NOVARTIS | Reimagining Medicine

Novartis Second Quarter and Half Year 2023

Condensed interim financial report – supplementary data

Novartis Global Communications

Novartis Second Quarter and Half Year 2023 Condensed Interim Financial Report – Supplementary Data

Group

Key Figures

Second quarter and half year

	Q2 2023 USD m	Q2 2022 USD m	% change USD	% change cc[1]	H1 2023 USD m	H1 2022 USD m	% change USD	% change cc[1]
Net sales to third parties	**13 622**	**12 781**	**7**	**9**	**26 575**	**25 312**	**5**	**8**
Divisional operating income[2]	3 211	2 563	25	41	6 205	5 584	11	24
Corporate income and expense, net[2]	-291	-335	13	16	-429	-504	15	17
Operating income	**2 920**	**2 228**	**31**	**50**	**5 776**	**5 080**	**14**	**28**
As % of net sales	*21.4*	*17.4*			*21.7*	*20.1*		
Loss from associated companies	-2		nm	nm	-3	-2	-50	11
Interest expense	-224	-202	-11	-17	-435	-403	-8	-12
Other financial income and expense	75	16	nm	nm	171	36	nm	nm
Income taxes	-452	-347	-30	-47	-898	-797	-13	-27
Net income	**2 317**	**1 695**	**37**	**54**	**4 611**	**3 914**	**18**	**32**
Basic earnings per share (USD)	**1.11**	**0.77**	**44**	**62**	**2.20**	**1.77**	**24**	**39**
Net cash flows from operating activities	**3 576**	**3 755**	**-5**		**6 533**	**5 404**	**21**	
Non-IFRS measures[1]								
Free cash flow[3]	**3 275**	**3 498**	**-6**		**5 995**	**4 890**	**23**	
Core operating income	**4 668**	**4 270**	**9**	**17**	**9 081**	**8 353**	**9**	**16**
As % of net sales	*34.3*	*33.4*			*34.2*	*33.0*		
Core net income	**3 811**	**3 431**	**11**	**19**	**7 425**	**6 682**	**11**	**19**
Core basic earnings per share (USD)	**1.83**	**1.56**	**17**	**25**	**3.54**	**3.02**	**17**	**25**

[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 48. Unless otherwise noted, all growth rates in this release refer to same period in prior year.

[2] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023 (see Note 9 in this Condensed Interim Financial Report).

[3] Effective January 1, 2023, Novartis revised its definition of free cash flow, to define free cash flow as net cash flows from operating activities less purchases of property, plant and equipment. To aid in comparability, the prior year free cash flow amounts have been revised to conform with the new free cash flow definition. See page 48 of the Condensed Interim Financial Report.

nm = not meaningful

Strategy Update

Our focus

With our new focused strategy unveiled in 2022, Novartis is transforming into a "pure-play" Innovative Medicines business. We focus on **five core therapeutic areas** (cardiovascular, immunology, neuroscience, solid tumors and hematology), with multiple significant in-market and pipeline assets in each of these areas, that address high disease burden and have substantial growth potential. In addition to two established **technology platforms** (chemistry and biotherapeutics), three emerging platforms (gene & cell therapy, radioligand therapy, and xRNA) are being prioritized for continued investment into new R&D capabilities and manufacturing scale. Geographically, we are focused on growing in our **priority geographies** – the US, China, Germany and Japan.

Our priorities

1. **Accelerate growth**: Renewed attention to deliver high-value medicines (NMEs) and focus on launch excellence, with a rich pipeline across our core therapeutic areas.
2. **Deliver returns**: Continuing to embed operational excellence and deliver improved financials. Novartis remains disciplined and shareholder-focused in our approach to capital allocation, with substantial cash generation and a strong capital structure supporting continued flexibility.
3. **Strengthening foundations**: Unleashing the power of our people, scaling data science and technology and continuing to build trust with society.

Sandoz planned spin-off

The Novartis Board of Directors has unanimously endorsed the proposed separation of Sandoz to create an independent company by way of a 100% spin-off.

As a next step, shareholders of Novartis will be invited to vote on the proposed spin-off and a related reduction of the share capital of Novartis AG at an Extraordinary General Meeting, planned to be held on Friday, 15 September 2023. The invitation to the EGM, a Shareholder Brochure and listing prospectus, which will be published by Sandoz, are planned to be distributed in August 2023.

Sandoz is planned to be listed on the SIX Swiss Exchange, with an American Depositary Receipt (ADR) program in the US.

The proposed spin-off is planned to occur early in the fourth quarter of 2023. In addition to Novartis shareholder approval, completion of the proposed Sandoz spin-off is subject to satisfaction of certain conditions, including obtaining the necessary approvals for the listing of the Sandoz shares, no order prohibiting (and no other event outside the control of Novartis preventing) the spin-off and no material adverse change.*

Entresto patent update (July)

Following a negative decision from the U.S. District Court for the District of Delaware, Novartis will appeal to the U.S. Court of Appeals for the Federal Circuit to uphold validity of Novartis patent covering *Entresto* and combinations of sacubitril and valsartan. No generics have tentative or final approval in the US. Any commercial launch of a generic *Entresto* product prior to the final outcome of Novartis combination patent appeal, or ongoing litigations involving other patents, may be at risk of later litigation developments.

* There can be no assurance regarding the ultimate timing of the proposed transaction or that the transaction will be completed. Further details of the proposed spin-off will be provided at a later date.

Financials

Second quarter

Net sales

Net sales were USD 13.6 billion (+7%, +9% cc) in the second quarter driven by volume growth of 14 percentage points, price erosion of 2 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 291 million in the second quarter compared to an expense of USD 335 million in the prior year, mainly driven by lower restructuring costs, a favorable stamp duties tax settlement and higher contributions from the Novartis Venture Fund, partly offset by lower fair value adjustment on contingent receivables related to intellectual property rights.

Operating income

Operating income was USD 2.9 billion (31%, +50% cc), mainly driven by higher sales and lower restructuring charges.

Core operating income was USD 4.7 billion (+9%, +17% cc), mainly driven by higher sales. Core operating income margin was 34.3% of net sales, increasing by 0.9 percentage points (+2.5 percentage points cc).

Interest expense and other financial income/expense

Interest expense amounted to USD 224 million broadly in line with prior year at USD 202 million.

Other financial income and expense amounted to an income of USD 75 million compared to USD 16 million in the prior year, as higher interest income was only partly offset by higher currency losses.

Core other financial income and expense amounted to an income of USD 111 million compared to USD 61 million in the prior year, as higher interest income was only partly offset by higher currency losses.

Income taxes

The tax rate in the second quarter was 16.3% compared to 17.0% in the prior year. The decrease from the prior year was mainly the result of a change in profit mix.

The core tax rate (core taxes as a percentage of core income before tax) was 16.3% compared to 16.9% in the prior year. The decrease from the prior year was mainly the result of a change in profit mix.

Net income, EPS and free cash flow

Net income was USD 2.3 billion (+37%, +54% cc), mainly due to higher operating income. EPS was USD 1.11 (+44%, +62% cc), growing faster than net income, benefiting from lower weighted average number of shares outstanding.

Core net income was USD 3.8 billion (+11%, +19% cc), mainly due to higher core operating income. Core EPS was USD 1.83 (+17%, +25% cc), growing faster than core net income, benefiting from lower weighted average number of shares outstanding.

Free cash flow amounted to USD 3.3 billion (–6% USD), compared with USD 3.5 billion in the prior year quarter. This decrease was driven by the lower net cash flows from operating activities.

First half

Net sales

Net sales were USD 26.6 billion (+5%, +8% cc) in the first half driven by volume growth of 15 percentage points, price erosion of 3 percentage points and the negative impact from generic competition of 4 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 429 million, compared to an expense of USD 504 million in the first half of 2022, mainly driven by higher contributions from the Novartis Venture Fund, higher fair value adjustment on contingent receivables related to intellectual property rights and a favorable stamp duties tax settlement.

Operating income

Operating income was USD 5.8 billion (14%, +28% cc), mainly driven by higher sales.

Core operating income was USD 9.1 billion (+9%, +16% cc), mainly driven higher sales. Core operating income margin was 34.2% of net sales, increasing by 1.2 percentage points (+2.4 percentage points cc).

Interest expense and other financial income/expense

Interest expense amounted to USD 435 million broadly in line with prior year at USD 403 million.

Other financial income and expense amounted to an income of USD 171 million compared to USD 36 million in the prior year, as higher interest income was only partly offset by higher currency losses.

Core other financial income and expense amounted to an income of USD 228 million compared to USD 93 million in the prior year, as higher interest income was only partly offset by higher currency losses.

Income taxes

The tax rate in the first half was 16.3% compared to 16.9% in the prior year period. The current year tax rate was favorably impacted by the effect of non-taxable income recognized related to a legal matter. Excluding this impact, the current year tax rate would have been 16.7%. The decrease from the prior year was mainly the result of a change in profit mix.

The core tax rate (core taxes as a percentage of core income before tax) was 16.3% in the first half and 16.9% in the prior year period. The decrease from the prior year was mainly the result of a change in profit mix.

Net income, EPS and free cash flow

Net income was USD 4.6 billion (+18%, +32% cc), mainly due to higher operating income. EPS was USD 2.20 (+24%, +39% cc), growing faster than net income, benefiting from lower weighted average number of shares outstanding.

Core net income was USD 7.4 billion (+11%, +19% cc), mainly due to higher core operating income. Core EPS was USD 3.54 (+17%, +25% cc), growing faster than core net income, benefiting from lower weighted average number of shares outstanding.

Free cash flow amounted to USD 6.0 billion (+23% USD), compared with USD 4.9 billion in the prior year period driven by higher net cash flows from operating activities.

Innovative Medicines

	Q2 2023 USD m	Q2 2022 restated USD m[1]	% change USD	% change cc	H1 2023 USD m	H1 2022 restated USD m[1]	% change USD	% change cc
Net sales to third parties	**11 243**	**10 525**	**7**	**9**	**21 813**	**20 755**	**5**	**8**
Operating income	**2 999**	**2 206**	**36**	**52**	**5 674**	**4 833**	**17**	**30**
As % of net sales	*26.7*	*21.0*			*26.0*	*23.3*		
Core operating income	**4 387**	**3 911**	**12**	**20**	**8 475**	**7 583**	**12**	**19**
As % of net sales	*39.0*	*37.2*			*38.9*	*36.5*		

[1] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023 (see Note 9 in this Condensed Interim Financial Report).

Second quarter

Net sales

Net sales were USD 11.2 billion (+7%, +9% cc) with volume contributing 15 percentage points to growth. Generic competition had a negative impact of 4 percentage points and pricing had a negative impact of 2 percentage points. Sales in the US were USD 4.5 billion (+14%) and in the rest of the world USD 6.7 billion (+3%, +7% cc).

Sales growth was mainly driven by continued strong performance from Entresto (USD 1.5 billion, +35%, +37% cc), *Kesimpta* (USD 489 million, +105%, +105% cc), *Pluvicto* (USD 240 million), *Kisqali* (USD 493 million, +60%, +66% cc) and *Scemblix* (USD 106 million, +242%, +248% cc), partly offset by generic competition mainly for *Gilenya*.

In the US (USD 4.5 billion, +14%), sales growth was mainly driven by *Pluvicto*, *Entresto*, *Kesimpta*, *Kisqali* and *Scemblix*, partly offset by the impact of generic competition on *Gilenya*. In Europe (USD 3.5 billion, 0%, +2% cc), sales growth was driven by Entresto, *Kisqali* and *Kesimpta*, partly offset by increased generic competition for *Lucentis* and *Gilenya*. Emerging Growth Markets grew +7% (+17% cc), which includes China sales of USD 0.9 billion (+10%, +16% cc), where growth was mainly driven by *Entresto* and *Cosentyx*.

Operating income

Operating income was USD 3.0 billion (+36%, +52% cc), mainly driven by higher sales and lower restructuring charges. Operating income margin was 26.7% of net sales, increasing 5.7 percentage points (+8.1 percentage points in cc).

Core adjustments were USD 1.4 billion, mainly due to amortization and impairment, compared to USD 1.7 billion in prior year. Core adjustments decreased compared to prior year, mainly due to lower restructuring charges.

Core operating income was USD 4.4 billion (+12%, +20% cc), mainly driven by higher gross sales. Core operating income margin was 39.0% of net sales, increasing 1.8 percentage points (+3.4 percentage points cc). Other revenue and sales to other segments as a percentage of sales decreased by 0.2 percentage points (cc). Core cost of goods sold as a percentage of sales increased by 0.1 percentage points (cc). Core R&D expenses as a percentage of net sales decreased by 1.3 percentage points (cc). Core SG&A expenses as a percentage of net sales decreased by 2.2 percentage points (cc). Core other income and expense as a percentage of net sales increased the margin by 0.2 percentage points (cc).

First half

Net sales

Net sales were USD 21.8 billion (+5%, +8% cc) with volume contributing 16 percentage points to growth. Generic competition had a negative impact of 5 percentage points and pricing had a negative impact of 3 percentage points. Sales in the US were USD 8.6 billion (+12%) and in the rest of the world USD 13.2 billion (+1%, +6% cc).

Sales growth was mainly driven by continued strong performance from *Entresto* (USD 2.9 billion, +31%, +35% cc), *Kesimpta* (USD 873 million, +101%, +103% cc), *Pluvicto* (USD 451 million) and *Kisqali* (USD 908 million, +66%, +73% cc), partly offset by generic competition mainly for *Gilenya*.

In the US (USD 8.6 billion, +12%), sales growth was mainly driven by *Pluvicto*, *Entresto*, *Kesimpta*, *Kisqali* and *Scemblix*, partly offset by the impact of generic competition on *Gilenya*. In Europe (USD 6.9 billion, –1%, +2% cc), sales growth was driven by *Entresto*, *Kisqali*, *Kesimpta* and *Leqvio*, partly offset by increased generic competition for *Gilenya* and *Lucentis*. Emerging Growth Markets grew +8% (+16% cc), which includes China sales of USD 1.7 billion (+4%, +11% cc), where growth was mainly driven by *Entresto* and *Cosentyx*.

Operating income

Operating income was USD 5.7 billion (+17%, +30% cc), mainly driven by higher sales. Other income from legal matters was offset by higher impairments. Operating income margin was 26.0% of net sales, increasing 2.7 percentage points (+4.7 percentage points in cc).

Core adjustments were USD 2.8 billion, mainly due to amortization and impairment, compared to USD 2.7 billion in prior year. Core adjustments increased compared to prior year, mainly due to higher impairment and amortization, partly offset by other income from legal matters.

Core operating income was USD 8.5 billion (+12%, +19% cc), mainly driven by higher sales. Core operating income margin was 38.9% of net sales, increasing 2.4 percentage points (+3.6 percentage points cc). Other revenue and sales to other segments as a percentage of sales decreased by 0.2 percentage points (cc). Core cost of goods sold as a percentage of sales decreased by 0.2 percentage points (cc). Core R&D expenses as a percentage of net sales decreased by 1.1 percentage points (cc). Core SG&A expenses as a percentage of net sales decreased by 2.4 percentage points (cc). Core other income and expense as a percentage of net sales increased the margin by 0.1 percentage points (cc).

PRODUCT COMMENTARY (RELATING TO Q2 PERFORMANCE)

CARDIOVASCULAR

	Q2 2023 USD m	Q2 2022 USD m	% change USD	% change cc	**H1 2023 USD m**	H1 2022 USD m	% change USD	% change cc
Cardiovascular								
Entresto	1 516	1 125	35	37	2 915	2 218	31	35
Leqvio	78	22	255	249	142	36	294	293
Total Cardiovascular	**1 594**	**1 147**	**39**	**41**	**3 057**	**2 254**	**36**	**39**

Entresto (USD 1,516 million, +35%, +37% cc) sustained robust demand-led growth benefitting from the adoption of guideline-directed medical therapy across regions. In the US, Novartis is in ANDA litigation with generic manufacturers. In July 2023, the U.S. District Court for the District of Delaware issued a negative decision regarding the validity of Novartis patent covering *Entresto* and combinations of sacubitril and valsartan, which expires in 2025 (with pediatric exclusivity). Novartis will appeal to reverse the decision to uphold validity of the combination patent. No generics have tentative or final approval in the US. Any commercial launch of a generic *Entresto* product prior to the final outcome of Novartis combination patent appeal, or ongoing litigations involving other patents, may be at risk of later litigation developments.

Leqvio (USD 78 million, +255%, +249% cc) launch in the US and other markets is ongoing, with focus on patient on-boarding, removing access hurdles and enhancing medical education. In the US, *Leqvio* is covered at or near label for 76% of patients. More than 50% of *Leqvio* source of business in the US is now through “Buy and Bill” acquisition model. *Leqvio* is now approved in 82 countries. Novartis obtained global rights to develop, manufacture and commercialize *Leqvio* under a license and collaboration agreement with Alnylam Pharmaceuticals. In July 2023, FDA expanded the label with: updated indication to include primary hyperlipidemia, less restrictive language for use for statin therapy, broader population from ORION-11 and removal of several adverse reactions from safety section.

IMMUNOLOGY

	Q2 2023 USD m	Q2 2022 USD m	% change USD	% change cc	H1 2023 USD m	H1 2022 USD m	% change USD	% change cc
Immunology								
Cosentyx	1 272	1 275	0	1	2 348	2 434	-4	-1
Xolair [1]	362	352	3	5	716	720	-1	3
Ilaris	316	275	15	17	644	560	15	18
Other						1	nm	nm
Total Immunology	**1 950**	**1 902**	**3**	**4**	**3 708**	**3 715**	**0**	**2**

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

Cosentyx (USD 1,272 million, 0%, +1% cc) sales stabilized with continued demand growth across key regions, offset by US revenue deduction, mainly related to channel mix. Ex-US sales grew +18% (cc). Since initial approval in 2015, *Cosentyx* has proven its sustained efficacy and consistent safety profile and has treated over 1 million patients worldwide across six systemic inflammatory conditions. In May 2023, the European Commission approved *Cosentyx* as the first and only IL-17A inhibitor for hidradenitis suppurativa (HS) and the first new biologic therapy for HS in nearly a decade. *Cosentyx* HS was launched in Germany in June 2023 and FDA approval is expected in H2 2023.

Xolair (USD 362 million, +3%, +5% cc) sales grew in Emerging Growth Markets offset by lower sales in other markets. 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 316 million, +15%, +17% cc) sales grew in the US, Emerging Growth Markets and Japan. Contributors to growth include the Still's disease indications (SJIA/AOSD) in the US and Europe, as well as strong performance for the Familial Mediterranean Fever (FMF) indication in key markets worldwide.

NEUROSCIENCE

	Q2 2023 USD m	Q2 2022 USD m	% change USD	% change cc	H1 2023 USD m	H1 2022 USD m	% change USD	% change cc
Neuroscience								
Kesimpta	489	239	105	105	873	434	101	103
Zolgensma	311	379	-18	-16	620	742	-16	-15
Mayzent	94	85	11	11	183	164	12	13
Aimovig	67	55	22	24	128	109	17	21
Other						1	nm	nm
Total Neuroscience	**961**	**758**	**27**	**28**	**1 804**	**1 450**	**24**	**26**

nm = not meaningful

Kesimpta (USD 489 million, +105%, +105% cc) sales growth across all regions driven by increased demand and strong access. *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 87 countries with nearly 45,000 patients treated.

Zolgensma (USD 311 million, –18%, –16% cc) sales declined in the US as a result of fewer prevalent patients, and in Europe mainly due to price mix and other one-time events in Q2 2022. The number of patients treated globally remained relatively stable. *Zolgensma* is now approved in 50 countries.

Mayzent (USD 94 million, +11%, +11% cc) sales grew mainly in Europe. Sales continued to grow in patients with multiple sclerosis showing signs of progression despite being on other treatments. *Mayzent* is an oral disease-modifying therapy studied and proven to delay disease progression in a broad SPMS patient population.

Aimovig (USD 67 million, ex-US, ex-Japan +22%, +24% cc) sales grew in Europe. *Aimovig* is reimbursed in 32 markets and has been prescribed to over 806,000 patients worldwide.

SOLID TUMORS

	Q2 2023 USD m	Q2 2022 USD m	% change USD	% change cc	**H1 2023 USD m**	H1 2022 USD m	% change USD	% change cc
Solid Tumors								
Tafinlar + Mekinist [1]	496	452	10	13	954	855	12	15
Kisqali	493	308	60	66	908	547	66	73
Pluvicto	240	10	nm	nm	451	12	nm	nm
Lutathera	150	86	74	75	299	211	42	43
Piqray/Vijoice	130	85	53	54	246	158	56	57
Votrient	106	124	-15	-13	211	253	-17	-15
Tabrecta	41	30	37	37	77	61	26	27
Other					1		nm	nm
Total Solid Tumors	**1 656**	**1 095**	**51**	**54**	**3 147**	**2 097**	**50**	**54**

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

Tafinlar + Mekinist (USD 496 million, +10%, +13% cc) sales grew across all regions, driven by demand in BRAF+ adjuvant melanoma and NSCLC indications, while maintaining demand in the highly competitive BRAF+ metastatic melanoma market. The US also posted strong growth in the tumor agnostic indication (approved in June 2022). *Tafinlar + Mekinist* remains the worldwide targeted therapy leader in BRAF+ melanoma.

Kisqali (USD 493 million, +60%, +66% cc) sales grew strongly across all regions, based on increasing recognition of its consistently reported overall survival and quality of life benefits in HR+/HER2- advanced breast cancer. Updates to the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for breast cancer, released in January 2023, recommend ribociclib (*Kisqali*) as the only Category 1 Preferred CDK4/6 inhibitor for first-line treatment of patients with HR+/HER2- advanced breast cancer in combination with an aromatase inhibitor (AI). In March 2023, positive topline results were announced from an interim analysis of NATALEE, a Phase III trial evaluating ribociclib plus endocrine therapy (ET) in a broad population of patients with HR+/HER2- early breast cancer at risk of recurrence. The positive primary results were presented in June 2023 at ASCO, and data showed that *Kisqali* plus ET, compared to ET alone, lowered the risk of cancer recurrence by 25.2% with a consistent, clinically meaningful benefit across Stage II and III patients, regardless of disease stage, menopausal or nodal status. Novartis plans to submit data from NATALEE to regulatory authorities (in Europe, the US, and other countries) in Q3/Q4 2023. Novartis is in US ANDA litigation with a generic manufacturer.

Pluvicto (USD 240 million) continues to see strong demand in the US as the first and only radioligand therapy approved by the FDA for the treatment of adult patients with progressive, PSMA-positive metastatic castration-resistant prostate cancer, who have already been treated with other anticancer treatments (ARPI and taxane-based chemotherapy). In Q2 2023, approval was received for commercial production of *Pluvicto* for US patients at our radioligand manufacturing facility in Millburn, NJ and the expansion of manufacturing operations for EU commercial supply at our site in Zaragoza, Spain.

Lutathera (USD 150 million, +74%, +75% cc) sales grew mainly in the US and Japan due to increased demand and prior year low base. Growth in the US was also driven by strong field execution. In Japan, growth was driven by increased demand following the transfer of the marketing authorization (MA) back to Novartis from Fujifilm Toyama Chemical.

Piqray/Vijoice (USD 130 million, +53%, +54% cc) sales grew mainly in the US and Europe, benefiting from indication expansion into PIK3CA-related overgrowth spectrum (PROS). In addition to PROS, *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 a worse prognosis.

Votrient (USD 106 million, –15%, –13% cc) sales declined due to increased competition, especially from immuno-oncology agents in metastatic renal cell carcinoma.

Tabrecta (USD 41 million, +37%, +37% cc) sales grew mainly in the US. *Tabrecta* is the first therapy approved by the FDA to specifically target metastatic NSCLC with a mutation that leads to MET exon 14 skipping (METex14) in line agnostic setting.

HEMATOLOGY

	Q2 2023 USD m	Q2 2022 USD m	% change USD	% change cc	**H1 2023 USD m**	H1 2022 USD m	% change USD	% change cc
Hematology								
Promacta/Revolade	583	534	9	11	1 130	1 025	10	13
Tasigna	476	498	-4	-3	938	959	-2	1
Jakavi	435	398	9	11	849	787	8	12
Kymriah	129	136	-5	-5	264	263	0	3
Scemblix	106	31	242	248	182	56	225	228
Adakveo	53	49	8	8	105	93	13	13
Other						1	nm	nm
Total Hematology	**1 782**	**1 646**	**8**	**10**	**3 468**	**3 184**	**9**	**12**

nm = not meaningful

Promacta/Revolade (USD 583 million, +9%, +11% cc) grew across all regions driven by increased use in second-line persistent and chronic immune thrombocytopenia and as first-line and/or second-line treatment for severe aplastic anemia, according to the respective label in the countries.

Tasigna (USD 476 million, –4%, –3% cc) sales decline was driven by Europe, Emerging Growth Markets and Japan, partly offset by growth in the US.

Jakavi (USD 435 million, +9%, +11% cc) sales grew in Emerging Growth Markets, Europe and Japan, driven by strong demand in both myelofibrosis and polycythemia vera indications. As per the Incyte/Novartis License Agreement, Incyte has rights in the US to exclusively develop and commercialize ruxolitinib for all indications under a different brand name Jakafi®.

Kymriah (USD 129 million, –5%, –5% cc) sales declined in Europe and Emerging Growth Markets, partly offset by growth in Japan and follicular lymphoma indication launch across markets.

Scemblix (USD 106 million, +242%, +248% cc) sales grew across all regions, demonstrating the high unmet need for effective and tolerable treatment options, for CML patients, who have been treated with 2 or more tyrosine kinase inhibitors, or who have the T315I mutation.

Adakveo (USD 53 million, +8%, +8% cc) sales grew mainly in the US and Emerging Growth Markets, treating patients with vaso-occlusive crises caused by sickle cell disease. On May 25, 2023, CHMP recommended the revocation of the conditional marketing authorization for *Adakveo*, following a review by the CHMP further to the results of the phase III study STAND, which did not demonstrate a statistically significant difference between crizanlizumab 5mg/kg or crizanlizumab 7.5mg/kg and placebo in annualized rates of vaso-occlusive crises leading to a healthcare visit over the first-year post randomization. Final decision by the European Commission is expected by July 31, 2023.

OTHER PROMOTED BRANDS

	Q2 2023 USD m	Q2 2022 USD m	% change USD	% change cc	**H1 2023 USD m**	H1 2022 USD m	% change USD	% change cc
Other Promoted Brands								
Ultibro Group	114	126	-10	-8	228	258	-12	-8
Xiidra	96	126	-24	-24	185	233	-21	-21
Beovu	53	54	-2	0	104	102	2	5
Other respiratory	23	20	15	22	48	39	23	31
Total Other Promoted Brands	**286**	**326**	**-12**	**-11**	**565**	**632**	**-11**	**-8**
Total Promoted Brands [1]	**8 229**	**6 874**	**20**	**22**	**15 749**	**13 332**	**18**	**21**

[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).

***Ultibro* Group** (USD 114 million, –10%, –8% cc) sales declined mainly in Europe and Japan due to various factors including competition, partly offset by growth in China. *Ultibro* Group consists of *Ultibro Breezhaler*, *Seebri Breezhaler* and *Onbrez Breezhaler*.

Xiidra (USD 96 million, –24%, –24% cc) sales declined due to higher Medicare part D rebates. In the US, Novartis is in ANDA litigation with a generic manufacturer. Novartis has signed an agreement with Bausch + Lomb to divest *Xiidra* (see Note 9 to the Condensed Interim Consolidated Financial Statements).

Beovu (USD 53 million, –2%, 0% cc) sales grew (cc) in Europe, Japan and Emerging Growth Markets, offset by decline in the US.

ESTABLISHED BRANDS

	Q2 2023 USD m	Q2 2022 USD m	% change USD	% change cc	**H1 2023 USD m**	H1 2022 USD m	% change USD	% change cc
Established Brands								
Lucentis	395	501	-21	-20	811	1 021	-21	-17
Sandostatin	331	318	4	5	660	638	3	5
Gilenya	269	555	-52	-52	501	1 160	-57	-56
Exforge Group	184	199	-8	-4	370	399	-7	-3
Galvus Group	175	222	-21	-15	358	438	-18	-12
Diovan Group	155	159	-3	2	313	350	-11	-5
Gleevec/Glivec	142	194	-27	-24	289	392	-26	-23
Afinitor/Votubia	116	143	-19	-17	226	281	-20	-17
Contract manufacturing [1]	132	83	59	56	255	182	40	41
Other [2]	1 115	1 277	-13	-5	2 281	2 562	-11	-4
Total Established Brands [1, 2]	**3 014**	**3 651**	**-17**	**-13**	**6 064**	**7 423**	**-18**	**-14**

[1] 2022 restated to reflect the transfer of the Sandoz Division's biotechnology manufacturing services to other companies' activities to the Innovative Medicines Division that was effective as of January 1, 2023.
[2] 2022 restated to reflect the transfer of the *Coartem* brand from the Sandoz Division to the Innovative Medicines Division that was effective as of January 1, 2023.

Lucentis (USD 395 million, –21%, –20% cc) sales declined in Europe, Japan and Emerging Growth Markets mainly due to competition.

Gilenya (USD 269 million, –52%, –52% cc) sales declined due to generic competition across all regions. Novartis is in litigation against a generic manufacturer on the method of treatment patent in the US, and against generic manufacturers on the dosing regimen patent in Europe. On 17 April 2023, the US Supreme Court declined to review an appellate decision invalidating the dosing regimen patent and that decision is now final.

Sandoz

	Q2 2023 USD m	Q2 2022 restated USD m[1]	% change USD	% change cc	H1 2023 USD m	H1 2022 restated USD m[1]	% change USD	% change cc
Net sales to third parties	**2 379**	**2 256**	**5**	**8**	**4 762**	**4 557**	**4**	**8**
Operating income	**212**	**357**	**-41**	**-27**	**531**	**751**	**-29**	**-19**
As % of net sales	*8.9*	*15.8*			*11.2*	*16.5*		
Core operating income	**429**	**451**	**-5**	**6**	**933**	**964**	**-3**	**5**
As % of net sales	*18.0*	*20.0*			*19.6*	*21.2*		

[1] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023 (see Note 9 in this Condensed Interim Financial Report).

Second quarter

Net sales

Sandoz net sales were USD 2.4 billion (+5%, +8% cc), with volume contributing 9 percentage points to growth. Pricing had a negative impact of 1 percentage point. Sales growth was mainly driven by Europe, which benefited from strong volume growth driven by continued momentum from prior year launches, a strong cough and cold season and the biosimilars business.

Sales in Europe were USD 1.3 billion (+11%, +13% cc), in the US USD 378 million (–8%), in Asia / Africa / Australasia USD 395 million (–3%, +4% cc) and in Canada and Latin America USD 277 million (+12%, +16% cc).

Generics sales were USD 1.8 billion (+4%, +6% cc), driven by growth in Europe. Global sales of Biosimilars grew to USD 531 million (+12%, +13% cc), driven by growth ex-US.

Operating income

Operating income was USD 212 million (–41%, –27% cc), with the decline mainly due to higher legal settlements, SG&A investments to drive sales growth and separation and stand-up costs partly offset by higher sales and improved product mix. The full impact of inflation on production costs will only be realized in subsequent periods, after the sell-through of inventory produced at lower cost in the prior year. Operating income margin was 8.9% of net sales, decreasing 6.9 percentage points (-5.1 percentage points in cc).

Core adjustments were USD 217 million, including USD 57 million of amortization. Prior year core adjustments were USD 94 million including USD 56 million of amortization. The change in core adjustments compared to prior year was mainly due to higher legal settlements and separation costs.

Core operating income was USD 429 million (–5%, +6% cc), mainly driven by higher sales and improved product mix partly offset by higher SG&A investments to drive sales growth. Core operating income margin was 18.0% of net sales, decreasing by 2.0 percentage points (-0.3 percentage points cc). Core gross margin as a percentage of sales increased by 1.6 percentage points (cc) mainly due to improved product mix, with the full impact of inflation on production costs to be realized in subsequent periods, after the sell-through of inventory produced at lower cost in the prior year. Core R&D expenses as a percentage of net sales increased by 0.3 percentage points (cc). Core SG&A expenses as a percentage of net sales increased by 1.6 percentage points (cc). Core other income and expense as a percentage of net sales remained in line with prior year.

First half

Net sales

Sandoz net sales were USD 4.8 billion (+4%, +8% cc), with volume contributing 12 percentage points to growth. Pricing had a negative impact of 4 percentage points. Sales growth was mainly driven by Europe, which benefited from strong volume growth driven by continued momentum from prior year launches, a strong cough and cold season and the biosimilars business.

Sales in Europe were USD 2.7 billion (+11%, +14% cc), in the US USD 758 million (–7%), in Asia / Africa / Australasia USD 772 million (–5%, +4% cc) and in Canada and Latin America USD 537 million (+7%, +11% cc).

Generics sales were USD 3.7 billion (+3%, +6% cc), driven by growth in Europe. Global sales of Biosimilars grew to USD 1.0 billion (+12%, +15% cc), driven by growth ex-US.

Operating income

Operating income was USD 531 million (–29%, –19% cc), with the decline mainly due to higher legal settlements, higher SG&A investments and separation and stand-up costs partly offset by higher sales and improved product mix. The full impact of inflation on production costs will only be realized in subsequent periods, after the sell-through of inventory produced at lower cost in the prior year. Operating income margin was 11.2% of net sales, decreasing 5.3 percentage points (-4.0 percentage points in cc).

Core adjustments were USD 402 million, including USD 111 million of amortization. Prior year core adjustments were USD 213 million including USD 114 million of amortization. The change in core adjustments compared to prior year was mainly due to higher legal settlements and separation costs.

Core operating income was USD 933 million (–3%, +5% cc), mainly driven by higher sales and improved product mix partly offset by higher SG&A investments to drive higher sales. Core operating income margin was 19.6% of net sales, decreasing by 1.6 percentage points (-0.5 percentage points cc). Core gross margin as a percentage of sales increased by 1.8 percentage points (cc) mainly due to improved product mix, with the full impact of inflation on production costs to be realized in subsequent periods, after the sell-through of inventory produced at lower cost in the prior year. Core R&D expenses as a percentage of net sales increased by 0.1 percentage points (cc). Core SG&A expenses as a percentage of net sales increased by 1.2 percentage points (cc). Core other income and expense as a percentage of net sales decreased the margin by 1.0 percentage points (cc), mainly due to lower divestment income.

Group Cash Flow and Balance Sheet

Cash Flow

Second quarter

Net cash flows from operating activities amounted to USD 3.6 billion, compared with USD 3.8 billion in the prior year quarter. This decrease was mainly due to timing of income taxes paid, higher payments out of provisions and unfavorable changes in working capital, partly offset by higher net income adjusted for non-cash items and other adjustments, including divestment gains.

Net cash outflows used in investing activities amounted to USD 1.1 billion, compared with USD 11.6 billion in the prior year quarter.

The current year quarter cash outflows were mainly driven by USD 0.7 billion for the purchases of intangible assets; USD 0.3 billion for purchases of property, plant and equipment; and USD 0.1 billion for acquisitions and divestments of businesses, net.

In the prior year quarter, net cash outflows used in investing activities of USD 11.6 billion 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.

Net cash outflows used in financing activities amounted to USD 3.6 billion, compared with USD 2.3 billion in the prior year quarter.

The current year quarter cash outflows were mainly driven by USD 3.0 billion for net treasury share transactions and USD 0.7 billion from the net decrease in current financial debts.

In the prior year quarter, net cash outflows used in financing activities of USD 2.3 billion 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.

Free cash flow amounted to USD 3.3 billion (–6% USD), compared with USD 3.5 billion in the prior year quarter. This decrease was driven by the lower net cash flows from operating activities.

First half

Net cash flows from operating activities amounted to USD 6.5 billion, compared with USD 5.4 billion in the prior year period. This increase was mainly driven by higher net income adjusted for non-cash items and other adjustments, including divestment gains, favorable changes in working capital, higher interest received, partly offset by higher payments out of provisions.

Net cash inflows from investing activities amounted to USD 9.6 billion, compared with USD 2.3 billion net cash outflows in the prior year period.

The current year period cash inflows were driven by net proceeds of USD 10.9 billion from the sale of marketable securities, commodities and time deposits; USD 0.3 billion from the sale of intangible assets, financial assets and property, plant and equipment. These cash inflows were partly offset by cash outflows of USD 0.9 billion for purchases of intangible assets; USD 0.5 billion for purchases of property, plant and equipment; and USD 0.1 billion for purchases of financial assets. Acquisitions and divestments of businesses resulted in a net cash outflow of USD 0.1 billion.

In the prior year period, net cash outflows used in investing activities of USD 2.3 billion 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.

Net cash outflows used in financing activities amounted to USD 12.8 billion, compared with USD 11.8 billion in the prior year period.

The current year period cash outflows were mainly driven by USD 7.3 billion for the dividend payment and USD 5.7 billion for net treasury share transactions. These cash outflows were partly offset by cash inflows of USD 0.3 billion from the net increase in current financial debts.

In the prior year period, net cash outflows used in financing activities of USD 11.8 billion 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.

Free cash flow amounted to USD 6.0 billion (+23% USD), compared with USD 4.9 billion in the prior year period driven by higher net cash flows from operating activities.

Balance sheet

Assets

Total non-current assets of USD 77.5 billion decreased by USD 3.1 billion compared to December 31, 2022.

Intangible assets other than goodwill decreased by USD 3.6 billion mainly due to amortization and impairments and the reclassification to assets held for sale of current marketed product *Xiidra* related to the planned divestment of the 'front of eye' ophthalmology assets (see Note 9) , partially offset by additions and favorable currency translation adjustments.

Goodwill increased by USD 0.2 billion due to favorable currency translation adjustments.

Deferred tax assets increased by USD 0.3 billion and property, plant and equipment, right-of-use assets, investments in associated companies, financial assets, and other non-current assets were broadly in line with December 31, 2022.

Total current assets of USD 33.5 billion decreased by USD 3.4 billion compared to December 31, 2022.

Cash and cash equivalents, marketable securities, commodities, time deposits and derivative financial instruments decreased by USD 7.8 billion mainly due to the dividend payment, and purchases of treasury shares and intangible assets, partially offset by the cash generated through operating activities.

Assets held for sale increased by USD 1.7 billion due to the reclassification of current marketed product Xiidra related to the planned divestment of the 'front of eye' ophthalmology assets.

Inventories increased by USD 1.1 billion and trade receivables increased by USD 1.1 billion. Other current assets increased by USD 0.4 billion and income tax receivables were broadly in line with December 31, 2022.

Liabilities

Total non-current liabilities of USD 27.1 billion decreased by USD 2.2 billion compared to December 31, 2022.

Non-current financial debts decreased by USD 2.0 billion mainly due to the reclassification of USD 2.1 billion from non-current to current financial debts of a USD denominated bond with notional amount of USD 2.2 billion maturing in 2024.

Non-current lease liabilities, deferred tax liabilities and provisions and other non-current liabilities were broadly in line with December 31, 2022.

Total current liabilities of USD 31.9 billion increased by USD 3.2 billion compared to December 31, 2022.

Current financial debts and derivative financial instruments increased by USD 2.4 billion, mainly due to the reclassification of USD 2.1 billion from non-current to current financial debts of a USD denominated bond with notional amount of USD 2.2 billion maturing in 2024.

Provisions and other current liabilities increased by USD 0.5 billion. Trade payables, current income tax liabilities and current lease liabilities were broadly in line with December 31, 2022.

Equity

The Group`s equity decreased by USD 7.5 billion to USD 51.9 billion compared to December 31, 2022. This decrease was mainly due to the cash-dividend payment of USD 7.3 billion and the purchase of treasury shares of USD 5.9 billion. This was partially offset by the net income of USD 4.6 billion, favorable currency translation differences of USD 0.5 billion, exercise of options and employee transactions of USD 0.2 billion, and equity-based compensation of USD 0.4 billion.

Net debt and debt/equity ratio

The Group's liquidity amounted to USD 11.2 billion at June 30, 2023, compared to USD 18.9 billion on December 31, 2022. Total non-current and current financial debts, including derivatives, amounted to USD 26.5 billion at June 30, 2023 compared to USD 26.2 billion at December 31, 2022.

The debt/equity ratio were 0.51:1 at June 30, 2023, compared to 0.44:1 at December 31, 2022. As of June 30, 2023 the net debt was USD 15.4 billion, compared to USD 7.2 billion on December 31, 2022.

Innovation Review

Novartis continues to focus its R&D portfolio prioritizing high value medicines with transformative potential for patients. We now focus on ~130 projects in clinical development.

Selected Innovative Medicines approvals

Product	Active ingredient/ Descriptor	Indication	Region
Cosentyx	secukinumab	300mg auto-injector and pre-filled syringe	US
Cosentyx	secukinumab	Hidradenitis suppurativa	EU
Entresto	sacubitril + valsartan	Heart failure, pediatrics	EU

Selected Innovative Medicines projects awaiting regulatory decisions

		Completed submissions			
Product	**Indication**	**US**	**EU**	**Japan**	**News update**
LNP023 (iptacopan)	Paroxysmal nocturnal hemoglobinuria	Q2 2023	Q2 2023		– US and EU filings
Cosentyx	Intravenous formulation for psoriatic arthritis (PsA), ankylosing spondylitis (AS), and non-radiographic axial SpA (nr-axSpA)	Q4 2022			
Cosentyx	Hidradenitis suppurativa	Q3 2022	Approved		– EU approval
Jakavi	Acute graft-versus-host disease (GvHD)		Approved	Q1 2021	
	Chronic GvHD		Approved	Q1 2021	
VDT482 (tislelizumab)	2L Esophageal cancer (ESCC)	Q3 2021	Q1 2022		
	NSCLC		Q1 2022		

Selected Innovative Medicines pipeline projects

Compound/ product	Potential indication/ Disease area	First planned submissions	Current Phase	News update
Aimovig	Migraine, pediatrics	≥2026	3	
AVXS-101 (OAV101)	Spinal muscular atrophy (IT formulation)	2025	3	
Beovu	Diabetic retinopathy	2025	3	
CFZ533 (iscalimab)	Sjögren's syndrome	≥2026	2	
Coartem	Malaria, uncomplicated (<5 kg patients)	2024	3	– Submission will use the MAGHP procedure in Switzerland to facilitate rapid approval in developing countries
Cosentyx	Giant cell arteritis	2025	3	
	Polymyalgia rheumatica	≥2026	3	
	Rotator cuff tendinopathy	≥2026	3	
	Lupus nephritis		3	– Project discontinuation due to futility
JDQ443	Non-small cell lung cancer, 2/3L	2024	3	
	Non-small cell lung cancer (combos)	≥2026	2	
KAE609 (cipargamin)	Malaria, uncomplicated	≥2026	2	
	Malaria, severe	≥2026	2	
KLU156 (ganaplacide + lumefantrine)	Malaria, uncomplicated	≥2026	2	– FDA Orphan Drug designation – FDA Fast Track designation for the ganaplacide-containing combination therapy

Compound/ product	Potential indication/ Disease area	First planned submissions	Current Phase	News update
Kisqali + endocrine therapy	Hormone receptor-positive (HR+)/human epidermal growth factor receptor 2-negative (HER2-) early breast cancer (adjuvant)	2023	3	– NATALEE data presentation at ASCO
Leqvio	Secondary prevention of cardiovascular events in patients with elevated levels of LDL-C	≥2026	3	
	Primary prevention CVRR	≥2026	3	
LNA043	Osteoarthritis	≥2026	2	– FDA Fast Track designation
LNP023 (iptacopan)	IgA nephropathy	2024	3	– EU Orphan Drug designation
	C3 glomerulopathy	2024	3	– EU Orphan Drug designation – EU PRIME designation – FDA Rare Pediatric designation – China Breakthrough Therapy designation – FDA Breakthrough Therapy designation granted
	IC-MPGN	≥2026	3	– Ph3 APPARENT
	Atypical haemolytic uraemic syndrome	≥2026	3	
LOU064 (remibrutinib)	Chronic spontaneous urticaria	2024	3	
	Multiple sclerosis	≥2026	3	
	Sjögren's syndrome	≥2026	2	
Lutathera	Gastroenteropancreatic neuroendocrine tumors, 1L in G2/3 tumors	2024	3	– Timelines revised based on event rates
^{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
	Unfit acute myeloid leukemia	≥2026	2	
MIJ821 (onfasprodil)	Depression	≥2026	2	
NIS793	1L Pancreatic cancer		3	– Program discontinuation based on benefit-risk assessment
Piqray	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
QGE031 (ligelizumab)	Food allergy	≥2026	3	
SAF312 (libvatrep)	Chronic ocular surface pain	≥2026	2	– 'Front of eye' ophthalmology divestment subject to customary closing conditions
Scemblix	1L Chronic myeloid leukemia	2024	3	
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

Compound/ product	Potential indication/ Disease area	First planned submissions	Current Phase	News update
VAY736 (ianalumab)	Auto-immune hepatitis	≥2026	2	
	Sjögren's syndrome	≥2026	3	– FDA Fast Track designation
	Lupus nephritis	≥2026	3	
	Systemic lupus erythematosus	≥2026	3	
	1L Immune thrombocytopenia	≥2026	3	
	2L Immune thrombocytopenia	≥2026	3	
	warm Autoimmune hemolytic anemia	≥2026	3	
VDT482 (tislelizumab)	1L Nasopharyngeal carcinoma		3	– Filing will not be pursued to prioritize other key programs in portfolio
	1L Gastric cancer	2023	3	
	1L ESCC	2023	3	
	Localized ESCC	2024	3	
	1L Hepatocellular carcinoma		3	– Filing will not be pursued to prioritize other key programs in portfolio
	1L Small cell lung cancer	2024	3	
	1L Urothelial cell carcinoma	≥2026	3	
	Adj/Neo adj. NSCLC	≥2026	3	
Xolair	Food allergy	2023	3	
YTB323	Lupus nephritis	≥2026	2	
	1L High-risk large B-cell lymphoma	≥2026	2	
XXB750	Hypertension	≥2026	2	
Business development updates				– Agreement to acquire Chinook Therapeutics, a clinical-stage biopharmaceutical company with two high-value, late-stage assets in development for IgA nephropathy
				– Agreement to acquire AVROBIO cystinosis gene therapy program
				– Acquired DTx Pharma, deal includes DTx-1252 (for Charcot-Marie-Tooth disease type 1A), two additional preclinical programs and DTx's FALCON platform

Selected Sandoz approvals and pipeline projects

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

Condensed Interim Consolidated Financial Statements

Consolidated income statements

Second quarter (unaudited)

(USD millions unless indicated otherwise)	Note	**Q2 2023**	Q2 2022
Net sales to third parties	9	**13 622**	**12 781**
Other revenues	9	314	304
Cost of goods sold		-4 341	-3 751
Gross profit		**9 595**	**9 334**
Selling, general and administration		-3 686	-3 581
Research and development		-2 526	-2 498
Other income		147	303
Other expense		-610	-1 330
Operating income		**2 920**	**2 228**
Loss from associated companies		-2	
Interest expense		-224	-202
Other financial income and expense		75	16
Income before taxes		**2 769**	**2 042**
Income taxes		-452	-347
Net income		**2 317**	**1 695**
Attributable to:			
Shareholders of Novartis AG		*2 316*	*1 694*
Non-controlling interests		*1*	*1*
Weighted average number of shares outstanding – Basic (million)		2 083	2 198
Basic earnings per share (USD) [1]		**1.11**	**0.77**
Weighted average number of shares outstanding – Diluted (million)		2 095	2 211
Diluted earnings per share (USD) [1]		**1.11**	**0.77**

[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 2023**	H1 2022
Net sales to third parties	9	**26 575**	**25 312**
Other revenues	9	569	587
Cost of goods sold		-8 272	-7 607
Gross profit		**18 872**	**18 292**
Selling, general and administration		-7 129	-7 093
Research and development		-5 320	-4 818
Other income		1 117	529
Other expense		-1 764	-1 830
Operating income		**5 776**	**5 080**
Loss from associated companies		-3	-2
Interest expense		-435	-403
Other financial income and expense		171	36
Income before taxes		**5 509**	**4 711**
Income taxes		-898	-797
Net income		**4 611**	**3 914**
Attributable to:			
Shareholders of Novartis AG		*4 609*	*3 916*
Non-controlling interests		*2*	*-2*
Weighted average number of shares outstanding – Basic (million)		2 097	2 211
Basic earnings per share (USD) [1]		**2.20**	**1.77**
Weighted average number of shares outstanding – Diluted (million)		2 109	2 224
Diluted earnings per share (USD) [1]		**2.19**	**1.76**

[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 2023**	Q2 2022
Net income	**2 317**	**1 695**
Other comprehensive income		
Items that are or may be recycled into the consolidated income statement		
Net investment hedge, net of taxes	6	95
Currency translation effects, net of taxes	216	-1 014
Total of items that are or may be recycled	222	-919
Items that will never be recycled into the consolidated income statement		
Actuarial (losses)/gains from defined benefit plans, net of taxes	-1	475
Fair value adjustments on equity securities, net of taxes	-2	-145
Total of items that will never be recycled	-3	330
Total comprehensive income	**2 536**	**1 106**
Attributable to:		
Shareholders of Novartis AG	*2 535*	*1 109*
Non-controlling interests	*1*	*-3*

First half (unaudited)

(USD millions)	**H1 2023**	H1 2022
Net income	**4 611**	**3 914**
Other comprehensive income		
Items that are or may be recycled into the consolidated income statement		
Net investment hedge, net of taxes	-29	120
Currency translation effects, net of taxes	522	-1 284
Total of items that are or may be recycled	493	-1 164
Items that will never be recycled into the consolidated income statement		
Actuarial (losses)/gains from defined benefit plans, net of taxes	-59	2 342
Fair value adjustments on equity securities, net of taxes	-46	-325
Total of items that will never be recycled	-105	2 017
Total comprehensive income	**4 999**	**4 767**
Attributable to:		
Shareholders of Novartis AG	*4 996*	*4 773*
Non-controlling interests	*3*	*-6*

Consolidated balance sheets

(USD millions)	Note	Jun 30, 2023 (unaudited)	Dec 31, 2022 (audited)
Assets			
Non-current assets			
Property, plant and equipment	9	10 825	10 764
Right-of-use assets		1 452	1 431
Goodwill	9	29 522	29 301
Intangible assets other than goodwill	9	28 003	31 644
Investments in associated companies		127	143
Deferred tax assets		4 043	3 739
Financial assets		2 306	2 411
Other non-current assets		1 208	1 110
Total non-current assets		**77 486**	**80 543**
Current assets			
Inventories		8 228	7 175
Trade receivables		9 195	8 066
Income tax receivables		348	268
Marketable securities, commodities, time deposits and derivative financial instruments		289	11 413
Cash and cash equivalents		10 885	7 517
Other current assets		2 828	2 471
Total current assets without disposal group		**31 773**	**36 910**
Asset held for sale	9	1 720	
Total current assets		**33 493**	**36 910**
Total assets		**110 979**	**117 453**
Equity and liabilities			
Equity			
Share capital		842	890
Treasury shares		-52	-92
Reserves		51 057	58 544
Equity attributable to Novartis AG shareholders		**51 847**	**59 342**
Non-controlling interests		84	81
Total equity		**51 931**	**59 423**
Liabilities			
Non-current liabilities			
Financial debts		18 259	20 244
Lease liabilities		1 545	1 538
Deferred tax liabilities		2 526	2 686
Provisions and other non-current liabilities		4 809	4 906
Total non-current liabilities		**27 139**	**29 374**
Current liabilities			
Trade payables		5 350	5 146
Financial debts and derivative financial instruments		8 289	5 931
Lease liabilities		247	251
Current income tax liabilities		2 651	2 533
Provisions and other current liabilities		15 338	14 795
Total current liabilities without disposal group		**31 875**	**28 656**
Liabilities held for sale	9	34	
Total current liabilities		**31 909**	**28 656**
Total liabilities		**59 048**	**58 030**
Total equity and liabilities		**110 979**	**117 453**

Consolidated statements of changes in equity

Second quarter (unaudited)

(USD millions)	Note	Share capital	Treasury shares	Reserves: Retained earnings	Reserves: Total value adjustments	Issued share capital and reserves attributable to Novartis shareholders	Non-controlling interests	Total equity
Total equity at April 1, 2023		**842**	**-36**	**56 089**	**-4 836**	**52 059**	**83**	**52 142**
Net income				2 316		2 316	1	2 317
Other comprehensive income					219	219	0	219
Total comprehensive income				**2 316**	**219**	**2 535**	**1**	**2 536**
Purchase of treasury shares			-17	-2 994		-3 011		-3 011
Equity-based compensation			1	241		242		242
Fair value adjustments on financial assets sold				8	-8			
Other movements	4.3			22		22		22
Total of other equity movements			**-16**	**-2 723**	**-8**	**-2 747**		**-2 747**
Total equity at June 30, 2023		**842**	**-52**	**55 682**	**-4 625**	**51 847**	**84**	**51 931**

(USD millions)	Note	Share capital	Treasury shares	Reserves: Retained earnings	Reserves: Total value adjustments	Issued share capital and reserves attributable to Novartis shareholders	Non-controlling interests	Total equity
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	4.1			-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	4.2			2 639		2 639		2 639
Changes in non-controlling interests							-80	-80
Other movements	4.3			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**

Consolidated statements of changes in equity

First half (unaudited)

(USD millions)	Note	Share capital	Treasury shares	Reserves: Retained earnings	Reserves: Total value adjustments	Issued share capital and reserves attributable to Novartis shareholders	Non-controlling interests	Total equity
Total equity at January 1, 2023		**890**	**-92**	**63 540**	**-4 996**	**59 342**	**81**	**59 423**
Net income				4 609		4 609	2	4 611
Other comprehensive income					387	387	1	388
Total comprehensive income				**4 609**	**387**	**4 996**	**3**	**4 999**
Dividends				-7 255		-7 255		-7 255
Purchase of treasury shares			-35	-5 853		-5 888		-5 888
Reduction of share capital		-48	68	-20				
Exercise of options and employee transactions	4.1		2	151		153		153
Equity-based compensation			5	428		433		433
Taxes on treasury share transactions				8		8		8
Value adjustments on financial assets sold				16	-16			
Other movements	4.3			58		58		58
Total of other equity movements		**-48**	**40**	**-12 467**	**-16**	**-12 491**		**-12 491**
Total equity at June 30, 2023		**842**	**-52**	**55 682**	**-4 625**	**51 847**	**84**	**51 931**

(USD millions)	Note	Share capital	Treasury shares	Reserves: Retained earnings	Reserves: Total value adjustments	Issued share capital and reserves attributable to Novartis shareholders	Non-controlling interests	Total equity
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	4.1		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	4.2			2 809		2 809		2 809
Changes in non-controlling interests							-80	-80
Fair value adjustments on financial assets sold				7	-7			
Other movements	4.3			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**

Consolidated statements of cash flows

Second quarter (unaudited)

(USD millions)	Note	**Q2 2023**	Q2 2022
Net income		**2 317**	**1 695**
Adjustments to reconcile net income to net cash flows from operating activities			
Reversal of non-cash items and other adjustments	6.1	2 883	3 061
Dividends received from associated companies and others			1
Interest received		118	21
Interest paid		-230	-198
Change in other financial receipts		-53	
Change in other financial payments		-5	-13
Income taxes paid		-1 030	-606
Net cash flows from operating activities before working capital and provision changes		**4 000**	**3 961**
Payments out of provisions and other net cash movements in non-current liabilities		-262	-152
Change in net current assets and other operating cash flow items	6.2	-162	-54
Net cash flows from operating activities		**3 576**	**3 755**
Purchases of property, plant and equipment		-301	-257
Proceeds from sale of property, plant and equipment		7	13
Purchases of intangible assets		-695	-326
Proceeds from sale of intangible assets		3	127
Purchases of financial assets		-27	-38
Proceeds from sale of financial assets		47	30
Acquisitions and divestments of interests in associated companies, net		-2	-2
Acquisitions and divestments of businesses, net	6.3	-84	-59
Purchases of marketable securities, commodities and time deposits		-4	-13 233
Proceeds from sale of marketable securities, commodities and time deposits		3	2 117
Net cash used in investing activities		**-1 053**	**-11 628**
Purchases of treasury shares		-2 957	-2 714
Proceeds from exercised options and other treasury share transactions, net			6
Increase in non-current financial debts		4	3
Repayments of the current portion of non-current financial debts			-1 075
Change in current financial debts		-713	1 477
Payments of lease liabilities		-73	-74
Other financing cash flows, net		102	75
Net cash flows used in financing activities		**-3 637**	**-2 302**
Net change in cash and cash equivalents before effect of exchange rate changes		**-1 114**	**-10 175**
Effect of exchange rate changes on cash and cash equivalents		-1	-52
Net change in cash and cash equivalents		**-1 115**	**-10 227**
Cash and cash equivalents at April 1		12 000	13 852
Cash and cash equivalents at June 30		**10 885**	**3 625**

Consolidated statements of cash flows

First half (unaudited)

(USD millions)	Note	**H1 2023**	H1 2022
Net income		**4 611**	**3 914**
Adjustments to reconcile net income to net cash flows from operating activities			
Reversal of non-cash items and other adjustments	6.1	5 890	5 414
Dividends received from associated companies and others		5	1
Interest received		374	38
Interest paid		-353	-308
Other financial receipts		27	
Other financial payments		-11	-43
Income taxes paid		-1 378	-1 239
Net cash flows from operating activities before working capital and provision changes		**9 165**	**7 777**
Payments out of provisions and other net cash movements in non-current liabilities		-966	-308
Change in net current assets and other operating cash flow items	6.2	-1 666	-2 065
Net cash flows from operating activities		**6 533**	**5 404**
Purchases of property, plant and equipment		-538	-514
Proceeds from sale of property, plant and equipment		39	46
Purchases of intangible assets		-928	-928
Proceeds from sale of intangible assets		133	193
Purchases of financial assets		-69	-73
Proceeds from sale of financial assets		111	96
Acquisitions and divestments of interests in associated companies, net		-5	-20
Acquisitions and divestments of businesses, net	6.3	-123	-880
Purchases of marketable securities, commodities and time deposits		-69	-17 454
Proceeds from sale of marketable securities, commodities and time deposits		11 017	17 271
Net cash flows from/(used in) investing activities		**9 568**	**-2 263**
Dividends paid to shareholders of Novartis AG		-7 255	-7 506
Purchases of treasury shares		-5 843	-5 256
Proceeds from exercised options and other treasury share transactions, net		159	100
Increase in non-current financial debts		6	6
Repayments of the current portion of non-current financial debts			-1 075
Change in current financial debts		309	1 955
Payments of lease liabilities		-148	-151
Other financing cash flows, net		-67	97
Net cash flows used in financing activities		**-12 839**	**-11 830**
Net change in cash and cash equivalents before effect of exchange rate changes		**3 262**	**-8 689**
Effect of exchange rate changes on cash and cash equivalents		106	-93
Net change in cash and cash equivalents		**3 368**	**-8 782**
Cash and cash equivalents at January 1		7 517	12 407
Cash and cash equivalents at June 30		**10 885**	**3 625**

Notes to the Condensed Interim Consolidated Financial Statements for the three-month and six-month period ended June 30, 2023 (unaudited)

1. Basis of preparation

These Condensed Interim Consolidated Financial Statements for the three-month and six-month interim period ended June 30, 2023, were prepared in accordance with International Accounting Standard 34 *Interim Financial Reporting* and accounting policies set out in the 2022 Annual Report published on February 1, 2023.

2. Selected critical accounting policies

The Group's principal accounting policies are set out in Note 1 to the Consolidated Financial Statements in the 2022 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 regularly 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 2022 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 pending transactions entered into in second quarter 2023 and closed in July 2023

Innovative Medicines – acquisition of DTx Pharma Inc.

In the second quarter of 2023, Novartis entered into an agreement to acquire DTx Pharma Inc. (DTx), a San-Diego US based, pre-clinical stage biotechnology company focused on leveraging its proprietary FALCON platform to develop siRNA therapies for neuroscience indications. DTx's lead program, DTx-1252 targets the root cause of CMT1A—the overexpression of PMP22, a protein that causes the myelin sheath that supports and insulates nerves in the peripheral nervous system to function abnormally. The transaction also includes two additional pre-clinical programs for other neuroscience indications. The transaction closed on July 14, 2023.

The purchase price consists of a cash payment of USD 0.5 billion and potential additional milestones up to USD 0.5 billion, which the DTx Pharma Inc. shareholders are eligible to receive upon achievement of specified milestone.

Significant pending transaction in 2023

Innovative Medicines – acquisition of Chinook Therapeutics

On June 12, 2023, Novartis entered into an agreement to acquire Chinook Therapeutics, a Seattle, WA, based clinical stage biopharmaceutical company with two late-stage medicines in development for rare, severe chronic kidney diseases. The purchase price will consist of a cash payment of USD 3.2 billion and potential additional payments of up to USD 0.3 billion, which Chinook Therapeutics shareholders are eligible to receive upon achievement of specified milestones.

The transaction is expected to be completed in the second half of 2023, subject to customary closing conditions, including approval of Chinook Therapeutics shareholders and receipt of regulatory approvals.

Significant transactions in 2022

Innovative Medicines – acquisition of Gyroscope Therapeutics Holdings plc

On December 22, 2021, Novartis entered into an agreement to acquire all outstanding shares of 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 customary purchase price adjustments, and potential additional milestone payments of up to USD 0.7 billion, which Gyroscope shareholders are eligible to receive 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 cash payment of USD 0.8 billion (including customary purchase price adjustments) and the fair value of contingent consideration of USD 0.2 billion, which Gyroscope shareholders are eligible to receive upon achievement of specified milestones. The purchase price allocation resulted in net identifiable assets of USD 0.9 billion, consisting primarily of intangible assets of USD 1.1 billion and net deferred tax liabilities of USD 0.2 billion. Goodwill amounted to USD 0.1 billion.

The 2022 results of operations since the date of acquisition were not material.

4. Summary of equity attributable to Novartis AG shareholders

		Number of outstanding shares (in millions)		Issued share capital and reserves attributable to Novartis AG shareholders (in USD millions)	
	Note	**2023**	2022	**H1 2023**	H1 2022
Balance at beginning of year		**2 119.6**	**2 234.9**	**59 342**	**67 655**
Shares acquired to be canceled		-61.3	-61.7	-5 767	-5 381
Other share purchases		-1.3	-1.2	-121	-109
Exercise of options and employee transactions	4.1	2.8	1.9	153	91
Equity-based compensation		8.5	8.9	433	437
Shares delivered to Alcon employees as a result of the Alcon spin-off			0.0		5
Taxes on treasury share transactions				8	11
Decrease of treasury share repurchase obligation under a share buyback trading plan	4.2				2 809
Dividends				-7 255	-7 506
Net income of the period attributable to shareholders of Novartis AG				4 609	3 916
Other comprehensive income attributable to shareholders of Novartis AG				387	857
Other movements	4.3			58	140
Balance at June 30		**2 068.3**	**2 182.8**	**51 847**	**62 925**

4.1. At December 31, 2022, the market maker held 3 million (December 31, 2021: 3 million) written call options, originally issued as part of the share-based compensation for employees, that had not yet been exercised. The weighted average exercise price of these options at December 31, 2022, was USD 66.07 (December 31, 2021: USD 61.45), and they had contractual lives of 10 years, with remaining lives less than one year (December 31, 2021: two years). In the first quarter of 2023, the market maker exercised 3 million written call options and as a result there are no written call option outstanding at June 30, 2023.

4.2. 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. The arrangement was updated in July 2022, December 2022, and May 2023, and concluded in June 2023. In addition, in June 2023, Novartis entered into a new irrevocable, non-discretionary arrangement with a bank to repurchase 11.7 million Novartis shares on the second trading line. Novartis is able to cancel this arrangement but would be subject to a 90-day waiting period under certain conditions. As of June 30, 2023, these waiting period conditions were not applicable and as a result, there was no requirement to record a liability under this arrangement as of June 30, 2023.

4.3. Other movements include, for subsidiaries in hyperinflationary economies, the impact of the restatement of the equity balances of the current period as well as restatement of the non-monetary assets and liabilities with the general price index at the beginning of the period.

5. 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, 2023, and December 31, 2022. For additional information on the hierarchies and other matters, please refer to the Consolidated Financial Statements in the 2022 Annual Report, published on February 1, 2023.

	Level 1		Level 2		Level 3		Total	
(USD millions)	**Jun 30, 2023**	Dec 31, 2022	**Jun 30, 2023**	Dec 31, 2022	**Jun 30, 2023**	Dec 31, 2022	**Jun 30, 2023**	Dec 31, 2022
Financial assets								
Cash and cash equivalents								
Debt securities	49						49	
Total cash and cash equivalents at fair value	**49**						**49**	
Marketable securities								
Debt securities			8	9			8	9
Derivative financial instruments			102	204			102	204
Total marketable securities and derivative financial instruments at fair value			**110**	**213**			**110**	**213**
Current contingent consideration receivables					**58**	**43**	**58**	**43**
Long-term financial investments								
Debt and equity securities	488	473	11	10	599	699	1 098	1 182
Fund investments	7	20			194	261	201	281
Non-current contingent consideration receivables					675	607	675	607
Total long-term financial investments at fair value	**495**	**493**	**11**	**10**	**1 468**	**1 567**	**1 974**	**2 070**
Associated companies at fair value through profit or loss					**114**	**129**	**114**	**129**
Financial liabilities								
Current contingent consideration liabilities					-29	-131	-29	-131
Current other financial liabilities					-189		-189	
Derivative financial instruments			-40	-55			-40	-55
Total current financial liabilities at fair value			**-40**	**-55**	**-218**	**-131**	**-258**	**-186**
Non-current contingent consideration liabilities					-593	-704	-593	-704
Non-current other financial liabilities						-232		-232
Total non-current financial liabilities at fair value					**-593**	**-936**	**-593**	**-936**

In the first half of 2023, there were three transfers of equity securities from Level 3 to Level 1 for USD 63 million mainly due to Initial Public Offering.

The fair value of straight bonds amounted to USD 20.7 billion at June 30, 2023 (USD 20.3 billion at December 31, 2022) compared with the carrying amount of USD 22.5 billion at June 30, 2023 (USD 22.3 billion at December 31, 2022). 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 2.0 billion at June 30, 2023 (USD 2.1 billion at December 31, 2022) is included in the line "Financial assets" of the consolidated balance sheets. The carrying amount of non-current contingent consideration liabilities and non-current other financial liabilities included in the line total non-current financial liabilities at fair value of USD 0.6 billion at June 30, 2023 (USD 0.9 billion at December 31, 2022) is included in the line "Provisions and other non-current liabilities" of the consolidated balance sheet.

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.

6. Details to the consolidated statements of cash flows

6.1. Non-cash items and other adjustments

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

(USD millions)	**Q2 2023**	Q2 2022
Depreciation, amortization and impairments on:		
Property, plant and equipment	262	507
Right-of-use assets	77	76
Intangible assets	1 486	1 219
Financial assets [1]	28	97
Change in provisions and other non-current liabilities	73	547
Losses/(gains) on disposal and other adjustments on property, plant and equipment; intangible assets; financial assets; and other non-current assets, net	85	-114
Equity-settled compensation expense	233	204
Loss from associated companies	2	
Income taxes	452	347
Net financial expense	149	186
Other	36	-8
Total	**2 883**	**3 061**

[1] Includes fair value changes

(USD millions)	**H1 2023**	H1 2022
Depreciation, amortization and impairments on:		
Property, plant and equipment	565	821
Right-of-use assets	151	154
Intangible assets	3 105	2 232
Financial assets [1]	75	199
Change in provisions and other non-current liabilities	585	635
Gains on disposal and other adjustments on property, plant and equipment; intangible assets; financial assets; and other non-current assets, net	-217	-192
Equity-settled compensation expense	432	407
Loss from associated companies	3	2
Income taxes	898	797
Net financial expense	264	367
Other	29	-8
Total	**5 890**	**5 414**

[1] Includes fair value changes

In the second quarter of 2023, there were no additions to intangible assets (Q2 2022: nil; other than through business combinations) with deferred payments. In the second quarter of 2023, there were USD 74 million (Q2 2022: USD 79 million) additions to right-of-use assets recognized.

In the first half of 2023, there were no additions to intangible assets with deferred payments. In the first half of 2022, other than through business combinations, there were USD 0.3 billion additions to intangible assets with deferred payments. In the first half of 2023, there were USD 225 million (H1 2022: USD 122 million) additions to right-of-use assets recognized.

6.2. Cash flows from changes in working capital and other operating items included in the net cash flows from operating activities

(USD millions)	**Q2 2023**	Q2 2022	**H1 2023**	H1 2022
Increase in inventories	-376	-194	-996	-619
Increase in trade receivables	-425	-413	-1 275	-909
Increase/(decrease) in trade payables	127	11	214	-132
Change in other current and non-current assets	-111	70	-288	-293
Change in other current liabilities	623	472	679	-112
Total	**-162**	**-54**	**-1 666**	**-2 065**

6.3. 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 2023**	Q2 2022	**H1 2023**	H1 2022
Net assets recognized as a result of acquisitions of businesses	**0**	**-107**	**0**	**-1 086**
Fair value of previously held equity interests		24		24
Contingent consideration payable, net		31	-26	212
Payments (incl. prepayments), deferred consideration and other adjustments, net	-100	12	-100	-13
Cash flows used for acquisitions of businesses	**-100**	**-40**	**-126**	**-863**
Cash flows from/(used for) divestments of businesses, net [1]	**16**	**-19**	**3**	**-17**
Cash flows used for acquisitions and divestments of businesses, net	**-84**	**-59**	**-123**	**-880**

[1] In the first half of 2023, USD 3 million (Q2 2023: USD 16 million) represented the net cash inflows from divestments in prior years.
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 2022 periods 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).

Notes 3 and 7 provide further information regarding acquisitions and divestments of businesses. All acquisitions were for cash.

7. Acquisitions of businesses

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

(USD millions)	H1 2023	H1 2022
Property, plant and equipment		13
Right-of-use assets		12
Acquired research and development		1 223
Deferred tax assets		53
Other current assets		5
Cash and cash equivalents		89
Deferred tax liabilities		-303
Current and non-current lease liabilities		-12
Trade payables and other liabilities		-68
Net identifiable assets acquired	**0**	**1 012**
Acquired cash and cash equivalents		-89
Goodwill		163
Net assets recognized as a result of acquisitions of businesses	**0**	**1 086**

Note 3 details significant acquisitions of businesses. There were no significant acquisitions of businesses in the first half of 2023. In the first half of 2022, there was the acquisition of Gyroscope. The goodwill arising out of the Gyroscope acquisition was mainly attributable to the accounting for deferred tax liabilities on acquired assets and the assembled workforce. None of the goodwill arisen in the first half of 2022 was tax deductible.

8. 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 2022 Annual Report and 2022 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 17, 2023, of significant developments in those proceedings, as well as any new significant proceedings commenced since the date of the 2022 Annual Report and 2022 Form 20-F.

Investigations and related litigations

Government generic pricing antitrust investigations, antitrust class actions

Since 2016, Sandoz Inc. has been part of an investigation into alleged price fixing and market allocation of generic drugs in the United States. In 2020, Sandoz Inc. reached a resolution with the DOJ Antitrust Division, pursuant to which Sandoz Inc. paid USD 195 million and entered into a deferred prosecution agreement (DPA). The Sandoz Inc. resolution related to instances of misconduct at the Company between 2013 and 2015 with regard to certain generic drugs sold in the United States. The term of the DPA concluded in March 2023 and the underlying matter has been dismissed. Sandoz Inc. also finalized a resolution with the DOJ Civil Division and in 2021 paid USD 185 million to settle related claims arising under the False Claims Acts (FCA), and entered into a corporate integrity agreement with the Office of Inspector General (OIG) of the US Department of Health and Human Services (HHS). This resolved all federal government matters related to price fixing allegations.

Since the third quarter of 2016, Sandoz Inc. and Fougera Pharmaceuticals Inc. have been sued alongside other generic pharmaceutical companies in numerous related individual and putative class action complaints by direct and indirect private purchasers and by over 50 US states and territories, represented by their respective Attorneys General. Plaintiffs claim that defendants, including Sandoz Inc., engaged in price fixing and market allocation of generic drugs in the United States, and seek damages and injunctive relief. The litigation includes complaints alleging product-specific conspiracies, as well as complaints alleging the existence of an overarching industry conspiracy, and assert claims for damages and penalties under federal and state antitrust and consumer

protection acts. The cases have been consolidated for pretrial purposes in the United States District Court (USDC) for the Eastern District of Pennsylvania, and the claims are being vigorously contested.

Lucentis/Avastin® matters

In connection with an investigation into whether Novartis entities, F. Hoffmann-La Roche AG, Genentech Inc. and Roche S.p.A. colluded to artificially preserve the market positions of Avastin® and Lucentis, in 2014 the Italian Competition Authority (ICA) imposed a fine equivalent to USD 125 million on the Novartis entities. Novartis paid the fine, subject to the right to later claim recoupment, and appealed before the Consiglio di Stato (CdS). In 2014 and 2015, the Italian Ministry of Health and the Lombardia region sent letters with payment requests for a total equivalent of approximately USD 1.3 billion in damages from Novartis and Roche entities based on these allegations. In 2019, the CdS upheld the ICA decision and fine. Following that CdS decision, several additional Italian regions and hospitals sent letters claiming damages for an aggregate amount of approximately USD 330 million. Novartis filed a revocation action before the CdS in 2019 and a further appeal before the Supreme Court in 2020. Respectively in October 2021 and May 2023, the Supreme Court and the CdS rejected Novartis's actions.

The ICA decision is now final.

In 2019, the French Competition Authority (FCA) issued a Statement of Objections against Novartis entities, alleging anti-competitive practices on the French market for anti-vascular endothelial growth factor treatments for wet age-related macular degeneration from 2008 to 2013. In 2020, the FCA issued a decision finding that the Novartis entities had infringed competition law by abusing a dominant position and imposing a fine equivalent to approximately USD 452 million. Novartis paid the fine, again subject to recoupment, and appealed the FCA's decision. In February 2023, the Paris Court of Appeal (Court) overturned the FCA's decision which triggered the reimbursement of the originally paid fine (recorded as "Other income" in the Company's consolidated income statement), and in March 2023, the FCA filed an appeal of the Court's decision. Novartis entities are the subject of similar investigations and proceedings involving competition authorities, which are disclosed in the 2022 Annual Report and 2022 Form 20-F.

Antitrust class actions

Exforge

Since 2018, Novartis Group companies as well as other pharmaceutical companies have been sued by various direct and indirect purchasers of *Exforge* in multiple US individual and putative class action complaints. They claim that Novartis made a reverse payment in the form of an agreement not to launch an authorized generic, alleging violations of federal antitrust law and state antitrust, consumer protection and common laws, and seeking damages as well as injunctive relief. The cases have been consolidated in the S.D.N.Y. In 2022, Novartis agreed to a settlement in principle to pay USD 245 million to resolve these cases. In Q1 2023 Novartis paid USD 245 million to fund the required trust accounts. These settlements are subject to finalization of documentation and, in some cases, court approval.

In addition to the matters described above, there have been other non-material developments in the other legal matters described in Note 20 to the Consolidated Financial Statements contained in our 2022 Annual Report and 2022 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.

9. 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 pharmaceuticals. The Innovative Medicines Division is organized in two commercial organizational units: Innovative Medicines International and Innovative Medicines US, and is focused on the core therapeutic areas: cardiovascular; immunology; neuroscience; solid tumors and hematology; as well as other promoted brands (in the therapeutic areas of ophthalmology and respiratory) and established brands.

Sandoz develops, manufactures and markets finished dosage form medicines as well as intermediary products including active pharmaceutical ingredients. Effective in the second quarter of 2023, Sandoz is organized globally into two franchises: Generics and Biosimilars. In Generics, Sandoz develops, manufactures and markets finished dosage forms of small molecule pharmaceuticals for sale to third parties across a broad range of therapeutic areas, including finished dosage form of anti-infectives sold to third parties, as well as, active pharmaceutical ingredients and intermediates, mainly antibiotics, for sale to third-party companies. In Biosimilars, Sandoz develops, manufactures and markets protein- or other biotechnology-based products, including biosimilars, and provides biotechnology manufacturing services to other companies. Prior to the second quarter of 2023, Sandoz was organized globally into three business franchises of Retail Generics, Anti-Infectives and Biopharmaceuticals. The change in the second quarter of 2023 combined Retail Generics and Anti-infectives to form Generics, and Biopharmaceuticals was renamed to Biosimilars.

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.

Effective January 1, 2023, the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand were transferred to the Innovative Medicines Division. The reporting of the financial results and the net assets of the reporting segments Innovative Medicines, Sandoz and Corporate have been accordingly adapted. To comply with IFRS, Novartis has restated its segmentation disclosure of the consolidated income statement and additional consolidated balance sheet disclosure to reflect these transfers. This restatement had no impact on the reported financial results and consolidated balance sheet of the total Group.

Further details are provided in Note 3 to the Consolidated Financial Statements of the 2022 Annual Report.

Segmentation – Consolidated income statements

Second quarter

(USD millions)	Innovative Medicines Q2 2023	Innovative Medicines Q2 2022 restated[2]	Sandoz Q2 2023	Sandoz Q2 2022 restated[2]	Corporate (including eliminations)[1] Q2 2023	Corporate (including eliminations)[1] Q2 2022 restated[2]	Group Q2 2023	Group Q2 2022
Net sales to third parties	**11 243**	**10 525**	**2 379**	**2 256**			**13 622**	**12 781**
Sales to other segments	192	178	57	55	-249	-233		
Net sales	**11 435**	**10 703**	**2 436**	**2 311**	**-249**	**-233**	**13 622**	**12 781**
Other revenues	304	295	6	7	4	2	314	304
Cost of goods sold	-3 338	-2 773	-1 250	-1 212	247	234	-4 341	-3 751
Gross profit	**8 401**	**8 225**	**1 192**	**1 106**	**2**	**3**	**9 595**	**9 334**
Selling, general and administration	-2 955	-2 956	-594	-503	-137	-122	-3 686	-3 581
Research and development	-2 304	-2 302	-222	-196			-2 526	-2 498
Other income	108	207	14	23	25	73	147	303
Other expense	-251	-968	-178	-73	-181	-289	-610	-1 330
Operating income	**2 999**	**2 206**	**212**	**357**	**-291**	**-335**	**2 920**	**2 228**
as % of net sales	*26.7%*	*21.0%*	*8.9%*	*15.8%*			*21.4%*	*17.4%*
Loss from associated companies		1		1	-2	-2	-2	
Interest expense							-224	-202
Other financial income and expense							75	16
Income before taxes							**2 769**	**2 042**
Income taxes							-452	-347
Net income							**2 317**	**1 695**

[1] Eliminations mainly relate to the elimination of sales to other segments and the corresponding cost of goods sold.
[2] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023.

First half

(USD millions)	Innovative Medicines H1 2023	Innovative Medicines H1 2022 restated[2]	Sandoz H1 2023	Sandoz H1 2022 restated[2]	Corporate (including eliminations)[1] H1 2023	Corporate (including eliminations)[1] H1 2022 restated[2]	Group H1 2023	Group H1 2022
Net sales to third parties	**21 813**	**20 755**	**4 762**	**4 557**			**26 575**	**25 312**
Sales to other segments	424	388	149	102	-573	-490		
Net sales	**22 237**	**21 143**	**4 911**	**4 659**	**-573**	**-490**	**26 575**	**25 312**
Other revenues	550	569	12	13	7	5	569	587
Cost of goods sold	-6 328	-5 695	-2 517	-2 434	573	522	-8 272	-7 607
Gross profit	**16 459**	**16 017**	**2 406**	**2 238**	**7**	**37**	**18 872**	**18 292**
Selling, general and administration	-5 715	-5 842	-1 136	-1 016	-278	-235	-7 129	-7 093
Research and development	-4 879	-4 414	-441	-404			-5 320	-4 818
Other income	859	352	24	71	234	106	1 117	529
Other expense	-1 050	-1 280	-322	-138	-392	-412	-1 764	-1 830
Operating income	**5 674**	**4 833**	**531**	**751**	**-429**	**-504**	**5 776**	**5 080**
as % of net sales	*26.0%*	*23.3%*	*11.2%*	*16.5%*			*21.7%*	*20.1%*
Loss from associated companies	1	1	1	1	-5	-4	-3	-2
Interest expense							-435	-403
Other financial income and expense							171	36
Income before taxes							**5 509**	**4 711**
Income taxes							-898	-797
Net income							**4 611**	**3 914**

[1] Eliminations mainly relate to the elimination of sales to other segments and the corresponding cost of goods sold.
[2] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023.

Segmentation – Additional consolidated balance sheets and income statements disclosure

(USD millions)	Innovative Medicines		Sandoz		Corporate (including eliminations)[1]		Group	
	Jun 30, 2023	Dec 31, 2022 restated	**Jun 30, 2023**	Dec 31, 2022 restated	**Jun 30, 2023**	Dec 31, 2022	**Jun 30, 2023**	Dec 31, 2022
Total assets[2]	**75 633**	75 836	**16 677**	15 752	**18 669**	25 865	**110 979**	117 453
Total liabilities	**-16 942**	-16 966	**-4 195**	-3 710	**-37 911**	-37 354	**-59 048**	-58 030
Total equity							**51 931**	59 423
Net debt[3]					15 374	7 245	15 374	7 245
Net operating assets[2]	**58 691**	58 870	**12 482**	12 042	**-3 868**	-4 244	**67 305**	66 668
Included in net operating assets are:								
Property, plant and equipment	8 463	8 488	1 965	1 861	397	415	10 825	10 764
Goodwill[2]	21 992	21 857	7 530	7 444			29 522	29 301
Intangible assets other than goodwill	26 152	29 826	1 427	1 460	424	358	28 003	31 644

[1] Eliminations mainly relate to the elimination of intercompany receivables and payables to other segments and inventories.
[2] December 31, 2022, restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective January 1, 2023. These restatements had no impact on Corporate or the total Group.
[3] See page 49 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 2023	Q2 2022	**Q2 2023**	Q2 2022	**Q2 2023**	Q2 2022	**Q2 2023**	Q2 2022
Property, plant and equipment impairment charges	-31	-236	-1			-1	**-32**	**-237**
Property, plant and equipment impairment reversals	39		1	2			**40**	**2**
Intangible assets impairment charges[1]	-453	-226	-2	-4			**-455**	**-230**
Additions to restructuring provisions	-33	-316	-11	-20	-23	-162	**-67**	**-498**

[1] The second quarter of 2023 includes an impairment of USD 0.3 billion for the write-down of a currently marketed product to reflect reduction in recoverable amount.

First half

(USD millions)	Innovative Medicines		Sandoz		Corporate		Group	
	H1 2023	H1 2022	**H1 2023**	H1 2022	**H1 2023**	H1 2022	**H1 2023**	H1 2022
Property, plant and equipment impairment charges	-58	-258	-2	-1		-1	**-60**	**-260**
Property, plant and equipment impairment reversal	48	2	1	3			**49**	**5**
Right-of-use assets impaiment charges				-1				**-1**
Intangible assets impairment charges[1]	-926	-263	-14	-4			**-940**	**-267**
Additions to restructuring provisions	-411	-360	-16	-30	-55	-172	**-482**	**-562**

[1] The first half of 2023 includes an impairment of USD 0.3 billion due to the write-down of IPR&D related to cessation of clinical development program NIZ985 and of USD 0.3 billion for the write-down of a currently marketed product to reflect reduction in recoverable amount.

In the first half of 2023, there were no reversals of prior-year impairment charges on intangible assets (H1 2022: nil) and right-of-use assets (H1 2022: nil).

Pending divestment of intangible assets – Innovative Medicines

On June 30, 2023, Novartis entered into an agreement with Bausch + Lomb Corporation to divest the currently marketed product *Xiidra* and certain IPR&D assets related to 'front of eye' ophthalmology. The transaction will be accounted for as a divestment of assets. The purchase price will consist of a total cash payment of USD 1.75 billion and potential milestone payments related to the currently marketed product and IPR&D assets of up to USD 750 million. The transaction is expected to be completed in the second half of 2023, pending customary closing conditions, including receipt of regulatory approval.

As of June 30, 2023, the carrying value of the currently marketed product intangible asset (USD 1.72 billion) and its related contingent consideration liability (USD 34 million) have been reclassified and presented separately as asset and liability held for sale in the Consolidated balance sheet. The amortization of the currently marketed product was ceased as of June 30, 2023. The IPR&D assets to be divested had no carrying value at June 30, 2023.

There are no cumulative income or expenses included in other comprehensive income relating to the non-current asset classified as held for sale.

Restructuring provisions movements

(USD millions)	**Q2 2023**	Q2 2022	**H1 2023**	H1 2022
Balance at beginning of period	**1 209**	**331**	**1 131**	**345**
Additions	67	498	482	562
Cash payments	-173	-76	-490	-144
Releases	-63	-10	-95	-15
Transfers	1	-1	0	
Currency translation effects	4	-11	17	-17
Balance at closing of period	**1 045**	**731**	**1 045**	**731**

In the first half of 2023, additions to provisions of USD 482 million (Q2: USD 67 million) were mainly related to the continuation of the initiative announced in April 2022, to implement a new streamlined organizational model designed to support innovation, growth and productivity.

In the first half of 2022, additions to provisions of USD 562 million (Q2: USD 498 million) were mainly related to the initiative announced in April 2022, to implement a new streamlined organizational model designed to support innovation, growth and productivity, as well as, to the continuation of the Innovative Medicines Division and the Operations unit 2021 restructuring initiatives.

Segmentation – Net sales to third parties

Net sales by region[1]

Second quarter

	Q2 2023 USD m	Q2 2022 restated USD m[2]	% change USD	% change cc[3]	Q2 2023 % of total	Q2 2022 % of total
Innovative Medicines						
Europe	3 496	3 481	0	2	31	33
US	4 503	3 967	14	14	40	38
Asia/Africa/Australasia	2 418	2 328	4	10	22	22
Canada and Latin America	826	749	10	19	7	7
Total	**11 243**	**10 525**	**7**	**9**	**100**	**100**
Of which in Established Markets	8 276	7 742	7	7	74	74
Of which in Emerging Growth Markets	2 967	2 783	7	17	26	26
Sandoz						
Europe	1 329	1 192	11	13	56	53
US	378	411	-8	-8	16	18
Asia/Africa/Australasia	395	406	-3	4	17	18
Canada and Latin America	277	247	12	16	11	11
Total	**2 379**	**2 256**	**5**	**8**	**100**	**100**
Of which in Established Markets	1 685	1 581	7	7	71	70
Of which in Emerging Growth Markets	694	675	3	10	29	30
Group						
Europe	4 825	4 673	3	5	35	37
US	4 881	4 378	11	11	36	34
Asia/Africa/Australasia	2 813	2 734	3	9	21	21
Canada and Latin America	1 103	996	11	18	8	8
Total	**13 622**	**12 781**	**7**	**9**	**100**	**100**
Of which in Established Markets	9 961	9 323	7	7	73	73
Of which in Emerging Growth Markets	3 661	3 458	6	15	27	27

[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] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023. These restatements had no impact on the total Group.

[3] Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 48.

Net sales by region[1]

First half

	H1 2023 USD m	H1 2022 restated USD m[2]	% change USD	% change cc[3]	**H1 2023 % of total**	H1 2022 % of total
Innovative Medicines						
Europe	6 917	7 010	-1	2	32	34
US	8 575	7 642	12	12	39	37
Asia/Africa/Australasia	4 717	4 656	1	9	22	22
Canada and Latin America	1 604	1 447	11	19	7	7
Total	**21 813**	**20 755**	**5**	**8**	**100**	**100**
Of which in Established Markets	15 954	15 314	4	6	73	74
Of which in Emerging Growth Markets	5 859	5 441	8	16	27	26
Sandoz						
Europe	2 695	2 427	11	14	57	53
US	758	819	-7	-7	16	18
Asia/Africa/Australasia	772	811	-5	4	16	18
Canada and Latin America	537	500	7	11	11	11
Total	**4 762**	**4 557**	**4**	**8**	**100**	**100**
Of which in Established Markets	3 330	3 155	6	8	70	69
Of which in Emerging Growth Markets	1 432	1 402	2	8	30	31
Group						
Europe	9 612	9 437	2	5	36	37
US	9 333	8 461	10	10	35	33
Asia/Africa/Australasia	5 489	5 467	0	8	21	22
Canada and Latin America	2 141	1 947	10	17	8	8
Total	**26 575**	**25 312**	**5**	**8**	**100**	**100**
Of which in Established Markets	19 284	18 469	4	6	73	73
Of which in Emerging Growth Markets	7 291	6 843	7	15	27	27

[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] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023. These restatements had no impact on the total Group.

[3] Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 48.

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

Second quarter

	Q2 2023 USD m	Q2 2022 USD m[1]	% change USD	% change cc[2]
Cardiovascular				
Entresto	1 516	1 125	35	37
Leqvio	78	22	255	249
Total Cardiovascular	**1 594**	**1 147**	**39**	**41**
Immunology				
Cosentyx	1 272	1 275	0	1
Xolair[3]	362	352	3	5
Ilaris	316	275	15	17
Total Immunology	**1 950**	**1 902**	**3**	**4**
Neuroscience				
Kesimpta	489	239	105	105
Zolgensma	311	379	-18	-16
Mayzent	94	85	11	11
Aimovig	67	55	22	24
Total Neuroscience	**961**	**758**	**27**	**28**
Solid Tumors				
Tafinlar + Mekinist	496	452	10	13
Kisqali	493	308	60	66
Pluvicto	240	10	nm	nm
Lutathera	150	86	74	75
Piqray/Vijoice	130	85	53	54
Votrient	106	124	-15	-13
Tabrecta	41	30	37	37
Total Solid Tumors	**1 656**	**1 095**	**51**	**54**
Hematology				
Promacta/Revolade	583	534	9	11
Tasigna	476	498	-4	-3
Jakavi	435	398	9	11
Kymriah	129	136	-5	-5
Scemblix	106	31	242	248
Adakveo	53	49	8	8
Total Hematology	**1 782**	**1 646**	**8**	**10**
Other Promoted Brands				
Ultibro Group	114	126	-10	-8
Xiidra	96	126	-24	-24
Beovu	53	54	-2	0
Other respiratory	23	20	15	22
Total Other Promoted Brands	**286**	**326**	**-12**	**-11**
Total Promoted Brands	**8 229**	**6 874**	**20**	**22**
Established Brands				
Lucentis	395	501	-21	-20
Sandostatin	331	318	4	5
Gilenya	269	555	-52	-52
Exforge Group	184	199	-8	-4
Galvus Group	175	222	-21	-15
Diovan Group	155	159	-3	2
Gleevec/Glivec	142	194	-27	-24
Afinitor/Votubia	116	143	-19	-17
Contract manufacturing[4]	132	83	59	56
Other[5]	1 115	1 277	-13	-5
Total Established Brands[4, 5]	**3 014**	**3 651**	**-17**	**-13**
Total division net sales to third parties[4, 5]	**11 243**	**10 525**	**7**	**9**

[1] In Q1 2023 *Lucentis* was reclassified from Other Promoted Brands to Established Brands and *Gilenya* was reclassified from Neuroscience to Established Brands. Q2 2022 has been reclassified to reflect these movements.

[2] Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 48.

[3] Net sales to third parties reflect *Xolair* sales for all indications.

[4] Q2 2022 restated to reflect the transfer of the Sandoz Division's biotechnology manufacturing services to other companies' activities to the Innovative Medicines Division that was effective as of January 1, 2023.

[5] Q2 2022 restated to reflect the transfer of the *Coartem* brand from the Sandoz Division to the Innovative Medicines Division that was effective as of January 1, 2023.

nm = not meaningful

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

First half

	H1 2023 USD m	H1 2022 USD m[1]	% change USD	% change cc[2]
Cardiovascular				
Entresto	2 915	2 218	31	35
Leqvio	142	36	294	293
Total Cardiovascular	**3 057**	**2 254**	**36**	**39**
Immunology				
Cosentyx	2 348	2 434	-4	-1
Xolair[3]	716	720	-1	3
Ilaris	644	560	15	18
Other		1	nm	nm
Total Immunology	**3 708**	**3 715**	**0**	**2**
Neuroscience				
Kesimpta	873	434	101	103
Zolgensma	620	742	-16	-15
Mayzent	183	164	12	13
Aimovig	128	109	17	21
Other		1	nm	nm
Total Neuroscience	**1 804**	**1 450**	**24**	**26**
Solid Tumors				
Tafinlar + Mekinist	954	855	12	15
Kisqali	908	547	66	73
Pluvicto	451	12	nm	nm
Lutathera	299	211	42	43
Piqray/Vijoice	246	158	56	57
Votrient	211	253	-17	-15
Tabrecta	77	61	26	27
Other	1		nm	nm
Total Solid Tumors	**3 147**	**2 097**	**50**	**54**
Hematology				
Promacta/Revolade	1 130	1 025	10	13
Tasigna	938	959	-2	1
Jakavi	849	787	8	12
Kymriah	264	263	0	3
Scemblix	182	56	225	228
Adakveo	105	93	13	13
Other		1	nm	nm
Total Hematology	**3 468**	**3 184**	**9**	**12**
Other Promoted Brands				
Ultibro Group	228	258	-12	-8
Xiidra	185	233	-21	-21
Beovu	104	102	2	5
Other respiratory	48	39	23	31
Total Other Promoted Brands	**565**	**632**	**-11**	**-8**
Total Promoted Brands	**15 749**	**13 332**	**18**	**21**
Established Brands				
Lucentis	811	1 021	-21	-17
Sandostatin	660	638	3	5
Gilenya	501	1 160	-57	-56
Exforge Group	370	399	-7	-3
Galvus Group	358	438	-18	-12
Diovan Group	313	350	-11	-5
Gleevec/Glivec	289	392	-26	-23
Afinitor/Votubia	226	281	-20	-17
Contract manufacturing[4]	255	182	40	41
Other[5]	2 281	2 562	-11	-4
Total Established Brands[4, 5]	**6 064**	**7 423**	**-18**	**-14**
Total division net sales to third parties[4, 5]	**21 813**	**20 755**	**5**	**8**

[1] In Q1 2023 *Lucentis* was reclassified from Other Promoted Brands to Established Brands and *Gilenya* was reclassified from Neuroscience to Established Brands. H1 2022 has been reclassified to reflect these movements.

[2] Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 48.

[3] Net sales to third parties reflect *Xolair* sales for all indications.

[4] H1 2022 restated to reflect the transfer of the Sandoz Division's biotechnology manufacturing services to other companies' activities to the Innovative Medicines Division that was effective as of January 1, 2023.

[5] H1 2022 restated to reflect the transfer of the *Coartem* brand from the Sandoz Division to the Innovative Medicines Division that was effective as of January 1, 2023.

nm = not meaningful

Net sales to third parties of the top 20 Innovative Medicines Division brands in 2023

Second quarter

			US		Rest of world			Total		
Brands	**Brand classification by therapeutic area, other promoted brands or established brands**	**Key indications**	USD m	% change USD/cc[1]	USD m	% change USD	% change cc[1]	USD m	% change USD	% change cc[1]
Entresto	Cardiovascular	Chronic heart failure, hypertension	755	38	761	32	36	1 516	35	37
Cosentyx	Immunology	Psoriasis (PsO), ankylosing spondylitis (AS), psoriatic arthritis (PsA), non-radiographic axial spondyloarthritis (nr-axSPA)	650	-12	622	15	18	1 272	0	1
Promacta/Revolade	Hematology	Immune thrombocytopenia (ITP), severe aplastic anemia (SAA)	313	16	270	2	5	583	9	11
Tafinlar + Mekinist	Solid Tumors	BRAF V600+ metastatic adjuvant melanoma, advanced non-small cell lung cancer (NSCLC), tumor agnostic with BRAF mutation indication	196	13	300	8	12	496	10	13
Tasigna	Hematology	Chronic myeloid leukemia (CML)	232	6	244	-13	-10	476	-4	-3
Kisqali	Solid Tumors	HR+/HER2- metastatic breast cancer	224	104	269	36	45	493	60	66
Kesimpta	Neuroscience	Relapsing-remitting multiple sclerosis (RRMS)	373	83	116	231	226	489	105	105
Jakavi	Hematology	Myelofibrosis (MF), polycytomia vera (PV), graft-versus-host disease (GvHD)			435	9	11	435	9	11
Lucentis	Established Brands[2]	Age-related macular degeneration (AMD), diabetic macular edema (DME), retinal vein occlusion (RVO)			395	-21	-20	395	-21	-20
Xolair[3]	Immunology	Severe allergic asthma (SAA), chronic spontaneous urticaria (CSU), nasal polyps			362	3	5	362	3	5
Sandostatin	Established Brands	Carcinoid tumors, acromegaly	203	-2	128	15	18	331	4	5
Ilaris	Immunology	Auto-inflammatory (CAPS, TRAPS, HIDS/MKD, FMF, SJIA, AOSD, gout)	163	20	153	10	13	316	15	17
Zolgensma	Neuroscience	Spinal muscular atrophy (SMA)	84	-32	227	-11	-9	311	-18	-16
Gilenya	Established Brands[2]	Relapsing multiple sclerosis (RMS)	104	-69	165	-26	-26	269	-52	-52
Pluvicto	Solid Tumors	PSMA-positive mCRPC patients post-ARPI, post-Taxane	227	nm	13	nm	nm	240	nm	nm
Exforge Group	Established Brands	Hypertension	4	33	180	-8	-4	184	-8	-4
Galvus Group	Established Brands	Type 2 diabetes			175	-21	-15	175	-21	-15
Diovan Group	Established Brands	Hypertension	12	-14	143	-1	4	155	-3	2
Lutathera	Solid Tumors	GEP-NETs gastroenteropancreatic neuroendocrine tumors	106	108	44	26	28	150	74	75
Gleevec/Glivec	Established Brands	Chronic myeloid leukemia (CML), gastrointestinal stromal tumors (GIST)	39	-32	103	-25	-21	142	-27	-24
Top 20 brands total			**3 685**	**15**	**5 105**	**4**	**8**	**8 790**	**9**	**11**
Rest of portfolio[4]			818	5	1 635	-2	5	2 453	0	5
Total division net sales to third parties[4]			**4 503**	**14**	**6 740**	**3**	**7**	**11 243**	**7**	**9**

[1] Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 48.

[2] In Q1 2023 *Lucentis* was reclassified from Other Promoted Brands to Established Brands and *Gilenya* was reclassified from Neuroscience to Established Brands.

[3] Net sales to third parties reflect *Xolair* sales for all indications.

[4] % change has been restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023.

nm = not meaningful

Net sales to third parties of the top 20 Innovative Medicines Division brands in 2023

First half

			US		Rest of world			**Total**		
Brands	**Brand classification by therapeutic area, other promoted brands or established brands**	**Key indications**	USD m	% change USD/cc[1]	USD m	% change USD	% change cc[1]	USD m	% change USD	% change cc[1]
Entresto	Cardiovascular	Chronic heart failure, hypertension	1 459	34	1 456	29	35	2 915	31	35
Cosentyx	Immunology	Psoriasis (PsO), ankylosing spondylitis (AS), psoriatic arthritis (PsA), non-radiographic axial spondyloarthritis (nr-axSPA)	1 178	-16	1 170	13	18	2 348	-4	-1
Promacta/Revolade	Hematology	Immune thrombocytopenia (ITP), severe aplastic anemia (SAA)	590	14	540	6	11	1 130	10	13
Tafinlar + Mekinist	Solid Tumors	BRAF V600+ metastatic adjuvant melanoma, advanced non-small cell lung cancer (NSCLC), tumor agnostic with BRAF mutation indication	390	19	564	7	13	954	12	15
Tasigna	Hematology	Chronic myeloid leukemia (CML)	443	5	495	-8	-3	938	-2	1
Kisqali	Solid Tumors	HR+/HER2- metastatic breast cancer	406	115	502	40	50	908	66	73
Kesimpta	Neuroscience	Relapsing-remitting multiple sclerosis (RRMS)	668	78	205	253	261	873	101	103
Jakavi	Hematology	Myelofibrosis (MF), polycytomia vera (PV), graft-versus-host disease (GvHD)			849	8	12	849	8	12
Lucentis	Established Brands[2]	Age-related macular degeneration (AMD), diabetic macular edema (DME), retinal vein occlusion (RVO)			811	-21	-17	811	-21	-17
Xolair[3]	Immunology	Severe allergic asthma (SAA), chronic spontaneous urticaria (CSU), nasal polyps			716	-1	3	716	-1	3
Sandostatin	Established Brands	Carcinoid tumors, acromegaly	412	1	248	7	12	660	3	5
Ilaris	Immunology	Auto-inflammatory (CAPS, TRAPS, HIDS/MKD, FMF, SJIA, AOSD, gout)	304	16	340	14	19	644	15	18
Zolgensma	Neuroscience	Spinal muscular atrophy (SMA)	193	-18	427	-16	-14	620	-16	-15
Gilenya	Established Brands[2]	Relapsing multiple sclerosis (RMS)	184	-71	317	-39	-37	501	-57	-56
Pluvicto	Solid Tumors	PSMA-positive mCRPC patients post-ARPI, post-Taxane	432	nm	19	nm	nm	451	nm	nm
Exforge Group	Established Brands	Hypertension	8	14	362	-8	-3	370	-7	-3
Galvus Group	Established Brands	Type 2 diabetes			358	-18	-12	358	-18	-12
Diovan Group	Established Brands	Hypertension	27	0	286	-11	-5	313	-11	-5
Lutathera	Solid Tumors	GEP-NETs gastroenteropancreatic neuroendocrine tumors	210	48	89	29	35	299	42	43
Gleevec/Glivec	Established Brands	Chronic myeloid leukemia (CML), gastrointestinal stromal tumors (GIST)	77	-28	212	-26	-21	289	-26	-23
Top 20 brands total			**6 981**	**14**	**9 966**	**2**	**7**	**16 947**	**7**	**10**
Rest of portfolio[4]			1 594	7	3 272	-3	4	4 866	0	5
Total division net sales to third parties[4]			**8 575**	**12**	**13 238**	**1**	**6**	**21 813**	**5**	**8**

[1] Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 48.

[2] In Q1 2023 *Lucentis* was reclassified from Other Promoted Brands to Established Brands and *Gilenya* was reclassified from Neuroscience to Established Brands.

[3] Net sales to third parties reflect *Xolair* sales for all indications.

[4] % change has been restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023.

nm = not meaningful

Sandoz Division net sales to third parties by business franchise

Second quarter

	Q2 2023 USD m	Q2 2022 restated[1] USD m	% change USD	% change cc[2]
Generics	1 848	1 783	4	6
Biosimilars	531	473	12	13
Total division net sales to third parties	**2 379**	**2 256**	**5**	**8**

[1] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities (from Biosimilars) and the *Coartem* brand (from Generics) to the Innovative Medicines Division that was effective as of January 1, 2023. Also restated to reflect the Q2 2023 change in business franchise structure of the Sandoz Division, whereby Retail Generics and Anti-Infectives were combined into the Generics business franchise and Biopharmaceuticals was renamed to Biosimilars.
[2] Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 48.

First half

	H1 2023 USD m	H1 2022 restated[1] USD m	% change USD	% change cc[2]
Generics	3 713	3 619	3	6
Biosimilars	1 049	938	12	15
Total division net sales to third parties	**4 762**	**4 557**	**4**	**8**

[1] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities (from Biosimilars) and the *Coartem* brand (from Generics) to the Innovative Medicines Division that was effective as of January 1, 2023. Also restated to reflect the Q2 2023 change in business franchise structure of the Sandoz Division, whereby Retail Generics and Anti-Infectives were combined into the Generics business franchise and Biopharmaceuticals was renamed to Biosimilars.
[2] Constant currencies (cc) is a non-IFRS measure. A definition of non-IFRS measures used by Novartis can be found starting on page 48.

The product portfolio of Sandoz is widely spread in 2023 and 2022.

Segmentation – Other revenue

Second quarter

	Innovative Medicines		Sandoz		Corporate		Group	
(USD millions)	**Q2 2023**	Q2 2022	**Q2 2023**	Q2 2022	**Q2 2023**	Q2 2022	**Q2 2023**	Q2 2022
Profit sharing income	246	223					246	223
Royalty income	19	3	4	4		2	23	9
Milestone income	25	20		1			25	21
Other[1]	14	49	2	2	4		20	51
Total other revenues	**304**	**295**	**6**	**7**	**4**	**2**	**314**	**304**

[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

	Innovative Medicines		Sandoz		Corporate		Group	
(USD millions)	**H1 2023**	H1 2022	**H1 2023**	H1 2022	**H1 2023**	H1 2022	**H1 2023**	H1 2022
Profit sharing income	445	428					445	428
Royalty income	41	6	8	9		5	49	20
Milestone income	28	39		1			28	40
Other[1]	36	96	4	3	7		47	99
Total other revenues	**550**	**569**	**12**	**13**	**7**	**5**	**569**	**587**

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

10. Events subsequent to the June 30, 2023, consolidated balance sheet

Significant transactions closed in July 2023
In the second quarter of 2023, Novartis entered into an agreement to acquire DTx Pharma Inc. (DTx), a San-Diego US based, pre-clinical stage biotechnology company focused on leveraging its proprietary FALCON platform to develop siRNA therapies for neuroscience indications. The transaction was completed on July 14, 2023. For details see Note 3, "Significant pending transactions entered into in second quarter 2023 and closed in July 2023."

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 and free cash flow.

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, software, 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 exchanges 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 with the prior year is shown as a positive growth.

Free cash flow

Effective January 1, 2023, Novartis revised its definition of free cash flow, to define free cash flow as net cash flows from operating activities less purchases of property, plant and equipment. This new definition provides a simpler performance measure focusing on core operating activities, and also excludes items that can vary

significantly from year to year which enables better comparison of business performance across years. The prior year free cash flow amounts have been revised to conform with the new free cash flow definition to aid in comparability.

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.

Additional information

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 presented as additional information because it sets forth how management monitors net debt or liquidity and 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.

See page 59 for additional disclosures related to net debt.

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

Second quarter

(USD millions unless indicated otherwise)	Innovative Medicines Q2 2023	Innovative Medicines Q2 2022 restated[2]	Sandoz Q2 2023	Sandoz Q2 2022 restated[2]	Corporate Q2 2023	Corporate Q2 2022 restated[2]	Group Q2 2023	Group Q2 2022
IFRS operating income	**2 999**	**2 206**	**212**	**357**	**-291**	**-335**	**2 920**	**2 228**
Amortization of intangible assets	**914**	**894**	**57**	**56**			**971**	**950**
Impairments								
Intangible assets	453	226	2	4			455	230
Property, plant and equipment related to the Group-wide rationalization of manufacturing sites	-36	234	-1	-2			-37	232
Other property, plant and equipment	22						22	
Total impairment charges	**439**	**460**	**1**	**2**			**440**	**462**
Acquisition or divestment of businesses and related items								
- Income	-3	-1			-56		-59	-1
- Expense	1	7					1	7
Total acquisition or divestment of businesses and related items, net	**-2**	**6**			**-56**		**-58**	**6**
Other items								
Divestment gains	-6	-128				-2	-6	-130
Financial assets – fair value adjustments	33	68			-4	28	29	96
Restructuring and related items								
- Income	-49	-5	-2	-4	-15	-2	-66	-11
- Expense	112	389	45	44	129	219	286	652
Legal-related items								
- Income								
- Expense	2	102	112	4			114	106
Additional income	-64	-104	-4	-1	88		20	-105
Additional expense	9	23	8	-7	1		18	16
Total other items	**37**	**345**	**159**	**36**	**199**	**243**	**395**	**624**
Total adjustments	**1 388**	**1 705**	**217**	**94**	**143**	**243**	**1 748**	**2 042**
Core operating income	**4 387**	**3 911**	**429**	**451**	**-148**	**-92**	**4 668**	**4 270**
as % of net sales	*39.0%*	*37.2%*	*18.0%*	*20.0%*			*34.3%*	*33.4%*
(Loss)/income from associated companies		1		1	-2	-2	-2	0
Interest expense							-224	-202
Other financial income and expense							75	16
Core adjustments to other financial income and expense							36	45
Income taxes, adjusted for above items (core income taxes)							-742	-698
Core net income							**3 811**	**3 431**
Core net income attributable to shareholders of Novartis AG							**3 810**	**3 430**
Core basic EPS (USD) [1]							**1.83**	**1.56**

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

[2] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023 (see Note 9 in this Condensed Interim Financial Report).

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

First half

(USD millions unless indicated otherwise)	Innovative Medicines H1 2023	Innovative Medicines H1 2022 restated[2]	Sandoz H1 2023	Sandoz H1 2022 restated[2]	Corporate H1 2023	Corporate H1 2022 restated[2]	Group H1 2023	Group H1 2022
IFRS operating income	**5 674**	**4 833**	**531**	**751**	**-429**	**-504**	**5 776**	**5 080**
Amortization of intangible assets	**1 941**	**1 772**	**111**	**114**			**2 052**	**1 886**
Impairments								
Intangible assets	926	263	14	4			940	267
Property, plant and equipment related to the Group-wide rationalization of manufacturing sites	-43	251	-1	-2			-44	249
Other property, plant and equipment	22						22	
Total impairment charges	**905**	**514**	**13**	**2**			**918**	**516**
Acquisition or divestment of businesses and related items								
- Income	-3	-1			-60	-2	-63	-3
- Expense	3	7					3	7
Total acquisition or divestment of businesses and related items, net		**6**			**-60**	**-2**	**-60**	**4**
Other items								
Divestment gains	-136	-128			4	-20	-132	-148
Financial assets – fair value adjustments	72	100			3	98	75	198
Restructuring and related items								
- Income	-74	-9	-4	-10	-21	-2	-99	-21
- Expense	730	532	80	90	247	236	1 057	858
Legal-related items								
- Income	-484	-51					-484	-51
- Expense	31	102	201	10			232	112
Additional income	-198	-119	-7	-3	-72		-277	-122
Additional expense	14	31	8	10	1		23	41
Total other items	**-45**	**458**	**278**	**97**	**162**	**312**	**395**	**867**
Total adjustments	**2 801**	**2 750**	**402**	**213**	**102**	**310**	**3 305**	**3 273**
Core operating income	**8 475**	**7 583**	**933**	**964**	**-327**	**-194**	**9 081**	**8 353**
as % of net sales	*38.9%*	*36.5%*	*19.6%*	*21.2%*			*34.2%*	*33.0%*
Loss from associated companies	1	1	1	1	-5	-4	-3	-2
Interest expense							-435	-403
Other financial income and expense							171	36
Core adjustments to other financial income and expense							57	57
Income taxes, adjusted for above items (core income taxes)							-1 446	-1 359
Core net income							**7 425**	**6 682**
Core net income attributable to shareholders of Novartis AG							**7 423**	**6 684**
Core basic EPS (USD) [1]							**3.54**	**3.02**

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

[2] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023 (see Note 9 in this Condensed Interim Financial Report).

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

Second quarter

(USD millions unless indicated otherwise)	Q2 2023 IFRS results	Amortization of intangible assets[1]	Impairments[2]	Acquisition or divestment of businesses and related items[3]	Other items[4]	Q2 2023 Core results	Q2 2022 Core results
Gross profit	**9 595**	**926**	**310**		**25**	**10 856**	**10 247**
Operating income	**2 920**	**971**	**440**	**-58**	**395**	**4 668**	**4 270**
Income before taxes	**2 769**	**971**	**440**	**-58**	**431**	**4 553**	**4 129**
Income taxes[5]	-452					-742	-698
Net income	**2 317**					**3 811**	**3 431**
Basic EPS (USD)[6]	**1.11**					**1.83**	**1.56**
The following are adjustments to arrive at core gross profit							
Cost of goods sold	-4 341	926	310		25	-3 080	-2 838
The following are adjustments to arrive at core operating income							
Selling, general and administration	-3 686				13	-3 673	-3 589
Research and development	-2 526	45	146		-14	-2 349	-2 251
Other income	147		-39	-59	-4	45	127
Other expense	-610		23	1	375	-211	-264
The following are adjustments to arrive at core income before taxes							
Other financial income and expense	75				36	111	61

[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, research and development, other income and other expense include net impairment charges related to intangible assets; other income and other expense includes also net 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 a favorable stamp duties tax settlement related to prior periods acquisitions and a reversal of a provision for restructuring and integration costs

[4] Other items: cost of goods sold, selling, general and administration, research and development, other income and other expense include restructuring income and charges related to the initiative to implement a new streamlined organizational model, the Sandoz planned spin-off, the Group-wide rationalization of manufacturing sites and other net restructuring charges and related items; cost of goods sold and research and development also include contingent consideration adjustments; selling, general and administration includes adjustments to provisions; other income and other expense include fair value adjustments and divestment gains and losses on financial assets; other expense includes also legal related items; other income includes a fair value adjustment on a contingent receivable

[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 1.8 billion to arrive at the core results before tax amounts to USD 290 million. The average tax rate on the adjustments is 16.3% since the quarterly core tax charge of 16.3% 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 2023 IFRS results	Amortization of intangible assets[1]	Impairments[2]	Acquisition or divestment of businesses and related items[3]	Other items[4]	H1 2023 Core results	H1 2022 Core results
Gross profit	**18 872**	**1 854**	**322**		**115**	**21 163**	**20 207**
Operating income	**5 776**	**2 052**	**918**	**-60**	**395**	**9 081**	**8 353**
Income before taxes	**5 509**	**2 052**	**918**	**-60**	**452**	**8 871**	**8 041**
Income taxes[5]	-898					-1 446	-1 359
Net income	**4 611**					**7 425**	**6 682**
Basic EPS (USD)[6]	**2.20**					**3.54**	**3.02**
The following are adjustments to arrive at core gross profit							
Cost of goods sold	-8 272	1 854	322		115	-5 981	-5 692
The following are adjustments to arrive at core operating income							
Selling, general and administration	-7 129				55	-7 074	-7 087
Research and development	-5 320	198	620		-119	-4 621	-4 507
Other income	1 117		-47	-63	-853	154	254
Other expense	-1 764		23	3	1 197	-541	-514
The following are adjustments to arrive at core income before taxes							
Other financial income and expense	171				57	228	93

[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, research and development, other income and other expense include net impairment charges related to intangible assets; other income and other expense includes also net 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 a favorable stamp duties tax settlement related to prior periods acquisitions; other income and other expense include also reversals and charges of restructuring and integration costs

[4] Other items: cost of goods sold, selling, general and administration, research and development, other income and other expense include restructuring income and charges related to the initiative to implement a new streamlined organizational model, the Sandoz planned spin-off, the Group-wide rationalization of manufacturing sites and other net restructuring charges and related items; cost of goods sold and research and development also include contingent consideration adjustments; cost of goods sold and selling, general and administration includes also adjustments to provisions; other income and other expense include fair value adjustments and divestment gains and losses on financial assets and legal related items; other income includes also gains from the divestment of products, curtailment gains and fair value adjustment on a contingent receivable

[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 3.4 billion to arrive at the core results before tax amounts to USD 548 million. The average tax rate on the adjustments is 16.3% since the full year core tax charge of 16.3% 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 2023 IFRS results	Amortization of intangible assets[1]	Impairments[2]	Acquisition or divestment of businesses and related items[3]	Other items[4]	Q2 2023 Core results	Q2 2022 restated Core results[5]
Gross profit	**8 401**	**869**	**310**		**9**	**9 589**	**9 057**
Operating income	**2 999**	**914**	**439**	**-2**	**37**	**4 387**	**3 911**
The following are adjustments to arrive at core gross profit							
Cost of goods sold	-3 338	869	310		9	-2 150	-1 941
The following are adjustments to arrive at core operating income							
Selling, general and administration	-2 955				3	-2 952	-2 959
Research and development	-2 304	45	144		-14	-2 129	-2 055
Other income	108		-38	-3	-53	14	63
Other expense	-251		23	1	92	-135	-195

[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, research and development, other income and other expense include net impairment charges related to intangible assets; other income and other expense includes also net 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 a reversal of a provision for restructuring and integration costs

[4] Other items: cost of goods sold, selling, general and administration, research and development, other income and other expense include restructuring income and charges related to the initiative to implement a new streamlined organizational model, the Sandoz planned spin-off, the Group-wide rationalization of manufacturing sites and other net restructuring charges and related items; cost of goods sold and research and development also include contingent consideration adjustments; selling, general and administration includes adjustments to provisions; other income includes divestment income on financial assets; other expense includes fair value adjustments on financial assets and legal related items

[5] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023 (see Note 9 in this Condensed Interim Financial Report).

First half

(USD millions)	H1 2023 IFRS results	Amortization of intangible assets[1]	Impairments[2]	Acquisition or divestment of businesses and related items[3]	Other items[4]	H1 2023 Core results	H1 2022 restated Core results[5]
Gross profit	**16 459**	**1 743**	**310**		**79**	**18 591**	**17 765**
Operating income	**5 674**	**1 941**	**905**		**-45**	**8 475**	**7 583**
The following are adjustments to arrive at core gross profit							
Cost of goods sold	-6 328	1 743	310		79	-4 196	-3 947
The following are adjustments to arrive at core operating income							
Selling, general and administration	-5 715				39	-5 676	-5 842
Research and development	-4 879	198	618		-119	-4 182	-4 103
Other income	859		-46	-3	-713	97	145
Other expense	-1 050		23	3	669	-355	-382

[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, research and development, other income and other expense include net impairment charges related to intangible assets; other income and other expense includes also net impairment charges related to property, plant and equipment

[3] Acquisition or divestment of businesses and related items, including restructuring and integration charges: other income and other expense include reversals and charges of restructuring and integration costs

[4] Other items: cost of goods sold, selling, general and administration, research and development, other income and other expense include restructuring income and charges related to the initiative to implement a new streamlined organizational model, the Sandoz planned spin-off, the Group-wide rationalization of manufacturing sites and other net restructuring charges and related items; cost of goods sold and research and development also include contingent consideration adjustments; selling, general and administration includes adjustments to provisions; other income includes divestment income on financial assets, gains from the divestment of products, curtailment gains and legal related items; other expense includes fair value adjustments on financial assets and legal related items

[5] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023 (see Note 9 in this Condensed Interim Financial Report).

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

Second quarter

(USD millions)	Q2 2023 IFRS results	Amortization of intangible assets[1]	Impairments[2]	Acquisition or divestment of businesses and related items	Other items[3]	Q2 2023 Core results	Q2 2022 restated Core results[4]
Gross profit	**1 192**	**57**			**16**	**1 265**	**1 187**
Operating income	**212**	**57**	**1**		**159**	**429**	**451**
The following are adjustments to arrive at core gross profit							
Cost of goods sold	-1 250	57			16	-1 177	-1 131
The following are adjustments to arrive at core operating income							
Selling, general and administration	-594				9	-585	-510
Research and development	-222		2			-220	-196
Other income	14		-1		-2	11	17
Other expense	-178				136	-42	-47

[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: research and development includes impairment charges related to an intangible asset; other income includes a reversal of impairment charges related to property, plant and equipment
[3] Other items: cost of goods sold, selling, general and administration, other income and other expense include charges related to the Sandoz planned spin-off, the Group-wide rationalization of manufacturing sites and other net restructuring charges and related items; other expense includes also legal-related items
[4] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023 (see Note 9 in this Condensed Interim Financial Report).

First half

(USD millions)	H1 2023 IFRS results	Amortization of intangible assets[1]	Impairments[2]	Acquisition or divestment of businesses and related items	Other items[3]	H1 2023 Core results	H1 2022 restated Core results[4]
Gross profit	**2 406**	**111**	**12**		**36**	**2 565**	**2 405**
Operating income	**531**	**111**	**13**		**278**	**933**	**964**
The following are adjustments to arrive at core gross profit							
Cost of goods sold	-2 517	111	12		36	-2 358	-2 267
The following are adjustments to arrive at core operating income							
Selling, general and administration	-1 136				14	-1 122	-1 013
Research and development	-441		2			-439	-404
Other income	24		-1		-4	19	59
Other expense	-322				232	-90	-83

[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 and research and development include impairment charges related to intangible assets; other income includes a reversal of impairment charges related to property, plant and equipment
[3] Other items: cost of goods sold, selling, general and administration, other income and other expense include charges related to the Sandoz planned spin-off, the Group-wide rationalization of manufacturing sites and other net restructuring charges and related items; cost of goods sold and selling, general and administration also include adjustments to provisions; other expense includes legal-related items
[4] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023 (see Note 9 in this Condensed Interim Financial Report).

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

Second quarter

(USD millions)	Q2 2023 IFRS results	Amortization of intangible assets	Impairments	Acquisition or divestment of businesses and related items[1]	Other items[2]	Q2 2023 Core results	Q2 2022 restated Core results[3]
Gross profit	**2**					**2**	**3**
Operating loss	**-291**			**-56**	**199**	**-148**	**-92**
The following are adjustments to arrive at core operating loss							
Selling, general and administration	-137				1	-136	-120
Other income	25			-56	51	20	47
Other expense	-181				147	-34	-22

[1] Acquisition or divestment of businesses and related items, including restructuring and integration charges: other income includes a favorable stamp duties tax settlement related to prior periods acquisitions

[2] Other items: selling, general and administration, other income and other expense include restructuring income and charges related to the initiative to implement a new simplified organizational model, the Sandoz planned spin-off and other net restructuring charges and related items; other income and other expense also include fair value adjustments and divestment gains and losses on financial assets; other income also includes a fair value adjustment on a contingent receivable

[3] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023 (see Note 9 in this Condensed Interim Financial Report).

First half

(USD millions)	H1 2023 IFRS results	Amortization of intangible assets	Impairments	Acquisition or divestment of businesses and related items[1]	Other items[2]	H1 2023 Core results	H1 2022 restated Core results[3]
Gross profit	**7**					**7**	**37**
Operating loss	**-429**			**-60**	**162**	**-327**	**-194**
The following are adjustments to arrive at core operating loss							
Selling, general and administration	-278				2	-276	-232
Other income	234			-60	-136	38	50
Other expense	-392				296	-96	-49

[1] Acquisition or divestment of businesses and related items, including restructuring and integration charges: other income includes a favorable stamp duties tax settlement related to prior periods acquisitions and reversals of provisions for restructuring and integration costs

[2] Other items: selling, general and administration, other income and other expense include restructuring charges and income related to the initiative to implement a new streamlined organizational model, the Sandoz planned spin-off and other net restructuring charges and related items; other income and other expense also include fair value adjustments and divestment gains and losses on financial assets; other income also includes a fair value adjustment on a contingent receivable and curtailment gains

[3] Restated to reflect the transfers of the Sandoz Division's biotechnology manufacturing services to other companies' activities and the *Coartem* brand to the Innovative Medicines Division that was effective as of January 1, 2023 (see Note 9 in this Condensed Interim Financial Report).

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

	Q2 2023			Q2 2022		
(USD millions)	IFRS cash flow	Adjustments	Free cash flow	IFRS cash flow	Adjustments[1]	Revised Free cash flow[1]
Net cash flows from operating activities	**3 576**		**3 576**	3 755		3 755
Net cash flows used in investing activities[2]	**-1 053**	**752**	**-301**	-11 628	11 371	-257
Net cash flows used in financing activities[3]	**-3 637**	**3 637**	**0**	-2 302	2 302	0
Free cash flow[1]			**3 275**			3 498

[1] To aid in comparability, the prior year adjustments and free cash flow amounts have been revised to conform with the new free cash flow definition that was effective as of January 1, 2023.
[2] With the exception of purchases of property, plant and equipment, all net cash flows from investing activities are excluded from the free cash flow.
[3] Net cash flows used in financing activities are excluded from the free cash flow.

First half

	H1 2023			H1 2022		
(USD millions)	IFRS cash flow	Adjustments	Free cash flow	IFRS cash flow	Adjustments[1]	Revised Free cash flow[1]
Net cash flows from operating activities	**6 533**		**6 533**	5 404		5 404
Net cash flows from/(used in) investing activities[2]	**9 568**	**-10 106**	**-538**	-2 263	1 749	-514
Net cash flows used in financing activities[3]	**-12 839**	**12 839**	**0**	-11 830	11 830	0
Free cash flow[1]			**5 995**			4 890

[1] To aid in comparability, the prior year adjustments and free cash flow amounts have been revised to conform with the new free cash flow definition that was effective as of January 1, 2023.
[2] With the exception of purchases of property, plant and equipment, all net cash flows from investing activities are excluded from the free cash flow.
[3] Net cash flows used in financing activities are excluded from the free cash flow.

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

Second quarter

(USD millions)	**Q2 2023**	Q2 2022
Operating income	**2 920**	**2 228**
Adjustments for non-cash items		
Depreciation, amortization and impairments	1 853	1 899
Change in provisions and other non-current liabilities	73	547
Other	354	82
Operating income adjusted for non-cash items	**5 200**	**4 756**
Dividends received from associated companies and others		1
Interest received and change in other financial receipts	65	21
Interest paid and change in other financial payments	-235	-211
Income taxes paid	-1 030	-606
Payments out of provisions and other net cash movements in non-current liabilities	-262	-152
Change in inventories and trade receivables less trade payables	-674	-596
Change in other net current assets and other operating cash flow items	512	542
Net cash flows from operating activities	**3 576**	**3 755**
Purchases of property, plant and equipment	-301	-257
Free cash flow [1]	**3 275**	**3 498**

[1] To aid in comparability, the prior year free cash flow amounts have been revised to conform with the new free cash flow definition that was effective as of January 1, 2023

First half

(USD millions)	**H1 2023**	H1 2022
Operating income	**5 776**	**5 080**
Adjustments for non-cash items		
Depreciation, amortization and impairments	3 896	3 406
Change in provisions and other non-current liabilities	585	635
Other	244	207
Operating income adjusted for non-cash items	**10 501**	**9 328**
Dividends received from associated companies and others	5	1
Interest received and other financial receipts	401	38
Interest paid and other financial payments	-364	-351
Income taxes paid	-1 378	-1 239
Payments out of provisions and other net cash movements in non-current liabilities	-966	-308
Change in inventories and trade receivables less trade payables	-2 057	-1 660
Change in other net current assets and other operating cash flow items	391	-405
Net cash flows from operating activities	**6 533**	**5 404**
Purchases of property, plant and equipment	-538	-514
Free cash flow [1]	**5 995**	**4 890**

[1] To aid in comparability, the prior year free cash flow amounts have been revised to conform with the new free cash flow definition that was effective as of January 1, 2023

Additional information

Net debt

Condensed consolidated changes in net debt

Second quarter

(USD millions)	**Q2 2023**	Q2 2022
Net change in cash and cash equivalents	**-1 115**	**-10 227**
Change in marketable securities, commodities, time deposits, financial debts and derivatives financial instruments	845	11 386
Change in net debt	**-270**	**1 159**
Net debt at April 1	-15 104	-10 678
Net debt at June 30	**-15 374**	**-9 519**

First half

(USD millions)	**H1 2023**	H1 2022
Net change in cash and cash equivalents	**3 368**	**-8 782**
Change in marketable securities, commodities, time deposits, financial debts and derivatives financial instruments	-11 497	131
Change in net debt	**-8 129**	**-8 651**
Net debt at January 1	-7 245	-868
Net debt at June 30	**-15 374**	**-9 519**

Components of net debt

(USD millions)	**Jun 30, 2023**	Dec 31, 2022	Jun 30, 2022
Non-current financial debts	-18 259	-20 244	-22 232
Current financial debts and derivative financial instruments	-8 289	-5 931	-7 045
Total financial debts	**-26 548**	**-26 175**	**-29 277**
Less liquidity			
Cash and cash equivalents	10 885	7 517	3 625
Marketable securities, commodities, time deposits and derivative financial instruments	289	11 413	16 133
Total liquidity	**11 174**	**18 930**	**19 758**
Net debt at end of period	**-15 374**	**-7 245**	**-9 519**

Share information

	Jun 30, 2023	Jun 30, 2022
Number of shares outstanding	**2 068 263 550**	2 182 788 588
Registered share price (CHF)	**90.00**	80.85
ADR price (USD)	**100.91**	84.53
Market capitalization (USD billions) [1]	**207.0**	184.6
Market capitalization (CHF billions) [1]	**186.1**	176.5

[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.

Effects of currency fluctuations

Principal currency translation rates

(USD per unit)	**Average rates Q2 2023**	Average rates Q2 2022	**Average rates H1 2023**	Average rates H1 2022	**Period-end rates Jun 30, 2023**	Period-end rates Jun 30, 2022
1 CHF	1.113	1.037	1.097	1.060	1.112	1.046
1 CNY	0.143	0.151	0.144	0.154	0.138	0.149
1 EUR	1.089	1.065	1.081	1.094	1.086	1.044
1 GBP	1.252	1.257	1.233	1.299	1.262	1.215
100 JPY	0.729	0.771	0.742	0.816	0.692	0.733
100 RUB	1.230	1.509	1.300	1.336	1.133	1.850

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 2023	**Change in constant currencies % Q2 2023**	**Percentage point currency impact Q2 2023**	Change in USD % Q2 2022	Change in constant currencies % Q2 2022	Percentage point currency impact Q2 2022
Total Group						
Net sales to third parties	7	9	-2	-1	5	-6
Operating income	31	50	-19	-36	-30	-6
Net income	37	54	-17	-41	-34	-7
Basic earnings per share (USD)	44	62	-18	-40	-33	-7
Core operating income	9	17	-8	-2	5	-7
Core net income	11	19	-8	-8	-1	-7
Core basic earnings per share (USD)	17	25	-8	-6	1	-7
Innovative Medicines						
Net sales to third parties	7	9	-2	-1	5	-6
Operating income	36	52	-16	-31	-25	-6
Core operating income	12	20	-8	-1	6	-7
Sandoz						
Net sales to third parties	5	8	-3	-3	5	-8
Operating income	-41	-27	-14	-18	-14	-4
Core operating income	-5	6	-11	-9	-4	-5
Corporate						
Operating loss	13	16	-3	-112	-125	13
Core operating loss	-61	-63	2	14	6	8

First half

	Change in USD % H1 2023	Change in constant currencies % H1 2023	Percentage point currency impact H1 2023	Change in USD % H1 2022	Change in constant currencies % H1 2022	Percentage point currency impact H1 2022
Total Group						
Net sales to third parties	5	8	-3	0	5	-5
Operating income	14	28	-14	-14	-7	-7
Net income	18	32	-14	-21	-14	-7
Basic earnings per share (USD)	24	39	-15	-20	-12	-8
Core operating income	9	16	-7	1	7	-6
Core net income	11	19	-8	-6	0	-6
Core basic earnings per share (USD)	17	25	-8	-5	2	-7
Innovative Medicines						
Net sales to third parties	5	8	-3	0	5	-5
Operating income	17	30	-13	-12	-5	-7
Core operating income	12	19	-7	-1	6	-7
Sandoz						
Net sales to third parties	4	8	-4	-1	6	-7
Operating income	-29	-19	-10	3	8	-5
Core operating income	-3	5	-8	5	10	-5
Corporate						
Operating loss	15	17	-2	-72	-81	9
Core operating loss	-69	-71	2	23	18	5

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 “anticipated,” “continue,” “remain,” “growth,” “confidence,” “upcoming,” “expect,” “ongoing,” “outlook,” “planned” “focus,” “pipeline,” “potential,” “will,” “guidance,” “continuing,” “estimated,” “launch,” “to deliver,” “transformation,” “transforming,” “address,” “growing,” “accelerate,” “remains,” “scaling,” “expected,” “driven,” “long-term,” “innovation,” “transformative,” “priority,” “can,” “to develop,” “to experience,” “look forward,” “momentum,” 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, including the acquisitions of Chinook Therapeutics or DTx Pharma, or our divestiture of ‘front of eye’ ophthalmology assets; or regarding potential future sales or earnings of the Group or any of its divisions; or regarding discussions of strategy, priorities, plans, expectations or intentions, including our transforming into a “pure-play” Innovative Medicines business; or regarding the Group’s liquidity or cash flow positions and its ability to meet its ongoing financial obligations and operational needs; or regarding our planned spin-off of Sandoz; or regarding the new share buyback; or regarding the impact of the decision of the US District Court for the District of Delaware on the validity of our patent covering *Entresto* and combinations of sacubitril and valsartan. 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. There can be no guarantee that the investigational or approved products described in this press release will be submitted or approved for sale or for any additional indications or labeling in any market, or at any particular time. Nor can there be any guarantee that such products will be commercially successful in the future. Neither can there be any guarantee expected benefits or synergies from the transactions described in this press release will be achieved in the expected timeframe, or at all. 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 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 potential that the benefits and opportunities expected from our planned spin-off of Sandoz may not be realized or may be more difficult or take longer to realize than expected; 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.

About Novartis

Novartis is reimagining medicine to improve and extend people's lives. We deliver high-value medicines that alleviate society's greatest disease burdens through technology leadership in R&D and novel access approaches. In our quest to find new medicines, we consistently rank among the world's top companies investing in research and development. About 103,000 people of more than 140 nationalities work together to bring Novartis products to nearly 800 million people 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 15, 2023	Extraordinary General Meeting (related to Sandoz Spin-off)
October 24, 2023	Third quarter & Nine months 2023 results
November 28, 2023	R&D Day