MERCK
INVENTING FOR LIFE

Merck
Q2 2021 Earnings

Forward-looking statement of Merck & Co., Inc., Kenilworth, N.J., USA

This presentation of Merck & Co., Inc., Kenilworth, N.J., USA (the "company") includes "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. These statements are based upon the current beliefs and expectations of the company's management and are subject to significant risks and uncertainties. There can be no guarantees with respect to pipeline products that the products will receive the necessary regulatory approvals or that they will prove to be commercially successful. If underlying assumptions prove inaccurate or risks or uncertainties materialize, actual results may differ materially from those set forth in the forward-looking statements.

Risks and uncertainties include but are not limited to, general industry conditions and competition; general economic factors, including interest rate and currency exchange rate fluctuations; the impact of the global outbreak of novel coronavirus disease (COVID-19); the impact of pharmaceutical industry regulation and health care legislation in the United States and internationally; global trends toward health care cost containment; technological advances, new products and patents attained by competitors; challenges inherent in new product development, including obtaining regulatory approval; the company's ability to accurately predict future market conditions; manufacturing difficulties or delays; financial instability of international economies and sovereign risk; dependence on the effectiveness of the company's patents and other protections for innovative products; and the exposure to litigation, including patent litigation, and/or regulatory actions.

The company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the company's 2020 Annual Report on Form 10-K and the company's other filings with the Securities and Exchange Commission (SEC) available at the SEC's Internet site (www.sec.gov).

Q2 performance highlights

Worldwide sales performance[1,4]

$11.4B
+19%

Non-GAAP EPS performance[1,4]

$1.31
+27%

Created shareholder value

- Invested $2.5B in research and development, making significant progress in advancing our pipeline and sustaining our key growth pillars
- Returned $1.9B to shareholders through dividends and share repurchase
- Completed spinoff of Organon on June 2, received cash distribution of approximately $9B

Advanced the pipeline[5]

- FDA approved 4 filings in oncology and vaccines and granted 2 priority reviews in oncology
- In the EU, received 2 approvals for KEYTRUDA and one approval for Verquvo
- In China, received 2 approvals in oncology
- Presented data at ASCO, ESMO Virtual Plenary, ECCMID, and IAS
- Toplined results for KEYTRUDA and VAXNEUVANCE
- Advanced COVID-19 antiviral into 2 Phase 3 trials

1. Growth rates exclude impact of foreign exchange
2. The GAAP to non-GAAP reconciliation is available in the Supplemental Tables to Merck's Q2 2021 earnings release.
3. GAAP EPS =$0.48
4. Results are presented on a continuing operations basis
5. Key milestones through July 29, 2021

Driving value for patients and shareholders by progressing our pipeline

Key regulatory milestones through July 29:

- In the U.S., received approval for KEYTRUDA in high-risk early-stage TNBC based on KN-522, in gastric or GEJ cancer based on KN-811, in endometrial cancer based on KN-775, and in locally advanced cSCC based on KN-629, as well as received approval for pneumococcal conjugate vaccine VAXNEUVANCE (V114) in adults
- In the U.S., FDA granted priority reviews for KEYTRUDA + Lenvima in RCC based on KN-581
- In the EU, received approval for Verquvo in certain patients with chronic heart failure, and approval for KEYTRUDA in certain types of esophageal or GEJ cancer based on KN-590, as well as approval for an alternative dosing regimen for KEYTRUDA, dosing patients once every six weeks for combination therapies
- In China, received approval for KEYTRUDA in dMMR/MSI-H CRC based on KN-177 and Lynparza in certain types of advanced prostate cancer based on PROfound

Key data presentations through July 29:

- Presented new data from KEYNOTE-522 in neoadjuvant and adjuvant TNBC at ESMO Virtual Plenary 2021
- Presented data across our broad oncology portfolio at ASCO, including for KEYTRUDA (KN-564, KN-811, KN-581, and KN-775) and Lynparza (OlympiA), as well as first-time Phase 1 data for favezelimab (MK-4280) in MSS CRC and updated Phase 2 data for belzutifan (MK-6482)
- Presented pivotal data (PNEU-AGE) and additional Phase 3 data (PNEU-AGE, PNEU-TRUE, PNEU-PATH, and PNEU-DAY) for VAXNEUVANCE (V114) at ECCMID
- Presented Phase 2a data for once-monthly islatravir in HIV PrEP and Phase 2 islatravir safety analysis data in HIV treatment at IAS
- Toplined results for KEYTRUDA as part of a combination regimen in certain patients with advanced TNBC (KN-355) and in patients with advanced cervical cancer (KN-826) and VAXNEUVANCE (V114) in the pediatric setting (PNEU-DIRECTION and PNEU-PLAN)
- Advanced COVID-19 antiviral, molnupiravir (MK-4482), into Phase 3 pivotal trial in the high-risk outpatient setting, presented efficacy data from inpatient and outpatient Phase 2 studies at ECCMID and initiated Phase 3 trial in the post-exposure prophylaxis setting

Broad and innovative pipeline to solve significant unmet medical needs

Phase 2

Oncology

KEYTRUDA (MK-3475)
Advanced Solid Tumors

LYNPARZA (MK-7339)
Advanced Solid Tumors

MK-6440
Breast
NSCLC
SCLC
HNSCC
Esophageal
Gastric
Prostate
Melanoma

MK-1026
Hematological Malignancies

MK-2140
Breast
NSCLC

MK-4280
NSCLC
Hematological Malignancies

MK-4280A
RCC

LENVIMA (MK-7902)
Biliary Tract
Glioblastoma
Pancreas

V937
Melanoma
Breast
CSCC
HNSCC
Solid Tumors

MK-7684
Melanoma

MK-5890
NSCLC

MK-6482
VHL aRCC (EU)

MK-4830
NSCLC
SCLC

MK-1308A
Advanced Solid Tumors
HCC
CRC
Melanoma

MK-1308
NSCLC

TUKYSA (MK-7119)
Advanced Solid Tumors
Colorectal
Gastric
Endometrial
NSCLC
Bladder
BTC
Cervical

Vaccines

V160
Cytomegalovirus

V116
Pneumococcal, adult

V184
Chikungunya Virus

MK-1654
Respiratory Syncytial Virus

Cardiovascular

MK-5475
Pulmonary Arterial Hypertension

Neuroscience

MK-8189
Schizophrenia

Infectious diseases

MK-8591B (Islatravir/MK-8507)
HIV-1 Infection

General medicine

MK-7075
Overgrowth Syndrome

MK-1942
Treatment Resistant Depression

MK-3655
NASH

Phase 3

Oncology

KEYTRUDA (MK-3475)
Biliary Tract
Cervical (EU)
cSCC (EU)
Gastric (EU)
Hepatocellular (EU)
Mesothelioma
Ovarian
Prostate
SCLC

MK-1308A
RCC

MK-7684A
NSCLC

LENVIMA (MK-7902)
Bladder
Melanoma
NSCLC
HNSCC
Gastric
Colorectal

LYNPARZA (MK-7339)
NSCLC
SCLC
Colorectal

MK-6482
RCC

TUKYSA (MK-7119)
Breast

Infectious diseases

MK-8591A (doravirine/islatravir)
HIV-1 Infection

Islatravir (MK-8591)
HIV-1 Infection

Molnupiravir (MK-4482)
COVID-19

Under regulatory review

Oncology

Belzutifan (MK-6482)
VHL-aRCC (US)

KEYTRUDA (MK-3475)
MSI-H Endometrial
TMB-H (JPN)
Unresectable or Metastatic MSI-H or dMMR Colorectal (JPN)
Metastatic TNBC (EU, JPN)
Adjuvant RCC (EU)
Advanced Unresectable Metastatic Esophageal (JPN)

LENVIMA (MK-7902)
1L HCC (US)
Advanced unresectable RCC (US, EU, JPN)
Advanced endometrial (EU, JPN)

Vaccines

V114
Pneumoconjugate Vaccine, adult (EU)

General medicine

Gefapixant (MK-7264)
Cough (US, JPN, EU)

Cubicin (MK-3009)
cSST & Sepsis, pediatric (JPN)

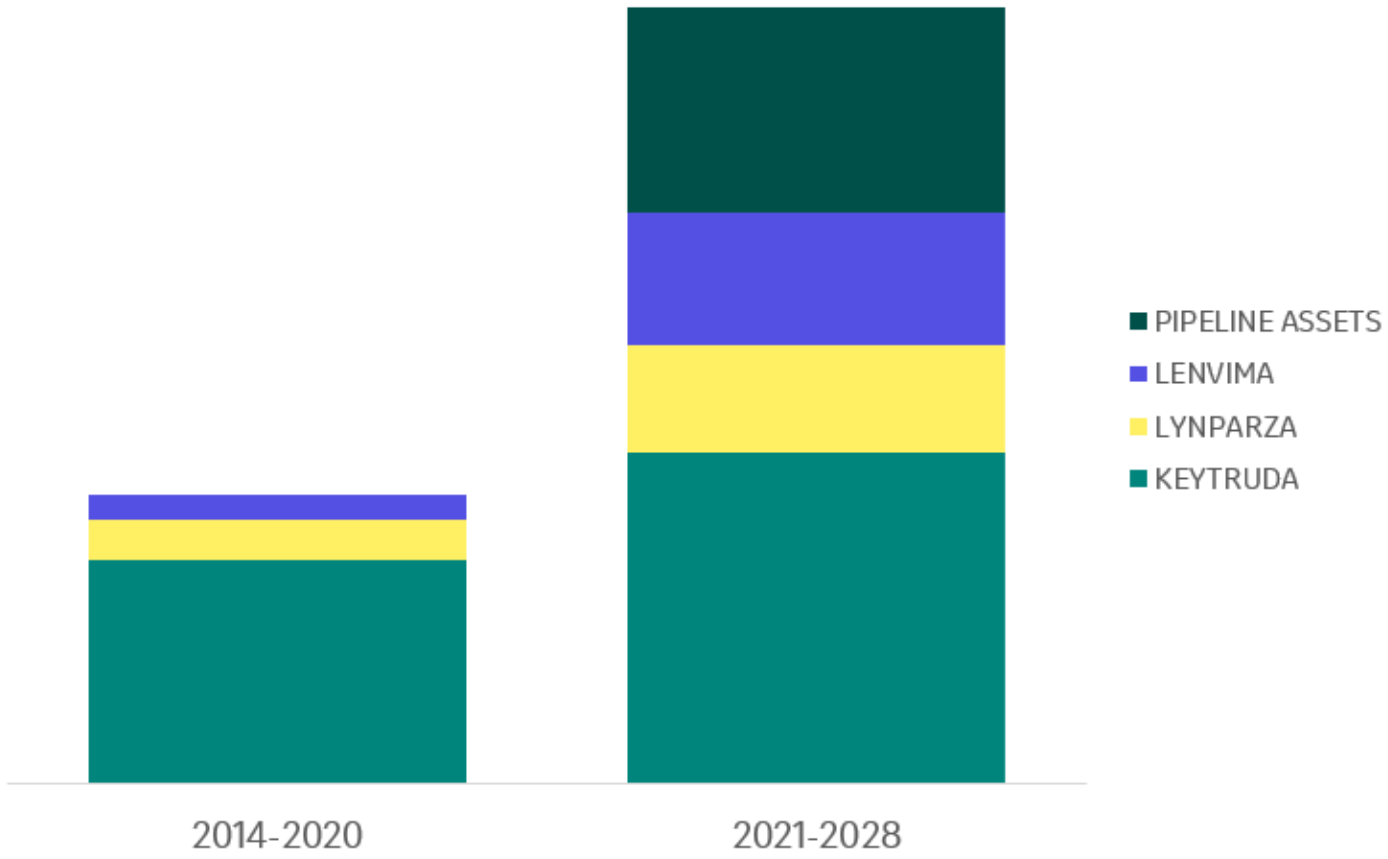
Noxafil (MK-5592)
Invasive aspergillosis (US, EU, Japan)

As of July 27, 2021

More than tripling the number of new indications and launches across oncology portfolio over the next eight years

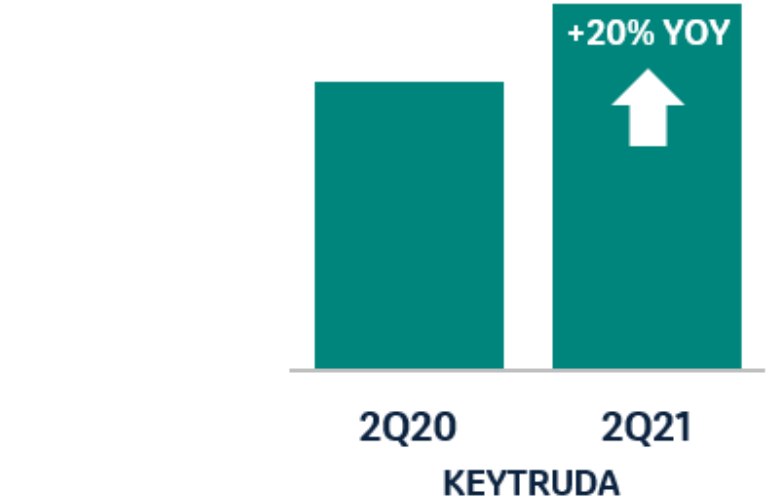
>90

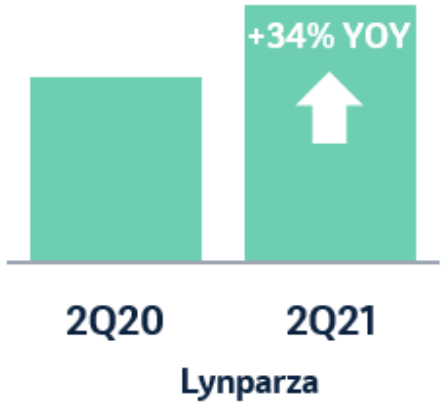
potential approvals expected by 2028 with more than 50 expected by 2025

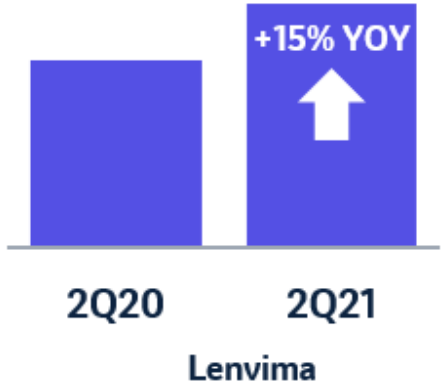


Oncology: continued strength & leadership across portfolio

- KEYTRUDA sales of $4.2B increased 20% year-over-year, reflecting continued strong global demand
  - In the U.S., 15% growth driven by strong growth across all key tumor types, including continued leadership in lung
  - Ex-U.S., 27% growth driven by continued uptake in lung and ongoing launches in HNSCC and RCC
- Oncology portfolio continues to benefit from growth of Lynparza, +34%, and Lenvima, +15%
  - Lynparza performance driven by recent approvals
  - Higher demand for Lenvima in China following listing on the NRDL



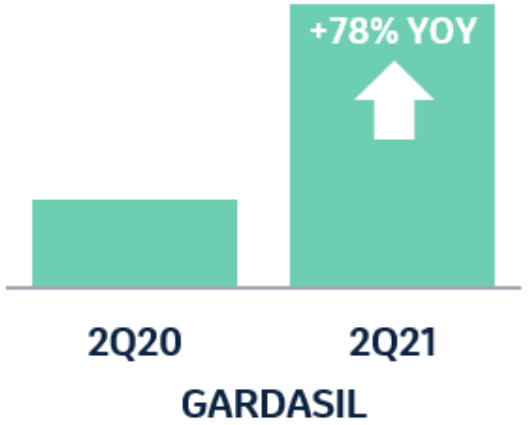


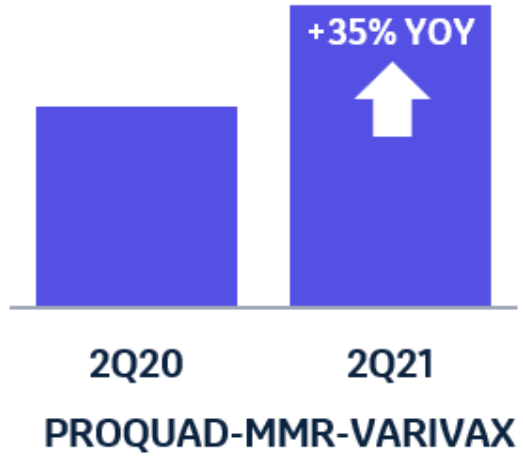


1. All growth rates exclude the impact of foreign exchange.

Vaccines: GARDASIL driving robust growth

- GARDASIL sales of $1.2B increased 78% year-over-year reflecting strong underlying global demand
  - In the U.S., sales increased 170% year-over-year benefitting from ongoing pandemic recovery and strong demand
  - Ex-U.S., sales increased 47% year-over-year, driven by continued uptake in global markets, including China which also benefitted from increased supply
- PROQUAD-MMR-VARIVAX sales of $516M increased 35% year-over-year, driven by ongoing pandemic recovery in the U.S.

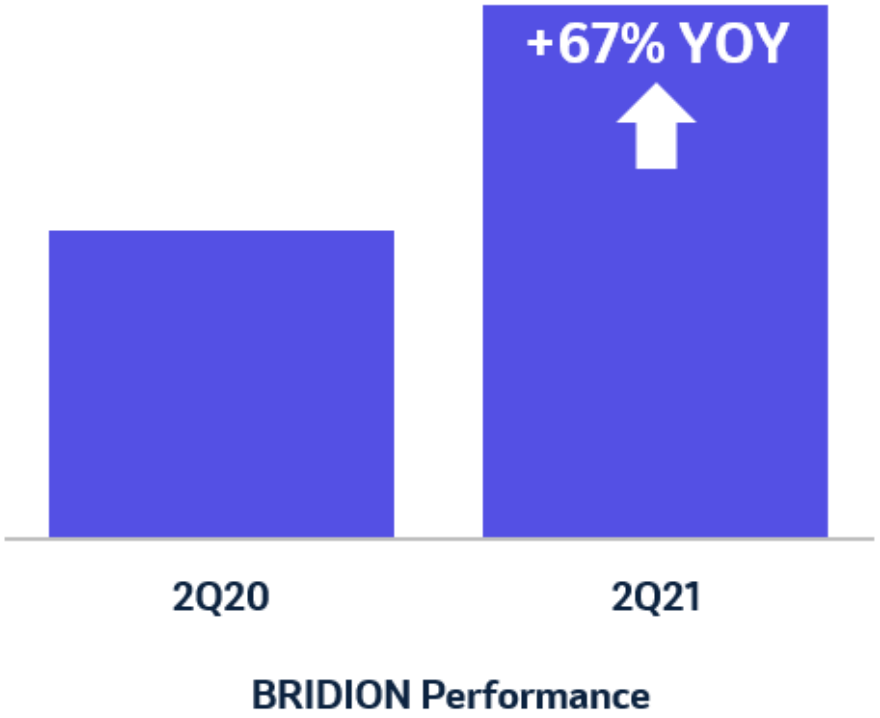




1. All growth rates exclude the impact of foreign exchange.

Hospital: continued pandemic recovery

- BRIDION sales of $387M increased 67% year-over-year, reflecting higher demand globally and improved patient access
- Continued uptake in PREVYMIS, driven by ongoing launches

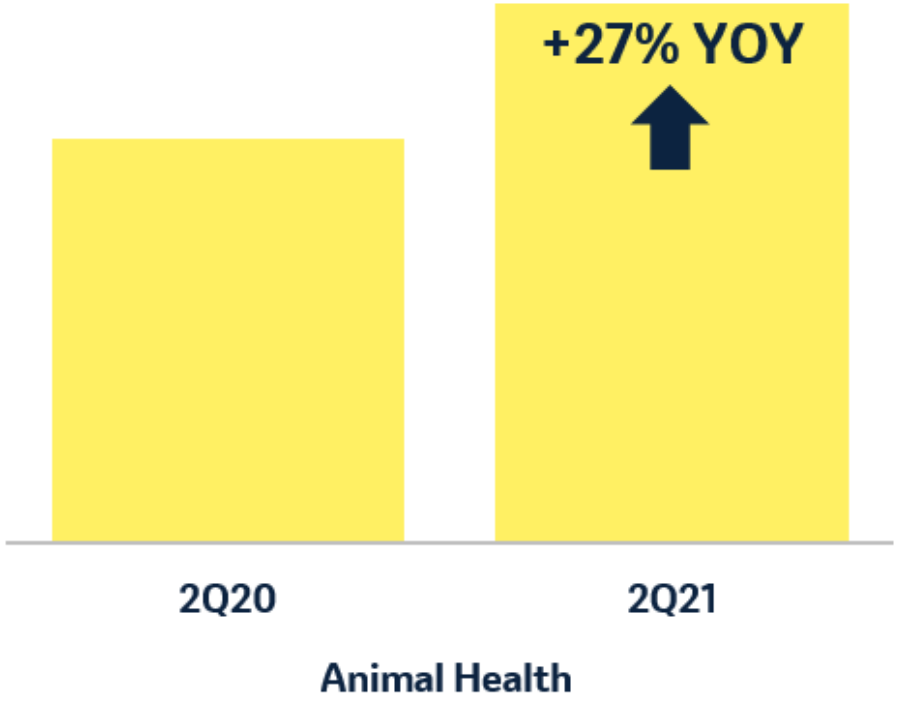


BRIDION Performance

1. All growth rates exclude the impact of foreign exchange.

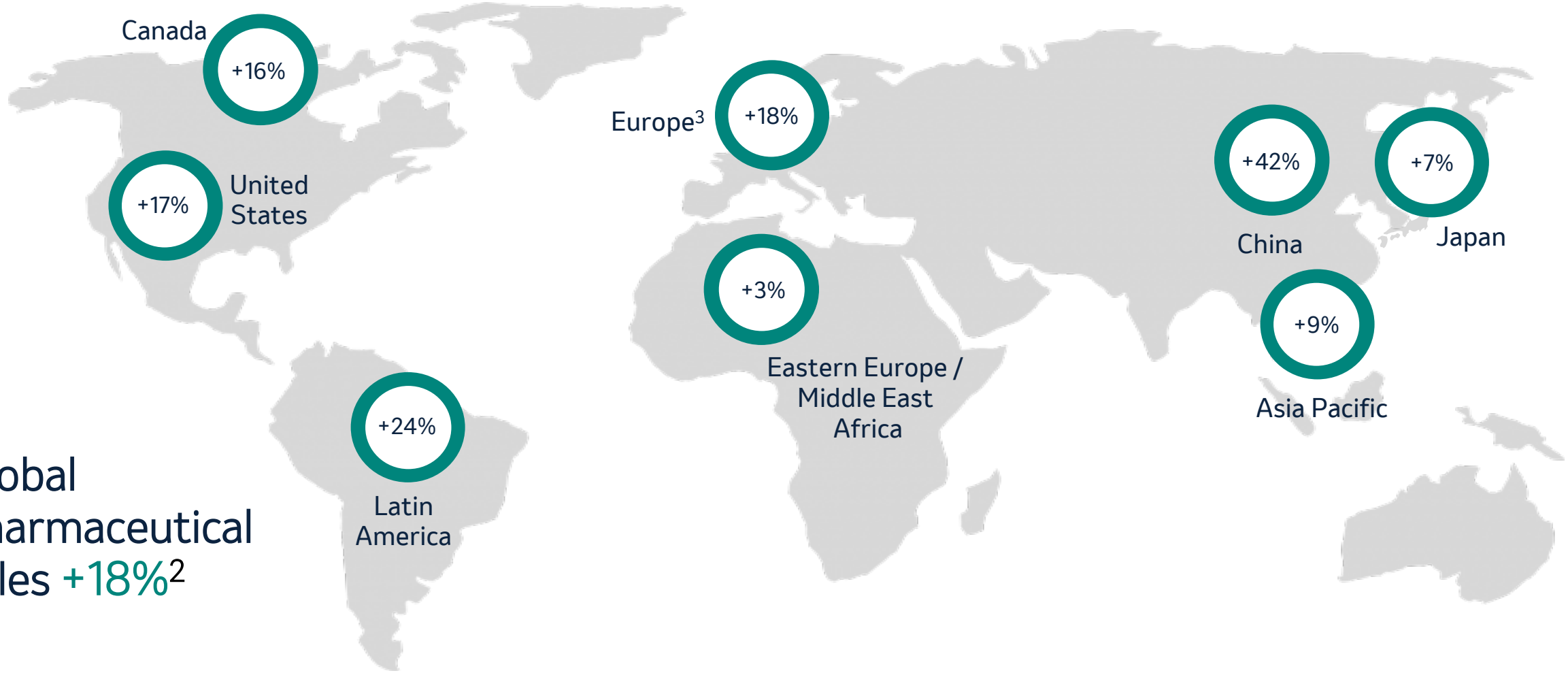
Animal Health: very strong performance across portfolio

- Animal Health sales increased 27% to $1.5B, adjusting for pandemic impact, sales increased 19%
  - Companion Animal sales increased 38%, driven by increased global demand for vaccines and parasiticides
  - Livestock sales increased 20%, reflecting increased global demand in ruminant, swine and poultry, as well as higher global demand for Animal Health Intelligence products



1. All growth rates exclude the impact of foreign exchange.

Strong global recovery across geographies[1]



Global pharmaceutical sales +18%[2]

1. Results are presented on a continuing operations basis
2. All growth rates exclude the impact of foreign exchange.
3. Europe primarily represents all European Union countries, the European Union accession markets and the United Kingdom.

Q2 2021 financial results summary[1]: Strong business recovery and leverage in P&L

$ in billions, except EPS amounts

	Q2 2021	Q2 2020	Change	Change Ex-FX
Sales	$11.4	$9.4	+22%	+19%
GAAP Gross Margin	72.8%	70.6%	+2%	+3%
Non-GAAP Gross Margin[3]	76.5%	77.1%	-1%	0%
GAAP net income[2]	$1.2	$2.3	-48%	-47%
Non-GAAP net income that excludes certain items [2,3]	$3.3	$2.6	+28%	+27%
GAAP EPS	$0.48	$0.92	-48%	-48%
Non-GAAP EPS that excludes certain items [3]	$1.31	$1.02	+28%	+27%

1. On June 2, 2021, Merck completed the spinoff of products from its women's health, biosimilars and established brands businesses into a new, independent, publicly traded company named Organon & Co. (Organon) through a distribution of Organon's publicly traded stock to company shareholders. The historical results of the women's health, biosimilars and established brands businesses that were contributed to Organon in the spin-off are excluded from sales and expenses and reflected as discontinued operations in the company's Consolidated Statements of Income
2. Net income attributable to Merck & Co., Inc.
3. Merck is providing certain 2021 and 2020 non-GAAP information that excludes certain items because of the nature of these items and the impact they have on the analysis of underlying business performance and trends. Management believes that providing this information enhances investors' understanding of the company's results and permits investors to understand how management assesses performance. Management uses these measures internally for planning and forecasting purposes and to measure the performance of the company along with other metrics. In addition, senior management's annual compensation is derived in part using non-GAAP pretax income. This information should be considered in addition to, but not as a substitute for or superior to, information prepared in accordance with GAAP. For a description of the non-GAAP adjustments, see Table 2a attached to this release.

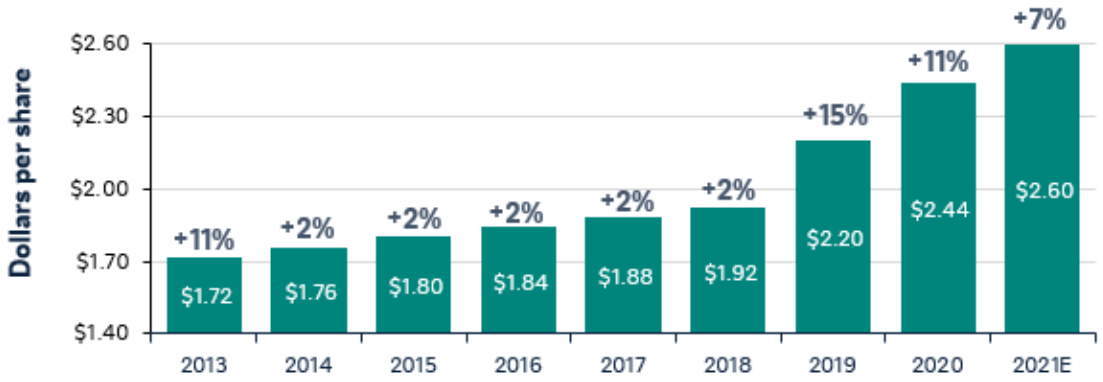
Continuing operations full-year 2021 guidance[1]

	Guidance	Key Assumptions
Revenue	$46.4 to $47.4B +12% to +14% (+10% to +12% ex-FX)	• Raised and narrowed from previous guidance ($45.8 to 47.8B) • Assumes a <2% positive FX impact • Now assumes <3% negative impact due to COVID-19, all of which relates to the pharmaceutical segment
Non-GAAP Gross Margin Rate[2]	76.0-77.0%	
Non-GAAP Operating Expenses[3]	Increase by high single-digit rate	• Increased promotional spend and patient activation as well as increased investment in the pipeline
Other (Income) / Expense	~$300M of expense	
Tax Rate[4]	~14.5-15.5%	
Shares Outstanding	~2.53B	• Assumes very modest share repurchase
GAAP EPS	$4.24 to $4.34	
Non-GAAP EPS[5,6]	$5.47 to $5.57 +21% to +23% (+19% to +21% ex-FX)	• Now assumes ~2% positive FX impact

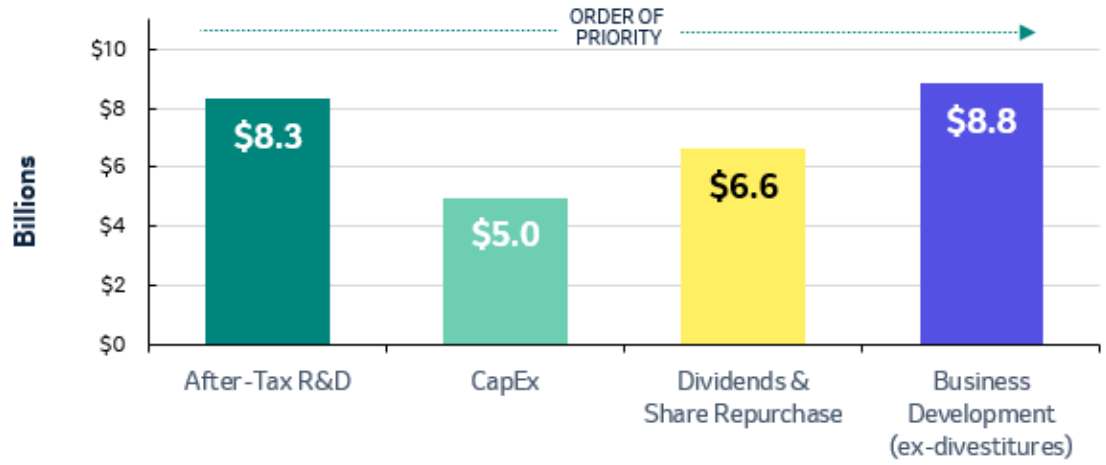
1. All estimates are provided on a continuing operations basis
2. GAAP Gross Margin Rate: Higher than 2020 by a low single-digit rate
3. GAAP Operating Expenses: Lower than 2020 by a mid-single-digit rate
4. GAAP Tax Rate: ~14.5% - 15.5%
5. The GAAP to non-GAAP reconciliation is available in Merck's Q2 2021 earnings release

Balanced approach to capital allocation: Investing in the business and creating value for shareholders

Commitment to the Dividend



Over the Past 12 Months



Capital Investments
2020 to 2024

~$20B

Over 5 years, including expanding manufacturing capacity for Oncology, Vaccines, and Animal Health. Includes >$10B in the U.S.

Balanced Capital Allocation to Invest in Growth While Returning Cash to Shareholders Over Past 12 Months

- $9.7 billion invested in R&D (~$8.3 billion after-tax)
- $8.8 billion spent on business development, including recently closed Pandion Therapeutics acquisition
- $6.6 billion in dividend and share repurchases
  - Remain committed to the dividend, which increased 7% in 2021
  - Returned $0.2 billion in Q2 2021 through share repurchases

Merck has actively supplemented its pipeline and portfolio with strategic business development

	Oncology	Cardiovascular, Neurosciences & Other	Animal Health
Bolt-on acquisitions	ArQule, Peloton Therapeutics, Tilos Therapeutics, Viralytics, VelosBio, Immune Design	calporta, Afferent Pharmaceuticals, Pandion Therapeutics	Allflex Livestock Intelligence, Vecoxan, Sure Petcare, IdentiGEN, VAKI, Harris Vaccines, ScanAqua, Sentinel, QuantifiedAg, Biomark
Strategic collaborations & licensing	AstraZeneca, Eisai, Seagen, moderna, Sutro Biopharma	Bayer, NGMBio, Gilead, Teijin, Hanmi, RidgeBackBio, Yumanity Therapeutics	

Creating long-term value for patients, employees and shareholders

Next 5 Years

Strong execution driving sustainable revenue growth, meaningful margin expansion and accelerated bottom-line growth

5-10 Years

Rich pipeline addressing areas of high unmet need to drive performance over the next 5 to 10 years

10+ Years

Revitalized discovery efforts and increased expertise in biology to deliver ongoing scientific breakthroughs for decades to come

Working with more speed, urgency and agility to more closely match the pace of change in the broader environment, and accelerate delivery of our innovations to the patients who need them

Continuing to make progress on our ESG commitments

267 million

Reached more than 267 million people globally with product donations through the MECTIZAN® Donation Program and Medical Outreach Program

1 million

Announced that our prior CEO, Ken Frazier, is the co-chair of the OneTen Initiative, which is working toward the hiring and promoting of 1M Black Americans over the next 10 years

13 million Women

Reached 13 million women through Merck for Mothers, which promotes safe, high-quality healthcare to help prevent maternal mortality

Renewable Energy

Accelerating by 15 years, to 2025, our goal to 100% renewable energy sources of our purchased electricity

46% Female

Increased the gender diversity of our Board of Directors

Access Principles

Refreshed our Access to Health Guiding Principles to ensure we continue to prioritize affordable availability and uptake of our medicines and vaccines

COVID-19 Relief

Provided more than $30 million for relief efforts in 2020, including cash support and in-kind giving, to help address the COVID-19 pandemic's impact on vulnerable people and communities

Carbon Neutrality

Committed to achieving carbon neutrality across our operations by 2025 and reducing our value chain emissions 30% by 2030