Novartis AG
Investor Relations

Q2 2016 results

Investor presentation | July 19, 2016

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Nor can there be any guarantee that Novartis will be able to realize any of the potential strategic benefits, synergies or opportunities as a result of the creation of the Pharmaceuticals business unit and Oncology business unit to form the Innovative Medicines Division, the strategic actions announced in January 2016, the creation and operation of NBS, or the transactions with GSK, Lilly and CSL. Neither can there be any guarantee that Novartis or any of the businesses involved in the transactions will achieve any particular financial results in the future. Neither can there be any guarantee that shareholders will achieve any particular level of shareholder returns. Nor can there be any guarantee that the Group, or any of its divisions, will be commercially successful in the future, or achieve any particular credit rating. In particular, management’s expectations could be affected by, among other things: unexpected regulatory actions or delays or government regulation generally; the potential that the strategic benefits, synergies or opportunities expected from the creation of the Pharmaceuticals business unit and Oncology business unit to form the Innovative Medicines Division, the strategic actions announced in January 2016, the creation and operation of NBS, or the transactions with GSK, Lilly and CSL may not be realized or may take longer to realize than expected; the inherent uncertainties involved in predicting shareholder returns or credit ratings; the uncertainties inherent in research and development, including unexpected clinical trial results and additional analysis of existing clinical data; our ability to obtain or maintain proprietary intellectual property protection, including the ultimate extent of the impact on Novartis of the loss of patent protection and exclusivity on key products which commenced in prior years and continues this year; unexpected safety, quality or manufacturing issues; global trends toward health care cost containment, including ongoing pricing pressures, in particular from increased publicity on pharmaceuticals pricing; uncertainties regarding actual or potential legal proceedings, including, among others, actual or potential product liability litigation, litigation and investigations regarding sales and marketing practices, intellectual property disputes, and government investigations generally; general economic and industry conditions, including uncertainties regarding the effects of the persistently weak economic and financial environment in many countries; uncertainties regarding future global exchange rates, including the continued increases in value of the US dollar, our reporting currency, against a number of currencies; uncertainties regarding future demand for our products; uncertainties involved in the development of new healthcare products; uncertainties regarding potential significant breaches of data security or disruptions of our information technology systems; and other risks and factors referred to in Novartis AG’s current Form 20-F on file with the US Securities and Exchange Commission. 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Agenda

1.	**Group review**	**Joseph Jimenez, Chief Executive Officer**
2.	Financial review	Harry Kirsch, Chief Financial Officer
3.	Development	Vas Narasimhan, Global Head Drug Development & CMO
4.	Closing	Joseph Jimenez, Chief Executive Officer
5.	Q&A session	Executive team

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Solid Q2 despite Gleevec® LoE; innovation strengthens future growth prospects[1,2]

Net sales flat (cc vs. PY)

With growth products mitigating Gleevec® LoE impact

Core operating income -4% (cc vs. PY)

Reflecting Gleevec® LoE and growth investment

Launches progressing

Strong Entresto® guidelines in US and EU; Cosentyx® strong launch continues

Innovation

LEE011 trial stopped early on positive efficacy; biosimilar rituximab filed in Europe

1. LoE: Loss of exclusivity 2. All growth shown vs. prior year (PY) in constant currencies (cc). All numbers refer to continuing operations (incl. the oncology assets acquired from GSK and the OTC JV formed in 2015) and do not include divested businesses. An explanation of continuing operations can be found on page 40 of the Condensed Financial Report

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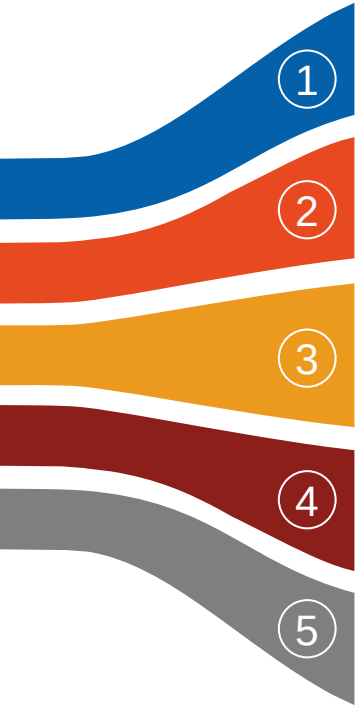
Our priorities for 2016



1. Deliver strong **Financial Results**
2. Strengthen **Innovation**
3. Improve **Alcon performance**
4. Capture **Cross-Divisional Synergies**
5. Build a **High-Performing Organization**

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Solid sales performance despite Gleevec® LoE, Alcon growth plan progressing

1 Deliver strong **Financial Results**[1]

2

3

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5

Innovative Medicines

Sales -1%
with Cosentyx®, Gilenya® off-setting Gleevec® US (+3% excl. Gleevec®)[2]

Sandoz

Sales +3%
driven by growth in all regions

Alcon

Sales -1%
growth plan being executed

1. All growth shown vs. PY in constant currencies (cc). All figures reflect the transfers of certain products between divisions, as announced on January 27, 2016. See page 42 of the Condensed Interim Financial Report for a full explanation
2. In the US, Gleevec® lost exclusivity on February 1, 2016

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Entresto®: Strong endorsement of patient benefit

1 2 3 4 5

Strengthen
Innovation

Entresto® sacubitril/valsartan

- Class I recommendation in US and EU guidelines
- JAMA Cardiology report[1]:
  - — 28,000 deaths could be prevented or postponed in US alone
  - — Entresto® cost-effective vs. enalapril
- Significant investment increase in 2016:
  - — FortiHFy: Largest ever heart failure clinical program
  - — US field force: Expansion underway
  - — Medical support

1. Fonarow et al. JAMA Cardiol. 2016;1(6):1-4. doi:10.1001/jamacardio.2016.1724; Gaziano et al. JAMA Cardiol. 2016

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Entresto®: Acceleration in TRx trend

1
2 Strengthen **Innovation**
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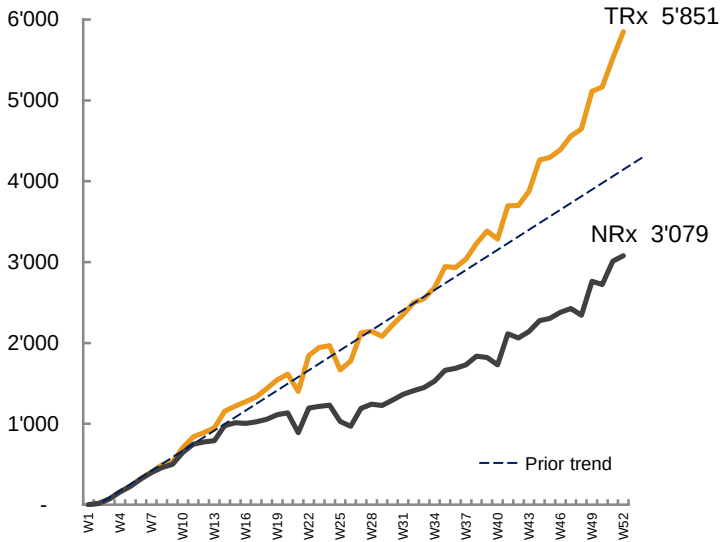
US Entresto® TRx and NRx[1]



- **Q2 Sales:** USD 32m
- **US accelerating** adoption and new prescribers
- **HTA bodies in the EU** endorse Entresto® as cost-effective[2]
- **On track** for full-year sales of USD 200m

1. IMS data week ending 7/1/16 2. Most recently IQWiG (Germany) recommended reimbursement. G-BA confirmed IQWiG recommendation

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Strong Cosentyx® launch boost to Q2 sales

1 2 3 4 5

Strengthen
Innovation

Cosentyx® secukinumab

- **USD 260 million sales in Q2**
- **US field force** expansion completed
- **Long-term efficacy:** 3-year data in PsO and 2-year data in AS and PsA[1,2]

1. PsO: Psoriasis; AS: Ankylosing Spondylitis; PsA: Psoriatic arthritis 2. Maksymowych W, et al. Abstract OP114 (EULAR 2016); Nash P, et al. Abstract EULAR16-2049 (EULAR 2016)

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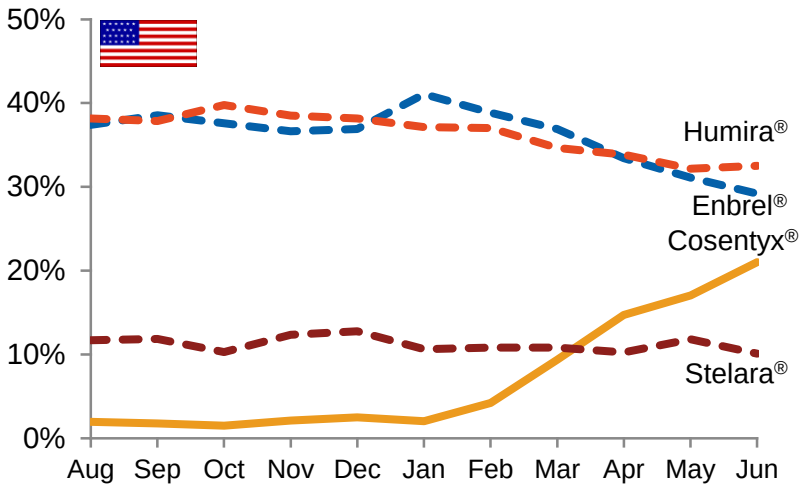
Cosentyx®: Strong launch in AS and PsA; PsO progress continues

1 2 3 4 5

Strengthen
Innovation

AS and PsA share of US weekly NBRx[1]
(%; US Rheumatology only)



- **AS and PsA:**
  - Launched in US, JP[2], DE
- **PsO**:
  - Launched in US, JP, EU
  - Leading share in DE biologics[3]

1. Total NBRx data across Rheumatology specialty (Source: IMS NBRx Monthly June 2016 allocated for PSA and AS indications only based on anonymized patient data) 2. In JP only PsO and PsA are indicated. AS has not been submitted to date 3. Biologics segment defined as Humira®, Enbrel®, Simponi®, Stelara®, Cimzia®, Cosentyx®, Otezla®, Remicade® (Source: IMS, office-based dermatologist only).

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Innovative Medicines pipeline continues to deliver

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2 Strengthen **Innovation**
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Oncology

- **LEE011**
  Ph III trial stopped early due to positive efficacy
- **Tafinlar® + Mekinist®**
  63% ORR in BRAF V600E-mutant NSCLC[1]
- **Afinitor®**
  FDA and EU approval in GI/lung NET[2]

Pharmaceuticals

- **Ultibro®**
  FLAME data demonstrates superiority over Seretide®[3]
- **AMG 334**
  Significant benefit in chronic migraine (Ph II)

1. Overall Response Rate in BRAF V600E-mutation positive non-small cell lung cancer 2. Treatment of unresectable or metastatic, well-differentiated (Grade 1 or Grade 2) nonfunctional neuroendocrine tumors (NET) of gastrointestinal (GI) or lung origin in adults with progressive disease 3. Seretide® is a registered trademark of GlaxoSmithKline

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Sandoz delivering on biosimilars[1]

1 2 3 4 5

Strengthen **Innovation**

- **Etanercept** recommended by FDA advisory committee for approval

- **Rituximab** submission accepted by EMA and new data demonstrates bioequivalence to originator

1 Rituxan® is a registered trademark of Roche. Enbrel® is a registered trademark of Amgen.

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Alcon: Turnaround progress giving confidence

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2
3 Improve **Alcon Performance**
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Accelerating innovation and sales

- Sales growth in cataract consumables and contact lenses
- CE Mark in Europe for Dailies Total1® Multifocal and PanOptix® with UltraSert®
- Pivotal data on CyPass® MIGS device presented at ASCRS
- Increased M&S investment behind key products in both Surgical and Vision Care

Reinforcing strong customer relationships

- Redefined and launched new customer experience standards
- Created global organization focused on delivering customer excellence

Improving basic operations

- Upgraded order and inventory management, resulting in improved supply stability
- Further engaging and building confidence with associates

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We are advancing our productivity agenda

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4 Capture **Cross-Divisional Synergies**
5

- NBS cost under management continues to be **flat vs. PY**
- Procurement savings of **~USD 0.8bn YTD**
- Selective offshoring to our five **Global Service Centers** continues
- Centralized **Technical Operations** and integrated **Drug Development** organizations operational as of July 1, 2016

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Expected cost synergies USD 1bn per year from manufacturing and development by 2020

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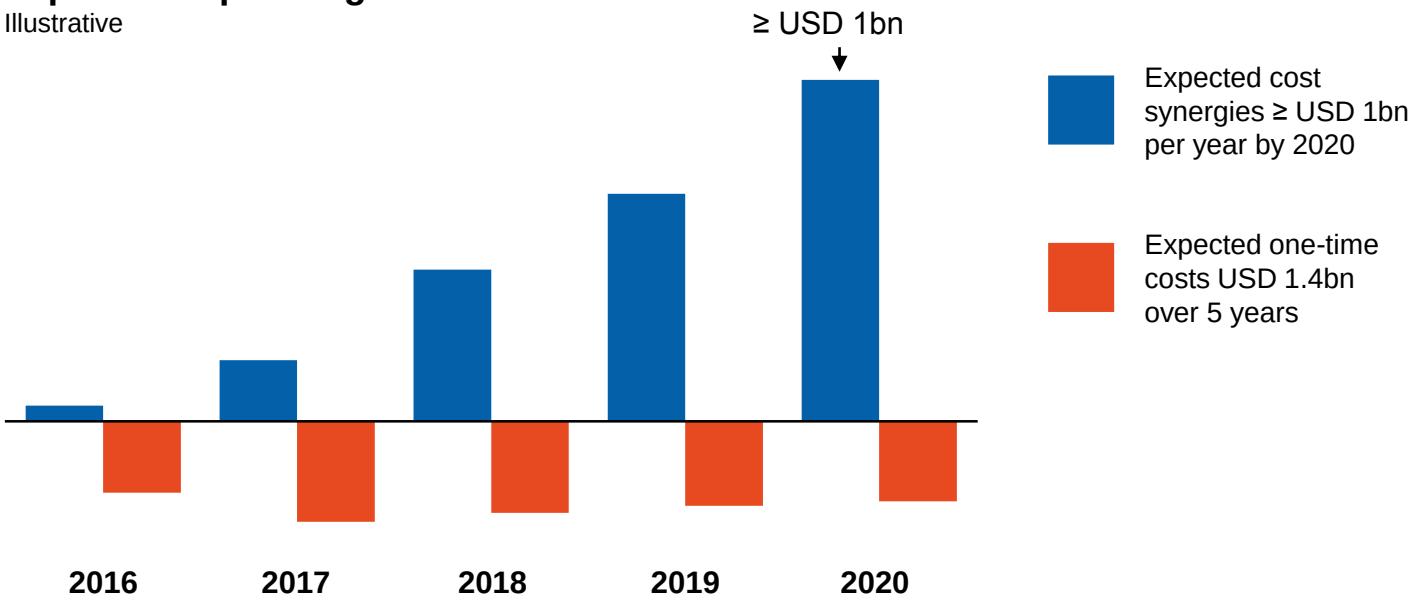
4 Capture **Cross-Divisional Synergies**
5

Impact on Operating Income

Illustrative



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Focused businesses fueled by innovation, supported by functional excellence

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5 Build a **High-Performing Organization**

	Innovative medicines		Generics & biosimilars	Eye care devices
Patient and customer focus	**Oncology**	**Pharmaceuticals**	**Sandoz**	**Alcon**
Innovation	**Research**			
	Development			
Functional excellence	**Manufacturing**			
	Business Services			
	Corporate Functions			

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Summary of Q2 2016 financial results

Continuing operations[1]
USD m

	Q2 2016	Change vs. PY % USD	Change vs. PY % cc
Net Sales	12 470	-2	0
Core Operating Income	3 332	-7	-4
Operating Income	2 093	-8	-4
Net Income	1 806	-3	0
Core EPS (USD)	1.23	-3	-1
EPS (USD)	0.76	-1	2
Free Cash Flow	2 526	22	

1. An explanation of continuing operations can be found on page 40 of the Condensed Interim Financial Report

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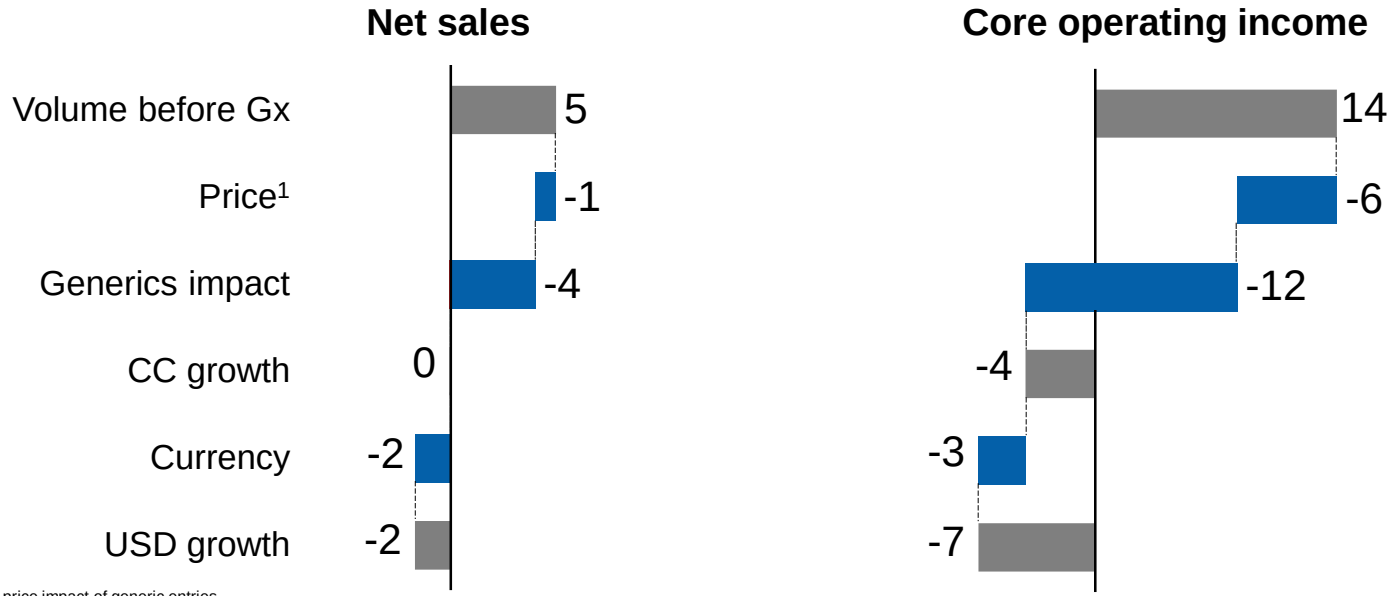
Sales volume mostly offset by Gx impact

Continuing operations Q2 2016
(growth vs. PY in %)



1. Includes the price impact of generic entries

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Core margin decline mainly due to generic erosion and growth investments

	Q2 2016			
	Net sales change vs. PY (in % cc)	**Core operating income change vs. PY** (in % cc)	**Core ROS** (%)	**Core margin change vs. PY** (% pts cc)
Innovative Medicines	-1	-4	31.8	-1.0
Sandoz	3	4	20.8	0.2
Alcon	-1	-15	15.8	-2.6
Q2 continuing operations	**0**	**-4**	**26.7**	**-1.1**

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Innovative Medicines Division

Key growth drivers[1]

	Indication	Q2 2016 Net sales (USD m)	Q2 2016 Growth vs. PY (% cc)
GILENYA (fingolimod)	MS	811	17%
Tasigna (nilotinib)	CML	458	15%
Galvus (vildagliptin)	Type 2 diabetes mellitus	306	12%
Cosentyx (secukinumab)	PsO, PsA, AS	260	nm
Xolair (omalizumab)	Severe allergic asthma, CSU/CIU	212	12%
Votrient (pazopanib)	aRCC	188	15%
Onbrez breezhaler, Seebri breezhaler, Ultibro breezhaler [2]	COPD	176[3]	17%
Tafinlar (dabrafenib), Mekinist (trametinib)	BRAF V600+ metastatic melanoma	172[4]	31%
JAKAVI ruxolitinib	MF, PV	146	49%
REVOLADE [5] (eltrombopag olamine)	Thrombocytopenia[6], SAA	158	36%
Entresto (sacubitril/valsartan)	HFrEF	32	nm

1. Selected key products for growth of Innovative Medicines Division 2. In the US, Onbrez® Breezhaler® approved as Arcapta® Neohaler®; Seebri® Breezhaler® as Seebri® Neohaler® and Ultibro® Breezhaler® as Utibron® Neohaler®
3. Net sales and growth of Onbrez®, Seebri® and Ultibro® 4. Net sales of Tafinlar® + Mekinist® 5. Approved as Promacta® in the US 6. cITP and thrombocytopenia associated with hepatitis C

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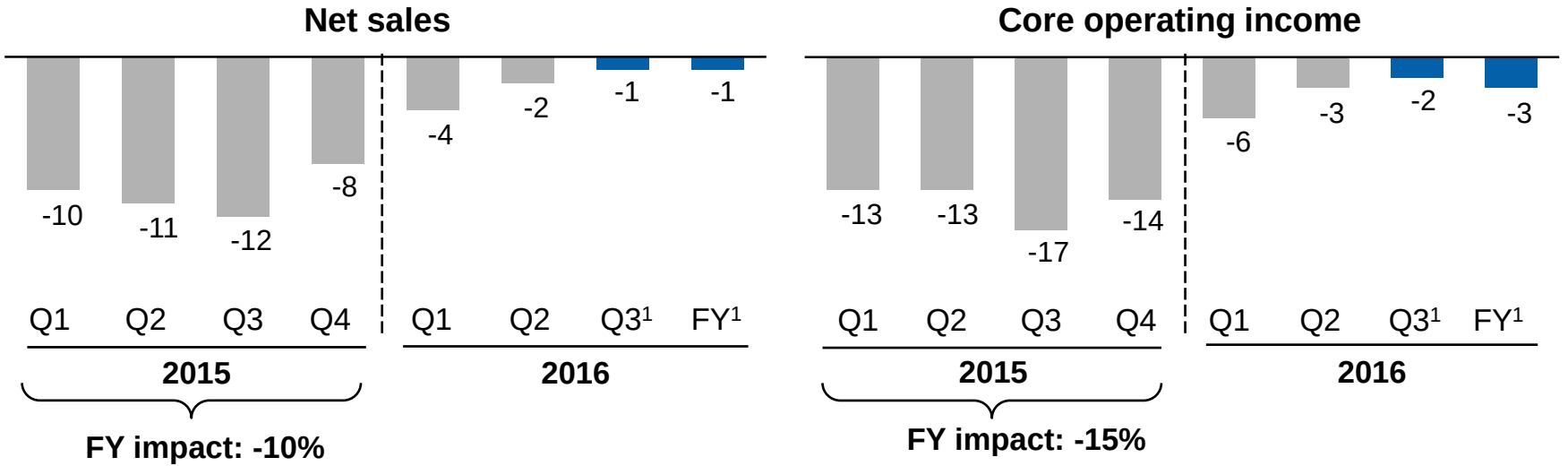
Q2 currency impact -2% and -3%, FY outlook at -1% and -3%

Currency impact vs. PY
(in % pts)



1. Assuming early July rates prevail for the remainder of the year

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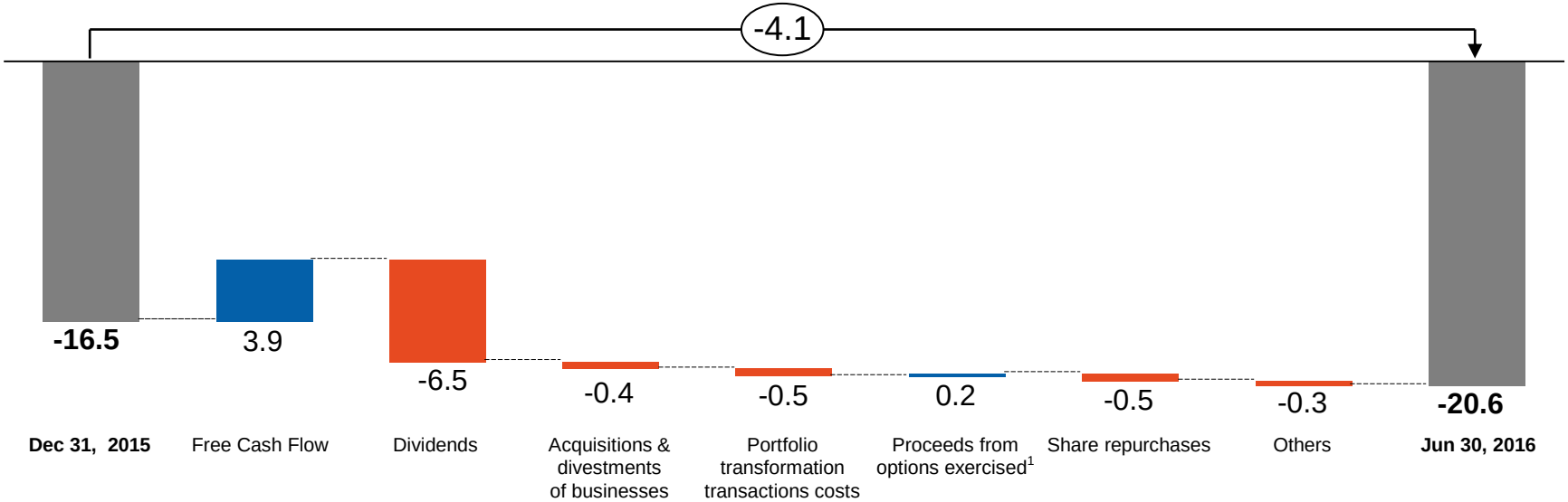
Net debt increased as expected due to dividend payment in March

(in USD bn)



1. Related to employee participation programs

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Full year outlook

Barring unforeseen events

- Group net sales are expected to be broadly in line with the prior year (cc)
- Based on positive treatment guidelines on Entresto®, we will increase spending significantly in H2 2016 to maximize this growth opportunity
- As a result of this additional investment, and depending on Gleevec® erosion curve, core operating income is expected to be broadly in line or decline low single digit (cc)

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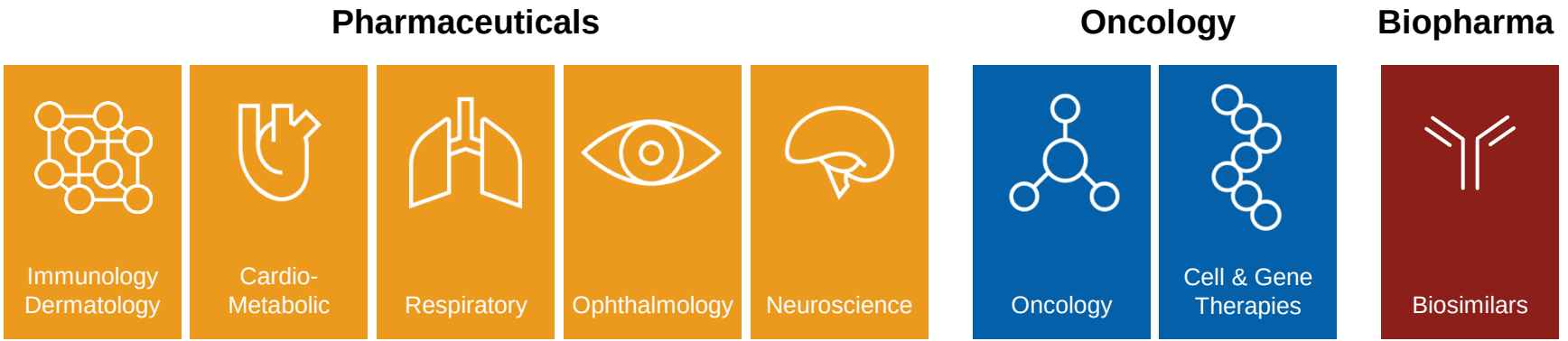
One Novartis Development organization; three units across Innovative Medicines and Sandoz

Novartis Drug Development



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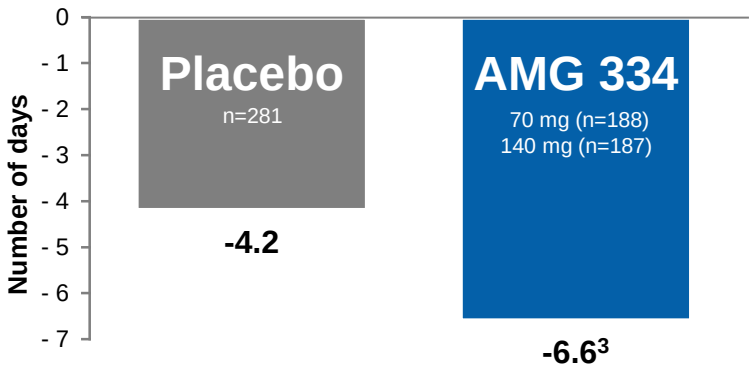
AMG 334[1] demonstrated positive efficacy and safety in chronic migraine prophylaxis

Phase II Chronic Migraine Results[2]

Reduction of mean monthly migraine days



AMG 334 (CGRP inhibitor)

- Positive efficacy and safety results from Ph II study for chronic migraine (CM) prophylaxis
- Ph III episodic migraine results expected in H2 2016

Chronic Migraine

- 15 or more headache days a month of which at least 8 are migraine days
- CM global prevalence ranges from 1% to 5%[4]

1. In collaboration with Amgen; Novartis has AMG 334 rights outside of US, Canada and Japan 2. Phase II chronic migraine study: patients with ~18 migraine days per month at baseline 3. Statistically significant reduction for both doses
4. The International Classification of Headache Disorders, 3rd edition (beta version) Cephalalgia 2013; 33(9) 629–808

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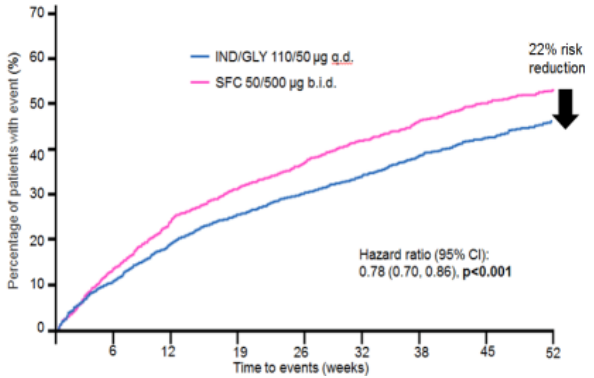
Ultibro® Breezhaler® superior to Seretide®[1] in reducing COPD exacerbations

FLAME[2] study
Ultibro® Breezhaler® vs. Seretide®

Time to 1st moderate / severe COPD exacerbation



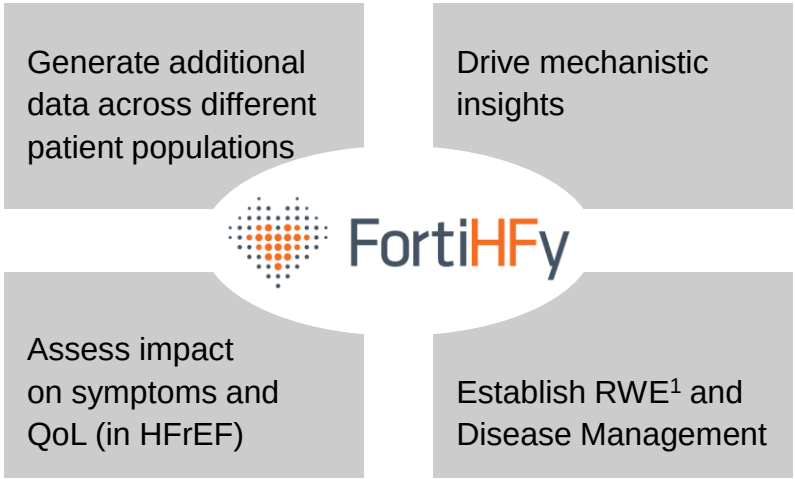
Ultibro® Breezhaler® demonstrated consistent superiority over Seretide®

- Significantly reduced rate of moderate or severe exacerbations (17%)
- Significantly prolonged time to first moderate or severe exacerbation (22%)
- Confirmed improvements in lung function and health-related quality of life
- Now published in NEJM[3]

Ultibro® Breezhaler® provides important treatment option for frequently exacerbating COPD patients

1. Seretide® is a registered trademark of GlaxoSmithKline 2. Wedzicha JA, et al. NEJM (www.nejm.org/doi/full/10.1056/NEJMoa1516385; accessed May 16, 2016) 3. NEJM: The New England Journal of Medicine

Entresto®: Driving further clinical trial data and insights generation



Entresto® sacubitril/valsartan

FortiHFy Clinical Program

>40 ongoing / planned trials, with over 30,000 investigators to expand clinical evidence in HF patients incl. in HFrEF "non-PARADIGM" patients

Recent JAMA Cardiology publications[2]

>28,000 preventable or postponable deaths in the US if all eligible patients would be treated with Entresto®

Entresto® shown to be cost effective compared to ACE inhibitor and consistent with other high-value CV interventions

Post-Acute Myocardial Infarction

PARADISE-MI trial on track to start in 2016

1. RWE: Real World Evidence 2. Fonarow et al. JAMA Cardiol. 2016;1(6):1-4. doi:10.1001/jamacardio.2016.1724; Gaziano et al. JAMA Cardiol. 2016

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Entresto® given strong recommendations in heart failure guidelines

Entresto® sacubitril/valsartan

Associations	Entresto®	Key implications	
  	Class I rating	Places Entresto® as alternative standard therapy to ACE/ARB (ACE or ARB or ARNI)	Symptomatic patients on ACE/ARB should be switched to Entresto®
 	Class I rating	Entresto® should replace ACE in patients on optimal therapy (ACE, BB, MRI) who are still symptomatic	For patients meeting the PARADIGM-HF criteria

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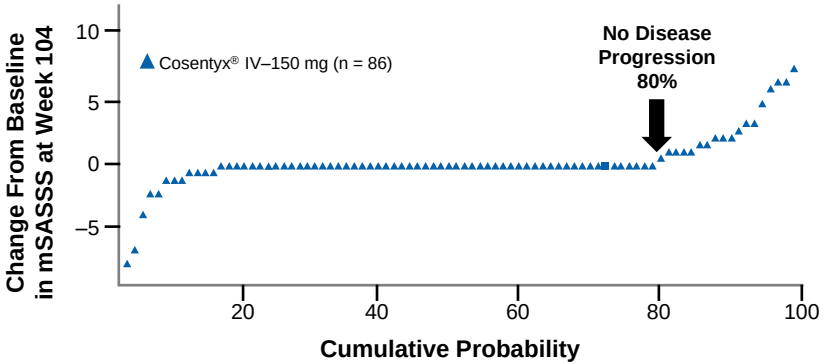
Data show that Cosentyx® can prevent disease progression in Ankylosing Spondylitis (AS)

Strong data support initiation of new superiority head-to-head trial vs. Humira®[1]

Cosentyx® (secukinumab)

AS: mSASSS progression at week 104[2]



- 80% of AS patients treated with Cosentyx® had no radiographic progression in the spine for up to 2 years
- Indirect comparison suggests Cosentyx® may improve signs and symptoms vs. Humira® in AS
- New head-to-head superiority trial vs. Humira® planned in AS (SURPASS)

1. Humira® is a registered trademark of AbbVie 2. J. Braun et al. Ann Rheum Dis. 2016;75 (Suppl2): 52

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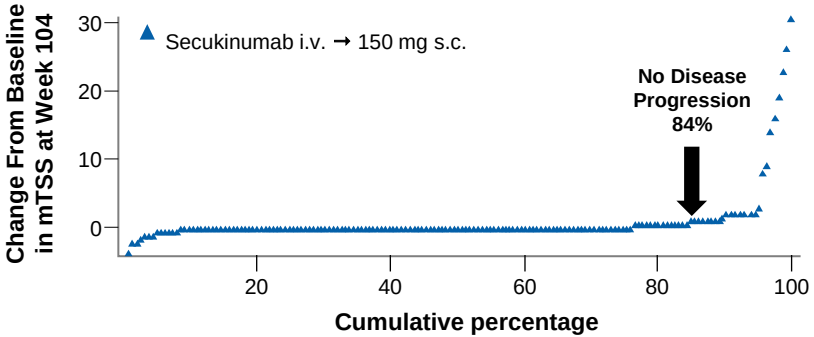
Cosentyx® shows strong longer term data in Psoriatic Arthritis (PsA)

Robust data further support planned head-to-head superiority trial vs. Humira®[1]

Cosentyx (secukinumab)

PsA: mTSS progression at week 104[2]



- No radiographic progression in 84% of PsA patients treated with Cosentyx® for up to 2 years[2]
- Sustained relief from signs and symptoms through 2 years[2]
- Indirect comparison suggests Cosentyx® may improve signs and symptoms vs. Humira® for PsA
- Supports planned head-to-head superiority trial vs. Humira®

1. Humira® is a registered trademark of AbbVie 2. A. Kavanaugh, et al. Ann Rheum Dis. 2016;75 (Suppl2): 598

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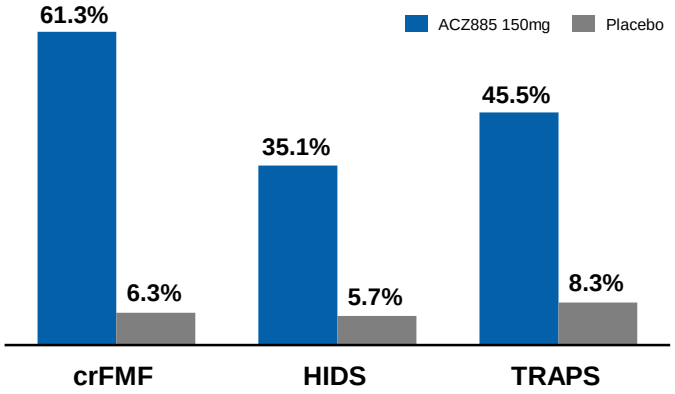
Ilaris®: 3 FDA breakthrough designations and priority reviews for Periodic Fever Syndromes

Ilaris® CLUSTER trial[1]

Responder rate[2] at Week 16



ILARIS (canakinumab)

Trial results	Regulatory update
Ilaris® offered significant improvement vs. placebo	Submissions completed in US, EU, JP
Ilaris® was effective and well tolerated	FDA breakthrough therapy designations received
	FDA priority reviews granted for all three indications

Latest news

CHMP recommended license extension of Ilaris® to treat Adult-Onset Still's Disease (AOSD)

1. De Benedetti et al. EULAR 2016 poster presentation 2. Responder definition: Resolution of index flare at Day 15 and no new flare from the resolution of the index flare until Week 16

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LEE011 on track for filing later this year with additional Phase III trials progressing

MONALEESA-2: Ph III study in 1st-line HR+/ HER2- advanced breast cancer

- Primary efficacy endpoint met at pre-planned interim analysis; trial stopped early
- Clinically meaningful improvement in PFS of ribociclib + letrozole vs. letrozole
- Novartis initiating discussions with regulatory authorities worldwide

Additional LEE011 Ph III trials in HR+/ HER2- advanced breast cancer

MONALEESA-3 (post-menopausal)

- 1st / 2nd line post AI in combination with fulvestrant
- Fully enrolled; final data expected H2 2017; potential filing early 2018

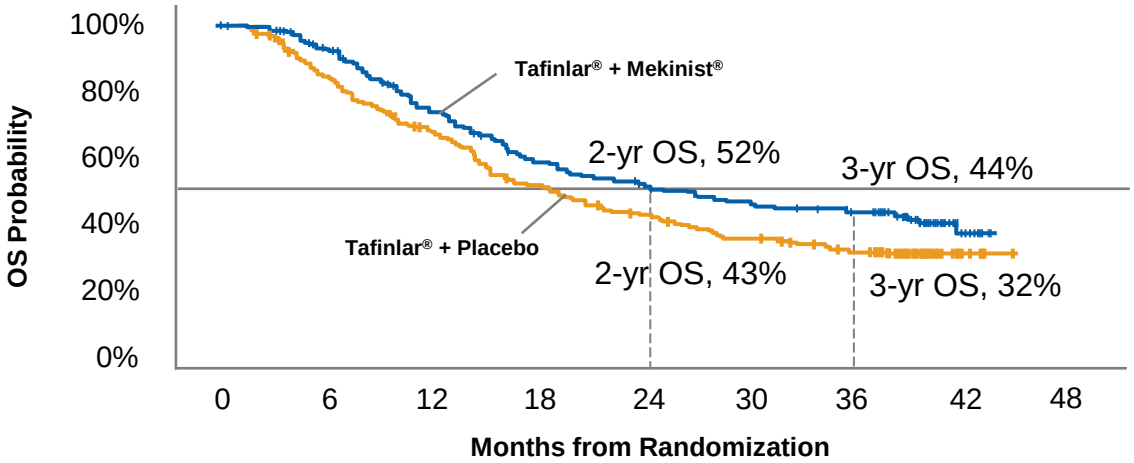
MONALEESA-7 (pre-menopausal)

- 1st line in combination with tamoxifen/NSAI & goserelin
- Fully enrolled; final data expected H1 2018 and potential filing H2 2018

NOVARTIS

Long-term survival in melanoma Phase III trial with Tafinlar® + Mekinist®

COMBI-d: Overall Survival (OS)[1]
% probability of event-free survival



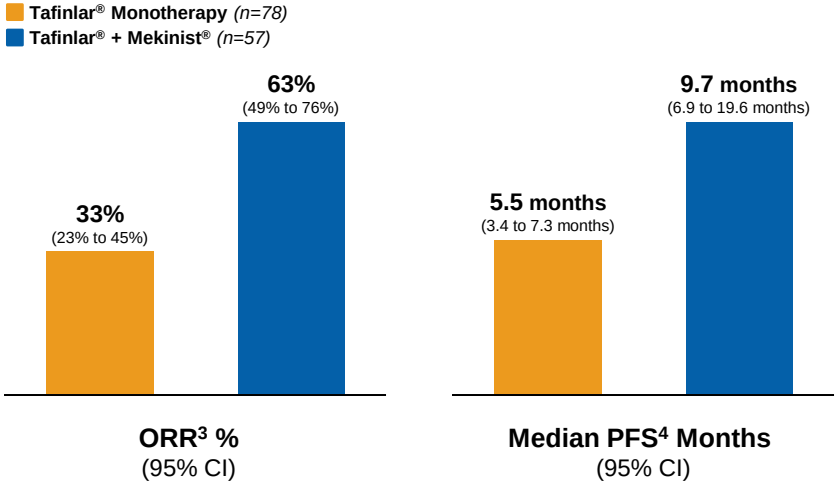
At 3-year follow-up, 44% of patients alive after receiving Tafinlar® + Mekinist®

Presented at ASCO; only Ph III study in melanoma to report new OS landmark

1. Intent-to-treat population; Tafinlar® + placebo includes 26 patients who crossed over to combination arm

Positive data for Tafinlar® + Mekinist® for NSCLC, regulatory filings planned for Q3 2016

Results from Ph II, non-comparative trial in BRAF V600+ NSCLC[1,2]



Safety profile similar to previous experience in melanoma

- No new safety risks identified

Low treatment discontinuation due to AEs

- 8 (14%) 2L+ subjects

Planned submissions in Q3 2016

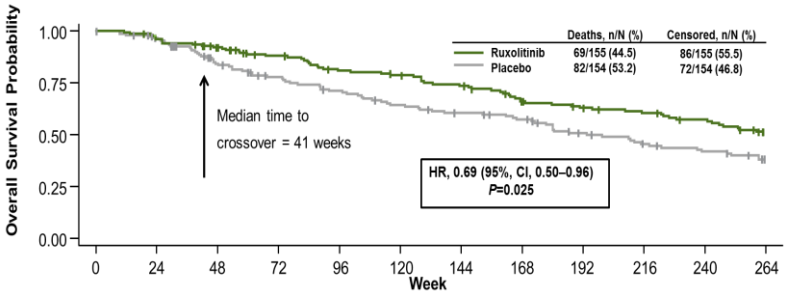
- US, EU & Japan

1. Planchard D, et al. Lancet Oncol. April 11, 2016 2. Planchard D, et al. Lancet Oncol. June 06, 2016 3. Overall Response Rate (Complete Response + Partial Response) 4. Progression Free Survival

Jakavi®: Data confirms significant clinical benefit for patients with MF and PV

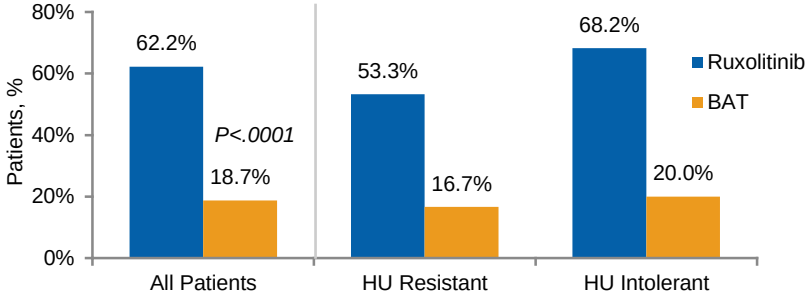
JAKAVI™ ruxolitinib

Myelofibrosis (COMFORT- I)
5-year OS follow-up



- Significant OS advantage of Jakavi® vs. placebo at 5-year follow-up
- Complements COMFORT-II survival data

Polycythemia Vera (RESPONSE-2)
Hematocrit control vs. BAT[1]



- Superior hematocrit control vs. BAT[1] in inadequately controlled (IC) patients without enlarged spleen
- Consistent with RESPONSE trial in IC patients with enlarged spleen

1. Best Available Therapy

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Progressing development of 11 potential blockbusters in Innovative Medicines

Molecule	Indication	MoA	Expected Pivotal Trial Readout	Potential blockbuster?
LEE011 (ribociclib)	HR+ HER2- advanced breast cancer	CDK4/6 inhibitor	✓	✓
OAP030 (Fovista®)[1]	Neovascular AMD	Aptamer anti-PDGF	Q4 2016	✓
AMG 334[2]	Prophylaxis of migraine	CGRP receptor antagonist	H2 2016[3]	✓
RLX030 (serelaxin)	Acute heart failure	Relaxin receptor agonist	H1 2017	✓
RTH258 (brolucizumab)	Neovascular AMD	Anti-VEGF (scFv)	H1 2017	✓
ACZ885 (Ilaris®)	CV risk reduction	Anti-IL1β	2017	✓
AIN457 (Cosentyx®)	Non-radiographic axial SpA	Anti-IL17A	2018	✓
QVM149 (indacaterol, glycopyrronium, mometasone)	Asthma	LABA + LAMA + ICS	2018	✓
LCZ696 (Entresto®)	Heart failure - preserved EF (HFpEF)	ARNI	2019	✓
QAW039 (fevipiprant)	Asthma	CRTh2 antagonist	2019	✓
OMB157 (ofatumumab)	Relapsing multiple sclerosis	Anti-CD20	2019	✓

1. In collaboration with OphthoTech and Genentech; Novartis has OAP030 rights outside of the US 2. In collaboration with Amgen; Novartis has AMG 334 rights outside of US, Canada and Japan 3. Ph IIb trial for chronic migraine completed, Ph III for episodic migraine ongoing

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Biosimilars: Regulatory and data milestones

Rituximab

- Submitted in EU
- Demonstrated similarity with MabThera®[1]: PK bioequivalence, similar PD, safety, efficacy and immunogenicity

Pegfilgrastim

- FDA complete response letter received

Etanercept

- Demonstrated similarity with Enbrel®[2]: PK bioequivalence, no clinically meaningful differences in safety, tolerability and immunogenicity
- Approval unanimously recommended by FDA advisory committee for all originator indications

1. MabThera® is a registered trademark of Roche in Europe. The treatment is marketed as Rituxan® in the US by Genentech 2. Enbrel® is a registered trademark of Amgen in the US and Pfizer in Europe

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Biosimilars on track for multiple potential approvals

Molecule	Indication[1]	Originator[2]	Agency	Filing	
Etanercept	Rheumatoid Arthritis	Enbrel etanercept	FDA	2015	✓
Etanercept	Rheumatoid Arthritis	Enbrel etanercept	EMA	2015	✓
Pegfilgrastim	Neutropenia	Neulasta (pegfilgrastim)	FDA	2015	✓
Pegfilgrastim	Neutropenia	Neulasta (pegfilgrastim)	EMA	2015	✓
Epoetin subcutaneous	Anemia	EPOGEN EPOETIN ALFA PROCRIT EPOETIN ALFA	EMA	2015 (approved)	✓
Rituximab	Non-Hodgkin's Lymphoma	Rituxan Rituximab	EMA	2016	✓
Epoetin	Anemia	EPOGEN EPOETIN ALFA PROCRIT EPOETIN ALFA	FDA	2016	
Adalimumab	Rheumatoid Arthritis	HUMIRA adalimumab	FDA	2016	
Adalimumab	Rheumatoid Arthritis	HUMIRA adalimumab	EMA	2017	
Rituximab	Non-Hodgkin's Lymphoma	Rituxan Rituximab	FDA	2017	
Infliximab	Inflammatory Bowel Disease	Remicade INFLIXIMAB	EMA	2017	

1. Main indication only 2. All trademarks are the property of the respective originator companies

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Agenda

1.	Group review	Joseph Jimenez, Chief Executive Officer
2.	Financial review	Harry Kirsch, Chief Financial Officer
3.	Development	Vas Narasimhan, Global Head Drug Development & CMO
4.	**Closing**	**Joseph Jimenez, Chief Executive Officer**
5.	Q&A session	Executive team

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Solid Q2, investing for future growth as we manage the Gleevec® patent expiration

- Investing behind our growth opportunities
- Launches progressing well
- Pipeline strong

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Agenda

1.	Group review	Joseph Jimenez, Chief Executive Officer
2.	Financial review	Harry Kirsch, Chief Financial Officer
3.	Development	Vas Narasimhan, Global Head Drug Development & CMO
4.	Closing	Joseph Jimenez, Chief Executive Officer
5.	**Q&A session**	**Executive team**

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Q&A

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Appendix

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Achieved and expected highlights from regulatory news flow

H1 2016	Cosentyx®	FDA action in ankylosing spondylitis	✓
	Cosentyx®	FDA action in psoriatic arthritis	✓
	Ilaris®	Regulatory filings in US, EU and JP for periodic fever syndromes	✓
	Afinitor®	FDA and EU action for advanced non functional NET (GI/lung origin)	✓
	PKC412	Regulatory filings in US and EU for both ASM and AML	(✓)[1]
	Tafinlar® + Mekinist®	PMDA action in BRAF V600+ metastatic melanoma	✓
H2 2016	BYM338	Regulatory filings in EU and US for sporadic inclusion body myositis	✗
	Tafinlar® + Mekinist®	Regulatory filings in US and EU for BRAF V600+ NSCLC	
	Votrient®	Regulatory filings in US and EU for adjuvant RCC	
	Afinitor®	PMDA action in advanced non functional NET	
	LEE011 (+ letrozole)	Submission[2] in US and EU 1st line HR+ HER2(-) mBC	

1. US regulatory submission was initiated (rolling submission). EU regulatory submission in expected in H2 2. Trial stopped early as it met the primary efficacy endpoint at the interim analysis. US and EU submissions planned for Q3

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Planned filings[a] 2016 to ≥ 2020

2016		2017	2018	2019	≥ 2020	
LEE011 + ltz HR+, HER2 (-) postmenopausal adv. BC[1] 1st line	Tafinlar® + Mekinist® BRAF V600+ NSCLC[7]	CTL019 Pediatric acute lymphoblastic leukemia	INC280 NSCLC[7]	BAF312 SPMS[16]	ABL001 CML[8]	LJM716 Solid tumors
PKC412 AML[2]	Tasigna®[b] CML[8] treatment free remission	OAP030[d] nAMD[10]	LCI699 Cushing's disease	BYL719 + fulv HR+, HER2 (-) postmenopausal Adv. BC[1] 2nd line	ASB183 Solid and hematologic tumors	LJN452 NASH[21]
Afinitor®/Votubia®[b] TSC[3] seizures	Votrient® Renal cell carcinoma (adjuvant)	RLX030 Acute heart failure	RTH258 nAMD[10]	QAW039 Asthma	BGJ398 Solid tumors	PIM447 Hematologic tumors
Arzerra®[c] CLL[4] (relapsed)	Signifor® LAR[9] Cushing's disease	ACZ885 Sec. prev. CV events[11]	Arzerra® NHL[14] (refractory)	Entresto® Heart failure (PEF)[17]	BYM338 Hip fracture	QAX576 Allergic diseases
Ilaris®[c] Periodic fever syndromes	Adalimumab (US) GP2017	CTL019 DLBCL[12]	Cosentyx® nrAxSpA[15]	Jakavi® GVHD[18]	BKM120 Solid tumors	QGE031 CSU/IU[22]
Lucentis®[b] CNV[5]	Epoetin-alfa (US) HX575	FTY720 Pediatric MS[13]	LEE011+ fulv HR+, HER2 (-) postmenopausal adv. BC[1] 1st /2nd line	Lucentis® ROP[19]	CAD106 Alzheimer's disease	VAY736 Primary Sjoegren's syndrome
PKC412 ASM[6]	Rituximab (EU)[b] GP2013	Tafinlar® + Mekinist® BRAF V600+ Melanoma (adjuvant)	LEE011+ tmx + gsn/or NSAI + gsn HR+, HER2 (-) premenopausal Adv. BC[1] 1st line	OMB157 RMS[20]	CJM112 Immune disorders	BYL719 Solid tumors
		Zykadia® ALK+ adv. NSCLC[7] (1st line, treatment naïve)	QMF149 Asthma	Zykadia® ALK+ adv. NSCLC[7] (Brain metastases)	CNP520 Alzheimer's disease	BYM338 Sarcopenia
		Rituximab (US) GP2013	QVM149 Asthma		EMA401 Neuropathic pain	Entresto® Post-acute myocardial infarction
		Adalimumab (EU) GP2017			FCR001 Renal transplantation	Jakavi® Early myelofibrosis
		Infliximab (EU) GP 1111			HSC835 Stem cell transplantation	LEE011 Solid tumors
					KAE609 Malaria	QAW039 Atopic dermatitis
					KAF156 Malaria	RTH258 DME[23]
					LIK066 Metabolic disorders	Tafinlar® + Mekinist® BRAF V600+ Colorectal cancer

Combination abbreviations:

fulv	fulvestrant
ltz	letrozole
tmx	tamoxifen
gsn	goserelin
NSAI	Non-steroidal aromatase inhibitor

New molecule
New indication
New formulation
Biosimilars

1. Breast cancer
2. Acute myeloid leukemia
3. Tuberous sclerosis complex
4. Chronic lymphocytic leukemia
5. Choroidal neovascularization (CNV) secondary to conditions other than macular degeneration and pathologic myopia
6. Aggressive systemic mastocytosis
7. Non-small cell lung cancer
8. Chronic myeloid leukemia
9. Long-acting release
10. Neovascular age-related macular degeneration
11. Secondary prevention of cardiovascular events
12. Diffuse large B-cell lymphoma
13. Multiple sclerosis
14. Non-Hodgkin's lymphoma
15. Non-radiographic axial spondyloarthritis
16. Secondary progressive multiple sclerosis
17. Preserved ejection fraction
18. Graft-Versus-Host Disease
19. Retinopathy of prematurity
20. Relapsing multiple sclerosis
21. Non-alcoholic steatohepatitis
22. Chronic spontaneous urticaria / Inducible urticaria
23. Diabetic macular edema

a) AMG 334 is not included in this view. AMG 334 is part of the global collaboration with Amgen to commercialize and develop neuroscience treatments.
b) Submitted in EU
c) Submitted in US and EU
d) Also known as Fovista® (pegpleranib). This product is being developed by Ophthotech Corp. Ophthotech has licensed ex-US commercialization rights to Novartis under a Licensing and Commercialization Agreement.

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Pipeline of key projects in confirmatory development

Post-PoC

- ABL001 — CML[1]
- ASB183 — Solid and hematologic tumors
- BGJ398 — Solid tumors
- BKM120 — Solid tumors
- CAD106 — Alzheimer's disease
- CJM112 — Immune disorders
- CNP520 — Alzheimer's disease
- EMA401 — Neuropathic pain
- FCR001 — Renal transplantation
- HSC835 — Stem cell transplantation
- INC280 — NSCLC[2]
- KAE609 — Malaria
- KAF156 — Malaria
- LIK066 — Metabolic disorders
- LJM716 — Solid tumors
- LJN452 — NASH[3]
- PIM447 — Hematologic tumors
- QAX576 — Allergic diseases
- QGE031 — CSU/IU[4]
- VAY736 — Primary Sjoegren's syndrome
- BYM338 — Hip fracture
- BYL719 — Solid tumors
- BYM338 — Sarcopenia
- Jakavi® — GVHD[5]
- LEE011 — Solid tumors
- OMB157 — RMS[6]
- QAW039 — Atopic dermatitis
- Tafinlar® + Mekinist® — BRAF V600+ Colorectal cancer

Phase III / Pivotal

- AMG 334[a] — Migraine
- BAF312 — SPMS[7]
- BYL719 + fulv — HR+, HER2 (-) postmenopausal Adv. BC[8] 2nd line
- CTL019 — Pediatric acute lymphoblastic leukemia
- LEE011 + ltz — HR+, HER2(-) postmenopausal Adv. BC[8] 1st line
- LCI699 — Cushing's disease
- OAP030[b] — nAMD[9]
- PKC412[c] — AML[10]
- QAW039 — Asthma
- RLX030 — Acute Heart failure
- RTH258 — nAMD[9]
- ACZ885 — Sec. Prev. CV events[11]
- Arzerra® — NHL[12] (refractory)
- CTL019 — DLBCL[13]
- Cosentyx® — nrAxSpA[14]
- Entresto™ — Heart failure (PEF)[15]
- Entresto® — Post-acute myocardial infarction
- FTY720 — Pediatric MS[16]
- Jakavi® — Early myelofibrosis
- LEE011+ fulv — HR+, HER2(-) postmenopausal Adv. BC[8] 1st /2nd line
- LEE011+ tmx + gsn/or NSAI + gsn — HR+, HER2(-) premenopausal Adv. BC[8] 1st line
- Lucentis® — ROP[17]
- PKC412[c] — ASM[18]
- QMF149 — Asthma
- QVM149 — Asthma
- RTH258 — DME[19]
- Tafinlar® + Mekinist® — BRAF V600+ Melanoma (adjuvant)
- Tafinlar® + Mekinist® — BRAF V600+ NSCLC[2]
- Votrient® — Renal cell carcinoma (adjuvant)
- Zykadia® — ALK+ adv. NSCLC[2] (Brain metastases)
- Zykadia® — ALK+ adv. NSCLC[2] (1st line, treatment naive)
- Signifor® LAR[20] — Cushing's disease
- Adalimumab (US/EU) GP2017
- Epoetin-alfa (US) HX575
- Infliximab (EU) GP 1111
- Rituximab (US) GP2013

In Registration

- Afinitor®/Votubia® — TSC[21] seizures
- Arzerra® — CLL[22] (extended treatment)
- Arzerra® — CLL[22] (relapsed)
- Ilaris® — Periodic fever syndromes
- Lucentis® — CNV[23]
- Tasigna® — CML[1] treatment free remission
- Etanercept (EU/US) GP215
- Pegfilgrastim (EU/US) LA-EP2006
- Rituximab (EU) GP2013

1. Chronic myeloid leukemia
2. Non-small cell lung cancer
3. Non-alcoholic steatohepatitis
4. Chronic spontaneous urticaria / Inducible urticaria
5. Graft-Versus-Host Disease
6. Relapsing multiple sclerosis
7. Secondary progressive multiple sclerosis
8. Breast cancer
9. Neovascular age-related macular degeneration
10. Acute myeloid leukemia
11. Secondary prevention of cardiovascular events
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19. Diabetic macular edema
20. Long-acting release
21. Tuberous sclerosis complex
22. Chronic lymphocytic leukemia
23. Choroidal neovascularization (CNV) secondary to conditions other than macular degeneration and pathologic myopia

a) Licensed from Amgen for ex-US territories
b) Also known as Fovista® (pegpleranib). This product is being developed by Ophthotech Corp. Ophthotech has licensed ex-US commercialization rights to Novartis under a Licensing and Commercialization Agreement.
c) US regulatory submission has begun

Combination abbreviations:

fulv	fulvestrant
ltz	letrozole
tmx	tamoxifen
gsn	goserelin
NSAI	Non-steroidal aromatase inhibitor

New molecule
New indication
New formulation
Biosimilars

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Key definitions and trademarks

This presentation contains several important words or phrases that we define as below:

AML: Acute myeloid leukemia

Approval: In Pharmaceuticals and Alcon in US and EU; each indication and regulator combination counts as approval; excludes label updates, CHMP opinions alone and minor approvals

aRCC: advanced renal cell cancer

ARNI: Antiogensin receptor neprilysin inhibitor

AS: Ankylosing Spondylitis

ASCRS: American Society of Cataract and Refractive Surgery

ASM: Aggressive systemic mastocytosis

Base business: Continuing Oncology assets unaffected by the GSK transaction

BAT: Best available therapy

cc: constant currencies

CGRP: Calcitonin gene-related peptide

cITP: Chronic immune thrombocytopenia

CM: Chronic migraine

CML: Chronic myeloid leukemia

COPD: Chronic Obstructive Pulmonary Disease

crFMF: Colchicine resistant familial mediterranean fever

CSU / CIU: Chronic spontaneous urticaria / Chronic idiopathic urticaria

GI: Gastrointestinal

Growth Products: Products launched in a key markets (EU, US, Japan) in 2011 or later, or products with exclusivity in key markets until at least 2020 (except Sandoz, which includes only products launched in the last 24 months). They include the acquisition effect of the GSK oncology assets

HF: Heart failure

HFrEF: Heart failure with reduced ejection fraction

HIDS: Hyperimmunoglobulin D Syndrome

HR+/HER2- mBC: Hormone Receptor positive / Human Epidermal growth factor receptor 2 negative metastatic breast cancer

HSCT: Hematopoietic stem cell transplantation

JAMA: The Journal of the American Medical Association

LoE: Loss of exclusivity

MF: Myelofibrosis

MI: Myocardial infarction

MIGS: Minimally-invasive glaucoma surgery

MS: Multiple sclerosis

mSASSS: modified stoke ankylosing spondylitis spine score

mTSS: Modified total sharp score

NET: Neuroendocrine tumor

New assets: Assets acquired in the GSK transaction which closed on March 2, 2015

NSAI: Nonsteroidal aromatase inhibitor

NSCLC: Non-small cell lung cancer

ORR: Overall response rate

OS: Overall survival

PA: Prior authorization

PASI 90: 90% reduction in Psoriasis Area Severity Index from baseline

PFS: Progression free survival

PsA: Psoriatic arthritis

PsO: Psoriasis

PV: Polycythemia vera

PY: Prior year

RCC: Renal cell cancer

SAA: Severe aplastic anemia

scFv: Single chain variable fragment

SR GvHD: Steroid resistant graft vs host disease

TRAPS: Tumor necrosis factor receptor associated periodic syndrome

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