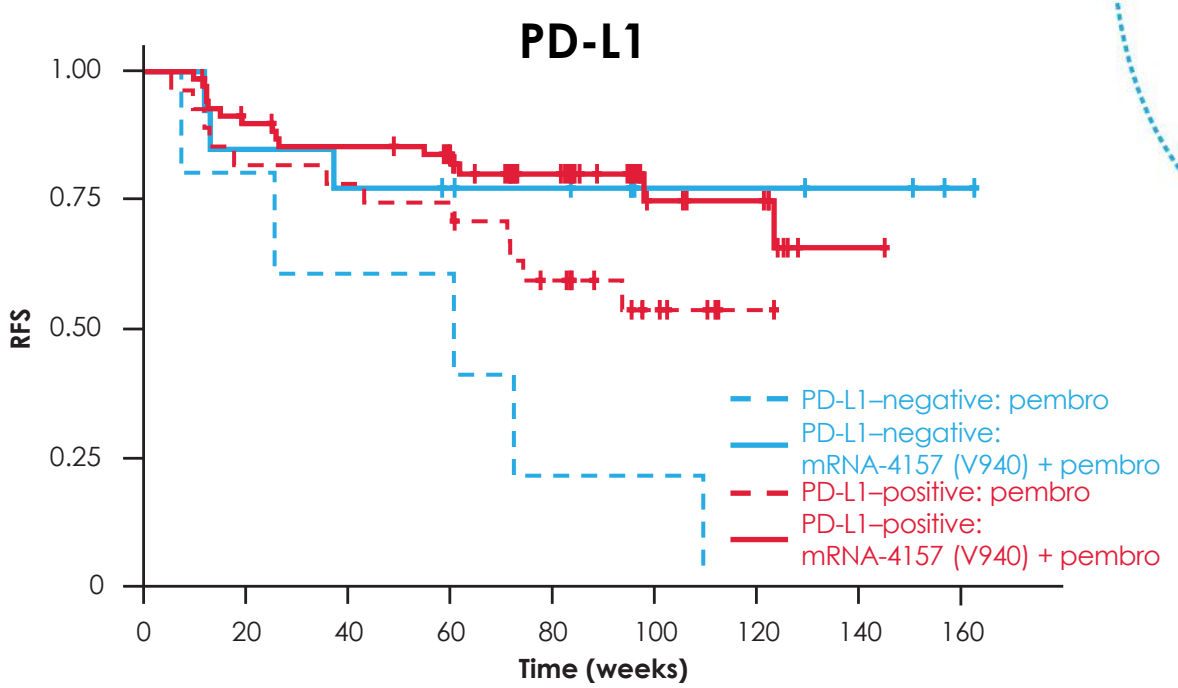
mRNA-4157 (V940) + pembrolizumab	107	92	85	73	49	24	20	8	1
pembrolizumab	50	42	40	37	28	13	6	1	0

CI, confidence interval; RFS, recurrence-free survival. Adjuvant melanoma.
[a]The hazard ratio and 95% CI for mRNA-4157 (V940) plus pembrolizumab versus pembrolizumab is estimated using a Cox proportional hazards model with treatment group as a covariate, stratified by disease stage (stages IIIB or IIIC or IIID vs stage IV) used for randomization. The *P* value is based on a 1-sided log-rank test stratified by disease stage (stages IIIB or IIIC or IIID vs stage IV) used for randomization.

INT: mRNA-4157 (V940) and pembrolizumab combination treatment demonstrated an improvement in RFS irrespective of tumor mutational burden (TMB) or PD-L1 status



mRNA-4157 (V940) + pembro vs pembro HR (95% CI)	
TMB – high	0.652 (0.284,1.494)
TMB – non-high	0.586 (0.243,1.415)



mRNA-4157 (V940) + pembro vs pembro HR (95% CI)	
PD-L1 – positive	0.485 (0.226, 1.039)
PD-L1 - negative	0.162 (0.038, 0.685)

INT: Additional Phase 2 mRNA-4157 (V940) data to be shared at upcoming medical meetings

Analyses to include

Distant metastasis-free survival at ASCO

Treatment outcomes by BRAF status

Other translational analyses as well as RFS with ≥ 51 events

Longer follow-up

mRNA-4157-P201/KEYNOTE-942 to evaluate **durability**

Breakthrough Therapy Designation from FDA and **PRIME Designation** from EMA facilitates frequent dialogue with regulatory agencies with the aim to rapidly make it available to patients

ASCO: American Society of Clinical Oncology
BRAF: is a common gene mutation in melanoma

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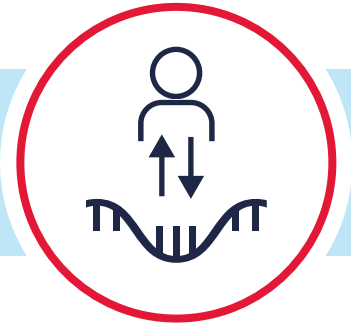
INT: Phase 3 adjuvant melanoma study to begin this year; studies in additional tumor types to follow

Initiate INT[1] Phase 3 study in adjuvant melanoma in 2023 and rapidly expand to additional tumor types including non-small cell lung cancer



Plan to **explore opportunities with strong biological rationale and unmet need**, within KEYTRUDA-approved indications and beyond, in early-stage disease and metastatic settings

1 Moderna and Merck have 50-50 partnership on Individualized Neoantigen Therapy program

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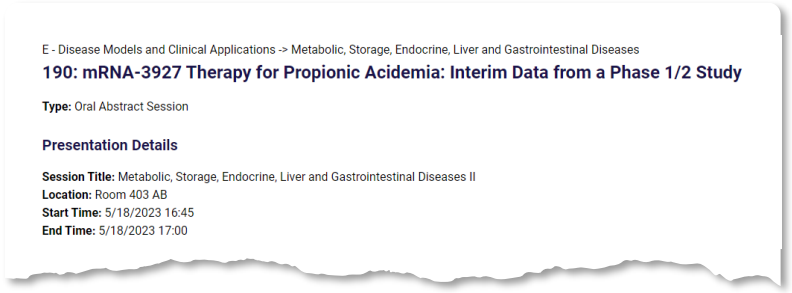
PA: mRNA-3927 Phase 1/2 trial dose expansion ongoing; interim clinical data to be presented at ASGCT on May 18

Program Updates

- **The Paramount study is ongoing**, currently enrolling patients in cohort 5 (0.9mg/kg) with no DLTs observed to date
- **Encouraging clinical benefit observed** to date, showing reductions metabolic decompensation events (MDEs), as well as biomarker responses
- **All eligible participants continue to opt-in** for the Open Label Expansion Participation



E - Disease Models and Clinical Applications -> Metabolic, Storage, Endocrine, Liver and Gastrointestinal Diseases

190: mRNA-3927 Therapy for Propionic Acidemia: Interim Data from a Phase 1/2 Study

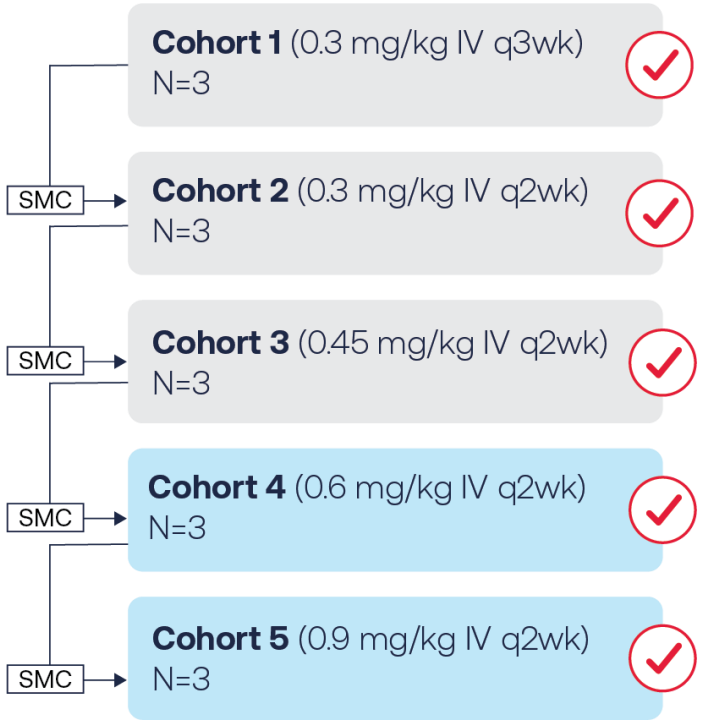
Type: Oral Abstract Session

Presentation Details

Session Title: Metabolic, Storage, Endocrine, Liver and Gastrointestinal Diseases II
Location: Room 403 AB
Start Time: 5/18/2023 16:45
End Time: 5/18/2023 17:00

Link to ASGCT Abstract

Phase 1/2 Trial Design



paramount study

Dose Expansion
N=4-6+

Identification of optimal dose triggers expansion

ASGCT: American Society of Gene & Cell Therapy
PA: Propionic academia
DLT: Dose limiting toxicity

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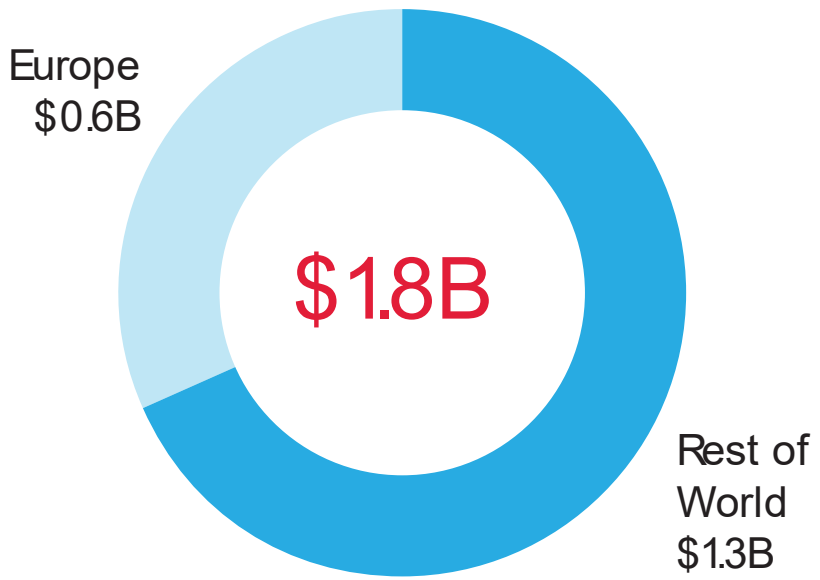
Recorded $1.8B of COVID-19 vaccine sales in 1Q23



1Q23 sales comprised mainly of ex-US regions:

- Europe: $0.6 billion
- RoW: $1.3 billion

$1.8 billion[1] of vaccine sales from previously announced APAs were delivered in 1Q23, representing the majority of the $2 billion expected in 1H23

U.S. sales expected beginning in 2H23 from novel, strain-matched COVID-19 vaccine

1 Note that figures may not sum due to rounding

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Reiterating 2023 minimum sales of ~$5B from previously announced COVID-19 APAs; positive ongoing discussions for additional contracts

Previously announced APAs

1H deliveries

- European Union
- Japan
- South Korea
- Other countries

2H deliveries

- Canada
- Kuwait
- Switzerland
- Taiwan
- United Kingdom

Expected new sales for 2H deliveries

- United States (commercial & government)
- Japan
- European Union
- Asia & Latin America

Signed 2023 contract

✓ Australia

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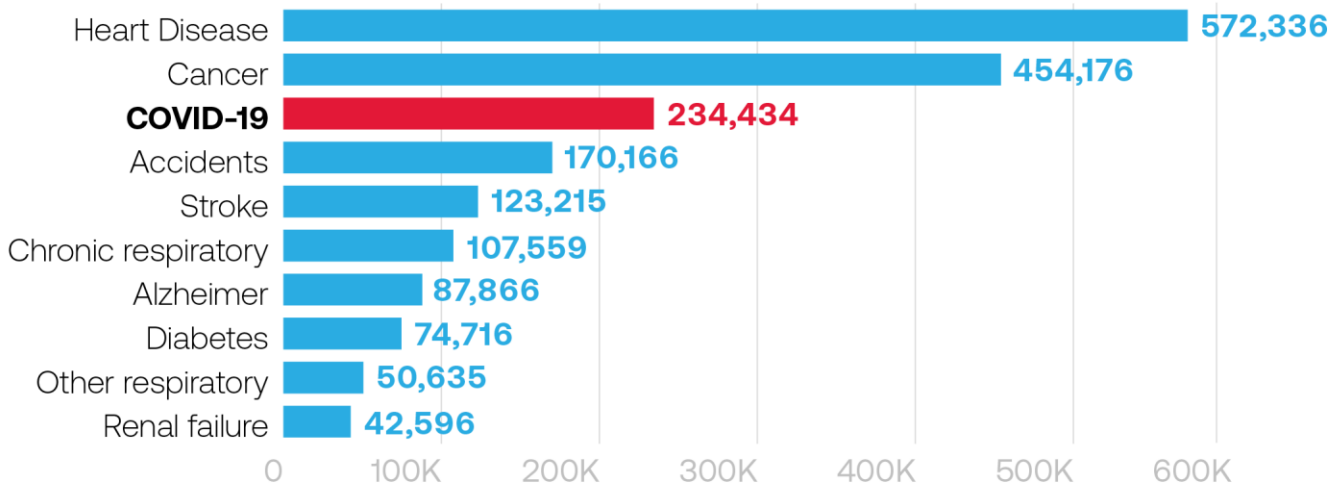
COVID-19 is a substantial health burden in the United States

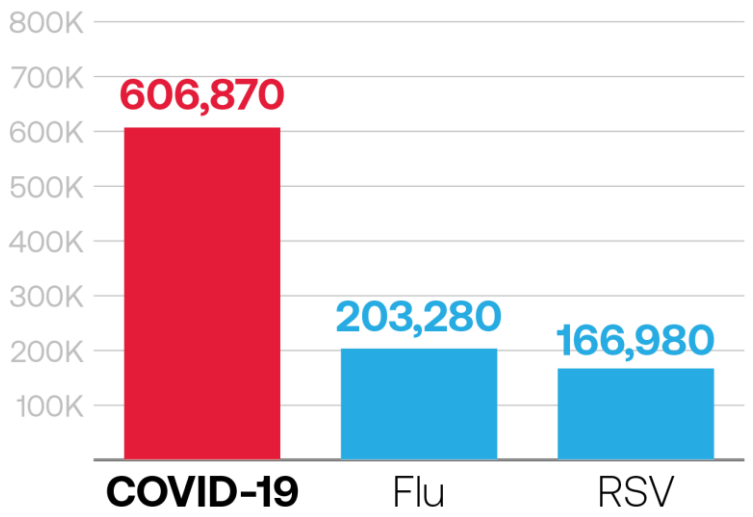
In the most recent fall/winter season, COVID-19 was the leading cause of hospitalizations in the United States among viral respiratory infections

COVID-19 was the third leading cause of death in the U.S. from January to September 2022



SOURCE: https://www.healthsystemtracker.org/brief/covid-19-leading-cause-of-death-ranking/#Total%20deaths%20in%20the%20United%20States%20from%20COVID-19%20and%20other%20leading%20causes,%202020-2022

Total hospitalizations in current 22/23 season to date (10/1/2022 – 4/16/2023)



SOURCE: RESP-NET – Respiratory Virus Hospitalizations Surveillance Network – CDC

Progress on 2023 U.S. COVID-19 commercial launch

In active supply discussions with customers throughout the U.S.

- ✓ National/regional pharmacies
- ✓ Integrated delivery networks (IDNs)
- ✓ Government health providers (VA, CDC, DOD, etc.)
- ✓ Occupational health providers
- ✓ Employers
- ✓ Physicians

- **Contracting with Group Purchasing Organizations (GPOs)** and Physician Buying Groups (PBGs)
- **Establishing a national distribution infrastructure** via Moderna Direct ecommerce site and distribution agreements with national wholesalers & distributors
- **Global supply chain** to provide our COVID-19 vaccine in single-dose vials and pre-filled syringes in time to meet vaccination needs this fall

2023 U.S. COVID market is estimated to be ~100M doses

Key variables that will impact COVID volumes:

- Viral evolution
- Regulatory recommendations
- Vaccine uptake

VA: Veterans Affairs
CDC: Centers for disease control and prevention
DOD: US Department of Defense

COVID-19 fall launch marketing activities

Omni Channel Approach
via tailored digital messaging to health care providers

Partnering with Customer Base
to assist with identifying patients and simplifying vaccination experience

Fall Campaigns
to support COVID-19 vaccinations along with annual influenza campaigns

2024 RSV launch preparations

Launch preparations in progress

- **Generating and communicating evidence** on health & economic burden of symptoms of RSV in older adults
- **Scientific exchange with KOLs** via Phase 3 data presentations at key congresses, such as RSVVW / ECCMID; future presentations planned
- **Engagements with payers and NITAGs globally** to ensure access upon launch
- **Local commercial market launch planning** well underway
- **Building digital-first capabilities** to educate customers on key product attributes upon approval
- **Began manufacturing mRNA-1345** in pre-filled syringes

Phase 3 ConquerRSV trial delivered clinical evidence of efficacy in vulnerable older adult populations[1]

88.4% efficacy in participants with comorbidities

95.4% efficacy in participants aged 70-79 years

83.7% efficacy in the overall study population

1 RSVVW data

NITAGs: National Immunization Technical Advisory Groups

Respiratory franchise addresses sizable markets

Estimated global COVID total addressable market[1]

Estimated global RSV total addressable market (older adults)[1]

Estimated global flu total addressable market[1]

Preparing for RSV and flu launches in 2024

1. Internal estimates

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INT: Identifying eligible populations to potentially benefit from Individualized Neoantigen Therapy

Announced adjuvant indications for Phase 3

Melanoma — **~30K** eligible patients

Non-Small Cell Lung Cancer — **~101K** eligible patients

Potential other tumor types in adjuvant and neoadjuvant

Neoadjuvant market opportunity

Tumor	Eligible patients
TNBC	23,200
MIBC	17,400
GEJ	3,700

Adjuvant market opportunity

Tumor	Eligible patients
TNBC	37,400
SCCHN	8,500
RCC	33,600
MIBC	32,800
GEJ	7,400

Clinical and commercial teams collaborating to identify largest unmet addressable markets

Source: Morgan Stanley research; US and EU populations
NSCLC: Non-small cell lung cancer; TNBC: Triple negative breast cancer; SCCHN: Squamous cell carcinoma head & neck; RCC: Renal cell carcinoma; MIBC: Muscle invasive bladder cancer; GEJ: Gastroesophageal junction adenocarcinoma

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First quarter 2023 financial results

In $ millions, except per share amounts	Q1 2023	Q1 2022	Change (Q1'23 vs. Q1'22)	
Product sales	**$ 1,828**	**$ 5,925**	**$ (4,097)**	**(69)%**
Other revenue [1]	34	141	(107)	(76) %
Total revenue	**1,862**	**6,066**	**(4,204)**	**(69)%**
Cost of sales	792	1,017	(225)	(22) %
Research and development	1,131	554	577	104 %
Selling, general and administrative	305	268	37	14 %
Total operating expenses	**2,228**	**1,839**	**389**	**21 %**
(Loss) income from operations	**(366)**	**4,227**	**(4,593)**	**(109)%**
Other income, net	61	2	59	NM
(Benefit from) provision for income taxes	(384)	572	(956)	(167) %
Net income	**$ 79**	**$ 3,657**	**$ (3,578)**	**(98)%**
Earnings per share – Diluted	$ 0.19	$ 8.58	$ (8.39)	(98) %
Weighted average shares – Diluted	405	426	(21)	(5) %
Effective tax rate	126 %	14 %		

[1] Includes grant revenue and collaboration revenue

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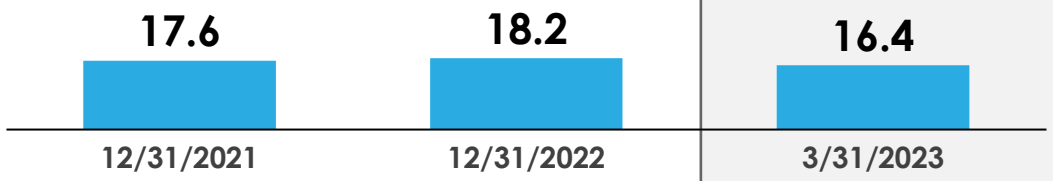
Cash / investments and cash deposits

Cash / investments

In USD Billions

Cash, cash equivalents and investments



Balance of cash deposits for future product supply

Cash, cash equivalents and investments as of March 31, 2023, at $16.4 billion, down from $18.2 billion as of December 31, 2022

Balance of cash deposits for future product supply as of December 31, 2023, at $1.8 billion, below prior quarter driven by product deliveries against customer deposits

Cash and investments decreased, primarily driven by a reduction of cash deposits and share buyback activity in 1Q23

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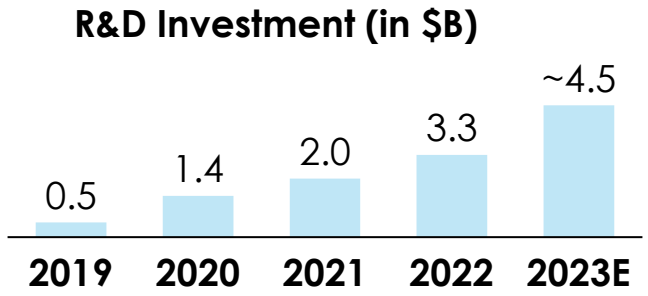
Moderna's capital allocation priorities

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



- **Phase 3 trials:** COVID boosters, Flu, RSV, CMV, Next-generation COVID
- **Individualized Neoantigen Therapy**
- **47 development programs**

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

METAGENOMI — carisma THERAPEUTICS — 2022

life edit an elevatebio company — generation bio — OriCiro — CytomX THERAPEUTICS — 2023

Return capital to shareholders

- **Repurchased 3.6 million shares for $526 million in 1Q23 (avg. price ~$145/share)**
- **$2.3 billion remaining capacity under the $3.0 billion August 2022 authorization as of March 31, 2022**

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2023 updated financial framework

Sales	• **Reiterating 2023 minimum sales of ~$5 billion from previously announced COVID-19 APAs** • **Active negotiations for additional sales** in the U.S., Japan, EU and other key markets • **Continue** to expect product sales in 1H 2023 of ~$2.0 billion (2Q estimated: $0.2 billion to $0.3 billion)
Cost of sales	• **Continue** to expect FY 2023 reported **cost of sales to be ~35-40 percent of sales,** which includes **combined royalties of ~5 percent of sales** • **2Q estimated cost of sales** $0.5 billion to $0.6 billion
R&D & SG&A Expenses	• **Continue** to expect full year **R&D** and **SG&A** expenses of **~$6 billion,** with **~$4.5 billion in R&D**
Tax	• **We now anticipate a full year tax benefit of ~$0.3 billion to $0.5 billion**, driven by R&D credits, international provisions, and nonrecurring items
Capital Expenditures	• **Continue** to expect **capital expenditures** of **~$1.0 billion**

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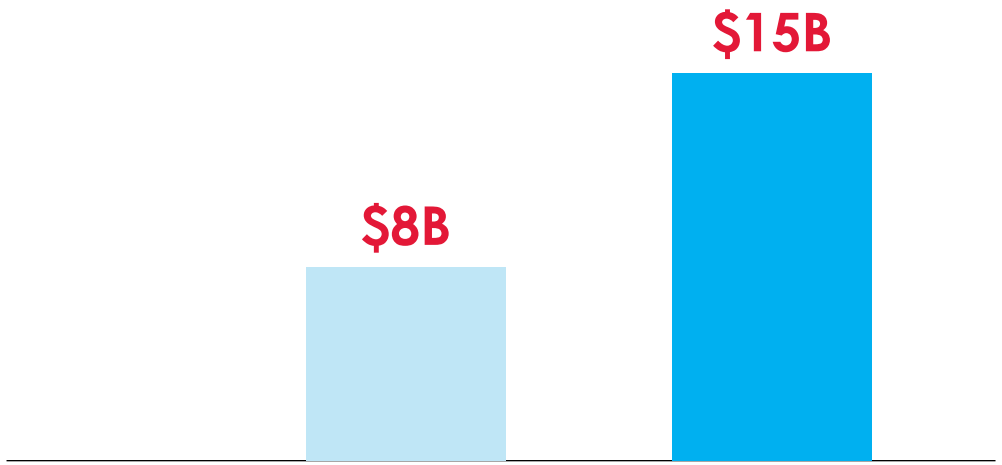
Our respiratory franchise (COVID, RSV, flu) is expected to become a significant source of cash generation by 2027

Estimated 2027 Respiratory Product Sales Range



	Low	High
Gross Profit %	~75%	80%+
Operating Profit %	50%+	60%+
Operating Profit $	**$4B+**	**$9B+**

Factors affecting revenue range:

- Vaccination rates
- Strong vaccine efficacy
- Standalone versus combination share

Continued room for growth beyond 2027

Leverageable, efficient and flexible cost base

Low Capex intensity

- Reinvestment ratio below 0.5x

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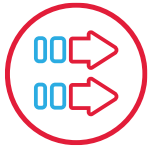
1Q23 earnings call agenda

Business Review
Stéphane Bancel, CEO

R&D/Clinical Programs
Stephen Hoge, M.D., President

Commercial Market
Arpa Garay, CCO

Financials
Jamey Mock, CFO



Looking Forward
Stéphane Bancel, CEO

Commercial outlook

COVID sales

In active negotiations with key customers in major markets
- U.S.
- Japan
- E.U.
- Other countries

Continuing to expect minimum ~$5 billion in COVID vaccine sales from previously announced APAs

RSV pre-launch

Generating and communicating evidence on health and economic burden of RSV

Manufacturing RSV mRNA underway

Oncology

Comprehensive plan to expand manufacturing scale while reducing needle-to-needle time frames

Working with our partner Merck to assess prioritization beyond melanoma

Commercial team working to evaluate unmet medical need and opportunity in additional tumor types

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Anticipated pipeline milestones in 2023

COVID booster vaccines

VRBPAC will meet on June 15 for new strain selection

Expect to launch a new strain-matched vaccine for fall 2023

RSV vaccine

Plan to submit for regulatory approval globally

Flu vaccines

mRNA-1010 P303 study to continue enrollment, expect data in 4Q

Individualized Neoantigen Therapy (INT)

Initiate a Phase 3 study in adjuvant melanoma in 2023 and rapidly expand to additional tumor types including non-small cell lung cancer. Additional Phase 2 updates expected at upcoming medical meetings

PA

Present Phase 1/2 update in ASGCT meeting in May

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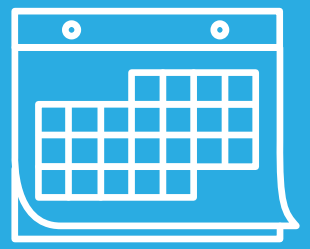

Save the Date

Events in 2023

R&D Day
September 13th

ESG Day
December 7th

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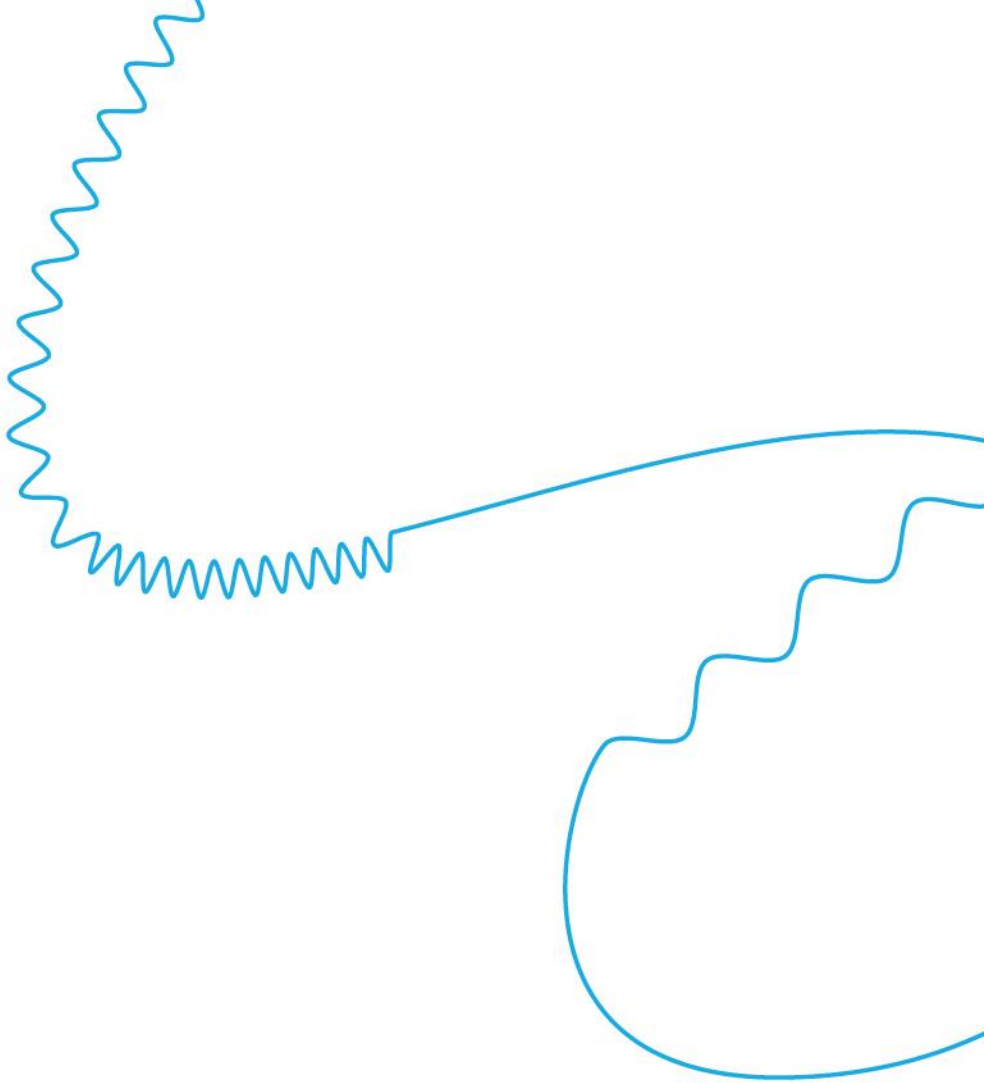
Our Mission

Deliver the greatest possible impact to people through mRNA medicines.



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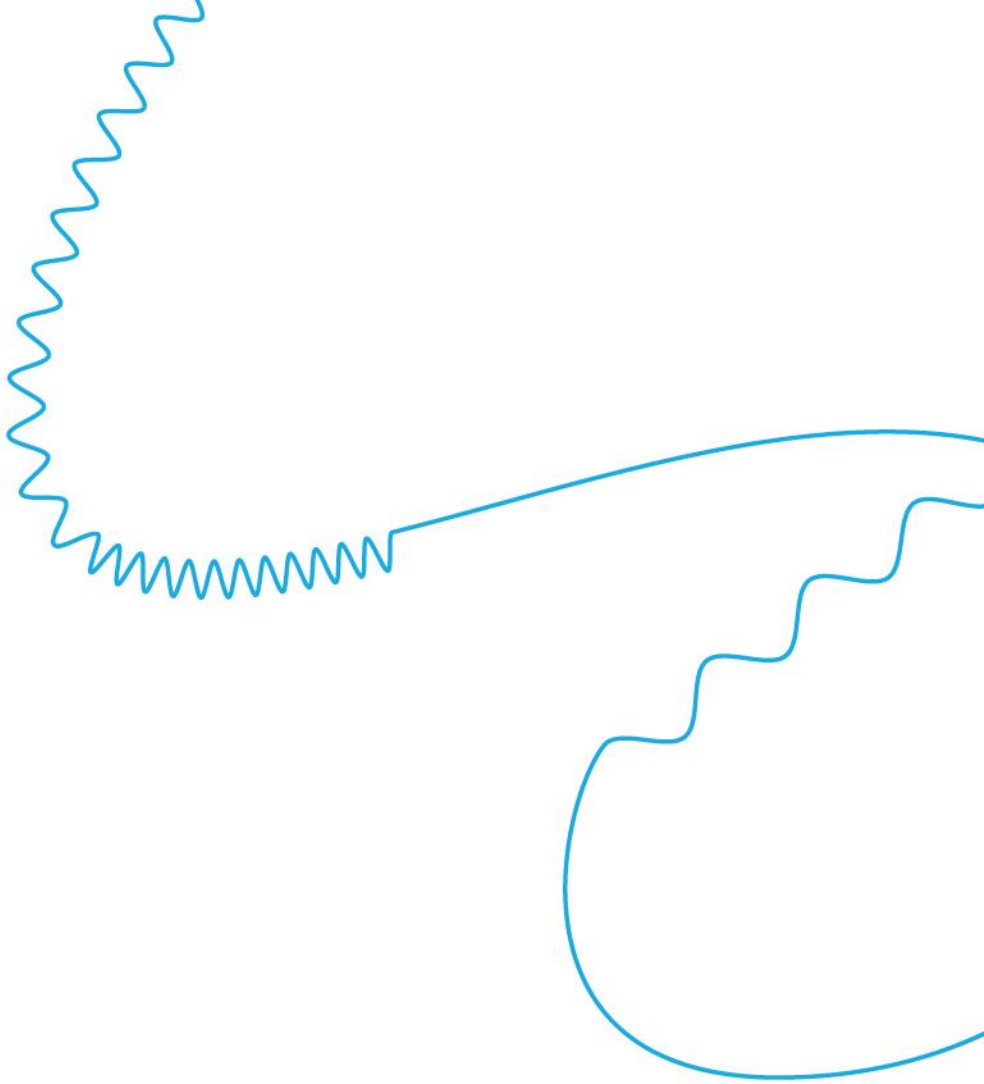
Q&A

Thank you



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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 — Infectious disease vaccines	COVID-19 vaccine	**Spikevax®/mRNA-1273.214/.222**						Worldwide
		mRNA-1283	Next generation (2-5 °C)					Worldwide
	Flu vaccine	**mRNA-1010**						Worldwide
		mRNA-1020						Worldwide
		mRNA-1030						Worldwide
		mRNA-1011						Worldwide
		mRNA-1012						Worldwide
	Older adults RSV vaccine	**mRNA-1345**						Worldwide
	COVID + Flu vaccine	**mRNA-1073**						Worldwide
	COVID + Flu vaccine	**mRNA-1083**						Worldwide
	COVID + Flu + RSV vaccine	**mRNA-1230**						Worldwide
	Flu + RSV vaccine	**mRNA-1045**						Worldwide
	Endemic HCoV vaccine	**mRNA-1287**						
	Pandemic Flu	**mRNA-1018**						Worldwide
Adolescents & Pediatrics	COVID-19 vaccine (adolescents)	**mRNA-1273.222/.214**	TeenCOVE					Worldwide
	COVID-19 vaccine (pediatrics)	**mRNA-1273.222/.214**	KidCOVE					Worldwide
	Pediatric RSV vaccine	**mRNA-1345**						Worldwide
	Pediatric hMPV + PIV3 vaccine	**mRNA-1653**						Worldwide
	Pediatric RSV + hMPV vaccine	**mRNA-1365**						Worldwide

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

Modality	Program	ID #	Preclinical development	Phase 1	Phase 2	Phase 3	Commercial	Moderna rights
Latent	CMV vaccine	**mRNA-1647**						Worldwide
	EBV vaccine *(to prevent infectious mononucleosis)*	**mRNA-1189**						Worldwide
	EBV vaccine *(to address EBV sequelae)*	**mRNA-1195**						Worldwide
Infectious disease vaccines	HSV vaccine	**mRNA-1608**						Worldwide
	VZV vaccine	**mRNA-1468**						Worldwide
	HIV vaccines	**mRNA-1644**						Worldwide ***IAVI** funded*
		mRNA-1574						Worldwide ***IAVI/others** funded*
Enteric	Norovirus vaccines	**mRNA-1403**						Worldwide
		mRNA-1405						Worldwide
Bacterial	Lyme vaccines	**mRNA-1975**						Worldwide
		mRNA-1982						Worldwide
Public health	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	Relaxin *Heart failure*	**mRNA-0184**						Worldwide
	PD-L1 *Autoimmune hepatitis*	**mRNA-6981**						Worldwide
Cancer vaccines & therapeutics	Individualized neoantigen therapy (INT)	**mRNA-4157**						50-50 global profit sharing with **Merck**
	KRAS vaccine	**mRNA-5671**						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**						Worldwide
Localized regenerative therapeutics	VEGF-A *Myocardial ischemia*	**AZD8601**						Worldwide
	Propionic acidemia (PA)	**mRNA-3927**						Worldwide
	Methylmalonic acidemia (MMA)	**mRNA-3705**						Worldwide
Systemic intracellular therapeutics	Glycogen storage disease type 1a (GSD1a)	**mRNA-3745**						Worldwide
	Ornithine transcarbamylase deficiency (OTC)	**mRNA-3139**						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)	**VX-522**						**Vertex** to pay milestones and royalties