MERCK
INVENTING FOR LIFE

Merck
Q4 2020 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 2019 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).

Q4 performance highlights

Delivered worldwide sales growth[1]

$12.5B
+5%

Strong non-GAAP EPS growth[1]

$1.32
+17%

Created shareholder value

- Invested $2.6B in research and development, making significant progress in advancing our pipeline and across our key growth pillars
- Returned $1.5B to shareholders through dividends
- Continued to capitalize on value-enhancing business development, including the acquisition of VelosBio and OncoImmune

Advanced the pipeline

- Received 2 FDA approvals for KEYTRUDA, and FDA accepted with priority review a Supplemental Biologics License Application for KEYTRUDA
- Ex-U.S., received 1 approval for KEYTRUDA and 2 approvals for Lynparza in Europe, and 3 new approvals for Lynparza in Japan
- Progressed COVID-19 therapeutic candidate programs, advancing molnupiravir and acquiring MK-7110 from OncoImmune
- Announced or presented data at key medical meetings, including in HIV, vaccines and oncology

1. Growth rates exclude impact of foreign exchange
2. The GAAP to non-GAAP reconciliation is available in the Supplemental Tables to Merck's Q4 2020 earnings release.
3. GAAP EPS =$(0.83)

Driving value for patients and shareholders by progressing our pipeline

Key 2020 regulatory milestones

- In the U.S.:
  - Received FDA approvals across oncology (KN-204, KN-158, KN-177, KN-629 R/M, TMB-H, Q6W dosing, PAOLA-1, PROfound, NF-1, KN-057, KN-355, KN-146), vaccines (GARDASIL9), hospital (RECARBRIO for HABP/VABP), and neuroscience (BELSOMRA data in Alzheimer's Disease)
  - FDA accepted filings for KEYTRUDA (KN-522), granted priority review for KEYTRUDA based on KN-590, and vericiguat[1], granted breakthrough designation for belzutifan (MK-6482) and Fast Track designation for V181
  - Announced supply agreement with U.S. Government for COVID-19 treatment candidate, MK-7110
- In the EU, received approvals in oncology (PAOLA-1, POLO and PROfound) and received CHMP positive opinions in oncology (KN-177[3])
- In Japan, received approvals for KEYTRUDA (KN-181 and Q6W dosing), Lynparza (PAOLA-1, PROfound and POLO) and SILGARD9
- In China, received approval for KEYTRUDA (KN-181 and KN-048) and Lenvima monotherapy (DTC)
- ERVEBO approved in African Nations of DRC, Burundi, Ghana and Zambia

Key 2020 data presentations & readouts

- Presented new data across our broad portfolio of assets at key medical meetings including in oncology, HIV, vaccines and respiratory, and new data from novel mechanisms including vibostolimab (TIGIT), MK-4830 (ILT4), quavonlimab (CTLA4) and belzutifan (HIF2α)
- Toplined results and awaiting presentation from pivotal phase 3 trials in oncology (KN-775 and KN-581), vaccines (PNEU-WAY and PNEU-FLU) and respiratory (COUGH-1and COUGH-2)
- Advanced pipeline assets and presented data including vibostolimab, belzutifan, quavonlimab, LAG3 (MK-4280), CD27 (MK-5890), STING (MK-1454), V116, V117 and islatravir

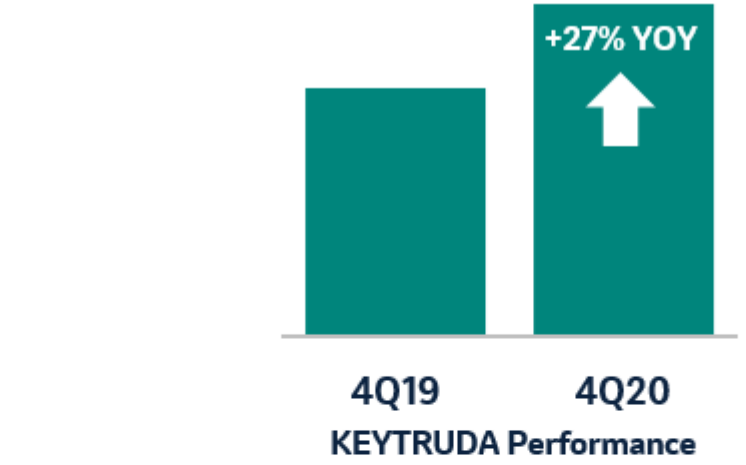
1. Announced FDA approval for vericiguat (Verquvo) on January 20, 2021
2. Announced that the FDA accepted for priority review the Biologics License Application for V114 for use in adults on January 12, 2021
3. Announced European Commission approval for KEYTRUDA based on KN-177 on January 26, 2021
4. Announced CHMP positive opinion for KEYTRUDA based on KN-204 on February 1, 2021

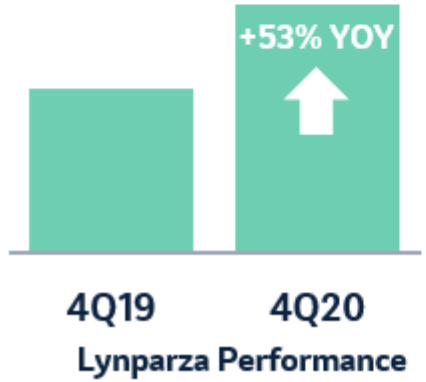
COVID-19 research efforts: advanced therapeutic candidates

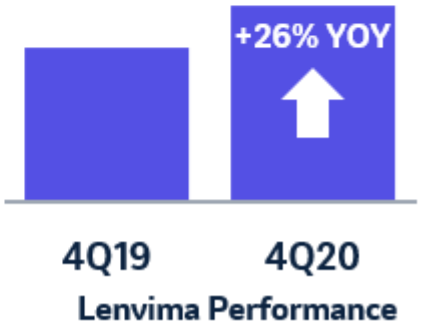
Treatment candidates	
Molnupiravir (MK-4482)	**MK-7110** (CD24Fc)
Collaboration with Ridgeback Bio to develop molnupiravir (MK-4482), an orally available antiviral candidate in development for the treatment of COVID-19. In preclinical studies, molnupiravir has shown antiviral activity against SARS-CoV-2, as well as the coronaviruses responsible for MERS and SARS. Results from Ridgeback's Phase 1 studies are largely complete and will read out in the coming months. Several of Ridgeback's three small Phase 2 studies also should have data available in the next few months. Merck's two large pivotal Phase 2/3 trials studying molnupiravir, one in outpatients and another in hospitalized patients with confirmed COVID-19, have primary completion dates in May 2021, and interim efficacy data is anticipated in the first quarter. We have scaled production and expect to have over 10 million courses available by the end of 2021, if approved.	MK-7110, a potentially first-in-class recombinant fusion protein acquired from OncoImmune, in development for the treatment of patients with severe and critical COVID-19. We expect full Phase 3 study results in the first quarter. If approved for use, we expect to scale up manufacturing to supply the U.S. government with approximately 60,000-100,000 doses of MK-7110 by mid-2021 as part of the government's pandemic response goals.

Oncology: strong growth across broad portfolio

- KEYTRUDA sales of $4.0B increased 27% year-over-year, reflecting continued leadership in lung and strong growth across a broad number of additional indications
  - In the U.S., sales of $2.2B driven by growth across all key tumor types, including continued growth and leadership in lung, continued benefit from Q6W dosing, and momentum from launches in renal cell and endometrial carcinomas
  - Ex-U.S., 28% growth, driven by global uptake in lung and launches in new tumor types
- Strong growth from both Lynparza and Lenvima continues to bolster oncology portfolio with growth of 53% and 26%, respectively



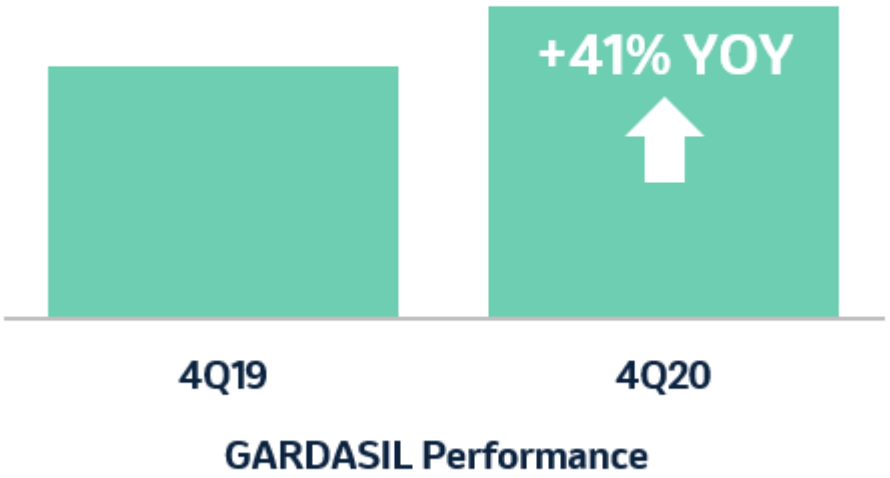




1. All growth rates exclude the impact of foreign exchange.

Vaccines: GARDASIL underlying demand remains intact

- GARDASIL sales of $1.0B increased year-over-year and reflect continued strong underlying demand
  - In the U.S., sales grew year-over-year largely due to $240M of benefit from CDC borrowing and repayment
  - Ex-U.S., sales declined year-over-year driven by current wave of COVID-19 lockdowns in Europe that offset growth in China

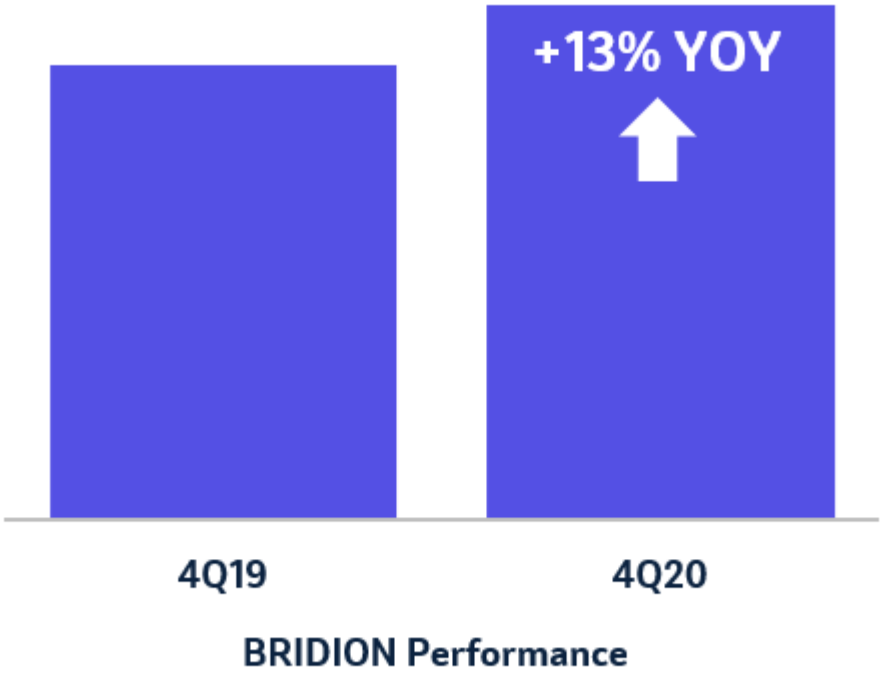


GARDASIL Performance

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

Hospital: solid BRIDION growth despite reduced surgical procedures

- BRIDION sales of $355M increased 13% year-over-year driven by increased market share gains, partially offset by lower elective surgery procedures
- In 2020, Bridion grew 7%, representing higher demand globally
- Continued strong uptake of PREVYMIS, resulting from longer duration of therapy for existing patients, offset by postponed transplant procedures

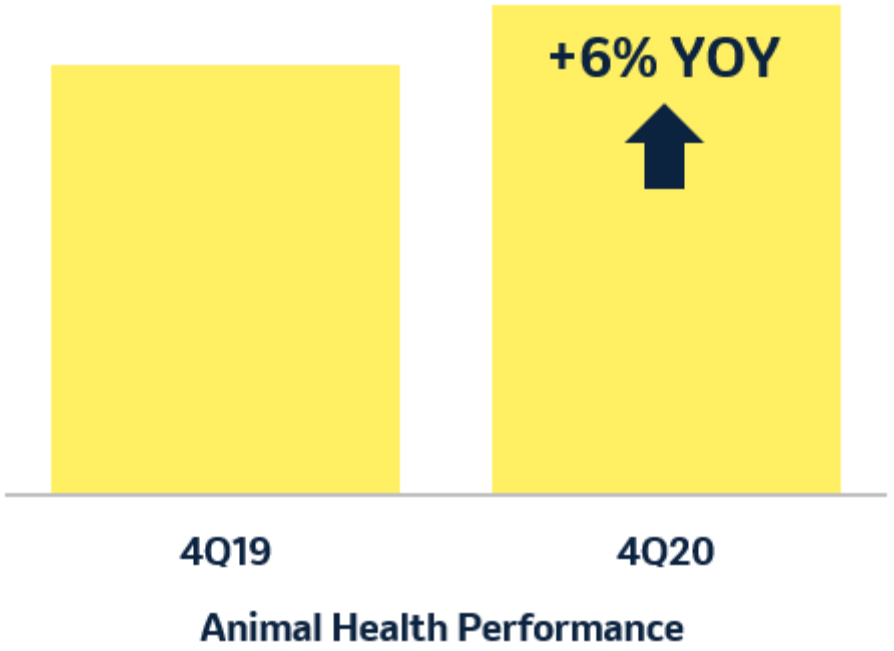


BRIDION Performance

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

Animal Health: strong growth across innovative portfolio

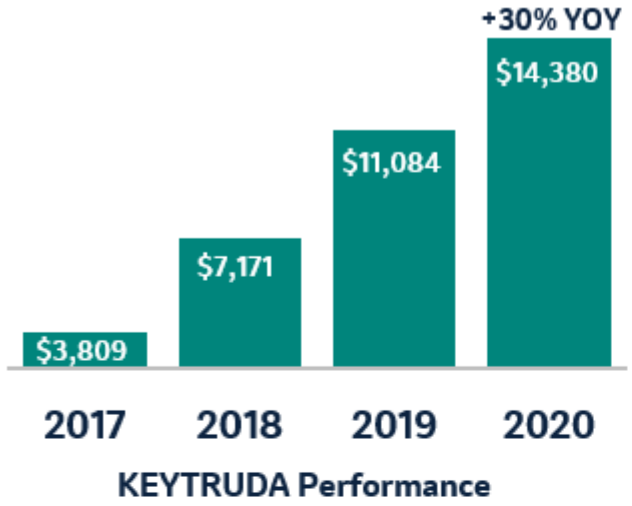
- Animal Health sales increased 6% to $1.2B
  - Companion Animal sales increased 9%, reflecting strength in vaccines and parasiticides
  - Livestock sales increased 4%, reflecting an additional month of sales related to the 2019 acquisition of Antelliq, partially offset by distributor purchasing patterns
- In 2020, Animal Health grew +10%, demonstrating strong demand across both the Companion Animal and Livestock portfolios and a benefit from the 2019 acquisition of Antelliq



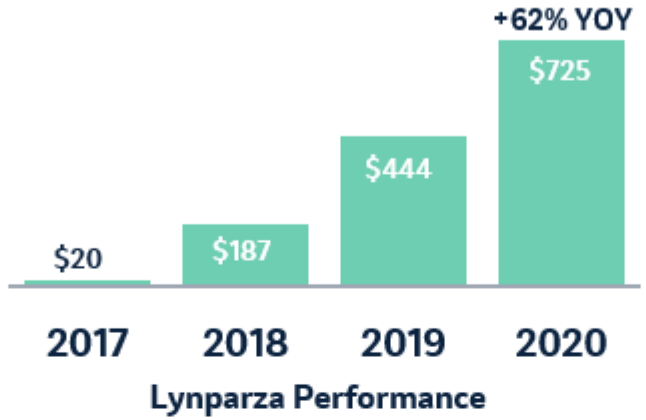
Animal Health Performance

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

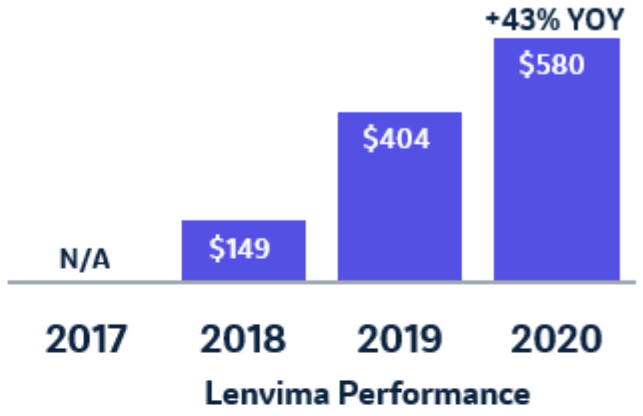
2020: key pillars driving growth the past four years



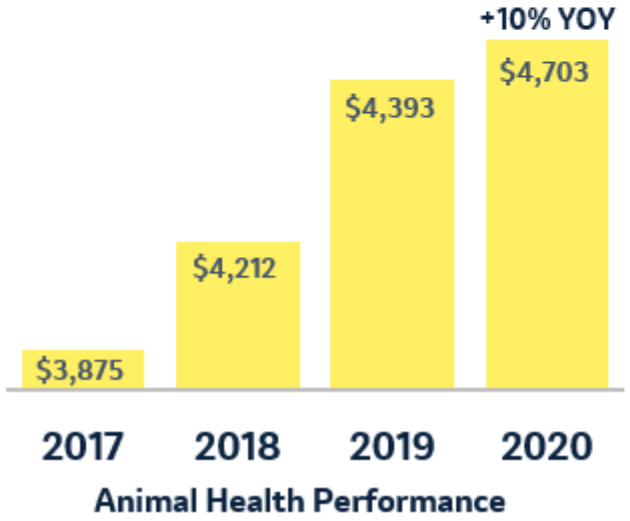
KEYTRUDA Performance



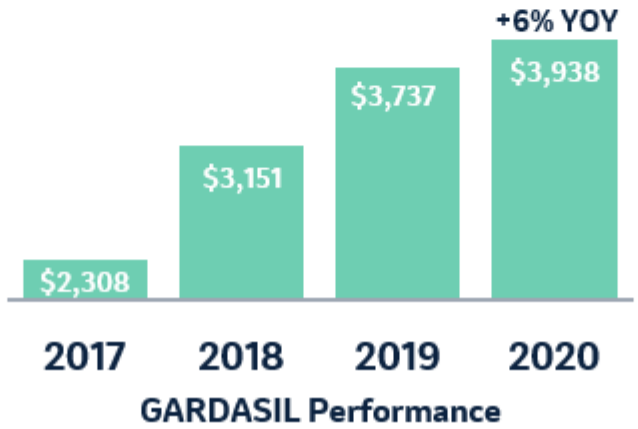
Lynparza Performance



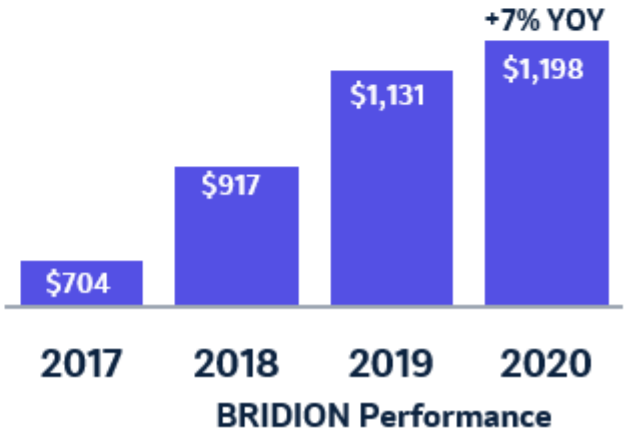
Lenvima Performance



Animal Health Performance



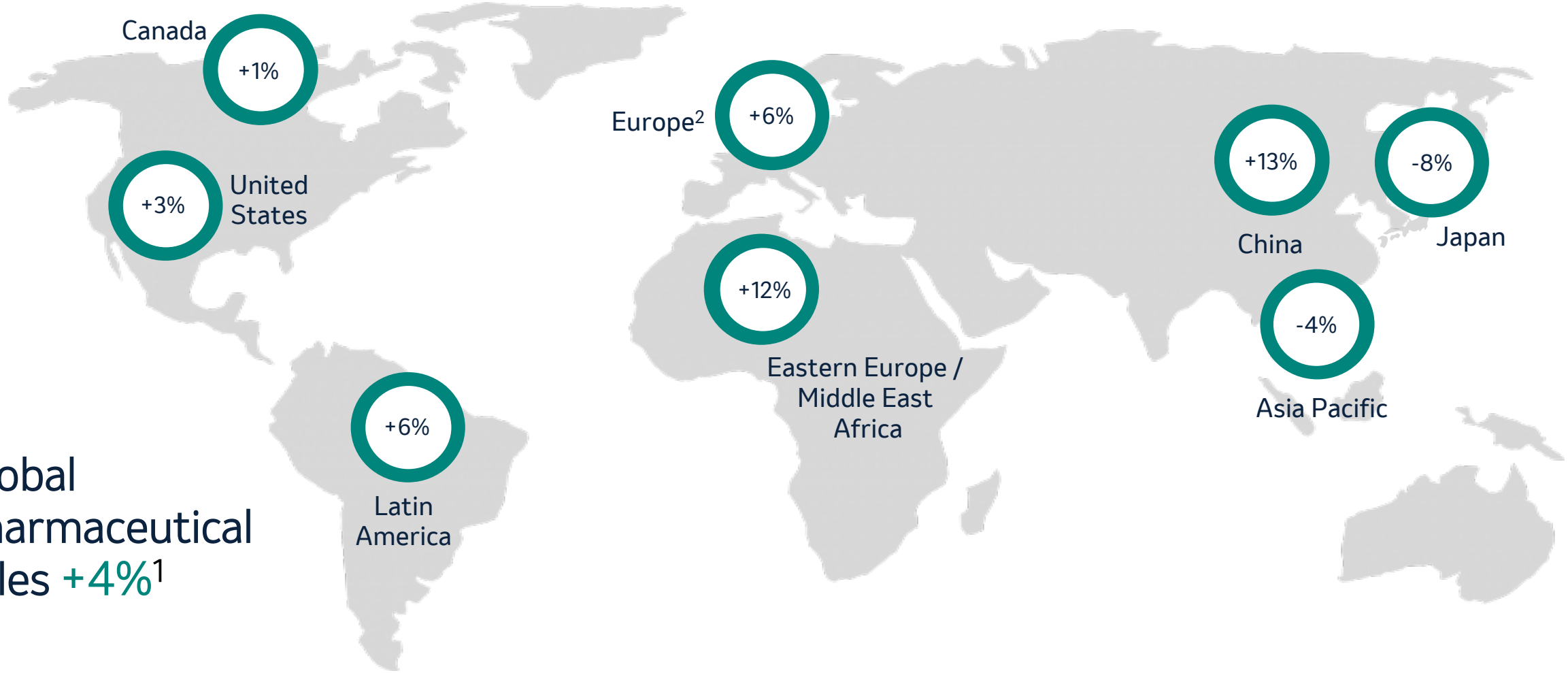
GARDASIL Performance



BRIDION Performance

1. All growth rates exclude the impact of foreign exchange.
2. Units in millions.

Growth across most global markets in 2020 despite ongoing pandemic impact



Global pharmaceutical sales +4%[1]

1. All growth rates exclude the impact of foreign exchange.
2. Europe primarily represents all European Union countries and the European Union accession markets.

Q4 2020 financial results summary: Delivering leverage in the P&L

$ in billions, except EPS amounts

	Q4 2020	Q4 2019	Change	Change Ex-FX
Sales	$12.5	$11.9	+5%	+5%
GAAP Gross Margin	55.8%	69.1%	-13%	-13%
Non-GAAP Gross Margin[2]	73.0%	72.6%	+0%	+1%
GAAP net (loss) income[1]	$(2.1)	$2.4	->100%	->100%
Non-GAAP net income that excludes certain items [1,2]	$3.4	$3.0	+12%	+16%
GAAP EPS	$(0.83)	$0.92	->100%	->100%
Non-GAAP EPS that excludes certain items [2]	$1.32	$1.16	+14%	+17%

1. Net income attributable to Merck & Co., Inc.
2. Merck is providing certain 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 as it 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.

2020 financial results summary: Solid growth despite pandemic headwinds

$ in billions, except EPS amounts

	2020	2019	Change	Change Ex-FX
Sales	$48.0	$46.8	+2%	+4%
GAAP Gross Margin	67.7%	69.9%	-2%	-2%
Non-GAAP Gross Margin[2]	74.3%	74.9%	-1%	-0%
GAAP net income[1]	$7.1	$9.8	-28%	-25%
Non-GAAP net income that excludes certain items [1,2]	$15.1	$13.4	+13%	+16%
GAAP EPS	$2.78	$3.81	-27%	-24%
Non-GAAP EPS that excludes certain items [2]	$5.94	$5.19	+14%	+17%

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Merck full-year 2021 guidance[1]

	Guidance	Key Assumptions
Revenue	$51.8B to $53.8B +8% to +12% (+6% to 10% ex-FX)	• Assumes ~2% positive FX impact • Assumes ~2% negative impact due to the COVID-19 pandemic, particularly during the first half of 2021
Non-GAAP Gross Margin Rate[2]	~77.0%	
Non-GAAP Operating Expenses[3]	Increase by high single to low double-digit rate	• Reflects increased R&D spend on COVID-19 research programs and progression of pipeline assets
Other (Income) / Expense	~$400M of expense	
Tax Rate[4]	~15.0-16.0%	
Shares Outstanding	~2.53B	
GAAP EPS[5]	$5.52 to $5.72	
Non-GAAP EPS[5,6]	$6.48 to $6.68 +12% to +15% (+9% to +12% ex-FX)	• Assumes ~3% positive FX impact • Changes to non-GAAP reporting resulted in a positive impact of approximately $0.08

1. All estimates based on the assumption that the Organon business will be a part of Merck for all of 2021
2. GAAP Gross Margin Rate: Higher than 2020 by a low single-digit rate
3. GAAP Operating Expenses: Lower than 2020 by a low double-digit rate
4. GAAP Tax Rate: 15.0% - 16.0%
5. The GAAP to non-GAAP reconciliation is available in Merck's Q4 2020 earnings release
6. Growth rates reflective of recast of non-GAAP P&L presentation

Momentum leading up to the spinoff of Organon & Co.

Remain confident the transaction will deliver significant benefits for both Merck and Organon, and create value for Merck shareholders

Organon will be well positioned for growth as it nears the end of loss of exclusivity exposure to key brands, with expected low to mid-single digit annual revenue growth off of a 2021 base year

Spinoff of Organon expected to be completed in late second quarter 2021

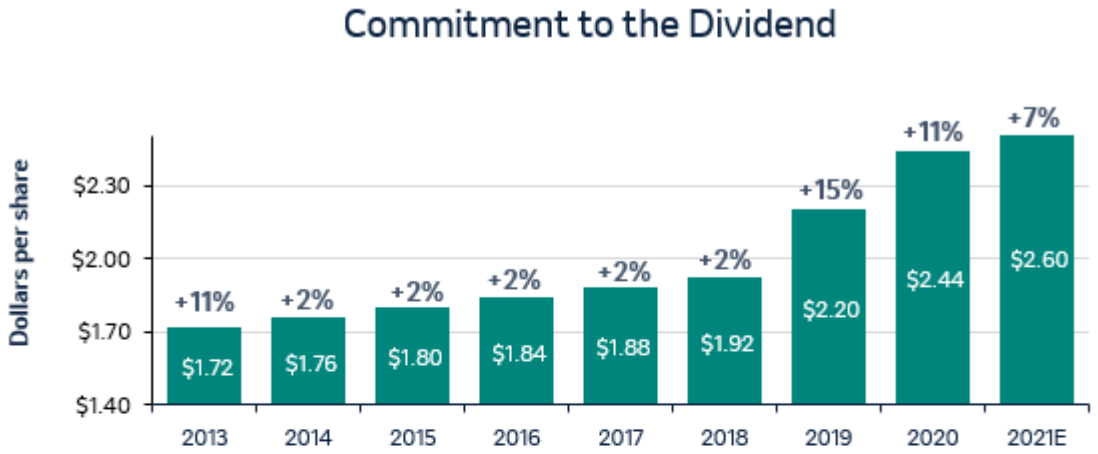
Creating two companies with enhanced strategic and operational focus, improved agility, simplified operating models, optimized capital structures and improved financial profiles

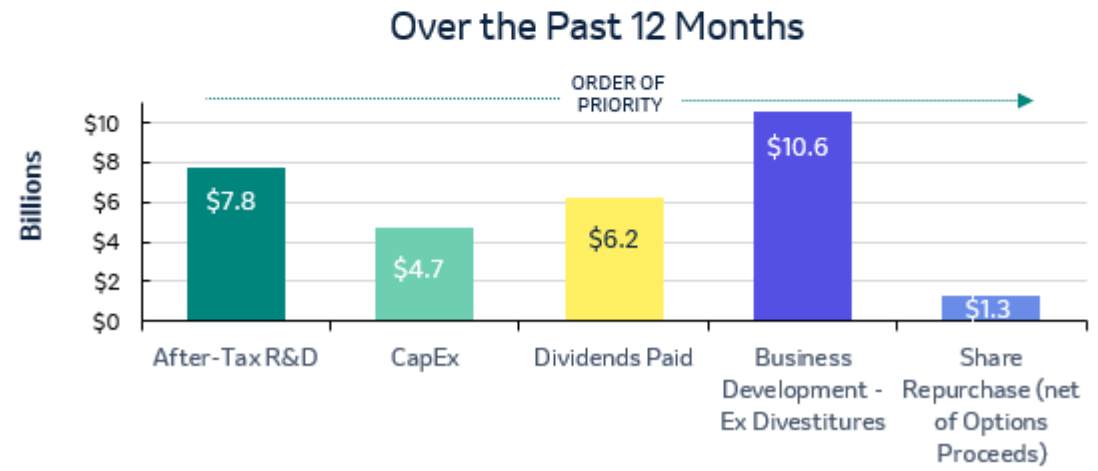
Updated high level 2021 Organon guidance

	Guidance	Additional Comments
2020 Revenue	$6.5B	• Products that will comprise Organon
2021 Revenue	$6.0B to $6.5B	• Expected low to mid-single digit annual revenue growth off of a 2021 base year
Non-GAAP Operating Margin	Mid-30% range as a standalone company post spinoff	• Expected to increase over time • Reflecting additional costs Organon will incur to operate as an independent company
EBITDA margins	High 30% range as a standalone company post spinoff	• Expected to increase over time
Debt	$9.0B to $9.5B in initial debt $8.5B to $9.0B special tax-free dividend to Merck	• Ample cash flow and financial flexibility for potential business development opportunities, debt paydown and a meaningful dividend
Dividend	Meaningful dividend	• Dividend will be incremental to Merck dividend

Organon will provide additional details at Investor Event prior to completion of spinoff

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





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

- $9.2 billion invested in R&D ($7.8 billion after-tax)
- $10.6 billion spent on business development, including acquisitions and collaborations for 4 COVID-19 vaccine and therapeutic candidates, acquisition of VelosBio, strategic oncology collaborations with Seagen, collaboration milestone payments, and Animal Health deals
- $7.5 billion in dividend and share repurchases
  - Remain committed to the dividend, which increased 7% in 2020
  - Returned $1.3 billion share repurchases (excluding option proceeds)

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

Completed 120 business development transactions in 2020

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

Anchored by our deep bench of talent and commitment to our mission

Continuing to make progress on our ESG commitments

Access to Health

Increasing access to health to advance Merck's efforts to serve more patients

- History of making medicines and vaccines accessible and affordable through responsible pricing practices
- Implemented refreshed Access to Health Guiding Principles to ensure we continue to fulfill our commitment to access by focusing on the most critical issues
- Reaching more than 13 million women worldwide through Merck for Mothers, a $500 million initiative
- Through our 30+ year old MECTIZAN® Donation Program, eliminated river blindness in 4 Latin American countries and in parts of 6 African countries so far, and eliminated lymphatic filariasis in 3 countries in Africa and the Middle East
- Thanks to the commitment of many collaborators across multiple sectors, ERVEBO, Merck's vaccine for the prevention of disease caused by Zaire ebolavirus, is now registered in eight African countries at high risk of Ebola (with additional African country registrations pending review). These registrations followed WHO prequalification, conditional approval in the EU, and licensure in the United States.

Employees

Fostering diverse and gender-balanced workforce essential to performance as a research-intensive company and to attracting most talented scientists

- Offering numerous programs to engage employees and promote positive work environment (including female mentorship by female Board members)
- Partnering with Year Up, a nonprofit that enables low-income young adults of color to move from minimum wage to meaningful careers in just one year
- Increase in 2019 in women on our Board (25%), in executive roles (36%), and in management roles (43%)
- Recognized as a 2020 best place to work for LGBTQ equality by the Human Rights Campaign (HRC) Foundation
- Identified by the American Indian Science and Engineering Society (AISES) as a 50 Top STEM Workplaces for Indigenous STEM Professionals

Environmental Sustainability

Executing an environmental sustainability strategy to take advantage of opportunities to reduce environmental impact across operations and supply chain

- Featuring energy-conservation and water-use-reduction initiatives
- Reducing environmental impacts as evidenced by an EPA Green Chemistry Challenge Award four years running (seven awards overall)
- Purchasing electricity from renewable energy sources to reduce greenhouse gas emissions, including the launch of our first large wind virtual power purchase agreement
- Collaborating with suppliers and customers to address shared needs and interests in environmentally beneficial ways

Ethics and Transparency

Earning trust and confidence of stakeholders is critical for a company in the business of marketing and selling medicines and vaccines

- Demonstrated commitment to transparency through disclosures about our business and how we operate, including issuing a multi-year report about pricing practices
- Work with broad range of stakeholders to help develop and advance innovative financing and solutions that address the needs of patients
- Integrating the SDGs into our reporting to demonstrate our commitment to sustainable development

Please find our 2019/2020 Corporate Responsibility Report here.

Recast of 2020 non-GAAP P&L presentation[1]

$ in millions, except EPS amounts

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	FY 2020
Sales	$12,057	$10,872	$12,551	$12,514	$47,994
COGS	$2,837	$2,533	$3,020	$3,222	$11,613
PGM	$9,220	$8,339	$9,531	$9,292	$36,381
Other (income) / expense	$169	$74	$35	$95	$376
Net income	$3,851	$3,368	$4,278	$3,210	$14,706
EPS	$1.51	$1.32	$1.68	$1.27	$5.79

1. Beginning in 2021, the Company will be changing the treatment of certain items for the purposes of its non-GAAP reporting. Historically, Merck's non-GAAP results excluded the amortization of intangible assets recognized in connection with business acquisitions but did not exclude the amortization of intangibles originating from collaborations, asset acquisitions or licensing arrangements. Beginning in 2021, Merck's non-GAAP results will no longer differentiate between the nature of the intangible assets being amortized and will exclude all amortization of intangible assets. Also, beginning in 2021, Merck's non-GAAP results will exclude gains and losses on investments in equity securities.