Bayer Pharmaceuticals

38th Annual J.P. Morgan Healthcare Conference

Stefan Oelrich,
President Pharmaceuticals

January 14, 2020
Disclaimer

Cautionary Statements Regarding Forward-Looking Information

This presentation may contain forward-looking statements based on current assumptions and forecasts made by Bayer management.

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The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.

Guidance at constant currencies, not including portfolio divestitures if not mentioned differently.
Key Priorities for Bayer Pharmaceuticals

1. Drive growth and profitability

2. Build the pipeline

3. Foster sourcing of external innovation
Pharma Posts Higher Sales and Strong Earnings Growth

9M2019

- Sales up 5% to €13.3 billion
- Underlying EBITDA up 5% to €4.5 billion; margin at 34%

Outlook 2019*

- Sales growth of about 4%
- Underlying EBITDA-margin at around 34%

Target 2022

- Sales growth of 4-5% p.a. CAGR (18-22)
- Underlying EBITDA-margin at >35%

*) As published with figures for Q3 2019 on October 30, 2019
\% Sales Fx & portfolio adjusted
Underlying EBITDA = EBITDA before special items
JP Morgan Healthcare Conference, January 14, 2020
Strong Performance of Xarelto, Eylea and China

Sales in € billion
Δ% Fx adj.

Xarelto

<table>
<thead>
<tr>
<th></th>
<th>FY2018</th>
<th>9M2019</th>
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<tbody>
<tr>
<td>Xarelto</td>
<td>3.6</td>
<td>3.0</td>
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<tr>
<td></td>
<td>+13%</td>
<td>+12%</td>
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Eylea

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<tr>
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<th>FY2018</th>
<th>9M2019</th>
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<tr>
<td>Eylea</td>
<td>2.2</td>
<td>1.8</td>
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<tr>
<td></td>
<td>+20%</td>
<td>+14%</td>
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China

<table>
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<tr>
<th></th>
<th>FY2018</th>
<th>9M2019</th>
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</thead>
<tbody>
<tr>
<td>China</td>
<td>2.3</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>+16%</td>
<td>+24%</td>
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</table>
Growth Across All Major Therapeutic Areas in 9M2019

9M 2019 Sales

Δ% yoy, Fx & portfolio adj.

Sales €13.3bn

- Cardiovascular
- Hematology
- Ophthalmology
- Oncology
- Radiology
- Women’s Health
- Other

+8%
+14%
+3%
+6%
+3%
-8%
+0%

Leading Brands

Xarelto
Adempas
Eylea
Kogenate
Kovaltry
Xofigo
Mirena
Aspirin Cardio
Stivarga
Gadovist 1.0
Nexavar
Nubeqa
VitraKvi
Four New Launches During the Last ~15 Months

**Xarelto CAD / PAD**
- Coronary Artery Disease / Peripheral Arterial Disease as label expansion
- ~30m patients diagnosed with CAD / PAD globally
- 20% net clinical benefit demonstrated in COMPASS phase III trial vs. aspirin alone

**Vitrakvi (larotrectinib)**
- First TRK inhibitor, for patients with advanced solid tumors harboring an NTRK gene fusion, regardless of patient age or tumor type
- Demonstrated overall response rates of 94% in children and 76% in adults with TRK fusion cancer

**Jivi (long-acting factor VIII)**
- Extended half-life allows for twice-weekly initial dosing for treatment of hemophilia A
- May be adjusted to every five days and further individually adjusted to less or more frequent dosing

**Nubeqa (darolutamide)**
- New treatment for men with non-metastatic castration-resistant prostate cancer
- Improvement in metastasis-free survival with a median of 40.4 months versus 18.4 months for placebo
- Differentiated safety profile
Committed to Significant Investment in R&D
Cardiovascular Diseases and Oncology as key therapeutic areas

Pharma R&D investment in € billion¹

1.7 → 2.8

+63%

13.8% 16.6%

2012 2018

R&D costs % of Net Sales

Clear focus on relevant therapeutic areas: Cardiovascular Diseases and Oncology

Cardiovascular diseases:

- Still the “Biggest Killers”
- Strong heritage and capabilities, e.g. Xarelto, Adempas, Adalat, Cardio-Aspirin

Oncology:

- Fastest growing market with high unmet medical need
- Emerging player
- Precision medicine entering the market - Vitrakvi

¹ R&D expenses before special items; 2012 figure including Radiology; 2018 figures excluding the one-time income of approx. €190m from Xarelto COMPASS opt-in by J&J

JP Morgan Healthcare Conference, January 14, 2020
VICTORIA Phase III Trial Met Primary Endpoint
Vericiguat in Patients with Worsening Chronic Heart Failure

Potential Additional Treatment Option
sGC Stimulator (Vericiguat)

Current Treatment Options
- Angiotensin Converting Enzyme Inhibitor (ACEi)
- Angiotensin Receptor Blocker (ARB)
- Angiotensin Receptor-Neprilysin Inhibitor (ARNi)
- Beta-Blocker
- Diuretic
- Aldosterone-Antagonist

- Significant reduction in risk of cardiovascular death or heart failure hospitalization versus placebo when given in combination with available heart failure therapies
- First sGC stimulator evaluated in patients with worsening chronic heart failure with reduced ejection fraction (HFrEF)
- 60 million patients worldwide with chronic heart failure (CHF)
- 50% of CHF patients have HFrEF
- >30% of symptomatic HFrEF patients will worsen
- Development in collaboration with Merck & Co.
- Data to be presented at an upcoming scientific meeting in 2020
Comprehensive Anti-FXI Development Portfolio May Deliver New Approach in Anti-coagulation

Oral factor XI inhibitor

- Various potential indications with high unmet medical need
- Significant portion of SPAF patients, for example, are still un- or undertreated

Anti factor XI antibody (osocimab)

- Phase II
- Potential indications with high unmet medical need include venous protection and SPAF in patients with end-stage renal disease and others

Factor XI antisense

- Phase II
- Factor XI antisense developed in collaboration with IONIS Pharmaceuticals
Focus Areas to Expand Our Presence in Oncology

**Oncogenic Signaling / Precision Medicine**
- First in class targets with pan-tumor potential and patient selection approaches
- Examples: Nexavar (sorafenib) / Stivarga (regorafenib)
  - Aliqopa (copanlisib)
  - Vitakvi (larotrectinib)
  - Rogaratinib (FGFRi) - Phase II
  - Selitrectinib (LOXO-195) - Phase I

**Immuno-Oncology Platform**
- Exploring new targets and potential IO combinations
- Examples: ILDR2 fb Ab - Phase I
  - Regorafenib combinations - Phase II

**Targeted Radionuclide Therapies**
- Developing potential new treatments with broader target range
- Example: Thorium conjugate platform - Phase I

**Tumor-specific Therapies**
- NUBEQA (darolutamide) and
- Xofigo (Radium-223)
Main Upcoming Pharma Catalysts

- **VITALITY phase II trial with Vericiguat in chronic heart failure (HFrEF)**
- **VICTORIA phase III trial with Vericiguat in chronic heart failure (HFrEF)**
- **VOYAGER PAD phase III trial with Rivaroxaban in periperal arterial disease**
- **FIDELIO-DKD phase III trial with Finerenone in diabetic kidney disease**
- **EU approval of darolutamide**
- **CHRONOS-3 phase III trial with Copanlisib in lymphoma**
- **FIGARO-DKD phase III trial with Finerenone in diabetic kidney disease**

**Q4 2019**
- Darolutamide approval Japan

**Q1 2020**
- Study completed

**Q2 2020**
- EU approval of darolutamide

**Q3 2020**
- CHRONOS-3 phase III trial with Copanlisib in lymphoma

**Q2 2021**
- Study completed

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1 Estimated primary study completion as of January 9, 2020 and subject to change

JP Morgan Healthcare Conference, January 14, 2020
Finerenone Targets a Key Driver of CKD Progression in Patients with Type 2 Diabetes

Drivers for CKD Progression

- **Inflammatory / fibrotic Pathway**
- **Metabolic Pathway**
- **Hemodynamic Pathway**

Treatment Approach

- Currently no treatment specifically addressing inflammation / fibrosis in CKD progression
- Glycaemic control
- Lipid management
- Diet
- Blood pressure control

- **Finerenone** is targeting overactivation of the mineralocorticoid receptor, thereby reducing the number of inflammatory and fibrotic factors
- Two phase III trials in chronic kidney disease in type 2 diabetes underway:
  - FIDELIO DKD: April 2020
  - FIGARO DKD: June 2021
- Potential first launch date: 2021

1Guideline recommendations for patients with diabetes to delay CKD, ESRD and/or CVD; Examples only
2Estimated primary study completion as of January 9, 2020 and subject to change
External Innovation will Support our Continued Success

In 2018, **45%** of Total Pharma sales were generated from partnered products, mainly Xarelto, Eylea, Adempas and Xofigo.

**~ 65% of sales growth** (2013-2018) were driven by partnered products.

Many different forms of cooperations along the entire value chain:

- Joint Labs and Research Agreements
- Crowdsourcing and Incubator
- Venture Investments
- Consortia
- Joint Ventures
- License agreements
Bayer is a Partner of Choice

Cooperations became significant products – 5 out of 7 with blockbuster potential

<table>
<thead>
<tr>
<th>Product</th>
<th>Partner</th>
<th>Blockbuster or blockbuster potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xarelto</td>
<td>Johnson &amp; Johnson</td>
<td>A Leading new oral anti-coagulant ✔</td>
</tr>
<tr>
<td>Eylea</td>
<td>Regeneron Pharmaceuticals</td>
<td>The leading therapy for back-of-the-eyes diseases ✔</td>
</tr>
<tr>
<td>Nexavar</td>
<td>Onyx Pharma (Amgen)</td>
<td>Treatments for different cancers ✔</td>
</tr>
<tr>
<td>Nubeqa</td>
<td>Orion Pharma</td>
<td>New treatment option for prostate cancer patients ✔</td>
</tr>
<tr>
<td>Vitragyi</td>
<td>Loxo Oncology (Eli Lilly)</td>
<td>First treatment with a tumor-agnostic indication</td>
</tr>
<tr>
<td>Xofixo</td>
<td>Algeta (Bayer)</td>
<td>First targeted alpha-therapy for prostate cancer ✔</td>
</tr>
<tr>
<td>Adempas</td>
<td>Merck &amp; Co</td>
<td>Pioneering sGC-modulators</td>
</tr>
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</table>
Leaps: Potential Breakthrough Innovation at Bayer

Mission: shift paradigms in health and agriculture, complementary to divisional activities

Our ambition

Fundamental breakthrough technologies shifting the core paradigms

FROM TREATMENT TO CURE/PREVENTION

The approach

Leverage the most promising technologies in order to increase our chances

Companies (selection)

Early stage high risk investments in potentially disruptive technologies

FROM TREATMENT TO CURE/PREVENTION
BlueRock: Building a Leading Position in Cell Therapy

Technology

- Best-in-class induced pluripotent stem cell platform
- Ability to cure diseases with significant cell loss and diminished self-repair potential

Goal

- **Neurology**: curative treatment of Parkinson’s disease
- **Cardiology**: treat chronic heart failure by re-growing heart muscle cells
- **Immunology**: macrophages and T-regulatory cells with potential in e.g. fibrosis, graft vs. host disease

// Combining cell biology and genetic engineering to create fundamentally new ways to impact disease

// Advanced programs (pre-clinical) in Parkinson’s and chronic heart failure

// First clinical trial initiation for cellular therapy of Parkinson’s planned in 2020

// BlueRock was founded as a JV with Versant Ventures. Bayer fully acquired BlueRock in Q3 2019
Key Takeaways

1. Profitable growth with strong performance of Xarelto, Eylea and China
2. Four new launches during the last ~15 months to fuel further growth
3. Sustained leadership in Cardiovascular
4. Expanding presence in Oncology
5. External innovation is key for success
Bayer Pharmaceuticals

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Stefan Oelrich,
President Pharmaceuticals

January 14, 2020
# Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACE</td>
<td>Angiotensin converting enzyme</td>
</tr>
<tr>
<td>ACS</td>
<td>Acute coronary syndrome</td>
</tr>
<tr>
<td>ARB</td>
<td>Angiotensin receptor blocker</td>
</tr>
<tr>
<td>CAD</td>
<td>Coronary artery disease</td>
</tr>
<tr>
<td>CKD</td>
<td>Chronic kidney disease</td>
</tr>
<tr>
<td>CV</td>
<td>Cardiovascular</td>
</tr>
<tr>
<td>CVD</td>
<td>Cardiovascular disease</td>
</tr>
<tr>
<td>DKD</td>
<td>Diabetic kidney disease</td>
</tr>
<tr>
<td>FGFRi</td>
<td>Fibroblast growth factor receptor inhibitor</td>
</tr>
<tr>
<td>HF</td>
<td>Heart failure</td>
</tr>
<tr>
<td>ILDR2 fbAb</td>
<td>Immunoglobulin-like domain containing receptor 2 function-blocking antibody</td>
</tr>
<tr>
<td>IO</td>
<td>Immuno-oncology</td>
</tr>
<tr>
<td>JV</td>
<td>Joint venture</td>
</tr>
<tr>
<td>NTRK</td>
<td>Neurotrophic receptor tyrosine kinase</td>
</tr>
<tr>
<td>PAD</td>
<td>Peripheral artery disease</td>
</tr>
<tr>
<td>sGC</td>
<td>Soluble guanylate cyclase</td>
</tr>
<tr>
<td>SPAF</td>
<td>Stroke prevention in atrial fibrillation</td>
</tr>
<tr>
<td>T2D</td>
<td>Type 2 diabetes mellitus</td>
</tr>
<tr>
<td>TKI</td>
<td>Tyrosine kinase inhibitor</td>
</tr>
<tr>
<td>TRK</td>
<td>Tropomyosin receptor kinases</td>
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