



Transforming Pharma to Deliver Sustainable Long- term Growth



Capital Markets Day
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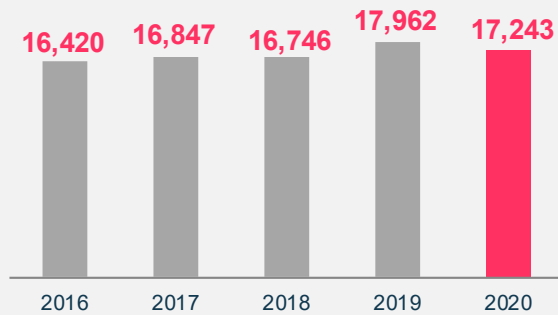
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Pharma: Focused on Therapeutic Areas with High Unmet Needs

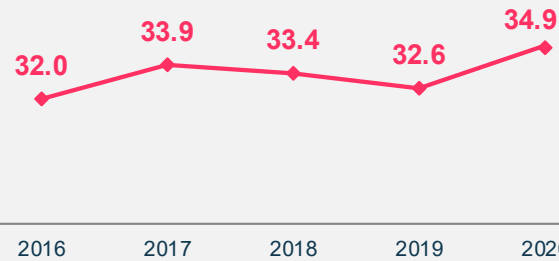
Sales development

In €m



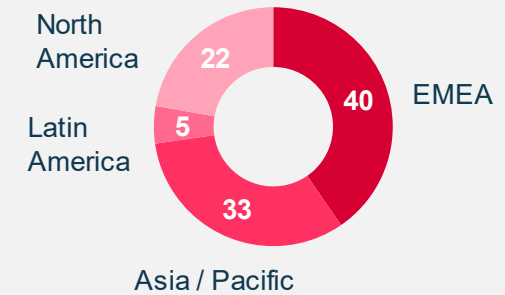
EBITDA margin development

In %, before special items



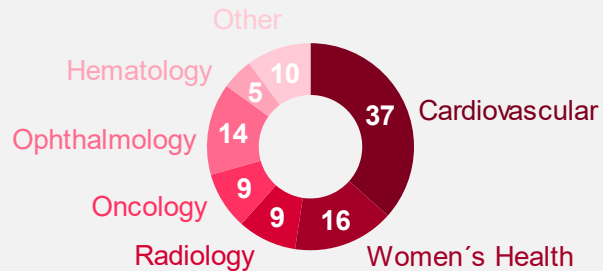
Sales by region

In %, in 2020



Therapeutic areas

In %, based on sales 2020



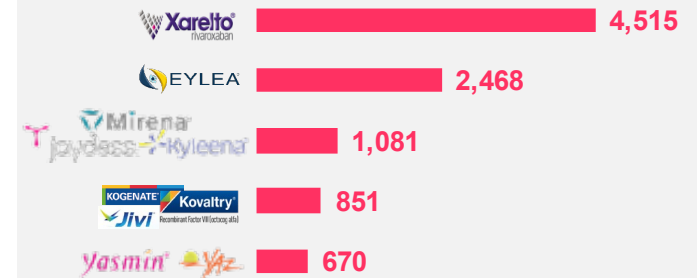
Leading positions in key therapeutic areas



- Cardiovascular
- Hematology
- Retinal Diseases
- Women's Health
- Radiology

Top products

In €m, based on sales 2020

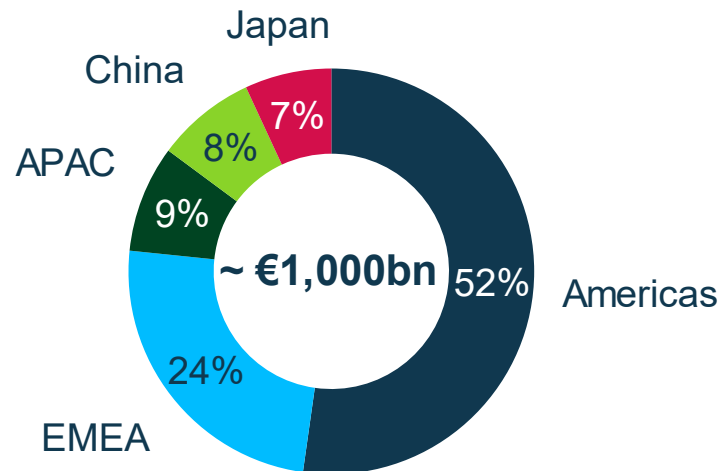




We are Operating in a Rapidly Changing but Attractive Market Environment

Pharma Market

Market Size 2020¹



Market CAGR 2020-24e²

▶ **4 - 5%**

Market Dynamics

Opportunities

- Rising life expectancy and increased access to healthcare systems
- Accelerated digital transformation across the value chain
- Technological disruption by breakthrough science
- Shift from treatment to prevention and potential cure

Challenges

- Pressure on pricing
- Declining R&D productivity
- Increased pressure for value and real-world evidence

¹ Source: IQVIA MIDAS MAT Q3-20

² Source: IQVIA Market Prognosis as of September 2020



The Transformation of Pharma is Underway



New management team focused on improving existing structures and processes



Realize full potential of products and pipeline to mitigate LoE impact and return to growth



Re-allocate resources and shape financial profile to post LoE future



Capitalize and build on investments in breakthrough innovation, espec. C>



Challenge strategic direction of R&D - enhance focus on external innovation



Our Transformation is Guided by Five Strategic Focus Areas

Strategic Focus Areas

Portfolio and Pipeline



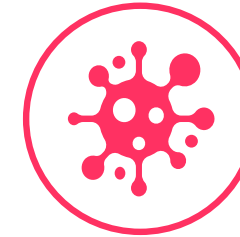
Digital Health



Cell & Gene Therapy



Oncology



China & US



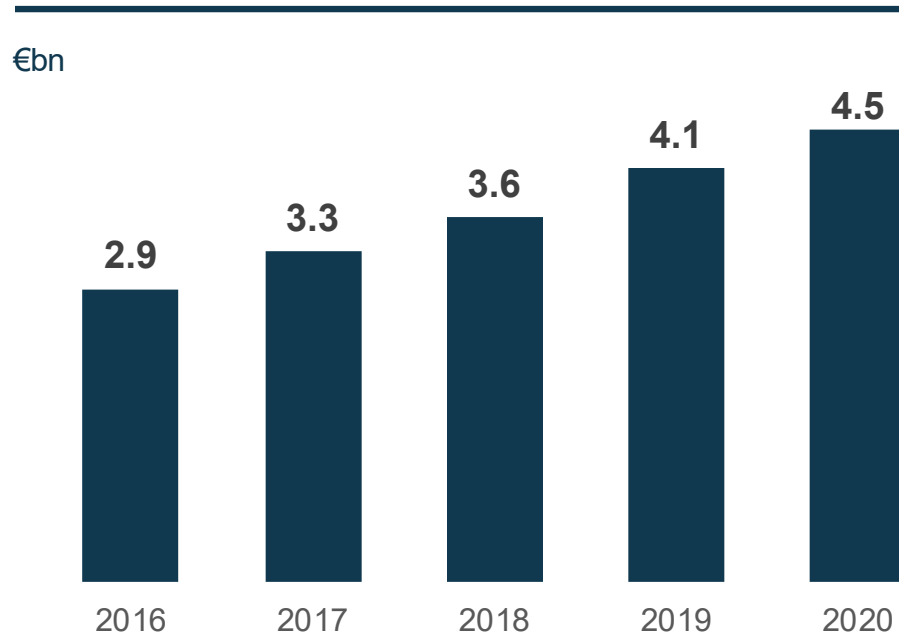
Key Priorities

- ▶ **Maximize the value** of the current portfolio and **manage the loss of exclusivity** for Xarelto & Eylea
- ▶ **Deliver three new potential blockbusters** from late-stage pipeline
- ▶ **Build digital health solutions** and capitalize on **Cell & Gene therapy platform**
- ▶ **Build an at scale player** in oncology in our areas of focus
- ▶ **Evolve regional strategies in China and the US** to sustain future growth



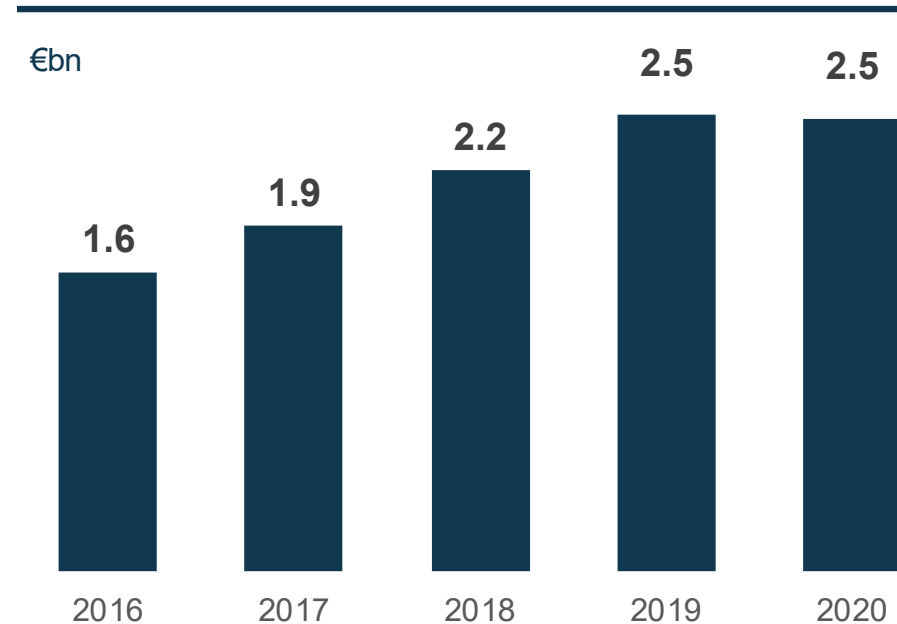
Xarelto and Eylea are on Track to Deliver Peak Sales Potential

Xarelto



- Peak sales potential > €5bn
- Strongest real-world experience
- Most comprehensively licensed NOAC

Eylea



- Peak sales potential > €2.5bn
- Leveraging leading market position in retinal diseases
- Investigating high-dose formulation
- Near-term impact due to Covid-19

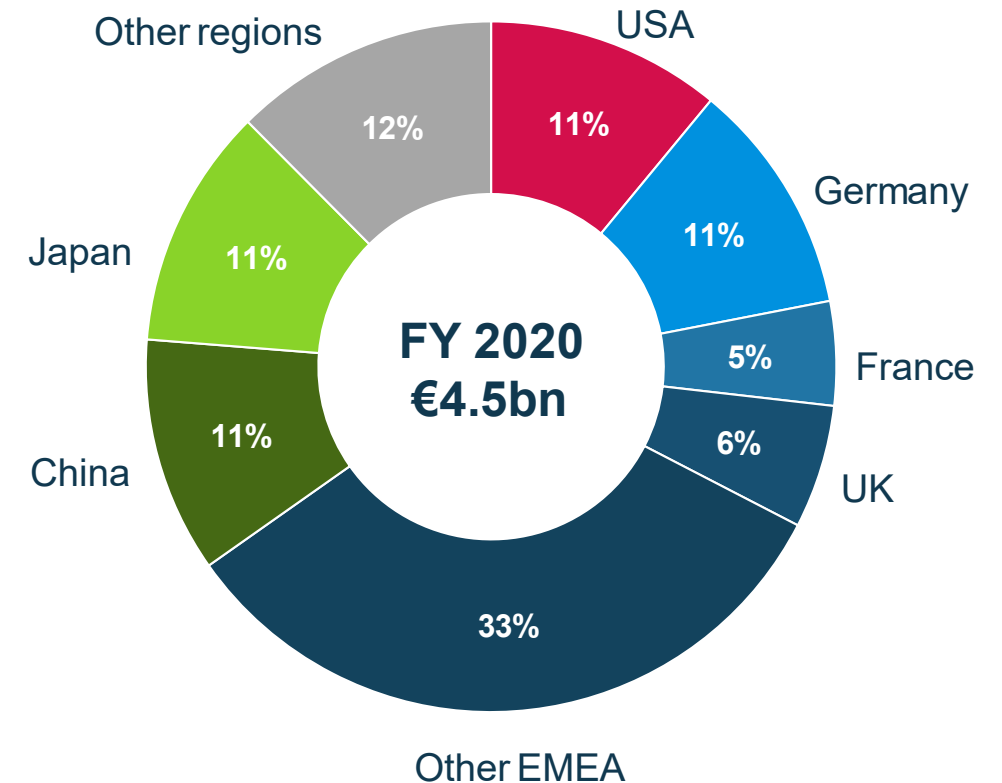


Xarelto's Loss of Exclusivity Will be Staggered Over Several Years

Xarelto's main patent expirations

Region	Patent	Effective Duration
China	Compound patent	2020
Japan	Compound patent	2022-2025
Europe	Compound patent incl. 6 months pediatric exclusivity	Q1 2024
USA	Compound patent incl. 6 months pediatric exclusivity	Q1 2025
	Once-daily use patent	2027*

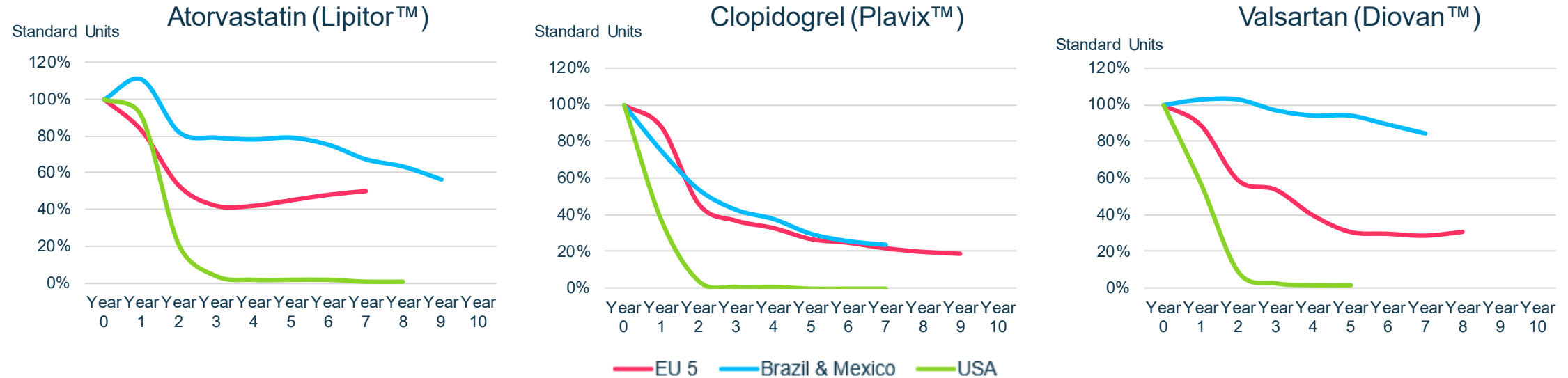
Xarelto sales by main markets



*) Litigation settled with all 16 generic defendants. Terms are confidential. As reported for Q3 2020, Unichem is licensed to market a generic version of Xarelto 10/15/20mg beginning in 2027. Official patent expiration in 2034.



Historic Genericization Patterns of Small Molecules Reveal that the most Pronounced LoE Impact Occurs in the US

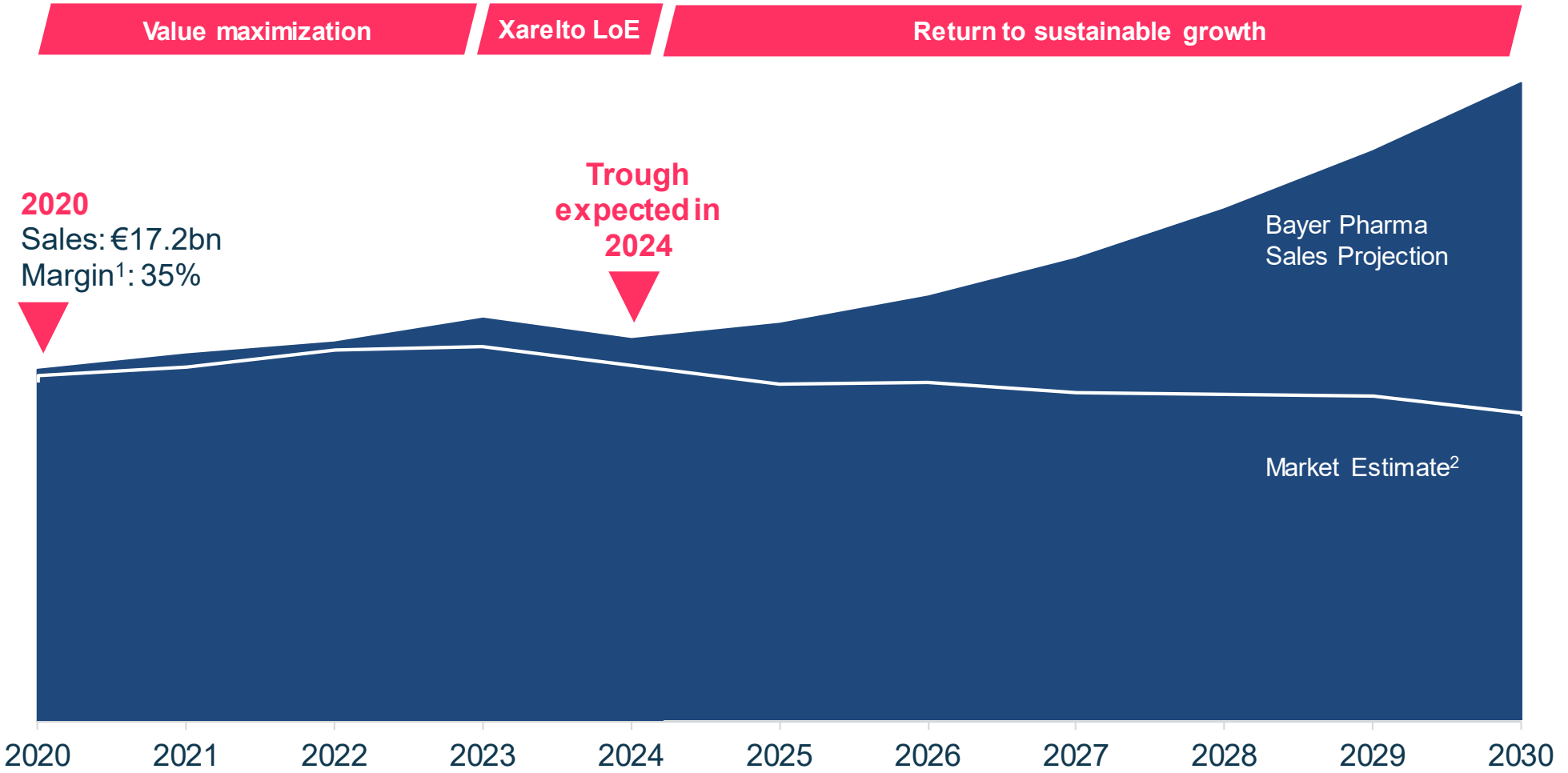


- Post LoE, in EU5 and Latin America sales decrease moderately over time while in the US, sales are declining rapidly
- Staggered market entry of generics in many European countries
- Most Emerging Markets are characterized by private and tender business, reducing relevance of patent expirations

Source: IQVIA Data; Standard Unit Volume set to 100% in the year of patent expiration. Lipitor, Plavix and Diovan are trademarks of Pfizer, Sanofi and Novartis respectively



Bayer's Long-Term Sales Projection Reveals Limited LoE Impact and Return to Sustainable Long-term Growth



¹ EBITDA margin before special items
² Consolidated estimates from seven major banks as of Jan. 2021

Graphic illustrative



We Laid The Foundation for Long-term Growth at Pharma

Main Building Blocks of Post LoE Growth

Late-stage Pipeline in CV & WH



Finerenone

Elinzanetant
(KaNDy NT-814)

Oncology



Pipeline

eg. EGFRexon20 inhib., ATR inhib., TTCs

Cell & Gene Therapy Platform

C> platform expected to deliver
significant sales contributions from
~2025 onwards



External Innovation and BD&L

>25 BD&L-transactions signed in 2020
Enhanced focus on external innovation to replenish pipeline

¹ In collaboration with Merck & Co. Inc., Kenilworth, NJ, USA



Christian Rommel

Head of Pharma R&D





A Successfully Matured Late-stage Pipeline May Deliver Three New Potential Blockbusters

Nubeqa (Darolutamide)¹ AR-Antagonist

- Launched in nmCRPC - global roll-out underway
- Differentiated clinical profile - 31% OS benefit & favourable safety profile (ARAMIS)
- Prim. completion of phase III trial in mHSPC with chemo mid-2021e (ARASENS)
- New phase III trial in mHSPC without chemo (ARANOTE)
- Peak sales potential \geq €1bn

Finerenone MR-Antagonist

- Significant reduction of renal and cardiovascular outcomes in patients with CKD and T2D
- Filed in key markets - FDA priority review
- Phase III trials in CKD/T2D (FIGARO) and in HFm/pEF (FINEARTS-HF) ongoing
- Peak sales potential \geq €1bn

Elinzanetant Dual NK 1,3 Receptor-Antagonist

- First-in-class oral, non-hormonal, once-daily neurokinin-1,3 receptor antagonist
- Promising phase IIb data for the treatment of frequent menopausal symptoms
- Phase III to be initiated in 2021
- Peak sales potential $>$ €1bn

¹ In collaboration with Orion Corporation



Peak-sales Potential of Key Late-stage Pipeline Assets

2018

Pipeline Asset	Peak Sales Potential
Nubeqa ¹ (Darolutamide)	≥ €1bn
Finerenone	≥ €1bn
Vittrakvi (Larotrectinib)	> €750m
Aliqopa (Copanlisib)	≥ €0.5bn
Verquvo ² (Vericiguat)	~ €0.5bn

New:

Elinzanetant
(KaNDy NT-814)

Launched:

Vittrakvi
Aliqopa
Verquvo²
(Vericiguat)

2021

Pipeline Asset	Peak Sales Potential
Nubeqa ¹ (Darolutamide)	≥ €1bn
Finerenone	≥ €1bn
Elinzanetant (KaNDy NT-814)	> €1bn

¹ In collaboration with Orion Corporation

² In collaboration with Merck & Co. Inc., Kenilworth, NJ, USA



Our Pipeline Comprises Attractive Late-/mid-stage Opportunities and Scientifically Appealing Early Assets

Late-/mid-stage Opportunities¹



Finerenone

- CKD in T2 Diabetes Patients
- Heart Failure



Elinzanetant (KaNDy NT-814)

- Vasomotor symptoms during menopause



Factor XI(a) portfolio

- Thrombo-embolic diseases



P2X3 Receptor Antagonist

- Multi-indication opportunity

Scientifically Appealing Early Assets¹



Precision Molecular Oncology

- EGFRex20 inhibitor
- ATR inhibitor



Targeted Alpha Therapies

- Thorium conjugates



CAR T-Cell Immuno-oncology

- Collaboration with Atara Biotherapeutics



Gene Therapy

- AskBio AAV gene augmentation platform



Cell Therapy

- BlueRock iPSC technology platform

¹ selected examples



We Enhance our Focus on External Innovation and Successfully Collaborate with Partners

Selected R&D Collaborations

Cardiovascular Diseases



Cardiometabolic risk partnership

EMR



Multi-target collaboration

Oncology



Next generation, mesothelin-targeted CAR T-cell therapies for solid tumors

- Pipeline replenishment is key imperative
- Collaborating with top academia, pharma partners and biotech companies
- Shift from “internal built” to “external partner”
- Increased investment in R&D and external innovation through re-allocation of resources
- LEAPS as a feeder of breakthrough technologies

EMR: Endocrinology, Metabolic Dysregulation, Reproductive Health

Transforming Major Elements Along the Value Chain and Capitalizing on a Growing Digital Health Portfolio

Research

Opening up new frontiers and increasing speed in drug discovery

- Combining molecular modelling, lab automation and *in silico* drug testing with machine learning/AI applied on big data
- Acceleration and transformation of drug discovery and de-risking early assets

Clinical Development

Enhance efficiency, insights, and patient outcomes in clinical trials

- Data science driven efficiency of trial enrolment and smart-device-based data collection
- Data driven adaptive trials to speed up the submission process
- Cutting edge analytics to improve insights in patient outcomes

Digital Health Business

Providing integrated solutions to improve patient outcomes and reduce health costs

- Digital solutions addressing major challenges e.g. lack of personalization and care coordination
- Tailored and evidence driven interventions help to achieve sustainable behavioral change
- Monetization via employers, payers and public health plans

External Collaborations

- **Recursion** in fibrotic diseases and **Exscientia** in oncology & CV, and with **Schrödinger** on *in silico* lead finding and optimization
- Informed Data Systems Inc. (**One Drop**) to develop digital health products for improved management of multiple therapeutic areas
- **Blackford Analysis** to establish a digital platform delivering access to digital & AI applications throughout medical imaging workflow



Marianne De Backer

*Head of Pharma Strategy and
Business Development &
Licensing*





External Innovation to Accelerate Replenishment of Pipeline and Broaden Modalities

Selected high-level overview

Momentum Significantly Increased

>25 **Transactions** signed in 2020

- Deals covering the entire spectrum from **equity investments** (with LEAPS), over **licensing agreements** to **acquisitions**
- **Active portfolio management** taking internal assets outside (eg. Vincera Pharma)

Strategic Focus

- Venturing into **new modalities** (Cell & Gene Therapy)
- Broadening the **Oncology** pipeline (eg. Systems Oncology, Atara)
- Commercial partnerships in **China** (eg. Hua Medicine)
- Deals in the **Digital** Space (eg. R&D: Schroedinger, Exscientia, Recursion; Commercial: OneDrop)
- Continued augmentation of core therapeutic areas: (**WHC**: KaNDy Therapeutics)
- Strengthening the **Cardiovascular** pipeline (Curadev, Broad Institute)



Our Cell & Gene Therapy Strategy Builds on Four Integrated Platforms to Drive the Next Wave of Innovation at Pharma

Gene Augmentation



- Industry-leading AAV vector gene augmentation platform
- Monogenic & pathway diseases
- CDMO business (Viralgen) already generates revenues

Stem Cells



- Creating induced pluripotent stem cells (iPSC) with broad differentiation
- Create an entirely new generation of cellular medicines
- Ph 1 for lead program in Parkinson's disease

Allogeneic Cell Therapy

Collaboration with Atara Biotherapeutics

- Next-generation, mesothelin-directed CAR T-cell therapies
- Focus on potential allogeneic, "off the shelf" tumor therapies

Gene Editing as cross-functional enabling technology



Comprehensive Cell & Gene Therapy Pipeline that has Proven Ability to Yield Commercial Stage Assets

Project	Discovery	Preclinical	Phase I/II	Estimated primary study completion ³
Pompe Disease - Gene Therapy				Dec 2022
Parkinson's Disease - Gene Therapy				Dec 2022
Congestive Heart Failure - Gene Therapy				.
Factor VIII - Gene Therapy ¹				Oct 2022
MSLN CAR-T Therapy (ATA2271) ²				Sep 2022
Parkinson's Disease - Cell Therapy				.
MSLN CAR-T Therapy (ATA3271) ²				
> 15 preclinical assets				

- Pipeline already comprises 6 clinical assets
- Multiple IND-generating opportunities - targeting to deliver ≥ 3 new INDs p.a.
- AAV technology included in commercialized assets

¹ In collaboration with Ultragenyx ² In collaboration with Atara Biotherapeutics ³ according to clinicaltrials.gov



Disciplined Investment in BD&L Delivered Top-ranked M&A-Transactions

#8 of the top 10 largest biopharma M&A deals in 2020¹

1. AstraZeneca / Alexion Pharma
2. Gilead Sciences / Immunomedics
3. Bristol Myers Squibb / MyoKardia
4. Johnson & Johnson / Momenta
5. Gilead Sciences / Forty Seven
6. Sanofi / Principia Biopharma
7. Merck & Co. / VelosBio
- 8. Bayer / AskBio**
9. Nestlé / Aimmune Therapeutics
10. Servier / Agios Pharmaceuticals' oncology portfolio

#6 & #19 of the top 20 biopharma M&A deals in 2020²

1. AstraZeneca / Alexion Pharma
2. Gilead Sciences / Immunomedics
3. Bristol Myers Squibb / MyoKardia
4. Johnson & Johnson / Momenta
5. Gilead Sciences / Forty Seven
- 6. Bayer / AskBio**
- ...
18. Acadia / CerSci
- 19. Bayer / KaNDy Therapeutics**
20. Novartis / Cadent Therapeutics

#1 in Pharma AI Transactions 2020³

- 1. Bayer**
2. Pfizer
3. AstraZeneca
- ...

¹ Fierce Pharma, ranking by transaction value ² Pharma Shots, ranking by transaction value ³ Deep Pharma Intelligence, ranking by number of transactions



Stefan Oelrich

President Pharmaceuticals

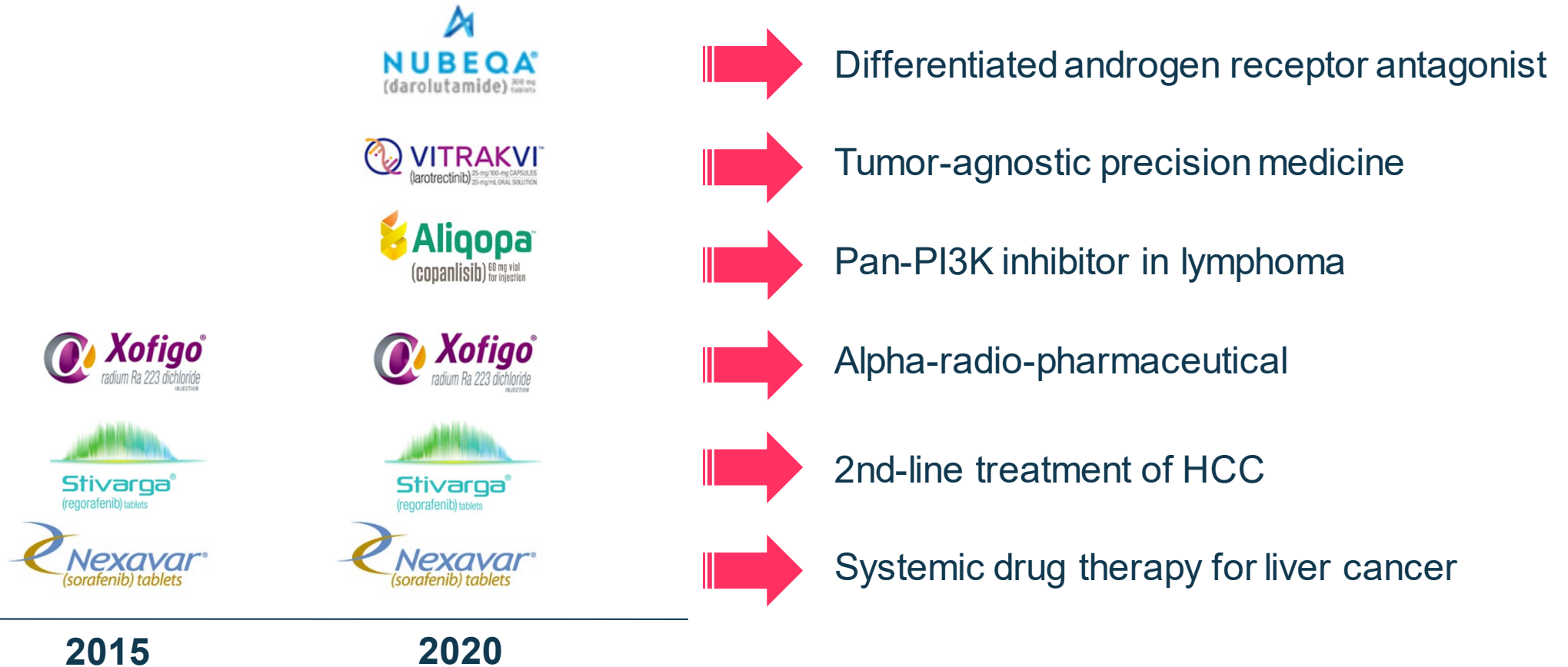




We Doubled the Portfolio in Oncology since 2015 and Delivered Innovation to Patients

Key Oncology Products

Delivering Innovation





We are Targeting to Significantly Expand our Presence in Select Areas of Oncology where One Blockbuster can Build a Franchise

Key elements to achieve our growth aspiration

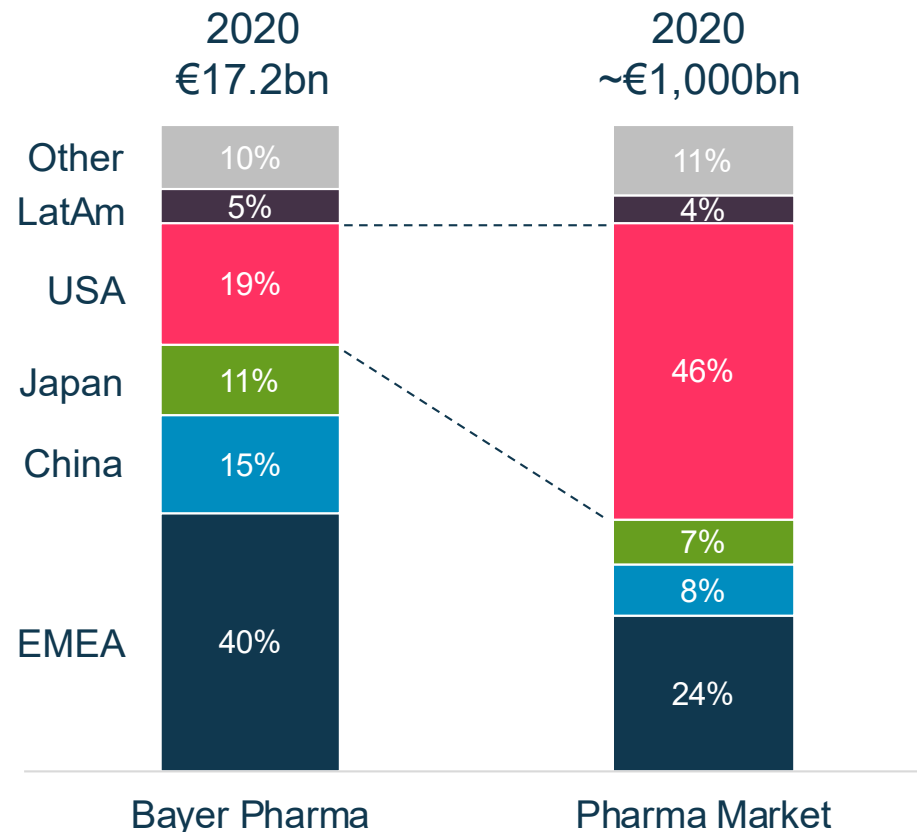


Key sales contributors, graphic illustrative

- Realize blockbuster potential of NUBEQA
- Expand prostate franchise with NUBEQA and Xofigo
- Continue to execute launch of VITRAKVI
- Expand into IO-combo opportunities with Stivarga
- Accelerate early pipeline projects
- Seek external growth opportunities through BD&L
- Continue to invest in next generation disruptive technologies



Evolving Our Regional Strategies to Address Portfolio Imbalance Relative to the Market



- Europe & China centric Pharma business
- Lacking US-rights for Xarelto & Eylea
- Portfolio evolution to balance the business geographically
- USA
 - Capitalizing on our strength in Women's Health (Elinzanetant) and Radiology
 - Growing in oncology, espec. prostate cancer (Nubeqa)
 - Entering cardio-renal with Finerenone & Verquvo
- Europe
 - Portfolio evolution into cell & gene therapies
- China
 - Innovation driven growth strategy

Market data source: IQVIA MIDAS MAT Q3-20



China is the 2nd Largest Pharmaceutical Market Globally and Remains an Attractive Growth Opportunity

Strong market fundamentals due to rising but still low disease diagnosis and treatment rates.

Emerging local biotech bring asset opportunities but also **competition to multinational** pharmacos.

Health Care policy changes in recent years from regulatory reform to payor reform, **accelerating the access to innovative therapies.**

China is on the **forefront of digital innovation** and presents a unique digital ecosystem and market opportunity for innovative **business models in digital health.**

Unprecedented pricing pressure on off-patent drugs due to **Volume Based Procurement (VBP)**



Sustaining Future Growth in China Through Innovation while Leveraging Significant Volume Opportunity in Established Products

Drive volume expansion in established product portfolio

- Established product portfolio affected by nationwide Volume Based Procurement
- Significant volume opportunity
- Leadership in key therapeutic areas of the government's "Healthy China 2030" initiative

Keep strong market position of established product portfolio

Leverage growth opportunity with innovation-based portfolio

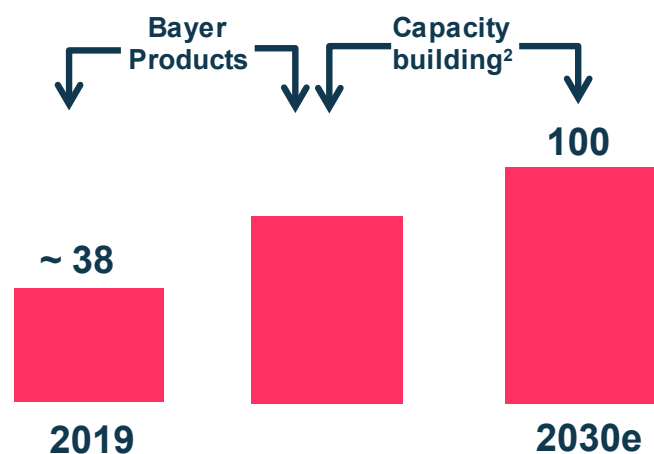
- Healthcare reforms enhancing innovation and access
- Nubeqa, Xofigo recently approved in China; filing of Vericiguat and Finerenone
- 5-7 new product launches expected by 2025
- Sourcing innovation through global/local partnerships

Sustained long-term growth through innovation and addressing unmet medical need



Sustainability is Fully Embedded in our Strategy

▶ Providing **100m women** in LMIC¹ with **access to modern contraception**



▶ Implementing **patient affordability programs** around the world

We aim to broaden access to our pharmaceutical products to 100m people in low- and middle-income countries

- “Health for All - Hunger for None” are core to our raison d’être at Pharma
- Measurable targets linked to incentive scheme
- Adopting an equitable pricing approach that incorporates country-level affordability.
- Focus on LMIC as priority in terms of pricing flexibility and patient affordability program implementation.

Numbers reflect women using modern contraception (millions) ¹ LMIC: low and middle income countries

² Capacity building refers to the development of knowledge, skills, commitment, structures, systems and leadership to enable and strengthen self-reliance and resilience of the local health systems and of the key players towards family planning and sexual reproductive health. We aim to do leverage partnerships to create impact at scale.



Mid-term Targets for Pharma Reflect Limited Impact from the LoE for Xarelto

Sales / Sales Growth

	act	At constant currencies ¹	At month-end Dec' 20 rates ²		
	2020	2021e	2021e	2022/2023e	2024e
Pharmaceuticals	€17.2bn	~ 4%	~ €17.5bn	3% to 5%	Low- to mid-single-digit decline

EBITDA margin (before special items)

	2020	2021e	2021e	2022/2023e	2024e
Pharmaceuticals	34.9%	~32%	~32%	32% to 34%	Above 30%

Divisional Drivers

- Top-line trough due to Xarelto LoE expected in 2024 - returning to growth thereafter
- New launches (eg. Nubeqa, Verquvo, Finerenone) to drive growth
- Continued focus on tight expense control
- Investing in new launches

cpa: currency and portfolio adjusted

¹ Reflects our 2021 plan at the average actual currencies for 2020 ² Currency assumptions based on month-end December spot rates (1 EUR=) 1.23 USD, 6.37 BRL, 7.98 CNY, 126 JPY, 24.4 MXN, 91.5 RUB



Key Takeaways for Pharma

1

The transformation of Bayer Pharma is underway

2

We expect limited impact from the LoE of Xarelto and laid the foundation for long-term growth thereafter

3

We target to launch three new potential blockbuster products

4

Established a C>-platform and continue to invest in potential breakthrough technologies

5

We are evolving our regional strategies to exploit new growth opportunities

6

Sustainability is fully embedded in our strategy



Experienced Pharma Leadership Team



Stefan Oelrich
President, Pharmaceuticals



Christoph Bertram
Human Resources



Marianne De Backer
Strategy, Business
Development & Licensing



Michael Devoy
Medical Affairs &
Pharmacovigilance



Reinhard Franzen
Commercial Operations EMEA



Sebastian Guth
Commercial Operations Americas



Axel Hamann
Chief Financial Officer



Wei Jiang
Commercial Operations China &
APAC



Jeanne Kehren
Digital & Commercial Innovation



Ursula Königer
Legal



Robert LaCaze
Oncology



**Anne-Grethe
Mortensen**
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Commercial Operations Japan



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Research and Development



Julio Triana
Pharma Transformation



Holger Weintritt
Product Supply



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Christian Rommel
Head of R&D Pharmaceuticals





Appendix: Abbreviations (1/2)

A	Actuals	EMEA	Europe, Middle East and Africa
AAV	Adeno-associated virus	EMR	Endocrinology, Metabolic Dysregulation, Reproductive Health
AI	Artificial intelligence	EU5	France, Germany, Italy, Spain, United Kingdom
APAC	Asia Pacific	FDA	U.S. Food and drug administration
AR	Androgen receptor	HCC	Hepatocellular carcinoma
ATR inhib.	Ataxia telangiectasia and Rad3-related protein inhibitor	HF	Heart failure
BD&L	Business Development & Licensing	HFmEF	Heart failure with mid-range ejection fraction
bn	billion	HFpEF	Heart failure with preserved ejection fraction
CAGR	Compound Annual Growth Rate	IND	Investigational New Drug
CAR-T	Chimeric antigen receptor modified T cells	IO	Immuno-oncology
CDMO	Contract development and manufacturing organization	Incl.	Inclusive
CKD	Chronic kidney disease	iPSC	Induced pluripotent stem cells
C>	Cell and gene therapy	LMIC	Low- and middle-income countries
cpa	Currency and portfolio adjusted	LoE	Loss of exclusivity
CV	Cardiovascular	mHSPC	Metastatic hormone sensitive prostate cancer
E	Estimate	m	million
EBITDA	Earnings before interest, tax, depreciation, and amortization	MAT	Moving annual total
EGFRex20	Epidermal growth factor receptor exon 20	M&A	Mergers & acquisitions



Appendix: Abbreviations (2/2)

MR	Mineralocorticoid receptor
MSLN	Mesothelin
NK	Neurokinin
nmCRPC	Non-metastatic castration resistant prostate cancer
NOAC	New oral anticoagulant
OS	Overall survival
p.a.	Per annum
Pan-PI3K	Pan-class phosphatidylinositol 3-kinase
Ph	Phase
R&D	Research & Development
T2	Type 2
T2D	Type 2 diabetes mellitus
TTC	Targeted Thorium conjugates
UK	United Kingdom
VBP	Volume based procurement
WH	Women's health
yoy	Year-over-year