

April 30 – May 4, 2023 | Wynn, Las Vegas



Specialty Pharmacy Industry Outlook: What's Next?

Adam J. Fein, CEO, Drug Channels Institute
Lisa Gill, Managing Director, J.P. Morgan Securities
Doug Long, VP, Industry Relations, IQVIA

May 2, 2023

Agenda

- The State of Specialty Pharmacy 2023 — Adam
- Value-Based Care and Specialty Pharmacy: A Wall St. Perspective — Lisa
- U.S. Specialty Pharmaceutical Trends, Issues, and Outlook — Doug
- Q&A (Send your questions to support@drugchannels.net)

Download these slides:

<https://drugch.nl/assembly23>

April 30 – May 4, 2023 | Wynn, Las Vegas



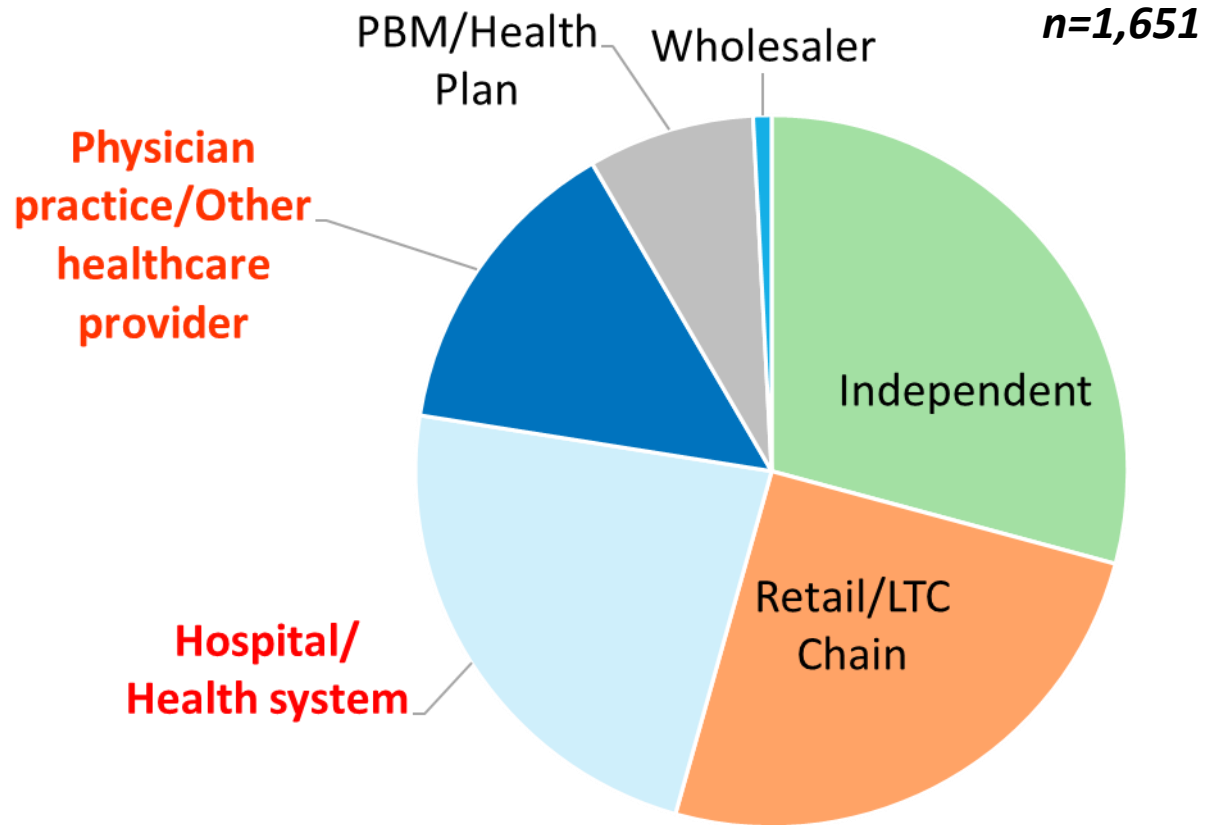
The State of Specialty Pharmacy 2023

Adam J. Fein, Ph.D.
Drug Channels Institute

May 2, 2023

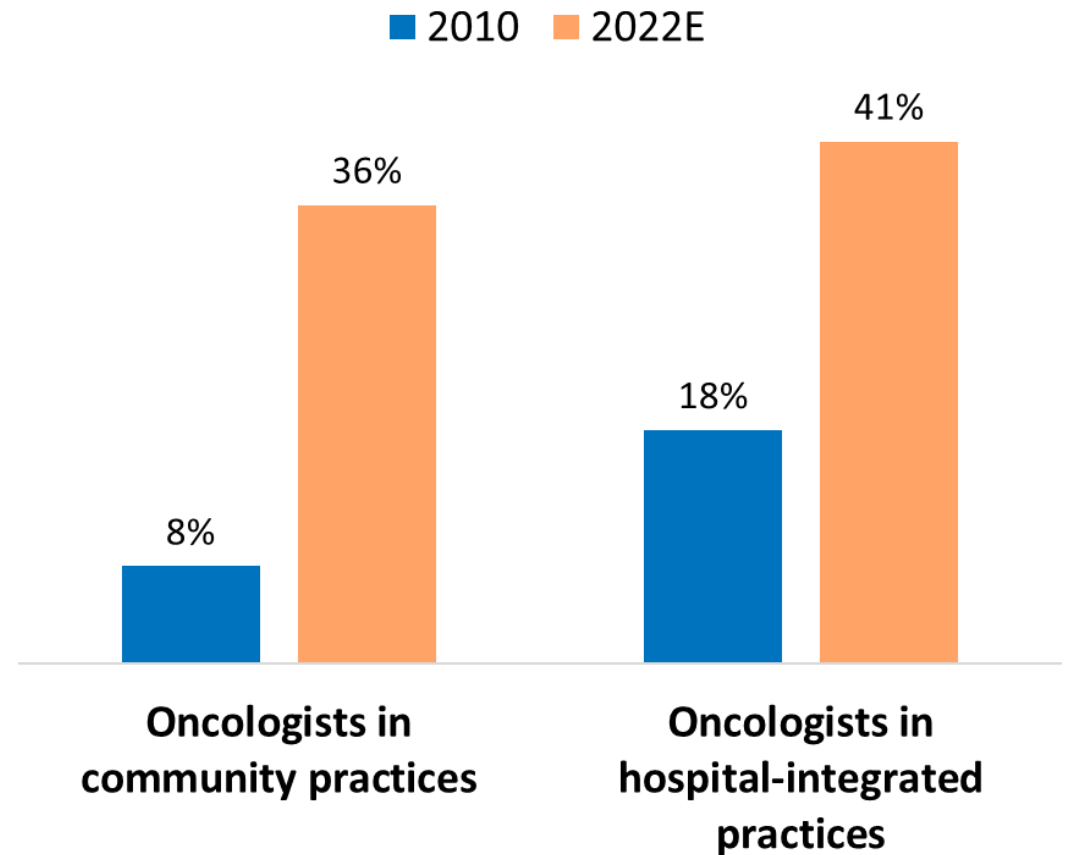
The Expanding Specialty Pharmacy Marketplace

SHARE OF PHARMACY LOCATIONS WITH SPECIALTY PHARMACY ACCREDITATION, BY CORPORATE OWNERSHIP, 2022



Source: [The 2023 Economic Report on U.S. Pharmacies and Pharmacy Benefit Managers](#), Exhibit 51. Figures show number of unique accredited locations by ACHC and/or URAC. Independents include private independent pharmacies, pharmacies owned by private equity firms, and independently owned franchise locations. Other healthcare provider includes pharmacies owned by physician practices and nonhospital providers. Retail/LTC Chain includes pharmacy locations owned by chain drugstores, grocery chains, and national long-term care pharmacy chains (LTC).

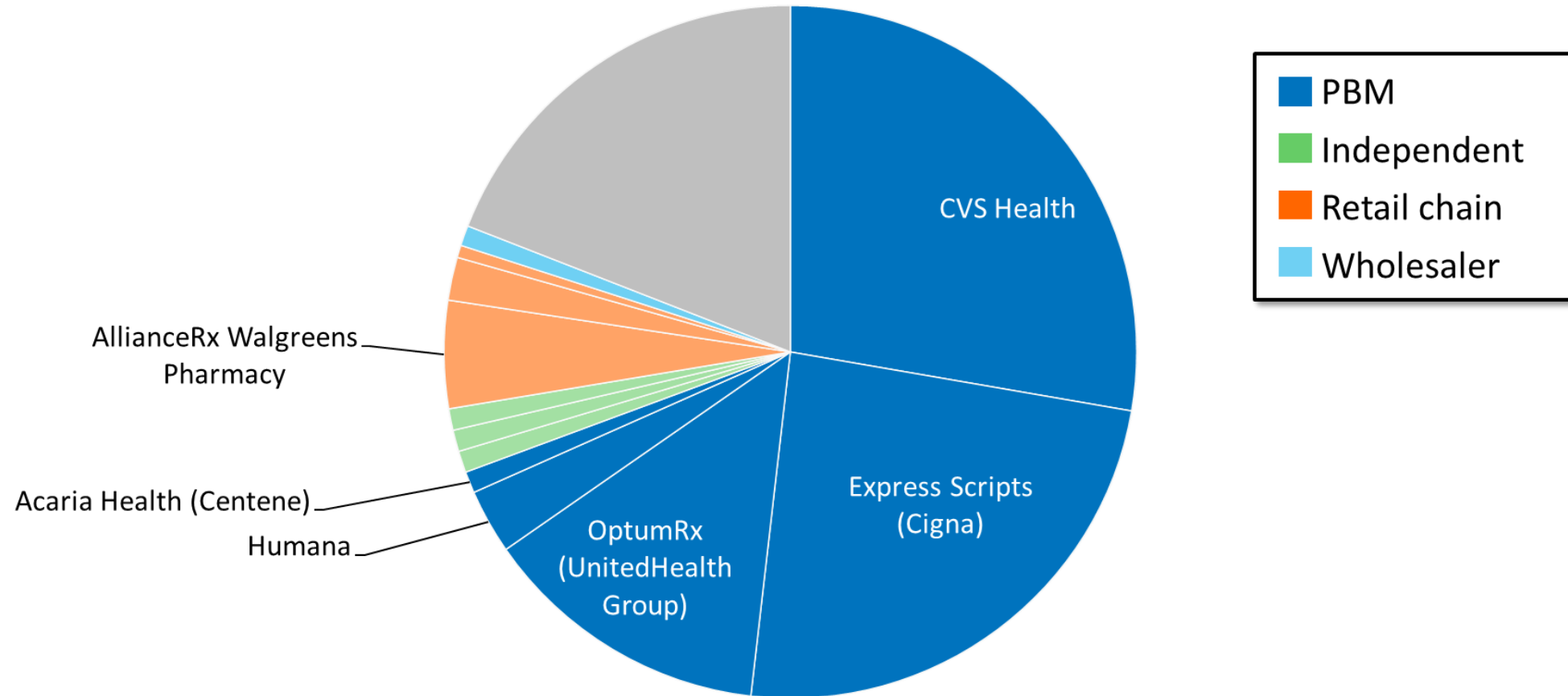
SHARE OF ONCOLOGISTS IN PRACTICES WITH MEDICALLY-INTEGRATED DISPENSING, BY PRACTICE SETTING



Source: Drug Channels Institute analysis of [Trends in Medically Integrated Dispensing Among Oncology Practices](#), JCO Oncology Practice, 2022; Drug Channels Institute estimates. See Source: [The 2023 Economic Report on U.S. Pharmacies and Pharmacy Benefit Managers](#), Exhibit 58.

Manufacturers Pick The Players. PBMs & Plans Pick the Winners.

SHARE OF SPECIALTY DRUG DISPENSING REVENUES, BY COMPANY, 2022



Source: [The 2023 Economic Report on U.S. Pharmacies and Pharmacy Benefit Managers](#), Exhibit 52. Includes revenues from retail, specialty, and mail pharmacies. Includes specialty revenues from retail locations, where relevant. Excludes revenues from network pharmacies of PBM-owned specialty pharmacies and infusion services covered by medical benefit. Reflects pro-forma impact of acquisitions.



1. Since 2021, Prime's Blue Cross and Blue Shield plans have had the option to use Express Scripts or AllianceRx Walgreens Pharmacy for mail/specialty pharmacy services. IN Dec. 2021, Walgreens purchased Prime Therapeutics' 45% ownership interest, so this business had no PBM ownership as of 2022. Effective June 2022, the company was rebranded as AllianceRx Walgreens Pharmacy.

2. Centene has announced that it would outsource its PBM operations to Express Scripts in 2024. In 2023, Centene rebranded its pharmacy benefit subsidiary as Centene Pharmacy Services.

3. In 2021, Centene sold a majority stake in its U.S. Medical Management to a group of private equity firms.

4. Since 2020, Prime has sourced formulary rebates via Ascent Health Services. In 2021, Humana began sourcing formulary rebates via Ascent Health Services for its commercial plans.

5. Previously known as Evernorth Care Group and Cigna Medical Group.

6. In 2021, Cigna's Evernorth business acquired MDLIVE.

7. In 2022, Cigna invested \$2.7 billion for an estimated 14% ownership stake in VillageMD. Walgreens owns a majority of VillageMD.

8. In September 2022, CVS Health announced its acquisition of Signify Health. In February 2023, CVS announced its acquisition of Oak Street Health. Both transactions closed in 2023.

9. Previously known as IngenioRx.

10. In 2021, Partners in Primary Care and Family Physicians Group businesses were rebranded as Centerwell Senior Primary Care.

11. In 2022, Kindred at Home was rebranded as CenterWell Home Health. In 2022, Humana announced an agreement to divest its majority interest in Kindred at Home's Hospice and Personal Care Divisions to Clayton, Dubilier & Rice. Humana also announced plans to close a majority of its SeniorBridge home care locations.

Source: [The 2023 Economic Report on U.S. Pharmacies and Pharmacy Benefit Managers](#), Exhibit 234. Companies are listed alphabetically by corporate name.

Themes for the coming year

- Market access pressure from vertically aligned channels¹
- Specialty drug price competition²
- Battle over patients' financial support³
- Deflating the gross-to-net bubble⁴
- Disruption from patient-paid prescriptions⁵
- IRA begins to reset the drug channel (beyond Medicare)⁶



1. [The 2023 Economic Report on U.S. Pharmacies and Pharmacy Benefit Managers](#), Sections 5.2.2. and 12.3.1.

2. [The Warped Incentives Behind Amgen's Humira Biosimilar Pricing—And What We Can Learn from Semglee and Repatha](#), *Drug Channels*, February 2023.

3. [Copay Accumulator and Maximizer Update: Adoption Plateaus as Insurers Battle Patients Over Copay Support](#), *Drug Channels*, February 2023.

4. [Four Trends That Will Pop the \\$250 Billion Gross-to-Net Bubble—and Transform PBMs, Market Access, and Benefit Design](#), *Drug Channels*, April 2023.

5. [Discount Cards, Cost-Plus Pharmacies, and PBMs: Trends, Controversies, and Outlook](#), DCI, March 2023.

6. [The Inflation Reduction Act: Ten Predictions About Market Access and Drug Channels](#), *Drug Channels*, April 2023.



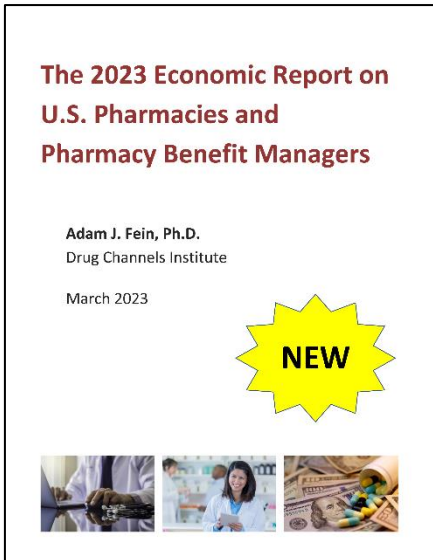
Free industry updates from my *Drug Channels* blog: DrugChannels.net



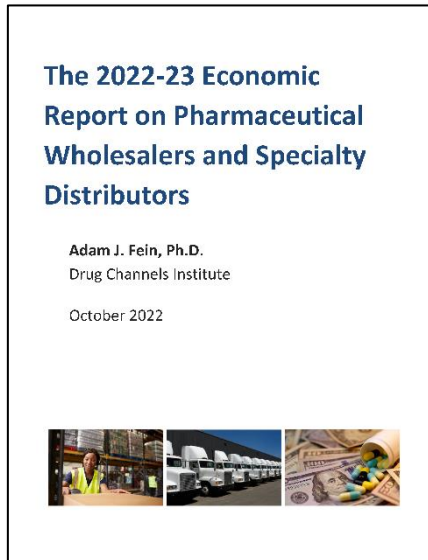
Daily posts about cool and intriguing stuff: linkedin.com/in/adamjfein/



Daily tweets about cool and intriguing stuff: twitter.com/DrugChannels



<https://drugch.nl/pharmacy>



<https://drugch.nl/wholesale>



Adam J. Fein, Ph.D.



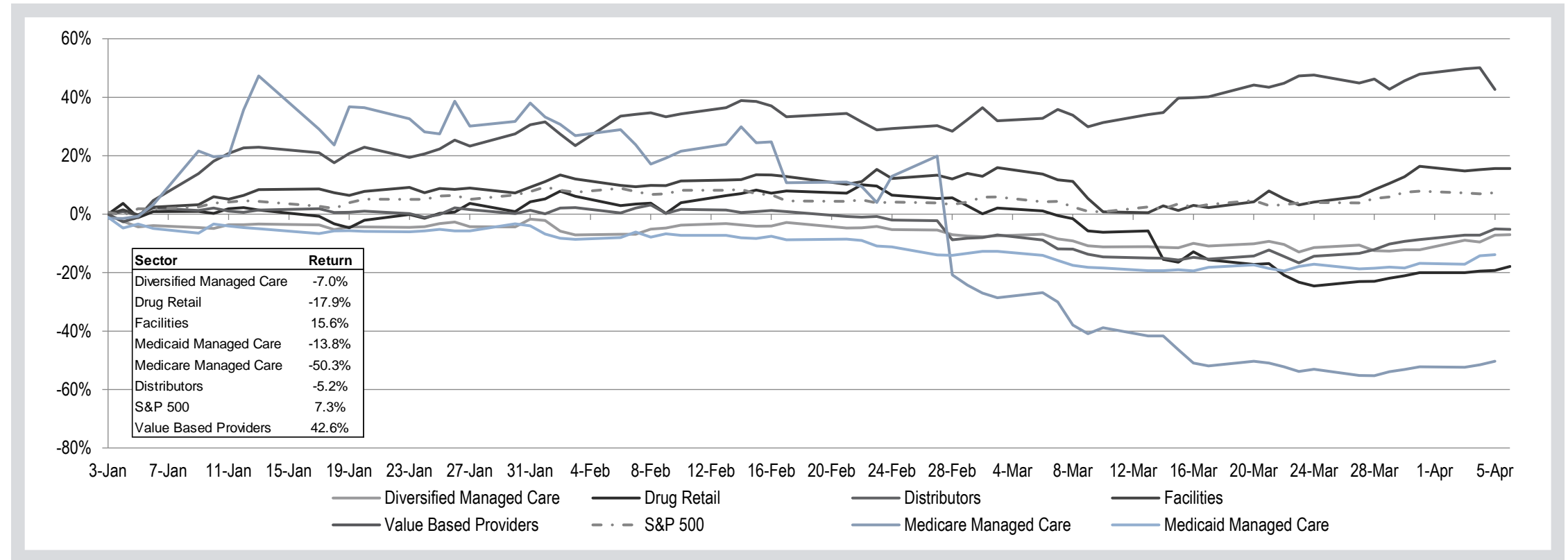
Value-Based Care and Specialty Pharmacy: A Wall St. Perspective

Lisa C. Gill

Head of J.P. Morgan's Healthcare Services Equity Research Team

5/2/23

Sector PERFORMANCE YTD






Sources: Bloomberg Finance L.P.

Diversified Managed Care includes CI, CVS, ELV, HUM, UNH; Drug Retail includes RAD, WBA; Facilities includes INNV, OPCH, SGRY; Medicaid Managed Care includes CNC, MOH; Medicare Managed Care includes ALHC, BHG; Distributors includes ABC, CAH, MCK, OMI; Value-Based Providers includes AGL, LFST, PRVA, TDOC.

value BASED CARE – Improves Quality, Cost, AND Convenience

Value-based care (VBC) is a fundamental shift within the healthcare system that is changing how care is paid for. In VBC models, payors and providers are incentivized to focus on the quality of care that they provide, with reimbursement linked to cost and quality of care metrics and sometimes health outcomes, as opposed to the traditional volume-based FFS model.

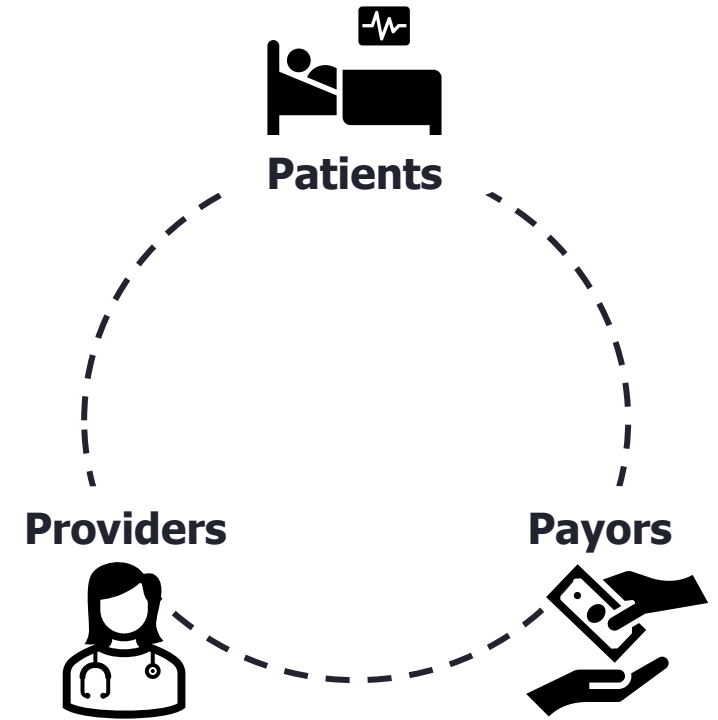
Cost	Quality	Convenience
Lowers overall healthcare costs by incentivizing providers to choose lower cost but effective treatments and to use preventive care 	Improves quality of care by incentivizing providers to focus on better quality of care, health outcomes, and effective prevention 	Increases convenience by incentivizing stakeholders to utilize lower cost sites of care, treating patients closer to (or even at) the home 

Value-Based Care Benefits all KEY Stakeholders













Value-based care aligns incentives by benefiting all key stakeholders:

- **Patients** will receive better quality care at a lower cost.
- **Providers** can potentially earn significantly more if they are able to manage costs and improve health outcomes effectively.
- **Payors** can benefit from lower cost of treatment and better health outcomes which translate into savings compared to FFS arrangements.

Despite all the benefits of value-based care we believe the transition to VBC is still in the early innings.



Value-based care companies in the public markets

Companies	Consolidating Company	Market Cap	VBC Lives
 agilon health	N/A	11B	359K
 CanoHealth	N/A	660M	180K
 CareMax	N/A	315M	245K
 Optum	UNITEDHEALTH GROUP®	480B	3M
 one medical	 amazon	1T	40K
 Oak St. Health	 CVS Health.	101B	159K
 PRIVIA. HEALTH	N/A	3B	856K
 P3 Health Partners	N/A	245M	100K
 VillageMD®	 Walgreens Boots Alliance	31B	806K

Sources: Company reports, Bloomberg Finance L.P. Lives as of 12/31/22

Note: VBC lives represent the following definitions: AGL and PIII disclose total member lives. CANO cites total Medicare capitated lives. OSH, UNH, WBA, and PRVA all explicitly disclosed VBC/VBA lives. ONEM disclosed “at-risk” lives.

How does Specialty Pharmacy Fit within Value Based Care?

Cost: Specialty drugs are a significant portion of the VBC mix

- VBC currently skews heavily towards MA populations with high drug utilization and chronic conditions.
- VBC incentivizes drug spend management via options like biosimilars.
- Specialty pharmacies can provide services on adherence and monitoring.

Quality: Outcomes-based contracting in focus

- Higher adherence improves outcomes, lowering costs for VBC providers and payors.
- Data and monitoring are key propositions for specialty pharmacies partnering with VBC arrangements.

Convenience: Improved outcomes via site of care & coordination

- A continued focus of VBC is shifting care and administration from high-cost settings to low-cost settings such as home infusion.
- Specialty pharmacies partnering with home infusion arms (e.g. CVS Specialty and Coram) can drive savings and improve patient experiences.

"Medication adherence especially for chronic disease is critically important. You see nearly 80% better than benchmark on adherence for medications around high blood pressure, high cholesterol, diabetes. And for patients who have cardiovascular disease or diabetes, the importance of being on a statin, nearly 40% better than benchmark."

— AGL 2022 Investor Day

"...performance contracts. We are in this -- adherence based programs, really trying to solve for what our end payers are looking for which is improved outcomes... We're seeing great improvements in ... how we're actually performing against these contracts which should obviously come through in pay for performance benefits"

— WBA, 2Q23 Earnings Call

Biosimilars in Value Based Care

- With 40 biosimilars approved as of 2022, doctors increasingly have lower cost Rx options, although a majority of current biosimilars flow through the medical benefit channel.
- We believe that VBC providers will continue to embrace biosimilars (particularly interchangeable biosimilars) and new biosimilars in the pharmacy channel will shift specialty pharmacy product mix.

Biosimilars are a natural tool for VBC

Cost savings are real, market share gains continue

- Per the Association for Accessible Medicines, in 2021 biosimilars drove savings of \$7B in biologic spending, with cumulative savings estimated of \$13B since 2015.
- Biosimilars continue to gain market share, with all biosimilar categories launched prior to 2020 having market share in excess of 40%.
- Across our coverage universe we believe incentives are aligned to increase biosimilar adoption.

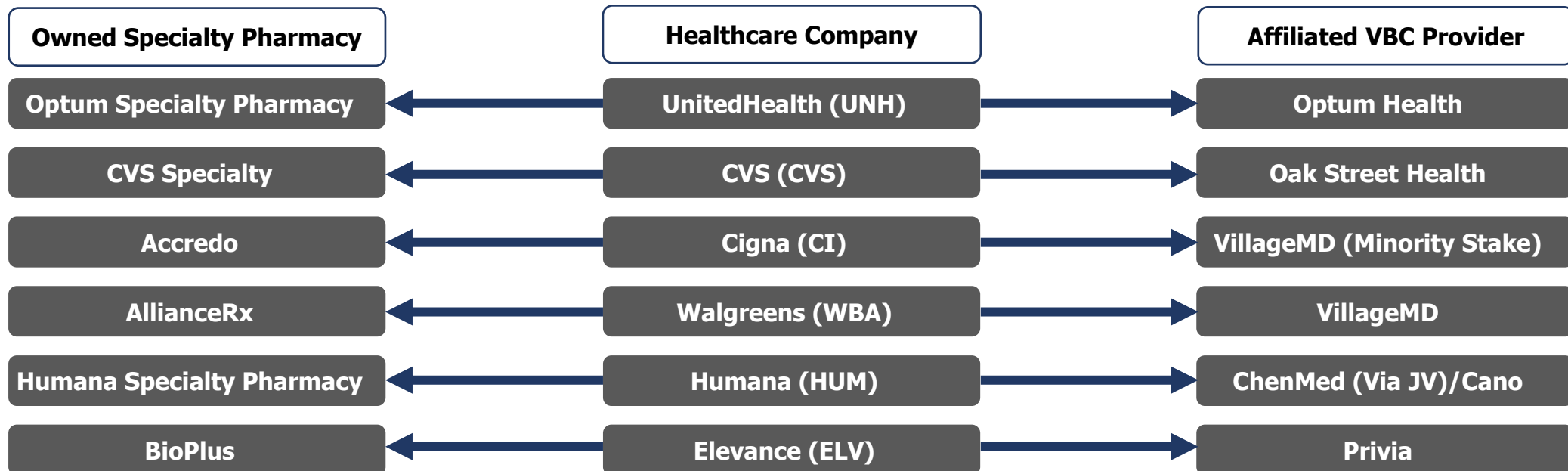
- Unlike other biosimilars approved, Humira is shipped by specialty pharmacies and is self-administered.
- Given the number of biosimilar approvals, we would expect significant discounting, driving a greater financial benefit.
- The first interchangeable biosimilar to Humira (Cyltezo) was approved in 2021, allowing for automatic substitution by pharmacies.

Humira biosimilars directly impacts specialty pharmacy

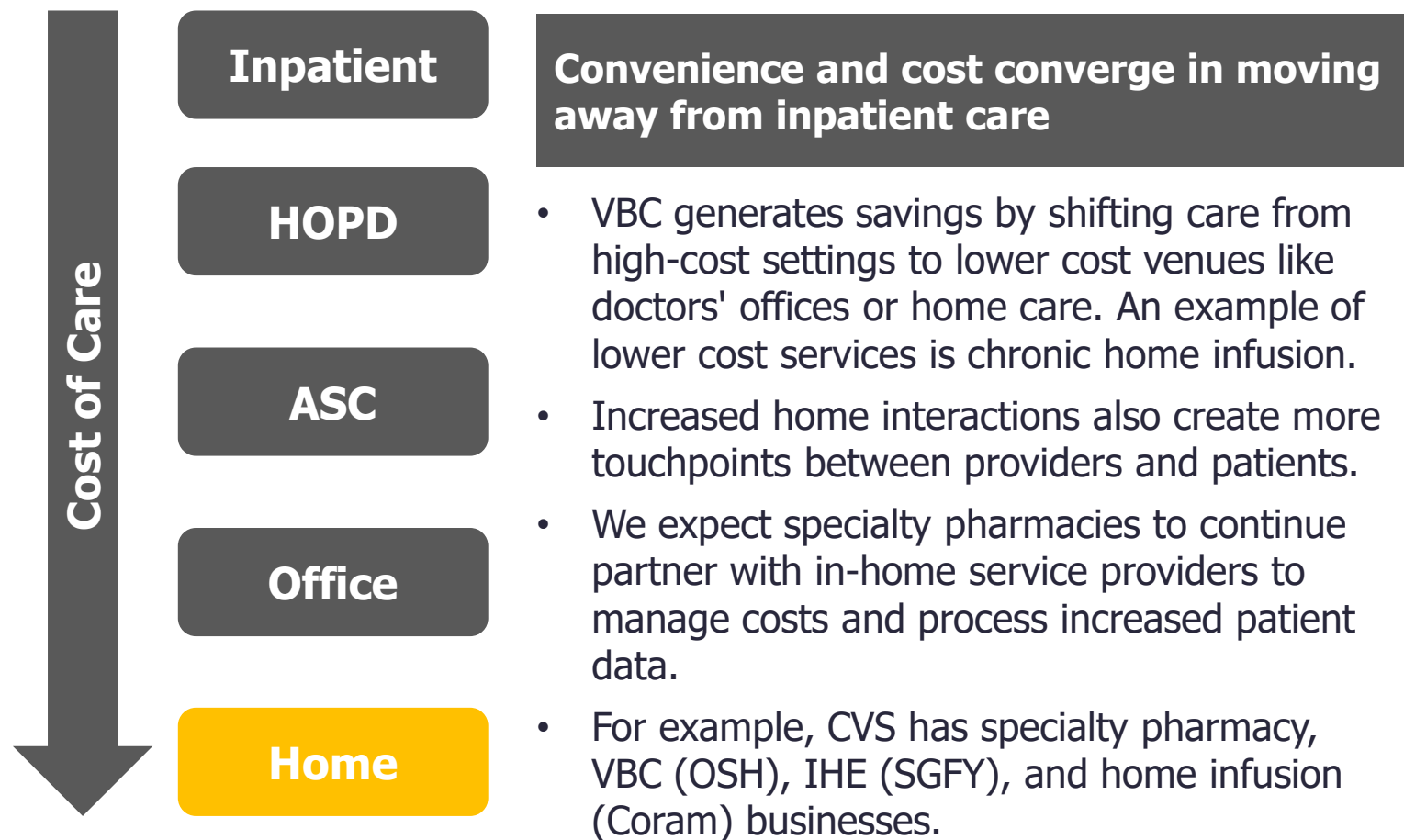
Specialty Pharmacies Have Consolidated VBC Exposure

Most large healthcare services companies have specialty pharmacies and investments VBC

- MCOs (who broadly own specialty pharmacies) are increasingly invested in VBC populations.
- While symptomatic of broader MCO vertical integration, this trend potentially aligns incentives across specialty pharmacy and VBC providers to centralize volumes and manage costs.



How does Site of Care Fit?



"....in many instances, (infusion is) a pretty expensive aspect, especially with some of the chronic conditions and the products associated with that. And so, the more we can enable a view of the total cost of care and help drive down that total cost by lower cost setting, high-quality care, better clinical outcomes, we think we have a right to participate. And we think we are in a really strong place in order to help that transition over to more value-based reimbursement or better clinical outcomes as they're looking at that total cost of care."

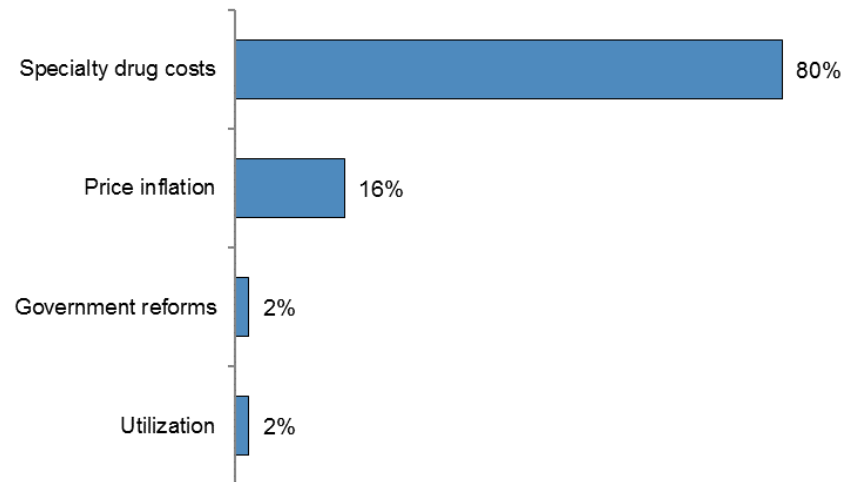
— Option Care 9/12/2022

VBC and Specialty Drugs: Growing Interest Outside of Medicare

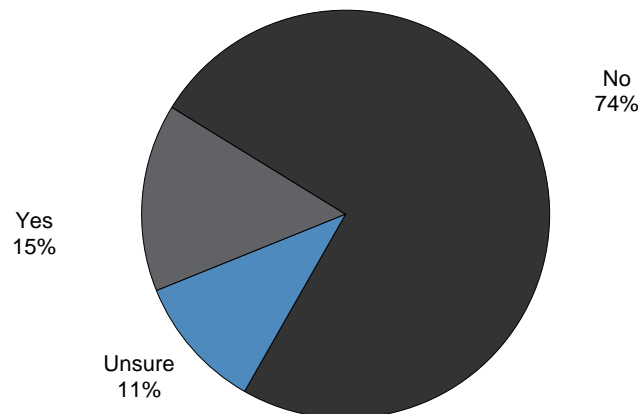
Our proprietary survey points to the continued expansion of VBC into the commercial market

- VBC is primarily MA focused currently, but our proprietary survey of benefit executives indicates that ~25% of executives either already have or expect their companies to have a value-based arrangement in the next 2 years
- At the same time, specialty drug costs are consistently cited as the largest concern by executives.
- We believe that VBC growth in commercial plans will increase demand for incremental services from pharmacies.

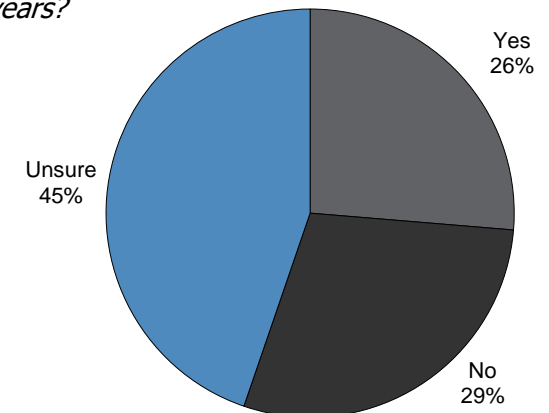
What is your biggest concern around the pharmacy benefit over the next five years?



Does your organization participate in any value-based care arrangements?



If your organization does not currently have any value-based care contracts, do you expect to participate in some form of value-based arrangement for a portion of your employee population within the next two years?



Disclosures

Analyst Certification: The Research Analyst(s) denoted by an “AC” on the cover of this report certifies (or, where multiple Research Analysts are primarily responsible for this report, the Research Analyst denoted by an “AC” on the cover or within the document individually certifies, with respect to each security or issuer that the Research Analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect the Research Analyst’s personal views about any and all of the subject securities or issuers; and (2) no part of any of the Research Analyst’s compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the Research Analyst(s) in this report. For all Korea-based Research Analysts listed on the front cover, if applicable, they also certify, as per KOFIA requirements, that the Research Analyst’s analysis was made in good faith and that the views reflect the Research Analyst’s own opinion, without undue influence or intervention.

All authors named within this report are Research Analysts who produce independent research unless otherwise specified. In Europe, Sector Specialists (Sales and Trading) may be shown on this report as contacts but are not authors of the report or part of the Research Department.

Important Disclosures

Company-Specific Disclosures: Important disclosures, including price charts and credit opinion history tables, are available for compendium reports and all J.P. Morgan–covered companies, and certain non-covered companies, by visiting <https://www.jpmm.com/research/disclosures>, calling 1-800-477-0406, or e-mailing research.disclosure.inquiries@jpmorgan.com with your request.

Explanation of Equity Research Ratings, Designations and Analyst(s) Coverage Universe:

J.P. Morgan uses the following rating system: Overweight [Over the next six to twelve months, we expect this stock will outperform the average total return of the stocks in the analyst’s (or the analyst’s team’s) coverage universe.] Neutral [Over the next six to twelve months, we expect this stock will perform in line with the average total return of the stocks in the analyst’s (or the analyst’s team’s) coverage universe.] Underweight [Over the next six to twelve months, we expect this stock will underperform the average total return of the stocks in the analyst’s (or the analyst’s team’s) coverage universe.] Not Rated (NR): J.P. Morgan has removed the rating and, if applicable, the price target, for this stock because of either a lack of a sufficient fundamental basis or for legal, regulatory or policy reasons. The previous rating and, if applicable, the price target, no longer should be relied upon. An NR designation is not a recommendation or a rating. In our Asia (ex-Australia and ex-India) and U.K. small- and mid-cap equity research, each stock’s expected total return is compared to the expected total return of a benchmark country market index, not to those analysts’ coverage universe. If it does not appear in the Important Disclosures section of this report, the certifying analyst’s coverage universe can be found on J.P. Morgan’s research website, <https://www.jpmorganmarkets.com>.

J.P. Morgan Equity Research Ratings Distribution, as of April 01, 2023

	Overweight (buy)	Neutral (hold)	Underweight (sell)
J.P. Morgan Global Equity Research Coverage*	47%	38%	15%
IB clients**	47%	44%	34%
JPMS Equity Research Coverage*	46%	41%	13%
IB clients**	66%	65%	53%

*Please note that the percentages might not add to 100% because of rounding.

**Percentage of subject companies within each of the "buy," "hold" and "sell" categories for which J.P. Morgan has provided investment banking services within the previous 12 months.

For purposes only of FINRA ratings distribution rules, our Overweight rating falls into a buy rating category; our Neutral rating falls into a hold rating category; and our Underweight rating falls into a sell rating category. Please note that stocks with an NR designation are not included in the table above. This information is current as of the end of the most recent calendar quarter.

Disclosures

Equity Valuation and Risks: For valuation methodology and risks associated with covered companies or price targets for covered companies, please see the most recent company-specific research report at <http://www.jpmorganmarkets.com>, contact the primary analyst or your J.P. Morgan representative, or email research.disclosure.inquiries@jpmorgan.com. For material information about the proprietary models used, please see the Summary of Financials in company-specific research reports and the Company Tearsheets, which are available to download on the company pages of our client website, <http://www.jpmorganmarkets.com>. This report also sets out within it the material underlying assumptions used.

A history of J.P. Morgan investment recommendations disseminated during the preceding 12 months can be accessed on the Research & Commentary page of <http://www.jpmorganmarkets.com> where you can also search by analyst name, sector or financial instrument.

Analysts' Compensation: The research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

Other Disclosures

J.P. Morgan is a marketing name for investment banking businesses of JPMorgan Chase & Co. and its subsidiaries and affiliates worldwide.

UK MIFID FICC research unbundling exemption: UK clients should refer to [UK MIFID Research Unbundling exemption](#) for details of JPMorgan's implementation of the FICC research exemption and guidance on relevant FICC research categorisation.

All research material made available to clients are simultaneously available on our client website, J.P. Morgan Markets, unless specifically permitted by relevant laws. Not all research content is redistributed, e-mailed or made available to third-party aggregators. For all research material available on a particular stock, please contact your sales representative.

Any long form nomenclature for references to China; Hong Kong; Taiwan; and Macau within this research material are Mainland China; Hong Kong SAR (China); Taiwan (China); and Macau SAR (China).

J.P. Morgan Research may, from time to time, write on issuers or securities targeted by economic or financial sanctions imposed or administered by the governmental authorities of the U.S., EU, UK or other relevant jurisdictions (Sanctioned Securities). Nothing in this report is intended to be read or construed as encouraging, facilitating, promoting or otherwise approving investment or dealing in such Sanctioned Securities. Clients should be aware of their own legal and compliance obligations when making investment decisions.

Any digital or crypto assets discussed in this research report are subject to a rapidly changing regulatory landscape. For relevant regulatory advisories on crypto assets, including bitcoin and ether, please see <https://www.jpmorgan.com/disclosures/cryptoasset-disclosure>.

The author(s) of this research report may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so.

Exchange-Traded Funds (ETFs): J.P. Morgan Securities LLC ("JPMS") acts as authorized participant for substantially all U.S.-listed ETFs. To the extent that any ETFs are mentioned in this report, JPMS may earn commissions and transaction-based compensation in connection with the distribution of those ETF shares and may earn fees for performing other trade-related services, such as securities lending to short sellers of the ETF shares. JPMS may also perform services for the ETFs themselves, including acting as

Disclosures

a broker or dealer to the ETFs. In addition, affiliates of JPMS may perform services for the ETFs, including trust, custodial, administration, lending, index calculation and/or maintenance and other services.

Options and Futures related research: If the information contained herein regards options- or futures-related research, such information is available only to persons who have received the proper options or futures risk disclosure documents. Please contact your J.P. Morgan Representative or visit <https://www.theocc.com/components/docs/riskstoc.pdf> for a copy of the Option Clearing Corporation's Characteristics and Risks of Standardized Options or http://www.finra.org/sites/default/files/Security_Futures_Risk_Disclosure_Statement_2018.pdf for a copy of the Security Futures Risk Disclosure Statement.

Changes to Interbank Offered Rates (IBORs) and other benchmark rates: Certain interest rate benchmarks are, or may in the future become, subject to ongoing international, national and other regulatory guidance, reform and proposals for reform. For more information, please consult: https://www.jpmorgan.com/global/disclosures/interbank_offered_rates

Private Bank Clients: Where you are receiving research as a client of the private banking businesses offered by JPMorgan Chase & Co. and its subsidiaries ("J.P. Morgan Private Bank"), research is provided to you by J.P. Morgan Private Bank and not by any other division of J.P. Morgan, including, but not limited to, the J.P. Morgan Corporate and Investment Bank and its Global Research division.

Legal entity responsible for the production and distribution of research: The legal entity identified below the name of the Reg AC Research Analyst who authored this material is the legal entity responsible for the production of this research. Where multiple Reg AC Research Analysts authored this material with different legal entities identified below their names, these legal entities are jointly responsible for the production of this research. Research Analysts from various J.P. Morgan affiliates may have contributed to the production of this material but may not be licensed to carry out regulated activities in your jurisdiction (and do not hold themselves out as being able to do so). Unless otherwise stated below, this material has been distributed by the legal entity responsible for production. If you have any queries, please contact the relevant Research Analyst in your jurisdiction or the entity in your jurisdiction that has distributed this research material.

Legal Entities Disclosures and Country-/Region-Specific Disclosures:

Argentina: JPMorgan Chase Bank N.A Sucursal Buenos Aires is regulated by Banco Central de la República Argentina ("BCRA"- Central Bank of Argentina) and Comisión Nacional de Valores ("CNV"- Argentinian Securities Commission" - ALYC y AN Integral N°51). **Australia:** J.P. Morgan Securities Australia Limited ("JPMSAL") (ABN 61 003 245 234/AFS Licence No: 238066) is regulated by the Australian Securities and Investments Commission and is a Market, Clearing and Settlement Participant of ASX Limited and CHI-X. This material is issued and distributed in Australia by or on behalf of JPMSAL only to "wholesale clients" (as defined in section 761G of the Corporations Act 2001). A list of all financial products covered can be found by visiting <https://www.jpmm.com/research/disclosures>. J.P. Morgan seeks to cover companies of relevance to the domestic and international investor base across all Global Industry Classification Standard (GICS) sectors, as well as across a range of market capitalisation sizes. If applicable, in the course of conducting public side due diligence on the subject company(ies), the Research Analyst team may at times perform such diligence through corporate engagements such as site visits, discussions with company representatives, management presentations, etc. Research issued by JPMSAL has been prepared in accordance with J.P. Morgan Australia's Research Independence Policy which can be found at the following link: [J.P. Morgan Australia - Research Independence Policy](#). **Brazil:** Banco J.P. Morgan S.A. is regulated by the Comissão de Valores Mobiliários (CVM) and by the Central Bank of Brazil. Ombudsman J.P. Morgan: 0800-7700847 / ouvidoria.jp.morgan@jpmorgan.com. **Canada:** J.P. Morgan Securities Canada Inc. is a registered investment dealer, regulated by the Investment Industry Regulatory Organization of Canada and the Ontario Securities Commission and is the participating member on Canadian exchanges. This material is distributed in Canada by or on behalf of J.P.Morgan Securities Canada Inc. **Chile:** Inversiones J.P. Morgan Limitada is an unregulated entity incorporated in Chile. **China:** J.P. Morgan Securities (China) Company Limited has been approved by CSRC to conduct the securities investment consultancy business. **Dubai International Financial Centre (DIFC):** JPMorgan Chase Bank, N.A., Dubai Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - The Gate, West Wing, Level 3 and 9 PO Box 506551, Dubai, UAE. This material has been distributed by JP Morgan Chase Bank, N.A., Dubai Branch to persons regarded as professional clients or market counterparties as defined under the DFSA rules. **European Economic Area (EEA):** Unless specified to the contrary, research is distributed in the EEA by J.P. Morgan SE ("JPM SE"), which is subject to prudential supervision by the

Disclosures

European Central Bank (“ECB”) in cooperation with BaFin and Deutsche Bundesbank in Germany. JPM SE is a company headquartered in Frankfurt with registered address at TaunusTurm, Taunustor 1, Frankfurt am Main, 60310, Germany. The material has been distributed in the EEA to persons regarded as professional investors (or equivalent) pursuant to Art. 4 para. 1 no. 10 and Annex II of MiFID II and its respective implementation in their home jurisdictions (“EEA professional investors”). This material must not be acted on or relied on by persons who are not EEA professional investors. Any investment or investment activity to which this material relates is only available to EEA relevant persons and will be engaged in only with EEA relevant persons. **Hong Kong:** J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong, and J.P. Morgan Broking (Hong Kong) Limited (CE number AAB027) is regulated by the Securities and Futures Commission in Hong Kong. JP Morgan Chase Bank, N.A., Hong Kong Branch (CE Number AAL996) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission, is organized under the laws of the United States with limited liability. Where the distribution of this material is a regulated activity in Hong Kong, the material is distributed in Hong Kong by or through J.P. Morgan Securities (Asia Pacific) Limited and/or J.P. Morgan Broking (Hong Kong) Limited. **India:** J.P. Morgan India Private Limited (Corporate Identity Number - U67120MH1992FTC068724), having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz - East, Mumbai – 400098, is registered with the Securities and Exchange Board of India (SEBI) as a ‘Research Analyst’ having registration number INH000001873. J.P. Morgan India Private Limited is also registered with SEBI as a member of the National Stock Exchange of India Limited and the Bombay Stock Exchange Limited (SEBI Registration Number – INZ000239730) and as a Merchant Banker (SEBI Registration Number - MB/INM000002970). Telephone: 91-22-6157 3000, Facsimile: 91-22-6157 3990 and Website: <http://www.jpmpil.com>. JPMorgan Chase Bank, N.A. - Mumbai Branch is licensed by the Reserve Bank of India (RBI) (Licence No. 53/ Licence No. BY.4/94; SEBI - IN/CUS/014/ CDSL : IN-DP-CDSL-444-2008/ IN-DP-NSDL-285-2008/ INBI00000984/ INE231311239) as a Scheduled Commercial Bank in India, which is its primary license allowing it to carry on Banking business in India and other activities, which a Bank branch in India are permitted to undertake. For non-local research material, this material is not distributed in India by J.P. Morgan India Private Limited. **Indonesia:** PT J.P. Morgan Sekuritas Indonesia is a member of the Indonesia Stock Exchange and is registered and supervised by the Otoritas Jasa Keuangan (OJK). **Korea:** J.P. Morgan Securities (Far East) Limited, Seoul Branch, is a member of the Korea Exchange (KRX). JPMorgan Chase Bank, N.A., Seoul Branch, is licensed as a branch office of foreign bank (JPMorgan Chase Bank, N.A.) in Korea. Both entities are regulated by the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS). For non-macro research material, the material is distributed in Korea by or through J.P. Morgan Securities (Far East) Limited, Seoul Branch. **Japan:** JPMorgan Securities Japan Co., Ltd. and JPMorgan Chase Bank, N.A., Tokyo Branch are regulated by the Financial Services Agency in Japan. **Malaysia:** This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X), which is a Participating Organization of Bursa Malaysia Berhad and holds a Capital Markets Services License issued by the Securities Commission in Malaysia. **Mexico:** J.P. Morgan Casa de Bolsa, S.A. de C.V. and J.P. Morgan Grupo Financiero are members of the Mexican Stock Exchange and are authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. **New Zealand:** This material is issued and distributed by JPMSAL in New Zealand only to “wholesale clients” (as defined in the Financial Markets Conduct Act 2013). JPMSAL is registered as a Financial Service Provider under the Financial Service providers (Registration and Dispute Resolution) Act of 2008. **Pakistan:** J. P. Morgan Pakistan Broking (Pvt.) Ltd is a member of the Karachi Stock Exchange and regulated by the Securities and Exchange Commission of Pakistan. **Philippines:** J.P. Morgan Securities Philippines Inc. is a Trading Participant of the Philippine Stock Exchange and a member of the Securities Clearing Corporation of the Philippines and the Securities Investor Protection Fund. It is regulated by the Securities and Exchange Commission. **Russia:** CB J.P. Morgan Bank International LLC is regulated by the Central Bank of Russia. **Singapore:** This material is issued and distributed in Singapore by or through J.P. Morgan Securities Singapore Private Limited (JPMSS) [MCI (P) 060/08/2022 and Co. Reg. No.: 199405335R], which is a member of the Singapore Exchange Securities Trading Limited, and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore), both of which are regulated by the Monetary Authority of Singapore. This material is issued and distributed in Singapore only to accredited investors, expert investors and institutional investors, as defined in Section 4A of the Securities and Futures Act, Cap. 289 (SFA). This material is not intended to be issued or distributed to any retail investors or any other investors that do not fall into the classes of “accredited investors,” “expert investors” or “institutional investors,” as defined under Section 4A of the SFA. Recipients of this material in Singapore are to contact JPMSS or JPMCB Singapore in respect of any matters arising from, or in connection with, the material. As at the date of this material, JPMSS is a designated market maker for certain structured warrants listed on the Singapore Exchange where the underlying securities may be the securities discussed in this material. Arising from its role as a designated market maker for such structured warrants, JPMSS may conduct hedging activities in respect of such underlying securities and hold or have an interest in such underlying securities as a result. The updated list of structured warrants for which JPMSS acts as designated market maker may be found on the website of the Singapore Exchange Limited: <http://www.sgx.com>. **South Africa:** J.P. Morgan Equities South Africa Proprietary Limited and JPMorgan Chase Bank, N.A., Johannesburg Branch are members of the Johannesburg Securities Exchange and are regulated by the Financial Services Board. **Taiwan:** J.P. Morgan Securities (Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. Material relating to equity securities is issued and distributed in Taiwan by J.P. Morgan

Disclosures

Securities (Taiwan) Limited, subject to the license scope and the applicable laws and the regulations in Taiwan. According to Paragraph 2, Article 7-1 of Operational Regulations Governing Securities Firms Recommending Trades in Securities to Customers (as amended or supplemented) and/or other applicable laws or regulations, please note that the recipient of this material is not permitted to engage in any activities in connection with the material that may give rise to conflicts of interests, unless otherwise disclosed in the “Important Disclosures” in this material. **Thailand:** This material is issued and distributed in Thailand by JPMorgan Securities (Thailand) Ltd., which is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission, and its registered address is 3rd Floor, 20 North Sathorn Road, Silom, Bangrak, Bangkok 10500. **UK:** Unless specified to the contrary, research is distributed in the UK by J.P. Morgan Securities plc (“JPMS plc”) which is a member of the London Stock Exchange and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. JPMS plc is registered in England & Wales No. 2711006, Registered Office 25 Bank Street, London, E14 5JP. This material is directed in the UK only to: (a) persons having professional experience in matters relating to investments falling within article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) (Order) 2005 (“the FPO”); (b) persons outlined in article 49 of the FPO (high net worth companies, unincorporated associations or partnerships, the trustees of high value trusts, etc.); or (c) any persons to whom this communication may otherwise lawfully be made; all such persons being referred to as “UK relevant persons”. This material must not be acted on or relied on by persons who are not UK relevant persons. Any investment or investment activity to which this material relates is only available to UK relevant persons and will be engaged in only with UK relevant persons. Research issued by JPMS plc has been prepared in accordance with JPMS plc's policy for prevention and avoidance of conflicts of interest related to the production of Research which can be found at the following link: [J.P. Morgan EMEA - Research Independence Policy](#). **U.S.:** J.P. Morgan Securities LLC (“JPMS”) is a member of the NYSE, FINRA, SIPC, and the NFA. JPMorgan Chase Bank, N.A. is a member of the FDIC. Material published by non-U.S. affiliates is distributed in the U.S. by JPMS who accepts responsibility for its content.

General: Additional information is available upon request. The information in this material has been obtained from sources believed to be reliable. While all reasonable care has been taken to ensure that the facts stated in this material are accurate and that the forecasts, opinions and expectations contained herein are fair and reasonable, JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) make no representations or warranties whatsoever to the completeness or accuracy of the material provided, except with respect to any disclosures relative to J.P. Morgan and the Research Analyst's involvement with the issuer that is the subject of the material. Accordingly, no reliance should be placed on the accuracy, fairness or completeness of the information contained in this material. There may be certain discrepancies with data and/or limited content in this material as a result of calculations, adjustments, translations to different languages, and/or local regulatory restrictions, as applicable. These discrepancies should not impact the overall investment analysis, views and/or recommendations of the subject company(ies) that may be discussed in the material. J.P. Morgan accepts no liability whatsoever for any loss arising from any use of this material or its contents, and neither J.P. Morgan nor any of its respective directors, officers or employees, shall be in any way responsible for the contents hereof, apart from the liabilities and responsibilities that may be imposed on them by the relevant regulatory authority in the jurisdiction in question, or the regulatory regime thereunder. Opinions, forecasts or projections contained in this material represent J.P. Morgan's current opinions or judgment as of the date of the material only and are therefore subject to change without notice. Periodic updates may be provided on companies/industries based on company-specific developments or announcements, market conditions or any other publicly available information. There can be no assurance that future results or events will be consistent with any such opinions, forecasts or projections, which represent only one possible outcome. Furthermore, such opinions, forecasts or projections are subject to certain risks, uncertainties and assumptions that have not been verified, and future actual results or events could differ materially. The value of, or income from, any investments referred to in this material may fluctuate and/or be affected by changes in exchange rates. All pricing is indicative as of the close of market for the securities discussed, unless otherwise stated. Past performance is not indicative of future results. Accordingly, investors may receive back less than originally invested. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. This material may include views on structured securities, options, futures and other derivatives. These are complex instruments, may involve a high degree of risk and may be appropriate investments only for sophisticated investors who are capable of understanding and assuming the risks involved. The recipients of this material must make their own independent decisions regarding any securities or financial instruments mentioned herein and should seek advice from such independent financial, legal, tax or other adviser as they deem necessary. J.P. Morgan may trade as a principal on the basis of the Research Analysts' views and research, and it may also engage in transactions for its own account or for its clients' accounts in a manner inconsistent with the views taken in this material, and J.P. Morgan is under no obligation to ensure that such other communication is brought to the attention of any recipient of this material. Others within J.P. Morgan, including Strategists, Sales staff and other Research Analysts, may take views that are inconsistent with those taken in this material. Employees of J.P. Morgan not involved in the preparation of this material

Disclosures

may have investments in the securities (or derivatives of such securities) mentioned in this material and may trade them in ways different from those discussed in this material. This material is not an advertisement for or marketing of any issuer, its products or services, or its securities in any jurisdiction.

"Other Disclosures" last revised April 01, 2023.

Copyright 2023 JPMorgan Chase & Co. All rights reserved. This material or any portion hereof may not be reprinted, sold or redistributed without the written consent of J.P. Morgan.



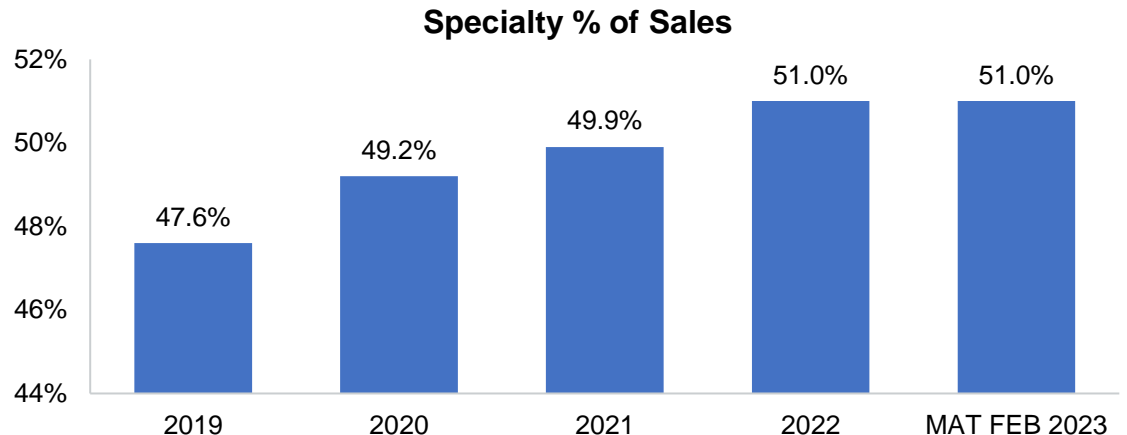
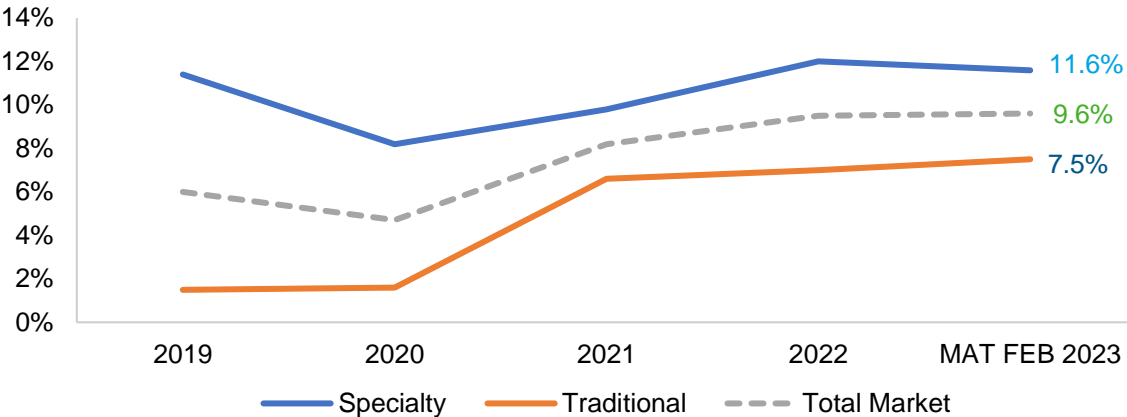
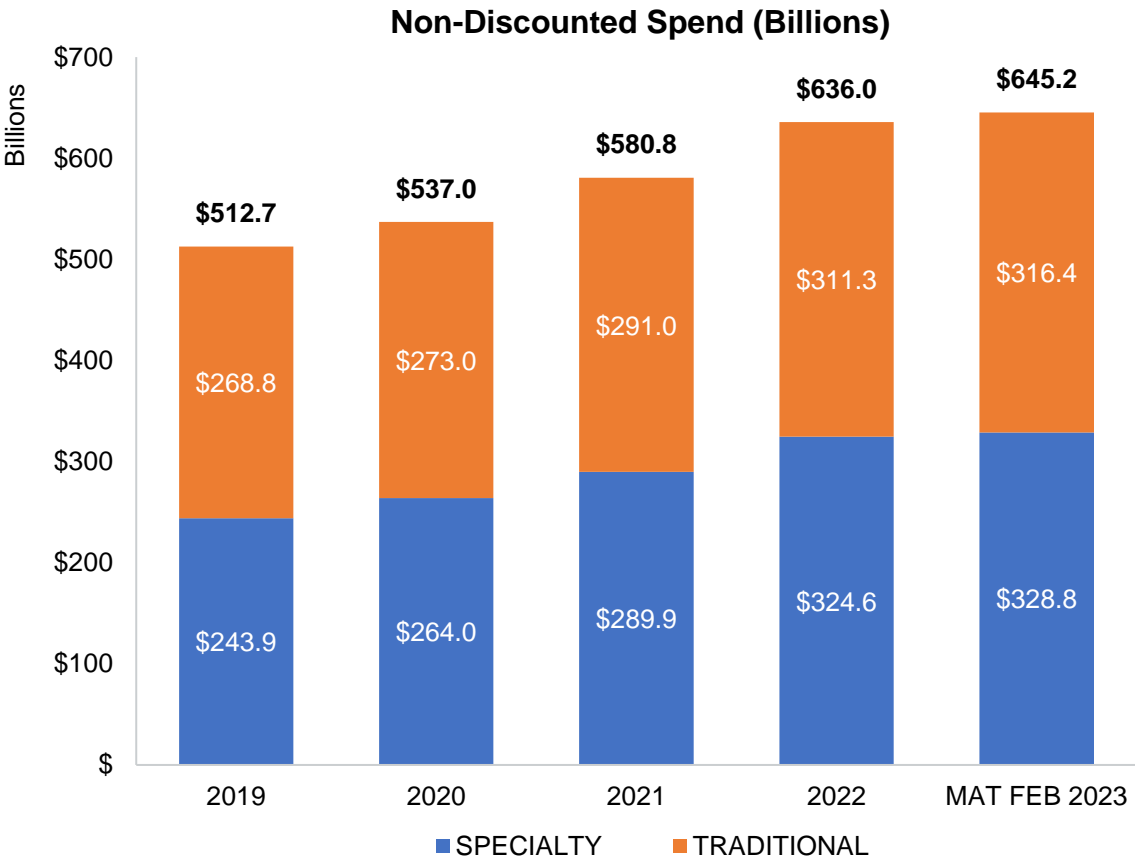
April 30 – May 4, 2023 | Wynn, Las Vegas

U.S. Specialty Pharmaceutical Trends, Issues, and Outlook

Doug Long
VP Industry Relations, IQVIA
May 2, 2023

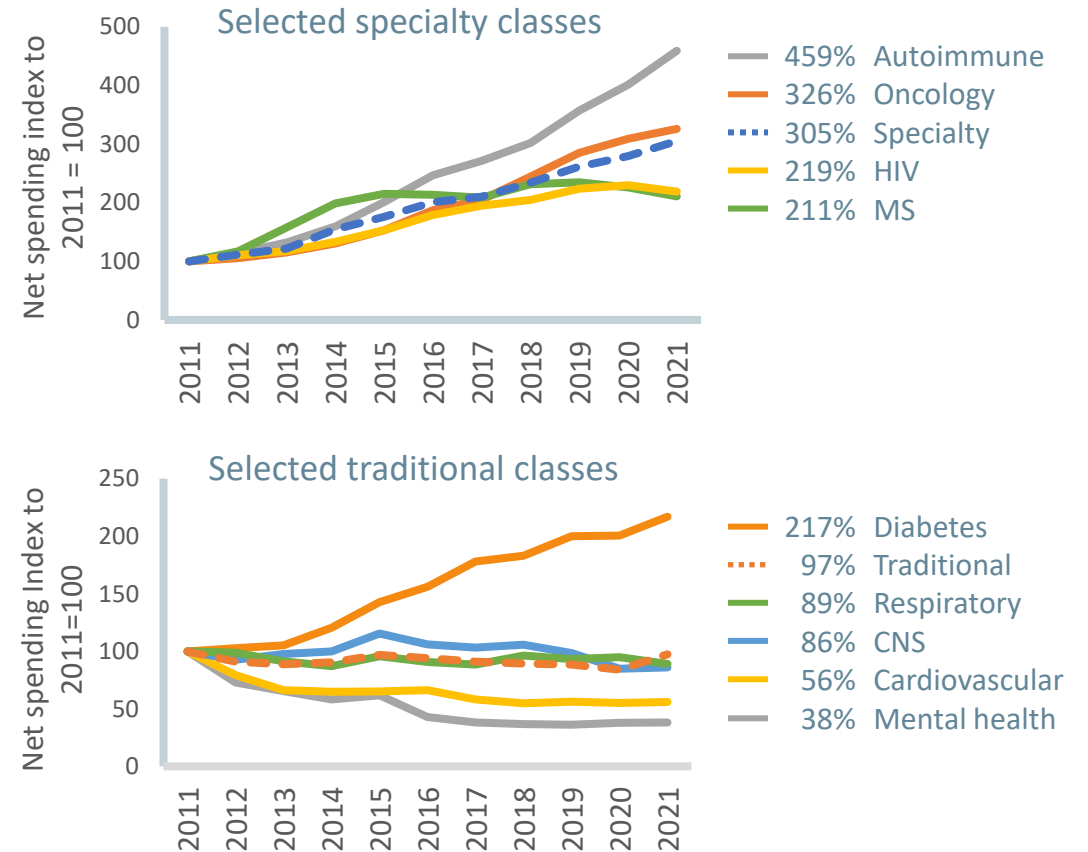
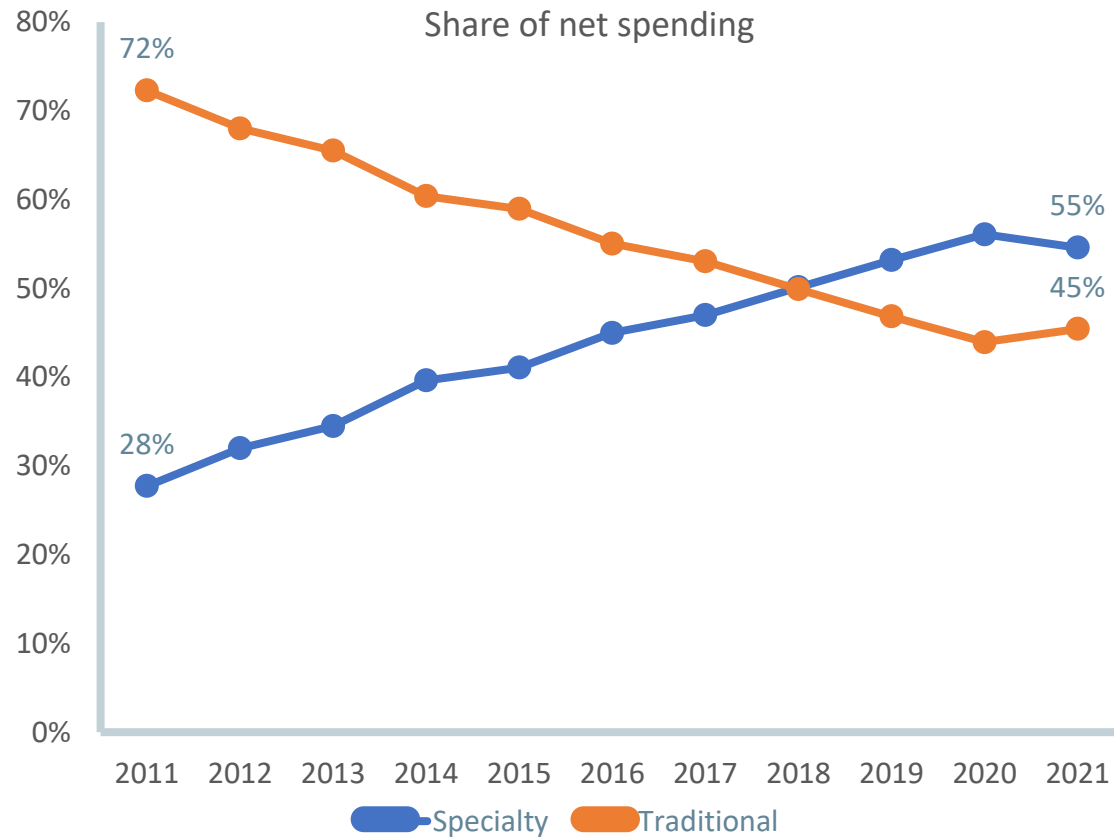
For the total market, specialty growth outpaces traditional growth and now has ~51% share of total non-discounted spend

In MAT February 2023, specialty spend grew by 11.6% while traditional growth grew 7.5%



Specialty medicines now account for 55% of net spending, up from 28% in 2011, driven by growth in auto-immune and oncology

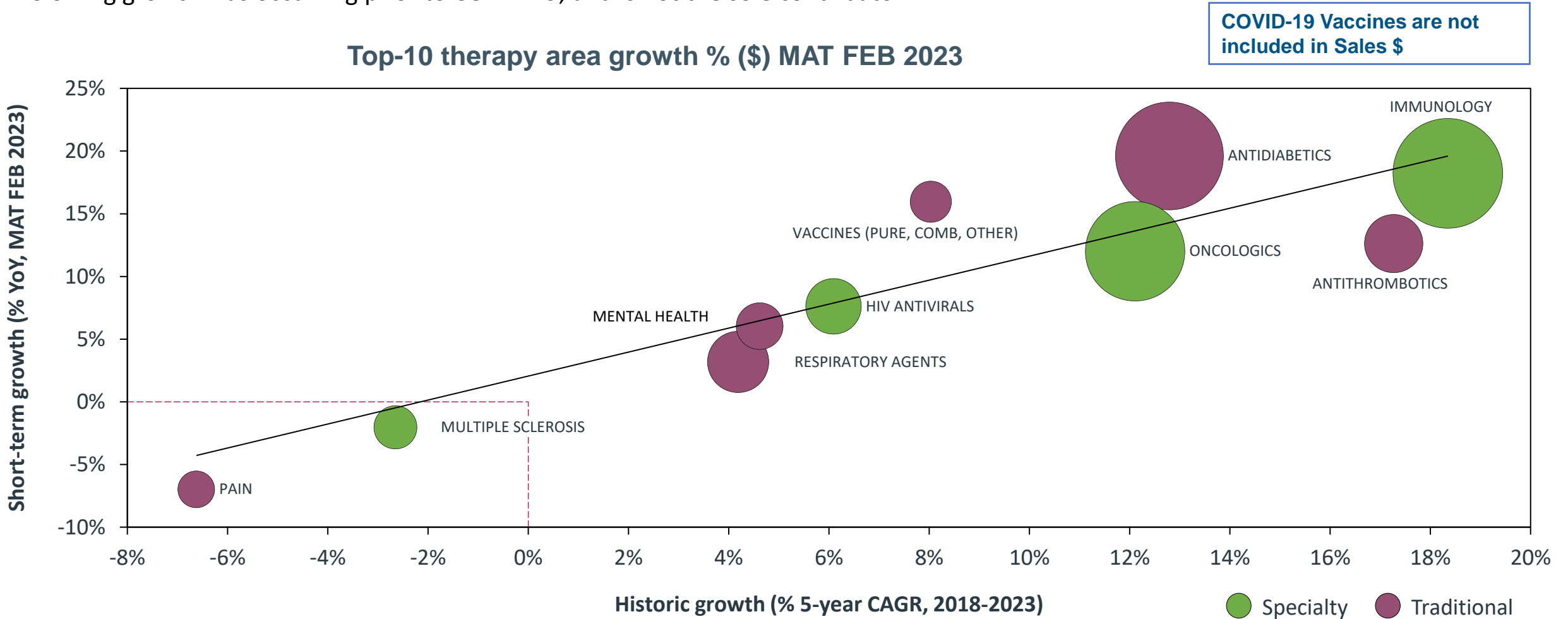
Share of spending at estimated net manufacturer prices



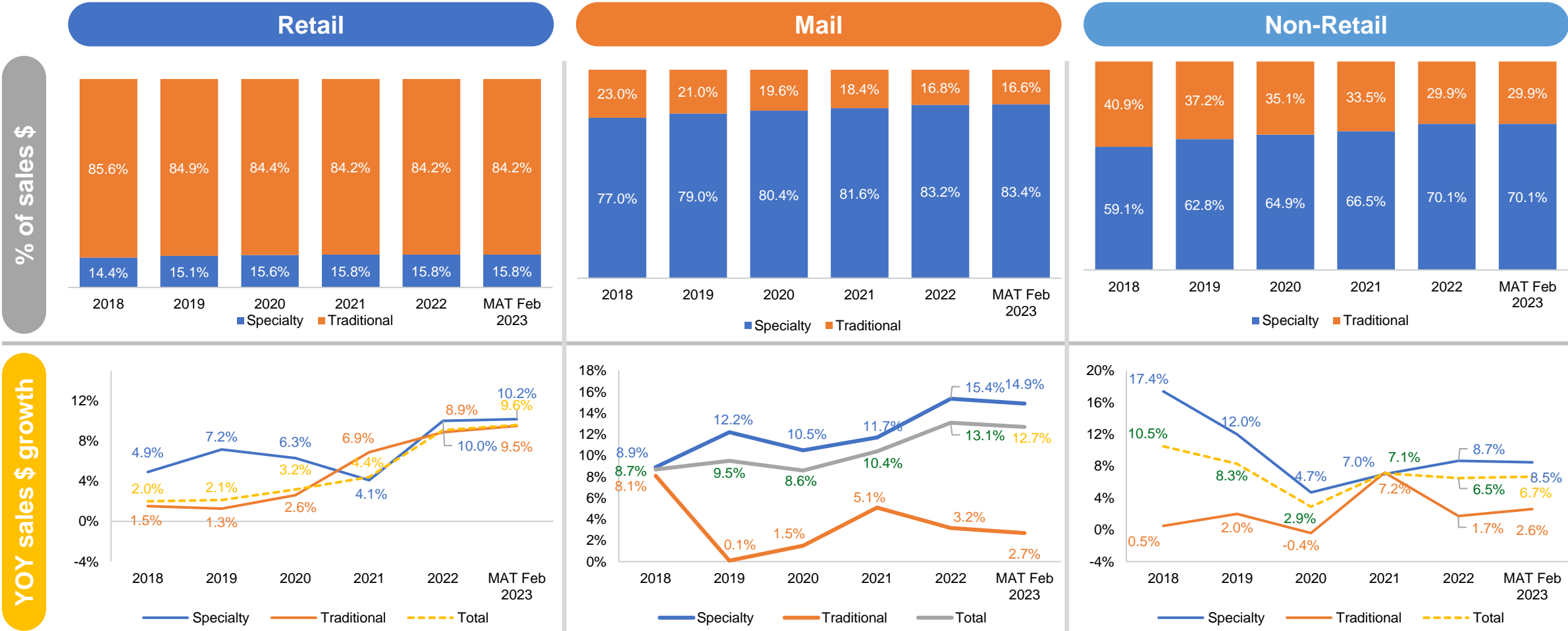
Source: IQVIA Institute, Mar 2022. The Use of Medicines in the U.S.: Usage and Spending Trends and Outlook to 2026. Report by the IQVIA Institute for Human Data Science.

Immunology and Antithrombotics lead short and long-term sales growth

Slowing growth was occurring prior to COVID-19, and is not the sole contributor



Specialty sales increase in all channels over time



Data is based on Rx and OTC Insulins only

HIV Antivirals, Immunology, and Oncologics top super channels

Top 10 Specialty Therapies for Retail, Mail, and Non-Retail - MAT February 2023 (in \$ Billions)

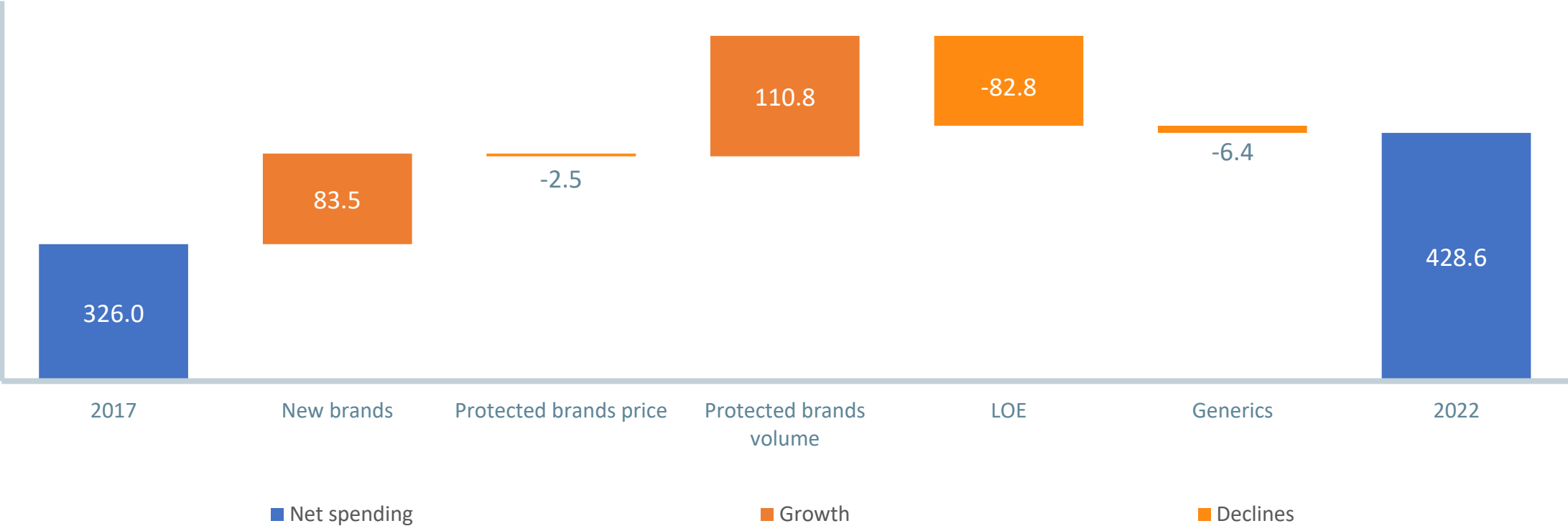
RETAIL		
Therapy	MAT Feb 2023	YoY Growth
HIV ANTIVIRALS	17.2	11.7%
IMMUNOLOGY	9.8	7.4%
MENTAL HEALTH	2.6	9.6%
ONCOLOGICS	2.5	14.9%
ANTI-INFLAMMATORY AND DIGESTIVE ENZYMES	2.4	10.3%
LIPID REGULATORS	1.7	-11.9%
VIRAL HEPATITIS	1.3	18.2%
OTHER CNS	0.9	12.6%
SEX HORMONES	0.7	26.6%
MULTIPLE SCLEROSIS	0.6	-10.7%

MAIL		
Therapy	MAT Feb 2023	YoY Growth
IMMUNOLOGY	82.7	11.7%
ONCOLOGICS	24.7	7.4%
MULTIPLE SCLEROSIS	9.7	9.6%
HIV ANTIVIRALS	5.5	14.9%
ALL OTHER RESPIRATORY	4.3	10.3%
RESPIRATORY AGENTS	3.0	-11.9%
OTHER CARDIOVASCULARS	2.5	18.2%
BLOOD COAGULATION	2.4	12.6%
GROWTH HORMONES	2.3	26.6%
VIRAL HEPATITIS	1.9	-10.7%

NON-RETAIL		
Therapy	MAT Feb 2023	YoY Growth
ONCOLOGICS	63.4	11.7%
IMMUNOLOGY	18.8	7.4%
MULTIPLE SCLEROSIS	6.2	9.6%
HIV ANTIVIRALS	5.5	14.9%
POLYVAL IMMUNOGLOBULINS IV&IM	5.4	10.3%
HEMATOPOIETIC GROWTH FACTORS	3.0	-11.9%
MENTAL HEALTH	2.7	18.2%
BLOOD COAGULATION	2.5	12.6%
IMMUNOSUPPRESSANTS	2.4	26.6%
ERYTHROPOIETINS	2.4	-10.7%

Spending increased by \$102.6Bn over the past five years driven by new products and brand volume, offset by expiries

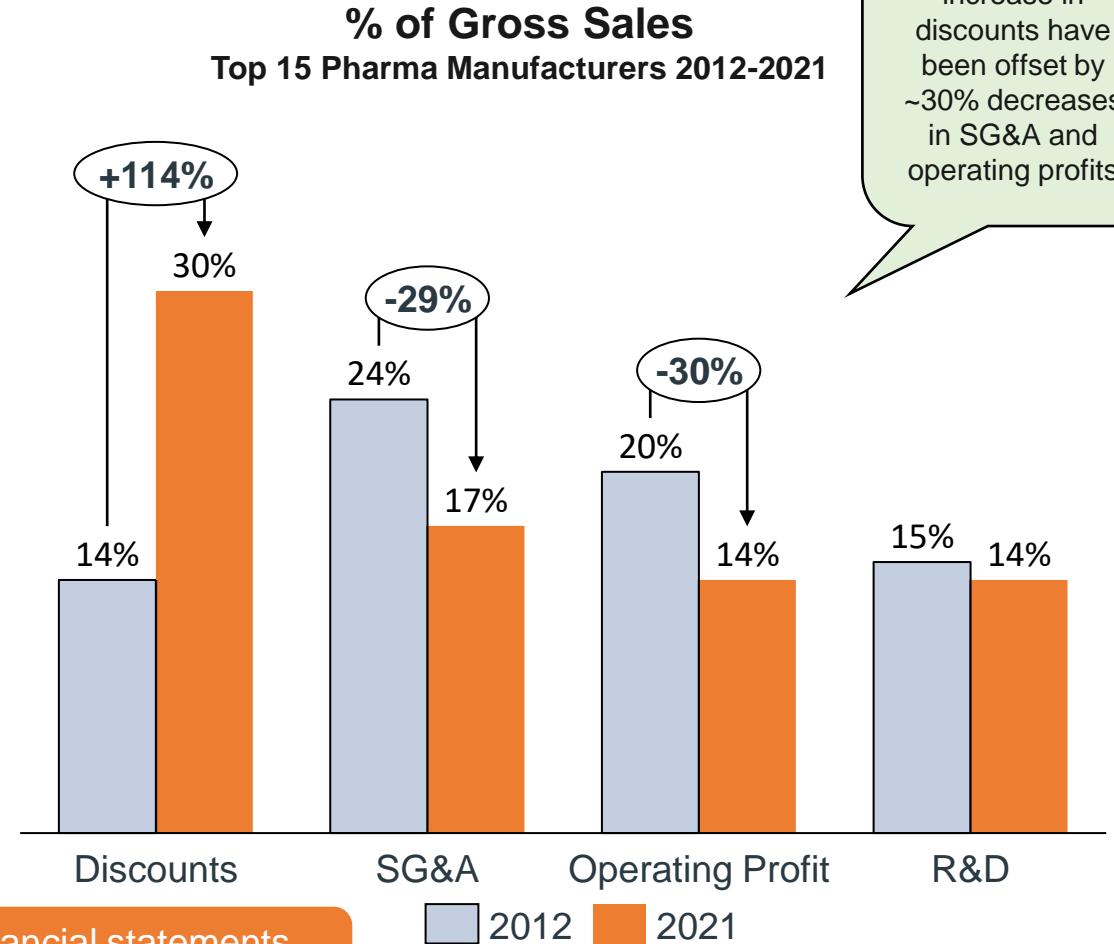
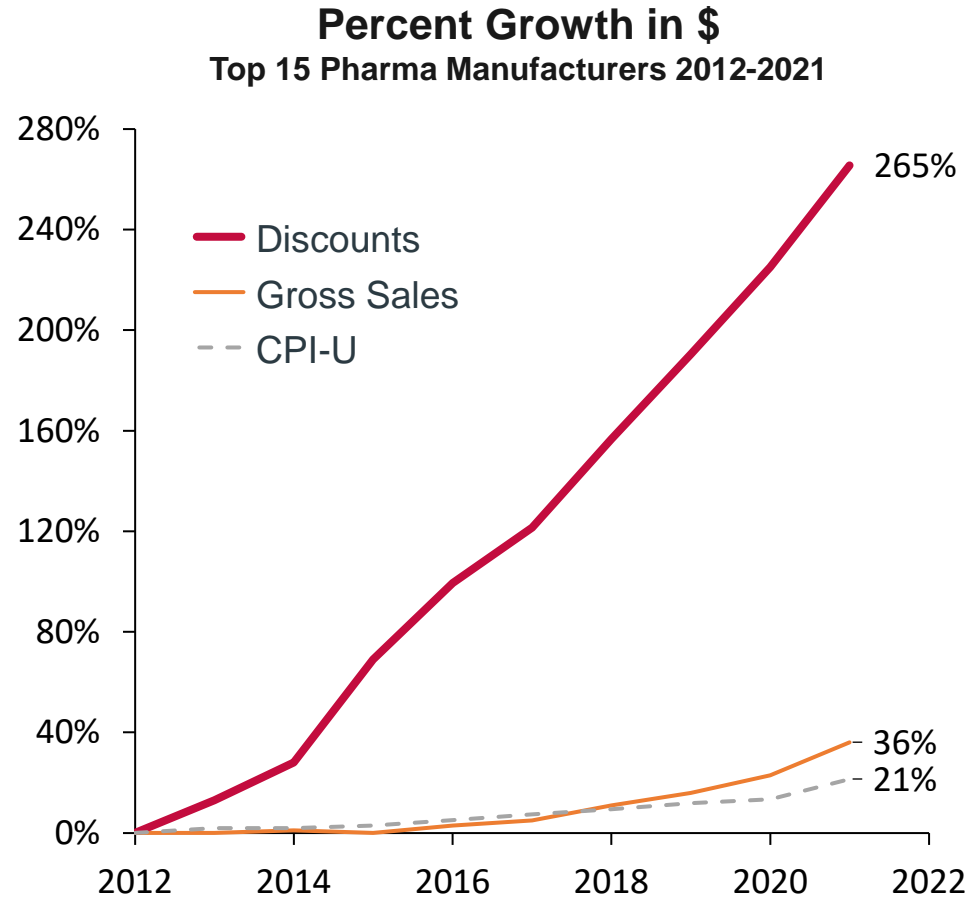
Spending and growth at estimated net manufacturer prices 2017–2022, all channels, US\$Bn



Source: IQVIA Institute, Mar 2023
 The Use of Medicines in the U.S.: Usage and Spending Trends and Outlook to 2027. Report by the IQVIA Institute for Human Data Science.

The *Big Squeeze* by the numbers...

Discounts have grown 7x faster than gross sales and 13x faster than the rate of inflation



A retrospective review of financial statements from the top 15 pharma manufacturers

As the frequency of high-cost treatment launches accelerates, pressure is put on the rest of the market to contain cost

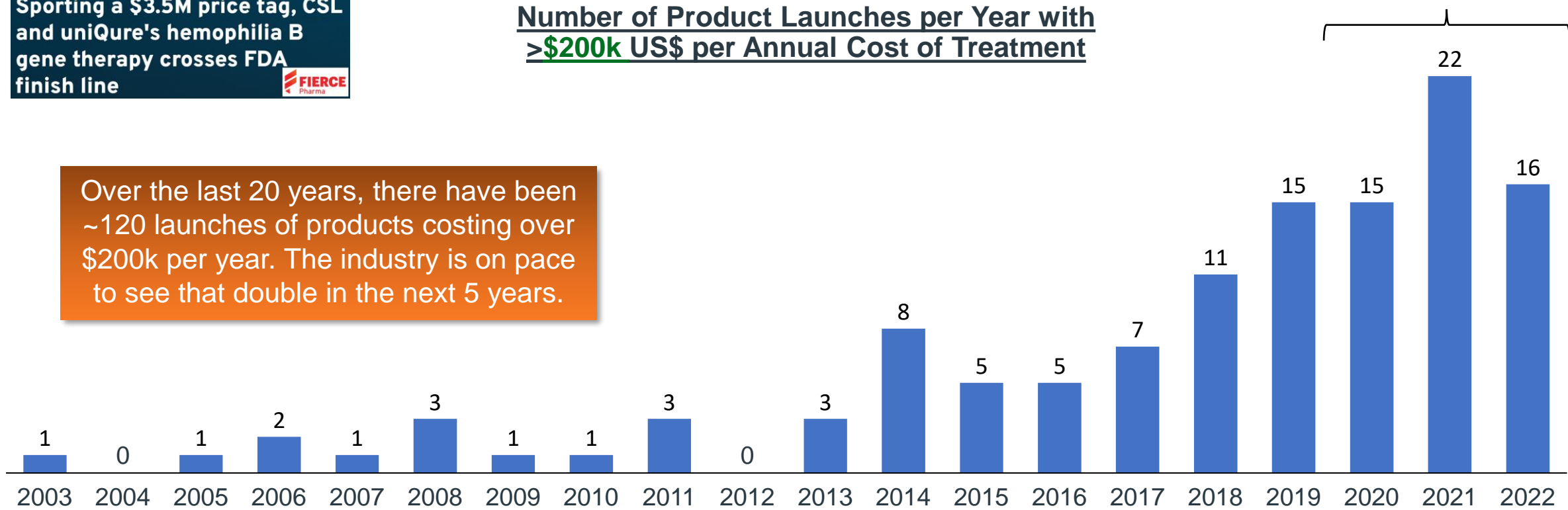
Sporting a \$3.5M price tag, CSL and uniQure's hemophilia B gene therapy crosses FDA finish line



Number of Product Launches per Year with >\$200k US\$ per Annual Cost of Treatment

Avg=\$568k/year

Over the last 20 years, there have been ~120 launches of products costing over \$200k per year. The industry is on pace to see that double in the next 5 years.



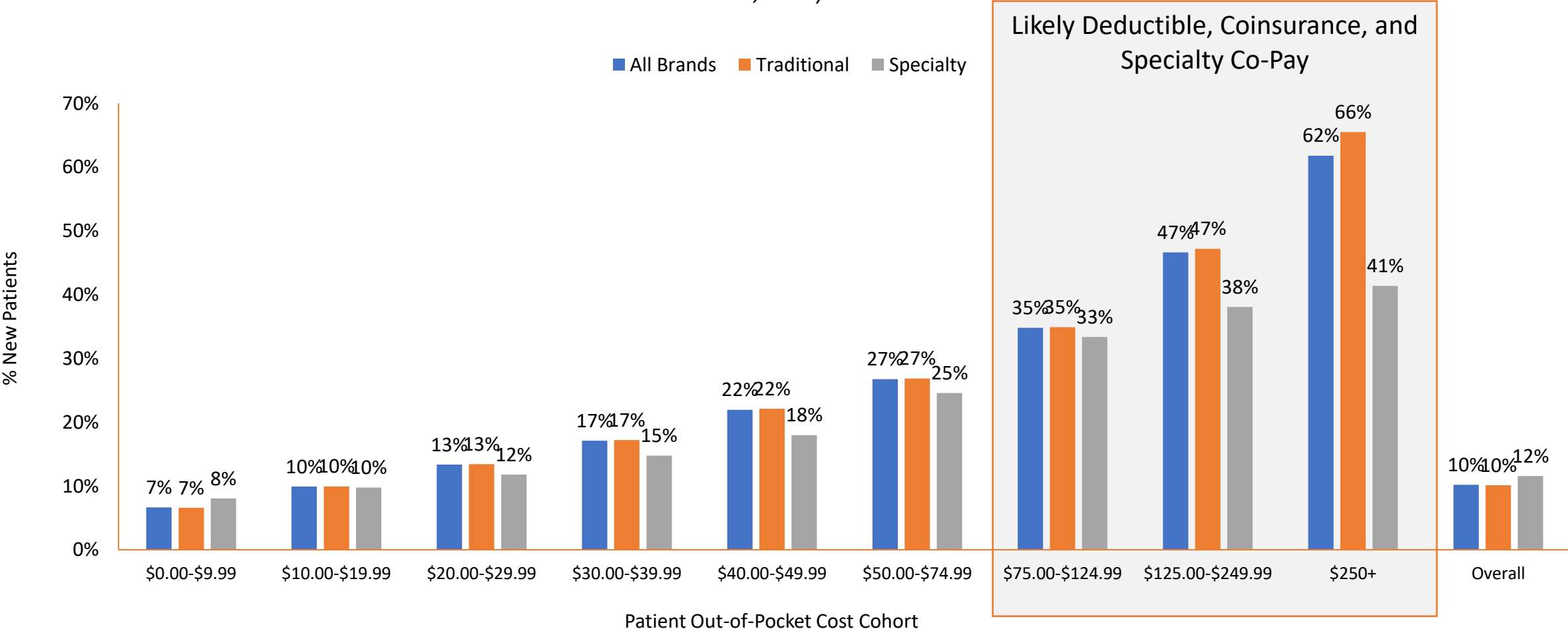
Source: IQVIA National Sales Perspectives, Feb 2023; IQVIA Institute Feb 2023

Notes: Annual costs based on invoice prices, with overall invoice-level spending divided by estimated numbers of patients. Patient estimates are based on audited volumes assuming all patients use the drug according to the approved label. Products are included in medians based on segment assignments. Oncology includes both orphan and non-orphan products. All other products which have orphan indications are grouped together and some products have both orphan and non-orphan indications in this group. Specialty and Traditional products exclude orphan or oncology products but are otherwise defined according to IQVIA definitions. Projected Median costs are based on simple extrapolation of the medians in the prior ten years.

With higher cost-sharing comes greater abandonment, affecting patients with deductibles and coinsurance

Patients tend to abandon high-cost specialty products less often than retail products

New Patient Abandonment by Patient Out-of-Pocket Cost Cohort and Product Type (All Channels, All Brands, 2022)





Four key elements of the Inflation Reduction Act are likely to impact pharmaceutical manufacturers

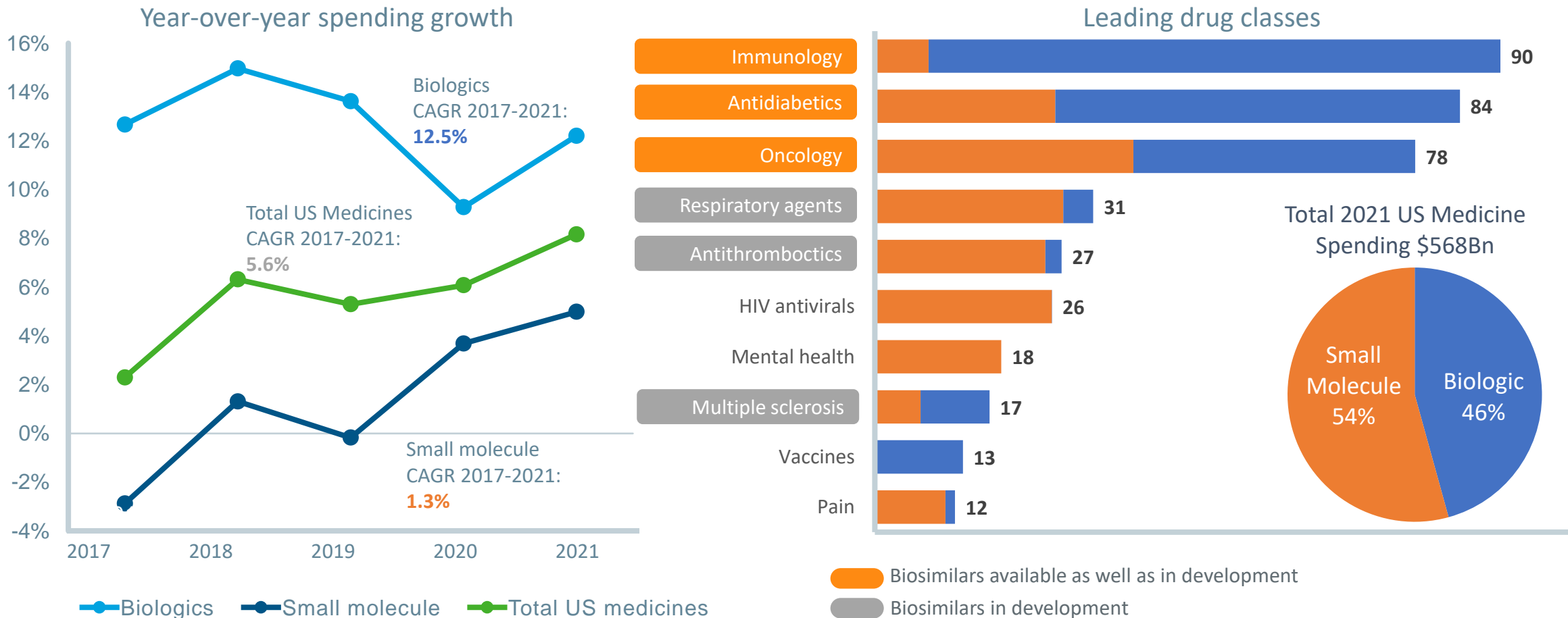
The IRA has created a disruptive and existential moment throughout the industry

Inflation Reduction Act (IRA)

- 1 | Part D Improvements and Re-Design**
 - Shifts liabilities away from CMS to Payers and manufacturers
- 2 | Lowering Prices Through Negotiation**
 - Maximum Fair Price for top-spend, “sole-source” drugs
- 3 | Prescription Drug Inflation Rebates**
 - Penalty paid to CMS for price increases that exceed CPI-U
- 4 | Maximum Patient Pharmacy Out-of-Pocket Limit**
 - \$2,000 annual maximum, can be allocated monthly

The U.S. biologics market continues to grow faster than non-biologics on an invoice-basis, and now comprises 46% of spending

Total U.S. invoice spending growth by type and leading therapy areas by 2021 spending, US\$Bn

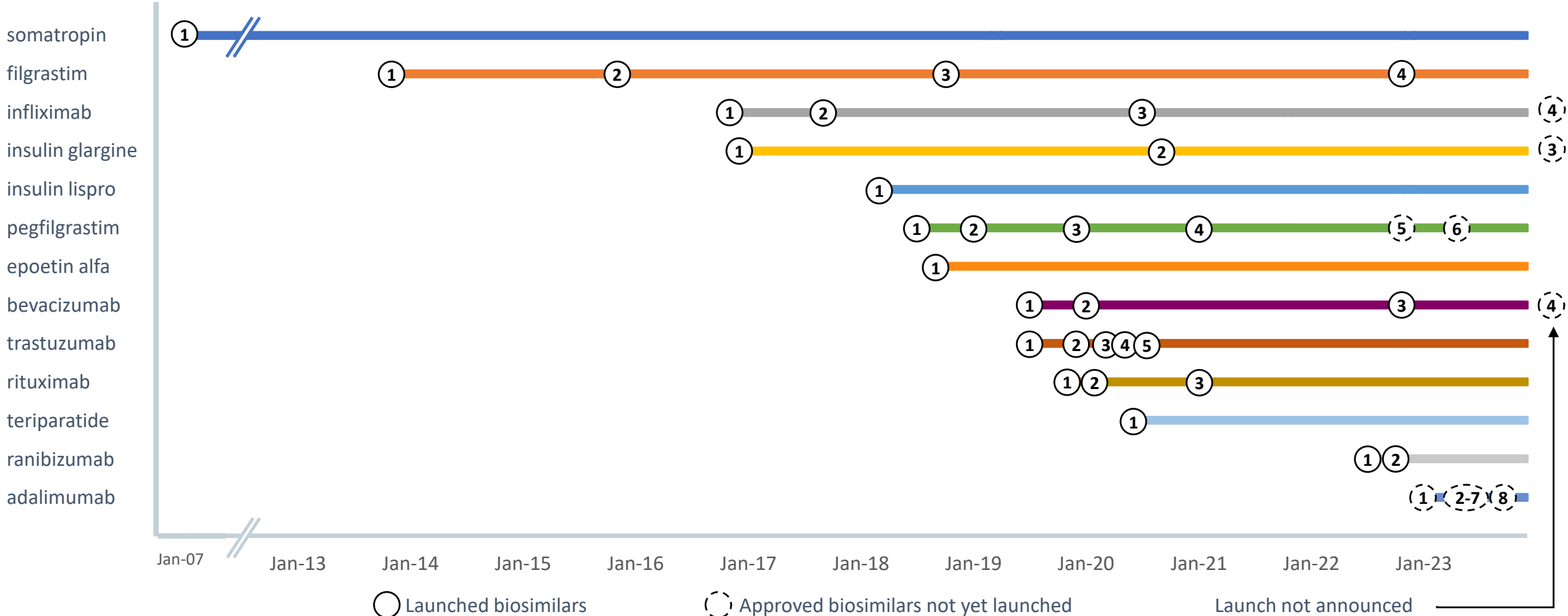


Source: IQVIA MIDAS, Dec 2021; IQVIA Institute, Nov 2022. Biosimilars in the United States 2023-2027 – Competition, Savings and Sustainability. Report by the IQVIA Institute for Human Data Science.

IQVIA© 2023 Confidential & Proprietary

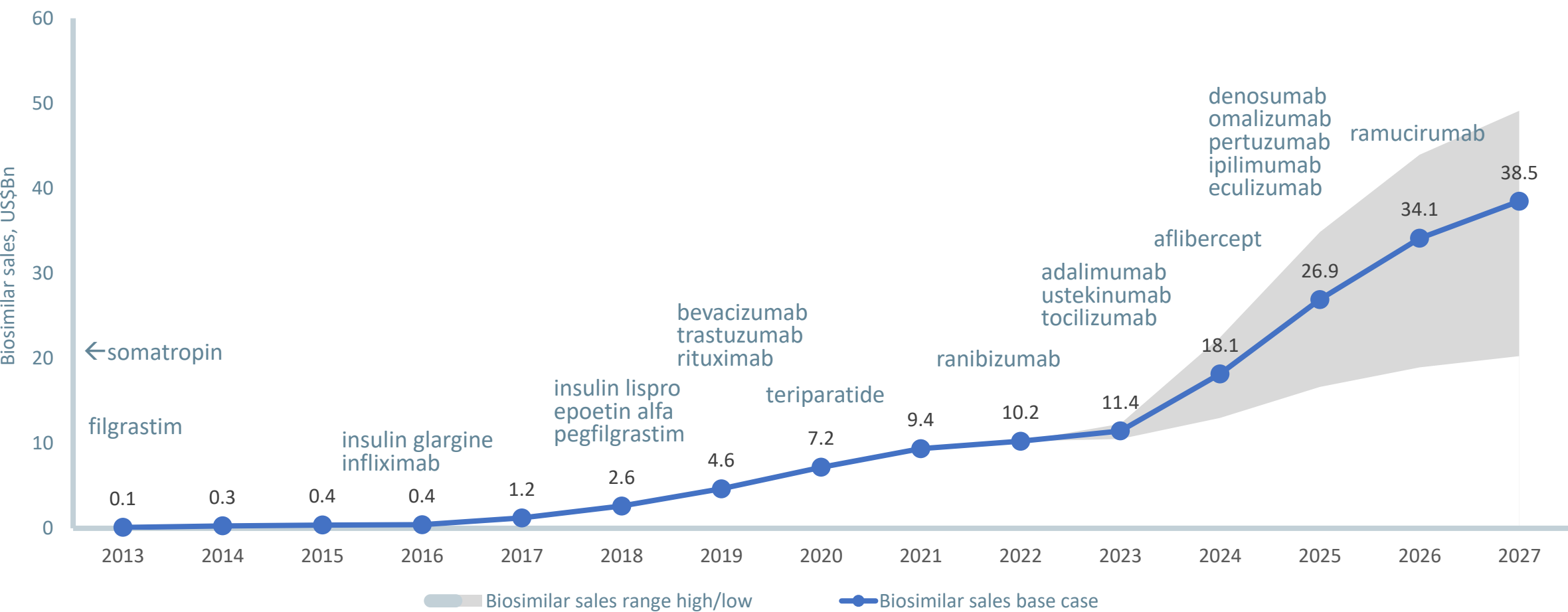
Since 2007, 30 biosimilars have launched in the U.S. with 10 more approved and set to launch by the end of 2023

Biosimilars approved and launched in the U.S.



Expected launches and uptake are likely to increase overall spending on biosimilars significantly to \$20–49 billion in 2027

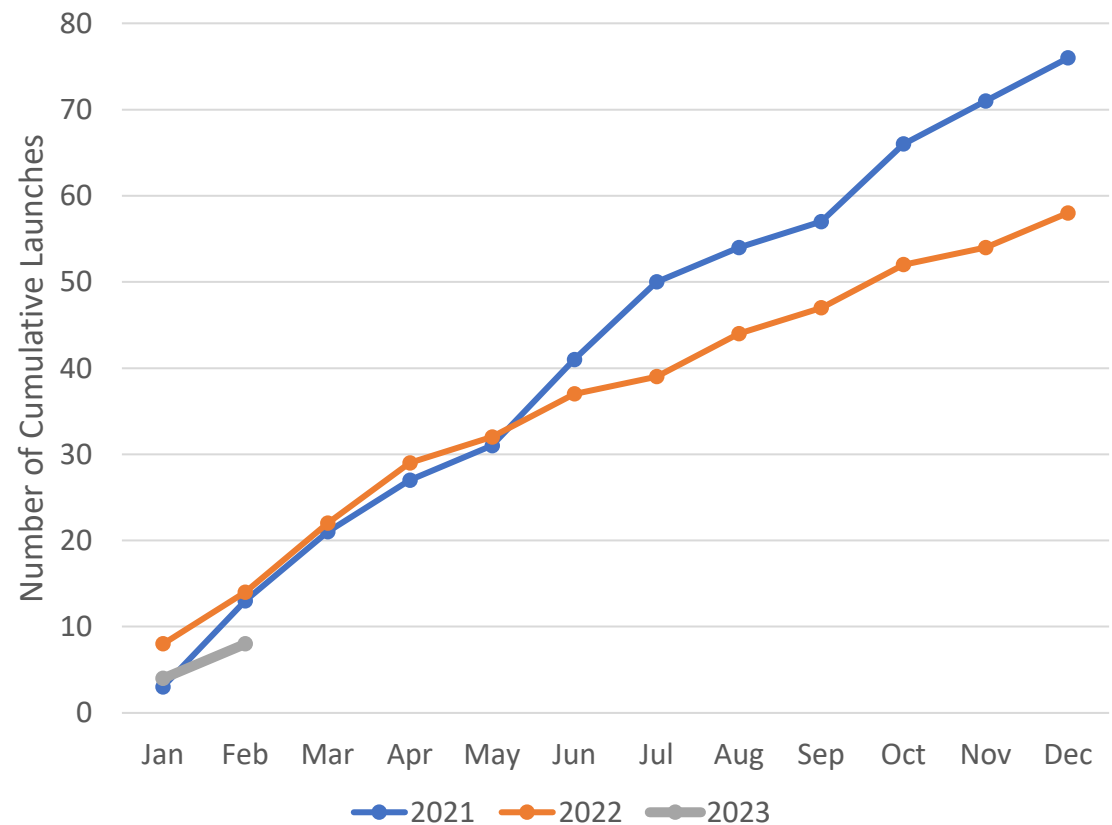
Biosimilar historical sales 2013–2022 and outlook scenarios 2023–2027, US\$Bn



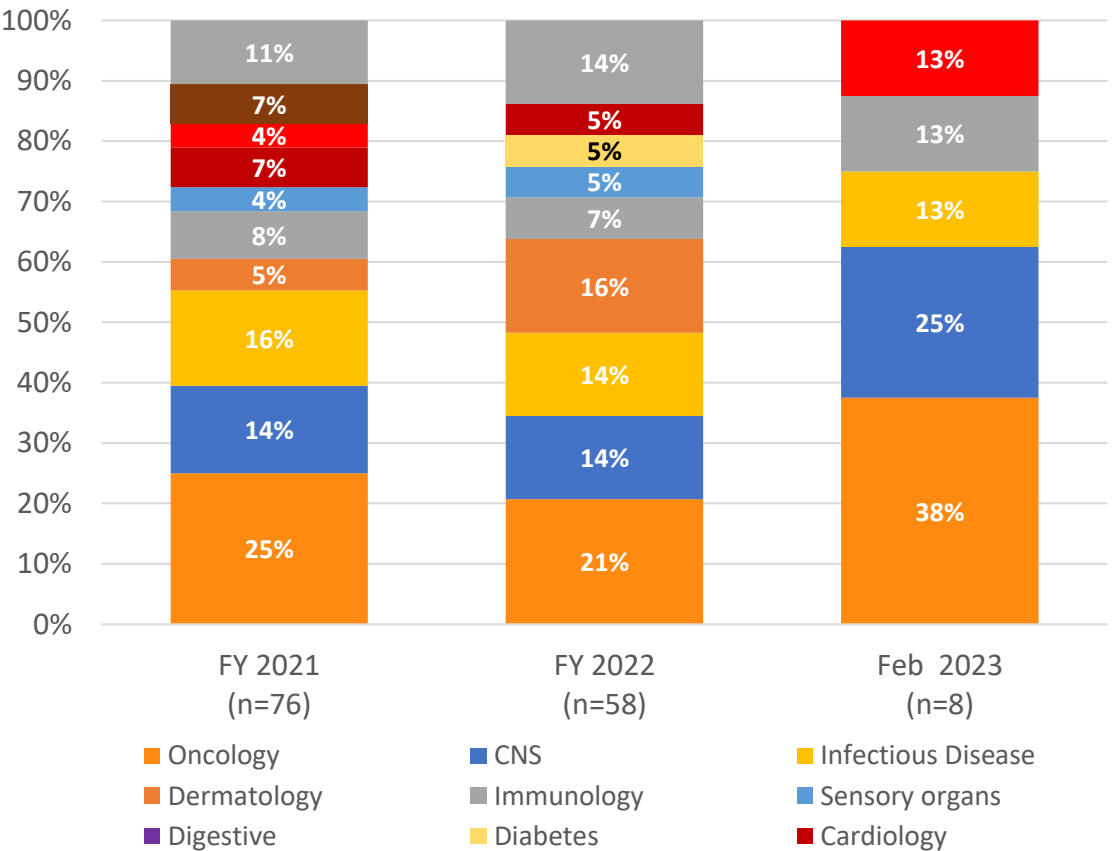
Source: IQVIA MIDAS, Jun 2022; IQVIA Institute, Nov 2022. Biosimilars in the United States 2023–2027 – Competition, Savings and Sustainability. Report by the IQVIA Institute for Human Data Science.

The total number of launches in 2023 was down compared to 2022

Time Aligned Cumulative Launches:
2021 vs 2022 and 2023

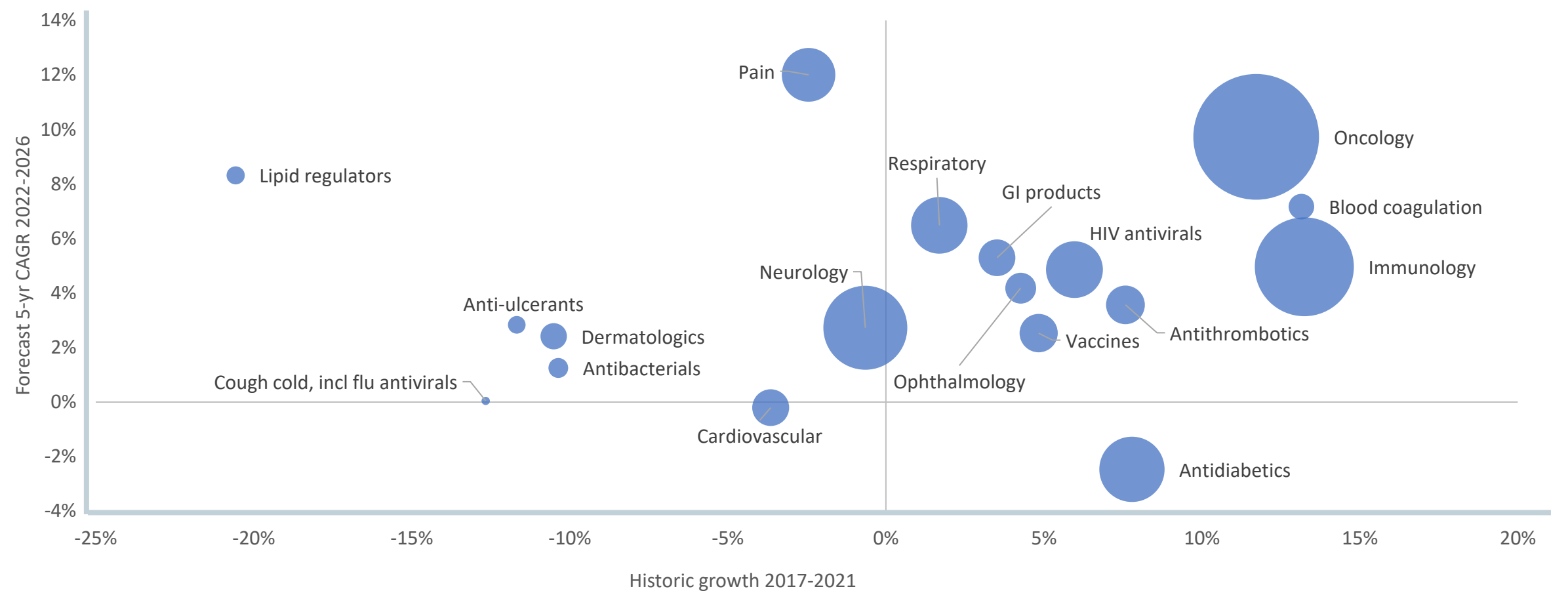


Launches by Therapy Area
Jan 2021 – Feb 2023



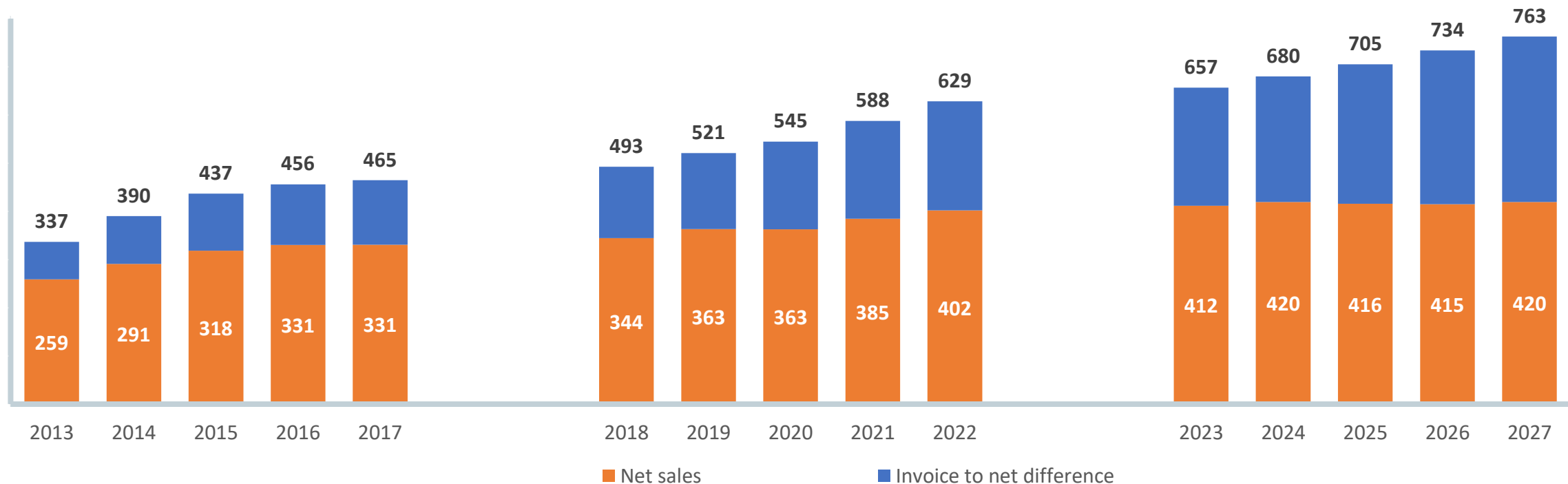
Immunology, oncology, neurology drive growth through 2026 along with COVID-19 vaccines

Historic and forecast net spending growth for leading therapy areas



The U.S. market, on a net price basis, is forecasted to grow -1–2% CAGR over the next 5 years, down from 4% CAGR for the past 5 years

U.S. medicine spending and growth at invoice-level and estimated net 2012–2027



Despite challenging market dynamics creating a difficult uphill climb, summing the next decade is still possible

10 Trends IQVIA is following that are reshaping the industry

1

INFLATION REDUCTION ACT

- Rulemaking, implementation, and legal activity
- Influence of midterm and executive elections

2

PHARMACY BIOSIMILARS

- Multi-source impact on price and uptake
- Stakeholder response to access/choice

3

EXPANDING PAYER CONTROL

- New ways to control access and influence choice
- More, previously uncontrolled therapies affected

4

INNOVATION PIPELINE

- New paradigms affecting pipeline priorities
- Critical need for accurate, access-based forecasts

5

DEMONSTRATION OF VALUE

- Role of ICER and other entities in drug pricing
- Opportunities for alternative contracts

6

ACCUMULATORS & MAXIMIZERS

- Long-term sustainability of patient support
- Evolving exposure mitigation practices

7

MODERN PRACTICES FOR LAUNCH

- Adjusted expectations for success and timing
- Long-term impacts of launch strategies

8

PATIENT ACCESS DISPARITIES

- Disproportionate barriers to treatment
- Market access opportunities for diversity, inclusion

9

NEW SITES OF CARE/ACQUISITION

- Developing role of new pharmacy sites/types
- Opportunities outside traditional managed care

10

PERSISTING 340B CHALLENGES

- Rising pressure on lawmakers to clarify scope
- Auditing and margin burden on manufacturers

Disclaimer:

- The analyses, their interpretation, and related information contained herein are made and provided subject to the assumptions, methodologies, caveats, and variables described in this report and are based on third party sources and data reasonably believed to be reliable. No warranty is made as to the completeness or accuracy of such third-party sources or data.
- As with any attempt to estimate future events, the forecasts, projections, conclusions, and other information included herein are subject to certain risks and uncertainties and are not to be considered guarantees of any particular outcome.
- All reproduction rights, quotations, broadcasting, publications reserved. No part of this presentation may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without express written consent of IQVIA.
- ©2023 IQVIA Incorporated and its affiliates. All rights reserved. Trademarks are registered in the United States and in various other countries.

U.S Progress Point

<https://www.iqvia.com/progresspoint>



*A curation of **IQVIA's best thinking** on **topics** and **trends** driving change, disruption, and **progress** in the United States healthcare market.*



Doug Long is Vice President of Industry Relations at IQVIA (formerly QuintilesIMS), the world's largest pharmaceutical information company. IQVIA offers services to the pharmaceutical industry in over 100 countries around the globe. Doug has been with IQVIA since 1989.

His fundamental task is to help secure data for all existing and new databases supported by IQVIA, manage supplier, manufacturer & association relationships, and develop information for data partners. As direct consequence of his involvement in these areas, Doug has considerable experience with, and a unique perspective on, the changing U.S. and global healthcare marketplace and pharmaceutical distribution.

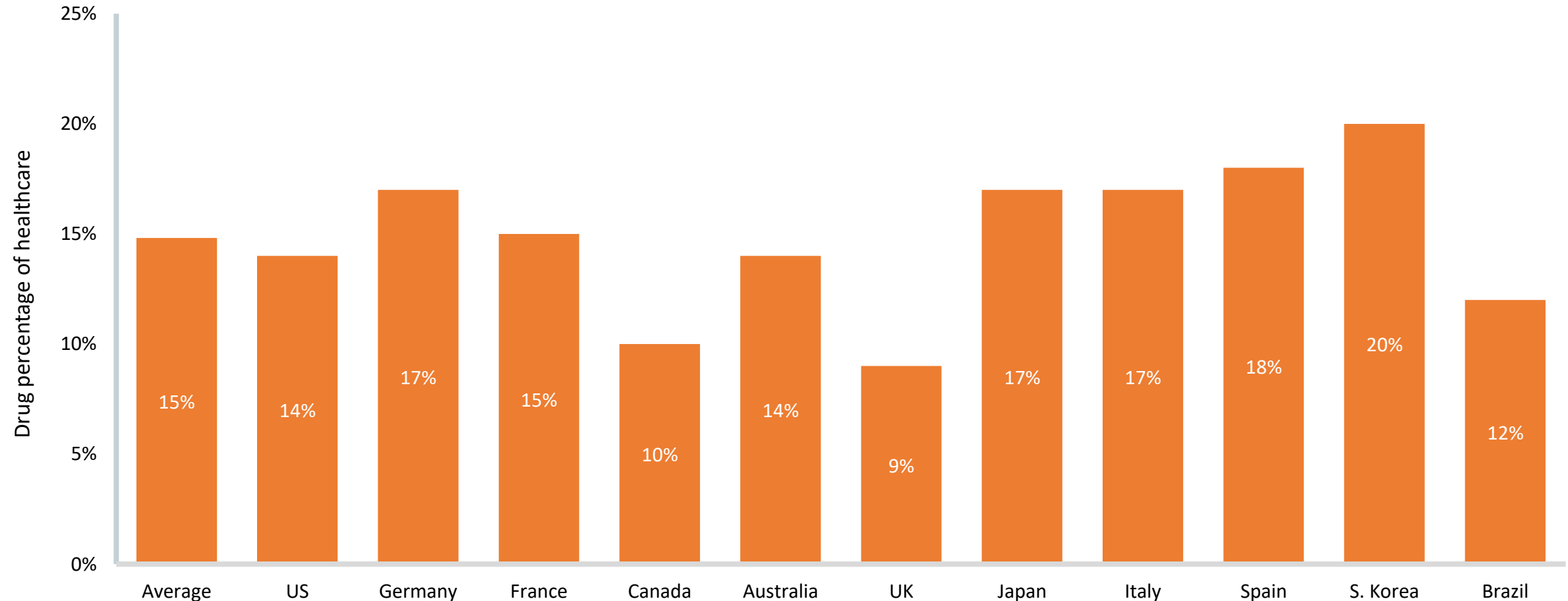
Doug is a frequent industry speaker and the recipient of many awards from trade groups. Before joining IQVIA Doug held positions at Nielsen Market Research for 16 years in various sales and marketing capacities. A native of Illinois, Doug received a BA from DePauw University and holds an MBA in management from Fairleigh Dickinson University.

doug.long@iqvia.com

Appendix

Total drug spending averages 15% of healthcare with countries ranging from 9-20%

Real net drug percentage of healthcare, 2018



Source: IQVIA Institute for Human Data Science, Sep 2021 Drug Expenditure Dynamics 1995–2020: Understanding medicine spending in context. Report by the IQVIA Institute for Human Data Science

IQVIA Definition of a Specialty Drug

Specialty drugs at IQVIA are classified as products that meet the following criteria



Treats chronic, rare and/or complex diseases



Expensive (USD \$6K annual cost of therapy)



Initiated and maintained by a specialist



Unique distribution



Generally injectable and/or not self-administered



Requires extensive or in-depth monitoring/patient counseling



Products that require an additional level of care in their chain of custody



Requires reimbursement assistance

The top 10 therapy areas are growing at 13.0% and account for 71.8% market share

Rank	Therapy Area	Non-Discounted Spend (US\$ BNs)			
		MAT DEC 2022	Market Share	ABS Growth	Growth
1	IMMUNOLOGY	\$109.3	17.2%	\$17.4	18.9%
2	ANTIDIABETICS	\$102.5	16.2%	\$16.5	19.1%
3	ONCOLOGICS	\$89.5	14.1%	\$9.7	12.2%
4	RESPIRATORY AGENTS	\$33.6	5.3%	\$1.5	4.6%
5	ANTITHROMBOTICS	\$30.5	4.8%	\$3.6	13.5%
6	HIV ANTIVIRALS	\$27.7	4.4%	\$1.7	6.5%
7	MENTAL HEALTH	\$19.8	3.1%	\$1.1	6.1%
8	MULTIPLE SCLEROSIS	\$16.6	2.6%	-\$0.3	-1.9%
9	VACCINES (PURE, COMB, OTHER)	\$15.3	2.4%	\$2.2	16.9%
10	PAIN	\$10.8	1.7%	-\$1.1	-9.2%
TOP 10		\$455.6	71.8%	\$52.3	13.0%

The top 20 therapy areas are growing at 11.2% and account for 84.4% market share

Rank	Therapy Area	Non-Discounted Spend (US\$ BNs)			
		MAT DEC 2022	Market Share	ABS Growth	Growth
11	ADHD	\$10.1	1.6%	\$1.0	10.8%
12	GI PRODUCTS	\$9.4	1.5%	\$0.2	2.2%
13	OTHER CNS	\$8.9	1.4%	\$1.1	14.8%
14	ANTIHYPERTENSIVES, PLAIN & COMBO	\$8.9	1.4%	\$0.4	4.2%
15	OTHER CARDIOVASCULARS	\$8.4	1.3%	-\$2.6	-23.8%
16	NERVOUS SYSTEM DISORDERS	\$8.4	1.3%	-\$1.1	-11.7%
17	MIGRAINE	\$8.1	1.3%	\$2.3	40.1%
18	DERMATOLOGICS	\$6.2	1.0%	-\$0.2	-2.9%
19	POLYVAL IMMUNOGLOBULINS IV&IM	\$5.9	0.9%	\$0.5	9.4%
20	OPHTHALMOLOGY, GENERAL	\$5.8	0.9%	\$0.0	-0.2%
TOP 20		\$535.6	84.4%	\$53.9	11.2%

Multiple products show strong growth in Total Market Specialty

Specialty Total Market

Rank	Product	Sales (\$) in Billions			
		MAT Feb 2023	Market Share	ABS Growth	Growth
1	HUMIRA	31.8	9.7%	4.1	14.9%
2	STELARA	14.2	4.3%	3.1	28.1%
3	KEYTRUDA	13.3	4.1%	3.1	30.5%
4	BIKTARVY	11.9	3.6%	2.0	20.0%
5	ENBREL	9.0	2.8%	0.9	10.9%
6	DUPIXENT	8.3	2.5%	2.4	40.1%
7	OPDIVO	5.0	1.5%	0.7	16.0%
8	OCREVUS	4.9	1.5%	0.6	14.7%
9	IMBRUVICA	3.5	1.1%	-0.7	-16.0%
10	TALTZ	4.7	1.4%	0.6	14.3%
TOP 10		106.5	32.4%	16.8	18.7%

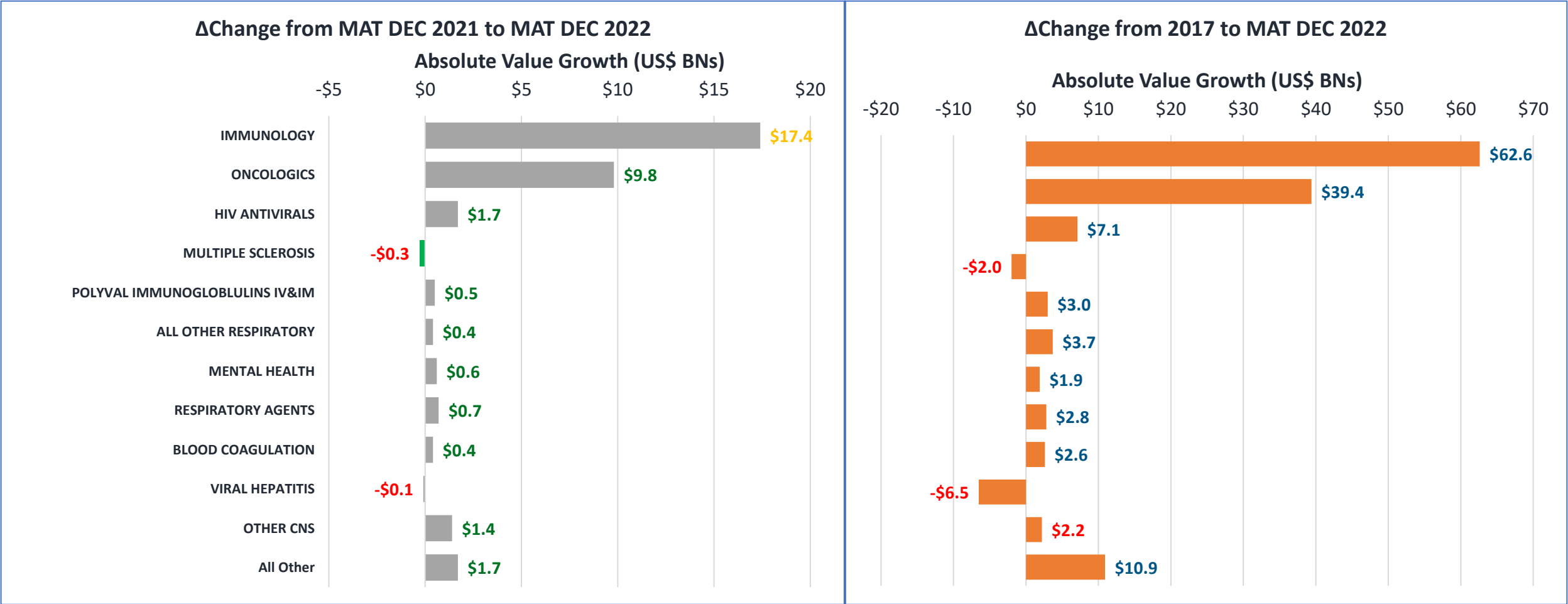
Immunology and Oncologics show strong total market growth in Specialty

Specialty Total Market

Rank	Class	Sales (\$) in Billions			
		MAT Feb 2023	Market Share	ABS Growth	Growth
1	IMMUNOLOGY	111.4	33.9%	17.2	18.2%
2	ONCOLOGICS	90.5	27.5%	9.7	12.0%
3	HIV ANTIVIRALS	28.2	8.6%	2.0	7.6%
4	MULTIPLE SCLEROSIS	16.4	5.0%	-0.3	-1.8%
5	POLYVAL IMMUNOGLOBULINS IV&IM	6.1	1.8%	0.6	10.6%
6	MENTAL HEALTH	5.5	1.7%	0.7	5.0%
7	ALL OTHER RESPIRATORY	5.5	1.7%	0.3	13.9%
8	RESPIRATORY AGENTS	5.3	1.6%	0.8	12.2%
9	BLOOD COAGULATION	5.2	1.6%	0.6	17.9%
10	VIRAL HEPATITIS	4.3	1.3%	0.0	-0.3%
TOP 10		278.3	84.6%	31.5	12.7%

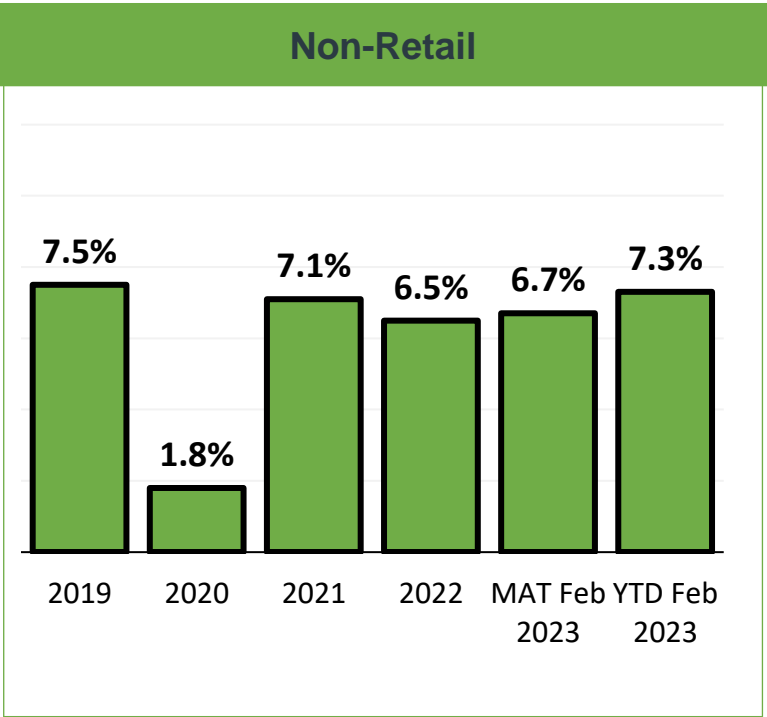
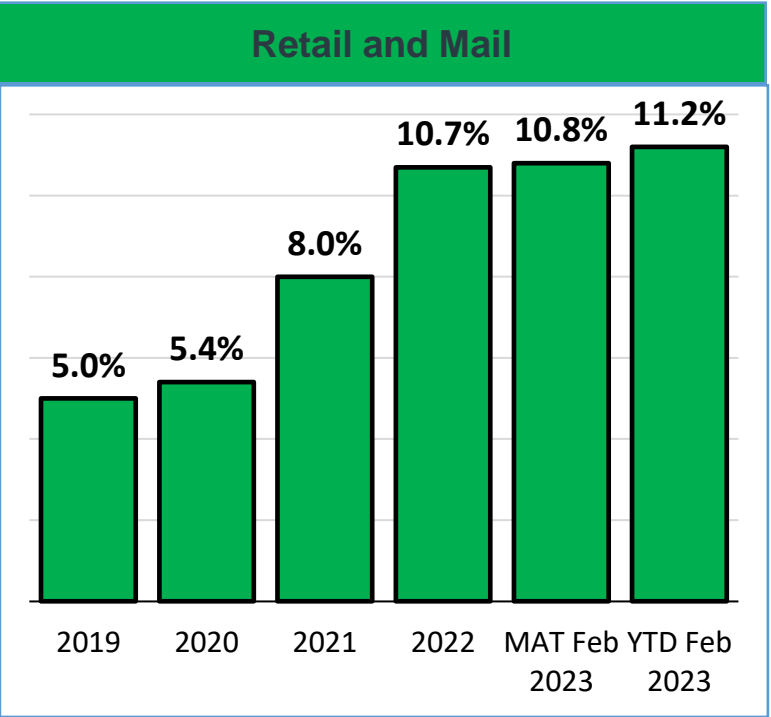
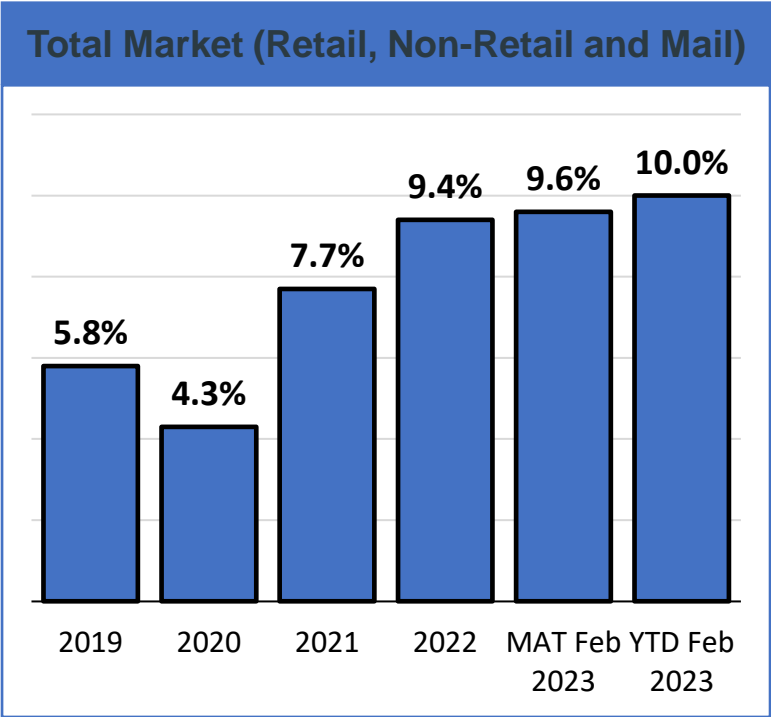
Immunology and Oncologic contributed the most absolute value growth for specialty therapy areas

Absolute Value Growth for Top Specialty Therapy Areas



The Non-Retail channel is recovering from effects of COVID-19

Growth (%) of Sales



Source: IQVIA, National Sales Perspectives, February 2023
 Note: Limited to Rx and OTC Insulins; Includes Retail, Non-Retail and Mail

Immunology and Oncologics show the most growth

Specialty Class Sales for Total Market by Absolute Gains and Losses - February 2023 (in \$ Billions)

Therapies			
Rank	Therapy	MAT Feb 2023 Abs Change	YoY Growth
1	IMMUNOLOGY	17.2	18.2%
2	ONCOLOGICS	9.7	12.0%
3	HIV ANTIVIRALS	2.0	7.6%
4	OTHER CNS	1.4	55.2%
5	RESPIRATORY AGENTS	0.8	17.9%
6	MENTAL HEALTH	0.7	13.9%
7	LIPID REGULATORS	0.6	41.2%
8	POLYVAL IMMUNOGLOBULINS	0.6	10.6%
9	BLOOD COAGULATION	0.6	12.2%
10	IMMUNOSUPPRESSANTS	0.6	19.5%

Therapies			
Rank	Therapy	MAT Feb 2023 Abs Change	YoY Growth
1	CORONAVIRUS ANTIVIRALS	-2.4	-66.6%
2	HEMATOPOIETIC GROWTH FACTORS	-0.4	-11.9%
3	ERYTHROPOIETINS	-0.3	-11.7%
4	MULTIPLE SCLEROSIS	-0.3	-1.8%
5	HORMONAL CONTRACEPTION	0.0	-2.9%
6	OTHER HAEMATOLOGICALS	0.0	-2.6%
7	ALL OTHER THERAPEUTICS	0.0	-6.2%
8	NERVOUS SYSTEM DISORDERS	0.0	-2.1%
9	ANTI-PARASITICS	0.0	-34.0%
10	VIRAL HEPATITIS	0.0	-0.3%

Humira and Keytruda show the greatest dollar growth

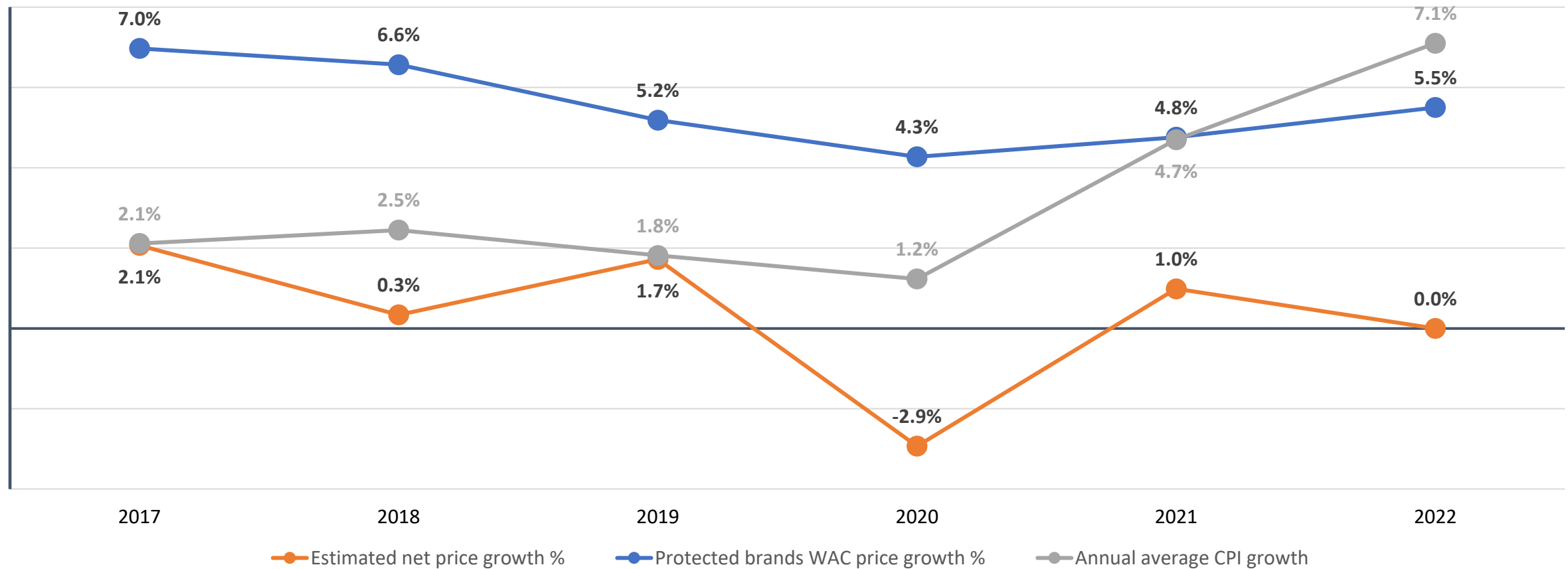
Specialty Product Sales for Total Market by Absolute Gains and Losses - February 2023 (in \$ Billions)

Products Absolute Gains			
Rank	Product	MAT Feb 2023 Abs Change	YoY Growth
1	HUMIRA	4.1	14.9%
2	KEYTRUDA	3.1	30.5%
3	STELARA	3.1	28.1%
4	SKYRIZI	2.6	90.0%
5	DUPIXENT	2.4	40.1%
6	BIKTARVY	2.0	20.0%
7	TREMFYA	1.5	49.7%
8	DARZALEX FASPRO	1.3	55.4%
9	VERZENIO	1.0	100.8%
10	ENBREL	0.9	10.9%

Product Absolute Losses			
Rank	Therapy	MAT Feb 2023 Abs Change	YoY Growth
1	VEKLURY	-2.5	-70.8%
2	VELCADE	-0.8	-68.4%
3	REMICADE	-0.8	-28.1%
4	ALIMTA	-0.7	-60.5%
5	IMBRUVICA	-0.7	-16.0%
6	ACTEMRA	-0.7	-32.8%
7	TECFIDERA	-0.6	-51.7%
8	ABRAXANE	-0.5	-55.4%
9	GILENYA	-0.5	-26.1%
10	LUCENTIS	-0.5	-28.2%

Protected brand list prices increased an estimated 5.5% in 2022, while net prices were flat- the sixth year at or below the CPI

Wholesaler Acquisition Cost (WAC) growth and net price growth for protected brands



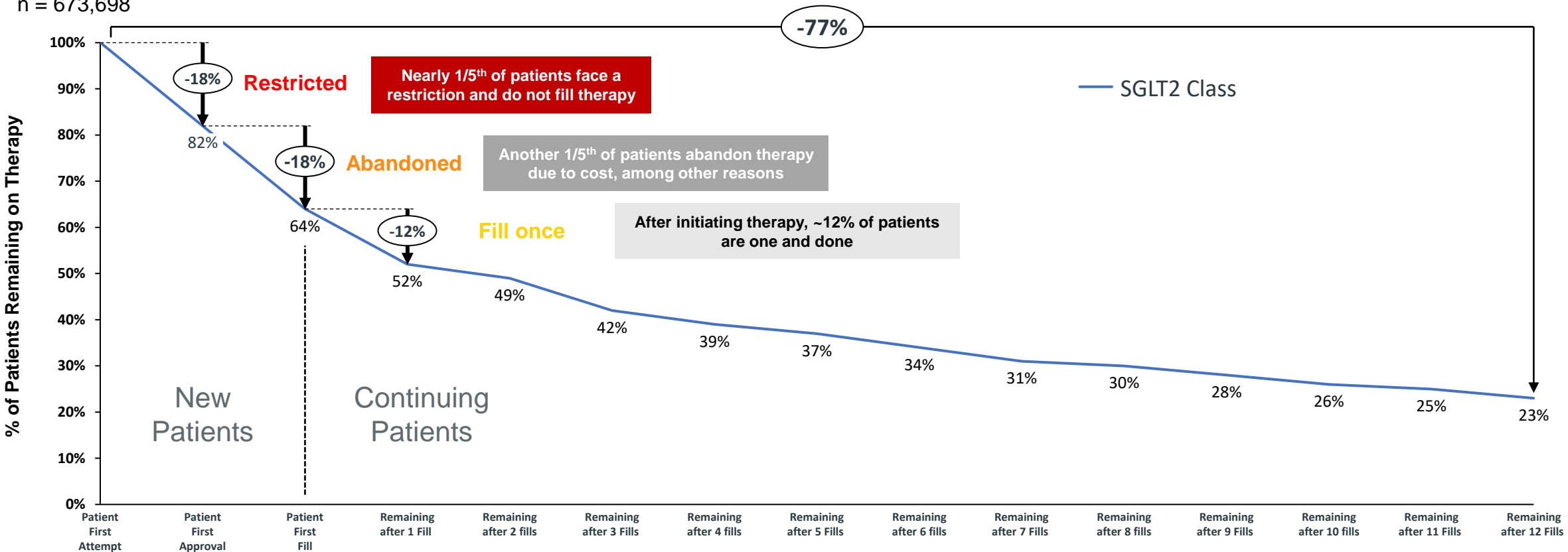
Source: IQVIA Institute, National Sales Perspectives, Dec 2021; Bureau of Labor Statistics, Annual Average Monthly CPI Growth, Dec 2021. The Use of Medicines in the U.S.: Usage and Spending Trends and Outlook to 2026. Report by the IQVIA Institute for Human Data Science.

In the SGLT2 class, market access pressures are leading to fewer patients starting and continuing on their prescribed therapy

After 1 fill only ~50% of patients initially attempting SGLT2 therapy remain

SGLT2 New Patient Therapeutic Journey – All Channels; New Attempts

n = 673,698



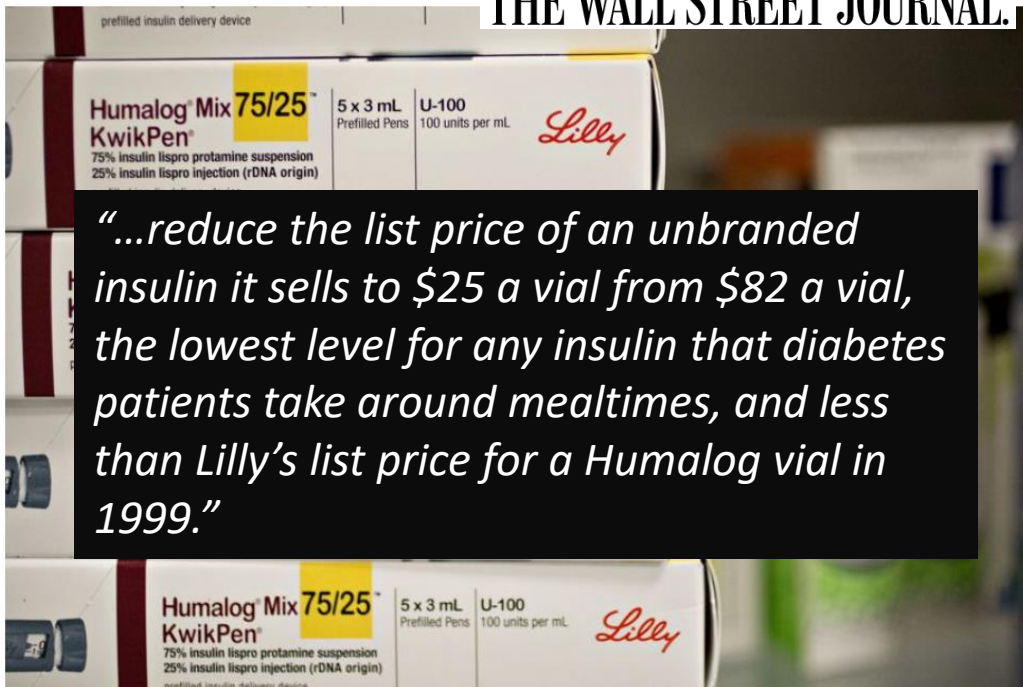
Note: New patients attempting therapy are tracked forward for 1 year post initiation; Naïve and Switch patients are considered new; SGLT2 class includes Farxiga, Jardiance, Glyxambi, Invokana, Invokamet, Qtern, Steglatro, Synjardy, Xigduo
 Source: LAAD 2.0 2017-2018 ; IQVIA US Market Access Strategy Consulting analysis

Hot off the press! Lilly, Novo, and Sanofi cut insulin prices by 70% – Is the gross to net bubble popping?

Eli Lilly to Cut Prices of Insulin Drugs by 70%, Cap Patient Costs at \$35

Drugmaker says it is taking other steps to make it easier for patients to afford the products

THE WALL STREET JOURNAL.



What drove the decision?

- Corporate Mission & Values
- New Legislation
- Increased Public Scrutiny
- Decades of Net Price Pressures

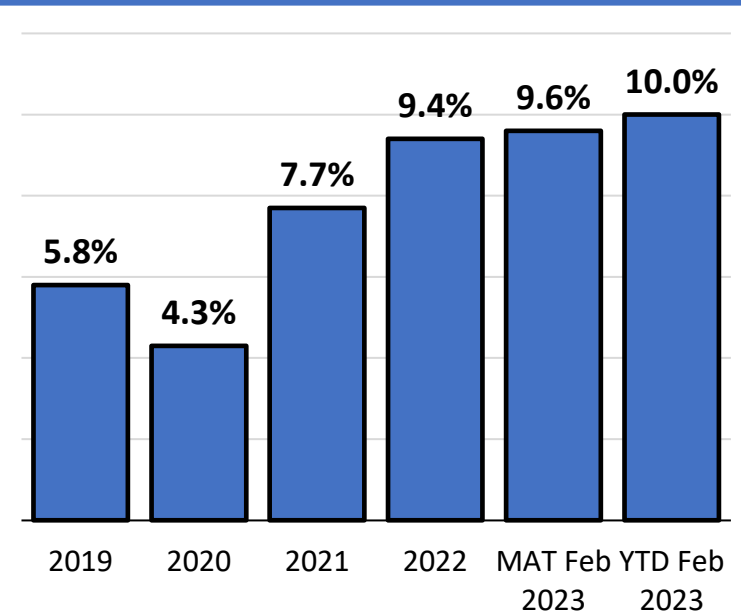


Penny Pricing Cap Removal in 2024

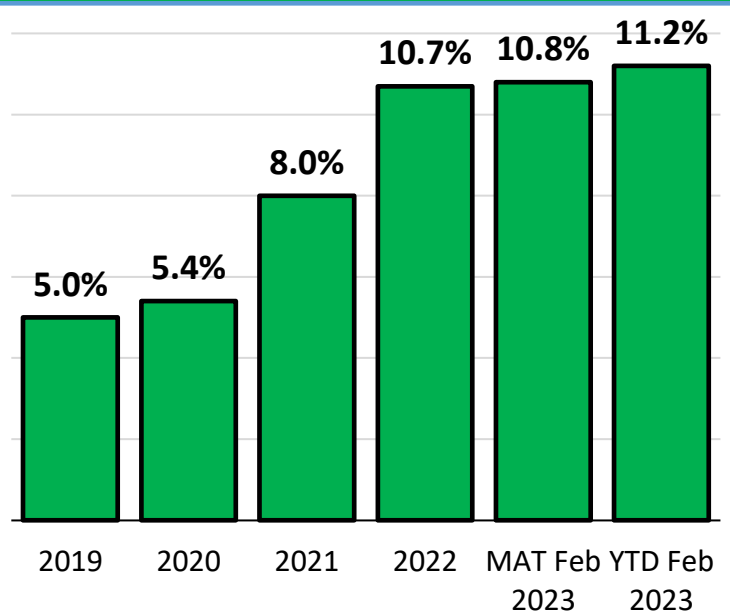
The Non-Retail channel is recovering from effects of COVID-19

Growth (%) of Sales

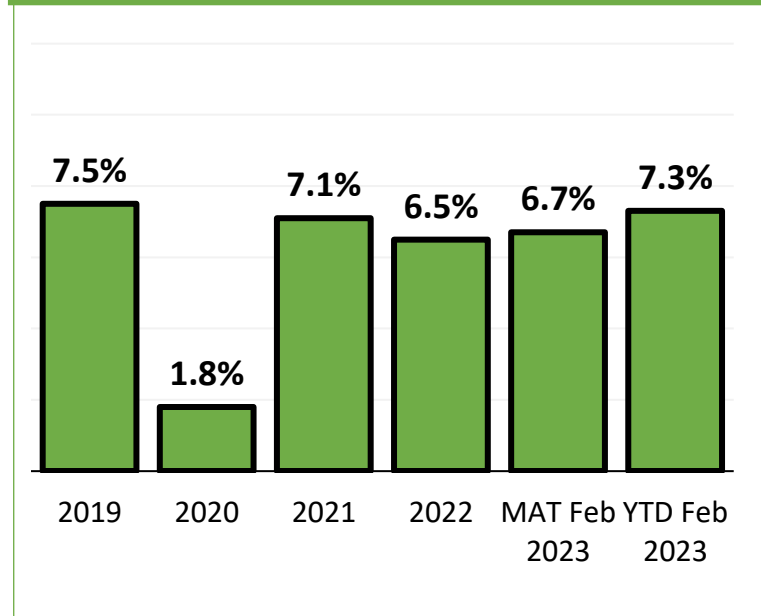
Total Market (Retail, Non-Retail and Mail)



Retail and Mail



Non-Retail



Source: IQVIA, National Sales Perspectives, February 2023
Note: Limited to Rx and OTC Insulins; Includes Retail, Non-Retail and Mail

Top Product Launches for 2020, 2021,& 2022

Product	Company	Indication	Launch
<u>2022</u>			
Mounjaro	Lilly	Diabetes	Jun-22
Vabysmo	Genentech	Wet AMD	Feb-22
Opdualag	BMS	Metastatic Melanoma	Mar-22
<u>2021</u>			
Wegovy	Novo Nordisk	Weight Loss	Jun-21
Prevnar 20	Pfizer	Pneumococcal vaccine	Aug-21
Qulipta	Abbvie	Migrane	Oct-21
<u>2020</u>			
Veklury	Gilead	Antiviral	Oct-21
Tepezza	Horizon	Thyroid Eye Disease	Feb-20



Thank You!