

Novartis Second Quarter and Half Year 2022

**Condensed interim financial report –
supplementary data**

Novartis Second Quarter and Half Year 2022 Condensed Interim Financial Report – Supplementary Data

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Group

Key Figures

Second quarter

	Excluding Roche investment impacts ²				Reported		
	Q2 2022 USD m	Q2 2021 USD m	% change USD	% change cc ¹	Q2 2021 USD m	% change USD	% change cc ¹
Net sales to third parties	12 781	12 956	-1	5	12 956	-1	5
Divisional operating income	2 567	3 639	-29	-24	3 639	-29	-24
Corporate income and expense, net	-339	-160	-112	-125	-160	-112	-125
Operating income	2 228	3 479	-36	-30	3 479	-36	-30
<i>As % of net sales</i>	<i>17.4</i>	<i>26.9</i>			<i>26.9</i>		
(Loss)/income from associated companies		-2	nm	nm	239	nm	nm
Interest expense	-202	-201	0	-1	-201	0	-1
Other financial income and expense	16	-11	nm	nm	-11	nm	nm
Income taxes	-347	-611	43	37	-611	43	37
Net income	1 695	2 654	-36	-29	2 895	-41	-34
Basic earnings per share (USD)	0.77	1.19	-35	-27	1.29	-40	-33
Net cash flows from operating activities	3 755	4 132	-9		4 132	-9	
Free cash flow¹	3 304	4 235	-22		4 235	-22	
Core¹							
Core operating income	4 270	4 345	-2	5	4 345	-2	5
<i>As % of net sales</i>	<i>33.4</i>	<i>33.5</i>			<i>33.5</i>		
Core net income	3 431	3 436	0	8	3 716	-8	-1
Core basic earnings per share (USD)	1.56	1.53	2	10	1.66	-6	1

¹ Constant currencies (cc), core results and free cash flow are non-IFRS measures. An explanation of non-IFRS measures can be found on page 47. Unless otherwise noted, all growth rates in this release refer to same period in prior year.

² A reconciliation of 2021 IFRS results and non-IFRS measures core results and free cash flow to exclude the impacts of the 2021 divestment of our Roche investment can be found on page 55 of the Condensed Interim Financial Report. The free cash flow impact represents the dividend received in Q1 2021 from Roche in relation to the distribution of its 2020 net income.

nm = not meaningful

First half

	Excluding Roche investment impacts ²				Reported		
	H1 2022 USD m	H1 2021 USD m	% change USD	% change cc ¹	H1 2021 USD m	% change USD	% change cc ¹
Net sales to third parties	25 312	25 367	0	5	25 367	0	5
Divisional operating income	5 593	6 193	-10	-3	6 193	-10	-3
Corporate income and expense, net	-513	-299	-72	-81	-299	-72	-81
Operating income	5 080	5 894	-14	-7	5 894	-14	-7
<i>As % of net sales</i>	<i>20.1</i>	<i>23.2</i>			<i>23.2</i>		
(Loss)/income from associated companies	-2	-2	0	0	495	nm	nm
Interest expense	-403	-403	0	-2	-403	0	-2
Other financial income and expense	36	-30	nm	nm	-30	nm	nm
Income taxes	-797	-1 002	20	13	-1 002	20	13
Net income	3 914	4 457	-12	-4	4 954	-21	-14
Basic earnings per share (USD)	1.77	1.98	-11	-3	2.20	-20	-12
Net cash flows from operating activities	5 404	5 740	-6		6 262	-14	
Free cash flow¹	4 224	5 310	-20		5 832	-28	
Core¹							
Core operating income	8 353	8 302	1	7	8 302	1	7
<i>As % of net sales</i>	<i>33.0</i>	<i>32.7</i>			<i>32.7</i>		
Core net income	6 682	6 536	2	9	7 129	-6	0
Core basic earnings per share (USD)	3.02	2.91	4	11	3.17	-5	2

¹ Constant currencies (cc), core results and free cash flow are non-IFRS measures. An explanation of non-IFRS measures can be found on page 47. Unless otherwise noted, all growth rates in this release refer to same period in prior year.

² A reconciliation of 2021 IFRS results and non-IFRS measures core results and free cash flow to exclude the impacts of the 2021 divestment of our Roche investment can be found on page 55 of the Condensed Interim Financial Report. The free cash flow impact represents the dividend received in Q1 2021 from Roche in relation to the distribution of its 2020 net income.

nm = not meaningful

Strategy Update

Novartis is a focused medicines company, with depth in five core therapeutic areas (Hematology, Solid Tumors, Immunology, Neuroscience and Cardiovascular), strength in technology platforms (Gene Therapy, Cell Therapy, Radioligand Therapy, Targeted Protein Degradation and xRNA), and a balanced geographic footprint. Our confidence to grow in the near to mid-term is driven by potential multi-billion-dollar sales from our key growth brands: *Cosentyx*, *Entresto*, *Kesimpta*, *Zolgensma*, *Kisqali* and *Leqvio*. To fuel further growth through 2030 and beyond, we have 20+ assets with significant sales potential that could be approved by 2026.

Novartis remains disciplined and shareholder focused in our capital allocation. We balance investing in our business, through organic investments and value-creating bolt-ons, with returning capital to shareholders via our growing annual dividend and share buybacks. Our previously announced USD 15 billion share buyback is ongoing, with USD 9.4 billion still to be executed.

In April, we announced a streamlined organizational model, designed to support innovation, growth and productivity, the implementation of which is progressing well. With the changes, Novartis now expects to deliver SG&A savings of approximately USD 1.5 billion, to be fully embedded by 2024. The savings will contribute to achieving mid to long-term IM core margins in the low 40's and investing in our pipeline.

The strategic review of Sandoz is on track; we expect to provide an update, at the latest, by the end of 2022.

Novartis continues to make significant strides in building trust with society and consistently integrating access strategies into how we research, develop and deliver our medicines. We are committed to net zero emissions across our value chain by 2040. During the quarter, our MSCI ESG rating was increased to "AA", placing us in the top quartile of companies within the pharmaceutical industry. Our culture journey towards an inspired, curious and unbossed organization continues, in order to drive performance and competitiveness in the long-term.

Financials

Second quarter

Net sales

Net sales were USD 12.8 billion (-1%, +5% cc) in the second quarter, driven by volume growth of 12 percentage points, price erosion of 4 percentage points and the negative impact from generic competition of 3 percentage points.

Corporate income and expense, net

Corporate income and expense, which includes the cost of Group headquarter and coordination functions, amounted to an expense of USD 339 million, compared to an expense of USD 160 million in the second quarter of 2021, mainly driven by higher restructuring costs.

Operating income

Operating income was USD 2.2 billion (-36%, -30% cc), mainly due to lower product divestment gains (USD 0.4 billion), higher impairments (USD 0.4 billion) and higher restructuring costs (USD 0.3 billion) primarily related to the implementation of the new organizational model.

Core operating income was USD 4.3 billion (-2%, +5% cc), mainly driven by higher sales, partly offset by higher R&D and M&S investments and lower gross margin. Core operating income margin was 33.4% of net sales, decreasing by 0.1 percentage points (+0.1 percentage points cc).

Income from associated companies

Income from associated companies was USD 0 million in the second quarter compared to USD 239 million in prior year and core income from associated companies was USD 0 million in the second quarter compared to USD 278 million in prior year. These decreases were due to the divestment of our investment in Roche that closed in the fourth quarter of 2021.

Interest expense and other financial income/expense

Interest expense amounted to USD 202 million in line with the prior year.

Other financial income and expense amounted to an income of USD 16 million compared to a loss of USD 11 million in the prior year quarter, mainly due to higher interest income and currency gains, partly offset by monetary losses on the net monetary positions for subsidiaries in hyperinflationary economies. Core other financial income and expense amounted to an income of USD 61 million compared to an income of USD 2 million in the prior year quarter.

Income taxes

The tax rate in the second quarter was 17.0% compared to 17.4% in the prior year. Excluding Roche income from associated companies (divested in Q4 2021) and the impact of an increase in an uncertain tax position, the prior year tax rate would have been 17.2% compared to 17.0% in the current year second quarter, decreasing mainly the result of a change in profit mix.

The core tax rate (core taxes as a percentage of core income before tax) was 16.9% compared to 16.0% in the prior year. For comparability, excluding Roche Income from associated companies (divested in Q4 2021), the prior year core tax rate would have been 17.1% compared to 16.9% in the current year second quarter, decreasing mainly the result of a change in profit mix.

Net income, EPS and free cash flow

Net income was USD 1.7 billion (-41%, -34% cc), mainly due to lower operating income. Excluding the impact of Roche income, net income declined -29% (cc). EPS was USD 0.77 (-40%, -33% cc). Excluding the impact of Roche income, EPS declined -27% (cc).

Core net income was USD 3.4 billion (-8%, -1% cc), as growth in core operating income was more than offset by the loss of Roche core income. Excluding the impact of Roche core income, core net income grew +8% (cc). Core EPS was USD 1.56 (-6%, +1% cc), benefiting from lower weighted average number of shares outstanding. Excluding the impact of Roche core income, core EPS grew +10% (cc).

Free cash flow amounted to USD 3.3 billion (-22% USD), compared to USD 4.2 billion in the prior year quarter, mainly due to lower divestment proceeds and unfavorable changes in working capital.

First half

Net sales

Net sales were USD 25.3 billion (0%, +5% cc) in the first half, driven by volume growth of 12 percentage points, price erosion of 4 percentage points and the negative impact from generic competition of 3 percentage points.

Corporate income and expense, net

Corporate income and expense, which includes the cost of Group headquarter and coordination functions, amounted to an expense of USD 513 million, compared to an expense of USD 299 million in the first half of 2021, mainly driven by higher restructuring costs and lower contributions from the Novartis Venture Fund.

Operating income

Operating income was USD 5.1 billion (-14%, -7% cc), mainly due to lower product divestment gains (USD 0.4 billion), unfavorable fair value adjustments on financial assets (USD 0.2 billion) and higher restructuring costs (USD 0.2 billion) primarily related to the implementation of the new organizational model.

Core operating income was USD 8.4 billion (+1%, +7% cc), mainly driven by higher sales, partly offset by higher R&D and M&S investments. Core operating income margin was 33.0% of net sales, increasing by 0.3 percentage points (+0.6 percentage points cc).

Income from associated companies

Income from associated companies was a loss of USD 2 million compared to an income of USD 495 million in prior year and core income from associated companies was a loss of USD 2 million compared to an income of USD 591

million in prior year. These decreases were due to the divestment of our investment in Roche that closed in the fourth quarter of 2021.

Interest expense and other financial income/expense

Interest expense amounted to USD 403 million in line with the prior year.

Other financial income and expense amounted to an income of USD 36 million compared to a loss of USD 30 million in the prior year, mainly due to higher interest income and currency gains, partly offset by monetary losses on the net monetary positions for subsidiaries in hyperinflationary economies. Core other financial income and expense amounted to an income of USD 93 million compared to a loss of USD 3 million in the prior year.

Income taxes

The tax rate in the first half was 16.9% compared to 16.8% in the prior year period. Excluding Roche Income from associated companies (divested in Q4 2021) and the impact of an increase in an uncertain tax position, the prior year tax rate would have been 17.5% compared to 16.9% in the current year first half, decreasing mainly the result of a change in profit mix.

The core tax rate (core taxes as a percentage of core income before tax) was 16.9% in the first half and 16.0% in the prior year period. For comparability, excluding Roche Income from associated companies (divested in Q4 2021), the prior year core tax rate would have been 17.2% compared to 16.9% in the current year first half, decreasing mainly the result of a change in profit mix.

Net income, EPS and free cash flow

Net income was USD 3.9 billion (-21%, -14% cc), mainly due to lower operating income. Excluding the impact of Roche income, net income declined -4% (cc). EPS was USD 1.77 (-20%, -12% cc). Excluding the impact of Roche income, EPS declined -3% (cc).

Core net income was USD 6.7 billion (-6%, 0% cc), as growth in core operating income was offset by the loss of Roche core income. Excluding the impact of Roche core income, core net income grew +9% (cc). Core EPS was USD 3.02 (-5%, +2% cc), benefiting from lower weighted average number of shares outstanding. Excluding the impact of Roche core income, core EPS grew +11% (cc).

Free cash flow amounted to USD 4.2 billion (-28% USD), compared to USD 5.8 billion in the prior year period, mainly due to lower divestment proceeds, unfavorable changes in working capital, and the loss of Roche annual dividend (prior year USD 0.5 billion), partly offset by favorable hedging results.

Innovative Medicines

	Q2 2022 USD m	Q2 2021 USD m	% change USD	% change cc	H1 2022 USD m	H1 2021 USD m	% change USD	% change cc
Net sales	10 461	10 559	-1	5	20 637	20 663	0	5
Operating income	2 188	3 177	-31	-25	4 795	5 419	-12	-5
<i>As % of net sales</i>	<i>20.9</i>	<i>30.1</i>			<i>23.2</i>	<i>26.2</i>		
Core operating income	3 893	3 936	-1	6	7 545	7 602	-1	6
<i>As % of net sales</i>	<i>37.2</i>	<i>37.3</i>			<i>36.6</i>	<i>36.8</i>		

Second quarter

Net sales

Net sales were USD 10.5 billion (-1%, +5% cc) with volume contributing 13 percentage points to growth. Generic competition had a negative impact of 4 percentage points, mainly due to *Afinitor/Votubia*, *Gilenya* (ex-US), *Gleevec/Glivec*, *Exjade* and *Sandostatin*. Pricing had a negative impact of 4 percentage points. Sales in the US were USD 3.9 billion (+6%) and in the rest of the world USD 6.5 billion (-5%, +5% cc).

Sales growth was mainly driven by continued strong growth from *Entresto* (USD 1.1 billion, +27%, +33% cc), *Kesimpta* (USD 239 million, +262%, +270% cc), *Cosentyx* (USD 1.3 billion, +9%, +12% cc), *Kisqali* (USD 308 million, +37%, +43% cc), *Zolgensma* (USD 379 million, +20%, +26% cc) and *Tafinlar+Mekinist* (USD 452 million, +6%, +13% cc), partly offset by increased competition for *Gilenya* and generic competition, mainly due to *Afinitor/Votubia*, *Gilenya* (ex-US), *Exjade* and *Gleevec/Glivec*.

In the US sales were mainly driven by *Entresto* and *Kesimpta*, partly offset by the impact of generic competition mainly on *Afinitor/Votubia*. In Europe (USD 3.5 billion, -8%, +4% cc) sales growth was driven by *Entresto* and *Kisqali*, partly offset by *Gilenya*, due to increased competition. Emerging Growth Markets grew +4% (+10% cc), with China sales USD 0.8 billion (+4%, +6% cc) driven by *Cosentyx*.

Operating income

Operating income was USD 2.2 billion (-31%, -25% cc), driven by lower divestment income, higher impairments and restructuring, partly offset by sales growth. Operating income margin was 20.9% of net sales, decreasing 9.2 percentage points (-8.6 percentage points in cc).

Core adjustments were USD 1.7 billion, mainly due to amortization, impairments and restructuring, compared to USD 0.8 billion in prior year. Core adjustments increased compared to prior year, mainly due to lower divestment income, higher impairments and higher restructuring.

Core operating income was USD 3.9 billion (-1%, +6% cc), mainly driven by higher sales, partly offset by higher R&D investments and unfavorable gross margin. Core operating income margin was 37.2% of net sales, decreasing 0.1 percentage points, (+0.5 percentage points cc). Core gross margin as a percentage of sales decreased by 0.9 percentage point (cc). Core R&D expenses as a percentage of net sales decreased by 0.2 percentage points (cc). Core SG&A expenses as a percentage of net sales decreased by 1.3 percentage points (cc). Core Other Income and Expense as a percentage of net sales decreased the margin by 0.1 percentage points (cc).

First half

Net sales

Net sales were USD 20.6 billion (0%, +5% cc) with volume contributing 12 percentage points to growth. Generic competition had a negative impact of 3 percentage points, mainly due to *Afinitor/Votubia*, *Gleevec/Glivec*, *Exjade*, *Gilenya* (ex-US) and *Exforge*. Pricing had a negative impact of 4 percentage points. Sales in the US were USD 7.6 billion (+4%) and in the rest of the world USD 13.1 billion (-3%, +5% cc).

Sales growth was mainly driven by continued strong growth from *Entresto* (USD 2.2 billion, +32%, +37% cc), *Kesimpta* (USD 434 million, +274%, +280% cc), *Cosentyx* (USD 2.4 billion, +9%, +12% cc), *Kisqali* (USD 547 million, +30%, +36% cc), *Zolgensma* (USD 742 million, +17%, +22% cc), partly offset by generic competition mainly for *Afinitor/Votubia*, *Gleevec/Glivec*, *Exjade* and increased competition for *Gilenya*.

In the US sales were mainly driven by *Entresto* and *Kesimpta*, partly offset by the impact of generic competition mainly on *Afinitor/Votubia* and *Gilenya* due to increased competition. In Europe (USD 7.0 billion, -6%, +4% cc) sales growth was driven by *Entresto* and *Jakavi*, partly offset by *Gilenya*, due to increased competition. Emerging Growth Markets grew +4% (+10% cc), with China sales USD 1.6 billion (+11%, +11% cc) driven by *Cosentyx*.

Operating income

Operating income was USD 4.8 billion (-12%, -5% cc), driven by lower gains from divestments and financial assets, partly offset by sales growth. Operating income margin was 23.2% of net sales, decreasing 3.0 percentage points (-2.3 percentage points in cc).

Core adjustments were USD 2.7 billion, mainly due to amortization, impairments and restructuring, compared to USD 2.2 billion in prior year. Core adjustments increased compared to prior year, mainly due to lower gains from divestments and financial assets.

Core operating income was USD 7.5 billion (-1%, +6% cc), mainly driven by higher sales, partly offset by higher R&D and M&S investments. Core operating income margin was 36.6% of net sales, decreasing 0.2 percentage points, (+0.3 percentage points cc). Core gross margin as a percentage of sales decreased by 0.3 percentage point (cc). Core R&D expenses as a percentage of net sales increased by 0.2 percentage points (cc). Core SG&A expenses as a percentage of net sales decreased by 1.0 percentage points (cc). Core Other Income and Expense as a percentage of net sales decreased the margin by 0.2 percentage points (cc).

HEMATOLOGY

	Q2 2022 USD m	Q2 2021 USD m	% change USD	% change cc	H1 2022 USD m	H1 2021 USD m	% change USD	% change cc
Hematology								
<i>Promacta/Revolade</i>	534	513	4	10	1 025	976	5	10
<i>Tasigna</i>	498	523	-5	0	959	1 038	-8	-4
<i>Jakavi</i>	398	398	0	11	787	761	3	13
<i>Kymriah</i>	136	147	-7	1	263	298	-12	-6
<i>Adakveo</i>	49	42	17	17	93	79	18	19
<i>Scemblix</i>	31		nm	nm	56		nm	nm
Other	1		nm	nm	1		nm	nm
Total Hematology	1 647	1 623	1	8	3 184	3 152	1	7

nm = not meaningful

Promacta/Revolade (USD 534 million, +4%, +10% cc) grew mainly in the US and Europe, driven by increased use in chronic immune thrombocytopenia (ITP) and as first-line treatment for severe aplastic anemia (SAA).

Tasigna (USD 498 million, -5%, 0% cc) overall sales were stable (cc). Sales grew in Emerging Growth Markets but declined in the US and Japan.

Jakavi (USD 398 million, 0%, +11% cc) continued to grow (cc) across all geographies, driven by strong demand in the myelofibrosis and polycythemia vera indications. In April, EMA approved *Jakavi* for the treatment of patients aged 12 years and older with acute GvHD or chronic GvHD who have inadequate response to corticosteroids or other systemic therapies.

Kymriah (USD 136 million, -7%, +1% cc) sales were stable (cc) with growth in Emerging Growth Markets, offset by declines in the US and Europe due to lower DLBCL demand in both regions. In May, EC and FDA approved *Kymriah* for the treatment of adult patients with relapsed or refractory (r/r) follicular lymphoma (FL) after two or more lines of systemic therapy. Coverage continued to expand, with more than 400 qualified treatment centers in 30 countries having coverage for at least one indication.

Adakveo (USD 49 million, +17%, +17% cc) continued to grow worldwide, reaching over 7,000 patients to date.

Scemblix (USD 31 million) strong launch uptake demonstrating the high unmet need in CML. In June, CHMP has adopted a positive opinion recommending approval for the treatment of adult patients with Philadelphia chromosome positive chronic myeloid leukemia in chronic phase previously treated with two or more tyrosine kinase inhibitors. This news follows regulatory approvals in Japan, Switzerland, UK and Canada.

SOLID TUMORS

	Q2 2022 USD m	Q2 2021 USD m	% change USD	% change cc	H1 2022 USD m	H1 2021 USD m	% change USD	% change cc
Solid Tumors								
<i>Tafinlar + Mekinist</i> ¹	452	425	6	13	855	818	5	10
<i>Kisqali</i>	308	225	37	43	547	420	30	36
<i>Votrient</i>	124	153	-19	-14	253	296	-15	-10
<i>Lutathera</i>	86	118	-27	-23	211	240	-12	-10
<i>Piqray</i>	85	82	4	5	158	160	-1	-1
<i>Tabrecta</i>	30	22	36	39	61	39	56	55
<i>Pluvicto</i>	10		nm	nm	12		nm	nm
Total Solid Tumors	1 095	1 025	7	12	2 097	1 973	6	11

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

Tafinlar + Mekinist (USD 452 million, +6%, +13% cc) grew across all geographies, driven by demand in BRAF+ adjuvant melanoma and NSCLC indications, while maintaining demand in the highly competitive BRAF+ metastatic melanoma market. Following FDA approval in late June, *Tafinlar + Mekinist* is the first and only therapy with a tumor-agnostic indication for adult and pediatric patients with solid tumors that have a BRAF V600E mutation, which drives tumor growth in more than 20 different tumor types. *Tafinlar + Mekinist* is approved in more than 80 countries and remains the worldwide targeted therapy leader in BRAF+ melanoma.

Kisqali (USD 308 million, +37%, +43% cc) grew strongly across all geographies based on the longest overall survival benefit reported in HR+/HER2- advanced breast cancer. It is the only CDK4/6 inhibitor with proven Overall Survival benefit across all three Phase III trials of the MONALEESA program. *Kisqali* is approved in 97 countries. Novartis is in US ANDA litigation with generic manufacturers.

Votrient (USD 124 million, -19%, -14% cc) declined due to increased competition, especially from Immuno-Oncology agents in mRCC (metastatic Renal Cell Carcinoma).

Lutathera (USD 86 million, -27%, -23% cc) sales declined mainly in the US, due to a temporary suspension in manufacturing during the quarter; production and phased deliveries of patient doses resumed in early June. There are almost 500 centers actively treating patients globally.

Piqray (USD 85 million, +4%, +5% cc) sales grew mainly in the US. *Piqray* is the first and only therapy specifically developed for the approximately 40% of HR+/HER2- advanced breast cancer patients who have a PIK3CA mutation, which is associated with poor prognosis. *Piqray* is approved in more than 70 countries.

Tabrecta (USD 30 million, +36%, +39% cc) sales grew mainly in the US. *Tabrecta* is the first and only therapy approved by the US FDA to specifically target metastatic NSCLC with a mutation that leads to MET exon 14 skipping (METex14), as detected by an FDA-approved test using tissue and blood. Recent Q2 regulatory approvals include Canada and EU.

Pluvicto (USD 10 million) received US FDA approval in late March 2022, as the first and only radioligand therapy for the treatment of progressive, PSMA positive metastatic castration-resistant prostate cancer. More than 100 centers have been operationalized to treat patients since launch. Sales were impacted by a temporary suspension in manufacturing during the quarter; production and phased deliveries of patient doses resumed in early June.

IMMUNOLOGY

	Q2 2022 USD m	Q2 2021 USD m	% change USD	% change cc	H1 2022 USD m	H1 2021 USD m	% change USD	% change cc
Immunology								
<i>Cosentyx</i>	1 275	1 175	9	12	2 434	2 228	9	12
<i>Xolair</i>	352	355	-1	11	720	690	4	14
<i>Ilaris</i>	275	247	11	20	560	503	11	19
Other					1		nm	nm
Total Immunology	1 902	1 777	7	13	3 715	3 421	9	14

Net sales reflect *Xolair* sales for all indications.
nm = not meaningful

Cosentyx (USD 1,275 million, +9%, +12% cc) continued demand-led growth in Europe and the US, with accelerated growth in China. Since its initial approval in 2015, *Cosentyx* has a proven sustained efficacy profile across five systemic inflammatory conditions and has treated more than 700,000 patients worldwide.

Xolair (USD 352 million, -1%, +11% cc) continued growing in all regions, driven by increasing demand in severe allergic asthma and chronic spontaneous urticaria indications, with nominal contribution from the nasal polyps indication. Novartis co-promotes *Xolair* with Genentech in the US and shares a portion of revenue as operating income but does not record any US sales.

Ilaris (USD 275 million, +11%, +20% cc) strong sales were driven by continued growth across all regions. Contributors to continuing growth include adult-onset Still's disease, together with the other adult rheumatology indications in the US and Europe, as well as strong performance for the Periodic Fevers Syndrome indications in Japan.

NEUROSCIENCE

	Q2 2022 USD m	Q2 2021 USD m	% change USD	% change cc	H1 2022 USD m	H1 2021 USD m	% change USD	% change cc
Neuroscience								
<i>Gilenya</i>	555	721	-23	-19	1 160	1 428	-19	-15
<i>Zolgensma</i>	379	315	20	26	742	634	17	22
<i>Kesimpta</i>	239	66	262	270	434	116	274	280
<i>Mayzent</i>	85	69	23	29	164	124	32	37
<i>Aimovig</i>	55	53	4	13	109	100	9	17
Other	1		nm	nm	1		nm	nm
Total Neuroscience	1 314	1 224	7	12	2 610	2 402	9	13

nm = not meaningful

Gilenya (USD 555 million, -23%, -19% cc) sales declined due to increased competition. Novartis is in litigation in the US on the dosing regimen and method of treatment patents, and in Europe regarding the forthcoming dosing regimen patent, with manufacturers of generic and other tablet forms. There is generic competition in some EU countries. In June 2022, an appeals court held the US dosing regimen patent invalid. Novartis plans to petition the appeals court for further review to uphold validity of the dosing regimen patent. There is no generic competition in the US at this time.

Zolgensma (USD 379 million, +20%, +26% cc) growth was driven by expanding access outside the US. *Zolgensma* is now approved in 43 countries.

Kesimpta (USD 239 million, +262%, +270% cc) strong sales growth was driven mainly by the US launch momentum due to strong access and increased demand based on a favorable risk-benefit profile. *Kesimpta* is a targeted B-cell therapy that can deliver powerful and sustained high efficacy, with a favorable safety and tolerability profile and the flexibility of an at home self-administration for a broad population of RMS patients. *Kesimpta* is now approved in 72 countries with more than 20,000 patients treated.

Mayzent (USD 85 million, +23%, +29% cc) sales grew in MS patients showing signs of progression despite being on other treatments. *Mayzent* is the first and only oral disease modifying therapy (DMT) studied and proven to delay disease progression in a broad SPMS patient population. *Mayzent* is now approved in 71 countries.

Aimovig (USD 55 million, ex-US, ex-Japan +4%, +13% cc) continued to grow across all regions, driven by first-mover advantage and high-quality data. *Aimovig* filed for approval in China and is reimbursed in 31 markets. *Aimovig* has been prescribed to over 700,000 patients worldwide in the post-trial setting.

CARDIOVASCULAR

	Q2 2022 USD m	Q2 2021 USD m	% change USD	% change cc	H1 2022 USD m	H1 2021 USD m	% change USD	% change cc
Cardiovascular								
<i>Entresto</i>	1 125	886	27	33	2 218	1 675	32	37
<i>Leqvio</i>	22	2	nm	nm	36	3	nm	nm
Total Cardiovascular	1 147	888	29	35	2 254	1 678	34	39

nm = not meaningful

Entresto (USD 1,125 million, +27%, +33% cc) sustained demand led growth across all regions, with increased patient share across markets. In the US, *Entresto* is indicated for heart failure patients with left ventricular ejection fraction (LVEF) below normal. In China, *Entresto* is included in the National Reimbursement Drug List for both HFrEF and Hypertension. In Japan, *Entresto* is indicated for Chronic heart failure and Hypertension and uptake is accelerating rapidly. In the US, Novartis is in ANDA litigation with generic manufacturers.

Leqvio (USD 22 million) launch in the US and other markets is ongoing, with focus on patient on-boarding, removing access hurdles and enhancing medical education. *Leqvio* is the first and only small interfering RNA (siRNA) therapy to lower low-density lipoprotein cholesterol approved in the US and was successfully launched in January 2022. *Leqvio* is now approved in more than 60 countries, with most awaiting reimbursement. Novartis has obtained global rights to develop, manufacture and commercialize *Leqvio* under a license and collaboration agreement with Alnylam Pharmaceuticals.

OTHER PROMOTED BRANDS

	Q2 2022 USD m	Q2 2021 USD m	% change USD	% change cc	H1 2022 USD m	H1 2021 USD m	% change USD	% change cc
Other Promoted Brands								
<i>Lucentis</i>	501	551	-9	0	1 021	1 096	-7	0
<i>Ultibro</i> Group	126	150	-16	-7	258	299	-14	-6
<i>Xiidra</i>	126	118	7	8	233	226	3	3
<i>Beovu</i>	54	47	15	25	102	86	19	27
Other respiratory	19	12	58	84	39	21	86	108
Total Other Promoted Brands	826	878	-6	3	1 653	1 728	-4	2
Total Promoted Brands¹	7 931	7 415	7	13	15 513	14 354	8	13

¹ Total Promoted Brands refer to the sum of Total Other Promoted Brands and all Therapeutic Areas brands (Hematology, Solid Tumors, Immunology, Neuroscience and Cardiovascular).

Lucentis (USD 501 million, -9%, 0% cc) sales were stable in (cc), with growth in Emerging Growth Markets and Europe, offset by decline in Japan because of biosimilars impact.

Ultibro Group (USD 126 million, -16%, -7% cc) sales declined mainly in Europe due to competition. *Ultibro* Group consists of *Ultibro* Breezhaler, *Seebri* Breezhaler and *Onbrez* Breezhaler.

Xiidra (USD 126 million, +7%, +8% cc) sales grew mainly in the US benefiting from increased brand awareness and unlocking Medicare Part D access after generic entry. In the US, Novartis is in ANDA litigation with generic manufacturers.

Beovu (USD 54 million, +15%, +25% cc) sales grew mainly in Europe, Emerging Growth Markets and Japan. This quarter, *Beovu* received FDA approval for diabetic macular edema (DME).

ESTABLISHED BRANDS

	Q2 2022 USD m	Q2 2021 USD m	% change USD	% change cc	H1 2022 USD m	H1 2021 USD m	% change USD	% change cc
Established Brands								
<i>Sandostatin</i>	318	359	-11	-9	638	717	-11	-9
<i>Galvus Group</i>	222	280	-21	-11	438	542	-19	-10
<i>Exforge Group</i>	199	247	-19	-15	399	501	-20	-17
<i>Gleevec/Glivec</i>	194	263	-26	-22	392	535	-27	-24
<i>Diovan Group</i>	159	190	-16	-10	350	404	-13	-9
<i>Afinitor/Votubia</i>	143	264	-46	-42	281	518	-46	-42
<i>Exjade/Jadenu</i>	84	147	-43	-39	194	300	-35	-31
<i>Zortress/Certican</i>	83	109	-24	-14	173	216	-20	-12
<i>Voltaren/Cataflam</i>	82	96	-15	-7	167	182	-8	-1
<i>Neoral/Sandimmun(e)</i>	80	93	-14	-7	162	187	-13	-7
Contract manufacturing	27		nm	nm	76		nm	nm
Other	939	1 096	-14	-9	1 854	2 207	-16	-12
Total Established Brands	2 530	3 144	-20	-14	5 124	6 309	-19	-14

nm = not meaningful

Sandostatin (USD 318 million, -11%, -9% cc) declined across most markets due to ongoing competitive pressure, including generics impact.

Galvus Group (USD 222 million, -21%, -11% cc) declined mainly due to the co-promotion agreement in Japan.

Exforge Group (USD 199 million, -19%, -15% cc) declined mainly due to generic competition and the impact of Volume-Based Procurement in China.

Gleevec/Glivec (USD 194 million, -26%, -22% cc) declined due to increased generic competition.

Diovan Group (USD 159 million, -16%, -10% cc) declined mainly due to generic competition and the impact of Volume-Based Procurement in China.

Afinitor/Votubia (USD 143 million, -46%, -42% cc) declined across all geographies, mainly in the US, driven by generic competition.

Exjade/Jadenu (USD 84 million, -43%, -39% cc) declined due to pressure from generic competition.

Zortress/Certican (USD 83 million, -24%, -14% cc) declined mainly in the US and Japan.

Voltaren/Cataflam (USD 82 million, -15%, -7% cc) declined mainly in Europe and Emerging Growth Markets.

Neoral/Sandimmun(e) (USD 80 million, -14%, -7% cc) declined mainly in Europe and Japan.

Sandoz

	Q2 2022 USD m	Q2 2021 USD m	% change USD	% change cc	H1 2022 USD m	H1 2021 USD m	% change USD	% change cc
Net sales	2 320	2 397	-3	5	4 675	4 704	-1	6
Operating income	379	462	-18	-14	798	774	3	8
<i>As % of net sales</i>	<i>16.3</i>	<i>19.3</i>			<i>17.1</i>	<i>16.5</i>		
Core operating income	473	520	-9	-4	1 011	965	5	10
<i>As % of net sales</i>	<i>20.4</i>	<i>21.7</i>			<i>21.6</i>	<i>20.5</i>		

Second quarter

Net sales

Sandoz net sales were USD 2.3 billion (-3%, +5% cc), benefiting from a return towards normal business dynamics, with growth across all business franchises. Volume contributed 11 percentage points to growth and pricing had a negative impact of 6 percentage points.

Sales in Europe were USD 1.2 billion (-7%, +4% cc), in the US USD 454 million (-1%), in Asia / Africa / Australasia USD 414 million (-1%, +8% cc) and in Canada and Latin America USD 247 million (+10%, +12% cc).

Retail sales were USD 1.7 billion (-4%, +4% cc), growing across most regions. Total Anti-Infectives sales were USD 276 million (+7%, +15% cc).

Global sales of Biopharmaceuticals (including contract manufacturing) grew to USD 528 million (+1%, +11% cc), growing across most regions, including +5 percentage points from a one-time contract manufacturing sale.

Operating income

Operating income was USD 379 million (-18%, -14% cc), with the decline mainly due to higher impairments, increased M&S investment and higher other expenses. Operating income margin was 16.3% of net sales, decreasing 3.0 percentage points (-3.5 percentage points in cc).

Core adjustments were USD 94 million, including USD 56 million of amortization. Prior year core adjustments were USD 58 million mostly due to amortization. The change in core adjustments compared to prior year was driven by higher impairments.

Core operating income was USD 473 million (-9%, -4% cc), with the decline mainly due to increased M&S investment and higher other expenses. Core operating margin was 20.4% of net sales, decreasing by 1.3 percentage points (-1.9 percentage points cc). Core gross margin as a percentage of sales decreased by 0.9 percentage points (cc). Core R&D expenses as a percentage of net sales decreased by 0.8 percentage points (cc). Core SG&A expenses as a percentage of net sales increased by 0.7 percentage points (cc). Core Other Income and Expense decreased the margin by 1.1 percentage points (cc), mainly due to higher healthcare cost contributions and lower divestments.

First half

Net sales

Sandoz net sales were USD 4.7 billion (-1%, +6% cc), benefiting from a lower prior year comparison, which was most notable for the cough and cold season, as business dynamics continued to return towards normal. Volume contributed 13 percentage points and pricing had a negative impact of 7 percentage points.

Sales in Europe were USD 2.5 billion (-4%, +7% cc), in the US USD 890 million (-2%), in Asia / Africa / Australasia USD 823 million (+2%, +8% cc) and in Canada and Latin America USD 500 million (+15%, +16% cc) driven by volume increases and tender wins.

Retail sales were USD 3.5 billion (0%, +7% cc), growing across all regions. Total Anti-Infectives sales were USD 545 million (+5%, +11% cc).

Global sales of Biopharmaceuticals (including contract manufacturing) grew to USD 1.0 billion (+1%, +9% cc), growing across most regions, and including +2 percentage points from a one-time contract manufacturing sale.

Operating income

Operating income was USD 798 million (+3%, +8% cc), mainly driven by higher sales, partly offset by higher M&S investments. Operating income margin was 17.1% of net sales, increasing by 0.6 percentage points (+0.3 percentage points in cc), benefiting from a lower prior year comparison as business dynamics continued to normalize.

Core adjustments were USD 213 million, including USD 114 million of amortization. Prior year core adjustments were USD 191 million, including USD 120 million of amortization. The change in core adjustments compared to prior year were mainly due to higher impairments.

Core operating income was USD 1.0 billion (+5%, +10% cc), benefiting from a lower prior year comparison as business dynamics continued to return towards normal. Core operating margin was 21.6% of net sales, increasing by 1.1 percentage points (+0.7 percentage points cc). Core gross margin as a percentage of sales increased by 0.5 percentage points (cc), due to product and geographic mix. Core R&D expenses as a percentage of net sales decreased by 0.6 percentage points (cc). Core SG&A expenses increased by 0.1 percentage points (cc). Core Other Income and Expense decreased the margin by 0.3 percentage points (cc).

Group Cash Flow and Balance Sheet

Cash Flow

Second quarter

Net cash flows from operating activities amounted to USD 3.8 billion, compared to USD 4.1 billion in the prior year quarter. This decrease was mainly due to unfavorable changes in working capital and higher income taxes paid.

Net cash outflows from investing activities from continuing operations amounted to USD 11.6 billion, compared to USD 0.1 billion net cash inflows in the prior year quarter.

The current year quarter cash outflows were driven by USD 11.1 billion for net purchases of marketable securities, commodities and time deposits; and USD 0.6 billion for purchases of intangible assets, property, plant and equipment and of financial assets. Acquisitions and divestments of businesses, net amounted to USD 0.1 billion. These cash outflows were partly offset by cash inflows of USD 0.2 billion from the sale of intangible assets, financial assets and property, plant and equipment.

In the prior year quarter, net cash inflows from investing activities from continuing operations of USD 0.1 billion were mainly driven by USD 0.8 billion proceeds from the sale of intangible assets and financial assets. These cash inflows were partly offset by cash outflows of USD 0.7 billion for purchases of property, plant and equipment, intangible assets, financial assets and other non-current assets.

Net cash outflows used in financing activities from continuing operations amounted to USD 2.3 billion, compared to USD 2.9 billion in the prior year quarter.

The current year quarter cash outflows were mainly driven by USD 2.7 billion for net treasury share transactions; USD 1.0 billion for the repayment of a US dollar bond; and USD 0.1 billion payments for lease liabilities. These cash outflows were partly offset by cash inflows of USD 1.5 billion from the net increase in current financial debts.

In the prior year quarter, net cash outflows used in financing activities from continuing operations of USD 2.9 billion were mainly driven by USD 2.3 billion net decrease in current financial debts and USD 0.7 billion for net treasury share transactions.

Free cash flow amounted to USD 3.3 billion (-22% USD), compared to USD 4.2 billion in the prior year quarter, mainly due to lower divestment proceeds and unfavorable changes in working capital.

First half

Net cash flows from operating activities amounted to USD 5.4 billion, compared to USD 6.3 billion in the prior year period. This decrease was mainly due to lower dividends from associated companies (the prior year period included the USD 0.5 billion dividends received from our investment in Roche, which was divested in the fourth quarter of 2021) and unfavorable changes in working capital, which were partly offset by favorable hedging results.

Net cash outflows from investing activities from continuing operations amounted to USD 2.3 billion, compared to net cash inflows of USD 0.9 billion in the prior year period.

The current year period cash outflows were driven by USD 0.9 billion for purchases of intangible assets; USD 0.9 billion for acquisitions and divestments of businesses, net (primarily the acquisition of Gyroscope Therapeutics Holdings plc for USD 0.8 billion); and USD 0.6 billion for purchases of property, plant and equipment and of financial assets. Cash outflows for net purchases of marketable securities, commodities and time deposits amounted to USD 0.2 billion. These cash outflows were partly offset by USD 0.3 billion cash inflows from the sale of intangible assets, financial assets and property, plant and equipment.

In the prior year period, net cash inflows from investing activities from continuing operations of USD 0.9 billion were mainly driven by USD 1.5 billion net proceeds from the sale of marketable securities, commodities and time deposits; and USD 1.1 billion from the sale of intangible assets, financial assets and property, plant and equipment. These cash inflows were partly offset by USD 0.9 billion for purchases of intangible assets (including the in-licensing of tislelizumab from BeiGene); USD 0.6 billion for purchases of property, plant and equipment and USD 0.2 billion for acquisitions and divestments of businesses, net.

Net cash outflows used in financing activities from continuing operations amounted to USD 11.8 billion, compared to USD 11.5 billion in the prior year period.

The current year period cash outflows were driven by USD 7.5 billion for the dividend payment; USD 5.2 billion for net treasury share transactions; USD 1.0 billion for the repayment of a US dollar bond; and USD 0.2 billion payments for lease liabilities. These cash outflows were partly offset by cash inflows of USD 2.0 billion from the net increase in current financial debts and other net financing cash inflows of USD 0.1 billion.

In the prior year period, net cash outflows used in financing activities from continuing operations of USD 11.5 billion were mainly driven by USD 7.4 billion for the dividend payment; USD 2.6 billion for net treasury share transactions; and USD 1.5 billion for the repayment of a bond denominated in euro (notional amount of EUR 1.25 billion) at maturity.

Free cash flow amounted to USD 4.2 billion (-28% USD), compared to USD 5.8 billion in the prior year period, mainly due to lower divestment proceeds, unfavorable changes in working capital, and the loss of Roche annual dividend (prior year USD 0.5 billion), partly offset by favorable hedging results.

Balance sheet

Assets

Total non-current assets of USD 84.8 billion decreased by USD 1.3 billion compared to December 31, 2021.

Intangible assets other than goodwill decreased by USD 0.8 billion as additions (primarily from the acquisition of Gyroscope Therapeutics Holdings plc) were more than offset by amortization, unfavorable currency translation adjustments and impairments. Goodwill decreased by USD 0.5 billion, mainly due to unfavorable currency translation adjustments.

Property, plant and equipment decreased by USD 0.8 billion as additions were more than offset by depreciation, unfavorable currency translation adjustments and impairments. Financial assets decreased by USD 0.6 billion, driven mainly by fair value losses on listed equity and fund investments.

These decreases were partly offset by an increase in other non-current assets of USD 1.7 billion driven by an increase in the prepaid post-employment benefit plans of USD 1.8 billion, resulting from actuarial gains primarily from changes in the discount rates used to calculate the actuarial defined benefit obligations, partly offset by actuarial losses from valuation impact on plan assets.

Investments in associated companies, deferred tax assets and right of use assets were broadly in line with December 31, 2021.

Total current assets of USD 38.1 billion at June 30, 2022 decreased by USD 7.6 billion compared to December 31, 2021.

Cash and cash equivalents, marketable securities, commodities, time deposits and derivative financial instruments decreased by USD 8.6 billion, mainly due to the dividend payment, the purchase of treasury shares and the repayment of a USD 1.0 billion bond, offset by the cash generated through operating activities.

Trade receivables increased by USD 0.6 billion and income tax receivables, other current assets and inventories were broadly in line with December 31, 2021.

Liabilities

Total non-current liabilities of USD 32.3 billion decreased by USD 1.5 billion compared to December 31, 2021.

Provisions and other non-current liabilities decreased by USD 0.8 billion, mainly driven by a decrease in defined benefit pension plans resulting from actuarial gains primarily from changes in the discount rates used to calculate the actuarial defined benefit obligations, partly offset by actuarial losses from valuation impact on plan assets.

Non-current financial debts decreased by USD 0.7 billion, mainly due to favorable foreign currency translation adjustments.

Deferred tax liabilities and lease liabilities were broadly in line with December 31, 2021.

Total current liabilities of USD 27.6 billion decreased by USD 2.6 billion compared to December 31, 2021.

Provisions and other current liabilities decreased by USD 2.7 billion, mainly due to the decrease of the treasury share repurchase obligation by USD 2.8 billion, as at June 30, 2022 there was no requirement to recognize the liability, see Note 5.1 for further details.

Current financial debts and derivative financial instruments increased by USD 0.8 billion, mainly due to the issuance of commercial papers of USD 2.1 billion, partially offset by the repayment of a USD 1.0 billion bond.

Trade payables decreased by USD 0.6 billion, and current lease liabilities and income tax liabilities were broadly in line with December 31, 2021.

Equity

The Group's equity decreased by USD 4.8 billion to USD 63.0 billion at June 30, 2022 compared to December 31, 2021.

This decrease was mainly due to the cash-dividend payment of USD 7.5 billion, purchase of treasury shares of USD 5.5 billion, unfavorable currency translation differences of USD 1.3 billion and net unfavorable fair value adjustments on financial instruments of USD 0.3 billion. This was partially offset by the net income of USD 3.9 billion, decrease of the treasury share repurchase obligation of USD 2.8 billion (see Note 5.1 for further details), net actuarial gains of USD 2.3 billion and equity-based compensation of USD 0.4 billion.

Net debt and debt/equity ratio

The Group's liquidity amounted to USD 19.8 billion at June 30, 2022, compared to USD 28.3 billion at December 31, 2021. Total non-current and current financial debts, including derivatives, amounted to USD 29.3 billion at June 30, 2022, compared to USD 29.2 billion at December 31, 2021.

The debt/equity ratio increased to 0.46:1 at June 30, 2022, compared to 0.43:1 at December 31, 2021. As of June 30, 2022 the net debt was USD 9.5 billion, compared to USD 0.9 billion at December 31, 2021.

Innovation Review

Benefiting from our continued focus on innovation, Novartis has one of the industry's most innovative and inventive pipelines with more than 160 projects in clinical development.

Selected Innovative Medicines approvals: US, EU and Japan in Q2

Product	Active ingredient/ Descriptor	Indication	Region
<i>Jakavi</i>	ruxolitinib	Acute graft-versus-host disease (GvHD)	EU – Apr
<i>Jakavi</i>	ruxolitinib	Chronic GvHD	EU – Apr
<i>Beovu</i>	VEGF inhibitor	Diabetic macular edema	US – May / JP – Jun
<i>Kymriah</i>	CD19 Cell Therapy	Relapsed/refractory follicular lymphoma	EU – Apr / US – May
<i>Cosentyx</i>	secukinumab	JPsA & ERA	EU – Jun

Selected Innovative Medicines projects awaiting regulatory decisions

Product	Indication	Completed submissions			News update
		US	EU	Japan	
<i>Cosentyx</i>	<i>Cosentyx</i> 300mg auto-injector and pre-filled syringe	Q4 2020	Approved	Q3 2021	
<i>Cosentyx</i>	Hidradenitis suppurativa		Q2 2022		– US submission planned in H2 2022
<i>Jakavi</i>	Acute graft-versus-host disease (GvHD)		Approved	Q1 2021	– US filing by Incyte
	Chronic GvHD		Approved	Q1 2021	– US filing by Incyte
<i>Scemblix</i>	3L Chronic myeloid leukemia	Approved	Q2 2021	Approved	– EU/EEA CHMP Positive opinion – Shows superior, long-term efficacy and consistent tolerability in 96-week follow-up
<i>Pluvicto</i>	Metastatic castration-resistant prostate cancer, post-taxane	Approved	Q4 2021		
<i>VDT482 (tislelizumab)</i>	2L Esophageal cancer (ESCC)	Q3 2021	Q1 2022		
	NSCLC		Q1 2022		– No US submission planned for monotherapy following FDA feedback
<i>Kymriah</i>	Relapsed/refractory follicular lymphoma	Approved	Approved	Q4 2021	
SKO136 (ensovibep)	Corona virus infection	Q1 2022			

Selected Innovative Medicines pipeline projects

Compound/ product	Potential indication/ Disease area	First planned submissions	Current Phase	News update
ABL001 (asciminib)	1L Chronic myeloid leukemia	2025	3	
ACZ885 (canakinumab)	Adjuvant NSCLC	2023	3	
<i>Aimovig</i>	Migraine, pediatrics	≥2026	3	
AVXS-101 (OAV101)	Spinal muscular atrophy (IT formulation)	2025	3	
<i>Beovu</i>	Diabetic retinopathy	2025	3	
CFZ533 (iscalimab)	Liver transplantation	≥2026	2	
	Sjögren's syndrome	≥2026	2	
<i>Coartem</i>	Malaria, uncomplicated (<5 kg patients)	2024	3	– Submission in Switzerland will include the MAGHP procedure, which facilitates accelerated approval for developing countries

Compound/ product	Potential indication/ Disease area	First planned submissions	Current Phase	News update
Cosentyx	Giant cell arteritis	2025	3	- Study protocol amended to address HA feedback
	Lichen planus	2025	2	- Ph2 data analysis on-going
	Lupus nephritis	≥2026	3	
	Psoriatic arthritis (IV formulation)	2022	3	
	Ankylosing spondylitis (IV formulation)	2023	3	
CPK850	Retinitis pigmentosa		2	-Decision to partner following annual project portfolio review
CSJ117	Asthma		2	-Decision to partner following annual project portfolio review
JDQ443	Non-small cell lung cancer, 2/3L	2024	3	- Ph3 initiated
	Non-small cell lung cancer (combos)	≥2026	2	
KAE609 (cipargamin)	Malaria, uncomplicated	≥2026	2	
	Malaria, severe	≥2026	2	
KAF156 (ganaplacide)	Malaria, uncomplicated	≥2026	2	
Kisqali + endocrine therapy	Hormone receptor-positive (HR+)/human epidermal growth factor receptor 2-negative (HER2-) early breast cancer (adjuvant)	2023	3	
Leqvio	Secondary prevention of cardiovascular events in patients with elevated levels of LDL-C	≥2026	3	
LJN452 (tropifexor + licogliflozin)	Nonalcoholic steatohepatitis		2	-Decision to partner following annual project portfolio review
LMI070 (branaplam)	Huntington's disease	≥2026	2	- FDA Orphan Drug designation - FDA Fast Track designation
LNA043	Osteoarthritis	≥2026	2	- FDA Fast Track designation
LNP023 (iptacopan)	Paroxysmal nocturnal hemoglobinuria	2023	3	- FDA, EU Orphan Drug designation - FDA Breakthrough Therapy designation
	IgA nephropathy	2023	3	- EU Orphan Drug designation
	C3 glomerulopathy	2023	3	- EU Orphan Drug designation - EU PRIME designation - FDA Rare Pediatric designation - China Breakthrough Therapy designation
	Membranous nephropathy	≥2026	2	
	Atypical haemolytic uraemic syndrome	2025	3	
LOU064 (remibrutinib)	Chronic spontaneous urticaria	2024	3	
	Multiple sclerosis	2025	3	
	Sjögren's syndrome	≥2026	2	
Lutathera	Gastroenteropancreatic neuroendocrine tumors, 1 st line in G2/3 tumors	2023	3	
¹⁷⁷ Lu-NeoB	Multiple solid tumors	≥2026	1	
LXE408	Visceral leishmaniasis	≥2026	2	
MBG453 (sabatolimab)	Myelodysplastic syndrome	2024	3	- FDA Fast Track designation - EU Orphan Drug designation - Ph3 readout timing revised following recent Ph2 results
	Unfit acute myeloid leukemia	≥2026	2	- Plans adjusted to be based on a randomized Ph3 study (FDA requirement) vs ongoing single arm one
MIJ821	Depression	≥2026	2	
NIS793	1L Pancreatic cancer	2025	3	- FDA Orphan Drug designation
Piqray	Triple negative breast cancer	≥2026	3	-Revised plans due to changes in competitive landscape
	Human epidermal growth factor receptor 2-positive (HER2+) advanced breast cancer	2025	3	
	Ovarian cancer	2023	3	
Pluvicto	Metastatic castration-resistant prostate cancer pre-taxane	2023	3	
	Metastatic hormone sensitive prostate cancer	2024	3	
PPY988 (GT005)	Geographic atrophy	≥2026	2	- Gyroscope acquisition

Compound/ product	Potential indication/ Disease area	First planned submissions	Current Phase	News update
QBW251 (icenticaftr)	Chronic obstructive pulmonary disease	2025	2	- Ph2b in COPD demonstrated dose response across multiple efficacy endpoints, study results to be presented by the end of 2022. Out-licensing planned
QGE031 (ligelizumab)	Food allergy	2025	3	
SAF312 (libvatrep)	Chronic ocular surface pain	≥2026	2	
TQJ230 (pelacarsen)	Secondary prevention of cardiovascular events in patients with elevated levels of lipoprotein(a)	2025	3	- FDA Fast Track designation - China Breakthrough Therapy designation - Ph3 Study HORIZON recruitment completed
UNR844	Presbyopia	2024	2	
VAY736 (ianalumab)	Auto-immune hepatitis	≥2026	2	
	Sjögren's syndrome	≥2026	2	- FDA Fast Track designation
	Lupus Nephritis	≥2026	3	- Ph3 to be initiated in 2022
	Systemic lupus erythematosus	≥2026	2	
VDT482 (tislelizumab)	1L Nasopharyngeal carcinoma	2022	3	- FDA Orphan designation
	1L Gastric cancer	2023	3	
	1L ESCC	2023	3	
	Localized ESCC	2023	3	
	1L Hepatocellular carcinoma	2023	3	
	1L Small cell lung cancer	2024	3	
	1L Urothelial cell carcinoma	≥2026	3	
	Adj/Neo adj. NSCLC	≥2026	3	
VPM087 (gevokizumab)	Colorectal cancer, 1 st line	≥2026	1	
Xolair	Food allergy	2023	3	
YTB323	2L Diffuse large B-cell lymphoma	2025	3	- Ph3 initiation and submission plans being updated

Selected Sandoz approvals and pipeline projects

Project/ Compound	Potential indication/ Disease area	News update
GP2411 (denosumab)	Osteoporosis (same as originator)	- In Ph3
SOK583 (affibercept)	Ophthalmology (same as originator)	- In Ph3
Insulin glargine, lispro, aspart	Diabetes	- Collaboration with Gan & Lee
Natalizumab	Multiple sclerosis and Crohn's disease	- Collaboration Polpharma Biologics
Trastuzumab	HER2-positive cancer tumors	- Collaboration EirGenix - In registration
Bevacizumab	Solid tumors	- Collaboration Bio-Thera Solutions

Condensed Interim Consolidated Financial Statements

Consolidated income statements

Second quarter (unaudited)

(USD millions unless indicated otherwise)

	Note	Q2 2022	Q2 2021
Net sales to third parties	10	12 781	12 956
Other revenues	10	304	338
Cost of goods sold		-3 751	-3 914
Gross profit		9 334	9 380
Selling, general and administration		-3 581	-3 754
Research and development		-2 498	-2 400
Other income		303	769
Other expense		-1 330	-516
Operating income		2 228	3 479
Income from associated companies	3		239
Interest expense		-202	-201
Other financial income and expense		16	-11
Income before taxes		2 042	3 506
Income taxes		-347	-611
Net income		1 695	2 895
<i>Attributable to:</i>			
Shareholders of Novartis AG		1 694	2 896
Non-controlling interests		1	-1
Weighted average number of shares outstanding – Basic (million)		2 198	2 243
Basic earnings per share (USD) ¹		0.77	1.29
Weighted average number of shares outstanding – Diluted (million)		2 211	2 258
Diluted earnings per share (USD) ¹		0.77	1.28

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)

(USD millions unless indicated otherwise)

	Note	H1 2022	H1 2021
Net sales to third parties	10	25 312	25 367
Other revenues	10	587	621
Cost of goods sold		-7 607	-7 953
Gross profit		18 292	18 035
Selling, general and administration		-7 093	-7 283
Research and development		-4 818	-4 751
Other income		529	1 108
Other expense		-1 830	-1 215
Operating income		5 080	5 894
(Loss)/Income from associated companies	3	-2	495
Interest expense		-403	-403
Other financial income and expense		36	-30
Income before taxes		4 711	5 956
Income taxes		-797	-1 002
Net income		3 914	4 954
<i>Attributable to:</i>			
Shareholders of Novartis AG		3 916	4 955
Non-controlling interests		-2	-1
Weighted average number of shares outstanding – Basic (million)		2 211	2 248
Basic earnings per share (USD) ¹		1.77	2.20
Weighted average number of shares outstanding – Diluted (million)		2 224	2 263
Diluted earnings per share (USD) ¹		1.76	2.19

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)

(USD millions)	Q2 2022	Q2 2021
Net income	1 695	2 895
Other comprehensive income		
Items that are or may be recycled into the consolidated income statement		
Net investment hedge, net of taxes	95	-33
Currency translation effects, net of taxes	-1 014	606
Total of items that are or may be recycled	-919	573
Items that will never be recycled into the consolidated income statement		
Actuarial gains from defined benefit plans, net of taxes	475	576
Fair value adjustments on equity securities, net of taxes	-145	77
Total of items that will never be recycled	330	653
Total comprehensive income	1 106	4 121
<i>Attributable to:</i>		
Shareholders of Novartis AG	1 109	4 123
Non-controlling interests	-3	-2

First half (unaudited)

(USD millions)	H1 2022	H1 2021
Net income	3 914	4 954
Other comprehensive income		
Items that are or may be recycled into the consolidated income statement		
Novartis share of other comprehensive income recognized by associated companies, net of taxes		-71
Net investment hedge, net of taxes	120	72
Currency translation effects, net of taxes	-1 284	-1 550
Total of items that are or may be recycled	-1 164	-1 549
Items that will never be recycled into the consolidated income statement		
Actuarial gains from defined benefit plans, net of taxes	2 342	1 674
Fair value adjustments on equity securities, net of taxes	-325	226
Total of items that will never be recycled	2 017	1 900
Total comprehensive income	4 767	5 305
<i>Attributable to:</i>		
Shareholders of Novartis AG	4 773	5 309
Non-controlling interests	-6	-4

Consolidated balance sheets

(USD millions)	Note	Jun 30, 2022 (unaudited)	Dec 31, 2021 (audited)
Assets			
Non-current assets			
Property, plant and equipment	10	10 733	11 545
Right-of-use assets		1 473	1 561
Goodwill	10	29 113	29 595
Intangible assets other than goodwill	10	33 367	34 182
Investments in associated companies	3	167	205
Deferred tax assets		3 617	3 743
Financial assets		2 413	3 036
Other non-current assets	4	3 885	2 210
Total non-current assets		84 768	86 077
Current assets			
Inventories		6 880	6 666
Trade receivables		8 643	8 005
Income tax receivables		267	278
Marketable securities, commodities, time deposits and derivative financial instruments		16 133	15 922
Cash and cash equivalents		3 625	12 407
Other current assets		2 594	2 440
Total current assets		38 142	45 718
Total assets		122 910	131 795
Equity and liabilities			
Equity			
Share capital		890	901
Treasury shares		-60	-48
Reserves		62 095	66 802
Equity attributable to Novartis AG shareholders		62 925	67 655
Non-controlling interests		81	167
Total equity		63 006	67 822
Liabilities			
Non-current liabilities			
Financial debts		22 232	22 902
Lease liabilities		1 552	1 621
Deferred tax liabilities		3 122	3 070
Provisions and other non-current liabilities		5 352	6 172
Total non-current liabilities		32 258	33 765
Current liabilities			
Trade payables		4 969	5 553
Financial debts and derivative financial instruments		7 045	6 295
Lease liabilities		258	275
Current income tax liabilities		2 445	2 415
Provisions and other current liabilities		12 929	15 670
Total current liabilities		27 646	30 208
Total liabilities		59 904	63 973
Total equity and liabilities		122 910	131 795

Consolidated statements of changes in equity

Second quarter (unaudited)

(USD millions)	Note	Share capital	Treasury shares	Reserves		Issued share capital and reserves attributable to Novartis shareholders	Non-controlling interests	Total equity
				Retained earnings	Total value adjustments			
Total equity at April 1, 2022		901	-60	63 451	-2 752	61 540	164	61 704
Net income				1 694		1 694	1	1 695
Other comprehensive income					-585	-585	-4	-589
Total comprehensive income				1 694	-585	1 109	-3	1 106
Purchase of treasury shares			-16	-2 667		-2 683		-2 683
Reduction of share capital		-11	15	-4				
Exercise of options and employee transactions				-2		-2		-2
Equity-based compensation			1	203		204		204
Taxes on treasury share transactions				1		1		1
Decrease of treasury share repurchase obligation under a share buyback trading plan	5.1			2 639		2 639		2 639
Changes in non-controlling interests							-80	-80
Other movements	5.2			117		117		117
Total of other equity movements		-11		287		276	-80	196
Total equity at June 30, 2022		890	-60	65 432	-3 337	62 925	81	63 006

(USD millions)	Note	Share capital	Treasury shares	Reserves		Issued share capital and reserves attributable to Novartis shareholders	Non-controlling interests	Total equity
				Retained earnings	Total value adjustments			
Total equity at April 1, 2021		913	-60	52 048	-2 378	50 523	66	50 589
Net income				2 896		2 896	-1	2 895
Other comprehensive income					1 227	1 227	-1	1 226
Total comprehensive income				2 896	1 227	4 123	-2	4 121
Purchase of treasury shares			-5	-788		-793		-793
Exercise of options and employee transactions			0	-3		-3		-3
Equity-based compensation			0	179		179		179
Taxes on treasury share transactions				-1		-1		-1
Fair value adjustments on financial assets sold				55	-55			
Impact of change in ownership of consolidated entities							22	22
Other movements	5.2			14		14		14
Total of other equity movements			-5	-544	-55	-604	22	-582
Total equity at June 30, 2021		913	-65	54 400	-1 206	54 042	86	54 128

Consolidated statements of changes in equity

First half (unaudited)

(USD millions)	Note	Share capital	Treasury shares	Reserves		Issued share capital and reserves attributable to Novartis shareholders	Non-controlling interests	Total equity
				Retained earnings	Total value adjustments			
Total equity at January 1, 2022		901	-48	70 989	-4 187	67 655	167	67 822
Net income				3 916		3 916	-2	3 914
Other comprehensive income					857	857	-4	853
Total comprehensive income				3 916	857	4 773	-6	4 767
Dividends				-7 506		-7 506		-7 506
Purchase of treasury shares			-33	-5 457		-5 490		-5 490
Reduction of share capital		-11	15	-4				
Exercise of options and employee transactions			1	90		91		91
Equity-based compensation			5	432		437		437
Shares delivered to Alcon employees as a result of the Alcon spin-off			0	5		5		5
Taxes on treasury share transactions				11		11		11
Decrease of treasury share repurchase obligation under a share buyback trading plan	5.1			2 809		2 809		2 809
Changes in non-controlling interests							-80	-80
Fair value adjustments on financial assets sold				7	-7			
Other movements	5.2			140		140		140
Total of other equity movements		-11	-12	-9 473	-7	-9 503	-80	-9 583
Total equity at June 30, 2022		890	-60	65 432	-3 337	62 925	81	63 006

(USD millions)	Note	Share capital	Treasury shares	Reserves		Issued share capital and reserves attributable to Novartis shareholders	Non-controlling interests	Total equity
				Retained earnings	Total value adjustments			
Total equity at January 1, 2021		913	-53	57 157	-1 419	56 598	68	56 666
Net income				4 955		4 955	-1	4 954
Other comprehensive income				-71	425	354	-3	351
Total comprehensive income				4 884	425	5 309	-4	5 305
Dividends				-7 368		-7 368		-7 368
Purchase of treasury shares			-17	-2 669		-2 686		-2 686
Exercise of options and employee transactions			0	39		39		39
Equity-based compensation			5	332		337		337
Shares delivered to Alcon employees as a result of the Alcon spin-off			0	17		17		17
Decrease of treasury share repurchase obligation under a share buyback trading plan	5.1			1 769		1 769		1 769
Fair value adjustments on financial assets sold				209	-209			
Fair value adjustments related to divestments				3	-3			
Impact of change in ownership of consolidated entities							22	22
Other movements	5.2			27		27		27
Total of other equity movements			-12	-7 641	-212	-7 865	22	-7 843
Total equity at June 30, 2021		913	-65	54 400	-1 206	54 042	86	54 128

Consolidated statements of cash flows

Second quarter (unaudited)

(USD millions)	Note	Q2 2022	Q2 2021
Net income		1 695	2 895
<i>Adjustments to reconcile net income to net cash flows from operating activities</i>			
Reversal of non-cash items and other adjustments	7.1	3 061	1 900
Dividends received from associated companies and others		1	1
Interest received		21	2
Interest paid		-198	-189
Other financial payments		-13	-39
Income taxes paid		-606	-409
Net cash flows from operating activities before working capital and provision changes		3 961	4 161
Payments out of provisions and other net cash movements in non-current liabilities		-152	-159
Change in net current assets and other operating cash flow items		-54	130
Net cash flows from operating activities		3 755	4 132
Purchases of property, plant and equipment		-257	-321
Proceeds from sale of property, plant and equipment		13	19
Purchases of intangible assets		-326	-276
Proceeds from sale of intangible assets		127	546
Purchases of financial assets		-38	-42
Proceeds from sale of financial assets		30	204
Purchases of other non-current assets			-30
Proceeds from sale of other non-current assets			3
Acquisitions of interests in associated companies, net		-2	-2
Acquisitions and divestments of businesses, net	7.2	-59	0
Purchases of marketable securities, commodities and time deposits		-13 233	-45
Proceeds from sale of marketable securities, commodities and time deposits		2 117	42
Net cash flows (used in)/from investing activities from continuing operations		-11 628	98
Net cash flows used in investing activities from discontinued operations			-1
Net cash flows (used in)/from investing activities		-11 628	97
Acquisitions of treasury shares		-2 714	-703
Proceeds from exercised options and other treasury share transactions, net		6	23
Increase in non-current financial debts		3	
Repayments of non-current financial debts		-1 075	0
Change in current financial debts		1 477	-2 293
Payments of lease liabilities		-74	-78
Other financing cash flows, net		75	115
Net cash flows used in financing activities from continuing operations		-2 302	-2 936
Net cash flows used in financing activities from discontinued operations			-3
Net cash flows used in financing activities		-2 302	-2 939
Net change in cash and cash equivalents before effect of exchange rate changes		-10 175	1 290
Effect of exchange rate changes on cash and cash equivalents		-52	26
Net change in cash and cash equivalents		-10 227	1 316
Cash and cash equivalents at April 1		13 852	3 801
Cash and cash equivalents at June 30		3 625	5 117

Consolidated statements of cash flows

First half (unaudited)

(USD millions)	Note	H1 2022	H1 2021
Net income		3 914	4 954
<i>Adjustments to reconcile net income to net cash flows from operating activities</i>			
Reversal of non-cash items and other adjustments	7.1	5 414	4 266
Dividends received from associated companies and others		1	523
Interest received		38	6
Interest paid		-308	-301
Other financial payments		-43	-322
Income taxes paid		-1 239	-1 144
Net cash flows from operating activities before working capital and provision changes		7 777	7 982
Payments out of provisions and other net cash movements in non-current liabilities		-308	-376
Change in net current assets and other operating cash flow items		-2 065	-1 344
Net cash flows from operating activities		5 404	6 262
Purchases of property, plant and equipment		-514	-567
Proceeds from sale of property, plant and equipment		46	85
Purchases of intangible assets		-928	-888
Proceeds from sale of intangible assets		193	629
Purchases of financial assets		-73	-78
Proceeds from sale of financial assets		96	428
Purchases of other non-current assets			-42
Proceeds from sale of other non-current assets			3
Divestments and acquisitions of interests in associated companies, net		-20	-4
Acquisitions and divestments of businesses, net	7.2	-880	-209
Purchases of marketable securities, commodities and time deposits		-17 454	-95
Proceeds from sale of marketable securities, commodities and time deposits		17 271	1 621
Net cash flows (used in)/from investing activities from continuing operations		-2 263	883
Net cash flows used in investing activities from discontinued operations			-6
Net cash flows (used in)/from investing activities		-2 263	877
Dividends paid to shareholders of Novartis AG		-7 506	-7 368
Acquisitions of treasury shares		-5 256	-2 625
Proceeds from exercised options and other treasury share transactions, net		100	53
Increase in non-current financial debts		6	
Repayments of non-current financial debts		-1 075	-1 466
Change in current financial debts		1 955	8
Payments of lease liabilities		-151	-158
Other financing cash flows, net		97	91
Net cash flows used in financing activities from continuing operations		-11 830	-11 465
Net cash flows used in financing activities from discontinued operations			-14
Net cash flows used in financing activities		-11 830	-11 479
Net change in cash and cash equivalents before effect of exchange rate changes		-8 689	-4 340
Effect of exchange rate changes on cash and cash equivalents		-93	-201
Net change in cash and cash equivalents		-8 782	-4 541
Cash and cash equivalents at January 1		12 407	9 658
Cash and cash equivalents at June 30		3 625	5 117

Notes to the Condensed Interim Consolidated Financial Statements for the three-month and six-month period ended June 30, 2022 (unaudited)

1. Basis of preparation

These Condensed Interim Consolidated Financial Statements for the three-month and six-month interim period ended June 30, 2022, were prepared in accordance with

International Accounting Standard 34 *Interim Financial Reporting* and accounting policies set out in the 2021 Annual Report published on February 2, 2022.

2. Selected critical accounting policies

The Group's principal accounting policies are set out in Note 1 to the Consolidated Financial Statements in the 2021 Annual Report and conform with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board.

The preparation of interim financial statements requires management to make certain estimates and assumptions, either at the balance sheet date or during the period, which affect the reported amounts of revenues, expenses, assets, liabilities and contingent amounts.

Estimates are based on historical experience and other assumptions that are considered reasonable under the given circumstances and are continually monitored. Actual outcomes and results could differ from those estimates and assumptions. Revisions to estimates are recognized in the period in which the estimate is revised.

As disclosed in the 2021 Annual Report, goodwill, 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 may lead to potentially significant impairment charges in the future that could have a materially adverse impact on the Group's results of operations and financial condition.

The Group's activities are not subject to significant seasonal fluctuations.

3. Significant transactions

The Group applied the acquisition method of accounting for businesses acquired, and did not elect to apply the optional concentration test to account for acquired business as an asset separately acquired.

Significant transactions in 2022

Innovative Medicines – acquisition of Gyroscope Therapeutics Holdings plc

On December 22, 2021, Novartis entered into an agreement to acquire Gyroscope Therapeutics Holdings plc (Gyroscope), a UK-based ocular gene therapy company.

Gyroscope focuses on the discovery and development of gene therapy treatments for retinal indications. The purchase price consisted of a cash payment of USD 0.8 billion, subject to certain purchase price adjustments, and potential additional milestone payments of up to USD 0.7 billion, upon achievement of specified milestones. The acquisition closed on February 17, 2022.

The fair value of the total purchase consideration was USD 1.0 billion. The amount consisted of an upfront payment of USD 0.8 billion (including customary purchase price adjustments) and the fair value of contingent consideration of USD 0.2 billion. The preliminary purchase price allocation resulted in net identifiable assets of approximately USD 0.9 billion, consisting primarily of

intangible assets of approximately USD 1.1 billion and net deferred tax liabilities of approximately USD 0.2 billion. Goodwill amounted to approximately USD 0.1 billion.

The results of operations since the date of acquisition are not material.

Significant transactions in 2021

Sandoz – acquisition of GSK’s cephalosporin antibiotics business

On February 10, 2021, Sandoz entered into an agreement with certain subsidiaries of GlaxoSmithKline plc (GSK) for the acquisition of the GSK’s cephalosporin antibiotics business.

Under the agreement, Sandoz acquired the global rights to three established brands (Zinnat®, Zinacef® and Fortum®) in more than 100 markets. It excluded the rights in the US, Australia and Germany to certain of those brands, which were previously divested by GSK, and the rights in India, Pakistan, Egypt, Japan (to certain of the brands) and China, which will be retained by GSK. The transaction closed on October 8, 2021.

The purchase price consisted of a USD 350 million upfront payment paid at closing and potential milestone payments up to USD 150 million, which GSK will be eligible to receive upon the achievement of certain annual sales milestones for the portfolio.

The fair value of the total purchase consideration was USD 415 million. The amount consisted of a payment of USD 351 million, including purchase price adjustments, and the fair value of contingent consideration of USD 64 million, which GSK is eligible to receive upon the achievement of specified milestones. The purchase price allocation resulted in net identifiable assets of USD 308 million, consisting of USD 292 million intangible assets and USD 16 million deferred tax assets. Goodwill amounted to USD 107 million.

The 2021 results of operations since the date of acquisition were not material.

Corporate – divestment of the investment in Roche Holding AG

On November 3, 2021, Novartis entered into a Share Repurchase Agreement with Roche Holding AG under which Novartis agreed to sell 53.3 million (approximately 33.3%) bearer shares of Roche Holding AG voting shares in a bilateral transaction to Roche Holding AG for a total consideration of USD 20.7 billion. As a result, Novartis discontinued the use of equity method accounting starting from November 3, 2021.

The transaction closed on December 6, 2021. In the fourth quarter of 2021, Novartis realized a gain of USD 14.6 billion, recorded in income from associated companies.

4. Other non-current assets

(USD millions)	Jun 30, 2022	Dec 31, 2021
Deferred compensation plans	450	520
Prepaid post-employment benefit plans	3 218	1 415
Other non-current assets	217	275
Total other non-current assets	3 885	2 210

5. Summary of equity attributable to Novartis AG shareholders

	Note	Number of outstanding shares (in millions)		Issued share capital and reserves attributable to Novartis AG shareholders (in USD millions)	
		2022	2021	H1 2022	H1 2021
Balance at beginning of year		2 234.9	2 256.8	67 655	56 598
Shares acquired to be canceled		-61.7	-28.2	-5 381	-2 558
Other share purchases		-1.2	-1.3	-109	-128
Exercise of options and employee transactions		1.9	0.6	91	39
Equity-based compensation		8.9	8.7	437	337
Shares delivered to Alcon employees as a result of the Alcon spin-off		0.0	0.1	5	17
Taxes on treasury share transactions				11	
Decrease of treasury share repurchase obligation under a share buyback trading plan	5.1			2 809	1 769
Dividends				-7 506	-7 368
Net income of the period attributable to shareholders of Novartis AG				3 916	4 955
Other comprehensive income attributable to shareholders of Novartis AG				857	354
Other movements	5.2			140	27
Balance at June 30		2 182.8	2 236.7	62 925	54 042

5.1. In December 2021, Novartis entered into an irrevocable, non-discretionary arrangement with a bank to repurchase Novartis shares on the second trading line under its up-to USD 15.0 billion share buyback. Novartis is able to cancel this arrangement but would be subject to a 90-day waiting period under certain conditions. As of June 30, 2022, these waiting period conditions are not applicable and as a result, there was no requirement

to record a current liability under this arrangement as of June 30, 2022.

5.2. Other movements include, for subsidiaries in hyper-inflationary economies, the impact of the restatement of the equity balances of the current year as well as restatement of the non-monetary assets and liabilities with the general price index at the beginning of the period. See Note 6 for additional disclosures.

6. Financial instruments

Fair value by hierarchy

The following table illustrates the three hierarchical levels for valuing financial instruments at fair value as of June 30, 2022, and December 31, 2021. For additional information on the hierarchies and other matters, please refer to the Consolidated Financial Statements in the 2021 Annual Report, published on February 2, 2022.

(USD millions)	Level 1		Level 2		Level 3		Total	
	Jun 30, 2022	Dec 31, 2021	Jun 30, 2022	Dec 31, 2021	Jun 30, 2022	Dec 31, 2021	Jun 30, 2022	Dec 31, 2021
Financial assets								
Cash and cash equivalents								
Debt securities		2 010						2 010
Total cash and cash equivalents at fair value		2 010						2 010
Marketable securities								
Debt securities		2 719	9	22			9	2 741
Derivative financial instruments			121	105			121	105
Total marketable securities and derivative financial instruments at fair value		2 719	130	127			130	2 846
Current contingent consideration receivables					43		43	
Long-term financial investments								
Debt and equity securities	487	1 080	10		684	617	1 181	1 697
Fund investments	20	28			273	338	293	366
Non-current contingent consideration receivables					610	641	610	641
Total long-term financial investments at fair value	507	1 108	10		1 567	1 596	2 084	2 704
Associated companies at fair value through profit or loss					153	192	153	192
Financial liabilities								
Current contingent consideration liabilities					-103	-119	-103	-119
Derivative financial instruments			-56	-68			-56	-68
Total current financial liabilities at fair value			-56	-68	-103	-119	-159	-187
Non-current contingent consideration liabilities					-1 115	-956	-1 115	-956
Other financial liabilities					-239	-19	-239	-19
Total non-current financial liabilities at fair value					-1 354	-975	-1 354	-975

There were no transfers across levels in the six months period ended June 30, 2022.

The fair value of straight bonds amounted to USD 22.4 billion at June 30, 2022 (USD 27.1 billion at December 31, 2021) compared to the carrying amount of USD 23.6 billion at June 30, 2022 (USD 25.3 billion at December 31, 2021). 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 total long-term financial investments of USD 2.1 billion at June 30, 2022 (USD 2.7 billion at December 31, 2021) is included in the line "Financial assets" of the consolidated balance sheets. The carrying amount of non-current contingent consideration liabilities and other financial liabilities included in the line total non-current financial liabilities at fair value of USD 1.4 billion at June 30, 2022 (USD 1.0 billion at December 31, 2021) is included in the line "Provisions and other non-current liabilities" of the consolidated balance sheet.

Foreign currency exchange rate risk

Subsidiaries whose functional currencies have experienced a cumulative inflation rate of more than 100% over the past three years apply the rules of IAS 29 "Financial reporting in Hyperinflationary Economies." The hyperinflationary economies in which Novartis operates are Argentina, Venezuela and Turkey. Venezuela and Argentina were hyperinflationary for all periods presented, and Turkey became hyperinflationary effective May 1, 2022, requiring retroactive implementation of hyperinflation accounting as of January 1, 2022. The impacts of applying IAS 29 were not significant in all periods presented.

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. Details to the consolidated statements of cash flows

7.1. Non-cash items

The following table shows the reversal of non-cash items and other adjustments in the consolidated statements of cash flows.

(USD millions)	Q2 2022	Q2 2021
Depreciation, amortization and impairments on:		
Property, plant and equipment	507	299
Right-of-use assets	76	80
Intangible assets	1 219	1 065
Financial assets ¹	97	59
Change in provisions and other non-current liabilities	547	139
Gains on disposal and other adjustments on property, plant and equipment; intangible assets; financial assets; and other non-current assets, net	-114	-511
Equity-settled compensation expense	204	185
Income from associated companies		-239
Income taxes	347	611
Net financial expense	186	212
Other	-8	
Total	3 061	1 900

¹ Includes fair value adjustments

(USD millions)	H1 2022	H1 2021
Depreciation, amortization and impairments on:		
Property, plant and equipment	821	733
Right-of-use assets	154	160
Intangible assets	2 232	2 248
Financial assets ¹	199	-42
Change in provisions and other non-current liabilities	635	416
Gains on disposal and other adjustments on property, plant and equipment; intangible assets; financial assets; and other non-current assets, net	-192	-557
Equity-settled compensation expense	407	368
Loss/(income) from associated companies	2	-495
Income taxes	797	1 002
Net financial expense	367	433
Other	-8	
Total	5 414	4 266

¹ Includes fair value adjustments

In the second quarter of 2022, other than through business combinations, there were no additions (Q2 2021: nil) to intangible assets with deferred payments and USD 79 million (Q2 2021: USD 78 million) additions to right-of-use assets were recognized.

In the first half of 2022, other than through business combinations, there were USD 0.3 billion (H1 2021: nil) additions to intangible assets with deferred payments and USD 122 million (H1 2021: USD 139 million) additions to right-of-use assets were recognized.

7.2. Cash flows arising from acquisitions and divestments of businesses, net

The following table is a summary of the cash flow impact of acquisitions and divestments of businesses. The most significant transactions are described in Note 3.

(USD millions)	Q2 2022	Q2 2021	H1 2022	H1 2021
Net assets recognized as a result of acquisitions of businesses	-107	0	-1 086	-229
Fair value of previously held equity interests	24		24	20
Contingent consideration payable, net	31		212	0
Payments, deferred consideration and other adjustments, net	12		-13	-2
Cash flows used for acquisitions of businesses	-40	0	-863	-211
Cash flows (used for)/from divestments of businesses, net ¹	-19	0	-17	2
Cash flows used for acquisitions and divestments of businesses, net	-59	0	-880	-209

¹ In the first half of 2022, USD 17 million (Q2 2022: USD 19 million) net cash outflows from divestments of businesses included USD 20 million (Q2 2022: USD 20 million) reduction to cash and cash equivalents due to the derecognized cash and cash equivalents following a loss of control of a company upon expiry of an option to purchase the company, partly offset by net cash inflows of USD 3 million (Q2 2022: USD 1 million) from business divestments in the current year period and in prior years.

In the first half of 2022, the net identifiable assets of divested businesses amounted to USD 140 million (Q2 2022: USD 106 million), comprised of non-current assets of USD 118 million (Q2 2022: USD 113 million), current assets of USD 65 million (Q2 2022: USD 36 million), including USD 29 million (Q2 2022: USD 20 million) cash and cash equivalents and of non-current and current liabilities of USD 43 million (Q2 2022: USD 43 million). The deferred sale price receivable and other adjustments amounted to USD 25 million (Q2 2022: nil). In the first half of 2021, USD 2 million (Q2 2021: nil), represented the net cash inflows from divestments in previous years.

Notes 3 and 8 provide further information regarding acquisitions and divestments of businesses. All acquisitions were for cash.

8. Acquisitions of businesses

Fair value of assets and liabilities arising from acquisitions of businesses:

(USD millions)	H1 2022	H1 2021
Property, plant and equipment	13	
Right-of-use assets	12	
Acquired research and development	1 223	161
Deferred tax assets	53	12
Other current assets	5	
Cash and cash equivalents	89	6
Deferred tax liabilities	-303	-31
Current and non-current lease liabilities	-12	
Trade payables and other liabilities	-68	-3
Net identifiable assets acquired	1 012	145
Acquired cash and cash equivalents	-89	-6
Non-controlling interests		-22
Goodwill	163	112
Net assets recognized as a result of acquisitions of businesses	1 086	229

Note 3 details significant acquisitions of businesses, specifically, the acquisition of Gyroscope in the first quarter of 2022. There were no significant acquisitions of businesses in the first half of 2021. The goodwill arising out of the Gyroscope acquisition is mainly attributable to the

accounting for deferred tax liabilities on acquired assets and the assembled workforce. The goodwill for the first half of 2021 acquisition relates to buyer specific synergies and the assembled workforce. In the first half of 2022, no goodwill (H1 2021: nil) is tax deductible.

9. 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 2021 Annual Report and 2021 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, 2022, of significant developments in those proceedings, as well as any new significant proceedings commenced since the date of the 2021 Annual Report and 2021 Form 20-F.

Investigations and related litigations

340B Drug Pricing Program investigation

In February 2021, Novartis Pharmaceuticals Corporation (NPC) received a civil investigative subpoena from the Office of the Attorney General of the State of Vermont. The subpoena requests the production of documents and information concerning NPC's participation in the 340B Drug Pricing Program in Vermont. NPC provided documents and information to the Office of the Attorney General. In May 2021, NPC received a notification from the US Health Resources and Services Administration (HRSA) which stated that HRSA believes NPC's contract pharmacy policy violates the 340B statute and threatened potential enforcement action. NPC subsequently sued HRSA in the U.S. District Court ("USDC") for the District of Columbia to challenge HRSA's determination and to enjoin HRSA from taking action with respect to NPC's contract pharmacy policy. HRSA then referred the matter regarding NPC's contract pharmacy policy to OIG, which could result in the imposition of civil monetary penalties on NPC. In November 2021, the USDC issued a decision rejecting HRSA's interpretation of the 340B statute, vacated the violation notification and remanded the matter to HRSA. HRSA has filed an appeal. In December 2021, Emory University Hospital Midtown filed an Administrative Dispute Resolution Proceeding (ADR) against NPC, seeking the return of alleged overcharges resulting from NPC's contract pharmacy policy. The parties are awaiting assignment to an ADR panel.

Greece Investigation

Novartis is providing information to the Greek authorities investigating allegations of potentially inappropriate economic benefits to HCPs, government officials and others in Greece. These authorities include the Greek Coordinating Body for Inspection and Control, and the Greek Body of Prosecution of Financial Crime (SDOE), from which the Company received a summons in 2018 and 2020. In 2021, SDOE imposed on Novartis Hellas a fine equivalent to approximately USD 1.2 million, which Novartis Hellas has appealed. In 2022, the Greek State served a civil lawsuit on Novartis Hellas, seeking approximately USD 225 million in compensation for moral damages allegedly arising from the conduct that was the subject of the Company's 2020 settlement with the US Department of Justice regarding allegations of inappropriate economic benefits in Greece that was disclosed in the 2020 Annual Report and 2020 Form 20-F. The claims are being vigorously contested.

Product liability litigation

Taxotere® (docetaxel)

Sandoz is a defendant in more than 3 000 US product liability actions involving Taxotere® (docetaxel), an oncology product, many of which have been transferred to a multidistrict litigation in the Eastern District of Louisiana. The complaints allege misleading marketing and that Sanofi, as innovator, and several 505(b)(2) NDA holders (including Sandoz) failed to warn of the risk of permanent alopecia/hair loss. In 2022, a new multidistrict litigation was created in the Eastern District of Louisiana for claims related to alleged eye injuries. The claims are being vigorously contested.

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 2021 Annual Report and 2021 Form 20-F.

Novartis believes that its total provisions for investigations, product liability, arbitration and other legal matters are adequate based upon currently available information. However, given the inherent difficulties in estimating liabilities, there can be no assurance that additional liabilities and costs will not be incurred beyond the amounts provided.

10. Segmentation of key figures

The businesses of Novartis are divided operationally on a worldwide basis into two identified reporting segments, Innovative Medicines and Sandoz. 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.

The reporting segments are as follows:

Innovative Medicines researches, develops, manufactures, distributes and sells patented prescription medicines. Effective April 4, 2022, the Innovative Medicines Division is organized in two commercial organizational units: Innovative Medicines International and Innovative Medicines US, and is focused on the following core therapeutic areas: hematology; solid tumors; immunology; neuroscience; and cardiovascular, as well as other promoted brands (in the therapeutic areas of ophthalmology and respiratory) and established brands. Prior to the announcement of April 4, 2022, the Innovative Medicines Division was organized into two global business units: Novartis Oncology and Novartis Pharmaceuticals.

Sandoz develops, manufactures and markets finished dosage form medicines as well as intermediary products including active pharmaceutical ingredients. Sandoz is organized globally into three franchises: Retail Generics, Anti-Infectives and Biopharmaceuticals. In Retail Generics, Sandoz develops, manufactures and markets active ingredients and finished dosage forms of small molecule pharmaceuticals to third parties across a broad range of therapeutic areas, as well as finished dosage form of anti-infectives sold to third parties. In Anti-Infectives, Sandoz manufactures and supplies active pharmaceutical ingredients and intermediates, mainly antibiotics, for the Retail Generics business franchise and for sale to third-party companies. In Biopharmaceuticals, Sandoz develops, manufactures and markets protein- or other biotechnology-based products, including biosimilars, and provides biotechnology manufacturing services to other companies.

Corporate includes the costs of the Group headquarters and those of corporate coordination functions in major countries, and items that are not specific to one segment.

Our divisions are supported by Novartis Institutes for BioMedical Research, Global Drug Development, and the Operations unit, which combined the Novartis Technical Operations (NTO) and Customer & Technology Solutions (CTS) organizational units, following the internal reorganization announced on April 4, 2022.

Further details are provided in Note 3 to the Consolidated Financial Statements of the 2021 Annual Report.

Segmentation – Consolidated income statements

Second quarter

(USD millions)	Innovative Medicines		Sandoz		Corporate (including eliminations) ¹		Group	
	Q2 2022	Q2 2021	Q2 2022	Q2 2021	Q2 2022	Q2 2021	Q2 2022	Q2 2021
Net sales to third parties	10 461	10 559	2 320	2 397			12 781	12 956
Sales to other segments	210	194	55	48	-265	-242		
Net sales	10 671	10 753	2 375	2 445	-265	-242	12 781	12 956
Other revenues	295	321	7	16	2	1	304	338
Cost of goods sold	-2 765	-2 902	-1 252	-1 271	266	259	-3 751	-3 914
Gross profit	8 201	8 172	1 130	1 190	3	18	9 334	9 380
Selling, general and administration	-2 950	-3 120	-505	-512	-126	-122	-3 581	-3 754
Research and development	-2 302	-2 179	-196	-221			-2 498	-2 400
Other income	207	622	23	102	73	45	303	769
Other expense	-968	-318	-73	-97	-289	-101	-1 330	-516
Operating income	2 188	3 177	379	462	-339	-160	2 228	3 479
as % of net sales	20.9%	30.1%	16.3%	19.3%			17.4%	26.9%
Income from associated companies	1	1	1	1	-2	237		239
Interest expense							-202	-201
Other financial income and expense							16	-11
Income before taxes							2 042	3 506
Income taxes							-347	-611
Net income							1 695	2 895

¹ Eliminations mainly relate to the elimination of sales to other segments and the corresponding cost of goods sold.

First half

(USD millions)	Innovative Medicines		Sandoz		Corporate (including eliminations) ¹		Group	
	H1 2022	H1 2021	H1 2022	H1 2021	H1 2022	H1 2021	H1 2022	H1 2021
Net sales to third parties	20 637	20 663	4 675	4 704			25 312	25 367
Sales to other segments	438	422	102	101	-540	-523		
Net sales	21 075	21 085	4 777	4 805	-540	-523	25 312	25 367
Other revenues	569	591	13	25	5	5	587	621
Cost of goods sold	-5 677	-5 966	-2 502	-2 537	572	550	-7 607	-7 953
Gross profit	15 967	15 710	2 288	2 293	37	32	18 292	18 035
Selling, general and administration	-5 830	-6 026	-1 019	-1 014	-244	-243	-7 093	-7 283
Research and development	-4 414	-4 316	-404	-435			-4 818	-4 751
Other income	352	828	71	145	106	135	529	1 108
Other expense	-1 280	-777	-138	-215	-412	-223	-1 830	-1 215
Operating income	4 795	5 419	798	774	-513	-299	5 080	5 894
as % of net sales	23.2%	26.2%	17.1%	16.5%			20.1%	23.2%
(Loss)/income from associated companies	1	1	1	1	-4	493	-2	495
Interest expense							-403	-403
Other financial income and expense							36	-30
Income before taxes							4 711	5 956
Income taxes							-797	-1 002
Net income							3 914	4 954

¹ Eliminations mainly relate to the elimination of sales to other segments and the corresponding cost of goods sold.

Segmentation – Additional consolidated balance sheets and income statements disclosure

(USD millions)	Innovative Medicines		Sandoz		Corporate (including eliminations)		Group	
	Jun 30, 2022	Dec 31, 2021	Jun 30, 2022	Dec 31, 2021	Jun 30, 2022	Dec 31, 2021	Jun 30, 2022	Dec 31, 2021
Total assets	77 630	79 220	15 916	16 192	29 364	36 383	122 910	131 795
Total liabilities	-15 573	-15 929	-3 477	-3 632	-40 854	-44 412	-59 904	-63 973
Total equity							63 006	67 822
Net debt ¹					9 519	868	9 519	868
Net operating assets	62 057	63 291	12 439	12 560	-1 971	-7 161	72 525	68 690
Included in net operating assets are:								
Property, plant and equipment	8 505	9 168	1 790	1 901	438	476	10 733	11 545
Goodwill	21 408	21 562	7 698	8 026	7	7	29 113	29 595
Intangible assets other than goodwill	31 627	32 357	1 448	1 577	292	248	33 367	34 182

¹ See page 57 for additional disclosures related to net debt.

The following table shows the property, plant and equipment impairment charges and reversals, the right-of-use assets impairment charges, the intangible assets impairment charges and additions to restructuring provisions:

Second quarter

(USD millions)	Innovative Medicines		Sandoz		Corporate		Group	
	Q2 2022	Q2 2021	Q2 2022	Q2 2021	Q2 2022	Q2 2021	Q2 2022	Q2 2021
Property, plant and equipment impairment charges	-236	-64		-17	-1		-237	-81
Property, plant and equipment impairment reversals		41	2	55			2	96
Intangible assets impairment charges	-226	-87	-4				-230	-87
Additions to restructuring provisions	-316	-55	-20	-18	-162	-15	-498	-88

First half

(USD millions)	Innovative Medicines		Sandoz		Corporate		Group	
	H1 2022	H1 2021	H1 2022	H1 2021	H1 2022	H1 2021	H1 2022	H1 2021
Property, plant and equipment impairment charges	-258	-178	-1	-36	-1		-260	-214
Property, plant and equipment impairment reversal	2	43	3	55			5	98
Right-of-use assets impairment charges			-1				-1	
Intangible assets impairment charges ¹	-263	-288	-4	-1			-267	-289
Additions to restructuring provisions	-360	-136	-30	-32	-172	-16	-562	-184

¹ First half of 2021 includes an impairment of USD 201 million in Innovative Medicines related to the write-down of IPR&D related to cessation of clinical development program GTX312.

In the second quarter and first half of 2022, there were no reversals of prior-year impairment charges on intangible assets (Q2 and H1 2021: nil) and right-of-use assets (Q2 and H1 2021: nil).

Restructuring provisions movements

(USD millions)	Q2 2022	Q2 2021	H1 2022	H1 2021
Balance at beginning of period	331	406	345	459
Additions	498	88	562	184
Cash payments	-76	-89	-144	-208
Releases	-10	-9	-15	-16
Transfers	-1	-1		-2
Currency translation effects	-11	8	-17	-14
Balance at closing of period	731	403	731	403

In the first half of 2022, additions to provisions of USD 562 million (Q2: USD 498 million) were mainly related to the following reorganizations:

- Initiative announced in April 2022 to implement a new simplified organizational model designed to support innovation, growth and productivity.
- The continuation of the Innovative Medicines Division, the Novartis Technical Operations and the Customer & Technology Solutions 2021 restructuring initiatives.

In the first half of 2021, additions to provisions of USD 184 million (Q2: USD 88 million) were mainly related to the following reorganizations:

- The Innovative Medicines Division commenced a plan to restructure its field force and supporting functions in response to changes in its go-to-market structure with increased utilization of digital technology.
- Group-wide initiatives to streamline Novartis Technical Operations and implement new technologies continued. In addition, Customer & Technology Solutions continued the phased implementation of the new operating model to transition activities to service centers.

Segmentation – Net sales

Net sales by region¹

Second quarter

	Q2 2022 USD m	Q2 2021 USD m	% change USD	% change cc ²	Q2 2022 % of total	Q2 2021 % of total
Innovative Medicines						
Europe	3 468	3 751	-8	4	33	36
US	3 924	3 709	6	6	38	35
Asia/Africa/Australasia	2 320	2 396	-3	4	22	23
Canada and Latin America	749	703	7	10	7	6
Total	10 461	10 559	-1	5	100	100
<i>Of which in Established Markets</i>	7 685	7 898	-3	3	73	75
<i>Of which in Emerging Growth Markets</i>	2 776	2 661	4	10	27	25
Sandoz						
Europe	1 205	1 299	-7	4	52	54
US	454	457	-1	-1	20	19
Asia/Africa/Australasia	414	417	-1	8	18	17
Canada and Latin America	247	224	10	12	10	10
Total	2 320	2 397	-3	5	100	100
<i>Of which in Established Markets</i>	1 638	1 730	-5	3	71	72
<i>Of which in Emerging Growth Markets</i>	682	667	2	10	29	28
Group						
Europe	4 673	5 050	-7	4	37	39
US	4 378	4 166	5	5	34	32
Asia/Africa/Australasia	2 734	2 813	-3	5	21	22
Canada and Latin America	996	927	7	10	8	7
Total	12 781	12 956	-1	5	100	100
<i>Of which in Established Markets</i>	9 323	9 628	-3	3	73	74
<i>Of which in Emerging Growth Markets</i>	3 458	3 328	4	10	27	26

¹ Net sales to third parties by location of customer. Emerging Growth Markets comprise all markets other than the Established Markets of the US, Canada, Western Europe, Japan, Australia and New Zealand.

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 47.

Net sales by region¹

First half

	H1 2022 USD m	H1 2021 USD m	% change USD	% change cc ²	H1 2022 % of total	H1 2021 % of total
Innovative Medicines						
Europe	6 975	7 400	-6	4	34	36
US	7 571	7 252	4	4	37	35
Asia/Africa/Australasia	4 644	4 678	-1	4	23	23
Canada and Latin America	1 447	1 333	9	11	6	6
Total	20 637	20 663	0	5	100	100
<i>Of which in Established Markets</i>	15 208	15 463	-2	3	74	75
<i>Of which in Emerging Growth Markets</i>	5 429	5 200	4	10	26	25
Sandoz						
Europe	2 462	2 557	-4	7	53	54
US	890	904	-2	-2	19	19
Asia/Africa/Australasia	823	810	2	8	18	17
Canada and Latin America	500	433	15	16	10	10
Total	4 675	4 704	-1	6	100	100
<i>Of which in Established Markets</i>	3 261	3 385	-4	3	70	72
<i>Of which in Emerging Growth Markets</i>	1 414	1 319	7	15	30	28
Group						
Europe	9 437	9 957	-5	5	37	39
US	8 461	8 156	4	4	33	32
Asia/Africa/Australasia	5 467	5 488	0	5	22	22
Canada and Latin America	1 947	1 766	10	12	8	7
Total	25 312	25 367	0	5	100	100
<i>Of which in Established Markets</i>	18 469	18 848	-2	3	73	74
<i>Of which in Emerging Growth Markets</i>	6 843	6 519	5	11	27	26

¹ Net sales to third parties by location of customer. Emerging Growth Markets comprise all markets other than the Established Markets of the US, Canada, Western Europe, Japan, Australia and New Zealand.

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 47.

Innovative Medicines Division net sales by core therapeutic area; other promoted brands; and established brands

Second quarter

	Q2 2022 USD m	Q2 2021 USD m ²	% change USD	% change cc ³
Hematology				
<i>Promacta/Revolade</i>	534	513	4	10
<i>Tasigna</i>	498	523	-5	0
<i>Jakavi</i>	398	398	0	11
<i>Kymriah</i>	136	147	-7	1
<i>Adakveo</i>	49	42	17	17
<i>Scemblix</i>	31		nm	nm
Other	1		nm	nm
Total Hematology	1 647	1 623	1	8
Solid Tumors				
<i>Tafinlar + Mekinist</i>	452	425	6	13
<i>Kisqali</i>	308	225	37	43
<i>Votrient</i>	124	153	-19	-14
<i>Lutathera</i>	86	118	-27	-23
<i>Piqray</i>	85	82	4	5
<i>Tabrecta</i>	30	22	36	39
<i>Pluvicto</i>	10		nm	nm
Total Solid Tumors	1 095	1 025	7	12
Immunology				
<i>Cosentyx</i>	1 275	1 175	9	12
<i>Xolair</i> ¹	352	355	-1	11
<i>Ilaris</i>	275	247	11	20
Total Immunology	1 902	1 777	7	13
Neuroscience				
<i>Gilenya</i>	555	721	-23	-19
<i>Zolgensma</i>	379	315	20	26
<i>Kesimpta</i>	239	66	262	270
<i>Mayzent</i>	85	69	23	29
<i>Aimovig</i>	55	53	4	13
Other	1		nm	nm
Total Neuroscience	1 314	1 224	7	12
Cardiovascular				
<i>Entresto</i>	1 125	886	27	33
<i>Leqvio</i>	22	2	nm	nm
Total Cardiovascular	1 147	888	29	35
Other Promoted Brands				
<i>Lucentis</i>	501	551	-9	0
<i>Ultibro</i> Group	126	150	-16	-7
<i>Xiidra</i>	126	118	7	8
<i>Beovu</i>	54	47	15	25
Other respiratory	19	12	58	84
Total Other Promoted Brands	826	878	-6	3
Total Promoted Brands	7 931	7 415	7	13
Established Brands				
<i>Sandostatin</i>	318	359	-11	-9
<i>Galvus</i> Group	222	280	-21	-11
<i>Exforge</i> Group	199	247	-19	-15
<i>Gleevec/Glivec</i>	194	263	-26	-22
<i>Diovan</i> Group	159	190	-16	-10
<i>Afinitor/Votubia</i>	143	264	-46	-42
<i>Exjade/Jadenu</i>	84	147	-43	-39
<i>Zortress/Certican</i>	83	109	-24	-14
<i>Voltaren/Cataflam</i>	82	96	-15	-7
<i>Neoral/Sandimmun(e)</i>	80	93	-14	-7
Contract manufacturing	27		nm	nm
Other	939	1 096	-14	-9
Total Established Brands	2 530	3 144	-20	-14
Total division net sales	10 461	10 559	-1	5

¹ Net sales reflect *Xolair* sales for all indications.

² Restated to reflect the new Innovative Medicines divisional structures announced on April 4, 2022

³ Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 47.

nm = not meaningful

Innovative Medicines Division net sales by core therapeutic area; other promoted brands; and established brands

First half

	H1 2022 USD m	H1 2021 USD m ²	% change USD	% change cc ³
Hematology				
<i>Promacta/Revolade</i>	1 025	976	5	10
<i>Tasigna</i>	959	1 038	-8	-4
<i>Jakavi</i>	787	761	3	13
<i>Kymriah</i>	263	298	-12	-6
<i>Adakveo</i>	93	79	18	19
<i>Scemblix</i>	56		nm	nm
Other	1		nm	nm
Total Hematology	3 184	3 152	1	7
Solid Tumors				
<i>Tafinlar + Mekinist</i>	855	818	5	10
<i>Kisqali</i>	547	420	30	36
<i>Votrient</i>	253	296	-15	-10
<i>Lutathera</i>	211	240	-12	-10
<i>Piqray</i>	158	160	-1	-1
<i>Tabrecta</i>	61	39	56	55
<i>Pluvicto</i>	12		nm	nm
Total Solid Tumors	2 097	1 973	6	11
Immunology				
<i>Cosentyx</i>	2 434	2 228	9	12
<i>Xolair</i> ¹	720	690	4	14
<i>Ilaris</i>	560	503	11	19
Other	1		nm	nm
Total Immunology	3 715	3 421	9	14
Neuroscience				
<i>Gilenya</i>	1 160	1 428	-19	-15
<i>Zolgensma</i>	742	634	17	22
<i>Kesimpta</i>	434	116	274	280
<i>Mayzent</i>	164	124	32	37
<i>Aimovig</i>	109	100	9	17
Other	1		nm	nm
Total Neuroscience	2 610	2 402	9	13
Cardiovascular				
<i>Entresto</i>	2 218	1 675	32	37
<i>Leqvio</i>	36	3	nm	nm
Total Cardiovascular	2 254	1 678	34	39
Other Promoted Brands				
<i>Lucentis</i>	1 021	1 096	-7	0
<i>Ultibro Group</i>	258	299	-14	-6
<i>Xiidra</i>	233	226	3	3
<i>Beovu</i>	102	86	19	27
Other respiratory	39	21	86	108
Total Other Promoted Brands	1 653	1 728	-4	2
Total Promoted Brands	15 513	14 354	8	13
Established Brands				
<i>Sandostatin</i>	638	717	-11	-9
<i>Galvus Group</i>	438	542	-19	-10
<i>Exforge Group</i>	399	501	-20	-17
<i>Gleevec/Glivec</i>	392	535	-27	-24
<i>Diovan Group</i>	350	404	-13	-9
<i>Afinitor/Votubia</i>	281	518	-46	-42
<i>Exjade/Jadenu</i>	194	300	-35	-31
<i>Zortress/Certican</i>	173	216	-20	-12
<i>Voltaren/Cataflam</i>	167	182	-8	-1
<i>Neoral/Sandimmun(e)</i>	162	187	-13	-7
Contract manufacturing	76		nm	nm
Other	1 854	2 207	-16	-12
Total Established Brands	5 124	6 309	-19	-14
Total division net sales	20 637	20 663	0	5

¹ Net sales reflect *Xolair* sales for all indications.

² Restated to reflect the new Innovative Medicines divisional structures announced on April 4, 2022

³ Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 47.

nm = not meaningful

Net sales of the top 20 Innovative Medicines Division brands in 2022

Second quarter

Brands	Key indication	US		Rest of world			Total		
		USD m	% change USD/cc ²	USD m	% change USD	% change cc ²	USD m	% change USD	% change cc ²
<i>Cosentyx</i>	Immunology	736	3	539	17	28	1 275	9	12
<i>Entresto</i>	Cardiovascular	548	35	577	20	31	1 125	27	33
<i>Gilenya</i>	Neuroscience	332	-10	223	-37	-29	555	-23	-19
<i>Promacta/Revolade</i>	Hematology	270	15	264	-5	6	534	4	10
<i>Lucentis</i>	Other Promoted Brands			501	-9	0	501	-9	0
<i>Tasigna</i>	Hematology	218	0	280	-8	1	498	-5	0
<i>Tafinlar + Mekinist</i>	Solid Tumors	174	15	278	1	12	452	6	13
<i>Jakavi</i>	Hematology			398	0	11	398	0	11
<i>Zolgensma</i>	Neuroscience	123	16	256	23	31	379	20	26
<i>Xolair</i> ¹	Immunology			352	-1	11	352	-1	11
<i>Sandostatin</i>	Solid Tumors	207	0	111	-27	-20	318	-11	-9
<i>Ilaris</i>	Immunology	136	20	139	4	19	275	11	20
<i>Kisqali</i>	Solid Tumors	110	33	198	39	49	308	37	43
<i>Galvus Group</i>	Established Brands			222	-21	-11	222	-21	-11
<i>Kesimpta</i>	Neuroscience	204	219	35	nm	nm	239	262	270
<i>Exforge Group</i>	Established Brands	3	-40	196	-19	-15	199	-19	-15
<i>Gleevec/Glivec</i>	Hematology	57	-12	137	-31	-25	194	-26	-22
<i>Diovan Group</i>	Established Brands	14	27	145	-19	-12	159	-16	-10
<i>Afinitor/Votubia</i>	Solid Tumors	55	-64	88	-21	-11	143	-46	-42
<i>Kymriah</i>	Hematology	49	-14	87	-3	11	136	-7	1
Top 20 brands total		3 236	9	5 026	-3	7	8 262	1	7
Rest of portfolio		688	-8	1 511	-9	-1	2 199	-9	-3
Total division sales		3 924	6	6 537	-5	5	10 461	-1	5

¹ Net sales reflect *Xolair* sales for all indications.

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 47.

nm = not meaningful

Net sales of the top 20 Innovative Medicines Division brands in 2022

First half

Brands	Key indication	US		Rest of world			Total		
		USD m	% change USD/cc ²	USD m	% change USD	% change cc ²	USD m	% change USD	% change cc ²
<i>Cosentyx</i>	Immunology	1 395	3	1 039	20	28	2 434	9	12
<i>Entresto</i>	Cardiovascular	1 090	39	1 128	27	36	2 218	32	37
<i>Gilenya</i>	Neuroscience	638	-12	522	-26	-19	1 160	-19	-15
<i>Promacta/Revolade</i>	Hematology	517	14	508	-2	6	1 025	5	10
<i>Lucentis</i>	Other Promoted Brands			1 021	-7	0	1 021	-7	0
<i>Tasigna</i>	Hematology	420	-2	539	-11	-5	959	-8	-4
<i>Tafinlar + Mekinist</i>	Solid Tumors	328	13	527	0	9	855	5	10
<i>Jakavi</i>	Hematology			787	3	13	787	3	13
<i>Zolgensma</i>	Neuroscience	236	5	506	24	31	742	17	22
<i>Xolair</i> ¹	Immunology			720	4	14	720	4	14
<i>Sandostatin</i>	Solid Tumors	407	-3	231	-22	-17	638	-11	-9
<i>Ilaris</i>	Immunology	262	19	298	5	19	560	11	19
<i>Kisqali</i>	Solid Tumors	189	23	358	35	43	547	30	36
<i>Galvus Group</i>	Established Brands			438	-19	-10	438	-19	-10
<i>Kesimpta</i>	Neuroscience	376	230	58	nm	nm	434	274	280
<i>Exforge Group</i>	Established Brands	7	-13	392	-20	-17	399	-20	-17
<i>Gleevec/Glivec</i>	Hematology	107	-23	285	-28	-24	392	-27	-24
<i>Diovan Group</i>	Established Brands	27	-13	323	-13	-8	350	-13	-9
<i>Afinitor/Votubia</i>	Solid Tumors	102	-66	179	-16	-8	281	-46	-42
<i>Kymriah</i>	Hematology	95	-20	168	-6	3	263	-12	-6
Top 20 brands total		6 196	7	10 027	-1	7	16 223	2	7
Rest of portfolio		1 375	-7	3 039	-8	-1	4 414	-7	-3
Total division sales		7 571	4	13 066	-3	5	20 637	0	5

¹ Net sales reflect *Xolair* sales for all indications.

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 47.

nm = not meaningful

Sandoz Division net sales by business franchise

Second quarter

	Q2 2022 USD m	Q2 2021 USD m	% change USD	% change cc ²
Retail Generics ¹	1 699	1 777	-4	4
Biopharmaceuticals	528	524	1	11
Anti-Infectives ¹	93	96	-3	2
Total division net sales	2 320	2 397	-3	5

¹ Sandoz total anti-infectives net sales amounted to USD 276 million (Q2 2021: USD 257 million), of which USD 183 million (Q2 2021: USD 161 million) is sold through the Retail Generics business franchise and USD 93 million (Q2 2021: USD 96 million) is sold to other third-party companies through the Anti-Infectives business franchise.

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 47.

First half

	H1 2022 USD m	H1 2021 USD m	% change USD	% change cc ²
Retail Generics ¹	3 467	3 456	0	7
Biopharmaceuticals	1 043	1 035	1	9
Anti-Infectives ¹	165	213	-23	-19
Total division net sales	4 675	4 704	-1	6

¹ Sandoz total anti-infectives net sales amounted to USD 545 million (H1 2021: USD 520 million), of which USD 380 million (H1 2021: USD 307 million) is sold through the Retail Generics business franchise and USD 165 million (H1 2021: USD 213 million) is sold to other third-party companies through the Anti-Infectives business franchise.

² Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 47.

The product portfolio of Sandoz is widely spread in 2022 and 2021.

Segmentation – Other revenue

Second quarter

(USD millions)	Innovative Medicines		Sandoz		Corporate		Group	
	Q2 2022	Q2 2021	Q2 2022	Q2 2021	Q2 2022	Q2 2021	Q2 2022	Q2 2021
Profit sharing income	223	214					223	214
Royalty income	3	19	4	6	2	1	9	26
Milestone income	20	73	1	2			21	75
Other ¹	49	15	2	8			51	23
Total other revenues	295	321	7	16	2	1	304	338

¹ Other includes revenue from activities such as manufacturing or other services rendered, to the extent such revenue is not recorded under net sales.

First half

(USD millions)	Innovative Medicines		Sandoz		Corporate		Group	
	H1 2022	H1 2021	H1 2022	H1 2021	H1 2022	H1 2021	H1 2022	H1 2021
Profit sharing income	428	405					428	405
Royalty income	6	42	9	12	5	5	20	59
Milestone income	39	112	1	3			40	115
Other ¹	96	32	3	10			99	42
Total other revenues	569	591	13	25	5	5	587	621

¹ Other includes revenue from activities such as manufacturing or other services rendered, to the extent such revenue is not recorded under net sales.

Supplementary information (unaudited)

Non-IFRS disclosures

Novartis uses certain non-IFRS metrics when measuring performance, especially when measuring current-year results against prior periods, including core results, constant currencies, free cash flow and net debt.

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 their usefulness to investors.

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

As an internal measure of Group performance, these non-IFRS measures have limitations, and the Group's performance management process is not solely restricted to these metrics.

Core results

The Group's core results – including core operating income, core net income and core earnings per share – exclude fully the amortization and impairment charges of intangible assets, excluding software, net gains and losses on fund investments and equity securities valued at fair value through profit and loss, and certain acquisition- and divestment-related items. The following items that exceed a threshold of USD 25 million are also excluded: integration- and divestment-related income and expenses; divestment gains and losses; restructuring charges/releases and related items; legal-related items; impairments of property, plant and equipment, and financial assets, and 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 since, core measures exclude items that can vary significantly from year to year, they 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.

As an internal measure of Group performance, the core results measures have limitations, and the Group's performance management process is not solely restricted to these metrics. A limitation of the core results 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, divestment, or amortization/impairments of purchased intangible assets, impairments to property, plant and equipment and restructurings and related items.

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 exchange rates:

- The impact of translating the income statements of consolidated entities from their non-USD functional currencies to USD
- 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 (excluding the IAS 29 "Financial Reporting in Hyperinflationary Economies" adjustments to the local currency income statements of subsidiaries operating in hyperinflationary economies), 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 that 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.

Free cash flow

Novartis defines free cash flow as net cash flows from operating activities and cash flows from investing activities associated with purchases and sales of property, plant and equipment, of intangible assets, of financial assets and of other non-current assets. Excluded from free cash flow are cash flows from investing activities

associated with acquisitions and divestments of businesses and of interests in associated companies, purchases and sales of marketable securities, commodities, time deposits and net cash flows from financing activities.

Free cash flow is a non-IFRS measure and is not intended to be a substitute measure for net cash flows from operating activities as determined under IFRS. 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 investment in strategic opportunities, returning to shareholders and for debt repayment. Free cash flow is a non-IFRS measure, which means it should not be interpreted as a measure determined under IFRS.

Net debt

Novartis calculates net debt as current financial debts and derivative financial instruments plus non-current financial debts less cash and cash equivalents and marketable securities, commodities, time deposits and derivative financial instruments.

Net debt is a non-IFRS measure, which means it should not be interpreted as a measure 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.

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

Second quarter

(USD millions unless indicated otherwise)	Innovative Medicines		Sandoz		Corporate		Group	
	Q2 2022	Q2 2021	Q2 2022	Q2 2021	Q2 2022	Q2 2021	Q2 2022	Q2 2021
IFRS operating income	2 188	3 177	379	462	-339	-160	2 228	3 479
Amortization of intangible assets	894	886	56	56			950	942
Impairments								
Intangible assets	226	87	4				230	87
Property, plant and equipment related to the Group-wide rationalization of manufacturing sites	234	-22	-2	-38			232	-60
Other property, plant and equipment		45						45
Total impairment charges	460	110	2	-38			462	72
Acquisition or divestment of businesses and related items								
- Income	-1						-1	
- Expense	7					3	7	3
Total acquisition or divestment of businesses and related items, net	6					3	6	3
Other items								
Divestment gains	-128	-550			-2	-18	-130	-568
Financial assets – fair value adjustments	68	32			28	28	96	60
Restructuring and related items								
- Income	-5	-2	-4	-16	-2	-2	-11	-20
- Expense	389	261	44	50	219	18	652	329
Legal-related items								
- Income								
- Expense	102		4	5			106	5
Additional income	-104	-4	-1	1			-105	-3
Additional expense	23	26	-7			20	16	46
Total other items	345	-237	36	40	243	46	624	-151
Total adjustments	1 705	759	94	58	243	49	2 042	866
Core operating income	3 893	3 936	473	520	-96	-111	4 270	4 345
as % of net sales	37.2%	37.3%	20.4%	21.7%			33.4%	33.5%
Income from associated companies	1	1	1	1	-2	237		239
Core adjustments to income from associated companies, net of tax						39		39
Interest expense							-202	-201
Other financial income and expense							16	-11
Core adjustments to other financial income and expense							45	13
Income taxes, adjusted for above items (core income taxes)							-698	-708
Core net income							3 431	3 716
Core net income attributable to shareholders of Novartis AG							3 430	3 717
Core basic EPS (USD)¹							1.56	1.66

¹ 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

(USD millions unless indicated otherwise)	Innovative Medicines		Sandoz		Corporate		Group	
	H1 2022	H1 2021	H1 2022	H1 2021	H1 2022	H1 2021	H1 2022	H1 2021
IFRS operating income	4 795	5 419	798	774	-513	-299	5 080	5 894
Amortization of intangible assets	1 772	1 775	114	120			1 886	1 895
Impairments								
Intangible assets	263	288	4	1			267	289
Property, plant and equipment related to the Group-wide rationalization of manufacturing sites	251	90	-2	-19			249	71
Other property, plant and equipment		45						45
Total impairment charges	514	423	2	-18			516	405
Acquisition or divestment of businesses and related items								
- Income	-1	-1			-2	-5	-3	-6
- Expense	7	1				12	7	13
Total acquisition or divestment of businesses and related items, net	6				-2	7	4	7
Other items								
Divestment gains	-128	-559		-4	-20	-50	-148	-613
Financial assets – fair value adjustments	100	-75			98	34	198	-41
Restructuring and related items								
- Income	-9	-14	-10	-17	-2	-2	-21	-33
- Expense	532	571	90	79	236	22	858	672
Legal-related items								
- Income	-51			-11			-51	-11
- Expense	102	1	10	42			112	43
Additional income	-119	-22	-3				-122	-22
Additional expense	31	83	10			23	41	106
Total other items	458	-15	97	89	312	27	867	101
Total adjustments	2 750	2 183	213	191	310	34	3 273	2 408
Core operating income	7 545	7 602	1 011	965	-203	-265	8 353	8 302
as % of net sales	36.6%	36.8%	21.6%	20.5%			33.0%	32.7%
(Loss)/income from associated companies	1	1	1	1	-4	493	-2	495
Core adjustments to income from associated companies, net of tax						96		96
Interest expense							-403	-403
Other financial income and expense							36	-30
Core adjustments to other financial income and expense							57	27
Income taxes, adjusted for above items (core income taxes)							-1 359	-1 358
Core net income							6 682	7 129
Core net income attributable to shareholders of Novartis AG							6 684	7 130
Core basic EPS (USD)¹							3.02	3.17

¹ 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

(USD millions unless indicated otherwise)	Q2 2022 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items ³	Other items ⁴	Q2 2022 Core results	Q2 2021 Core results
Gross profit	9 334	911	6		-4	10 247	10 455
Operating income	2 228	950	462	6	624	4 270	4 345
Income before taxes	2 042	950	462	6	669	4 129	4 424
Income taxes ⁵	-347					-698	-708
Net income	1 695					3 431	3 716
Basic EPS (USD)⁶	0.77					1.56	1.66

The following are adjustments to arrive at core gross profit

Cost of goods sold	-3 751	911	6		-4	-2 838	-2 839
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The following are adjustments to arrive at core operating income

Selling, general and administration	-3 581				-8	-3 589	-3 710
Research and development	-2 498	39	224		-16	-2 251	-2 284
Other income	303		-4	-1	-171	127	92
Other expense	-1 330		236	7	823	-264	-208

The following are adjustments to arrive at core income before taxes

Other financial income and expense	16				45	61	2
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¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to currently marketed products and other production-related intangible assets; research and development includes the amortization of acquired rights for technologies

² Impairments: Cost of goods sold and research and development include impairment charges related to intangible assets; other income and other expense include reversals of impairment charges and impairment charges related to property, plant and equipment

³ Acquisition or divestment of businesses and related items, including restructuring and integration charges: other income includes transitional service fee income related to divestments; other expense includes stamp duties related to an acquisition

⁴ Other items: cost of goods sold, research and development, other income and other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; cost of goods sold, selling, general and administration, research and development, other income and other expense include other restructuring income and charges and related items; cost of goods sold, selling, general and administration and research and development include adjustments to provisions and related items; cost of goods sold and research and development also include contingent consideration adjustments; other income and other expense include fair value adjustments and divestment gains and losses on financial assets; other income also includes product divestment gains and a milestone payment; other expense includes legal-related items and other costs; other financial income and expense includes the monetary loss on the restatement of non-monetary items for subsidiaries in hyperinflationary economies and a revaluation impact of a financial liability incurred through the Alcon distribution

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 other 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 of USD 2.1 billion to arrive at the core results before tax amounts to USD 351 million. The average tax rate on the adjustments is 16.8% since the estimated quarterly core tax charge of 16.9% 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

(USD millions unless indicated otherwise)	H1 2022 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items ³	Other items ⁴	H1 2022 Core results	H1 2021 Core results
Gross profit	18 292	1 812	6		97	20 207	20 242
Operating income	5 080	1 886	516	4	867	8 353	8 302
Income before taxes	4 711	1 886	516	4	924	8 041	8 487
Income taxes ⁵	-797					-1 359	-1 358
Net income	3 914					6 682	7 129
Basic EPS (USD)⁶	1.77					3.02	3.17

The following are adjustments to arrive at core gross profit

Cost of goods sold	-7 607	1 812	6		97	-5 692	-5 746
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The following are adjustments to arrive at core operating income

Selling, general and administration	-7 093				6	-7 087	-7 230
Research and development	-4 818	74	261		-24	-4 507	-4 411
Other income	529		-5	-3	-267	254	178
Other expense	-1 830		254	7	1 055	-514	-477

The following are adjustments to arrive at core income before taxes

Other financial income and expense	36				57	93	-3
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¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to currently marketed products and other production-related intangible assets; research and development includes the amortization of acquired rights for technologies

² Impairments: Cost of goods sold and research and development include impairment charges related to intangible assets; other income and other expense include reversals of impairment charges and impairment charges related to property, plant and equipment

³ Acquisition or divestment of businesses and related items, including restructuring and integration charges: other income includes adjustments to portfolio transformation provisions and transitional service fee income related to divestments; other expense includes stamp duties related to an acquisition and related items

⁴ Other items: cost of goods sold, research and development, other income and other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; cost of goods sold, selling, general and administration, research and development, other income and other expense include other restructuring income and charges and related items; cost of goods sold, selling, general and administration, research and development and other expense include adjustments to provisions and related items; cost of goods sold and research and development also include contingent consideration adjustments; other income and other expense include fair value adjustments and divestment gains and losses on financial assets and legal-related items; other income also includes product divestment gains, a curtailment gain and a milestone payment; other expense includes a reversal of an accrual and other costs; other financial income and expense includes the monetary loss on the restatement of non-monetary items for subsidiaries in hyperinflationary economies and a revaluation impact of a financial liability incurred through the Alcon distribution

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 other 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 of USD 3.3 billion to arrive at the core results before tax amounts to USD 562 million. The average tax rate on the adjustments is 16.9% since the estimated full year core tax charge of 16.9% 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

Second quarter

(USD millions)	Q2 2022 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items ³	Other items ⁴	Q2 2022 Core results	Q2 2021 Core results
Gross profit	8 201	855	2		-25	9 033	9 181
Operating income	2 188	894	460	6	345	3 893	3 936

The following are adjustments to arrive at core gross profit

Cost of goods sold	-2 765	855	2		-25	-1 933	-1 893
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The following are adjustments to arrive at core operating income

Selling, general and administration	-2 950				-3	-2 953	-3 077
Research and development	-2 302	39	224		-16	-2 055	-2 063
Other income	207		-2	-1	-141	63	35
Other expense	-968		236	7	530	-195	-140

¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to currently marketed products and other production-related intangible assets; research and development includes the amortization of acquired rights for technologies

² Impairments: Cost of goods sold and research and development include impairment charges related to intangible assets; other income and other expense include reversals of impairment charges and impairment charges related to property, plant and equipment

³ Acquisition or divestment of businesses and related items, including restructuring and integration charges: other income includes transitional service fee income related to divestments; other expense includes stamp duties related to an acquisition

⁴ Other items: cost of goods sold, research and development and other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; cost of goods sold, selling, general and administration, research and development, other income and other expense include other restructuring income and charges and related items; cost of goods sold and research and development also include contingent consideration adjustments and adjustments to provisions and related items; other income also includes product divestment gains and a milestone payment; other expense includes fair value adjustments on financial assets, legal-related items and other costs

First half

(USD millions)	H1 2022 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items ³	Other items ⁴	H1 2022 Core results	H1 2021 Core results
Gross profit	15 967	1 698	2		48	17 715	17 781
Operating income	4 795	1 772	514	6	458	7 545	7 602

The following are adjustments to arrive at core gross profit

Cost of goods sold	-5 677	1 698	2		48	-3 929	-3 895
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The following are adjustments to arrive at core operating income

Research and development	-4 414	74	261		-24	-4 103	-3 977
Other income	352		-3	-1	-203	145	91
Other expense	-1 280		254	7	637	-382	-320

¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to currently marketed products and other production-related intangible assets; research and development includes the amortization of acquired rights for technologies

² Impairments: Cost of goods sold and research and development include impairment charges related to intangible assets; other income and other expense include reversals of impairment charges and impairment charges related to property, plant and equipment

³ Acquisition or divestment of businesses and related items, including restructuring and integration charges: other income includes transitional service fee income related to divestments; other expense includes stamp duties related to an acquisition

⁴ Other items: cost of goods sold, research and development and other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; cost of goods sold, research and development, other income and other expense include other restructuring income and charges and related items; cost of goods sold and research and development also include contingent consideration adjustments and adjustments to provisions and related items; other income and other expense include fair value adjustments on financial assets and legal-related items; other income also includes product divestment gains, a curtailment gain and a milestone payment; other expense includes a reversal of an accrual and other costs

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

Second quarter

(USD millions)	Q2 2022 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items	Other items ³	Q2 2022 Core results	Q2 2021 Core results
Gross profit	1 130	56	4		21	1 211	1 256
Operating income	379	56	2		36	473	520

The following are adjustments to arrive at core gross profit

Cost of goods sold	-1 252	56	4		21	-1 171	-1 205
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The following are adjustments to arrive at core operating income

Selling, general and administration	-505				-7	-512	-511
Other income	23		-2		-4	17	31
Other expense	-73				26	-47	-35

¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to currently marketed products and other production-related intangible assets

² Impairments: cost of goods sold includes impairment charges related to intangible assets; other income includes a reversal of an impairment charge related to property, plant and equipment

³ Other items: cost of goods sold, other income and other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; selling, general and administration, other income and other expense include other restructuring income and charges and related items; selling, general and administration also includes adjustments to provisions and related items; other expense includes legal-related items

First half

(USD millions)	H1 2022 IFRS results	Amortization of intangible assets ¹	Impairments ²	Acquisition or divestment of businesses and related items	Other items ³	H1 2022 Core results	H1 2021 Core results
Gross profit	2 288	114	4		49	2 455	2 429
Operating income	798	114	2		97	1 011	965

The following are adjustments to arrive at core gross profit

Cost of goods sold	-2 502	114	4		49	-2 335	-2 401
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The following are adjustments to arrive at core operating income

Selling, general and administration	-1 019				3	-1 016	-1 014
Other income	71		-2		-10	59	58
Other expense	-138				55	-83	-74

¹ Amortization of intangible assets: cost of goods sold includes the amortization of acquired rights to currently marketed products and other production-related intangible assets

² Impairments: cost of goods sold includes impairment charges related to intangible assets; other income includes a reversal of an impairment charge related to property, plant and equipment

³ Other items: cost of goods sold, other income and other expense include net restructuring and other charges related to the Group-wide rationalization of manufacturing sites; cost of goods sold, selling, general and administration and other expense include adjustments to provisions and related items; selling, general and administration, other income and other expense include other restructuring income and charges and related items; other expense also includes legal-related items

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

Second quarter

(USD millions)	Q2 2022 IFRS results	Amortization of intangible assets	Impairments	Acquisition or divestment of businesses and related items	Other items ¹	Q2 2022 Core results	Q2 2021 Core results
Gross profit	3					3	18
Operating loss	-339				243	-96	-111

The following are adjustments to arrive at core operating loss

Selling, general and administration	-126				2	-124	-122
Other income	73				-26	47	26
Other expense	-289				267	-22	-33

¹ Other items: selling, general and administration, other income and other expense include restructuring charges and related items; other income and other expense also include fair value adjustments and divestment gains and losses on financial assets

First half

(USD millions)	H1 2022 IFRS results	Amortization of intangible assets	Impairments	Acquisition or divestment of businesses and related items ¹	Other items ²	H1 2022 Core results	H1 2021 Core results
Gross profit	37					37	32
Operating loss	-513			-2	312	-203	-265

The following are adjustments to arrive at core operating loss

Selling, general and administration	-244				3	-241	-243
Other income	106			-2	-54	50	29
Other expense	-412				363	-49	-83

¹ Acquisition or divestment of businesses and related items, including restructuring and integration charges: other income includes adjustments to portfolio transformation provisions and transitional service fee income related to divestments

² Other items: selling, general and administration, other income and other expense include restructuring charges and related items; other income and other expense also include fair value adjustments and divestment gains and losses on financial assets

Reconciliation of 2021 IFRS results and non-IFRS measures core results and free cash flow to exclude the impacts of the 2021 divestment of our Roche investment

To enhance investor understanding of the Group's performance in comparison with the prior year, we presented the 2021 IFRS results and non-IFRS measures core results and free cash flow excluding the impacts related to our Roche investment, due to its divestment in the fourth quarter of 2021.

The following tables provide a reconciliation of our 2021 published IFRS results and non-IFRS measures core results and free cash flow to the 2021 results, excluding the impacts related to our Roche investment, due to its divestment.

(USD millions unless indicated otherwise)	Q2 2021			H1 2021		
	Results as published	Our Roche investment impacts	Results excluding impacts from the divestment of our Roche investment	Results as published	Our Roche investment impacts	Results excluding impacts from the divestment of our Roche investment
Operating income	3 479		3 479	5 894		5 894
Income from associated companies	239	-241	-2	495	-497	-2
Interest expense and other financial income and expense	-212		-212	-433		-433
Income before tax	3 506	-241	3 265	5 956	-497	5 459
Income taxes	-611		-611	-1 002		-1 002
Net income	2 895	-241	2 654	4 954	-497	4 457
Earnings per share (USD)	1.29	-0.10	1.19	2.20	-0.22	1.98
<i>Effective tax rate</i> ¹	17.4%		18.7%	16.8%		18.4%
Core operating income	4 345		4 345	8 302		8 302
Core income from associated companies	278	-280	-2	591	-593	-2
Core interest expense and core other financial income and expense	-199		-199	-406		-406
Core income before tax	4 424	-280	4 144	8 487	-593	7 894
Core income taxes	-708		-708	-1 358		-1 358
Core net income	3 716	-280	3 436	7 129	-593	6 536
Core earnings per share (USD)	1.66	-0.13	1.53	3.17	-0.26	2.91
<i>Core effective tax rate</i> ²	16.0%		17.1%	16.0%		17.2%
Free cash flow ³	4 235		4 235	5 832	-522	5 310

¹ Effective tax rate is calculated as Income taxes divided by Income before tax.

² Core effective tax rate is calculated as Core income taxes divided by Core income before tax.

³ The free cash flow impact represents the dividend received in Q1 2021 from Roche in relation to the distribution of its 2020 net income.

(USD millions)	H1 2021		
	Free cash flow as published	Dividends received from Roche in relation to the distribution of its 2020 net income ¹	Free cash flow excluding dividends received from Roche
Operating income	5 894		5 894
Adjustments for non-cash items	3 326		3 326
Operating income adjusted for non-cash items	9 220		9 220
Dividends received from associated companies and others	523	-522	1
Interest and other financial payments, net	-617		-617
Income taxes paid	-1 144		-1 144
Other operating cash flow items, net	-1 720		-1 720
Net cash flows from operating activities	6 262	-522	5 740
Net purchases of property, plant and equipment, intangible assets, financial assets and other non-current assets	-430		-430
Free cash flow	5 832	-522	5 310

¹ In 2021, the dividend received from Roche in relation to the distribution of its 2020 net income was received in Q1 2021.

The following table provides a summary of the percentage point impact from excluding the effect of the divestment of our investment in Roche (in Q4 2021) on the USD and constant currencies % change on key Group figures.

Second quarter

	In USD			In constant currencies		
	% change as published Q2 2022	% change excluding impacts from the divestment of our Roche investment Q2 2022	Percentage point impact Q2 2022	% change as published Q2 2022	% change excluding impacts from the divestment of our Roche investment Q2 2022	Percentage point impact Q2 2022
Net income	-41	-36	-5	-34	-29	-5
Basic earnings per share (USD)	-40	-35	-5	-33	-27	-6
Free cash flow	-22	-22	0			
Core net income	-8	0	-8	-1	8	-9
Core basic earnings per share (USD)	-6	2	-8	1	10	-9

First half

	In USD			In constant currencies		
	% change as published H1 2022	% change excluding impacts from the divestment of our Roche investment H1 2022	Percentage point impact H1 2022	% change as published H1 2022	% change excluding impacts from the divestment of our Roche investment H1 2022	Percentage point impact H1 2022
Net income	-21	-12	-9	-14	-4	-10
Basic earnings per share (USD)	-20	-11	-9	-12	-3	-9
Free cash flow	-28	-20	-8			
Core net income	-6	2	-8	0	9	-9
Core basic earnings per share (USD)	-5	4	-9	2	11	-9

Net debt

Condensed consolidated changes in net debt

Second quarter

(USD millions)	Q2 2022	Q2 2021
Net change in cash and cash equivalents	-10 227	1 316
Change in marketable securities, commodities, time deposits, financial debts and derivatives financial instruments	11 386	1 972
Change in net debt	1 159	3 288
Net debt at April 1	-10 678	-31 835
Net debt at June 30	-9 519	-28 547

Condensed consolidated changes in net debt

First half

(USD millions)	H1 2022	H1 2021
Net change in cash and cash equivalents	-8 782	-4 541
Change in marketable securities, commodities, time deposits, financial debts and derivatives financial instruments	131	475
Change in net debt	-8 651	-4 066
Net debt at January 1	-868	-24 481
Net debt at June 30	-9 519	-28 547

Components of net debt

(USD millions)	Jun 30, 2022	Dec 31, 2021	Jun 30, 2021
Non-current financial debts	-22 232	-22 902	-24 828
Current financial debts and derivative financial instruments	-7 045	-6 295	-9 075
Total financial debts	-29 277	-29 197	-33 903
Less liquidity			
Cash and cash equivalents	3 625	12 407	5 117
Marketable securities, commodities, time deposits and derivative financial instruments	16 133	15 922	239
Total liquidity	19 758	28 329	5 356
Net debt at end of period	-9 519	-868	-28 547

Share information

	Jun 30, 2022	Jun 30, 2021
Number of shares outstanding	2 182 788 588	2 236 739 037
Registered share price (CHF)	80.85	84.32
ADR price (USD)	84.53	91.24
Market capitalization (USD billions) ¹	184.6	204.8
Market capitalization (CHF billions) ¹	176.5	188.6

¹ Market capitalization is calculated based on the number of shares outstanding (excluding treasury shares). Market capitalization in USD is based on the market capitalization in CHF converted at the quarter end CHF/USD exchange rate.

Free cash flow

The following table is a reconciliation of the three major categories of the IFRS consolidated statements of cash flows to free cash flow:

Second quarter

(USD millions)	Q2 2022			Q2 2021		
	IFRS cash flow	Adjustments	Free cash flow	IFRS cash flow	Adjustments	Free cash flow
Net cash flows from operating activities	3 755		3 755	4 132		4 132
Net cash flows (used in)/from investing activities from continuing operations¹	-11 628	11 177	-451	98	5	103
Net cash flows used in investing activities from discontinued operations ²				-1	1	0
Net cash flows (used in)/from investing activities	-11 628	11 177	-451	97	6	103
Net cash flows used in financing activities from continuing operations³	-2 302	2 302	0	-2 936	2 936	0
Net cash flows used in financing activities from discontinued operations ²				-3	3	0
Net cash flows used in financing activities	-2 302	2 302	0	-2 939	2 939	0
Free cash flow			3 304			4 235

¹ Excluded from the free cash flow are cash flows from investing activities associated with acquisitions and divestments of businesses and of interest in associated companies, purchases and sales of marketable securities, commodities and time deposits.

² Net cash flows used in investing activities from discontinued operations are activities associated with acquisitions and divestments of businesses which are excluded from the free cash flow. Net cash flows used in financing activities from discontinued operations are excluded from free cash flow. Free cash flow from discontinued operations in the second quarter of 2022 and 2021 was nil.

³ Net cash flows used in financing activities from continuing operations are excluded from the free cash flow.

First half

(USD millions)	H1 2022			H1 2021		
	IFRS cash flow	Adjustments	Free cash flow	IFRS cash flow	Adjustments	Free cash flow
Net cash flows from operating activities	5 404		5 404	6 262		6 262
Net cash flows (used in)/from investing activities from continuing operations¹	-2 263	1 083	-1 180	883	-1 313	-430
Net cash flows used in investing activities from discontinued operations ²				-6	6	0
Net cash flows (used in)/from investing activities	-2 263	1 083	-1 180	877	-1 307	-430
Net cash flows used in financing activities from continuing operations³	-11 830	11 830	0	-11 465	11 465	0
Net cash flows used in financing activities from discontinued operations ²				-14	14	0
Net cash flows used in financing activities	-11 830	11 830	0	-11 479	11 479	0
Free cash flow			4 224			5 832

¹ Excluded from the free cash flow are cash flows from investing activities associated with acquisitions and divestments of businesses and of interest in associated companies, purchases and sales of marketable securities, commodities and time deposits.

² Net cash flows used in investing activities from discontinued operations are activities associated with acquisitions and divestments of businesses which are excluded from the free cash flow. Net cash flows used in financing activities from discontinued operations are excluded from free cash flow. Free cash flow from discontinued operations was nil in the first half of 2022 and 2021.

³ Net cash flows used in financing activities from continuing operations are excluded from the free cash flow.

The following table is a summary of the free cash flow:

Second quarter

(USD millions)	Q2 2022	Q2 2021
Operating income	2 228	3 479
Adjustments for non-cash items		
Depreciation, amortization and impairments	1 899	1 503
Change in provisions and other non-current liabilities	547	139
Other	82	-326
Operating income adjusted for non-cash items	4 756	4 795
Dividends received from associated companies and others	1	1
Interest received	21	2
Interest and other financial payments	-211	-228
Income taxes paid	-606	-409
Payments out of provisions and other net cash movements in non-current liabilities	-152	-159
Change in inventories and trade receivables less trade payables	-596	-308
Change in other net current assets and other operating cash flow items	542	438
Net cash flows from operating activities	3 755	4 132
Purchases of property, plant and equipment	-257	-321
Proceeds from sale of property, plant and equipment	13	19
Purchases of intangible assets	-326	-276
Proceeds from sale of intangible assets	127	546
Purchases of financial assets	-38	-42
Proceeds from sale of financial assets	30	204
Purchases of other non-current assets		-30
Proceeds from sale of other non-current assets		3
Free cash flow	3 304	4 235

First half

(USD millions)	H1 2022	H1 2021
Operating income	5 080	5 894
Adjustments for non-cash items		
Depreciation, amortization and impairments	3 406	3 099
Change in provisions and other non-current liabilities	635	416
Other	207	-189
Operating income adjusted for non-cash items	9 328	9 220
Dividends received from associated companies and others	1	523
Interest received	38	6
Interest and other financial payments	-351	-623
Income taxes paid	-1 239	-1 144
Payments out of provisions and other net cash movements in non-current liabilities	-308	-376
Change in inventories and trade receivables less trade payables	-1 660	-1 051
Change in other net current assets and other operating cash flow items	-405	-293
Net cash flows from operating activities	5 404	6 262
Purchases of property, plant and equipment	-514	-567
Proceeds from sale of property, plant and equipment	46	85
Purchases of intangible assets	-928	-888
Proceeds from sale of intangible assets	193	629
Purchases of financial assets	-73	-78
Proceeds from sale of financial assets	96	428
Purchases of other non-current assets		-42
Proceeds from sale of other non-current assets		3
Free cash flow	4 224	5 832

Effects of currency fluctuations

Principal currency translation rates

(USD per unit)	Average rates Q2 2022	Average rates Q2 2021	Average rates H1 2022	Average rates H1 2021	Period-end rates Jun 30, 2022	Period-end rates Jun 30, 2021
1 CHF	1.037	1.098	1.060	1.102	1.046	1.086
1 CNY	0.151	0.155	0.154	0.155	0.149	0.155
1 EUR	1.065	1.206	1.094	1.206	1.044	1.190
1 GBP	1.257	1.398	1.299	1.388	1.215	1.384
100 JPY	0.771	0.914	0.816	0.929	0.733	0.905
100 RUB	1.509	1.348	1.336	1.346	1.850	1.376

Currency impact on key figures

The following table provides a summary of the currency impact on key Group figures due to their conversion into US dollars, the Group's reporting currency, of the financial data from entities reporting in non-US dollars. Constant currency (cc) calculations apply the exchange rates of the prior year period to the current period financial data for entities reporting in non-US dollars.

Second quarter

	Change in USD % Q2 2022	Change in constant currencies % Q2 2022	Percentage point currency impact Q2 2022	Change in USD % Q2 2021	Change in constant currencies % Q2 2021	Percentage point currency impact Q2 2021
Total Group						
Net sales to third parties	-1	5	-6	14	9	5
Operating income	-36	-30	-6	48	41	7
Net income	-41	-34	-7	55	49	6
Basic earnings per share (USD)	-40	-33	-7	57	52	5
Core operating income	-2	5	-7	18	13	5
Core net income	-8	-1	-7	20	14	6
Core basic earnings per share (USD)	-6	1	-7	22	16	6
Innovative Medicines						
Net sales to third parties	-1	5	-6	15	10	5
Operating income	-31	-25	-6	56	50	6
Core operating income	-1	6	-7	19	14	5
Sandoz						
Net sales to third parties	-3	5	-8	11	5	6
Operating income	-18	-14	-4	44	37	7
Core operating income	-9	-4	-5	9	3	6
Corporate						
Operating loss	-112	-125	13	nm	nm	nm
Core operating loss	14	6	8	-4	2	-6

nm = not meaningful

Currency impact on key figures

First half

	Change in USD % H1 2022	Change in constant currencies % H1 2022	Percentage point currency impact H1 2022	Change in USD % H1 2021	Change in constant currencies % H1 2021	Percentage point currency impact H1 2021
Total Group						
Net sales to third parties	0	5	-5	7	3	4
Operating income	-14	-7	-7	16	12	4
Net income	-21	-14	-7	23	19	4
Basic earnings per share (USD)	-20	-12	-8	24	21	3
Core operating income	1	7	-6	6	2	4
Core net income	-6	0	-6	7	3	4
Core basic earnings per share (USD)	-5	2	-7	9	5	4
Innovative Medicines						
Net sales to third parties	0	5	-5	9	5	4
Operating income	-12	-5	-7	13	10	3
Core operating income	-1	6	-7	10	6	4
Sandoz						
Net sales to third parties	-1	6	-7	0	-5	5
Operating income	3	8	-5	180	175	5
Core operating income	5	10	-5	-16	-19	3
Corporate						
Operating loss	-72	-81	9	nm	nm	nm
Core operating loss	23	18	5	-26	-22	-4

nm = not meaningful

Disclaimer

This press release contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995, that can generally be identified by words such as “grow,” “growth,” “growing,” “confidence,” “confident,” “outlook,” “accelerate,” “guidance,” “launch,” “focus,” “progressing,” “continue,” “continuing,” “continued,” “continues,” “driven,” “to drive,” “long-term,” “remains,” “potential,” “building,” “confidence,” “to fuel,” “can,” “ongoing,” “progressing,” “expect,” “expects,” “expected,” “to provide,” “committed,” “could,” “would,” “outlook,” “estimated,” “pipeline,” “priority,” “transformative,” “will,” “integrating,” “on-track,” “designed to” “to increase,” “being created,” “further strengthen,” “assumes,” “aims to,” “plans to,” or similar expressions, or by express or implied discussions regarding potential new products, potential new indications for existing products, potential product launches, or regarding potential future revenues from any such products; or regarding potential future, pending or announced transactions,; or regarding potential future sales or earnings of the Group or any of its divisions; or by discussions of strategy, plans, expectations or intentions; or regarding the Group’s liquidity or cash flow positions and its ability to meet its ongoing financial obligations and operational needs; or regarding the strategic review of Sandoz; or regarding our commitment to net zero emissions across our value chain by 2040; or regarding our new organizational structure; or our efforts to petition the appeals court to uphold the validity of the Gilenya US dosing regimen patent. 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. You should not place undue reliance on these statements. In particular, our expectations could be affected by, among other things: liquidity or cash flow disruptions affecting our ability to meet our ongoing financial obligations and to support our ongoing business activities; the potential that the strategic benefits, synergies or opportunities expected from our new organizational structure may not be realized or may be more difficult or take longer to realize than expected; the impact of a partial or complete failure of the return to normal global healthcare systems, including prescription dynamics; global trends toward healthcare cost containment, including ongoing government, payer and general public pricing and reimbursement pressures and requirements for increased pricing transparency; uncertainties regarding potential significant breaches of data security or data privacy, or disruptions of our information technology systems; regulatory actions or delays or government regulation generally, including potential regulatory actions or delays with respect to the development of the products described in this press release; the uncertainties in the research and development of new healthcare products, including 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; safety, quality, data integrity, or manufacturing issues; uncertainties involved in the development or adoption of potentially transformational technologies and business models; uncertainties regarding actual or potential legal proceedings, investigations or disputes; our performance on environmental, social and governance measures; general political, economic and business conditions, including the effects of and efforts to mitigate pandemic diseases such as COVID-19; uncertainties regarding future global exchange rates; uncertainties regarding future demand for our products; 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.

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About Novartis

Novartis is reimagining medicine to improve and extend people's lives. As a leading global medicines company, we use innovative science and digital technologies to create transformative treatments in areas of great medical need. In our quest to find new medicines, we consistently rank among the world's top companies investing in research and development. Novartis products reach nearly 800 million people globally and we are finding innovative ways to expand access to our latest treatments. About 108,000 people of more than 140 nationalities work at Novartis around the world. Find out more at <https://www.novartis.com>.

Novartis will conduct a conference call with investors to discuss this news release today at 14:00 Central European time and 8:00 Eastern Time. A simultaneous webcast of the call for investors and other interested parties may be accessed by visiting the Novartis website. A replay will be available after the live webcast by visiting <https://www.novartis.com/investors/event-calendar>.

Additional information is provided on Novartis divisions and pipeline of selected compounds in late stage development and a copy of today's earnings call presentation can be found at <https://www.novartis.com/investors/event-calendar>.

Important dates

September 21/22, 2022	Meet Novartis Management (starts at 1800 CET in Basel on September 21)
October 25, 2022	Third quarter & Nine months 2022 results
November 30, 2022	ESG Investor Day