



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.

Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. These factors include those discussed in Bayer's public reports which are available on the Bayer website at <http://www.bayer.com/>.

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

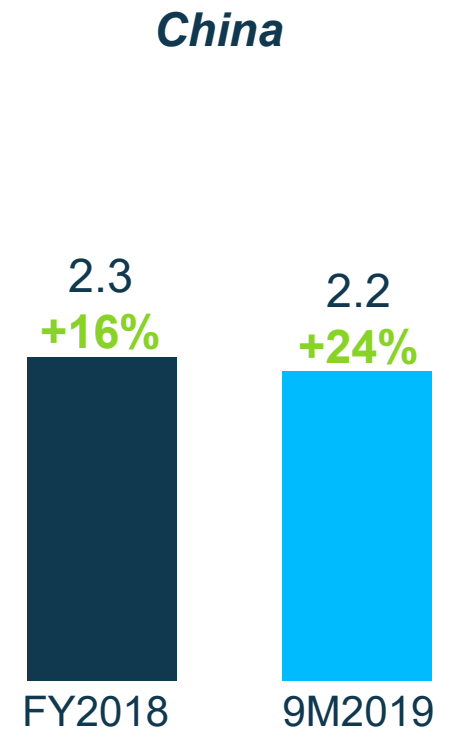
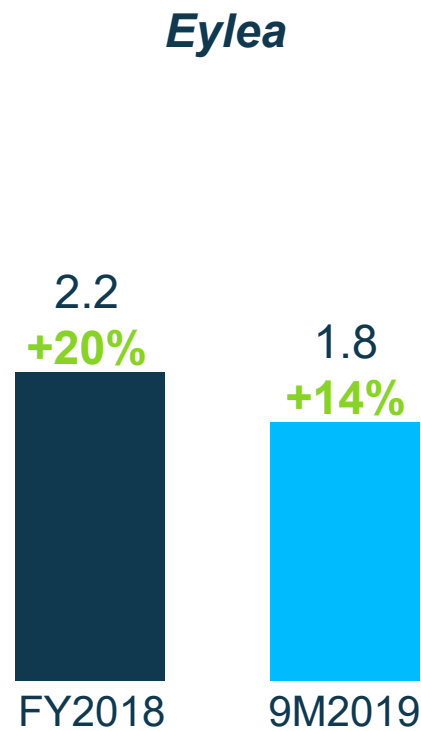
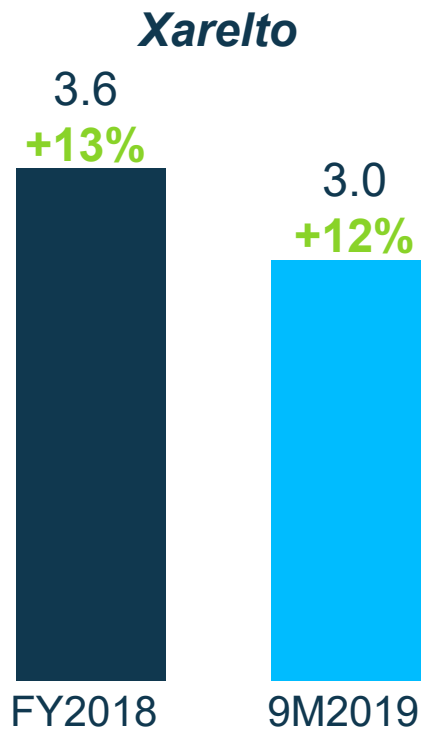
- // Sales growth of 4-5% p.a. CAGR (18-22)
- // Underlying EBITDA-margin at >35%

*) As published with figures for Q3 2019 on October 30, 2019
Δ% 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.

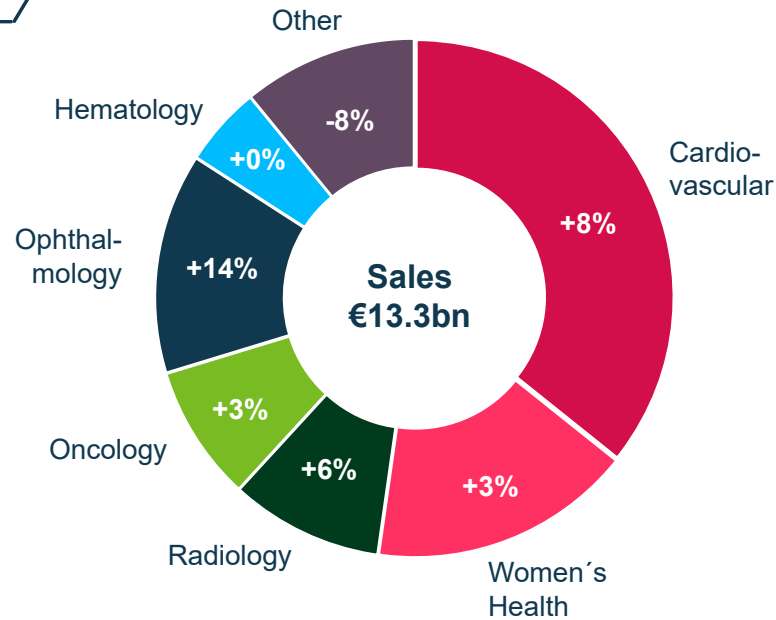




Growth Across All Major Therapeutic Areas in 9M2019

9M 2019 Sales

Δ% yoy, Fx & portfolio adj.



Leading Brands





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)

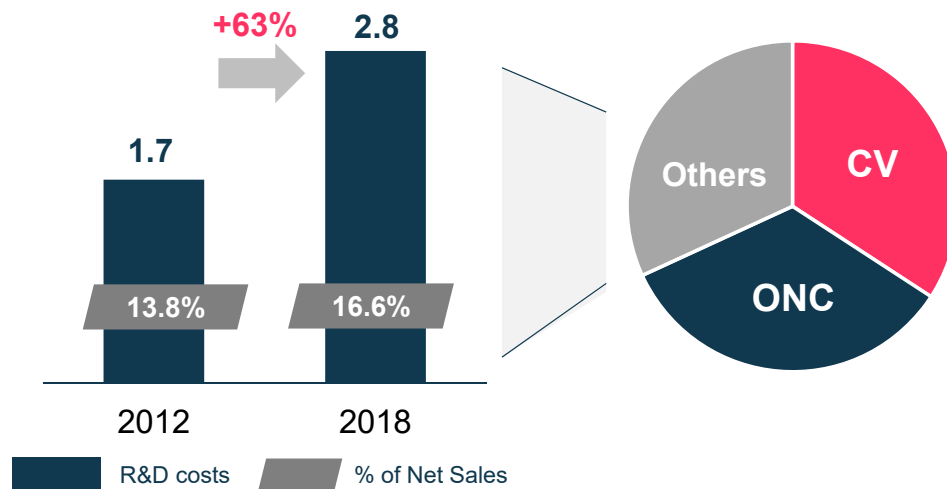
- // New treatment for men with non-metastatic castration-resistant prostate cancer
- // Improvement in metastasis-free survival with a median of 40.4 months versus 18.4 months for placebo
- // Differentiated safety profile



Committed to Significant Investment in R&D

Cardiovascular Diseases and Oncology as key therapeutic areas

Pharma R&D investment in € billion¹



// 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



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

Phase I

- // 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 developed in collaboration with IONIS Pharmaceuticals

Factor XI antisense

Phase II



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)
Vitrakvi (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

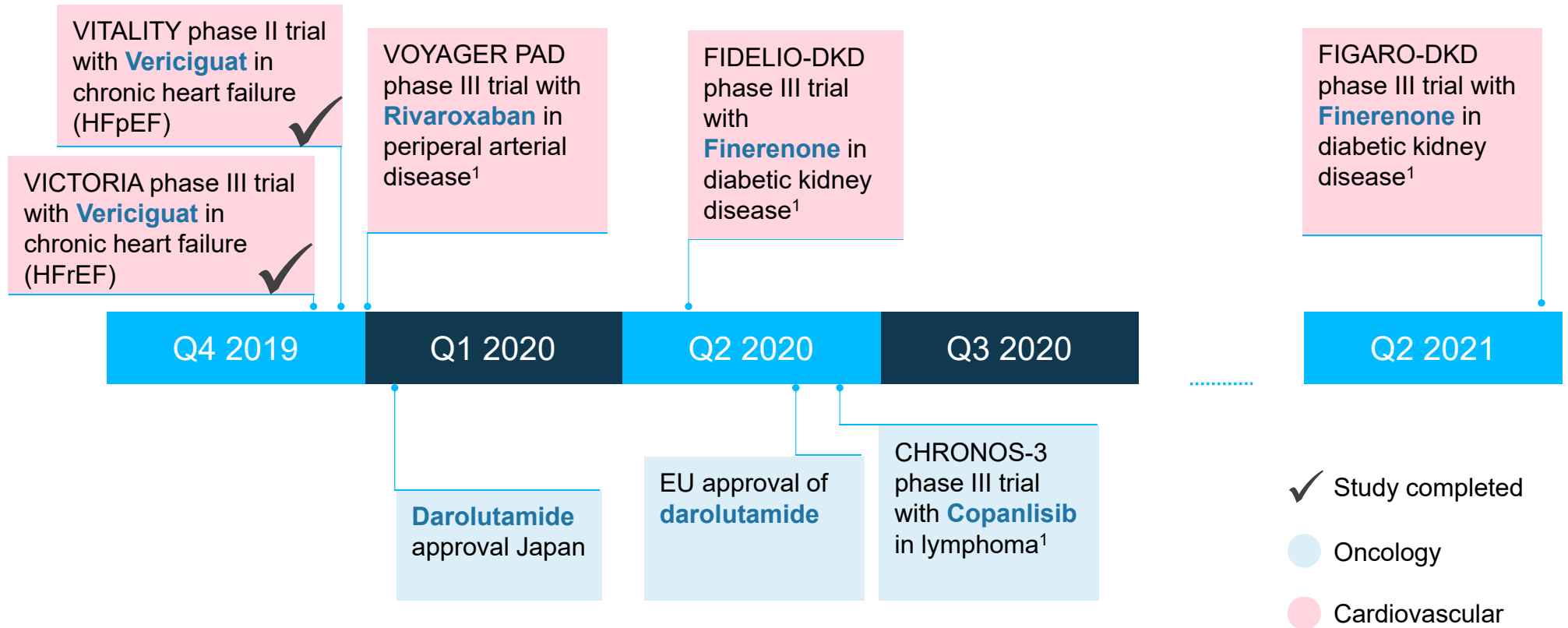
- // Developing potential new treatments with broader target range
- // Example: Thorium conjugate platform - Phase I

Tumor-specific Therapies

- // NUBEQA (darolutamide) and
- // Xofigo (Radium-223)



Main Upcoming Pharma Catalysts



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



Finerenone Targets a Key Driver of CKD Progression in Patients with Type 2 Diabetes

Drivers for CKD Progression

Treatment Approach¹



Inflammatory / fibrotic Pathway

// Currently no treatment specifically addressing inflammation / fibrosis in CKD progression



// **Finerenone** is targeting overactivation of the mineralocorticoid receptor, thereby reducing the number of inflammatory and fibrotic factors



Metabolic Pathway

// Glycaemic control
// Lipid management
// Diet

// Two phase III trials in chronic kidney disease in type 2 diabetes underway:

// FIDELIO DKD: April 2020^{e2}

// FIGARO DKD: June 2021^{e2}



Hemodynamic Pathway

// Blood pressure control

// Potential first launch date: 2021^e

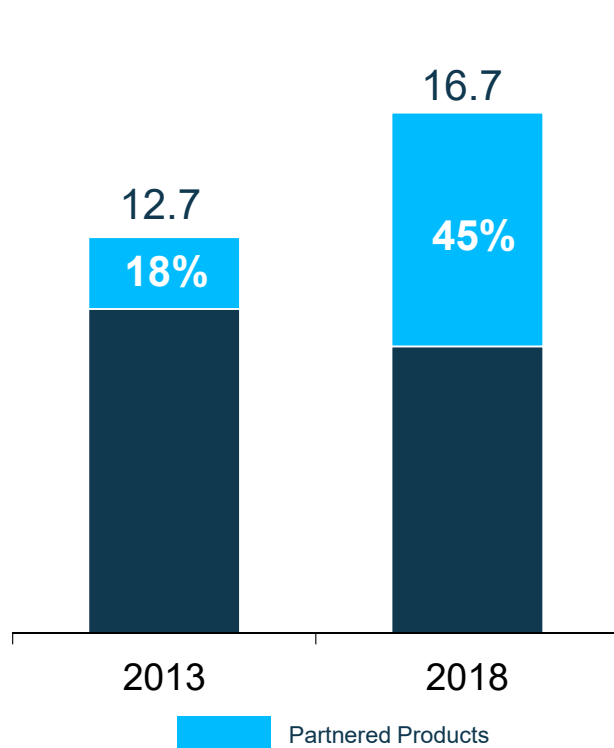
¹Guideline recommendations for patients with diabetes to delay CKD, ESRD and/or CVD; Examples only

²Estimated primary study completion as of January 9, 2020 and subject to change



External Innovation will Support our Continued Success

Net Sales Pharmaceuticals (€bn)










- // 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

Product	Partner		Blockbuster or blockbuster potential
 Xarelto [®] rivaroxaban	Johnson & Johnson	➡	A Leading new oral anti-coagulant ✓
 EYLEA [®] (aflibercept solution for injection)	Regeneron Pharmaceuticals	➡	The leading therapy for back-of-the-eyes diseases ✓
 Nexavar [®] (sorafenib) tablets Stivarga [®] (regorafenib) tablets	Onyx Pharma (Amgen)	➡	Treatments for different cancers ✓
 NUBEQA [®] (darolutamide) tablets	Orion Pharma	➡	New treatment option for prostate cancer patients ✓
 VITRAKVI [®] (larotrectinib) 25 mg/100 mg CAPSULES 20 mg/100 mg ORAL SOLUTION	Loxo Oncology (Eli Lilly)	➡	First treatment with a tumor-agnostic indication ✓
 Xofigo [®] radium Ra-223 dichloride SOLUTION FOR INJECTION	Algeta (Bayer)	➡	First targeted alpha-therapy for prostate cancer ✓
 Adempas [®] riociguat	Merck & Co	➡	Pioneering sGC-modulators



Leaps: Potential Breakthrough Innovation at Bayer

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

Our ambition

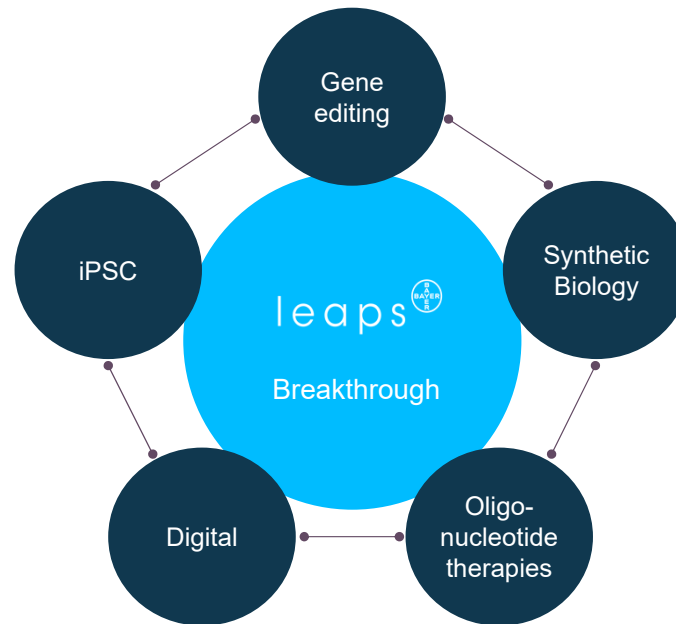
Fundamental breakthrough technologies shifting the core paradigms



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





BlueRock: Building a Leading Position in Cell Therapy



- // 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

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



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



**38th Annual J.P. Morgan Healthcare
Conference**

Stefan Oelrich,
President Pharmaceuticals

January 14, 2020





Abbreviations

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