Novartis International AG
Novartis Global Communications
CH-4002 Basel
Switzerland

http://www.novartis.com

Novartis Q2 and H1 2016 Condensed Interim Financial Report – Supplementary Data

GROUP AND DIVISIONAL OPERATING PERFORMANCE

Key figures[1]	Q2 2016	Q2 2015	% change		H1 2016	H1 2015	% change	
	USD m	USD m	USD	cc[2]	USD m	USD m	USD	cc[2]
Net sales to third parties from continuing operations	**12 470**	**12 694**	*-2*	*0*	**24 070**	**24 629**	*-2*	*1*
Divisional operating income from continuing operations	2 253	2 329	*-3*	*1*	4 810	5 260	*-9*	*-2*
Corporate income & expense, net from continuing operations	-160	-48	*-233*	*-250*	-266	-194	*-37*	*-47*
Operating income from continuing operations	**2 093**	**2 281**	***-8***	***-4***	**4 544**	**5 066**	***-10***	***-4***
As % of net sales	*16.8%*	*18.0%*			*18.9%*	*20.6%*		
Income from associated companies	203	121	*68*	*68*	330	136	*143*	*141*
Interest expense	-180	-164	*-10*	*-13*	-365	-343	*-6*	*-9*
Other financial income and expense	-3	-82	*96*	*nm*	-44	-25	*-76*	*nm*
Taxes	-307	-300	*-2*	*-6*	-648	-672	*4*	*-1*
Net income from continuing operations	**1 806**	**1 856**	***-3***	***0***	**3 817**	**4 162**	***-8***	***-2***
Net income from discontinued operations[3]		-18	*nm*	*nm*		10 681	*nm*	*nm*
Net income[3]	**1 806**	**1 838**	***-2***	***1***	**3 817**	**14 843**	***-74***	***-73***
Basic EPS from continuing operations (USD)	**0.76**	**0.77**	***-1***	***2***	**1.60**	**1.72**	***-7***	***-1***
Basic EPS from discontinued operations (USD)[3]		-0.01	*nm*	*nm*		4.43	*nm*	*nm*
Total basic EPS (USD)[3]	**0.76**	**0.76**	***0***	***3***	**1.60**	**6.15**	***-74***	***-72***
Free cash flow from continuing operations[2]	**2 526**	**2 064**	***22***		**3 888**	**3 529**	***10***	
Core[2]								
Core operating income from continuing operations	**3 332**	**3 593**	***-7***	***-4***	**6 593**	**7 244**	***-9***	***-4***
As % of net sales	*26.7%*	*28.3%*			*27.4%*	*29.4%*		
Core net income from continuing operations	**2 930**	**3 074**	***-5***	***-2***	**5 718**	**6 273**	***-9***	***-4***
Core net loss from discontinued operations		-59	*nm*	*nm*		-142	*nm*	*nm*
Core net income	**2 930**	**3 015**	***-3***	***0***	**5 718**	**6 131**	***-7***	***-3***
Core basic EPS from continuing operations (USD)	**1.23**	**1.27**	***-3***	***-1***	**2.40**	**2.60**	***-8***	***-3***
Core basic EPS from discontinued operations (USD)		-0.02	*nm*	*nm*		-0.06	*nm*	*nm*
Total core basic earnings per share (USD)	**1.23**	**1.25**	***-2***	***1***	**2.40**	**2.54**	***-6***	***-2***

nm = not meaningful

On January 27, 2016, Novartis announced plans to further focus our divisions, integrating businesses that share therapeutic areas to better leverage our development and marketing capabilities. These plans included the transfer of the Ophthalmic Pharmaceuticals franchise from the Alcon Division to the Innovative Medicines Division (formerly named the Pharmaceuticals Division), and the transfer of selected mature products from the Innovative Medicines Division to the Sandoz Division. Operationally, these transfers were completed as of April 1, 2016. The centralization of manufacturing and integration of some drug development functions, also announced on January 27, 2016, were completed as of July 1, 2016.

In compliance with International Financial Reporting Standards (IFRS), Novartis updated its segment financials to reflect these transfers, both for the current and prior year, to aid comparability of year-on-year results. As a result, all comparisons of divisional results from 2016 to 2015 reflect this new divisional structure.

In addition, in 2015, Novartis completed a series of portfolio transformation transactions, including the acquisition of oncology assets from GSK and a 36.5% interest in GSK Consumer Healthcare Holdings Ltd., and the divestment of its Vaccines and Animal Health businesses. To reflect these transactions, Novartis reported the Group's financial results in 2015 as "continuing operations" and "discontinued operations." All comparisons from 2016 to 2015 are versus continuing operations, unless otherwise noted. See page 40 for a full explanation.

[1] Continuing and discontinued operations are defined on page 40. In the prior-year quarter, net income from discontinued operations and net income of the Group include exceptional divestment gains.
[2] Constant currencies (cc), core results and free cash flow are non-IFRS measures. An explanation of non-IFRS measures can be found on page 48 of the Condensed Interim Financial Report. Unless otherwise noted, all growth rates in this Release refer to same period in prior year.
[3] H1 2015 included USD 12.8 billion of exceptional pre-tax divestment gains from the portfolio transformation transactions and USD 0.5 billion of additional pre-tax transaction related expenses.

Second quarter

Net sales
Net sales were USD 12.5 billion (-2%, 0% cc) in the second quarter, as volume growth of 5 percentage points offset the negative impact of generic competition (-4 percentage points) and pricing (-1 percentage points). Growth Products[1] contributed USD 4.4 billion or 35% of net sales, up 19% (USD) over the prior-year quarter.

Corporate income and expense, net
Corporate income and expense, which includes the cost of Group management and central services, amounted to a net expense of USD 160 million in the second quarter of 2016 compared to USD 48 million in the prior-year quarter. This increase was mainly due to higher impairments and lower realized gains from the investments in the Novartis Venture Fund in the current year and the reversal of an impairment of property, plant and equipment recorded in Corporate in the prior year.

Operating income
Operating income was USD 2.1 billion (-8%, -4% cc). Operating income margin in constant currencies decreased 0.7 percentage points; currency had a negative impact of 0.5 percentage points, resulting in a net decrease of 1.2 percentage points in US dollar terms to 16.8% of net sales.

Core adjustments amounted to USD 1.2 billion (2015: USD 1.3 billion), broadly in line with the prior-year quarter.

Excluding these items, core operating income was USD 3.3 billion (-7%, -4% cc). Core operating income margin in constant currencies decreased 1.1 percentage points, mainly due to loss of exclusivity on *Gleevec*, investments behind new launches and the Alcon growth plan. Currency had a negative impact of 0.5 percentage points, resulting in a net decrease of 1.6 percentage points in US dollar terms to 26.7% of net sales.

Income from associated companies
Income from associated companies amounted to USD 203 million, compared to USD 121 million in the prior-year quarter. The increase was due to the income of USD 57 million from our investment in GSK Consumer Healthcare Holdings Ltd., compared to a loss of USD 28 million recorded in the prior-year quarter. The income contribution from GSK Consumer Healthcare Holdings Ltd. includes a negative adjustment of USD 22 million recorded in the second quarter upon the issuance of actual 2015 results.

Core income from associated companies increased to USD 306 million from USD 237 million in the second quarter of 2015, also on account of higher core income contribution from GSK Consumer Healthcare Holdings Ltd.

The income contribution from Roche Holding AG (Roche) is broadly in line with the prior-year quarter both on a reported and core basis.

Interest expense and other financial income/expense
Interest expense in the second quarter of 2016 increased to USD 180 million from USD 164 million in the prior-year quarter due to higher outstanding debt.

Other financial income and expense amounted to an expense of USD 3 million compared to an expense of USD 82 million in the prior-year quarter, mainly due to lower currency losses in the second quarter of 2016 (USD 15 million compared to USD 61 million in the prior-year quarter), valuation gains on commodities of USD 7 million in the second quarter of 2016 compared to a loss of USD 1 million in the prior-year quarter, and monetary losses from hyperinflation accounting of USD 24 million in the prior-year quarter.

Taxes
The tax rate in the second quarter increased to 14.5% from 13.9% in the prior-year quarter, mainly as a result of a change in profit mix from lower to higher tax jurisdictions.

[1] "Growth Products" are an indicator of the rejuvenation of the portfolio, and comprise products launched in a key market (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.

The core tax rate increased to 15.2% from 14.7% in the prior-year quarter, mainly as a result of a change in profit mix from lower to higher tax jurisdictions.

Net income and EPS
Net income was USD 1.8 billion (-3%, 0% cc), down less than operating income mainly due to higher income from associated companies.

EPS was USD 0.76 (-1%, +2% cc), benefitting from a reduction in the number of shares outstanding.

Core net income was USD 2.9 billion (-5%, -2% cc), down less than core operating income mainly due to higher income from associated companies.

Core EPS was USD 1.23 (-3%, -1% cc), benefitting from a reduction in the number of shares outstanding.

Total Group
For the total Group, net income amounted to USD 1.8 billion, broadly in line with the prior-year quarter, and basic earnings per share was USD 0.76.

Free cash flow was USD 2.5 billion, compared to USD 2.0 billion in the second quarter of 2015.

First half

Net sales
Net sales were USD 24.1 billion (-2%, +1% cc) in the first half. Growth Products contributed USD 8.2 billion or 34% of net sales, up 21% (USD) over the prior-year period.

Corporate income and expense, net
Corporate income and expense amounted to an expense of USD 266 million in the first half of 2016 compared to USD 194 million in the prior-year period, mainly due to higher impairments and lower realized gains from investments in the Novartis Venture Fund compared to the prior year.

Operating income
Operating income was USD 4.5 billion (-10%, -4% cc). Operating income margin in constant currencies decreased 1.0 percentage points; currency had a negative impact of 0.7 percentage points, resulting in a net decrease of 1.7 percentage points to 18.9% of net sales.

Core adjustments amounted to USD 2.0 billion (2015: USD 2.2 billion), slightly below prior year mainly due to higher divestment gains in the first half of 2016.

Excluding these items, core operating income was USD 6.6 billion (-9%, -4% cc). Core operating income margin in constant currencies decreased 1.5 percentage points, mainly due to loss of exclusivity on *Gleevec*, investments behind new launches and the Alcon growth plan. Currency had a negative impact of 0.5 percentage points, resulting in a net decrease of 2.0 percentage points to 27.4% of net sales.

Income from associated companies
Income from associated companies increased to USD 330 million, compared to USD 136 million in the prior-year period. The increase was mainly due to a smaller adjustment recognized upon publication of 2015 actual results by Roche compared to the adjustment recorded in the prior year upon publication of the 2014 actual results. In the first half of 2016 we recognized an income of USD 219 million from our investment in Roche, which was our estimated share of income for the first half of 2016 of USD 287 million partly offset by the adjustment for 2015 actual results.

In addition, in the first half of 2016 we recognized an income of USD 107 million from our investment in GSK Consumer Healthcare Holdings Ltd., whereas the contribution was estimated to be negligible in the first half of 2015. The income contribution from GSK Consumer Healthcare Holdings Ltd. includes a negative adjustment of USD 22 million recorded in the second quarter upon the issuance of actual 2015 results.

Core income from associated companies increased to USD 559 million in the first half of 2016 from USD 458 million in the prior-year period. The increase was due to a higher contribution from GSK Consumer Healthcare Holdings Ltd., which accounted for USD 192 million in the first half of 2016 compared to USD 75 million in prior-year period. The increase was partially offset by a slight decrease in the core income contribution from Roche to USD 363 million in the first half of 2016 compared to USD 382 million in the prior-year period.

Interest expense and other financial income/expense
Interest expense in the first half of 2016 increased to USD 365 million from USD 343 million in the prior-year period due to higher outstanding debt.

Other financial income and expense amounted to an expense of USD 44 million compared to an expense of USD 25 million in the prior-year period, mainly due to a negative currency result of USD 74 million compared to currency gains of USD 13 million in the prior-year period, offset by valuation gains on commodities of USD 21 million in the first half compared to a loss of USD 2 million in the prior-year period and monetary losses from hyperinflation accounting of USD 43 million in the prior-year period.

Taxes
The tax rate in the first half increased to 14.5% from 13.9% in the prior-year period, mainly as a result of a change in profit mix from lower to higher tax jurisdictions.

The core tax rate increased to 15.2% from 14.7% in the prior-year period, mainly as a result of a change in profit mix from lower to higher tax jurisdictions.

Net income and EPS
Net income was USD 3.8 billion (-8%, -2% cc), down less than operating income mainly due to higher income from associated companies.

EPS was USD 1.60 (-7%, -1% cc), broadly in line with net income.

Core net income was USD 5.7 billion (-9%, -4% cc), in line with core operating income.

Core EPS was USD 2.40 (-8%, -3% cc), broadly in line with core net income.

Total Group
For the total Group, net income amounted to USD 3.8 billion compared to USD 14.8 billion in the prior-year period, and basic earnings per share decreased to USD 1.60 from USD 6.15. The decrease was due to the income from discontinued operations, which in the prior-year period included USD 12.8 billion exceptional pre-tax divestment gains from the portfolio transformation transactions and USD 0.5 billion additional pre-tax transaction related expenses.

Free cash flow was USD 3.9 billion compared to USD 3.2 billion in the first half of 2015.

Innovative Medicines

	Q2 2016	Q2 2015[1]	% change		H1 2016	H1 2015[1]	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Net sales	**8 387**	**8 633**	**-3**	**-1**	**16 116**	**16 593**	**-3**	**0**
Operating income	**1 866**	**1 994**	**-6**	**-3**	**4 046**	**4 444**	**-9**	**-4**
As % of net sales	22.2	23.1			25.1	26.8		
Core operating income	**2 669**	**2 872**	**-7**	**-4**	**5 271**	**5 727**	**-8**	**-3**
As % of net sales	31.8	33.3			32.7	34.5		

The Innovative Medicines Division (formerly named the Pharmaceuticals Division) is comprised of two business units (BUs): Novartis Pharmaceuticals and Novartis Oncology.[2]

Following the new divisional structure announced on January 27, 2016, results from the Innovative Medicines Division in 2016 and 2015 include the Ophthalmic Pharmaceuticals products transferred in from the Alcon Division, and exclude the selected mature products transferred out to Sandoz.

Second quarter

Net sales
Net sales were USD 8.4 billion (-3%, -1% cc) in the second quarter. Volume contributed 6 percentage points to sales growth. Generic competition had a negative impact of 6 percentage points and pricing had a negative impact of 1 percentage point, both largely due to *Gleevec/Glivec* genericization in the US, which impacted a full quarter for the first time. Growth Products[3] grew 23% (cc) to USD 3.8 billion, or 45% of division net sales.

Regionally, Europe sales (USD 2.9 billion, +9% cc) grew, mainly driven by *Cosentyx*, *Tafinlar* + *Mekinist* and *Gilenya.* US sales (USD 2.8 billion, -10% cc) declined due to generic competition, largely for *Gleevec/Glivec* and *Exelon Patch,* which more than offset the strong performance of Growth Products, including *Cosentyx.* Japan sales (USD 0.7 billion, -2% cc) declined, mainly due to the divestment of the 14 Established Medicines brands in March and to generic impact for *Exforge* and *Diovan*, as well as competition for *Lucentis*. Emerging Growth Markets (USD 2.0 billion, +3% cc) delivered growth, despite a slowdown in some markets (e.g. Venezuela) and the timing of tenders in the Middle East.

Novartis Pharmaceuticals BU sales were USD 5.1 billion (+1% cc). In Neuroscience, *Gilenya* (USD 811 million, +17% cc) saw double-digit growth in most markets. Ophthalmology sales declined, mainly due to *Patanol* genericization, as well as competition for *Lucentis* (USD 475 million, -10% cc). Respiratory performance was driven by the COPD[4] portfolio (USD 176 million, +17% cc). In Cardio-Metabolic, *Galvus* (USD 306 million, +12% cc) saw continued growth and *Entresto* (USD 32 million) continued to launch in additional countries. Immunology and Dermatology sales increased 53% (cc) to USD 734 million, driven by *Cosentyx* (USD 260 million).

Novartis Oncology BU sales were USD 3.3 billion (-3% cc). The sales decline was driven by *Gleevec/Glivec* (USD 891 million, -25% cc) generic impact in the US, partially offset by growth drivers including *Tasigna* (USD 458 million, +15% cc), *Jakavi* (USD 146 million, +49% cc), *Promacta/Revolade* (USD 158 million, +36% cc) and *Tafinlar + Mekinist* (USD 172 million, +31% cc).

Operating income
Operating income was USD 1.9 billion (-6%, -3% cc). Core adjustments totaled USD 803 million, including USD 614 million for amortization of intangible assets, mainly related to the acquired assets in Oncology and Ophthalmology. Prior-year core adjustments were USD 878 million.

[1] In compliance with IFRS, Novartis updated its segment financials to reflect the new divisional structure announced on January 27, 2016, to aid comparability of year-on-year results.
[2] See Note 5 to the Condensed Interim Financial Report for a complete description of the segment.
[3] Growth products are an indicator of the rejuvenation of the portfolio, and comprise products launched in a key market (EU, US, Japan) in 2011 or later, or products with exclusivity in key markets until at least 2020.
[4] Our chronic obstructive pulmonary disease (COPD) portfolio consists of *Ultibro Breezhaler/Utibron Neohaler, Onbrez Breezhaler/Arcapta Neohaler* and *Seebri Breezhaler/Seebri Neohaler*.

Core operating income was USD 2.7 billion (-7%, -4% cc), reflecting generic erosion and launch investments. Core operating income margin in constant currencies decreased by 1.0 percentage points; currency had a negative impact of 0.5 percentage points, resulting in a net decrease of 1.5 percentage points to 31.8% of net sales.

Core gross margin as a percentage of net sales decreased by 1.1 percentage points (cc), mainly due to higher production costs. Core R&D expenses decreased by 0.2 percentage points (cc). Core M&S expenses increased by 0.8 percentage points (cc), largely due to launch investments behind *Entresto* and *Cosentyx.* Core G&A expenses decreased by 0.2 percentage points (cc), and core Other Income and Expense, net improved the margin by 0.5 percentage points (cc).

First half

Net sales
Innovative Medicines delivered net sales of USD 16.1 billion (-3%, 0% cc) in the first half of the year, as volume growth (+7 percentage points) was fully offset by the impact of generic competition (-6 percentage points) and pricing (-1 percentage point).

Europe sales (USD 5.6 billion, +9% cc) grew, while the US performance (USD 5.4 billion, -7% cc) was impacted by generic competition. Japan sales (USD 1.3 billion, -9% cc) declined versus prior year, mainly due to generic competition and divestments. Emerging Growth Markets sales increased 4% (cc) to USD 4.0 billion.

Operating income
Operating income was USD 4.0 billion (-9%, -4% cc) for the first half. Core adjustments amounted to USD 1.2 billion, mainly due to USD 1.2 billion of amortization of intangible assets. Prior-year core adjustments were USD 1.3 billion.

Core operating income was USD 5.3 billion (-8%, -3% cc). Core operating income margin in constant currencies decreased by 1.2 percentage points; currency had a negative impact of 0.6 percentage points, resulting in a net decrease of 1.8 percentage points to 32.7% of net sales.

Core gross margin as a percentage of net sales decreased by 1.1 percentage points (cc), mainly due to higher production costs. Core R&D expenses decreased by 0.2 percentage points (cc). Core M&S expenses increased by 0.8 percentage points (cc), largely due to launch investments. Core G&A expenses decreased by 0.1 percentage points (cc) and core Other Income and Expense, net improved the margin by 0.4 percentage points (cc).

Innovative Medicines product review

All comments below focus on second quarter movements in constant currencies.

ONCOLOGY BUSINESS UNIT

	Q2 2016	Q2 2015	% change		**H1 2016**	H1 2015	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Gleevec/Glivec	891	1 184	-25	-25	1 725	2 254	-23	-22
Tasigna	458	412	11	15	840	784	7	11
Subtotal Bcr-Abl portfolio	**1 349**	**1 596**	**-15**	**-14**	**2 565**	**3 038**	**-16**	**-14**
Sandostatin	424	413	3	5	825	798	3	6
Afinitor/Votubia	365	423	-14	-13	732	811	-10	-8
Exjade/Jadenu	254	262	-3	-1	477	456	5	7
Votrient	188	165	14	15	354	222	nm	nm
Tafinlar + Mekinist[1]	172	131	31	31	322	171	nm	nm
Promacta/Revolade	158	116	36	36	289	152	nm	nm
Jakavi	146	98	49	49	270	188	44	47
Zykadia	24	18	33	35	48	34	41	44
Other	239	258	-7	-5	466	466	0	3
Total Oncology Business Unit	**3 319**	**3 480**	**-5**	**-3**	**6 348**	**6 336**	**0**	**2**

[1] Majority of sales for *Mekinist* and *Tafinlar* are combination, but both can be used as a monotherapy
nm = not meaningful

Our Bcr-Abl portfolio, consisting of *Tasigna* and *Gleevec/Glivec*, generated sales of USD 1.3 billion (-14% cc) in the second quarter.

Tasigna (USD 458 million, +15% cc) continued to grow at double-digit rates, driven by the US, Europe and other markets. Despite the entry of a generic version of *Gleevec* on February 1, 2016, *Tasigna* continued to grow in the US. *Tasigna* is approved for the treatment of adult patients newly diagnosed with Philadelphia chromosome-positive (Ph+) chronic myeloid leukemia (CML) in the chronic phase, and is also approved for the treatment of adult patients with Ph+ CML in the chronic or accelerated phase who are resistant or intolerant to at least one prior therapy including *Gleevec/Glivec*.

Gleevec/Glivec (USD 891 million, -25% cc) declined, driven by the US, which saw the entry of a generic version on February 1, 2016. *Gleevec* is approved in more than 110 countries for the treatment of adult patients in all phases of Ph+ CML, for the treatment of patients with KIT (CD117)-positive gastrointestinal tumors (KIT+ GIST), which cannot be surgically removed and/or have metastasized, and for the treatment of adult patients following complete surgical removal of KIT+ GIST. Not all indications are available in every country.

Afinitor/Votubia (USD 365 million, -13% cc) declined, mainly due to new treatment options for advanced renal cell carcinoma (aRCC) and advanced breast cancer in the US, partially offset by expansion in other indications, such as neuroendocrine tumors (NET) of GI or lung origin. *Afinitor* is approved in combination with exemestane for the treatment of patients with HR+/HER2 negative advanced breast cancer after failure with a non-steroidal aromatase inhibitor, for aRCC following VEGF-targeted therapy (in the US, specifically following sunitinib and sorafenib) and for the treatment of locally advanced, metastatic or unresectable progressive pancreatic NET. In February 2016, *Afinitor* was approved in the US for the treatment of advanced, progressive, well-differentiated, nonfunctional GI or lung NET, and in May 2016 the EC approved *Afinitor* for the same indication. *Afinitor* is also approved for treatment of patients with subependymal giant cell astrocytoma and renal angiomyolipoma associated with tuberous sclerosis complex. Everolimus, the active ingredient in *Afinitor/Votubia*, is available under the trade names *Zortress/Certican* for use in other non-oncology indications and is exclusively licensed to Abbott and sublicensed to Boston Scientific for use in drug-eluting stents.

Sandostatin (USD 424 million, +5% cc) continued to grow, driven by key markets, including the US. *Sandostatin* is a somatostatin analogue indicated for the treatment of acromegaly and NET. In NET, it is used for patients with symptoms of carcinoid syndrome from gastro-entero-pancreatic NET as well as for tumor control in patients with advanced NET of the midgut or unknown primary tumor location.

Exjade/Jadenu (USD 254 million, -1% cc) declined, driven by tender phasing in Emerging Growth Markets, partially offset by growth from the launch of *Jadenu* in the US. *Exjade* is a once-daily dispersible tablet for chronic transfusional iron overload, as well as for chronic iron overload in patients with non-transfusion-dependent thalassemia. *Jadenu*, an oral film-coated tablet formulation that can be swallowed whole, is approved in the US and Canada for the same indications as *Exjade*. In the EU, the new oral formulation was approved as *Exjade* Film-Coated Tablet in March 2016. Regulatory applications for *Jadenu* have been submitted in Switzerland and many other countries worldwide.

Votrient (USD 188 million, +15% cc) experienced growth in all major markets. *Votrient* is a small molecule tyrosine kinase inhibitor (TKI) that targets a number of intracellular proteins to limit tumor growth and cell survival, which is approved in the US for the treatment of patients with aRCC, and in the EU for first-line treatment of adult patients with aRCC as well as patients who have received prior cytokine therapy for advanced disease. *Votrient* is also indicated for the treatment of patients with selective subtypes of advanced soft tissue sarcoma (STS) who have received prior chemotherapy or have progressed within 12 months after neoadjuvant therapy.

Tafinlar + Mekinist (USD 172 million, +31% cc) showed strong growth. *Tafinlar* + *Mekinist* is the first combination of its kind for the treatment of patients with BRAF V600E/K mutation-positive unresectable or metastatic melanoma, as detected by a validated test. It is also the first combination of BRAF and MEK inhibitors to report three years of follow-up survival data in a Phase III study in BRAF V600+ unresectable or metastatic melanoma patients. *Tafinlar* and *Mekinist* are also approved as single agents for the treatment of patients with unresectable or metastatic melanoma in more than 60 and 35 countries worldwide, respectively. In addition, both *Tafinlar* monotherapy and the *Tafinlar* + *Mekinist* combination have FDA Breakthrough Therapy designation in BRAF mutant non-small cell lung cancer (NSCLC).

Promacta/Revolade (USD 158 million, +36% cc) double-digit growth was driven by continued worldwide uptake as well as growth of the thrombopoietin (TPO) class for chronic immune (idiopathic) thrombocytopenic purpura (ITP). It is the only approved once-daily oral TPO receptor agonist and the only TPO receptor agonist with multiple indications in different disease states. It is approved in more than 101 countries for the treatment of thrombocytopenia in adult patients with chronic ITP who have had an inadequate response or are intolerant to other treatments. In the US and EU, *Promacta/Revolade* is approved for patients one year and older with chronic ITP who have had an insufficient response to other treatments. It is also approved in 45 countries for the treatment of patients with severe aplastic anemia who are refractory to other treatments, and in more than 50 countries for the treatment of thrombocytopenia in patients with chronic hepatitis C to allow them to initiate and maintain interferon-based therapy.

Jakavi (USD 146 million, +49% cc), an oral inhibitor of the JAK 1 and JAK 2 tyrosine kinases, experienced continued strong growth driven by patient gains in the myelofibrosis (MF) indication across regions and the launch of the polycythemia vera (PV) indication in key markets. It is the first and only JAK inhibitor indicated for the treatment of disease-related splenomegaly or symptoms in adult patients with primary MF (also known as chronic idiopathic MF), post-polycythemia vera MF or post-essential thrombocythemia MF. *Jakavi* is currently approved in 100 countries for the MF indication, including EU countries, Japan and Canada. More than 65 countries have approved *Jakavi* for the treatment of adult patients with PV who are resistant to or intolerant of hydroxyurea, including EU countries, Switzerland, Canada and Japan, and regulatory applications have been submitted in other countries. Novartis licensed ruxolitinib from Incyte Corporation for development and commercialization outside the US. In April 2016, Novartis amended its license agreement to include ex-US rights to ruxolitinib in graft-versus-host disease. Ruxolitinib is marketed in the US by Incyte under the brand name Jakafi®.

Zykadia (USD 24 million, +35% cc), an oral, selective inhibitor of anaplastic lymphoma kinase (ALK) for ALK-positive NSCLC, continued to grow strongly. *Zykadia* is approved in more than 50 countries worldwide. In the US, it was granted accelerated approval for the treatment of patients with ALK+ metastatic NSCLC who have progressed on or are intolerant to crizotinib. The EC also provided conditional marketing authorization for *Zykadia* as a treatment for adult patients with ALK+ advanced NSCLC previously treated with crizotinib. Both US and EU approvals are contingent on further verification of clinical benefit in ongoing studies. Additional regulatory reviews for *Zykadia* are underway worldwide.

PHARMACEUTICALS BUSINESS UNIT

OPHTHALMOLOGY

	Q2 2016	Q2 2015	% change		**H1 2016**	H1 2015	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Lucentis	475	537	-12	-10	927	1 076	-14	-10
Travoprost Group	156	161	-3	-3	307	320	-4	-2
Topical Olopatadine Group	63	111	-43	-42	199	309	-36	-35
Systane Group	92	99	-7	-3	181	197	-8	-4
Other	618	671	-8	-6	1 160	1 257	-8	-5
Total Ophthalmology	**1 404**	**1 579**	**-11**	**-9**	**2 774**	**3 159**	**-12**	**-9**

Lucentis (USD 475 million, -10% cc) sales were impacted by competitive pressures. Outside of the US, *Lucentis* is the leading anti-VEGF therapy specifically designed for the eye, minimizing systemic exposure. The *Lucentis* pre-filled syringe has now launched in 26 countries. *Lucentis* is licensed from Genentech, and Novartis holds the rights to commercialize the product ex-US. Genentech holds the rights to commercialize *Lucentis* in the US.

Travoprost Group (USD 156 million, -3% cc), including ***Travatan***, ***TravatanZ*** and ***DuoTrav***, is indicated for the reduction of elevated intraocular pressure (IOP) in patients with open-angle glaucoma or who have ocular hypertension. Sales for the Travoprost Group declined, due to increased competition from branded generics. Single agent travoprost products (*Travatan*, *TravatanZ*, *Travatan BAK-Free* and *Izba*) are prescribed as first-line agents and are marketed in more than 140 countries, including the US, EU countries, Canada and China. *DuoTrav (*travoprost and timolol) is a fixed-dose combination solution approved as a second-line treatment and currently marketed in more than 140 countries, including the EU countries, Canada and China.

Topical Olopatadine Group (USD 63 million, -42% cc), which includes ***Patanol***, ***Pataday*** and ***Pazeo***, saw sales decline, driven by generic competition, mainly in the US where generic *Patanol* launched December 2015. *Patanol, Pataday* and *Pazeo* are olopatadine hydrochloride ophthalmic solutions of different concentrations that are approved to treat the signs and symptoms of allergic conjunctivitis (*Patanol*), as well as ocular itching associated with allergic conjunctivitis (*Pataday* and *Pazeo*). Olopatadine products are marketed in more than 100 countries, including the US, EU countries, Canada and China.

Systane **Group** (USD 92 million, -3% cc) declined, impacted by a slowdown in emerging markets which more than offset growth in developed markets. The *Systane* portfolio is a comprehensive offering of ocular health solutions, most of which are indicated for the temporary relief of burning and irritation due to dryness of the eye. The *Systane* portfolio includes products for daily and nighttime relief, as well as products for everyday lid hygiene, and for discomfort associated with contact lens wear. *Systane Ultra* is sold in more than 80 countries, including the US, Canada, EU countries, Latin America and Asia. *Systane Balance* is sold in more than 60 countries. *Systane Hydration*, a novel combination that includes hyaluronic acid, is sold in 32 countries across Europe, Canada and Australia.

NEUROSCIENCE

	Q2 2016	Q2 2015	% change		**H1 2016**	H1 2015	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Gilenya	811	700	16	17	1 509	1 338	13	15
Exelon/Exelon Patch	110	208	-47	-47	226	441	-49	-47
Other	31	35	-11	-11	64	70	-9	-7
Total Neuroscience	**952**	**943**	**1**	**2**	**1 799**	**1 849**	**-3**	**-1**

Gilenya (USD 811 million, +17% cc), the first once-daily oral therapy to treat relapsing forms of multiple sclerosis (RMS), continued to grow double-digit, mainly due to volume growth. *Gilenya* is approved in over 80 countries. *Gilenya* has been used to treat approximately 155,000 patients in both clinical trials and the post-marketing setting, with the total patient exposure now at approximately 343,000 patient years. *Gilenya* is licensed from Mitsubishi Tanabe Pharma.

Exelon/***Exelon Patch*** (USD 110 million, -47% cc) declined due to generic competition for *Exelon Patch* in the US and EU. *Exelon Patch* is approved for the treatment of mild-to-moderate Alzheimer's disease dementia (AD) in more than 85 countries, and severe AD in 14 countries, including the US. *Exelon Patch* is also indicated for the treatment of Parkinson's disease dementia in more than 20 countries.

IMMUNOLOGY and DERMATOLOGY (I and D)[1]

	Q2 2016	Q2 2015	% change		**H1 2016**	H1 2015	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Cosentyx	260	30	nm	nm	436	52	nm	nm
Neoral/Sandimmun(e)	136	145	-6	-6	259	291	-11	-9
Myfortic	91	100	-9	-5	195	199	-2	7
Zortress/Certican	102	80	28	30	193	161	20	25
Ilaris	73	61	20	22	135	116	16	19
Other	46	41	12	4	85	81	5	4
Total I and D (excl. everolimus stent drug)	**708**	**457**	**55**	**56**	**1 303**	**900**	**45**	**49**
Everolimus stent drug	26	26	0	4	51	50	2	4
Total I and D	**734**	**483**	**52**	**53**	**1 354**	**950**	**43**	**46**

[1] *Xolair* sales for all indications are reported in the Respiratory franchise
nm = not meaningful

Cosentyx (USD 260 million) showed strong growth in the second quarter. Launched in February 2015, *Cosentyx* has been used to treat more than 37,000 patients in a post-marketing setting to date. *Cosentyx* is the only fully human monoclonal antibody that selectively neutralizes circulating interleukin-17A (IL-17A) and is approved to treat psoriasis, ankylosing spondylitis (AS) and psoriatic arthritis (PsA). In clinical trials, *Cosentyx* has shown superiority over Enbrel® and Stelara®, providing rapid and sustainable efficacy for patients with psoriasis. In January 2015, Cosentyx became the first IL-17A inhibitor and biologic approved in the EU as a first-line systemic treatment of moderate-to-severe plaque psoriasis in adult patients, and in the US as a treatment for moderate-to-severe plaque psoriasis in adult patients who are candidates for systemic therapy or phototherapy. *Cosentyx* is approved for the treatment of moderate-to-severe plaque psoriasis in approximately 60 countries to date, including the US, EU countries, Switzerland, Canada, and Australia. *Cosentyx* is also approved in more than 60 countries for the treatment of adults with AS and PsA, including the US, EU countries, Canada, and Australia. In Japan, *Cosentyx* is approved for the treatment of moderate-to-severe plaque psoriasis, pustular psoriasis and PsA.

Xolair continued its strong growth globally and is currently approved in the EU, Switzerland and over 50 other countries as a treatment for chronic spontaneous urticaria (CSU), also known as chronic idiopathic urticaria (CIU), for which it is approved in the US, Canada and Australia. *Xolair* has now been launched for CSU/CIU in over 40 countries, including the US, Switzerland, Canada and several EU countries. *Xolair* as a treatment for moderate-to-severe or severe persistent allergic asthma (SAA) is addressed below in the Respiratory section, and all *Xolair* sales are booked in the Respiratory franchise. Novartis co-promotes *Xolair* in CSU/CIU and SAA with Genentech in the US and shares a portion of the operating income, but does not book US sales.

Neoral/Sandimmun(e) (USD 136 million, -6% cc) is an immunosuppressant to prevent organ rejection following a kidney, liver, heart or lung transplant. It is also indicated for the treatment of selected autoimmune disorders, such as psoriasis and rheumatoid arthritis. Although sales are declining as expected due to generic competition and mandatory price reductions, most notably in the US, Europe and Japan, the decrease is not as rapid as has been the case in other therapeutic areas, due to the special characteristics of the solid organ transplant market.

Myfortic (USD 91 million, -5% cc), a transplantation medicine, declined due to loss of exclusivity in several markets. *Myfortic* continued to grow in geographies where generic competition has not yet begun.

Zortress/Certican (USD 102 million, +30% cc), available in more than 90 countries to prevent organ rejection in adult heart and kidney transplant patients, continued to show growth. It is also approved in over 70 countries for liver transplant patients, including in EU countries and the US. Everolimus, the active ingredient in *Zortress*/*Certican*, is marketed for other indications under the trade names *Afinitor*/*Votubia*. Everolimus is exclusively licensed to Abbott and sublicensed to Boston Scientific for use in drug-eluting stents.

Ilaris (USD 73 million, +22% cc) continued to grow as a treatment for adults and children with cryopyrin-associated periodic syndrome (CAPS), for which it is approved in more than 70 countries. *Ilaris* is also approved for the treatment of active systemic juvenile idiopathic arthritis (SJIA) in the US, EU and other countries – an important growth driver for the product – and is also available for the symptomatic treatment of refractory acute gouty arthritis in the EU. *Ilaris* is being further developed to treat three rare types of Periodic Fever Syndromes, also known as Hereditary Periodic Fevers.

RESPIRATORY

	Q2 2016	Q2 2015	% change		**H1 2016**	H1 2015	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Ultibro Breezhaler	100	66	52	47	178	118	51	50
Seebri Breezhaler	39	38	3	4	74	75	-1	2
Onbrez Breezhaler/*Arcapta Neohaler*	37	47	-21	-16	70	90	-22	-17
COPD portfolio	**176**	**151**	**17**	**17**	**322**	**283**	**14**	**16**
Xolair[1]	212	194	9	12	404	374	8	13
Other	9	16	-44	-38	17	26	-35	-24
Total Respiratory	**397**	**361**	**10**	**12**	**743**	**683**	**9**	**13**

[1] Revenue, which is ex-US only, reflects *Xolair* sales for all indications (including CSU/CIU, which is managed by the Immunology and Dermatology franchise)

The COPD portfolio, which consists of ***Ultibro Breezhaler/Utibron Neohaler***, ***Onbrez Breezhaler/Arcapta Neohaler*** and ***Seebri Breezhaler/Seebri Neohaler***, grew +17% (cc) to USD 176 million. All three products in the COPD portfolio are delivered via the low-resistance *Breezhaler/Neohaler* inhalation device.

Ultibro Breezhaler/Utibron Neohaler (USD 100 million, +47% cc), a LABA/LAMA, continued to grow strongly, having been approved as a first-in-class dual bronchodilator in over 90 countries (including Japan and EU countries). *Ultibro Breezhaler* is a once-daily fixed-dose combination of indacaterol and glycopyrronium bromide, and, in the EU, is indicated as a maintenance bronchodilator treatment to relieve symptoms in adult patients with COPD. *Utibron Neohaler* was approved in the US in October 2015 as a twice-daily dual combination of indacaterol and glycopyrrolate for the long-term maintenance treatment of airflow obstruction in patients with COPD, including chronic bronchitis and/or emphysema.

Seebri Breezhaler/Seebri Neohaler (USD 39 million, +4% cc), an inhaled LAMA, saw sales grow. Indicated as a once-daily maintenance bronchodilator treatment to relieve symptoms of patients with COPD, *Seebri Breezhaler* is approved in over 90 countries. *Seebri Neohaler* was approved in the US in October 2015 as a twice-daily long-term maintenance treatment of airflow obstruction in patients with COPD, including chronic bronchitis and/or emphysema. Glycopyrronium bromide and certain use and formulation intellectual property were exclusively licensed to Novartis in April 2005 by Vectura and its co-development partner Sosei.

Onbrez Breezhaler/Arcapta Neohaler (USD 37 million, -16% cc), a once-daily inhaled LABA, declined, due in part to a focus of resources on *Ultibro Breezhaler*. *Onbrez Breezhaler/Arcapta Neohaler* is indicated as maintenance bronchodilator treatment of airflow obstruction in adult patients with COPD, approved in over 100 countries including the US.

Xolair (USD 212 million, +12% cc), currently approved in more than 90 countries as a treatment for moderate-to-severe or severe persistent allergic asthma, delivered solid sales growth. In July, the FDA approved an expanded age range for *Xolair* to include children six to 11 years of age with moderate to severe persistent asthma. Worldwide, *Xolair* is the first biologic approved for adults and children with moderate-to-severe allergic asthma. *Xolair* as a treatment for chronic spontaneous urticaria is addressed earlier in the Immunology and Dermatology section. Novartis co-promotes *Xolair* with Genentech in the US and shares a portion of the operating income, but does not book US sales.

CARDIO-METABOLIC

	Q2 2016	Q2 2015	% change		**H1 2016**	H1 2015	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Galvus	306	273	12	12	589	565	4	8
Entresto	32	0	nm	nm	49	0	nm	nm
Other	3	0	nm	nm	6	0	nm	nm
Total Cardio-Metabolic	**341**	**273**	**25**	**25**	**644**	**565**	**14**	**18**

nm = not meaningful

Entresto (USD 32 million) (sacubitril/valsartan) is approved for patients with chronic heart failure with reduced ejection fraction (HFrEF). Highlights in the second quarter include: the inclusion of *Entresto* in new US and European heart failure treatment guidelines supporting a Class I recommendation to replace an ACE inhibitor or angiotensin II receptor blocker in symptomatic patients (NYHA class II-III/IV), US field force expansion, and the launch of a direct-to-consumer television campaign in the US. Early experience in Europe remains encouraging, with better early access and a more rapid uptake than in the US. *Entresto* is now approved in more than 57 markets worldwide. A comprehensive clinical umbrella program called FortiHFy was announced in May 2016. FortiHFy includes more than 40 clinical trials including two large Phase III outcomes studies to support new indications for *Entresto* in heart failure with preserved ejection fraction (HFpEF) (PARAGON-HF), and the prevention of heart failure and cardiovascular death post-acute myocardial infarction (HF post-MI) (PARADISE-MI).

***Galvus* Group** (USD 306 million, +12% cc) delivered solid sales growth. The Group includes *Galvus*, an oral treatment for type-2 diabetes, and *Eucreas*, a single-pill combination of vildagliptin (the active ingredient in *Galvus*) and metformin. The focus for *Galvus* remains on patients whose diabetes is uncontrolled on metformin, earlier treatment intensification as well as on expansion of usage in key segments, such as elderly and renal-impaired patients. The *Galvus* Group is currently approved in more than 125 countries.

ESTABLISHED MEDICINES

	Q2 2016	Q2 2015	% change		**H1 2016**	H1 2015	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Diovan/Co-Diovan	283	333	-15	-13	555	705	-21	-18
Exforge	236	272	-13	-11	457	553	-17	-13
Voltaren/Cataflam	134	136	-1	2	258	270	-4	1
Ritalin/Focalin	77	108	-29	-27	147	210	-30	-28
Other	510	665	-23	-17	1 037	1 313	-21	-16
Total Established Medicines	**1 240**	**1 514**	**-18**	**-14**	**2 454**	**3 051**	**-20**	**-15**

***Diovan* Group** (USD 283 million, -13% cc), consisting of *Diovan* monotherapy and the combination product *Co-Diovan*/*Diovan HCT*, saw sales decline due to loss of exclusivity, including in the US, EU and Japan for both *Diovan* and *Co-Diovan*/*Diovan HCT*. *Diovan* and *Co-Diovan*/*Diovan HCT* are still growing in some emerging markets, including China, partially compensating for the loss of exclusivity.

***Exforge* Group** (USD 236 million, -11% cc), which includes *Exforge* and *Exforge HCT*, declined due to generic competition in the US and Japan. *Exforge* is maintaining sales value in the EU, where it has commercial exclusivity until January 2017, while growing in emerging markets, including China. *Exforge HCT* is growing in all regions except the US.

Voltaren/Cataflam (USD 134 million, +2% cc) is the leading international brand by sales in the plain non-steroidal anti-inflammatory drugs (NSAIDs) market for the relief of symptoms in rheumatic diseases, such as rheumatoid arthritis and osteoarthritis, and for various other inflammatory and pain conditions. This product is subject to generic competition and, in various countries, Sandoz markets generic versions of *Voltaren*.

Ritalin/Focalin (USD 77 million, -27% cc) is a treatment for attention deficit hyperactivity disorder (ADHD). *Ritalin* and *Ritalin LA* are available in more than 70 and 30 countries, respectively, and are also indicated for narcolepsy. *Focalin* and *Focalin XR* are available in the US, and *Focalin XR* is also approved in Switzerland. Most strengths of *Ritalin* and *Focalin* are subject to generic competition in the US.

Sandoz

	Q2 2016	Q2 2015[1]	% change		**H1 2016**	H1 2015[1]	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Net sales	**2 577**	**2 530**	**2**	**3**	**5 022**	**4 974**	**1**	**4**
Operating income	**380**	**281**	**35**	**43**	**726**	**621**	**17**	**25**
As % of net sales	14.7	11.1			14.5	12.5		
Core operating income	**535**	**537**	**0**	**4**	**1 020**	**1 020**	**0**	**5**
As % of net sales	20.8	21.2			20.3	20.5		

Following the new divisional structure announced on January 27, 2016, results from the Sandoz Division in 2016 and 2015 include the selected mature products transferred from the Innovative Medicines Division.

Second quarter

Net sales
Sandoz net sales were USD 2.6 billion (+2%, +3% cc) in the second quarter, as volume growth of 8 percentage points more than offset 5 percentage points of price erosion.

All regions grew in the second quarter. Sales in the US were USD 965 million (+5% cc), driven by a strong base business performance and despite a lower level of launches compared to a strong prior-year quarter, which included the launch and shipping of initial trade inventories of *Glatopa*. Sales in Western Europe were USD 726 million (+3% cc), with strong growth in France and slight growth in Germany. In emerging markets, Latin America sales grew 9% (cc) to USD 92 million, driven by double-digit growth in Brazil, while Middle East and Africa sales grew 7% (cc). Central and Eastern Europe sales were USD 283 million (+4% cc), despite the continued impact of the negative macroeconomic environment. Asia Pacific sales grew 3% (cc) to USD 204 million, with growth impacted by the commercial exit of low-margin businesses.

Global sales of Biopharmaceuticals (including biosimilars, biopharmaceutical contract manufacturing and *Glatopa*) grew 11% (cc) to USD 249 million, despite lapping the *Glatopa* launch in the prior-year quarter. Sandoz continued to see strong growth for its three in-market biosimilars – *Omnitrope* (somatropin), *Binocrit* (epoetin alfa) and *Zarzio* (filgrastim) – and strong patient uptake for the recently launched *Glatopa* and *Zarxio* in the US. Anti-Infectives franchise sales (partner label and finished dosage form sales) were USD 324 million (-3% cc), reflecting the discontinuation of low-margin products.

Operating income
Operating income increased to USD 380 million (+35%, +43% cc), driven by lower restructuring charges for site exits compared to the prior-year quarter. Core adjustments amounted to USD 155 million, including USD 114 million for amortization of intangible assets and USD 33 million of net restructuring charges.

Core operating income was USD 535 million (0%, +4% cc). Core operating income margin in constant currencies increased 0.2 percentage points; currency had a negative impact of 0.6 percentage points, resulting in a net decrease of 0.4 percentage points to 20.8% of net sales.

Core gross margin as a percentage of net sales decreased by 0.3 percentage points (cc), driven by unfavorable sales mix and continued price erosion, partially offset by ongoing productivity improvements. Core R&D expenses increased by 0.5 percentage points (cc), due to increased investments in key pipeline projects. Core M&S expenses decreased by 0.1 percentage points (cc), as sales growth compensated for investments in biosimilars and other key products. Core G&A expenses decreased by 0.4 percentage points (cc), driven by continued productivity improvements. Core Other Income and Expense net increased the margin by 0.5 percentage points (cc).

[1] In compliance with IFRS, Novartis updated its segment financials to reflect the new divisional structure announced on January 27, 2016, to aid comparability of year-on-year results.

First half

Net sales

Sandoz net sales were USD 5.0 billion (+1%, +4% cc) in the first half, as volume growth of 10 percentage points more than offset 6 percentage points of price erosion.

All regions grew in the first half, led by the US (+3% cc), Western Europe (+3% cc), Latin America (+14% cc), Middle East and Africa (+9% cc) and Asia Pacific (+4% cc). Central and Eastern Europe increased sales by 3% (cc), despite macroeconomic difficulties in the region.

Global sales of Biopharmaceuticals grew 27% (cc) to USD 462 million, benefitting from the performance of prior-year launches in the US (*Glatopa* in June 2015 and *Zarxio* in September 2015). Anti-Infectives franchise sales were USD 684 million (-3% cc), reflecting discontinued low-margin products and the weak flu season in the first quarter.

Operating income

Operating income was USD 726 million (+17%, +25% cc), driven by higher restructuring charges for site exits in the prior-year period. Core adjustments amounted to USD 294 million, including USD 230 million of amortization of intangible assets and USD 46 million of net restructuring charges.

Core operating income was USD 1.0 billion (0%, +5% cc). Core operating income margin in constant currencies increased by 0.4 percentage points; currency had a negative impact of 0.6 percentage points, resulting in a net decrease of 0.2 percentage points to 20.3% of net sales.

Core gross margin as a percentage of net sales was flat (cc), as ongoing productivity improvements were offset by sales mix and continued price erosion. Core R&D expenses increased by 0.2 percentage points (cc), due to increased investments in key pipeline projects. Core M&S expenses increased by 0.1 percentage points (cc), driven by investments in biosimilars and other key products. Core G&A expenses decreased by 0.3 percentage points (cc). Core Other Income and Expense net increased the margin by 0.4 percentage points (cc).

Alcon

	Q2 2016 USD m	Q2 2015[1] USD m	% change USD	% change cc	H1 2016 USD m	H1 2015[1] USD m	% change USD	% change cc
Net sales	**1 506**	**1 531**	**-2**	**-1**	**2 932**	**3 062**	**-4**	**-2**
Operating income	**7**	**54**	**-87**	**-77**	**38**	**195**	**-81**	**-59**
As % of net sales	0.5	3.5			1.3	6.4		
Core operating income	**238**	**287**	**-17**	**-15**	**481**	**669**	**-28**	**-21**
As % of net sales	15.8	18.7			16.4	21.8		

Following the new divisional structure announced on January 27, 2016, results from the Alcon Division in 2016 and 2015 exclude the Ophthalmic Pharmaceuticals products transferred to the Innovative Medicines Division.

Second quarter

Net sales
Alcon net sales were USD 1.5 billion (-2%, -1% cc) in the second quarter. Surgical sales (-1% cc) were down slightly, as strong performance of cataract consumables was more than offset by weaker sales of intraocular lenses (IOLs). Vision Care sales were flat (0% cc), with growth in contact lenses offsetting a decline in contact lens care.

Regionally, North America sales were broadly in line with the prior year (+1% cc). Sales in Japan (+3% cc) and Europe, the Middle East and Africa (+1% cc) benefitted from stronger Vision Care performance. Sales in Emerging Growth Markets declined (-7% cc), mainly impacted by weaker Surgical performance in Asia.

Operating income
Operating income was USD 7 million (-87%, -77% cc). Core adjustments amounted to USD 231 million, including USD 226 million for amortization of intangible assets. Prior-year core adjustments were USD 233 million due to amortization and other net costs.

Core operating income was USD 238 million (-17%, -15% cc), primarily impacted by higher investment spending in M&S and R&D behind the growth plan. Core operating income margin in constant currencies decreased by 2.6 percentage points; currency had a negative impact of 0.3 percentage points, resulting in a net decrease of 2.9 percentage points to 15.8% of net sales.

Core gross margin as a percentage of net sales increased by 1.1 percentage points (cc) versus prior year. Core R&D expenses increased 0.9 percentage points (cc), driven by investments in key pipeline projects including the *CyPass* micro-stent and *NGENUITY* platform for ophthalmic surgical visualization. Core M&S expenses increased 3.3 percentage points (cc) behind investments to drive growth. Core G&A expenses decreased 0.3 percentage points (cc). Core Other Income and Expense, net increased the margin by 0.2 percentage points (cc).

First half

Net sales
Alcon net sales were USD 2.9 billion (-4%, -2% cc) in the first half. Surgical sales (-2% cc) declined, driven by a slowdown in cataract equipment placements and weaker sales of IOLs, partially offset by continued growth in cataract consumables. Vision Care performance (-2% cc) was impacted by weaker contact lens sales in the US and a decline in contact lens care.

Operating income
Operating income was USD 38 million (-81%, -59% cc) in the first half. Core adjustments amounted to USD 443 million, primarily due to amortization of intangible assets. Prior-year core adjustments were USD 474 million due to amortization, restructuring charges and other net costs.

[1] In compliance with IFRS, Novartis updated its segment financials to reflect the new divisional structure announced on January 27, 2016, to aid comparability of year-on-year results.

Core operating income was USD 481 million (-28%, -21% cc), primarily impacted by higher investment spending in M&S and R&D behind the growth plan. Core operating income margin in constant currencies decreased by 4.3 percentage points; currency had a negative impact of 1.1 percentage points, resulting in a net decrease of 5.4 percentage points to 16.4% of net sales.

Core gross margin as a percentage of net sales was flat versus prior year. Core R&D expenses increased 0.6 percentage points (cc), driven by investments in key pipeline projects. Core M&S expenses increased 3.3 percentage points (cc) behind investments to drive growth. Core G&A expenses increased 0.3 percentage points (cc). Core Other Income and Expense, net decreased the margin by 0.1 percentage points (cc).

Alcon product review

All comments below focus on second quarter movements in constant currencies.

SURGICAL

	Q2 2016	**Q2 2015**	% change		**H1 2016**	**H1 2015**	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Cataract products	692	716	-3	0	1 368	1 454	-6	-2
IOLs	*252*	*294*	*-14*	*-11*	*513*	*578*	*-11*	*-6*
Consumables	*358*	*345*	*4*	*7*	*691*	*676*	*2*	*4*
Equipment	*82*	*77*	*6*	*16*	*164*	*200*	*-18*	*-14*
Vitreoretinal products	162	150	8	7	304	295	3	5
Refractive/Other	62	74	-16	-29	114	128	-11	-9
Total Surgical	**916**	**940**	**-3**	**-1**	**1 786**	**1 877**	**-5**	**-2**

Surgical sales were USD 916 million (-1% cc) in the second quarter. Sales of IOLs (-11% cc) declined, mainly due to weaker sales in Asia. Driven by a strong installed equipment base, cataract consumables sales (+7% cc) continued to deliver solid growth globally.

VISION CARE

	Q2 2016	**Q2 2015**	% change		**H1 2016**	**H1 2015**	% change	
	USD m	USD m	USD	cc	USD m	USD m	USD	cc
Contact lenses	457	446	2	2	886	902	-2	-1
Contact lens care	133	145	-8	-9	260	283	-8	-7
Total Vision Care	**590**	**591**	**0**	**0**	**1 146**	**1 185**	**-3**	**-2**

Vision Care sales were USD 590 million (0% cc) in the second quarter. Contact lenses (+2% cc) showed growth, despite competitive launches in the US, with continued strong sales of *Dailies Total1* globally. Contact lens care (-9% cc) declined due to competitive pressure and the continued market shift to daily disposable lenses.

Consolidated interim financial statements reflecting the portfolio transformation

Following the announcement of our portfolio transformation transactions on April 22, 2014, Novartis reported the Group's financial results for the current and prior years as "continuing operations" and "discontinued operations."

Continuing operations comprise the businesses of the Innovative Medicines, Sandoz and Alcon Divisions and the continuing Corporate activities. Continuing operations also include the results from Oncology assets acquired from GSK and the results from the 36.5% interest in GSK Consumer Healthcare Holdings Ltd. for the period from March 2, 2015 (the latter reported as part of income from associated companies).

Discontinued operations included in 2015 the operational results from the Vaccines influenza business, prior to its divestment to CSL Limited on July 31, 2015, as well as results from the Vaccines non-influenza business and the OTC business until March 2, 2015. Operational results from the Animal Health business, which was divested on January 1, 2015, include only the divestment gain.

Discontinued operations also included in the first half of 2015 the exceptional pre-tax gains of USD 12.8 billion from the divestment of Animal Health (USD 4.6 billion) and from the transactions with GSK (USD 2.8 billion from the Vaccines non-influenza business and USD 5.9 billion arising from the contribution of Novartis OTC into GSK Consumer Healthcare Holdings Ltd.). In addition, the GSK transactions resulted in USD 0.5 billion of additional pre-tax transaction-related costs, which were expensed and reported in Corporate discontinued operations.

Excluded from discontinued operations are certain intellectual property rights and related other revenues of the Vaccines Division, which are retained by Novartis and are now reported under Corporate activities.

As required by IFRS, the results of the discontinued operations excluded any depreciation and amortization related to discontinued operations from the date of the portfolio transformation announcement of April 22, 2014 through the completion of the related transactions.

CASH FLOW AND GROUP BALANCE SHEET

Cash flow

Second quarter
Cash flows from operating activities of continuing operations amounted to USD 3.1 billion in the second quarter of 2016, compared to USD 3.0 billion in the prior-year quarter. The increase was driven by cash inflows from net current assets and other operating cash-flow items as well as dividends received from GSK Consumer Healthcare Holdings Ltd., which more than offset lower operating income and payments out of provisions.

Cash flows used in investing activities from continuing operations amounted to USD 0.6 billion in the second quarter of 2016, primarily for the purchase of property, plant and equipment, intangible, financial and other non-current assets amounting to USD 0.7 billion. In the prior-year quarter, cash flows used in investing activities from continuing operations amounted to USD 1.1 billion, including a net cash outflow of USD 1.0 billion for the purchase of property, plant and equipment, intangible, financial and other non-current assets. Proceeds from the sales of non-current assets amounted to USD 0.2 billion. Cash outflows for acquisitions and divestments and changes in marketable securities amounted to USD 0.2 billion.

Cash flows used in investing activities from discontinued operations amounted to USD 0.3 billion in the second quarter of 2016, mainly due to outflows for capital gains taxes and other payments related to the portfolio transformation transactions. In the prior-year quarter, cash flows used in investing activities from discontinued operations of USD 0.7 billion were mainly driven by outflows related to capital gain taxes.

Cash flows used in financing activities in the second quarter of 2016 amounted to USD 1.6 billion, compared to USD 2.5 billion in the prior-year quarter. The current-year amount includes the repayment at maturity of a euro denominated bond of USD 1.7 billion. The prior-year amount included a net decrease in financial debts of USD 2.0 billion due to the repayment at maturity of a US dollar and Swiss franc denominated bond, partially offset by other short-term financial debts. Also in the prior-year quarter, treasury share transactions, net amounted to a cash outflow of USD 0.6 billion, partially offset by other financing cash inflows of USD 0.2 billion.

Free cash flow from continuing operations in the second quarter of 2016 was USD 2.5 billion (+22% USD), an increase of USD 0.5 billion compared to the prior-year quarter. The increase was driven by lower investments in property, plant, equipment and intangible assets and higher cash flows from operating activities from continuing operations, which includes lower operating income and dividends received from GSK Consumer Healthcare Holdings Ltd.

Total Group free cash flow amounted to USD 2.5 billion, compared to USD 2.0 billion in the prior-year quarter. The prior-year quarter included a negative free cash flow of USD 0.1 billion from discontinued operations.

First half
Cash flows from operating activities of continuing operations in the first half of 2016 amounted to USD 4.7 billion, compared to USD 4.9 billion in the prior-year period. The decrease of USD 0.2 billion was driven by lower operating income, lower hedging results and payments out of provisions, partially offset by lower cash outflows from net current assets and other operating cash-flow items as well as dividends received from GSK Consumer Healthcare Holdings Ltd.

Cash flows used in investing activities from continuing operations amounted to USD 1.2 billion in the first half of 2016. This amount includes a net cash outflow of USD 1.4 billion for the purchase of property, plant and equipment, intangible, financial and other non-current assets, as well as a net amount of USD 0.4 billion for acquisitions and divestments of businesses, mainly for the acquisition of Transcend Medical, Inc. Proceeds from the sales of non-current assets amounted to USD 0.6 billion in the first half of 2016, primarily on account of the sale of rights related to 14 Established Medicines products in Japan for USD 0.3 billion. In the prior year-period, cash flows used in investing activities from continuing operations amounted to USD 17.6 billion. This was primarily due to the acquisition of the oncology assets from GSK of USD 16 billion.

Cash flows used in investing activities from discontinued operations amounted to USD 0.5 billion in the first half of 2016, mainly due to outflows for capital gains taxes and other payments related to the portfolio transformation transactions. In the prior-year period, the cash flows from investing activities of discontinued operations of USD 9.2 billion was mainly driven by net proceeds from the portfolio transformation divestments.

Cash flows used in financing activities amounted to USD 2.7 billion, compared to USD 4.2 billion in the prior-year period. The current year amount includes cash outflows of USD 6.5 billion for the dividend payment and USD 0.3 billion for treasury share transactions, net. The net inflow from current and non-current financial debts of USD 4.1 billion was primarily driven by short-term borrowings, partially offset by the repayment at maturity of a euro denominated bond of USD 1.7 billion. The prior-year amount included an outflow of USD 6.6 billion for the dividend payment and USD 0.5 billion for treasury share transactions, net, partially offset by a net increase in financial debts of USD 3.0 billion.

Free cash flow for continuing operations in the first half of 2016 was USD 3.9 billion (+10% USD), an increase of USD 0.4 billion compared to the prior-year period. The increase was driven by lower net investments in property, plant, equipment and intangible assets, partially offset by lower cash flows from operating activities from continuing operations.

Total Group free cash flow amounted to USD 3.9 billion compared to USD 3.2 billion in the prior-year period. The prior period included a negative free cash flow of USD 0.3 billion from discontinued operations.

Balance sheet

Assets
Total non-current assets of USD 107.7 billion at June 30, 2016 decreased by USD 1.0 billion compared to December 31, 2015. Property, plant and equipment and goodwill increased by USD 0.2 billion mainly on account of currency translation adjustments. Financial and other non-current assets decreased by USD 0.4 billion. Intangible assets other than goodwill decreased by USD 0.8 billion, mainly due to amortization.

Total current assets increased by USD 0.9 billion to USD 23.7 billion at June 30, 2016, mainly due to an increase in inventories and trade receivables.

Liabilities
Total financial debt, including derivatives, increased by USD 4.5 billion to USD 26.4 billion at June 30 2016, compared to USD 21.9 billion at December 31, 2015. The increase was primarily driven by the dividend payment of USD 6.5 billion. Total financial debt is comprised of non-current financial debt of USD 16.3 billion, which is in line with the prior year, and current financial debt and derivatives of USD 10.1 billion, compared to USD 5.6 billion in the prior year.

Other non-current liabilities amounted to USD 16.4 billion at June 30, 2016, compared to USD 14.4 billion at December 31, 2015. The increase of USD 2.0 billion was primarily due to an increase in the pension liability of USD 2.1 billion, mainly resulting from a decrease in the actuarial discount rates used to calculate the present value of the benefit obligation and deferred taxes.

Trade payables and other current liabilities decreased by USD 1.9 billion to USD 16.2 billion compared to USD 18.1 billion at December 31, 2015.

The Group has an equivalent of approximately USD 0.2 billion of cash in Venezuela in local currency, which is only slowly being approved for remittance outside of the country. The subsidiaries in Venezuela restate items in the balance sheet in line with the requirements of IAS 29 “Financial Reporting in Hyperinflationary Economies.” The Group is exposed to potential devaluation losses in the income statement on its total intercompany balances with its subsidiaries in Venezuela, which at June 30, 2016 amounted to USD 0.3 billion.

The Group continues to use the exchange rate of VEF 11/USD for the consolidation of the financial statements of its Venezuelan subsidiaries. This exchange rate was defined in a transaction that was made with Centro Nacional de Comercio Exterior (CENCOEX, formerly CADIVI) in the fourth quarter of 2015.

Group equity
The Group's equity decreased by USD 4.6 billion to USD 72.5 billion at June 30, 2016, compared to USD 77.1 billion at December 31, 2015. The decrease was mainly on account of the dividend payment of USD 6.5 billion, net actuarial losses from defined benefit plans of USD 1.5 billion and unfavorable currency translation differences of USD 0.5 billion, partially offset by net income of USD 3.8 billion.

Net debt and debt/equity ratio
The Group's liquidity amounted to USD 5.7 billion at June 30, 2016 compared to USD 5.4 billion at December 31, 2015, and net debt increased over the same period by USD 4.1 billion to USD 20.6 billion. The debt/equity ratio increased to 0.36:1 at June 30, 2016 compared to 0.28:1 at December 31, 2015.

INNOVATION REVIEW

Benefiting from our continued focus on innovation, Novartis has one of the industry's most competitive pipelines with more than 200 projects in clinical development.

Key developments from the second quarter of 2016 include:

New approvals and regulatory opinions

- The EC approved ***Afinitor*** (everolimus) for the treatment of unresectable or metastatic, well-differentiated (Grade 1 or Grade 2) nonfunctional neuroendocrine tumors of gastrointestinal or lung origin in adults with progressive disease less than a month after the CHMP adopted a positive opinion for *Afinitor* in this indication.

- In July, the FDA approved an expanded age range for ***Xolair*** (omalizumab) to include children six to 11 years of age with moderate to severe persistent asthma, having a positive skin test or in vitro reactivity to an airborne allergen (perennial aeroallergen) and symptoms that are inadequately controlled with inhaled corticosteroids.

- ***Tafinlar + Mekinist*** (dabrafenib + trametinib) combination received a positive opinion and recommendation from NICE for the treatment of advanced melanoma with BRAF V600 mutation.

- ***Tafinlar + Mekinist*** achieved reimbursement by Japan's Ministry of Health, Labour and Welfare (MHLW).

- The CHMP recommended the license extension of ***Ilaris*** (canakinumab) to treat Adult-Onset Still's Disease (AOSD).

- The FDA granted Priority Review to the supplemental Biologics License Application (sBLA) for the use of ***Arzerra*** (ofatumumab) in combination with fludarabine and cyclophosphamide for the treatment of patients with relapsed chronic lymphocytic leukemia. Novartis submitted the application in March 2016 under the collaboration with Genmab. The FDA aims to complete its review of the ofatumumab sBLA within six months and has assigned a target action date of September 10, 2016.

- The CHMP adopted a negative opinion on the use of ***Arzerra*** as maintenance therapy for patients with relapsed chronic lymphocytic leukemia. The extension of indication was submitted by Novartis in July 2015 under the ofatumumab collaboration between Novartis and Genmab.

- Alcon achieved CE Mark in Europe for ***Dailies Total1 Multifocal,*** a daily disposable contact lens for patients with presbyopia that provides a unique water gradient for improved breathability.

- Alcon achieved CE Mark in Europe for ***AcrySof IQ PanOptix IOL*** **with** ***UltraSert***, a pre-loaded delivery system for Alcon trifocal IOLs that enables lens implantation through a 2.2mm incision during cataract surgery.

Regulatory submissions and filings

- In July, the FDA's Arthritis Advisory Committee voted unanimously to support approval of Sandoz proposed biosimilar etanercept for all five indications of the reference product (Enbrel®), including rheumatoid arthritis, plaque psoriasis, psoriatic psoriasis, ankylosing spondylitis and polyarticular juvenile idiopathic arthritis.

- The FDA granted three separate Breakthrough Therapy designations, as well as Priority Reviews, for ***Ilaris*** (canakinumab) to treat three rare types of Periodic Fever Syndromes (specifically TNF Receptor Associated Periodic Syndrome, Hyperimmunoglobulin D Syndrome/Mevalonate Kinase Deficiency, and Familial Mediterranean Fever), also known as Hereditary Periodic Fevers.

- An application was filed to the EMA for the inclusion of the ***Tasigna*** (nilotinib) ENESTFreedom and ENESTop clinical trial data in the EU Summary of Product Characteristics (SmPC).

- An application was submitted to the EMA for the use of ***Votubia*** (everolimus) as adjunctive therapy for refractory seizures associated with tuberous sclerosis complex (TSC).

- ***Xolair*** (omalizumab) was submitted to Japan's MHLW for approval of an additional indication as a treatment for chronic urticaria.

- The EMA granted PRIME designation to **CTL019** for the treatment of pediatric patients with relapsed/refractory acute lymphoblastic leukemia.

- Sandoz regulatory submission for a biosimilar to Roche's EU-licensed MabThera® (**rituximab**) was accepted by the EMA. Rituximab is a monoclonal antibody that is used to treat non-Hodgkin's lymphoma, which includes follicular lymphoma and diffuse large B-cell lymphoma, chronic lymphocytic leukemia and autoimmune diseases such as rheumatoid arthritis. Sandoz is seeking approval for the same indications as the reference product.

Results from ongoing trials and other highlights

- ***Entresto*** (sacubitril/valsartan) was given a strong Class I recommendation in both US and European heart failure treatment guidelines. The US guidelines position *Entresto* as the standard of care for symptomatic patients with heart failure with reduced ejection fraction (HFrEF).

- According to an analysis published in JAMA Cardiology, more than 28,000 deaths in the US alone could be prevented or postponed by optimal use of *Entresto*. The analysis supports the need for rapid and broad uptake in patients with HFrEF.

- JAMA Cardiology also published data showing that ***Entresto*** increased life expectancy at an incremental cost-effectiveness ratio consistent with other high-value cardiovascular interventions and further demonstrated cost effectiveness versus enalapril in eligible HFrEF patients.

- The European Journal of Heart Failure published new data from the PARADIGM-HF trial indicating that the benefit of ***Entresto*** (sacubitril/valsartan) over enalapril with respect to cardiovascular death or heart failure hospitalization was maintained in patients not tolerating the target dose of these treatments.

- The Journal of the American College of Cardiology published new data from the PARADIGM-HF trial showing that patients receiving ***Entresto*** experienced fewer all-cause and heart failure readmissions to the hospital in the first 30 days after an initial hospital admission, relative to enalapril.

- Results from another PARADIGM-HF analysis published in the Journal of the American College of Cardiology: Heart Failure showed that apparently "stable" heart failure patients (patients with no recent heart failure decompensation) benefited as much from a switch from enalapril to ***Entresto*** as patients with a recent heart failure decompensation.

- Novartis announced FortiHFy, a global clinical umbrella program comprising more than 40 active or planned trials, which will generate additional data on symptom reduction, efficacy, safety, quality of life benefits and real world evidence with ***Entresto*** and increase understanding of heart failure.

- Novartis announced that an independent Data Monitoring Committee recommended stopping the pivotal Phase III trial of CDK 4/6 inhibitor **LEE011** (ribociclib) early, because the trial met its primary endpoint of demonstrating a clinically meaningful improvement in progression-free survival (PFS). At a pre-planned interim analysis, the trial showed that LEE011 in combination with letrozole significantly extended PFS compared to letrozole alone in postmenopausal women who had received no prior therapy for their HR+/HER2- advanced breast cancer. Full results will be presented at an upcoming medical congress, and Novartis has initiated discussions with regulatory authorities worldwide.

- Data presented at EULAR showed that up to 80% of ankylosing spondylitis and 84% of psoriatic arthritis patients treated with ***Cosentyx*** (secukinumab) at two years had no radiographic progression in the spine or joints, respectively. New head-to-head clinical trials are planned to compare *Cosentyx* versus Humira®.

- Three-year follow-up data from a Phase III study of the combination of ***Tafinlar + Mekinist*** (dabrafenib + trametinib) in patients with BRAF V600E/K mutation-positive advanced melanoma were presented at the American Society of Clinical Oncology (ASCO) annual meeting. The study demonstrated an overall survival benefit at three years, with an estimated three-year survival rate of 44% for patients receiving combination therapy versus 32% for *Tafinlar* monotherapy. The first-line results also represented one of the longest survival follow-up studies to date with BRAF mutant advanced melanoma patients.

- A Phase II study of ***Tafinlar + Mekinist*** in patients with BRAF V600E mutation-positive non-small cell lung cancer (NSCLC) was presented at ASCO. The study demonstrated a 63% confirmed overall response rate for the investigational combination therapy in this rare form of lung cancer.

- Data from the investigational ENESTfreedom and ENESTop treatment-free remission trials of ***Tasigna*** (nilotinib) were presented at ASCO and the European Hematology Association (EHA) annual meeting. Findings from these two open label trials showed that more than 50% of Ph+ CML patients who met the rigorous predefined response criteria of the trials were able to maintain molecular response for 48 weeks after stopping Tasigna both in the first-line setting and after switching from Glivec. Stopping CML treatment is currently not a clinical recommendation and should only be attempted in the context of a clinical study. ENESTop met its primary endpoint, though ENESTfreedom did not.

- The full study results from the head-to-head FLAME trial, including data from further secondary endpoints, were reported at the American Thoracic Society conference in May 2016 and published simultaneously online in The New England Journal of Medicine. The FLAME trial demonstrated superiority of ***Ultibro Breezhaler*** (indacaterol/glycopyrronium) to Seretide® in reducing COPD exacerbations over one year of treatment. The FLAME results confirmed that *Ultibro Breezhaler* is an effective steroid-free option that both reduces exacerbations and improves lung function in COPD patients who have had one or more exacerbations in the past year, regardless of their eosinophil count, compared to Seretide®.

- A Phase II study investigating the efficacy and safety of the fully human monoclonal antibody **AMG 334** (erenumab) in chronic migraine prevention met its primary endpoint of a statistically significant reduction in the number of monthly migraine days versus placebo. The safety profile of the drug was similar to placebo. AMG 334 is currently being assessed in two Phase III studies in episodic migraine, with initial data from these studies expected later this year. AMG 334 is being co-developed by Novartis and Amgen. Novartis has commercial rights to AMG 334 outside of the US, Canada and Japan.

- Data from the Phase III RESPONSE 2 study, presented at EHA, showed that ***Jakavi*** (ruxolitinib) is superior to best available therapy in patients with less advanced polycythemia vera (PV). The study examined the efficacy of *Jakavi* in maintaining hematocrit control without the need for phlebotomy in patients with PV resistant to or intolerant of hydroxyurea who did not have an enlarged spleen as assessed by physical examination at baseline (spleen palpation).

- Results from the pivotal Phase II study of **PKC412** (midostaurin) in advanced systemic mastocytosis (SM) were published in The New England Journal of Medicine. This study, the largest and longest-running prospective trial ever conducted in this rare disorder, assessed the efficacy and safety of PKC412 in adults with advanced SM. PKC412 demonstrated an overall response rate, defined as a major or partial response, of 60% ($P<0.001$, 95% confidence interval [CI], 49-70%) in patients with advanced SM. The median duration of response was 24.1 months (95% CI, 10.8-not estimated).

- Data from the EXTEND trial of ***Promacta/Revolade*** (eltrombopag) confirmed the long-term safety profile of the drug in adults with chronic immune (idiopathic) thrombocytopenia, with data for up to 6.5 years in some patients (median exposure was 2.4 years). Additional data from the study showed long-term oral administration of *Promacta/Revolade* was effective in increasing and maintaining platelet counts in adult patients who had their spleens removed (splenectomized) as well as those who did not (non-splenectomized). The results were presented at EHA.

- Data from the Phase II ASPIRE trial of ***Promacta/Revolade*** for treatment of thrombocytopenia in patients with advanced myelodysplastic syndromes (MDS) and acute myeloid leukemia (AML) were also presented at EHA. The trial found that treatment of patients with advanced MDS or AML with *Promacta/Revolade* versus placebo for 12 weeks resulted in fewer clinically relevant thrombocytopenic events and did not result in an increase of disease progression. Rates of WHO Grade 3/4 bleeding were lower in patients treated with *Revolade*.

- Patient recruitment has completed for both Phase III pivotal trials of the anti-VEGF **RTH258** (brolucizumab), which is being evaluated against aflibercept for the treatment of nAMD. Initial top-line data from both trials are expected in the second quarter of 2017.

- Patient recruitment has been completed in both of the pivotal Phase III trials of **OAP030** (pegpleranib, also known as *Fovista*) anti-PDGF therapy in combination with ***Lucentis*** (ranibizumab). Initial, topline data from both Phase III trials, which are led by Ophthotech, are expected in the fourth quarter of 2016. A third Phase III trial, which is investigating *Fovista* in combination with either aflibercept or bevacizumab, completed enrollment in June 2016.

- All of the patients (more than 30,500) in the ***Lucentis*** LUMINOUS study completed their last study visit. The study aims to describe the real-world, long-term safety and effectiveness, treatment patterns, and patient-reported quality of life associated with ranibizumab treatment in routine clinical practice for all approved indications included in the local product label.

- First results of the Phase IIIb OCTAVE study of ***Lucentis*** in neovascular age-related macular degeneration (nAMD) showed a similar gain in visual acuity (VA) over 12 months when re-treatment was guided by VA alone (6.7 letter gain) or by adding imaging technology (8.7 letter gain). These data are consistent with the current *Lucentis* EU product information for use of VA and/or imaging technologies to guide re-treatment decisions in patients with nAMD.

- First results of the ***Lucentis*** China Phase III BLOSSOM study demonstrated superior efficacy of 0.5 mg ranibizumab over sham control in patients with visual impairment due to macular edema (ME) secondary to branched retinal vein occlusion (BRVO). There was a statistically significant difference of 7.5 letters from baseline to Month 1 through Month 6 between the ranibizumab 0.5 mg and sham treatment groups.

- Results from a Phase III study showed ***Afinitor/Votubia***, when used as an adjunctive therapy, significantly reduced treatment-resistant seizures associated with TSC compared to placebo. The EXIST-3 study was presented in a plenary session at the American Academy of Neurology (AAN) annual meeting.

- The ***Afinitor*** SWISH study evaluating stomatitis (mouth sores) prevention in 86 evaluable patients with HR+, HER2 negative metastatic breast cancer was presented at ASCO. The trial showed that preventative use of dexamethasone-based mouthwash four times a day resulted in a reduction in stomatitis (grade ≥2) in patients receiving *Afinitor* and exemestane treatment. The incidence of grade ≥2 stomatitis at eight weeks in SWISH was 2.4% compared to 33% in BOLERO-2. The incidence of all-grade stomatitis at eight weeks in SWISH was 21.2% compared to 67% in BOLERO-2.

- Results from the Phase III PILLAR-2 study evaluating ***Afinitor*** as adjuvant therapy in patients with diffuse large B-cell lymphoma following first-line treatment with rituximab and CHOP or EPOCH chemotherapy were presented at ASCO. The study did not meet the primary endpoint of improving disease free survival.

- Results from the Phase II BERIL-1 trial of **BKM120** (buparlisib) were presented in an oral presentation at ASCO. The study showed that BKM120 in combination with paclitaxel demonstrated improved clinical benefit when compared to paclitaxel alone in platinum pre-treated patients with recurrent/metastatic head and neck squamous cell carcinoma for all efficacy endpoints including PFS, response rate and overall survival. Additional analyses of the clinical and biomarker data are ongoing. Plans for further discussions with the health authorities are being defined at this time.

- Patient reported outcomes data from the Phase 3 PANORAMA-1 randomized, double-blind, placebo controlled study of ***Farydak*** (panobinostat) in patients with relapsed multiple myeloma who have received at least two prior regimens including bortezomib and an immunomodulatory agent were presented at ASCO and EHA. The data showed that at week 24, neurotoxicity scores were similar across treatment arms, and quality of life scores were generally stable after treatment initiation and comparable in the two arms at week 24.

- Novartis entered into a collaboration and licensing agreement with **Xencor**, adding bispecific antibodies to its growing immuno-oncology portfolio. Under the agreement, the companies will collaborate to co-develop Xencor's two bispecific T-cell engaging antibodies targeting acute myeloid leukemia and B-cell malignancies. Novartis also received the right to develop four additional bispecific antibodies and to use other Xencor proprietary antibody engineering technology for up to ten additional biotherapeutic programs across the Novartis R&D portfolio.

- Novartis Oncology continues its commitment to developing a new formulation of octreotide through a collaboration with Camurus. A multicenter Phase II study in patients with acromegaly and neuroendocrine tumors has been successfully completed with **CAM2029**, a FluidCrystal® formulation of octreotide, and results will be published.

- Novartis announced an agreement with Eisai Inc. to collaborate on commercial and certain medical affairs activities in the US to co-promote Lenvima® (lenvatinib) capsules used in combination with ***Afinitor*** (everolimus) for the treatment of patients with advanced renal cell carcinoma following one prior anti-angiogenic therapy. The collaboration follows the FDA approval in May 2016 of Lenvima® in combination with everolimus for this indication.

- Novartis completed an equity investment in **COTA**, Inc. to help enable the development of products and services with the potential to generate meaningful Real World Evidence (RWE) on patient-based outcomes that could be used to improve the way cancer is treated around the world. This investment is part of a continued effort by Novartis to accelerate innovation and improve patient outcomes through the use of RWE.

- In a key study comparing the Sandoz biosimilar **rituximab** candidate with MabThera®, the Sandoz candidate showed pharmacokinetic (PK) bioequivalence and similar pharmacodynamics (PD), safety, efficacy and immunogenicity.

- In another key study, comparing the Sandoz biosimilar **etanercept** candidate with originator product Enbrel®, the Sandoz candidate showed PK bioequivalence, with no clinically meaningful differences in safety, tolerability and immunogenicity.

- Week 12 data from the EGALITY trial demonstrated that the Sandoz biosimilar **etanercept** candidate has equivalent efficacy to Enbrel®.

- Sandoz received a complete response letter from the FDA for biosimilar **pegfilgrastim** candidate (Neulasta®), and is working with the agency to address remaining questions.

- Two-year follow-up data from the COMPASS trial were presented at the American Society of Cataract and Refractive Surgery annual meeting. The trial compares the intraocular pressure reducing effect and safety profile of supraciliary microstenting by ***CyPass*** implantation done in conjunction with cataract surgery to that of cataract surgery alone. Alcon announced its acquisition of Transcend Medical, which developed *CyPass*, in the first quarter of 2016.

Selected approvals: US, EU and Japan

Product	Active ingredient/ Descriptor	Indication	Approval date
Afinitor	Everolimus	Advanced, progressive nonfunctioning GI or lung NET	EU - May 2016
AcrySof IQ PanOptix IOL with *UltraSert*	Pre-loaded delivery device with trifocal IOL	Cataract	EU - Apr. 2016
Dailies Total1 Multifocal	Multifocal contact lens for refractive correction	Refractive error with presbyopia	EU - Apr. 2016

Selected projects awaiting regulatory decisions

		Completed submissions			
Product	**Indication**	**US**	**EU**	**Japan**	**News update**
Afinitor/Votubia	Advanced progressive, non-functioning GI or lung NET	Approved	Approved	Q3 2015	· EC approved Afinitor in GI/lung NET May 2016
	TSC seizures		Q2 2016		
Arzerra	Chronic lymphocytic leukemia (extended treatment)	Approved	Q3 2015		· CHMP adopted a negative opinion in Q2 2016
	Chronic lymphocytic leukemia (relapsed)	Q1 2016	Q1 2016		· FDA granted Priority Review
Ilaris	Periodic fevers syndromes	Q1 2016	Q2 2016	Q2 2016	· FDA granted three Breakthrough Therapy designations and Priority Reviews; FDA action expected before year-end on all three new indication supplements
Lucentis	Choroidal neo-vascularization in rare diseases		Q1 2016		
Tasigna	CML treatment-free remission		Q2 2016		

Selected Innovative Medicines pipeline projects

Project/ Compound	Potential indication/ Disease area	First planned submissions	Current Phase	News update
ABL001	Chronic myeloid leukemia	≥2020	I	
AMG 334	Migraine		III	· In partnership with Amgen
ASB183	Solid and hematologic tumors	≥2020	I	
ACZ885 (canakinumab)	Secondary prevention of cardiovascular events	2017	III	· Recruitment completed
Arzerra	Non-Hodgkin's lymphoma (refractory)	2018	III	· Study endpoint is event-driven
BAF312	Secondary progressive MS	2019	III	· Phase III results expected in H2 2016
BGJ398	Solid tumors	≥2020	II	
BKM120	Solid tumors	≥2020	I	
BYL719	Solid tumors	≥2020	I	
BYL719 + fulvestrant	HR+/HER2- postmenopausal advanced breast cancer 2nd line	2019	III	
BYM338	Hip fracture	≥2020	II	
	Sarcopenia	≥2020	II	
CAD106	Alzheimer's disease	≥2020	II / III	
CJM112	Immune disorders	≥2020	II	
CNP520	Alzheimer's disease	≥2020	I / II	· In partnership with Amgen
Cosentyx (AIN457)	Non-radiographic axial spondyloarthritis	2018	III	

CTL019	Pediatric acute lymphoblastic leukemia	2017	II	
	Diffuse large B-cell lymphoma	2017	II	
EMA401	Neuropathic pain	≥2020	II	
Entresto (LCZ696)	Chronic heart failure with preserved ejection fraction	2019	III	
	Post-acute myocardial infarction	≥2020	III	
FCR001	Renal transplant	≥2020	II	
FTY720 (fingolimod)	Pediatric MS	2017	III	
HSC835	Stem cell transplantation	≥2020	II	
INC280	Non-small cell lung cancer (NSCLC)	2018	II	
Jakavi	Early myelofibrosis	≥2020	III	· Phase III trial enrolling
	Graft-versus-host disease	2019	I / II	· In-licensed from Incyte in Q2 2016
KAE609	Malaria	≥2020	II	
KAF156	Malaria	≥2020	II	
LCI699	Cushing's disease	2018	III	· Trial ongoing
LEE011 + letrozole	HR+/HER2- postmenopausal advanced breast cancer 1st line	2016	III	· MONALEESA-2 trial met PFS endpoint at interim analysis and stopped early due to efficacy · Full results will be presented at upcoming medical congress and discussed with regulatory authorities worldwide
LEE011 + tamoxifen + goserelin or NSAI + goserelin	HR+/HER2- premenopausal advanced breast cancer 1st line	2018	III	· Phase III registration study enrolling
LEE011 + fulvestrant	HR+/HER2- postmenopausal advanced breast cancer 1st/2nd line	2018	III	· Fully enrolled
LEE011	Solid tumors	≥2020	I	· Pending study initiation
LIK066	Metabolic disorders	≥2020	II	
LJM716	Solid tumors	≥2020	I	
LJN452	Non-alcoholic steatohepatitis (NASH)	≥2020	II	
Lucentis	Retinopathy of prematurity	2019	III	· Phase III PIP study enrolling
OAP030 (pegpleranib; also known as *Fovista*)	Neovascular age-related macular degeneration (nAMD)	2017	III	· Phase III initial top line data expected Q4 2016
OMB157 (ofatumumab)	Relapsing multiple sclerosis	2019	II	· Phase III studies expected to begin in H2 2016
PIM447	Hematologic tumors	≥2020	I	
PKC412	Aggressive systemic mastocytosis	2016	II	· US regulatory submission has begun
	Acute myeloid leukemia	2016	III	· US regulatory submission has begun
QAW039	Asthma	2019	III	
	Atopic dermatitis	≥2020	II	
QAX576	Allergic diseases	≥2020	II	
QGE031	CSU/IU	≥2020	II	
QMF149	Asthma	2018	III	
QVM149	Asthma	2018	III	
RLX030 (serelaxin)	Acute heart failure	2017	III	· Trial ongoing
Signifor LAR	Cushing's disease	2016	III	

RTH258	nAMD	2018	III	· Recruitment completed; trial ongoing
	DME	≥2020	III	
Tafinlar + Mekinist	BRAF V600+ NSCLC	2016	II	· Trial ongoing
	BRAF V600+ melanoma (adjuvant)	2017	III	· Trial ongoing
	BRAF V600+ colorectal cancer	≥2020	I / II	
VAY736	Primary Sjoegren's syndrome	≥2020	II	
Votrient	Renal cell carcinoma (adjuvant)	2016	III	
Zykadia	ALK+ advanced NSCLC (1st line, treatment naïve)	2017	III	· Phase III study enrollment completed
	ALK+ NSCLC (brain metastases)	2019	II	· Trial ongoing

Selected Sandoz pipeline projects (biosimilars)

Project/ Compound	Potential indication/ Disease area	Submissions status	Current Phase	News update
GP2017 (adalimumab)	Arthritidies (rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis), plaque psoriasis and others (same as originator)		III	· Recruitment in Phase III psoriasis completed in Feb. 2015
GP2015 (etanercept)	Arthritidies (rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis), plaque psoriasis and others (same as originator)	EU and US	Submitted	· File accepted by FDA and EMA in Q4 2015 · FDA AdCom held on July 13, 2016; unanimously recommended approval for all five indications of the reference product
GP2013 (rituximab)	Follicular lymphoma (FL), diffuse large B cell lymphoma, chronic lymphocytic leukemia, rheumatoid arthritis (RA), granulomatosis with polyangelitis, and microscopic polyangelitis (same as originator)	EU	Submitted	· File accepted by EMA in Q2 2016
HX575 (epoetin alfa)	Chronic kidney disease, chemotherapy-induced anemia and others (same as originator)		III	· Trial complete
LA-EP2006 (pegfilgrastim)	Chemotherapy-induced neutropenia and others (same as originator)	US and EU	Submitted	· File accepted by FDA in Q4 2015 and EMA in Q1 2016 · Sandoz received a complete response letter from the FDA, and is working with agency to address their remaining questions
GP1111 (infliximab)	Autoimmune diseases including rheumatoid arthritis and psoriasis (same as originator)		Phase III	· EEA rights acquired from Pfizer in Q1 2016 · Trial fully recruited

Selected Alcon pipeline projects

Project/ Compound	Potential indication/ Disease area	Planned submissions	Current Phase	News update
SURGICAL				
AcrySof IQ ReSTOR Toric IOL 2.5D	Multifocal IOL for astigmatism	US 2017	Advanced	
AcrySof IQ ReSTOR Toric IOL 3.0D	Multifocal IOL for astigmatism	US 2014	Submitted	
VerifEye Lynk	Cataract planning linked intra-operative evaluation and guidance device	EU 2016 JP 2016 US 2016	Advanced Advanced Advanced	
AcrySof IQ PanOptix Toric IOL	Trifocal IOL for astigmatism	EU 2016	Advanced	
VISION CARE				
AirOptix Plus HydraGlyde	Contact lens for refractive correction	US 2016 JP 2016	Submitted Advanced	- Received CE Mark in Europe in Q4 2015
Dailies Total1 Multifocal	Multifocal contact lens for refractive correction	JP 2016	Advanced	- Received CE Mark in Europe in Q2 2016 - Achieved US approval in 2012 for *Dailies Total1* inclusive of multifocal design

CONDENSED INTERIM CONSOLIDATED FINANCIAL STATEMENTS

Consolidated income statements

Second quarter (unaudited)

	Q2 2016 USD m	Q2 2015 USD m	Change USD m
Net sales from continuing operations	**12 470**	**12 694**	**-224**
Other revenues	209	202	7
Cost of goods sold	-4 451	-4 487	36
Gross profit from continuing operations	**8 228**	**8 409**	**-181**
Marketing & Sales	-3 067	-3 016	-51
Research & Development	-2 190	-2 206	16
General & Administration	-582	-601	19
Other income	239	357	-118
Other expense	-535	-662	127
Operating income from continuing operations	**2 093**	**2 281**	**-188**
Income from associated companies	203	121	82
Interest expense	-180	-164	-16
Other financial income and expense	-3	-82	79
Income before taxes from continuing operations	**2 113**	**2 156**	**-43**
Taxes	-307	-300	-7
Net income from continuing operations	**1 806**	**1 856**	**-50**
Net loss from discontinued operations		-18	18
Net income	**1 806**	**1 838**	**-32**
Attributable to:			
Shareholders of Novartis AG	*1 804*	*1 836*	*-32*
Non-controlling interests	*2*	*2*	*0*
Weighted average number of shares outstanding – Basic (million)	**2 381**	**2 418**	**-37**
Basic earnings per share from continuing operations (USD)[1]	*0.76*	*0.77*	*-0.01*
Basic loss per share from discontinued operations (USD)[1]		*-0.01*	*0.01*
Total basic earnings per share (USD)[1]	**0.76**	**0.76**	**0.00**
Weighted average number of shares outstanding – Diluted (million)	2 401	2 451	-50
Diluted earnings per share from continuing operations (USD)[1]	*0.75*	*0.76*	*-0.01*
Diluted loss per share from discontinued operations (USD)[1]		*-0.01*	*0.01*
Total diluted earnings per share (USD)[1]	0.75	0.75	0.00

[1] Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

Consolidated income statements

First half (unaudited)

	H1 2016 USD m	H1 2015 USD m	Change USD m
Net sales to third parties from continuing operations	**24 070**	**24 629**	**-559**
Sales to discontinued segments		26	-26
Net sales from continuing operations	**24 070**	**24 655**	**-585**
Other revenues	419	443	-24
Cost of goods sold	-8 663	-8 467	-196
Gross profit from continuing operations	**15 826**	**16 631**	**-805**
Marketing & Sales	-5 808	-5 707	-101
Research & Development	-4 231	-4 273	42
General & Administration	-1 146	-1 192	46
Other income	1 016	771	245
Other expense	-1 113	-1 164	51
Operating income from continuing operations	**4 544**	**5 066**	**-522**
Income from associated companies	330	136	194
Interest expense	-365	-343	-22
Other financial income and expense	-44	-25	-19
Income before taxes from continuing operations	**4 465**	**4 834**	**-369**
Taxes	-648	-672	24
Net income from continuing operations	**3 817**	**4 162**	**-345**
Net income from discontinued operations		10 681	-10 681
Net income	**3 817**	**14 843**	**-11 026**
Attributable to:			
Shareholders of Novartis AG	*3 815*	*14 841*	*-11 026*
Non-controlling interests	*2*	*2*	*0*
Weighted average number of shares outstanding – Basic (million)	**2 380**	**2 412**	**-32**
Basic earnings per share from continuing operations (USD) [1]	*1.60*	*1.72*	*-0.12*
Basic earnings per share from discontinued operations (USD) [1]		*4.43*	*-4.43*
Total basic earnings per share (USD) [1]	**1.60**	**6.15**	**-4.55**
Weighted average number of shares outstanding – Diluted (million)	2 400	2 448	-48
Diluted earnings per share from continuing operations (USD) [1]	*1.59*	*1.70*	*-0.11*
Diluted earnings per share from discontinued operations (USD) [1]		*4.36*	*-4.36*
Total diluted earnings per share (USD) [1]	1.59	6.06	-4.47

[1] Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

Consolidated statements of comprehensive income

Second quarter (unaudited)

	Q2 2016 USD m	Q2 2015 USD m	Change USD m
Net income	**1 806**	**1 838**	**-32**
Other comprehensive income to be eventually recycled into the consolidated income statement:			
Fair value adjustments on financial instruments, net of taxes	130	130	0
Novartis share of other items recorded in comprehensive income recognized by associated companies, net of taxes	12	-3	15
Translation effects	-982	1 523	-2 505
Total of items to eventually recycle	*-840*	*1 650*	*-2 490*
Other comprehensive income never to be recycled into the consolidated income statement:			
Net actuarial (losses)/gains from defined benefit plans, net of taxes	-490	587	-1 077
Comprehensive income	**476**	**4 075**	**-3 599**
Attributable to:			
Shareholders of Novartis AG			
Continuing operations	*476*	*4 122*	*-3 646*
Discontinued operations		*-47*	*47*
Non-controlling interests	*0*	*0*	*0*

First half (unaudited)

	H1 2016 USD m	H1 2015 USD m	Change USD m
Net income	**3 817**	**14 843**	**-11 026**
Other comprehensive income to be eventually recycled into the consolidated income statement:			
Fair value adjustments on financial instruments, net of taxes	-100	76	-176
Novartis share of other items recorded in comprehensive income recognized by associated companies, net of taxes	1	-79	80
Translation effects	-534	632	-1 166
Total of items to eventually recycle	*-633*	*629*	*-1 262*
Other comprehensive income never to be recycled into the consolidated income statement:			
Net actuarial (losses)/gains from defined benefit plans, net of taxes	-1 532	321	-1 853
Comprehensive income	**1 652**	**15 793**	**-14 141**
Attributable to:			
Shareholders of Novartis AG			
Continuing operations	*1 652*	*5 138*	*-3 486*
Discontinued operations		*10 655*	*-10 655*
Non-controlling interests	*0*	*0*	*0*

Condensed consolidated balance sheets

	Jun 30, 2016 (unaudited) USD m	Dec 31, 2015 (audited) USD m	Change USD m
Assets			
Non-current assets			
Property, plant & equipment	16 067	15 982	85
Goodwill	31 331	31 174	157
Intangible assets other than goodwill	33 412	34 217	-805
Financial and other non-current assets	26 904	27 338	-434
Total non-current assets	**107 714**	**108 711**	**-997**
Current assets			
Inventories	6 674	6 226	448
Trade receivables	8 606	8 180	426
Other current assets	2 702	2 992	-290
Cash and cash equivalents, marketable securities, commodities and derivatives	5 740	5 447	293
Total current assets	**23 722**	**22 845**	**877**
Total assets	**131 436**	**131 556**	**-120**
Equity and liabilities			
Equity attributable to Novartis AG shareholders	72 456	77 046	-4 590
Non-controlling interests	76	76	0
Total equity	**72 532**	**77 122**	**-4 590**
Non-current liabilities			
Financial debts	16 276	16 327	-51
Other non-current liabilities	16 357	14 399	1 958
Total non-current liabilities	**32 633**	**30 726**	**1 907**
Current liabilities			
Trade payables	4 920	5 668	-748
Financial debts and derivatives	10 092	5 604	4 488
Other current liabilities	11 259	12 436	-1 177
Total current liabilities	**26 271**	**23 708**	**2 563**
Total liabilities	**58 904**	**54 434**	**4 470**
Total equity and liabilities	**131 436**	**131 556**	**-120**

Condensed consolidated changes in equity

Second quarter (unaudited)

	Q2 2016 USD m	Q2 2015 USD m	Change USD m
Consolidated equity at April 1	**71 889**	**76 444**	**-4 555**
Comprehensive income	476	4 075	-3 599
Purchase of treasury shares	-23	-700	677
Increase of treasury share repurchase obligation under a share buy-back trading plan		-1 246	1 246
Exercise of options and employee transactions	8	74	-66
Equity-based compensation	182	185	-3
Change in non-controlling interests	0	0	0
Consolidated equity at June 30	**72 532**	**78 832**	**-6 300**

First half (unaudited)

	H1 2016 USD m	H1 2015 USD m	Change USD m
Consolidated equity at January 1	**77 122**	**70 844**	**6 278**
Comprehensive income	1 652	15 793	-14 141
Purchase of treasury shares	-378	-2 133	1 755
Increase of treasury share repurchase obligation under a share buy-back trading plan		-1 211	1 211
Exercise of options and employee transactions	214	1 582	-1 368
Dividends to shareholders of Novartis AG	-6 475	-6 643	168
Equity-based compensation	397	610	-213
Change in non-controlling interests	0	-10	10
Consolidated equity at June 30	**72 532**	**78 832**	**-6 300**

Condensed consolidated cash flow statements

Second quarter (unaudited)

	Q2 2016 USD m	Q2 2015 USD m	Change USD m
Net income from continuing operations	**1 806**	**1 856**	**-50**
Reversal of non-cash items			
Taxes	307	300	7
Depreciation, amortization and impairments	1 466	1 509	-43
Change in provisions and other non-current liabilities	227	249	-22
Income from associated companies	-203	-121	-82
Net financial income	183	246	-63
Other	165	114	51
Net income adjusted for non-cash items	**3 951**	**4 153**	**-202**
Interest and other financial receipts	245	59	186
Interest and other financial payments	-373	-260	-113
Taxes paid [1]	-462	-524	62
Cash flows before working capital changes from continuing operations	**3 361**	**3 428**	**-67**
Payments out of provisions and other net cash movements in non-current liabilities	-501	-214	-287
Change in net current assets and other operating cash flow items	251	-259	510
Cash flows from operating activities from continuing operations	**3 111**	**2 955**	**156**
Cash flows used in operating activities from discontinued operations		-45	45
Total cash flows from operating activities	**3 111**	**2 910**	**201**
Purchase of property, plant & equipment	-448	-566	118
Purchase of intangible, financial and other non-current assets	-227	-476	249
Proceeds from sales of property, plant & equipment, intangible and financial assets	90	151	-61
Acquisitions and divestments of businesses	-12	-124	112
Change in marketable securities and commodities	4	-115	119
Cash flows used in investing activities from continuing operations	**-593**	**-1 130**	**537**
Cash flows used in investing activities from discontinued operations [1]	-251	-654	403
Total cash flows used in investing activities	**-844**	**-1 784**	**940**
Change in current and non-current financial debts	-1 580	-1 978	398
Treasury share transactions, net	-96	-624	528
Other financing cash flows	34	152	-118
Cash flows used in financing activities	**-1 642**	**-2 450**	**808**
Net translation effect on cash and cash equivalents	-46	69	-115
Change in cash and cash equivalents	**579**	**-1 255**	**1 834**
Cash and cash equivalents at April 1	4 457	6 473	-2 016
Cash and cash equivalents at June 30	**5 036**	**5 218**	**-182**

[1] In Q2 2016, the total tax payment amounted to USD 496 million of which USD 34 million was included in the cash flows used in investing activities from discontinued operations. In Q2 2015, the total tax payment amounted to USD 970 million of which USD 446 million was included in the cash flows used in investing activities from discontinued operations.

Condensed consolidated cash flow statements

First half (unaudited)

	H1 2016 USD m	H1 2015 USD m	Change USD m
Net income from continuing operations	**3 817**	**4 162**	**-345**
Reversal of non-cash items			
Taxes	648	672	-24
Depreciation, amortization and impairments	2 835	2 791	44
Change in provisions and other non-current liabilities	488	481	7
Income from associated companies	-330	-136	-194
Net financial income	409	368	41
Other	-28	162	-190
Net income adjusted for non-cash items	**7 839**	**8 500**	**-661**
Interest and other financial receipts	696	965	-269
Interest and other financial payments	-507	-388	-119
Taxes paid [1]	-981	-1 102	121
Cash flows before working capital changes from continuing operations	**7 047**	**7 975**	**-928**
Payments out of provisions and other net cash movements in non-current liabilities	-1 013	-636	-377
Change in net current assets and other operating cash flow items	-1 381	-2 488	1 107
Cash flows from operating activities from continuing operations	**4 653**	**4 851**	**-198**
Cash flows used in operating activities from discontinued operations [1]		-237	237
Total cash flows from operating activities	**4 653**	**4 614**	**39**
Purchase of property, plant & equipment	-833	-1 035	202
Purchase of intangible, financial and other non-current assets	-551	-722	171
Proceeds from sales of property, plant & equipment, intangible and financial assets	619	435	184
Acquisitions and divestments of businesses	-426	-16 144	15 718
Change in marketable securities and commodities	34	-110	144
Cash flows used in investing activities from continuing operations	**-1 157**	**-17 576**	**16 419**
Cash flows used in/from investing activities from discontinued operations [1]	-459	9 235	-9 694
Total cash flows used in investing activities	**-1 616**	**-8 341**	**6 725**
Dividends related to shareholders of Novartis AG	-6 475	-6 643	168
Change in current and non-current financial debts	4 081	3 020	1 061
Treasury share transactions, net	-280	-542	262
Other financing cash flows	5	-40	45
Cash flows used in financing activities	**-2 669**	**-4 205**	**1 536**
Net translation effect on cash and cash equivalents	-6	127	-133
Change in cash and cash equivalents	**362**	**-7 805**	**8 167**
Cash and cash equivalents at January 1	4 674	13 023	-8 349
Cash and cash equivalents at June 30	**5 036**	**5 218**	**-182**

[1] In H1 2016, the total tax payment amounted to USD 1 152 million of which USD 171 million was included in the cash flows used in investing activities from discontinued operations. In H1 2015, the total tax payment amounted to USD 1 616 million of which USD 1 million was included in the cash flows used in operating activities from discontinued operations and USD 513 million in cash flows from investing activities of discontinued operations.

Notes to the Condensed Interim Consolidated Financial Statements for the three-and six-month periods ended June 30, 2016 (unaudited)

1. Basis of preparation

These Condensed Interim Consolidated Financial Statements for the three- and six-months period ended June 30, 2016, were prepared in accordance with International Accounting Standard 34 *Interim Financial Reporting* and accounting policies set out in the 2015 Annual Report published on January 27, 2016.

2. Selected critical accounting policies

The Group's principal accounting policies are set out in Note 1 to the Consolidated Financial Statements in the Annual Report 2015 and conform with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board. The presentation of financial statements requires management to make subjective and complex judgments that affect the reported amounts. Because of the inherent uncertainties, actual outcomes and results may differ from management's assumptions and estimates.

In particular, during the first half of 2015, the significant transactions discussed in Note 3, were completed. Several of these transactions contained contingent consideration due to Novartis. Accounting for such contingent consideration requires management to make assumptions on the probability and amount of potential payments. If actual amounts are different from the estimated amounts recorded for contingent consideration there could be a significant impact, either positive or negative, on the Group's results of operations or cash flow.

The significant transactions discussed in Note 3 also included the formation of a new entity during the first quarter of 2015 via contribution of businesses from both Novartis and GlaxoSmithKline plc (GSK). Novartis has a 36.5% interest in this newly created entity and accounts for its stake using the equity method of accounting. Novartis has valued the contribution of 63.5% of its former OTC Division to the entity in exchange for 36.5% of the GlaxoSmithKline Consumer Healthcare Holdings Ltd. at fair value. The resulting gain for Novartis is based on these exchanged values. Novartis has elected to apply an option under IFRS for entities formed by contributions. Under this option, the retained 36.5% interest of Novartis in its former OTC division continues to be measured at its net book value at the time of the formation of the entity.

Furthermore, as discussed in the 2015 Annual Report, goodwill, Alcon brand name and acquired In-Process Research & Development projects are reviewed for impairment at least annually and these, as well as all other investments in intangible assets, are reviewed for impairment whenever an event or decision occurs that raises concern about their balance sheet carrying value. The amount of goodwill and other intangible assets on the Group's consolidated balance sheet has risen significantly in recent years, primarily from acquisitions. Impairment testing under IFRS may lead to potentially significant impairment charges in the future that could have a materially adverse impact on the Group's results of operations or cash flow.

3. Significant transactions

2016

Alcon – Acquisition of Transcend Medical, Inc.
On February 17, 2016, Alcon entered into an agreement to acquire Transcend Medical, Inc. (Transcend), a privately-held, US-based company focused on developing minimally-invasive surgical devices to treat glaucoma. The transaction closed on March 23, 2016, and the fair value of the total purchase consideration was USD 332 million. The amount consisted of an initial cash payment of USD 240 million and the net present value of the contingent consideration of USD 92 million due to the Transcend shareholders, which they are eligible to receive upon achievement of specified development and commercialization milestones. The purchase price allocation resulted in net identifiable assets of USD 294 million and goodwill of USD 38 million. Results of operations since the date of acquisition were not material.

2015

Transaction with Eli Lilly and Company
On January 1, 2015, Novartis closed its transaction with Eli Lilly and Company, USA (Lilly) announced in April 2014 to divest its Animal Health business for USD 5.4 billion in cash. This resulted in a pre-tax gain of USD 4.6 billion which was recorded in operating income from discontinued operations.

Transactions with GlaxoSmithKline plc
On March 2, 2015, Novartis closed its transactions with GlaxoSmithKline plc, Great Britain (GSK) announced in April 2014, with the following consequences:

Innovative Medicines – Acquisition of GSK oncology products
Novartis acquired GSK's oncology products and certain related assets for an aggregate cash consideration of USD 16.0 billion. Up to USD 1.5 billion of this cash consideration at the acquisition date is contingent on certain development milestones. The fair value of this potentially refundable consideration is USD 0.1 billion. In addition, under the terms of the agreement, Novartis is granted a right of first negotiation over the co-development or commercialization of GSK's current and future oncology R&D pipeline, excluding oncology vaccines. The right of first negotiation is for a period of 12.5 years from the acquisition closing date. The purchase price allocation of the fair value of the consideration of USD 15.9 billion resulted in net identified assets of USD 13.5 billion and goodwill of USD 2.4 billion. The net results from operations on a reported basis since the acquisition date were not significant.

Vaccines – Divestment
Novartis divested its Vaccines business (excluding its Vaccines influenza business) to GSK for up to USD 7.1 billion plus royalties. The USD 7.1 billion consists of USD 5.25 billion paid at closing and up to USD 1.8 billion in future milestone payments. The fair value of the contingent future milestones and royalties is USD 1.0 billion, resulting in a fair value of consideration received of USD 6.25 billion. Included in this amount, is a USD 450 million milestone payment received in late March 2015. The sale of this business resulted in a pre-tax gain of USD 2.8 billion which is recorded in operating income from discontinued operations.

Novartis's Vaccines influenza business was excluded from the GSK Vaccines business acquisition. However, GSK entered into a future option arrangement with Novartis in relation to the Vaccines influenza business, pursuant to which Novartis could have unilaterally required GSK to acquire the entire or certain parts of its Vaccines influenza business for consideration of up to USD 250 million (the Influenza Put Option) if the divestment to CSL Limited, Australia (CSL), discussed below, had not been completed. The option period was 18 months from the closing date of the GSK transaction, but terminated with the sale of the Vaccines influenza business to CSL on July 31, 2015. Novartis paid GSK a fee of USD 5 million in consideration for the grant of the Influenza Put Option.

Consumer Health – Combination of Novartis OTC with GSK Consumer Healthcare
Novartis and GSK have agreed to create a combined consumer healthcare business through a combination between Novartis OTC and GSK Consumer Healthcare businesses. On March 2, 2015, a new entity GlaxoSmithKline Consumer Healthcare Holdings Ltd. (GSK Consumer Healthcare) was

formed via contribution of businesses from both Novartis and GSK. Novartis has a 36.5% interest in the newly created entity. Novartis has valued the contribution of 63.5% of its OTC Division in exchange for 36.5% of the GSK Consumer Healthcare business at fair value. Based on the estimates of fair values exchanged, an investment in an associated company of USD 7.6 billion was recorded. The resulting pre-tax gain, net of transaction-related costs, of USD 5.9 billion was recorded in operating income from discontinued operations.

Novartis has four of eleven seats on the GSK Consumer Healthcare Holdings Ltd. Board of Directors. Furthermore, Novartis has customary minority rights and also exit rights at a pre-defined, market-based pricing mechanism.

The investment is accounted for using the equity method of accounting using estimated results for the quarter. Any differences between this estimate and actual results, when available, will be adjusted in the following consolidated financial statements in the following period.

Additional GSK related costs
The GSK transaction resulted in USD 0.5 billion of additional transaction-related expenses.

Transaction with CSL
On October 26, 2014, Novartis entered into an agreement with CSL to sell its Vaccines influenza business to CSL for USD 275 million. Entering into the separate divestment agreement with CSL resulted in the Vaccines influenza business being classified as a separate disposal group consisting of a group of cash generating units within the Vaccines Division, requiring the performance of a separate valuation of the Vaccines influenza business net assets. This triggered the recognition of an exceptional impairment charge in 2014 of USD 1.1 billion as the estimated net book value of the Vaccines influenza business net assets was above the USD 275 million consideration. The transaction with CSL was completed on July 31, 2015, resulting in a partial reversal of the impairment recorded in 2014 in the amount of USD 0.1 billion, which was recorded in the third quarter 2015 operating income from discontinued operations.

Innovative Medicines – Acquisition of Spinifex Pharmaceuticals, Inc.
On June 29, 2015 Novartis entered into an agreement to acquire Spinifex Pharmaceuticals, Inc. (Spinifex), a US and Australian-based, privately held development stage company, focused on developing a peripheral approach to treat neuropathic pain. The transaction closed on July 24, 2015, and the fair value of the total purchase consideration was USD 312 million. The amount consisted of an initial cash payment of USD 196 million and the net present value of the contingent consideration of USD 116 million due to previous Spinifex shareholders, which they are eligible to receive upon achievement of specified development and commercialization milestones. The purchase price allocation resulted in net identifiable assets of USD 263 million and goodwill of USD 49 million. Results of operations since the date of acquisition were not material.

Innovative Medicines – Acquisition of Admune Therapeutics LLC
On October 16, 2015, Novartis acquired Admune Therapeutics LLC (Admune), a US-based, privately held company, broadening Novartis' pipeline of cancer immunotherapies. The fair value of the total purchase consideration amounted to USD 258 million. This amount consists of an initial cash payment of USD 140 million and the net present value of the contingent consideration of USD 118 million due to Admune's previous owners, which they are eligible to receive upon the achievement of specified development and commercialization milestones. The purchase price allocation resulted in net identifiable assets of USD 258 million. No goodwill was recognized. Results of operations since the date of acquisition were not material.

Continuing operations comprise the businesses of the Innovative Medicines, Sandoz and Alcon Divisions and the continuing Corporate activities. Continuing operations also include the results from Oncology assets acquired from GSK and the estimated results from the 36.5% interest in GSK Consumer Healthcare Holdings Ltd. for the period from March 2, 2015 onward (the latter is reported as part of income from associated companies).

Discontinued operations included in 2015 the operational results from the Vaccines influenza business, prior to its divestment to CSL Limited on July 31, 2015, as well as results from the Vaccines

non-influenza business and OTC business until March 2, 2015. Operational results from the Animal Health business, which was divested on January 1, 2015, include only the divestment gain.

Discontinued operations also included in the first quarter of 2015 the exceptional pre-tax gains of USD 12.8 billion from the divestment of Animal Health (USD 4.6 billion) and from the transactions with GSK (USD 2.8 billion from the Vaccines non-influenza business and USD 5.9 billion arising from the contribution of Novartis OTC into GSK Consumer Healthcare Holdings Ltd.). In addition the GSK transactions resulted in USD 0.5 billion of additional transaction-related costs, which were expensed and reported in Corporate discontinued operations.

Excluded from discontinued operations are certain intellectual property rights and related other revenues of the Vaccines Division, which are retained by Novartis and are now reported under Corporate activities.

As required by IFRS, results of the discontinued operations exclude any further depreciation and amortization related to discontinued operations from the date of the portfolio transformation announcement of April 22, 2014.

4. Summary of equity attributable to Novartis AG shareholders

	Number of outstanding shares (in millions)			**Issued share capital and reserves attributable to Novartis AG shareholders**		
	2016	2015	Change	**H1 2016 USD m**	H1 2015 USD m	Change USD m
Balance at beginning of year	**2 373.9**	**2 398.6**	**-24.7**	**77 046**	**70 766**	**6 280**
Shares acquired to be held in Group Treasury		-5.0	5.0		-501	501
Shares acquired to be cancelled	-3.0	-12.8	9.8	-219	-1 286	1 067
Other share purchases	-2.0	-3.4	1.4	-159	-346	187
Exercise of options and employee transactions	4.0	26.9	-22.9	214	1 582	-1 368
Equity-based compensation	8.3	10.9	-2.6	397	610	-213
Increase of treasury share repurchase obligation under a share buy-back trading plan					-1 211	1 211
Dividends related to shareholders of Novartis AG				-6 475	-6 643	168
Net income of the period attributable to shareholders of Novartis AG				3 815	14 841	-11 026
Other comprehensive income attributable to shareholders of Novartis AG				-2 163	952	-3 115
Balance at June 30	**2 381.2**	**2 415.2**	**-34.0**	**72 456**	**78 764**	**-6 308**

5. Consolidated income statements – Segmentation

The businesses of Novartis are divided operationally on a worldwide basis into three reporting segments. In addition, we separately report Corporate activities.

Reporting segments are presented in a manner consistent with the internal reporting to the chief operating decision maker which is the Executive Committee of Novartis. The reporting segments are managed separately because they each research, develop, manufacture, distribute and sell distinct products that require differing marketing strategies.

The Executive Committee of Novartis is responsible for allocating resources and assessing the performance of the reporting segments.

Following the internal reorganization announced on January 27, 2016, the reporting segments and their financial results have been adapted to reflect in all years presented the transfers of:

- Alcon Ophthalmic Pharmaceuticals Franchise from the Alcon Division to the Innovative Medicines Division, the products of which will continue to be marketed with the Alcon brand name.
- Selected mature products from the Innovative Medicines Division to the Retails Generics and Oncology Injectables franchise of the Sandoz Division.

In order to comply with International Financial Reporting Standards (IFRS), Novartis has restated its consolidated financial statement disclosures by segment to reflect the above mentioned internal reorganization.

Innovative Medicines – formerly named the 'Pharmaceuticals Division' – researches, develops, manufactures, distributes and sells patented prescription medicines. The Innovative Medicines Division is organized into two global business units: Novartis Oncology, which consists of the global business franchises Oncology and Cell and Gene Therapies and Novartis Pharmaceuticals, consisting of the global business franchises responsible for the commercialization of various products. These franchises are: Neuroscience, Ophthalmology, Immunology and Dermatology, Respiratory, Cardio-Metabolic and Established Medicines.

Sandoz develops, manufactures, distributes and sells prescription medicines, as well as pharmaceutical active substances, which are not protected by valid and enforceable third-party patents. The Sandoz Division is organized globally in three franchises, Retail Generics, Anti-Infectives and Biopharmaceuticals. In Retail Generics, Sandoz develops, manufactures and markets active ingredients and finished dosage forms of pharmaceuticals to third parties. Retail Generics includes the areas of dermatology, respiratory, oncology and ophthalmics, as well as cardiovascular, metabolism, central nervous system, pain, gastrointestinal, and hormonal therapies. Finished dosage form anti-infectives sold to third parties are also part of Retail Generics. In Anti-Infectives, Sandoz manufactures active pharmaceutical ingredients and intermediates – mainly antibiotics – for internal use by Retail Generics and for sale to third party customers. In Biopharmaceuticals, Sandoz develops, manufactures and markets protein- or other biotechnology-based products known as biosimilars and provides biotechnology manufacturing services to other companies.

Alcon researches, discovers, develops, manufactures, distributes and sells eye care products. The Alcon Division is the global leader in eye care with product offerings in surgical and vision care. The Alcon Division is organized globally in two global business franchises as follows: In Surgical, Alcon develops, manufactures, distributes and sells ophthalmic surgical equipment, instruments, disposable products and intraocular lenses. In Vision Care, Alcon develops, manufactures, distributes and sells contact lenses and lens care products.

Details on Corporate, Novartis Institutes for Biomedical Research and Novartis Business Services supporting the divisions are provided in Note 3 to the Consolidated Financial Statements in the Annual Report 2015.

Segmentation – Second quarter (unaudited)

	Innovative Medicines [1]		Sandoz		Alcon		Corporate (including eliminations)		Group	
	Q2 2016 USD m	Q2 2015 restated [2] USD m	**Q2 2016 USD m**	Q2 2015 restated [2] USD m	**Q2 2016 USD m**	Q2 2015 restated [2] USD m	**Q2 2016 USD m**	Q2 2015 restated [2] USD m	**Q2 2016 USD m**	Q2 2015 USD m
Net sales to third parties from continuing operations	**8 387**	**8 633**	**2 577**	**2 530**	**1 506**	**1 531**			**12 470**	**12 694**
Sales to continuing segments	142	128	17	32			-159	-160		
Net sales from continuing operations	**8 529**	**8 761**	**2 594**	**2 562**	**1 506**	**1 531**	**-159**	**-160**	**12 470**	**12 694**
Other revenues	189	172	12	6		7	8	17	209	202
Cost of goods sold	-2 376	-2 426	-1 488	-1 433	-783	-817	196	189	-4 451	-4 487
Gross profit from continuing operations	**6 342**	**6 507**	**1 118**	**1 135**	**723**	**721**	**45**	**46**	**8 228**	**8 409**
Marketing & Sales	-2 168	-2 163	-427	-425	-472	-428			-3 067	-3 016
Research & Development	-1 844	-1 898	-206	-185	-140	-123			-2 190	-2 206
General & Administration	-254	-277	-78	-87	-104	-120	-146	-117	-582	-601
Other income	65	174	36	17	9	16	129	150	239	357
Other expense	-275	-349	-63	-174	-9	-12	-188	-127	-535	-662
Operating income from continuing operations	**1 866**	**1 994**	**380**	**281**	**7**	**54**	**-160**	**-48**	**2 093**	**2 281**
as % of net sales	*22.2%*	*23.1%*	*14.7%*	*11.1%*	*0.5%*	*3.5%*			*16.8%*	*18.0%*
Income from associated companies			2	1			201	120	203	121
Interest expense									-180	-164
Other financial income and expense									-3	-82
Income before taxes from continuing operations									**2 113**	**2 156**
Taxes									-307	-300
Net income from continuing operations									**1 806**	**1 856**
Net loss from discontinued operations										-18
Net income									**1 806**	**1 838**

[1] Formerly named the Pharmaceuticals Division.
[2] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.

Segmentation – First half (unaudited)

	Innovative Medicines [1]		Sandoz		Alcon		Corporate (including eliminations)		Group	
	H1 2016 USD m	H1 2015 restated [2] USD m	**H1 2016 USD m**	H1 2015 restated [2] USD m	**H1 2016 USD m**	H1 2015 restated [2] USD m	**H1 2016 USD m**	H1 2015 restated [2] USD m	**H1 2016 USD m**	H1 2015 USD m
Net sales to third parties from continuing operations	**16 116**	**16 593**	**5 022**	**4 974**	**2 932**	**3 062**			**24 070**	**24 629**
Sales to continuing and discontinued segments	306	266	42	70			-348	-310		26
Net sales from continuing operations	**16 422**	**16 859**	**5 064**	**5 044**	**2 932**	**3 062**	**-348**	**-310**	**24 070**	**24 655**
Other revenues	366	379	21	12	4	14	28	38	419	443
Cost of goods sold	-4 616	-4 416	-2 926	-2 842	-1 546	-1 603	425	394	-8 663	-8 467
Gross profit from continuing operations	**12 172**	**12 822**	**2 159**	**2 214**	**1 390**	**1 473**	**105**	**122**	**15 826**	**16 631**
Marketing & Sales	-4 086	-4 057	-837	-833	-885	-817			-5 808	-5 707
Research & Development	-3 576	-3 659	-401	-381	-254	-233			-4 231	-4 273
General & Administration	-498	-538	-158	-171	-223	-240	-267	-243	-1 146	-1 192
Other income	606	427	74	31	27	38	309	275	1 016	771
Other expense	-572	-551	-111	-239	-17	-26	-413	-348	-1 113	-1 164
Operating income from continuing operations	**4 046**	**4 444**	**726**	**621**	**38**	**195**	**-266**	**-194**	**4 544**	**5 066**
as % of net sales	*25.1%*	*26.8%*	*14.5%*	*12.5%*	*1.3%*	*6.4%*			*18.9%*	*20.6%*
Income from associated companies			4	1			326	135	330	136
Interest expense									-365	-343
Other financial income and expense									-44	-25
Income before taxes from continuing operations									**4 465**	**4 834**
Taxes									-648	-672
Net income from continuing operations									**3 817**	**4 162**
Net income from discontinued operations										10 681
Net income									**3 817**	**14 843**

[1] Formerly named the Pharmaceuticals Division.
[2] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.

Discontinued operations – Income statement 2015

	Q2 2015 USD m	H1 2015 USD m
Net sales to third parties of discontinued operations	**39**	**587**
Sales to continuing segments		17
Net sales of discontinued operations	**39**	**604**
Other revenues	3	21
Cost of goods sold	-61	-342
Gross profit of discontinued operations	**-19**	**283**
Marketing & Sales	-8	-240
Research & Development	-40	-163
General & Administration	-5	-56
Other income	5	13 323
Other expense	-29	-621
Operating loss/income of discontinued operations	**-96**	**12 526**
Loss/income before taxes of discontinued operations	**-96**	**12 526**
Taxes	78	-1 845
Loss/income of discontinued operations	**-18**	**10 681**

6. Financial instruments

The following table illustrates the three hierarchical levels for valuing financial instruments at fair value and also those measured at amortized cost or at cost as of June 30, 2016 and December 31, 2015. For additional information on the hierarchies and other matters, please refer to the Consolidated Financial Statements in the 2015 Annual Report, published on January 27, 2016.

	Level 1		Level 2		Level 3		Valued at amortized cost or cost		Total	
	Jun 30, 2016 USD m	Dec 31, 2015 USD m	**Jun 30, 2016 USD m**	Dec 31, 2015 USD m	**Jun 30, 2016 USD m**	Dec 31, 2015 USD m	**Jun 30, 2016 USD m**	Dec 31, 2015 USD m	**Jun 30, 2016 USD m**	Dec 31, 2015 USD m
Debt securities	288	316	25	23					313	339
Equity securities	7	6							7	6
Fund investments	29	29				4			29	33
Total available-for-sale marketable securities	**324**	**351**	**25**	**23**		**4**			**349**	**378**
Time deposits with original maturity more than 90 days							154	164	154	164
Derivative financial instruments			92	143					92	143
Accrued interest on debt securities							2	2	2	2
Total marketable securities, time deposits and derivative financial instruments	**324**	**351**	**117**	**166**		**4**	**156**	**166**	**597**	**687**
Financial investments and long-term loans										
Available-for-sale financial investments	599	700			487	473			1 086	1 173
Fund investments					106	90			106	90
Contingent consideration receivables					569	550			569	550
Long-term loans and receivables from customers and finance lease, advances, security deposits							607	653	607	653
Financial investments and long-term loans	**599**	**700**			**1 162**	**1 113**	**607**	**653**	**2 368**	**2 466**
Associated companies at fair value through profit or loss					173	181			173	181
Total associated companies at fair value through profit or loss					**173**	**181**			**173**	**181**
Contingent consideration payables					-935	-790			-935	-790
Other financial liabilities					-210	-315			-210	-315
Derivative financial instruments			-94	-30					-94	-30
Total financial liabilities at fair value			**-94**	**-30**	**-1 145**	**-1 105**			**-1 239**	**-1 135**

There were no changes in the first six months of the year in the valuation techniques used for financial instruments nor significant transfers from one level to the other nor significant transactions associated with level 3 financial instruments.

The fair value of straight bonds amounted to USD 17.3 billion at June 30, 2016 (USD 17.8 billion at December 31, 2015) compared to the balance sheet value of USD 15.6 billion at June 30, 2016 (USD 17.2 billion at December 31, 2015).

For all other financial assets and liabilities, the carrying amount is a reasonable approximation of the fair value. The carrying amount of financial assets included in the line financial investments and long-term loans amounted to USD 2.4 billion at June 30, 2016 (USD 2.5 billion at December 31, 2015) is included in line “financial and other non-current assets” of the condensed consolidated balance sheets.

The Group’s exposure to financial risks has not changed significantly during the period and there have been no major changes to the risk management department or in any risk management policies.

7. Legal proceedings update

A number of Novartis companies are, and will likely continue to be, subject to various legal proceedings, including litigations, arbitrations and governmental investigations, that arise from time to time. Legal proceedings are inherently unpredictable. As a result, the Group may become subject to substantial liabilities that may not be covered by insurance and may in the future incur judgments or enter into settlements of claims that could have a material adverse effect on its results of operations or cash flow. Note 20 to the Consolidated Financial Statements in our 2015 Annual Report and 2015 Form 20-F contains a summary as of the date of these reports of significant legal proceedings to which Novartis or its subsidiaries were a party. The following is a summary as of July 18, 2016 of potentially significant developments in those proceedings, as well as any new potentially significant proceedings commenced since the date of the 2015 Annual Report and 2015 Form 20-F.

Investigations and related litigations

Northern District of Texas (NDTX) investigation: Concluded
In 2012, Alcon was notified that the United States Attorney's office (USAO) for the NDTX was conducting an investigation relating to the export of certain Alcon medical end-use products to various countries subject to United States trade sanctions, including Iran, allegedly in violation of applicable trade sanctions, and received a grand jury subpoena requesting the production of documents for a period beginning in 2005 relating to this investigation. In June 2016, Alcon achieved civil settlements with the US Office of Foreign Assets Control (OFAC) and with the US Department of Commerce's Bureau of Industry and Security to pay a total of USD 9.4 million in civil monetary penalties. The settlements relate to the sale and export of medical end-use surgical and pharmaceutical products that were licensable and in fact had been previously and subsequently licensed by OFAC for Alcon. The USAO has advised Alcon that it has closed its investigation without taking action. This matter is therefore concluded.

*Lucentis/*Avastin® *Italy*
Granting a request by Novartis, in March 2016 the council of state suspended Novartis' appeal against the decision of the Tribunale amministrativo regionale (TAR) del Lazio and referred five legal questions to the European Court of Justice (ECJ) for a preliminary ruling. As previously reported, the TAR del Lazio decision had upheld the fines imposed on Novartis AG (NAG), Novartis Farma S.p.A., and two Roche entities for alleged collusion to artificially differentiate Avastin® and *Lucentis* in order to avoid the erosion of the sales of *Lucentis* by off-label Avastin® with the aim of preserving the market position of *Lucentis* in Italy. The ECJ's decision is pending. Novartis continues to vigorously contest the claims.

China investigations
After reports of Chinese government investigations of other pharmaceutical companies for alleged improper use of certain China-based travel agencies to reward healthcare providers, Novartis commenced an internal investigation in 2013 concerning its local affiliates' relationships with China-based travel agencies (and other vendors). In March 2016, NAG achieved a civil settlement with the US Securities and Exchange Commission (SEC) to pay USD 25 million to settle charges that it violated the internal controls and books-and-records provisions of the Foreign Corrupt Practices Act, without admitting or denying the findings. Novartis also agreed for two years to report to the SEC on the status of its remediation and anti-corruption compliance.

South Korea investigation
In Q1 2016, the Seoul Western District Prosecutor initiated a criminal investigation into allegations that Novartis Korea utilized medical journals to provide inappropriate economic benefits to healthcare professionals.

In addition to the matters described above, there have been other developments in the other legal matters described in Note 20 to the Consolidated Financial Statements contained in our 2015 Annual Report and 2015 Form 20-F. These do not significantly affect the assessment of management concerning the adequacy of the total provisions recorded for legal proceedings.

SUPPLEMENTARY INFORMATION (unaudited)

Non-IFRS disclosures

Core results

The Group's core results – including core operating income, core net income and core earnings per share – exclude the amortization of intangible assets, impairment charges, expenses relating to the integration of acquisitions and restructuring charges that exceed a threshold of USD 25 million, as well as income and expense items that management deems exceptional and that are or are expected to accumulate within the year to be over a USD 25 million threshold.

Novartis believes that investor understanding of the Group's performance is enhanced by disclosing core measures of performance because, since they exclude items which can vary significantly from year to year, the core measures enable better comparison of business performance across years. For this same reason, Novartis uses these core measures in addition to IFRS and other measures as important factors in assessing the Group's performance.

The following are examples of how these core measures are utilized:

- In addition to monthly reports containing financial information prepared under International Financial Reporting Standards (IFRS), senior management receives a monthly analysis incorporating these core measures.
- Annual budgets are prepared for both IFRS and core measures.

Despite the use of these measures by management in setting goals and measuring the Group's performance, these are non-IFRS measures that have no standardized meaning prescribed by IFRS. As a result, such measures have limits in usefulness to investors.

Because of their non-standardized definitions, the core measures (unlike IFRS measures) may not be comparable to the calculation of similar measures of other companies. These core measures are presented solely to permit investors to more fully understand how the Group's management assesses underlying performance. These core measures are not, and should not be viewed as, a substitute for IFRS measures.

As an internal measure of Group performance, these core measures have limitations, and the Group's performance management process is not solely restricted to these metrics. A limitation of the core measures is that they provide a view of the Group's operations without including all events during a period, such as the effects of an acquisition or amortization of purchased intangible assets.

Constant currencies

Changes in the relative values of non-US currencies to the US dollar can affect the Group's financial results and financial position. To provide additional information that may be useful to investors, including changes in sales volume, we present information about our net sales and various values relating to operating and net income that are adjusted for such foreign currency effects.

Constant currency calculations have the goal of eliminating two exchange rate effects so that an estimate can be made of underlying changes in the consolidated income statement excluding the impact of fluctuations in exchanges rates:

- the impact of translating the income statements of consolidated entities from their non-USD functional currencies to USD; and
- the impact of exchange rate movements on the major transactions of consolidated entities performed in currencies other than their functional currency.

We calculate constant currency measures by translating the current year's foreign currency values for sales and other income statement items into USD using the average exchange rates from the prior year and comparing them to the prior year values in USD.

We use these constant currency measures in evaluating the Group's performance, since they may assist us in evaluating our ongoing performance from year to year. However, in performing our evaluation, we also consider equivalent measures of performance which are not affected by changes in the relative value of currencies.

Growth rate calculation

For ease of understanding, Novartis uses a sign convention for its growth rates such that a reduction in operating expenses or losses compared to the prior year is shown as a positive growth.

Net debt and free cash flow

Net debt and free cash flow are non-IFRS financial measures, which means they should not be interpreted as measures determined under IFRS. Net debt is presented as additional information because management believes it is a useful supplemental indicator of the Group's ability to pay dividends, to meet financial commitments and to invest in new strategic opportunities, including strengthening its balance sheet. Free cash flow is presented as additional information because management believes it is a useful supplemental indicator of the Group's ability to operate without reliance on additional borrowing or use of existing cash. Free cash flow is a measure of the net cash generated that is available for debt repayment, investment in strategic opportunities and for returning to shareholders. Novartis uses free cash flow in internal comparisons of results from the Group's divisions. The definition of free cash flow used by Novartis does not include amounts related to changes in investments in associated companies nor related to acquisitions or divestments of subsidiaries. Free cash flow is not intended to be a substitute measure for cash flow from operating activities as determined under IFRS.

CORE RESULTS – Reconciliation from IFRS results to core results – Group – Second quarter

	Innovative Medicines [1]		Sandoz		Alcon		Corporate		Group	
	Q2 2016 USD m	Q2 2015 restated [2] USD m	**Q2 2016 USD m**	Q2 2015 restated [2] USD m	**Q2 2016 USD m**	Q2 2015 restated [2] USD m	**Q2 2016 USD m**	Q2 2015 USD m	**Q2 2016 USD m**	Q2 2015 USD m
IFRS Operating income from continuing operations	**1 866**	**1 994**	**380**	**281**	**7**	**54**	**-160**	**-48**	**2 093**	**2 281**
Amortization of intangible assets	**614**	**651**	**114**	**114**	**226**	**226**			**954**	**991**
Impairments										
Intangible assets	3	130	3						6	130
Property, plant & equipment related to the Group-wide rationalization of manufacturing sites			2	83					2	83
Other property, plant & equipment	60	6	3	-25		-1		-50	63	-70
Financial assets	10	3					30	6	40	9
Total impairment charges	**73**	**139**	**8**	**58**		**-1**	**30**	**-44**	**111**	**152**
Acquisition or divestment related items										
- Income	-3	-6					-62	-82	-65	-88
- Expense	8	75					60	79	68	154
Total acquisition or divestment related items, net	**5**	**69**					**-2**	**-3**	**3**	**66**
Other exceptional items										
Exceptional divestment gains	-12	-29							-12	-29
Restructuring items										
- Income	-5	-7	-2			-2	-3		-10	-9
- Expense	99	131	35	87	5	4	8	12	147	234
Legal-related items										
- Income										
- Expense										
Additional exceptional income	-11	-87		-3		-3	-2	-32	-13	-125
Additional exceptional expense	40	11				9	19	12	59	32
Total other exceptional items	**111**	**19**	**33**	**84**	**5**	**8**	**22**	**-8**	**171**	**103**
Total adjustments	**803**	**878**	**155**	**256**	**231**	**233**	**50**	**-55**	**1 239**	**1 312**
Core operating income from continuing operations	**2 669**	**2 872**	**535**	**537**	**238**	**287**	**-110**	**-103**	**3 332**	**3 593**
as % of net sales	*31.8%*	*33.3%*	*20.8%*	*21.2%*	*15.8%*	*18.7%*			*26.7%*	*28.3%*
Income from associated companies			2	1			201	120	203	121
Core adjustments to income from associated companies, net of tax							103	116	103	116
Interest expense									-180	-164
Other financial income and expense									-3	-63
Taxes (adjusted for above items)									-525	-529
Core net income from continuing operations									**2 930**	**3 074**
Core net loss from discontinued operations										-59
Core net income									**2 930**	**3 015**
Core net income attributable to shareholders of Novartis AG									**2 928**	**3 013**
Core basic EPS from continuing operations (USD) [3]									**1.23**	**1.27**
Core basic EPS from discontinued operations (USD) [3]										-0.02
Total core basic EPS (USD) [3]									**1.23**	**1.25**

[1] Formerly named the Pharmaceuticals Division.
[2] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.
[3] Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

CORE RESULTS – Reconciliation from IFRS results to core results – Group – First half

	Innovative Medicines [1]		Sandoz		Alcon		Corporate		Group	
	H1 2016 USD m	H1 2015 restated [2] USD m	**H1 2016 USD m**	H1 2015 restated [2] USD m	**H1 2016 USD m**	H1 2015 restated [2] USD m	**H1 2016 USD m**	H1 2015 USD m	**H1 2016 USD m**	H1 2015 USD m
IFRS Operating income from continuing operations	**4 046**	**4 444**	**726**	**621**	**38**	**195**	**-266**	**-194**	**4 544**	**5 066**
Amortization of intangible assets	**1 223**	**1 095**	**230**	**220**	**447**	**452**			**1 900**	**1 767**
Impairments										
Intangible assets	5	132	6		4				15	132
Property, plant & equipment related to the Group-wide rationalization of manufacturing sites		1	2	83					2	84
Other property, plant & equipment	60	7	10	1				6	70	14
Financial assets	10	15					50	25	60	40
Total impairment charges	**75**	**155**	**18**	**84**	**4**		**50**	**31**	**147**	**270**
Acquisition or divestment related items										
- Income	-10	-7					-130	-108	-140	-115
- Expense	13	117					127	96	140	213
Total acquisition or divestment related items, net	**3**	**110**					**-3**	**-12**	**0**	**98**
Other exceptional items										
Exceptional divestment gains	-338	-164							-338	-164
Restructuring items										
- Income	-20	-8	-20		-1	-2	-4		-45	-10
- Expense	198	190	66	98	6	13	25	13	295	314
Legal-related items										
- Income	-99								-99	
- Expense	136								136	
Additional exceptional income	-11	-119		-3	-13	-5	-10	-32	-34	-159
Additional exceptional expense	58	24				16	29	22	87	62
Total other exceptional items	**-76**	**-77**	**46**	**95**	**-8**	**22**	**40**	**3**	**2**	**43**
Total adjustments	**1 225**	**1 283**	**294**	**399**	**443**	**474**	**87**	**22**	**2 049**	**2 178**
Core operating income from continuing operations	**5 271**	**5 727**	**1 020**	**1 020**	**481**	**669**	**-179**	**-172**	**6 593**	**7 244**
as % of net sales	*32.7%*	*34.5%*	*20.3%*	*20.5%*	*16.4%*	*21.8%*			*27.4%*	*29.4%*
Income from associated companies			4	1			326	135	330	136
Core adjustments to income from associated companies, net of tax							229	322	229	322
Interest expense									-365	-343
Other financial income and expense									-44	-6
Taxes (adjusted for above items)									-1 025	-1 080
Core net income from continuing operations									**5 718**	**6 273**
Core net loss from discontinued operations										-142
Core net income									**5 718**	**6 131**
Core net income attributable to shareholders of Novartis AG									**5 716**	**6 129**
Core basic EPS from continuing operations (USD) [3]									**2.40**	**2.60**
Core basic EPS from discontinued operations (USD) [3]										-0.06
Total core basic EPS (USD) [3]									**2.40**	**2.54**

[1] Formerly named the Pharmaceuticals Division.
[2] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.
[3] Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

CORE RESULTS – Reconciliation from IFRS results to core results – Group – Second quarter

	Q2 2016 IFRS results USD millions	Amortization of intangible assets[1] USD millions	Impairments[2] USD millions	Acquisition or divestment related items, including restructuring and integration charges[3] USD millions	Other exceptional items[4] USD millions	Q2 2016 Core results USD millions	Q2 2015 Core results USD millions
Gross profit from continuing operations	**8 228**	**946**	**-2**		**35**	**9 207**	**9 538**
Operating income from continuing operations	**2 093**	**954**	**111**	**3**	**171**	**3 332**	**3 593**
Income before taxes from continuing operations	**2 113**	**1 010**	**111**	**3**	**218**	**3 455**	**3 603**
Taxes from continuing operations[5]	-307					-525	-529
Net income from continuing operations	**1 806**					**2 930**	**3 074**
Net loss from discontinued operations							-59
Net income	**1 806**					**2 930**	**3 015**
Basic EPS from continuing operations (USD)[6]	**0.76**					**1.23**	**1.27**
Basic EPS from discontinued operations (USD)[6]							-0.02
Total basic EPS (USD)[6]	**0.76**					**1.23**	**1.25**
The following are adjustments to arrive at Core Gross Profit from continuing operations							
Cost of goods sold	-4 451	946	-2		35	-3 472	-3 358
The following are adjustments to arrive at Core Operating Income from continuing operations							
Research & Development	-2 190	8	8		36	-2 138	-2 163
General & Administration	-582				16	-566	-585
Other income	239			-65	-35	139	105
Other expense	-535		105	68	119	-243	-291
The following are adjustments to arrive at Core Income before taxes from continuing operations							
Income from associated companies	203	56			47	306	237

[1] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets; Research & Development includes the recurring amortization of acquired rights for technology platforms; Income from associated companies includes USD 56 million for the Novartis share of the estimated Roche core items.

[2] Impairments: Cost of goods sold and Research & Development include impairment charges related to intangible assets; Research & Development also includes prior period impairment charges related to intangible assets which have been reclassed from Cost of goods sold; Other expense includes impairment charges related to property, plant and equipment and financial assets.

[3] Acquisition or divestment related items, including restructuring and integration charges: Other income and Other expense include service-fee income and expenses and other items related to the portfolio transformation.

[4] Other exceptional items: Cost of goods sold, Other income and Other expense include net restructuring charges related to the Group-wide rationalization of manufacturing sites; Research & Development, Other income and Other expense also include other restructuring income and charges; General & Administration, Other income and Other expense include items related to setup costs for Novartis Business Services; Research & Development also includes an expense due to an adjustment of a contingent consideration; Other income also includes additional gains from divestments announced in prior periods, as well as income related to the portfolio transformation; Other expense also includes a charge as a result of a pension plan amendment; Income from associated companies includes USD 47 million for the Novartis share of the estimated GSK Consumer Healthcare Holdings Ltd. core items.

[5] Taxes on the adjustments between IFRS and core results take into account, for each individual item included in the adjustment, the tax rate that will finally be applicable to the item based on the jurisdiction where the adjustment will finally have a tax impact. Generally, this results in amortization and impairment of intangible assets and acquisition-related restructuring and integration items having a full tax impact. There is usually a tax impact on exceptional items although this is not always the case for items arising from legal settlements in certain jurisdictions. Adjustments related to income from associated companies are recorded net of any related tax effect. Due to these factors and the differing effective tax rates in the various jurisdictions, the tax on the total adjustments for continuing operations of USD 1.3 billion to arrive at the core results before tax amounts to USD 218 million. The average tax rate on the adjustments for continuing operations is 16.2% since the estimated full year tax charge has been applied to the pre-tax income of the period.

[6] Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

CORE RESULTS – Reconciliation from IFRS results to core results – Group – First half

	H1 2016 IFRS results USD millions	Amortization of intangible assets[1] USD millions	Impairments[2] USD millions	Acquisition or divestment related items, including restructuring and integration charges[3] USD millions	Other exceptional items[4] USD millions	H1 2016 Core results USD millions	H1 2015 Core results USD millions
Gross profit from continuing operations	**15 826**	**1 883**	**5**		**55**	**17 769**	**18 528**
Operating income from continuing operations	**4 544**	**1 900**	**147**		**2**	**6 593**	**7 244**
Income before taxes from continuing operations	**4 465**	**2 044**	**147**		**87**	**6 743**	**7 353**
Taxes from continuing operations[5]	-648					-1 025	-1 080
Net income from continuing operations	**3 817**					**5 718**	**6 273**
Net loss from discontinued operations							-142
Net income	**3 817**					**5 718**	**6 131**
Basic EPS from continuing operations (USD)[6]	**1.60**					**2.40**	**2.60**
Basic EPS from discontinued operations (USD)[6]							-0.06
Total basic EPS (USD)[6]	**1.60**					**2.40**	**2.54**
The following are adjustments to arrive at Core Gross Profit from continuing operations							
Cost of goods sold	-8 663	1 883	5		55	-6 720	-6 542
The following are adjustments to arrive at Core Operating Income from continuing operations							
Research & Development	-4 231	17	10		55	-4 149	-4 207
General & Administration	-1 146				27	-1 119	-1 162
Other income	1 016			-140	-503	373	351
Other expense	-1 113		132	140	368	-473	-564
The following are adjustments to arrive at Core Income before taxes from continuing operations							
Income from associated companies	330	144			85	559	458

[1] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets; Research & Development includes the recurring amortization of acquired rights for technology platforms; Income from associated companies includes USD 144 million for the Novartis share of the estimated Roche core items.

[2] Impairments: Cost of goods sold and Research & Development include impairment charges related to intangible assets; Other expense includes impairment charges related to property, plant and equipment and financial assets.

[3] Acquisition or divestment related items, including restructuring and integration charges: Other income and Other expense include service-fee income and expenses and other items related to the portfolio transformation.

[4] Other exceptional items: Cost of goods sold, Other income and Other expense include net restructuring charges related to the Group-wide rationalization of manufacturing sites; Research & Development, Other income and Other expense also include other restructuring income and charges; Cost of goods sold and Research & Development include adjustments of a contingent consideration; General & Administration, Other income and Other expense include items related to setup costs for Novartis Business Services; Other income and Other expense also include net legal settlements; Other income also includes additional gains from divestments announced in prior periods, as well as income related to the portfolio transformation; Other expense also includes a charge as a result of a pension plan amendment; Income from associated companies includes USD 85 million for the Novartis share of the estimated GSK Consumer Healthcare Holdings Ltd. core items.

[5] Taxes on the adjustments between IFRS and core results take into account, for each individual item included in the adjustment, the tax rate that will finally be applicable to the item based on the jurisdiction where the adjustment will finally have a tax impact. Generally, this results in amortization and impairment of intangible assets and acquisition-related restructuring and integration items having a full tax impact. There is usually a tax impact on exceptional items although this is not always the case for items arising from legal settlements in certain jurisdictions. Adjustments related to income from associated companies are recorded net of any related tax effect. Due to these factors and the differing effective tax rates in the various jurisdictions, the tax on the total adjustments for continuing operations of USD 2.3 billion to arrive at the core results before tax amounts to USD 377 million. The average tax rate on the adjustments for continuing operations is 16.5% since the estimated full year tax charge has been applied to the pre-tax income of the period.

[6] Earnings per share (EPS) is calculated on the amount of net income attributable to shareholders of Novartis AG.

CORE RESULTS – Reconciliation from IFRS results to core results – Innovative Medicines[1] – Second quarter

	Q2 2016 IFRS results USD millions	Amortization of intangible assets[2] USD millions	Impairments[3] USD millions	Acquisition or divestment related items, including restructuring and integration charges[4] USD millions	Other exceptional items[5] USD millions	Q2 2016 Core results USD millions	Q2 2015 restated Core results[6] USD millions
Gross profit	**6 342**	**609**	**1**		**16**	**6 968**	**7 296**
Operating income	**1 866**	**614**	**73**	**5**	**111**	**2 669**	**2 872**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-2 376	609	1		16	-1 750	-1 637
The following are adjustments to arrive at Core Operating Income							
Research & Development	-1 844	5	2		36	-1 801	-1 858
Other income	65			-3	-28	34	46
Other expense	-275		70	8	87	-110	-177

[1] Formerly named the Pharmaceuticals Division.
[2] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets; Research & Development includes the recurring amortization of acquired rights for technology platforms.
[3] Impairments: Cost of goods sold and Research & Development include impairment charges related to intangible assets; Other expense includes impairment charges related to property, plant and equipment, and financial assets.
[4] Acquisition or divestment related items, including restructuring and integration charges: Other income and Other expense includes service-fee income and expenses and other items related to the portfolio transformation.
[5] Other exceptional items: Cost of goods sold, Other income and Other expense include net restructuring charges related to the Group-wide rationalization of manufacturing sites; Research & Development, Other income and Other expense also include other restructuring income and charges; Research & Development also includes an expense due to an adjustment of a contingent consideration; Other income also includes additional gains from divestments announced in prior periods; Other expense also includes a charge as a result of a pension plan amendment.
[6] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.

CORE RESULTS – Reconciliation from IFRS results to core results – Innovative Medicines[1] – First half

	H1 2016 IFRS results USD millions	Amortization of intangible assets[2] USD millions	Impairments[3] USD millions	Acquisition or divestment related items, including restructuring and integration charges[4] USD millions	Other exceptional items[5] USD millions	H1 2016 Core results USD millions	H1 2015 restated Core results[6] USD millions
Gross profit	**12 172**	**1 212**	**1**		**29**	**13 414**	**14 048**
Operating income	**4 046**	**1 223**	**75**	**3**	**-76**	**5 271**	**5 727**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-4 616	1 212	1		29	-3 374	-3 162
The following are adjustments to arrive at Core Operating Income							
Research & Development	-3 576	11	4		55	-3 506	-3 599
Other income	606			-10	-468	128	158
Other expense	-572		70	13	308	-181	-290

[1] Formerly named the Pharmaceuticals Division.
[2] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets; Research & Development includes the recurring amortization of acquired rights for technology platforms.
[3] Impairments: Cost of goods sold and Research & Development include impairment charges related to intangible assets; Other expense includes impairment charges related to property, plant and equipment, and financial assets.
[4] Acquisition or divestment related items, including restructuring and integration charges: Other income and Other expense include service-fee income and expenses and other items related to the portfolio transformation.
[5] Other exceptional items: Cost of goods sold, Other income and Other expense include net restructuring charges related to the Group-wide rationalization of manufacturing sites; Research & Development, Other income and Other expense also include other restructuring income and charges; Research & Development also includes an expense due to an adjustment of a contingent consideration; Other income and Other expense also include net legal settlements; Other income also includes gains from product divestments; Other expense also includes a charge as a result of a pension plan amendment.
[6] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.

CORE RESULTS – Reconciliation from IFRS results to core results – Sandoz – Second quarter

	Q2 2016 IFRS results USD millions	Amortization of intangible assets[1] USD millions	Impairments[2] USD millions	Acquisition or divestment related items, including restructuring and integration charges USD millions	Other exceptional items[3] USD millions	Q2 2016 Core results USD millions	Q2 2015 restated Core results[4] USD millions
Gross profit	**1 118**	**114**	**1**		**19**	**1 252**	**1 251**
Operating income	**380**	**114**	**8**		**33**	**535**	**537**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-1 488	114	1		19	-1 354	-1 317
The following are adjustments to arrive at Core Operating Income							
Research & Development	-206		2			-204	-185
Other income	36				-2	34	14
Other expense	-63		5		16	-42	-31

[1] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets.
[2] Impairments: Cost of goods sold and Research & Development include impairment charges related to intangible assets; Other expense includes impairment charges related to property, plant and equipment.
[3] Other exceptional items: Cost of goods sold, Other income and Other expense include net restructuring charges related to the Group-wide rationalization of manufacturing sites; Other expense also includes other restructuring charges.
[4] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.

CORE RESULTS – Reconciliation from IFRS results to core results – Sandoz – First half

	H1 2016 IFRS results USD millions	Amortization of intangible assets[1] USD millions	Impairments[2] USD millions	Acquisition or divestment related items, including restructuring and integration charges USD millions	Other exceptional items[3] USD millions	H1 2016 Core results USD millions	H1 2015 restated Core results[4] USD millions
Gross profit	**2 159**	**230**	**4**		**39**	**2 432**	**2 438**
Operating income	**726**	**230**	**18**		**46**	**1 020**	**1 020**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-2 926	230	4		39	-2 653	-2 618
The following are adjustments to arrive at Core Operating Income							
Research & Development	-401		2			-399	-381
Other income	74				-20	54	28
Other expense	-111		12		27	-72	-61

[1] Amortization of intangible assets: Cost of goods sold includes recurring amortization of acquired rights to in-market products and other production-related intangible assets.
[2] Impairments: Cost of goods sold and Research & Development include impairment charges related to intangible assets; Other expense includes impairment charges related to property, plant and equipment.
[3] Other exceptional items: Cost of goods sold, Other income and Other expense include net restructuring charges related to the Group-wide rationalization of manufacturing sites; Cost of goods sold, Other income and Other expense also include other restructuring income and charges.
[4] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.

CORE RESULTS – Reconciliation from IFRS results to core results – Alcon – Second quarter

	Q2 2016 IFRS results USD millions	Amortization of intangible assets[1] USD millions	Impairments[2] USD millions	Acquisition or divestment related items, including restructuring and integration charges USD millions	Other exceptional items[3] USD millions	Q2 2016 Core results USD millions	Q2 2015 restated Core results[4] USD millions
Gross profit	**723**	**223**	**-4**			**942**	**945**
Operating income	**7**	**226**			**5**	**238**	**287**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-783	223	-4			-564	-593
The following are adjustments to arrive at Core Operating Income							
Research & Development	-140	3	4			-133	-120
Other expense	-9				5	-4	-9

[1] Amortization of intangible assets: Cost of goods sold and Research & Development include recurring amortization of acquired rights to in-market products and other production-related intangible assets.
[2] Impairments: Research & Development includes prior period impairment charges related to intangible assets which have been reclassed from Cost of goods sold.
[3] Other exceptional items: Other expense includes restructuring charges.
[4] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.

CORE RESULTS – Reconciliation from IFRS results to core results – Alcon – First half

	H1 2016 IFRS results USD millions	Amortization of intangible assets[1] USD millions	Impairments[2] USD millions	Acquisition or divestment related items, including restructuring and integration charges USD millions	Other exceptional items[3] USD millions	H1 2016 Core results USD millions	H1 2015 restated Core results[4] USD millions
Gross profit	**1 390**	**441**			**-13**	**1 818**	**1 920**
Operating income	**38**	**447**	**4**		**-8**	**481**	**669**
The following are adjustments to arrive at Core Gross Profit							
Cost of goods sold	-1 546	441			-13	-1 118	-1 156
The following are adjustments to arrive at Core Operating Income							
Research & Development	-254	6	4			-244	-227
Other income	27				-1	26	31
Other expense	-17				6	-11	-14

[1] Amortization of intangible assets: Cost of goods sold and Research & Development include recurring amortization of acquired rights to in-market products and other production-related intangible assets.
[2] Impairments: Research & Development includes impairment charges related to intangible assets.
[3] Other exceptional items: Cost of goods sold includes an income due to an adjustment of a contingent consideration; Other income and Other expense include other restructuring income and charges.
[4] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.

CORE RESULTS – Reconciliation from IFRS results to core results – Corporate – Second quarter

	Q2 2016 IFRS results USD millions	Amortization of intangible assets USD millions	Impairments [1] USD millions	Acquisition or divestment related items, including restructuring and integration charges [2] USD millions	Other exceptional items [3] USD millions	Q2 2016 Core results USD millions	Q2 2015 Core results USD millions
Gross profit	**45**					**45**	**46**
Operating loss	**-160**		**30**	**-2**	**22**	**-110**	**-103**
The following are adjustments to arrive at Core Operating Loss							
General & Administration	-146				16	-130	-110
Other income	129			-62	-5	62	35
Other expense	-188		30	60	11	-87	-74

[1] Impairments: Other expense includes impairment charges related to financial assets.
[2] Acquisition or divestment related items, including restructuring and integration charges: Other income and Other expense include service-fee income and expenses and other items related to the portfolio transformation.
[3] Other exceptional items: General & Administration, Other income and Other expense include items related to setup costs for Novartis Business Services; Other income also includes an income related to the portfolio transformation; Other expense also includes other restructuring charges.

CORE RESULTS – Reconciliation from IFRS results to core results – Corporate – First half

	H1 2016 IFRS results USD millions	Amortization of intangible assets USD millions	Impairments [1] USD millions	Acquisition or divestment related items, including restructuring and integration charges [2] USD millions	Other exceptional items [3] USD millions	H1 2016 Core results USD millions	H1 2015 Core results USD millions
Gross profit	**105**					**105**	**122**
Operating loss	**-266**		**50**	**-3**	**40**	**-179**	**-172**
The following are adjustments to arrive at Core Operating Loss							
General & Administration	-267				27	-240	-229
Other income	309			-130	-14	165	134
Other expense	-413		50	127	27	-209	-199

[1] Impairments: Other expense includes impairment charges related to financial assets.
[2] Acquisition or divestment related items, including restructuring and integration charges: Other income and Other expense include service-fee income and expenses and other items related to the portfolio transformation.
[3] Other exceptional items: General & Administration, Other income and Other expense include items related to setup costs for Novartis Business Services; Other income also includes an income related to the portfolio transformation; Other expense also includes other restructuring charges.

CORE RESULTS – Discontinued operations – Second quarter 2015

	Q2 2015 Core results USD millions
Gross profit	**-17**
Operating loss	**-72**
Loss before taxes	**-72**
Taxes	13
Net loss	**-59**
Basic EPS (USD)	**-0.02**
The following accounts have been adjusted to arrive at Core Gross Profit	
Cost of goods sold	-59
The following accounts have been adjusted to arrive at Core Operating Loss	
Other income	2
Other expense	-4

CORE RESULTS – Discontinued operations – First half 2015

	H1 2015 Core results USD millions
Gross profit	**289**
Operating loss	**-174**
Loss before taxes	**-174**
Taxes	32
Net loss	**-142**
Basic EPS (USD)	**-0.06**
The following accounts have been adjusted to arrive at Core Gross Profit	
Cost of goods sold	-336
The following accounts have been adjusted to arrive at Core Operating Loss	
Other income	10
Other expense	-14

Condensed consolidated changes in net debt

Second quarter

	Q2 2016 USD m	Q2 2015 USD m
Change in cash and cash equivalents	**579**	**-1 255**
Change in marketable securities, commodities, financial debt and financial derivatives	1 801	1 606
Reduction in net debt	**2 380**	**351**
Net debt at April 1	-23 008	-17 750
Net debt at June 30	**-20 628**	**-17 399**

First half

	H1 2016 USD m	H1 2015 USD m
Change in cash and cash equivalents	**362**	**-7 805**
Change in marketable securities, commodities, financial debt and financial derivatives	-4 506	-3 045
Increase in net debt	**-4 144**	**-10 850**
Net debt at January 1	-16 484	-6 549
Net debt at June 30	**-20 628**	**-17 399**

Components of net debt

	Jun 30, 2016 USD m	Jun 30, 2015 USD m
Current financial debts and derivative financial instruments	-10 092	-9 973
Non-current financial debts	-16 276	-13 301
Less liquidity:		
Cash and cash equivalents	5 036	5 218
Marketable securities, commodities and derivative financial instruments	704	657
Net debt at June 30	**-20 628**	**-17 399**

Share information

	Jun 30, 2016	Jun 30, 2015
Number of shares outstanding	**2 381 221 094**	2 415 172 828
Registered share price (CHF)	**80.15**	92.15
ADR price (USD)	**82.51**	98.34
Market capitalization (USD billions)	**194.7**	238.6
Market capitalization (CHF billions)	**190.9**	222.6

Free cash flow

Second quarter

	Q2 2016 USD m	Q2 2015 USD m	Change USD m
Operating income from continuing operations	**2 093**	**2 281**	**-188**
Reversal of non-cash items			
Depreciation, amortization and impairments	1 466	1 509	-43
Change in provisions and other non-current liabilities	227	249	-22
Other	165	114	51
Operating income adjusted for non-cash items	**3 951**	**4 153**	**-202**
Interest and other financial receipts	245	59	186
Interest and other financial payments	-373	-260	-113
Taxes paid	-462	-524	62
Payments out of provisions and other net cash movements in non-current liabilities	-501	-214	-287
Change in inventory and trade receivables less trade payables	-160	-62	-98
Change in other net current assets and other operating cash flow items	411	-197	608
Cash flows from operating activities from continuing operations	**3 111**	**2 955**	**156**
Purchase of property, plant & equipment	-448	-566	118
Purchase of intangible, financial and other non-current assets	-227	-476	249
Proceeds from sales of property, plant & equipment, intangible and financial assets	90	151	-61
Free cash flow from continuing operations	**2 526**	**2 064**	**462**
Free cash flow from discontinued operations		-51	51
Total free cash flow	**2 526**	**2 013**	**513**

First half

	H1 2016 USD m	H1 2015 USD m	Change USD m
Operating income from continuing operations	**4 544**	**5 066**	**-522**
Reversal of non-cash items			
Depreciation, amortization and impairments	2 835	2 791	44
Change in provisions and other non-current liabilities	488	481	7
Other	-28	162	-190
Operating income adjusted for non-cash items	**7 839**	**8 500**	**-661**
Interest and other financial receipts	696	965	-269
Interest and other financial payments	-507	-388	-119
Taxes paid	-981	-1 102	121
Payments out of provisions and other net cash movements in non-current liabilities	-1 013	-636	-377
Change in inventory and trade receivables less trade payables	-1 524	-1 552	28
Change in other net current assets and other operating cash flow items	143	-936	1 079
Cash flows from operating activities from continuing operations	**4 653**	**4 851**	**-198**
Purchase of property, plant & equipment	-833	-1 035	202
Purchase of intangible, financial and other non-current assets	-551	-722	171
Proceeds from sales of property, plant & equipment, intangible and financial assets	619	435	184
Free cash flow from continuing operations	**3 888**	**3 529**	**359**
Free cash flow from discontinued operations		-290	290
Total free cash flow	**3 888**	**3 239**	**649**

Net sales of the top 20 Innovative Medicines[1] products in 2016 – Second quarter

			US		Rest of world		Total		
Brands	**Business Franchise**	**Indication**	**USD m**	**% change in constant currencies**	**USD m**	**% change in constant currencies**	**USD m**	**% change in USD**	**% change in constant currencies**
Gleevec/Glivec	Oncology	Chronic myeloid leukemia and GIST	340	-48	551	5	**891**	**-25**	**-25**
Gilenya	Neuroscience	Relapsing multiple sclerosis	446	17	365	17	**811**	**16**	**17**
Lucentis	Ophthalmology	Age-related macular degeneration			475	-10	**475**	**-12**	**-10**
Tasigna	Oncology	Chronic myeloid leukemia	185	9	273	19	**458**	**11**	**15**
Sandostatin	Oncology	Carcinoid tumors and Acromegaly	217	4	207	8	**424**	**3**	**5**
Afinitor/Votubia	Oncology	Breast cancer / TSC	195	-22	170	0	**365**	**-14**	**-13**
Galvus	Cardio-Metabolic	Diabetes			306	12	**306**	**12**	**12**
Diovan/Co–Diovan	Established Medicines	Hypertension	40	-43	243	-5	**283**	**-15**	**-13**
Exjade/Jadenu	Oncology	Chronic iron overload	122	14	132	-12	**254**	**-3**	**-1**
Exforge	Established Medicines	Hypertension		-100	236	-3	**236**	**-13**	**-11**
Cosentyx	Immunology and Dermatology	Psoriasis, ankylosing spondylitis and psoriatic arthritis	180	nm	80	nm	**260**	**nm**	**nm**
Xolair[2]	Respiratory	Asthma			212	12	**212**	**9**	**12**
Votrient	Oncology	Renal cell carcinoma	93	8	95	22	**188**	**14**	**15**
Tafinlar/Mekinist	Oncology	Melanoma	78	-9	94	105	**172**	**31**	**31**
Travoprost Group	Ophthalmology	Reduction of elevated intraocular pressure	53	20	103	-12	**156**	**-3**	**-3**
Promacta/Revolade	Oncology	Immune thrombocytopenic purpura	77	31	81	39	**158**	**36**	**36**
Jakavi	Oncology	Myelofibrosis			146	49	**146**	**49**	**49**
Neoral/Sandimmun(e)	Immunology and Dermatology	Transplantation	11	0	125	-6	**136**	**-6**	**-6**
Voltaren/Cataflam	Established Medicines	Inflammation/pain			134	2	**134**	**-1**	**2**
***Exelon/Exelon* Patch**	Neuroscience	Alzheimer's disease	19	-83	91	-7	**110**	**-47**	**-47**
Top 20 products total			**2 056**	**-10**	**4 119**	**7**	**6 175**	**0**	**1**
Rest of portfolio			790	-10	1 422	-4	**2 212**	**-9**	**-6**
Total Division sales			**2 846**	**-10**	**5 541**	**4**	**8 387**	**-3**	**-1**

[1] Formerly named the Pharmaceuticals Division.
[2] Net sales reflect *Xolair* sales for all indications (e.g. including *Xolair* SAA and *Xolair* CSU, which are managed by the Immunology and Dermatology).
nm = not meaningful

Net sales of the top 20 Innovative Medicines[1] products in 2016 – First half

			US		Rest of world		Total		
Brands	**Business Franchise**	**Indication**	**USD m**	**% change in constant currencies**	**USD m**	**% change in constant currencies**	**USD m**	**% change in USD**	**% change in constant currencies**
Gleevec/Glivec	Oncology	Chronic myeloid leukemia and GIST	659	-45	1 066	3	**1 725**	**-23**	**-22**
Gilenya	Neuroscience	Relapsing multiple sclerosis	813	14	696	15	**1 509**	**13**	**15**
Lucentis	Ophthalmology	Age-related macular degeneration			927	-10	**927**	**-14**	**-10**
Tasigna	Oncology	Chronic myeloid leukemia	349	12	491	10	**840**	**7**	**11**
Sandostatin	Oncology	Carcinoid tumors and Acromegaly	426	6	399	7	**825**	**3**	**6**
Afinitor/Votubia	Oncology	Breast cancer / TSC	385	-16	347	3	**732**	**-10**	**-8**
Galvus	Cardio-Metabolic	Diabetes			589	8	**589**	**4**	**8**
Diovan/Co–Diovan	Established Medicines	Hypertension	79	-49	476	-10	**555**	**-21**	**-18**
Exjade/Jadenu	Oncology	Chronic iron overload	227	28	250	-6	**477**	**5**	**7**
Exforge	Established Medicines	Hypertension		-100	457	-6	**457**	**-17**	**-13**
Cosentyx	Immunology and Dermatology	Psoriasis, ankylosing spondylitis and psoriatic arthritis	303	nm	133	nm	**436**	**nm**	**nm**
Xolair[2]	Respiratory	Asthma			404	13	**404**	**8**	**13**
Votrient	Oncology	Renal cell carcinoma	174	nm	180	nm	**354**	**nm**	**nm**
Tafinlar/Mekinist	Oncology	Melanoma	145	nm	177	nm	**322**	**nm**	**nm**
Travoprost Group	Ophthalmology	Reduction of elevated intraocular pressure	108	16	199	-9	**307**	**-4**	**-2**
Promacta/Revolade	Oncology	Immune thrombocytopenic purpura	139	nm	150	nm	**289**	**nm**	**nm**
Jakavi	Oncology	Myelofibrosis			270	47	**270**	**44**	**47**
Neoral/Sandimmun(e)	Immunology and Dermatology	Transplantation	21	-9	238	-9	**259**	**-11**	**-9**
Voltaren/Cataflam	Established Medicines	Inflammation/pain			258	1	**258**	**-4**	**1**
***Exelon/Exelon* Patch**	Neuroscience	Alzheimer's disease	49	-79	177	-9	**226**	**-49**	**-47**
Top 20 products total			**3 877**	**-7**	**7 884**	**7**	**11 761**	**-1**	**2**
Rest of portfolio			1 514	-10	2 841	-2	**4 355**	**-9**	**-5**
Total Division sales			**5 391**	**-7**	**10 725**	**4**	**16 116**	**-3**	**0**

[1] Formerly named the Pharmaceuticals Division.
[2] Net sales reflect *Xolair* sales for all indications (e.g. including *Xolair* SAA and *Xolair* CSU, which are managed by the Immunology and Dermatology).
nm = not meaningful

Innovative Medicines[1] net sales by business franchise – Second quarter

	Q2 2016 USD m	Q2 2015 restated[2] USD m	% change USD	% change cc
Oncology				
Gleevec/Glivec	891	1 184	-25	-25
Tasigna	458	412	11	15
Subtotal Bcr-Abl portfolio	**1 349**	**1 596**	**-15**	**-14**
Sandostatin	424	413	3	5
Afinitor/Votubia	365	423	-14	-13
Exjade/Jadenu	254	262	-3	-1
Votrient	188	165	14	15
Tafinlar/Mekinist	172	131	31	31
Promacta/Revolade	158	116	36	36
Jakavi	146	98	49	49
Zykadia	24	18	33	35
Other	239	258	-7	-5
Total Oncology business unit	**3 319**	**3 480**	**-5**	**-3**
Ophthalmology				
Lucentis	475	537	-12	-10
Travoprost Group	156	161	-3	-3
Topical Olopatadine Group	63	111	-43	-42
Systane Group	92	99	-7	-3
Other	618	671	-8	-6
Total Ophthalmology	**1 404**	**1 579**	**-11**	**-9**
Neuroscience				
Gilenya	811	700	16	17
Exelon/Exelon Patch	110	208	-47	-47
Other	31	35	-11	-11
Total Neuroscience	**952**	**943**	**1**	**2**
Immunology and Dermatology				
Cosentyx	260	30	nm	nm
Neoral/Sandimmun(e)	136	145	-6	-6
Myfortic	91	100	-9	-5
Zortress/Certican	102	80	28	30
Ilaris	73	61	20	22
Other	46	41	12	4
Subtotal Immunology and Dermatology excluding Everolimus stent drug	**708**	**457**	**55**	**56**
Everolimus stent drug	26	26	0	4
Total Immunology and Dermatology	**734**	**483**	**52**	**53**
Respiratory				
Ultibro Breezhaler	100	66	52	47
Seebri Breezhaler	39	38	3	4
Onbrez Breezhaler/Arcapta Neohaler	37	47	-21	-16
Subtotal COPD[3] portfolio	**176**	**151**	**17**	**17**
Xolair[4]	212	194	9	12
Other	9	16	-44	-38
Total Respiratory	**397**	**361**	**10**	**12**
Cardio-Metabolic				
Galvus	306	273	12	12
Entresto	32	0	nm	nm
Other	3	0	nm	nm
Total Cardio-Metabolic	**341**	**273**	**25**	**25**
Established Medicines				
Diovan/Co-Diovan	283	333	-15	-13
Exforge	236	272	-13	-11
Voltaren/Cataflam	134	136	-1	2
Ritalin/Focalin	77	108	-29	-27
Other	510	665	-23	-17
Total Established Medicines	**1 240**	**1 514**	**-18**	**-14**
Total Pharmaceuticals business unit	**5 068**	**5 153**	**-2**	**1**
Total Division net sales	**8 387**	**8 633**	**-3**	**-1**
Of which Growth products[5]	3 790	3 112	22	23
Of which rest of portfolio	4 597	5 521	-17	-15

[1] Formerly named the Pharmaceuticals Division.
[1] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.
[3] Chronic Obstructive Pulmonary Disease
[4] Net sales reflect *Xolair* sales for all indications (e.g. including *Xolair* SAA and *Xolair* CSU, which are managed by the Immunology and Dermatology).
[5] Growth products are an indicator of the rejuvenation of the portfolio, and comprise products launched in a key market (EU, US, Japan) in 2011 or later, or products with exclusivity until at least 2020 in key markets.
nm = not meaningful

Innovative Medicines[1] net sales by business franchise – First half

	H1 2016 USD m	H1 2015 restated[2] USD m	% change USD	% change cc
Oncology				
Gleevec/Glivec	1 725	2 254	-23	-22
Tasigna	840	784	7	11
Subtotal Bcr-Abl portfolio	**2 565**	**3 038**	**-16**	**-14**
Sandostatin	825	798	3	6
Afinitor/Votubia	732	811	-10	-8
Exjade/Jadenu	477	456	5	7
Votrient	354	222	nm	nm
Tafinlar/Mekinist	322	171	nm	nm
Promacta/Revolade	289	152	nm	nm
Jakavi	270	188	44	47
Zykadia	48	34	41	44
Other	466	466	0	3
Total Oncology business unit	**6 348**	**6 336**	**0**	**2**
Ophthalmology				
Lucentis	927	1 076	-14	-10
Travoprost Group	307	320	-4	-2
Topical Olopatadine Group	199	309	-36	-35
Systane Group	181	197	-8	-4
Other	1 160	1 257	-8	-5
Total Ophthalmology	**2 774**	**3 159**	**-12**	**-9**
Neuroscience				
Gilenya	1 509	1 338	13	15
Exelon/Exelon Patch	226	441	-49	-47
Other	64	70	-9	-7
Total Neuroscience	**1 799**	**1 849**	**-3**	**-1**
Immunology and Dermatology				
Cosentyx	436	52	nm	nm
Neoral/Sandimmun(e)	259	291	-11	-9
Myfortic	195	199	-2	7
Zortress/Certican	193	161	20	25
Ilaris	135	116	16	19
Other	85	81	5	4
Subtotal Immunology and Dermatology excluding Everolimus stent drug	**1 303**	**900**	**45**	**49**
Everolimus stent drug	51	50	2	4
Total Immunology and Dermatology	**1 354**	**950**	**43**	**46**
Respiratory				
Ultibro Breezhaler	178	118	51	50
Seebri Breezhaler	74	75	-1	2
Onbrez Breezhaler/Arcapta Neohaler	70	90	-22	-17
Subtotal COPD[3] portfolio	**322**	**283**	**14**	**16**
Xolair[4]	404	374	8	13
Other	17	26	-35	-24
Total Respiratory	**743**	**683**	**9**	**13**
Cardio-Metabolic				
Galvus	589	565	4	8
Entresto	49	0	nm	nm
Other	6	0	nm	nm
Total Cardio-Metabolic	**644**	**565**	**14**	**18**
Established Medicines				
Diovan/Co-Diovan	555	705	-21	-18
Exforge	457	553	-17	-13
Voltaren/Cataflam	258	270	-4	1
Ritalin/Focalin	147	210	-30	-28
Other	1 037	1 313	-21	-16
Total Established Medicines	**2 454**	**3 051**	**-20**	**-15**
Total Pharmaceuticals business unit	**9 768**	**10 257**	**-5**	**-1**
Total Division net sales	**16 116**	**16 593**	**-3**	**0**
Of which Growth products[5]	7 074	5 710	24	27
Of which rest of portfolio	9 042	10 883	-17	-14

[1] Formerly named the Pharmaceuticals Division.
[2] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.
[3] Chronic Obstructive Pulmonary Disease
[4] Net sales reflect *Xolair* sales for all indications (e.g. including *Xolair* SAA and *Xolair* CSU, which are managed by the Immunology and Dermatology).
[5] Growth products are an indicator of the rejuvenation of the portfolio, and comprise products launched in a key market (EU, US, Japan) in 2011 or later, or products with exclusivity until at least 2020 in key markets.
nm = not meaningful

Net sales by region[1] – Second quarter

	Q2 2016	Q2 2015 restated	% change		Q2 2016	Q2 2015 restated
	USD m	USD m	USD	cc	**% of total**	% of total
Innovative Medicines[2, 3]						
Europe	2 890	2 647	9	9	34	31
US	2 846	3 168	-10	-10	34	37
Asia/Africa/Australasia	1 961	1 952	0	0	23	23
Canada and Latin America	690	866	-20	-1	9	9
Total	**8 387**	**8 633**	**-3**	**-1**	**100**	**100**
Of which in Established Markets	6 343	6 422	-1	-3	76	74
Of which in Emerging Growth Markets	2 044	2 211	-8	3	24	26
Sandoz[2]						
Europe	1 078	1 051	3	4	42	42
US	965	923	5	5	37	36
Asia/Africa/Australasia	360	378	-5	-3	14	15
Canada and Latin America	174	178	-2	8	7	7
Total	**2 577**	**2 530**	**2**	**3**	**100**	**100**
Of which in Established Markets	1 940	1 846	5	4	75	73
Of which in Emerging Growth Markets	637	684	-7	1	25	27
Alcon[2]						
Europe	402	391	3	4	27	26
US	654	656	0	0	43	43
Asia/Africa/Australasia	333	348	-4	-7	22	23
Canada and Latin America	117	136	-14	4	8	8
Total	**1 506**	**1 531**	**-2**	**-1**	**100**	**100**
Of which in Established Markets	1 217	1 189	2	1	81	78
Of which in Emerging Growth Markets	289	342	-15	-7	19	22
Continuing operations						
Europe	4 370	4 089	7	7	35	32
US	4 465	4 747	-6	-6	36	37
Asia/Africa/Australasia	2 654	2 678	-1	-1	21	21
Canada and Latin America	981	1 180	-17	1	8	10
Total continuing operations	**12 470**	**12 694**	**-2**	**0**	**100**	**100**
Of which in Established Markets	9 500	9 457	0	-1	76	74
Of which in Emerging Growth Markets	2 970	3 237	-8	2	24	26

[1] Net sales from operations by location of third party customer. Emerging Growth Markets comprise all markets other than the Established Markets of the US, Canada, Western Europe, Japan, Australia and New Zealand.
[2] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.
[3] Formerly named the Pharmaceuticals Division.

Net sales by region[1] – First half

	H1 2016 USD m	H1 2015 restated USD m	% change USD	% change cc	H1 2016 % of total	H1 2015 restated % of total
Innovative Medicines[2, 3]						
Europe	5 588	5 219	7	9	35	31
US	5 391	5 827	-7	-7	33	35
Asia/Africa/Australasia	3 807	3 874	-2	-1	24	23
Canada and Latin America	1 330	1 673	-21	0	8	11
Total	**16 116**	**16 593**	**-3**	**0**	**100**	**100**
Of which in Established Markets	12 129	12 299	-1	-1	75	74
Of which in Emerging Growth Markets	3 987	4 294	-7	4	25	26
Sandoz[2]						
Europe	2 154	2 138	1	3	43	43
US	1 830	1 770	3	3	36	36
Asia/Africa/Australasia	713	731	-2	1	14	15
Canada and Latin America	325	335	-3	11	7	6
Total	**5 022**	**4 974**	**1**	**4**	**100**	**100**
Of which in Established Markets	3 745	3 623	3	4	75	73
Of which in Emerging Growth Markets	1 277	1 351	-5	3	25	27
Alcon[2]						
Europe	778	791	-2	1	27	26
US	1 261	1 284	-2	-2	43	42
Asia/Africa/Australasia	662	727	-9	-9	23	24
Canada and Latin America	231	260	-11	11	7	8
Total	**2 932**	**3 062**	**-4**	**-2**	**100**	**100**
Of which in Established Markets	2 341	2 362	-1	-1	80	77
Of which in Emerging Growth Markets	591	700	-16	-4	20	23
Continuing operations						
Europe	8 520	8 148	5	7	35	33
US	8 482	8 881	-4	-4	35	36
Asia/Africa/Australasia	5 182	5 332	-3	-2	22	22
Canada and Latin America	1 886	2 268	-17	3	8	9
Total continuing operations	**24 070**	**24 629**	**-2**	**1**	**100**	**100**
Of which in Established Markets	18 215	18 284	0	0	76	74
Of which in Emerging Growth Markets	5 855	6 345	-8	3	24	26

[1] Net sales from operations by location of third party customer. Emerging Growth Markets comprise all markets other than the Established Markets of the US, Canada, Western Europe, Japan, Australia and New Zealand.
[2] Restated to reflect the new divisional structures and product transfers between divisions, announced on January 27, 2016.
[3] Formerly named the Pharmaceuticals Division.

Principal currency translation rates

Second quarter

	Average rates Q2 2016 USD	Average rates Q2 2015 USD	**Period-end rates Jun 30, 2016 USD**	Period-end rates Jun 30, 2015 USD
1 CHF	**1.030**	1.062	**1.020**	1.072
1 CNY	**0.153**	0.161	**0.151**	0.161
1 EUR	**1.129**	1.105	**1.111**	1.116
1 GBP	**1.435**	1.532	**1.343**	1.570
100 JPY	**0.926**	0.824	**0.974**	0.817
100 RUB	**1.519**	1.903	**1.559**	1.795

First half

	Average rates H1 2016 USD	Average rates H1 2015 USD	**Period-end rates Jun 30, 2016 USD**	Period-end rates Jun 30, 2015 USD
1 CHF	**1.018**	1.056	**1.020**	1.072
1 CNY	**0.153**	0.161	**0.151**	0.161
1 EUR	**1.116**	1.116	**1.111**	1.116
1 GBP	**1.433**	1.524	**1.343**	1.570
100 JPY	**0.897**	0.832	**0.974**	0.817
100 RUB	**1.428**	1.745	**1.559**	1.795

Income from associated companies

	Q2 2016 USD m	Q2 2015 USD m	**H1 2016 USD m**	H1 2015 USD m
Share of estimated Roche reported results	*181*	*186*	*360*	*368*
Prior-year adjustment			*-68*	*-157*
Amortization of additional intangible assets recognized by Novartis on initial accounting for the equity interest	*-37*	*-38*	*-73*	*-76*
Net income effect from Roche Holding AG	144	148	219	135
Share of estimated GSK Consumer Healthcare Holdings Ltd. reported results	*81*	*-28*	*134*	
Prior-year adjustment	*-22*		*-22*	
Amortization of additional intangible assets recognized by Novartis on initial accounting for the equity interest	*-2*		*-5*	
Net income effect from GlaxoSmithKline Consumer Healthcare Holdings Ltd.	57	-28	107	
Others	2	1	4	1
Income from associated companies related to continuing operations	**203**	**121**	**330**	**136**

Core income from associated companies

	Q2 2016 USD m	Q2 2015 USD m	**H1 2016 USD m**	H1 2015 USD m
Income from associated companies related to continuing operations	**203**	**121**	**330**	**136**
Share of estimated Roche core adjustments	56	63	108	111
Roche prior year adjustment			36	136
Share of estimated GSK Consumer Healthcare Holdings Ltd. core adjustments	32	53	70	75
GSK Consumer Healthcare Holdings Ltd. prior year adjustment	15		15	
Core income from associated companies related to continuing operations	**306**	**237**	**559**	**458**

Disclaimer

This press release contains forward-looking statements that can be identified by words such as “innovation,” “prospects,” “growth products,” “building,” “increasing,” “growth investments,” “recommendation,” “planned,” “submitted,” “will,” “growth plan,” “progressing,” “expected,” “momentum,” “long-term,” “priorities,” “progress,” “plans,” “launches,” “launch,” “growth drivers,” “focus,” “ongoing,” “launched,” “continues,” “pipeline,” “Breakthrough Therapy,” "Priority Review," “could,” “investigational,” “growing,” “continued,” “accelerate,” “longer term,” “later in the year,” “initiatives,” “priority,” “to focus,” “aims,” “outlook,” “plan,” “opportunities,” “would,” “guidance,” “contingent,” “underway,” “encouraging,” “potential,” “seeking,” “upcoming,” “pending,” or similar terms, or by express or implied discussions regarding potential new products, potential new indications for existing products, or regarding potential future revenues from any such products; potential shareholder returns or credit ratings; or regarding any potential financial or other impact on Novartis or any of our divisions of the strategic actions announced in January 2016 to focus our divisions, integrate certain functions and leverage our scale; or regarding any potential financial or other impact on Novartis from the creation of the Pharmaceuticals business unit and Oncology business unit to form the Innovative Medicines Division; or regarding any potential financial or other impact on Novartis as a result of the creation and operation of NBS; or regarding the potential financial or other impact on Novartis of the transactions with GSK, Lilly or CSL; or regarding potential future sales or earnings of the Novartis Group or any of its divisions; or by discussions of strategy, plans, expectations or intentions. You should not place undue reliance on these statements. Such forward looking statements are based on the current beliefs and expectations of management regarding future events, and are subject to significant known and unknown risks and uncertainties. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those set forth in the forward looking statements. There can be no guarantee that any new products will be approved for sale in any market, or that any new indications will be approved for any existing products in any market, or that any approvals which are obtained will be obtained at any particular time, or that any such products will achieve any particular revenue levels. 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. Novartis is providing the information in this press release as of this date and does not undertake any obligation to update any forward-looking statements as a result of new information, future events or otherwise.

All product names appearing in italics are trademarks owned by or licensed to Novartis Group Companies. Seretide® is a registered trademark of GlaxoSmithKline Ltd. Humira® is a registered trademark of AbbVie Inc. Enbrel® and Neulasta® are registered trademarks of Amgen Inc. MabThera® is a registered trademark of F. Hoffmann-La Roche Ltd. Jakafi® is a registered trademark of Incyte Corporation. Stelara® is a registered trademark of Janssen Biotech, Inc. FluidCrystal® is a registered trademark of Camurus AB. Lenvima® is a registered trademark of Eisai Inc.

About Novartis
Novartis provides innovative healthcare solutions that address the evolving needs of patients and societies. Headquartered in Basel, Switzerland, Novartis offers a diversified portfolio to best meet these needs: innovative medicines, eye care and cost-saving generic pharmaceuticals. Novartis is the only global company with leading positions in these areas. In 2015, the Group achieved net sales of USD 49.4 billion, while R&D throughout the Group amounted to approximately USD 8.9 billion (USD 8.7 billion excluding impairment and amortization charges). Novartis Group companies employ approximately 118,000 full-time-equivalent associates. Novartis products are available in more than 180 countries around the world. For more information, please visit http://www.novartis.com.

Important dates

October 25, 2016	Third quarter results 2016
January 25, 2017	Fourth quarter and full year results 2016
February 28, 2017	Annual General Meeting