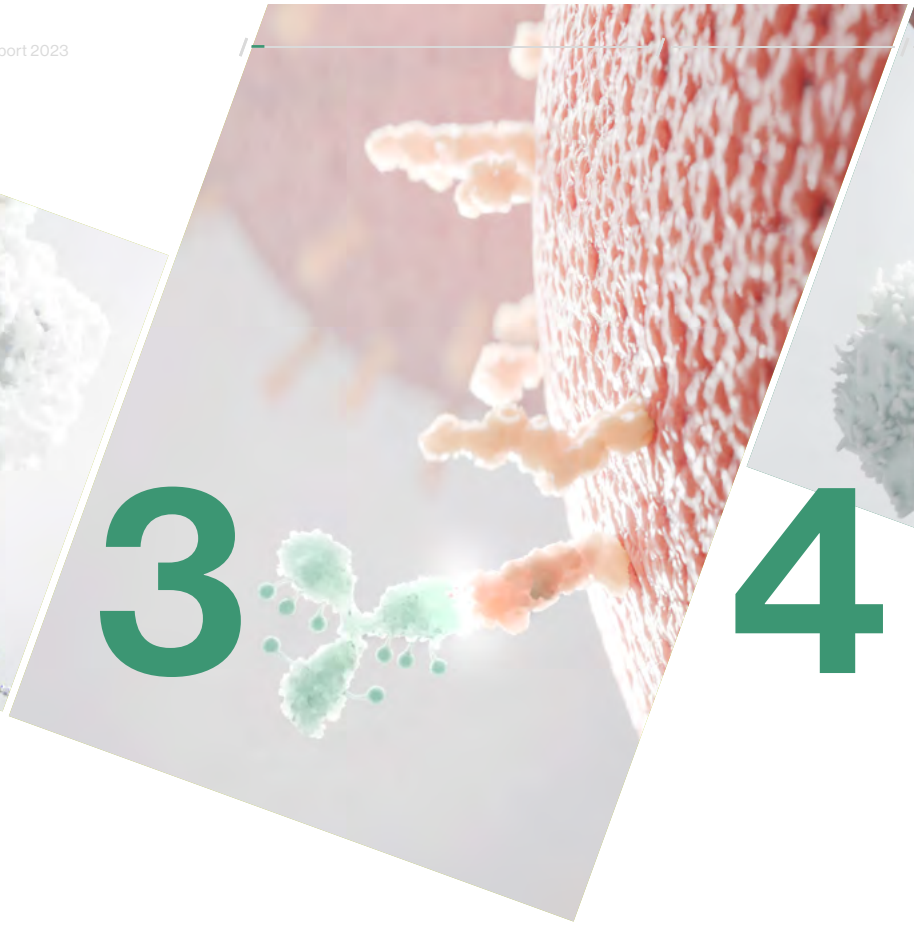
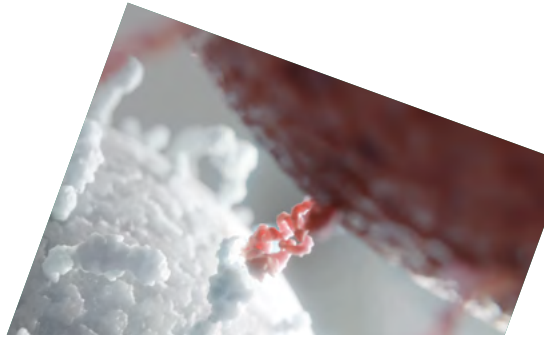

23
ACTING TOGETHER
BIONTECH


23
CREATING SYNERGIES
BIONTECH

1 MAGAZINE



FINANCIAL REPORT

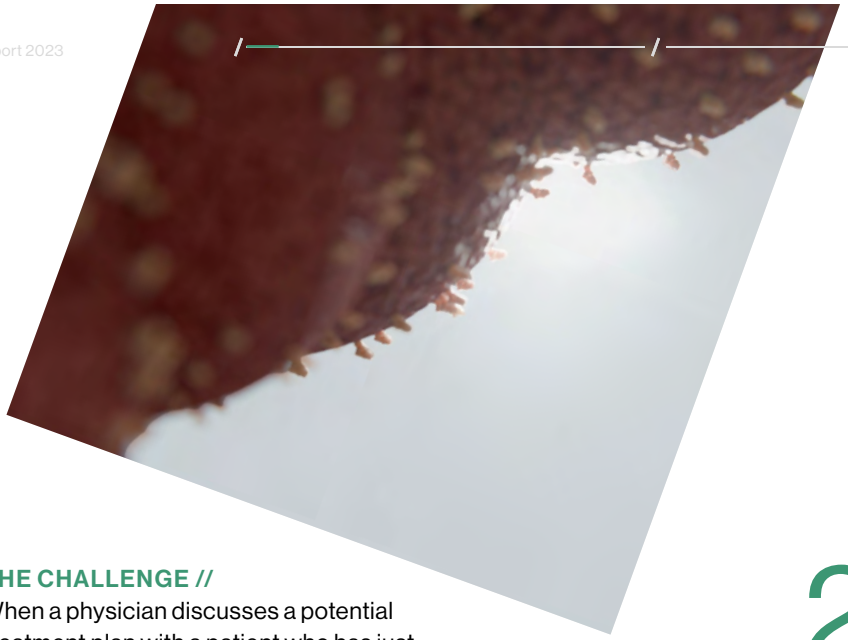


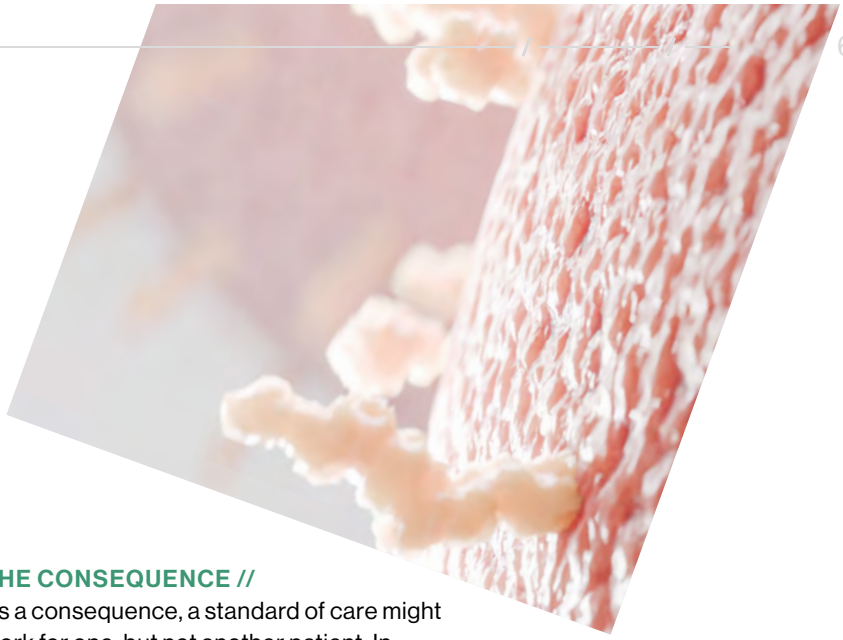
Bispecific antibodies are protein molecules that can bind two different targets, bringing closer for example the cancer cell to the immune cell. When in close proximity of the cancer cell, the immune cell could recognize and orchestrate its elimination.

MAGAZINE

EXPLORING THE POWER OF COMBINATION

Our vision for future precision cancer treatments: We are developing a unique therapy toolbox designed to act together and with the aim to improve outcomes for patients.





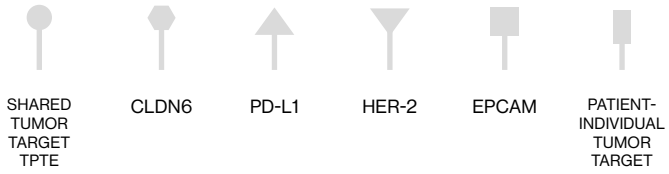
1 THE CHALLENGE //

When a physician discusses a potential treatment plan with a patient who has just been diagnosed with cancer, they know that they will have to treat a disease with many different facets. Cancer cells are physically different from healthy cells in the body. Their shapes and properties are mutated and changed. They interact differently with their environment to grow abnormally and survive. And in each growing cycle, they have the potential to change further. The cells in the same tumor within the same patient can also be different. Medicine faces the challenge that every tumor is unique.

2 THE CONSEQUENCE //

As a consequence, a standard of care might work for one, but not another patient. In other cases, the constant changes of the tumor cells lead to a resistance to available treatments. What may have originally given good results and helped the patient might not work over time. For example, it is estimated that more than *90% of mortalities* in cancer patients can be attributed to chemotherapy resistance.

Helping patients and addressing unmet medical needs is what drives us at BioNTech every day. We have been spending years on better understanding tumors' differences as well as the immune system's mechanisms to develop potential cancer treatments. We believe that the limitations cannot be overcome by a single technology, but rather a therapy toolbox.



3 OUR APPROACH //

We work on potential treatment approaches that aim to precisely target the specific tumor features by employing a different mechanism to tackle each feature. Our approach is to combine therapies – some investigational and some approved – with the aim of achieving better results compared to the current standard of care. This is why we are developing a suite of technologies which we call our oncology toolbox.

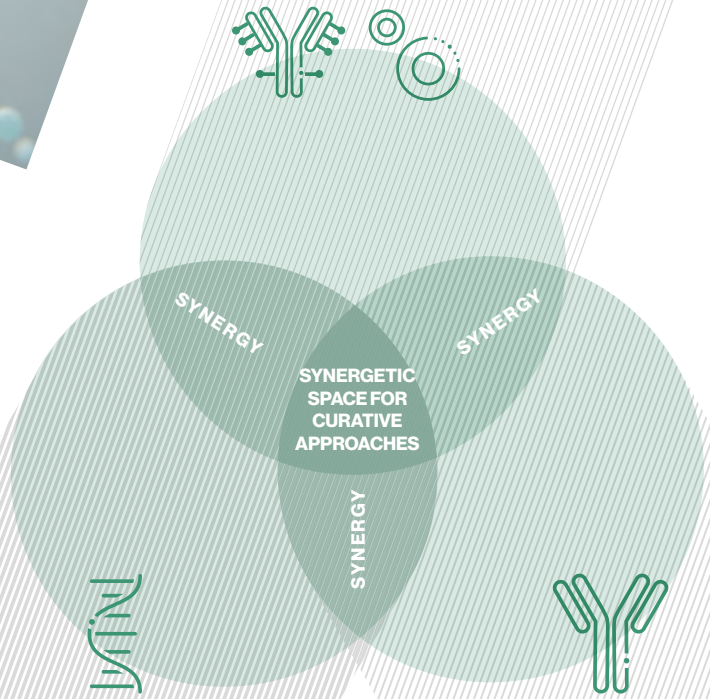
Targeted therapies //

Cell therapies are designed to **equip** certain immune cells of the patients physically with structures (receptors), enabling them to recognize cancer cells and orchestrate their elimination.

Antibody-drug conjugates (ADCs) are designed to targetedly **deliver** a chemotherapy to tumor cells. Unlike traditional chemotherapy, cancer treatments with ADCs are designed to minimize the impact on healthy cells.

SELECTED TARGETS

HER-2 CLDN6



SELECTED TARGETS

SHARED TUMOR TARGET TPTE

PATIENT- INDIVIDUAL TUMOR TARGET

mRNA vaccines//

mRNA vaccines are designed to **teach** the immune system about features on the surface of cancer cells (targets), supporting immune cells to recognize and destroy them.

Immuno-modulators //

Mono- and bispecific antibodies are designed to **modulate** the activity of immune cells and in some cases cancer cells, enhancing the immune response against cancer cells.

SELECTED TARGETS

PD-L1 EpCAM

Simplified illustration

We have been evaluating combinational therapies since 2014. Here is a selection of a few currently running clinical trials:

BNT211 //

The product candidate BNT211 combines a CAR-T cell therapy candidate with an mRNA vaccine candidate. For the CAR-T cell therapy candidate, patients' certain immune cells are equipped with a receptor to recognize the target protein CLDN6 and precisely attack cancer cells. The mRNA vaccine candidate encodes for CLDN6 and is designed to stimulate these CAR-T cells' persistence and functionality in the body, complementing the CAR-T cells in a synergistic manner. This approach is aimed at more efficient recognition and elimination of cancer cells. BNT211 is currently being evaluated in Phase 1/2 clinical trials in patients with germ cell tumors.

Claudin-6 (CLDN6) is a surface protein expressed on multiple solid tumors such as ovarian cancer, sarcoma, testicular cancer, endometrial cancer and gastric cancer.

AUTOGENE CEVUMERAN/BNT122[1] + CHECKPOINT INHIBITOR //

This potential treatment approach combines two different molecules to fight cancer. The individualized mRNA vaccine candidate BNT122 is designed to provide immune cells with information about the patient's unique cancer cells and induce an immune response against the tumor. The checkpoint inhibitor is an antibody that keeps cancer cells from suppressing immune cells. This combinatory approach is intended to lead to a stronger and more specific immune response and elimination of cancer cells. BNT122 is currently being evaluated in Phase 2 clinical trials in patients with melanoma.

1) In collaboration with Genentech, a member of the Roche Group.

ACASUNLIMAB/BNT311[1] + CHECKPOINT INHIBITOR //

This investigational treatment approach consists of two antibodies and is intended to target cancer cells while enhancing immune cell functions in a potentially synergistic manner. BNT311 is a bispecific antibody that is designed to simultaneously address two targets at once: It binds to 4-1BB molecules, which are expressed on specific immune cells, with the aim of enhancing their function. It also binds to PD-L1 proteins, which are expressed on tumor cells, with the aim of preventing them from silencing immune cells. BNT311 is combined with the current standard of care, which is a checkpoint inhibitor which also keeps cancer cells from suppressing immune cells. This combinational treatment approach is intended to increase the count of active immune cells that are able to recognize and eliminate cancer. BNT311 is currently being evaluated in Phase 2 clinical trials in patients with solid tumors, including non-small cell lung cancer and endometrial cancer.

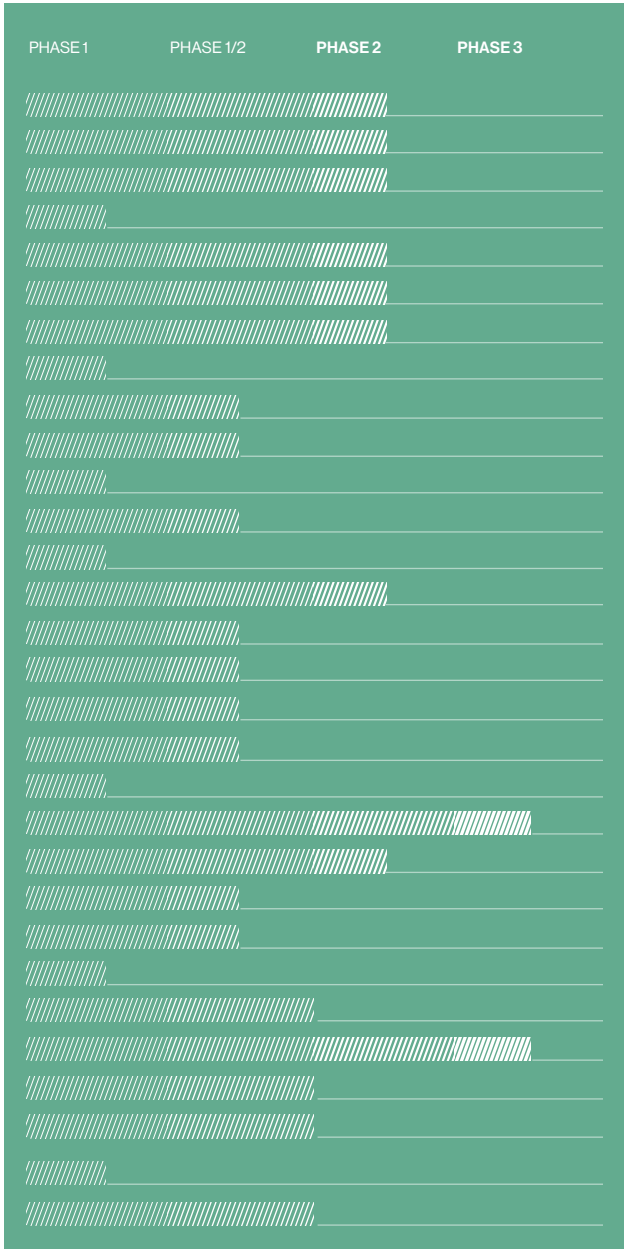
1) In collaboration with Genmab.

OUR PIPELINE

We are advancing a diversified portfolio of product candidates derived from our four drug classes focused on the potential treatment of cancer, infectious diseases and other serious diseases of unmet patient need.

ONCOLOGY //

DRUG CLASS	PLATFORM	PRODUCT CANDIDATE	INDICATION (TARGET)	RIGHTS[1]	COLLABORATOR/ PARTNER
mRNA	FixVac	BNT111	Advanced, R/R melanoma	Fully owned[2]	
		BNT113	Metastatic/R/R HPV16+ head and neck cancer		
			1L metastatic metastatic non-small cell lung cancer		
		BNT116	Advanced/metastatic non-small cell lung cancer		
	iNeST	BNT122 (autogene cevumeran)	1L advanced melanoma	Collaboration	Genentech[3]
			Adjuvant colorectal cancer		
			Adjuvant pancreatic ductal adenocarcinoma		
			Multiple solid tumors		
	RiboMabs	BNT142	Multiple solid tumors (CD3×CLDN6)	Fully owned	
	RiboCytokines	BNT151	Multiple solid tumors (IL-2 variant)	Fully owned	
		BNT152 + BNT153	Multiple solid tumors (IL-7, IL-2)		
CELL THERAPIES	CAR-T cells + CARVac	BNT211	Multiple solid tumors (CLDN6)	Fully owned	
	Neoantigen-based T cells	BNT221	Refractory metastatic melanoma	Fully owned	
PROTEIN-BASED THERAPEUTICS	Antibody-drug conjugates	BNT311/GEN1046 (acasunlimab)	aPD(L)1-R/R metastatic NSCLC (PD-L1×4-1BB)	Collaboration	Genmab
			Multiple solid tumors (PD-L1×4-1BB)		
		BNT312/GEN1042	Multiple solid tumors (CD40×4-1BB)[4]		
		BNT313/GEN1053	Multiple solid tumors (CD27)		
		BNT314/GEN1059	Multiple solid tumors (EpCAM×4-1BB)		
		BNT322/GEN1056	Multiple solid tumors		
		BNT316/ONC-392 (gotistobart)	aPD(L)1-R/R metastatic NSCLC (CTLA-4)	Collaboration	OncoC4
			Platinum-resistant ovarian cancer (CTLA-4)		
			Metastatic castration-resistant prostate cancer (CTLA-4)		
	Next-generation immune checkpoint modulators		Multiple solid tumors (CTLA-4)		
	Targeted cancer antibodies	BNT321	Pancreatic cancer (sLea)	Fully owned	
		BNT323/DB-1303	Multiple solid tumors (HER2)	Collaboration	Duality Biologics
			2L+, HR+/HER2-low metastatic breast cancer (HER2)		
		BNT324/DB-1311	Multiple solid tumors (B7H3)	Collaboration	MediLink Therapeutics
		BNT325/DB-1305	Multiple solid tumors (TROP2)		
		BNT326/YL202	Multiple solid tumors (HER3)		
SMI[5]	Toll-like receptor binding	BNT411	Multiple solid tumors (TLR7)	Fully owned	

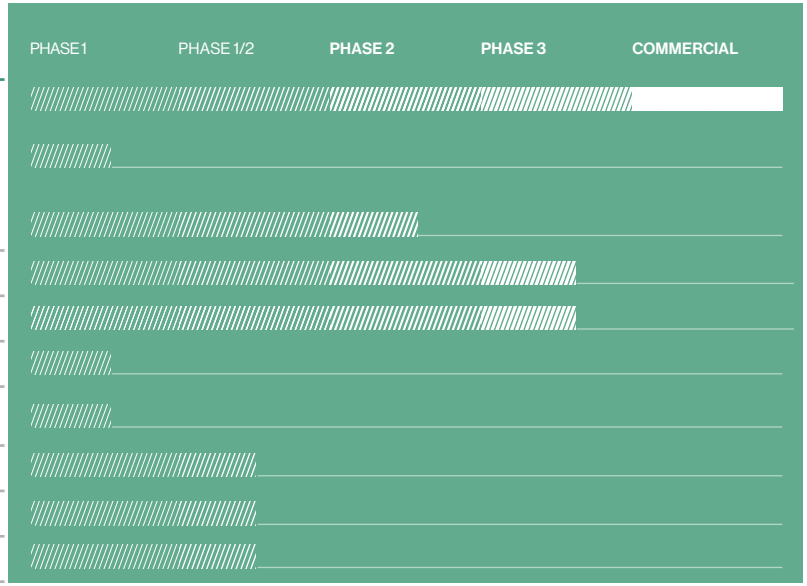


As of: March 20, 2024

1) For further details about BioNTech's rights see quarterly reports under *https://investors.biontech.de/financials-filings/quarterly-reports*. **2)** FixVac platform is fully owned by BioNTech. The BNT111 and BNT116 Phase 2 trials are jointly conducted with Regeneron as part of a cost-sharing strategic collaboration. **3)** A member of the Roche Group. **4)** Two Phase 1/2 clinical trials in patients with solid tumors are ongoing in combination with ICI+/- chemotherapy. **5)** Small molecule immunomodulators.

INFECTIOUS DISEASES //

DRUG CLASS	PRODUCT CANDIDATE	INDICATION	RIGHTS[1]	COLLABORATOR/ PARTNER
mRNA	BNT162b2	COVID-19	Collaboration	Pfizer Fosun Pharma
	BNT162b2+BNT162b4 (T-cell enhancing)			
	BNT162b5/6/7 (stabilized spike antigen)			
	BNT162b2+BNT161[6]	COVID-19 – Influenza combination	Collaboration	Pfizer
	BNT161	Influenza	Collaboration[7]	Pfizer
	BNT163	Herpes simplex virus	Collaboration	University of Pennsylvania
	BNT164	Tuberculosis[8]	Fully owned	Funded by Bill & Melinda Gates Foundation
	BNT165	Malaria[9]	Fully owned	
	BNT166	Mpox	Fully owned	Funded by CEPI[10]
	BNT167	Shingles	Collaboration	Pfizer



As of: March 20, 2024

1) For further details about BioNTech's rights see quarterly reports under *https://investors.biontech.de/financials-filings/quarterly-reports*. **6)** The COVID-19-Influenza combination is a Phase 3 trial in partnership with Pfizer. Further development is subject to entering into a definitive agreement. **7)** Out-licensed to Pfizer **8)** Two Phase 1 clinical trials are ongoing (NCT05537038, Germany and NCT05547464, Republic of South Africa). **9)** A Phase 1 clinical trial (NCT05581641) and a Phase 1/2 clinical trial (NCT06069544) are ongoing. **10)** Coalition for Epidemic Preparedness Innovations (CEPI).

FACTS AND FIGURES

OUR DIVERSE COMPANY

~ 6,300

EMPLOYEES

> 2,500

OF WHICH ARE IN RESEARCH & DEVELOPMENT

> 80

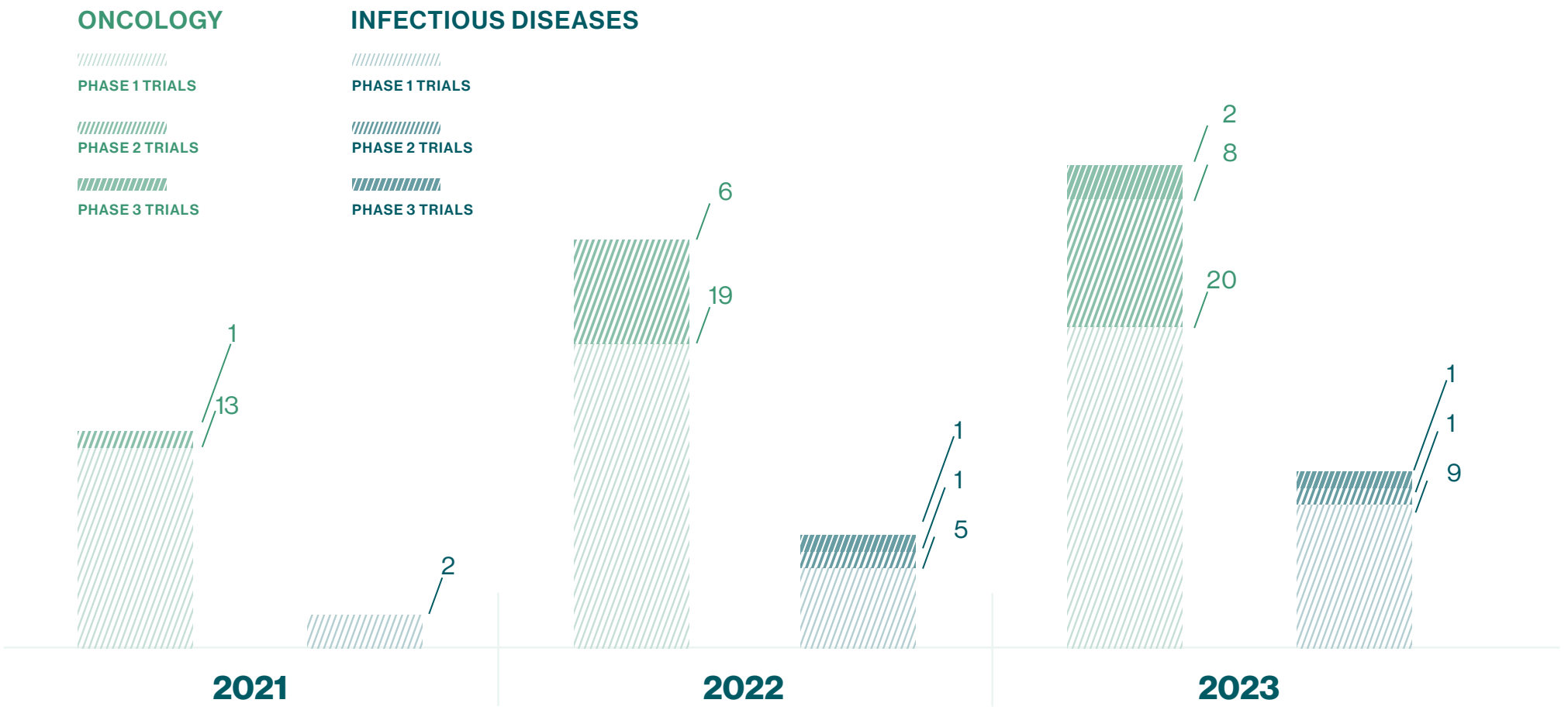
NATIONALITIES FROM
A LIKE AFGHANISTAN TO Z LIKE ZAMBIA

~ 51%

FEMALE EMPLOYEES
IN THE TOTAL WORKFORCE

All figures according to BioNTech's annual report on Form 20-F for the year ended December 31, 2023 available on *https://investors.biontech.de/node/15956/html*; accessed March 22, 2024.

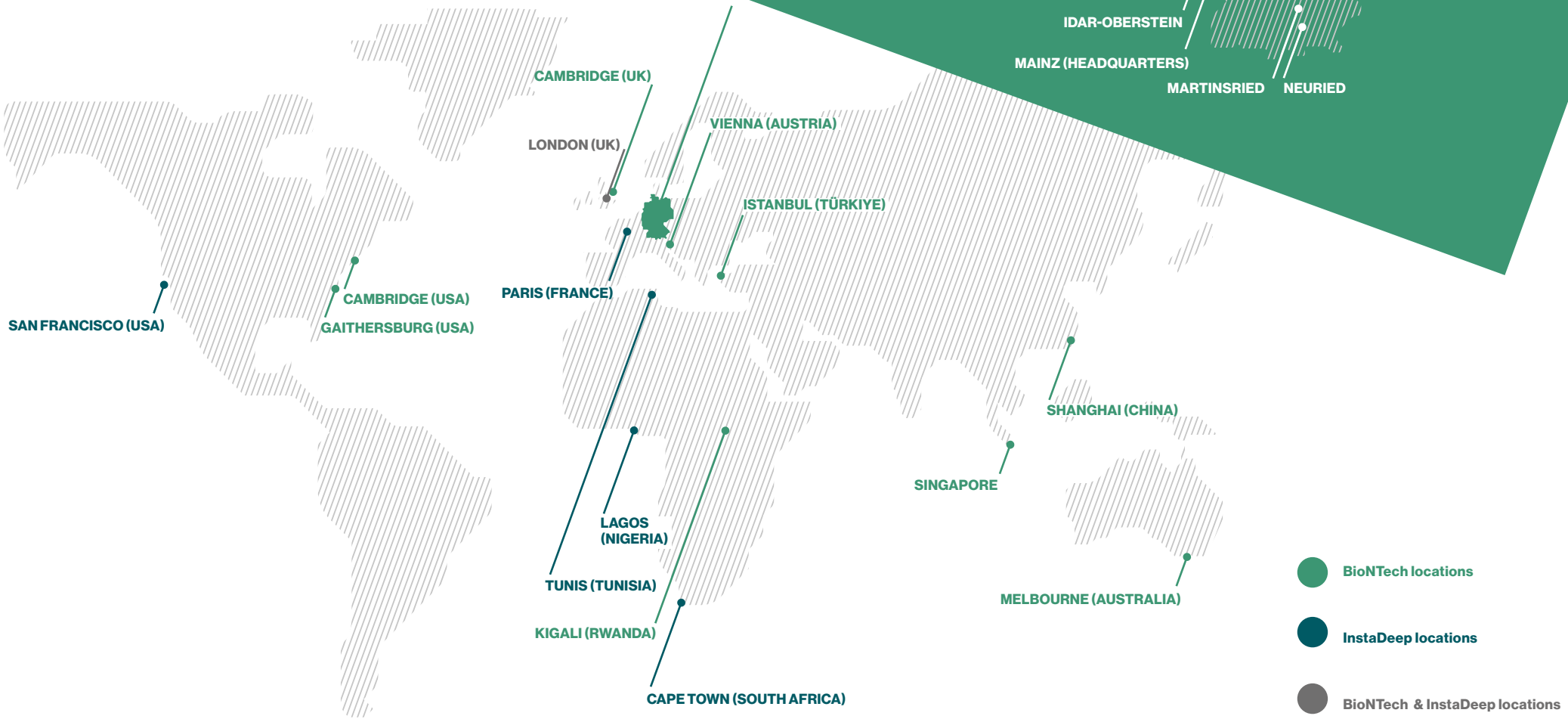
OUR INNOVATIVE PIPELINE



Sources: 2023: 20-F; 2022: 20-F, Link: https://investors.biontech.de/node/14881/html; 2021: 20-F, Link: https://investors.biontech.de/node/9571/html; Phase 1 also includes Phase 1/2 trials.

OUR GLOBAL FOOTPRINT[1]

LOCATIONS GLOBALLY //



LOCATIONS IN GERMANY //

1) As of March 20, 2024.

LETTER FROM THE MANAGEMENT BOARD

SEAN MARETT
CHIEF BUSINESS OFFICER AND CHIEF COMMERCIAL OFFICER

RYAN RICHARDSON
CHIEF STRATEGY OFFICER

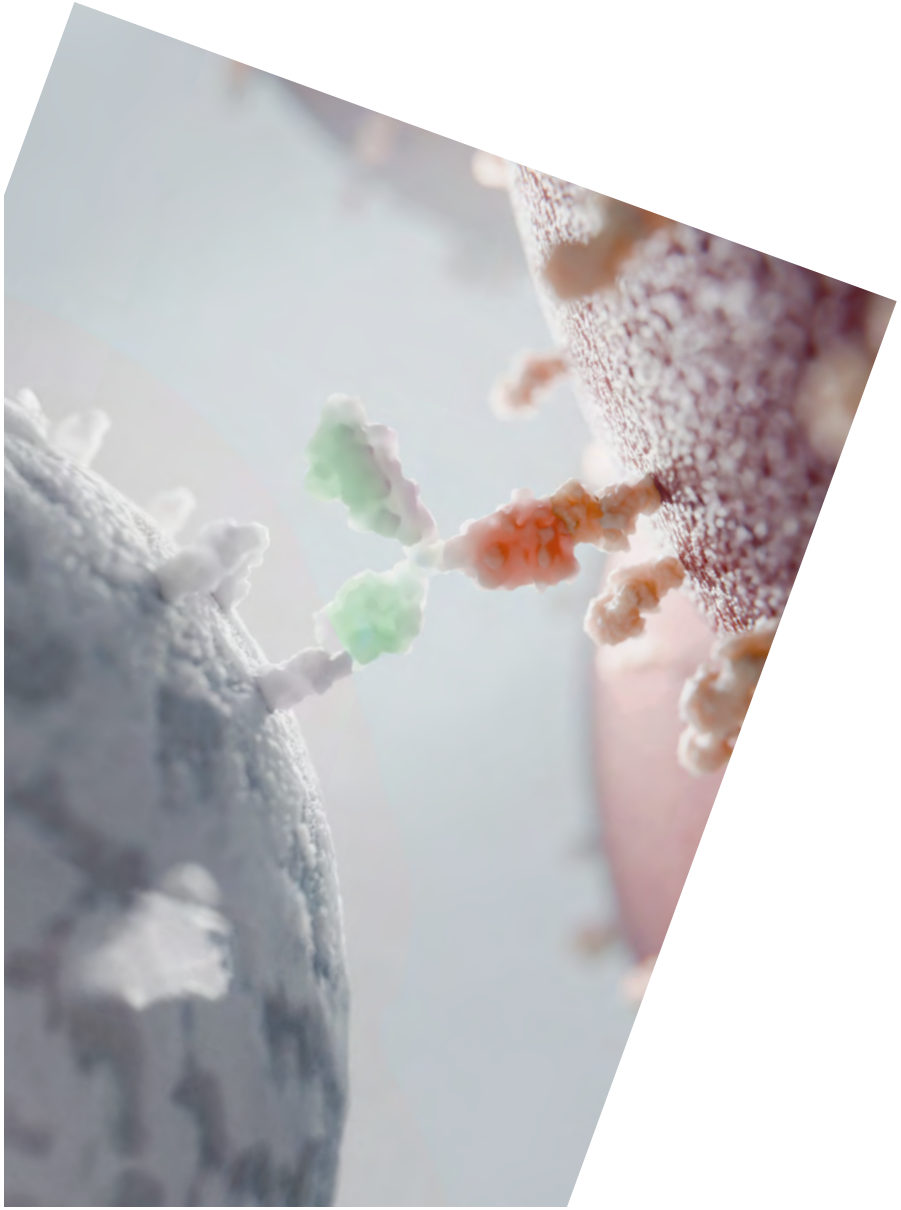
JAMES RYAN, PH.D.
CHIEF LEGAL OFFICER

JENS HOLSTEIN
CHIEF FINANCIAL OFFICER

SIERK POETTING, PH.D.
CHIEF OPERATING OFFICER

PROF. ÖZLEM TÜRECI, M.D.
CHIEF MEDICAL OFFICER

PROF. UGUR SAHIN,M.D.
CHIEF EXECUTIVE OFFICER



DEAR SHAREHOLDERS,

"Acting together" – the title of this year's annual report – reflects our commitment to developing therapies with combination or synergistic potential with the aim of revolutionizing the field of medicine.

2023 was a year in which we made good progress on many fronts: maintaining our position in the COVID-19 vaccine market, advancing our oncology pipeline, and strengthening our organization in preparation of the next growth phase, including our planned product launches in oncology. We presented encouraging data from our oncology pipeline and now have an increasing number of mid- and later-stage clinical trials.

We believe that we have the financial ability to fund a diversified pipeline and to strengthen our core capabilities with external innovation. At the same time, we continue our efforts to support developing a global ecosystem to bring innovative therapies to patients where they are needed. Thus, we believe that we have the technology, the capabilities, and the team to work towards a new era of precision medicine.

OUR COVID-19 VACCINE FRANCHISE //

Last year, we demonstrated that we have successfully built a leading COVID-19 vaccine franchise in collaboration with our partner Pfizer Inc. ("Pfizer"), both commercially and scientifically.

This was underlined by our leading market position in the United States, the European Union ("EU"), and Japan.[1] Since 2021, we have shipped more than 4.5 billion doses of COVID-19 vaccines to over 180 countries and territories.[2] In 2023 alone, we distributed over 460 million total vaccine doses, of which over 190 million doses were our successfully launched Omicron XBB.1.5-adapted monovalent COVID-19 vaccine.[3]

As we transitioned out of the pandemic into a more endemic-like situation, 2023 helped us better understand the future demand for COVID-19 vaccines. We expect COVID-19 to remain an annual seasonal disease with peaks in the respiratory infection season: This means that vaccinations are likely to largely shift to annual seasonal use, and we are adapting our company accordingly.

The transition of SARS-CoV-2 to an endemic infectious disease had an effect on our 2023 revenues, which were at approximately €3.8 billion. In the same period, we had less expenditures than originally planned, and we maintained a strong financial position.

1) Company assessment as of December 3, 2023. **2)** Partnered with Pfizer; cumulative doses shipped in the years 2021-2023. **3)** Figures according to BioNTech's annual report on Form 20-F for the year ended December 31, 2023, available at https://investors.biontech.de/node/15956/html; accessed March 22, 2024.

with approximately €17.7 billion in cash, cash equivalents, and security investments. We remained profitable in 2023, ending the year with approximately €0.9 billion in net profit. As we look to 2024, we expect our COVID-19 vaccine franchise to stay cash-generative given our partnership model with Pfizer. We will continue to focus on cost discipline, even as we invest in the next wave of innovation.

The World Health Organization ("WHO") expects that SARS-CoV-2 will remain a risk for people around the world as new variants emerge, making the need for addressing it critical.[4] In line with our goal to provide people worldwide with COVID-19 vaccines that are adapted to newly circulating virus variants or sublineages, we launched an Omicron XBB.1.5-adapted monovalent COVID-19 vaccine. We have introduced single-dose vials and non-frozen pre-filled syringes in the United States, which we delivered in line with the orders. We expect a transition from advanced purchase agreements to commercial market ordering in more geographies in the future.

Looking ahead, it is our goal to continue building a sustainable respiratory vaccine business and retain a market-leading position in COVID-19 vaccines. To this end, we have continued to work on combination vaccine candidates with Pfizer. Our combination vaccine candidate against COVID-19 and influenza moved into a Phase 3 trial in December 2023.

4) *https://www.who.int/europe/news/item/12-06-2023-with-the-international-public-health-emergency-ending--who-europe-launches-its-transition-plan-for-covid-19,* accessed February 15, 2024

We believe combining complementary treatment modalities may enable us to better leverage the potential of each technology to provide precise and personalized treatments to patients, improving outcomes and reducing the risk of resistance to therapies.

A GROWING MID- AND LATE-STAGE ONCOLOGY PIPELINE //

In 2023, we successfully advanced and broadened our diversified pipeline and now have multiple ongoing registrational trials. We also have leveraged our strong financial position with continued investment in R&D.

Our oncology pipeline is set to drive long-term growth for the company. It is based on our understanding that cancer is a highly individual disease. To this end, we want to lead in the individualization of cancer medicine and address the continuum of cancer treatments and bring novel therapies to patients, from early disease stages to late-stage metastatic disease.

We have built a portfolio of different platform technologies with combination potential and synergistic mechanisms of action, encompassing development programs for immunomodulators, cell and precision therapies, as well as personalized mRNA vaccines across a wide range of solid tumors and stages of treatment. With this approach, we aim for a widespread application of our platform technologies in combination with effective target selection to address a range of solid tumors in different stages of the disease with high medical need.

In 2023, we not only complemented the pipeline with in-licensed assets, but also presented encouraging data at various scientific conferences across our platform technologies. This included data for the investigational mRNA vaccine program autogene cevumeran/BNT122[5] in patients with adjuvant pancreatic ductal adenocarcinoma, our fully owned autologous cell therapy candidate BNT211 in combination with an mRNA booster, and data on programs we are developing with partners. The data presented for the antibody candidate BNT316[6] for patients with non-small cell lung cancer and the investigational antibody drug conjugate BNT323[7] for endometrium and breast cancer patients led to the start of pivotal Phase 3 trials for both assets.

We believe combining complementary treatment modalities may enable us to better leverage the potential of each technology to provide precise and personalized treatments to patients, improving outcomes and reducing the risk of resistance to therapies. We expect to continue building and maturing our oncology pipeline in 2024 in anticipation of potential commercial oncology launches as soon as 2026, if approved. We aim to have ten or more indication approvals by 2030.

ECOSYSTEM DEVELOPMENT //

Our vision is to improve the health of people worldwide by bringing innovative therapies to patients where they are needed. To this end, we initiated a number of public-private

5) I In collaboration with Genentech Inc. ("Genentech"), a member of the Roche Group. **6)** In collaboration with OncoC4, Inc. ("OncoC4").
7) In collaboration with Duality Biologics (Suzhou) Co. Ltd. ("DualityBio").

partnerships in 2023, which aim to support the development of immunotherapies and vaccines as well as expand access to our product candidates, building on our expertise in R&D as well as manufacturing.

We entered into a collaboration with the government of the United Kingdom to augment our clinical trial network for personalized mRNA immunotherapies with the aim to provide personalized cancer therapies for up to 10,000 patients by the end of 2030, either in clinical trials or as authorized treatments. In the state of Victoria in Australia, we entered a multi-year partnership aimed at strengthening the local mRNA ecosystem by supporting the development of innovative medicines from research to application in the clinic. We intend to progress the development of investigational mRNA-based medicines and other product candidates with the aim of treating up to 4,000 cancer patients in Australia and New Zealand over a ten-year period, either in clinical trials or as authorized treatments.

2023 also marked an important milestone in our efforts to help support equitable access to novel medicines globally: We inaugurated our site in Kigali, Rwanda, which is one of our initiatives to help build a sustainable and resilient African vaccine ecosystem. Our state-of-the-art manufacturing site in Kigali could become the first commercial-scale mRNA manufacturing facility on the continent, and we plan to equip it to manufacture a range of mRNA-based vaccines targeted to the needs of the African Union member states.

This ties in with our development activities for prophylactic mRNA vaccine candidates targeting infectious diseases such as tuberculosis, malaria, and HIV, as well as diseases with epidemic and pandemic potential, including mpox. Clinical trials for tuberculosis and malaria vaccine programs are already underway in South Africa and the United States, respectively. By the end of 2024, we plan to have ongoing clinical trials in Africa for vaccine candidates against malaria, tuberculosis, and HIV.

STRENGTHEN CORE CAPABILITIES WITH EXTERNAL INNOVATION //

We have made significant progress in enhancing our core capabilities with external innovation. The rationale behind these deals is to strengthen our backbone and complementary technologies, and we have already started to create value.

In 2023, we entered into licensing deals for six different clinical stage assets, including in-licensing an investigational antibody candidate from each of OncoC4 and Biotheus Inc. (“Biotheus”), as well as investigational antibody-drug conjugates from DualityBio and MediLink Therapeutics (Suzhou) Co., Ltd. (“MediLink”). Two of those assets – BNT316 and BNT323 – moved into pivotal trials within six months of signing the respective deal.

We also acquired InstaDeep Ltd. (“InstaDeep”) with the intent to integrate world-class capabilities in supercomputing, artificial intelligence (“AI”) research, and generative AI into drug design and delivery. Examples include optimization of mRNA and protein design, and end-to-end optimization for personalized medicines from genome and mutanome analysis to target prediction and manufacturing. We aim to implement AI and machine learning capabilities into our processes even more, planning to scale our platforms so that we are able to develop more precise products and provide them to patients more efficiently.

We will continue to focus on scaling the business for commercial readiness in oncology in multiple countries by the end of 2025. One step toward achieving this is our strategic collaboration with Autolus Therapeutics plc (“Autolus”), which we signed in February 2024. The collaboration grants us the option to access Autolus’ commercial and clinical site network, CAR-T cell therapy manufacturing capacities, and commercial supply infrastructure in a cost-efficient set-up. This has the potential to enable the expansion of our cell therapy program BNT211 into trials for multiple cancer indications.

“Acting together” is not only a description of our pipeline approach, but also a reflection of our culture.

A NOTE ON ACTING TOGETHER //

“Acting together” is not only a description of our pipeline approach, but also a reflection of our culture. At BioNTech, we believe in acting together not only within the company, but also with stakeholders, including our collaborators, business partners, regulators, community members, and many more. We saw during the COVID-19 pandemic that this approach was instrumental in successfully reaching a common goal, and we are convinced that by acting together, we will be able to work towards our vision of improving the health of people worldwide.

The development of the COVID-19 vaccine has transformed BioNTech. The realization of our oncology pipeline has the same potential to transform our company once more. However, this will only be possible thanks to the continued unrelenting commitment, passion, and hard work of our employees. We would also like to thank you, our shareholders, for your continued support and look forward to taking the next steps to turn our vision into reality.

Your Management Board,

Prof. Ugur Sahin, M.D.
Chief Executive Officer

Jens Holstein
Chief Financial Officer

Sean Marett
Chief Commercial Officer,
Chief Business Officer

Sierk Poetting, Ph.D.
Chief Operating Officer

Prof. Özlem Türeci, M.D.
Chief Medical Officer

Ryan Richardson
Chief Strategy Officer

James Ryan, Ph.D.
Chief Legal Officer

INTERVIEW WITH HELMUT JEGGLE AND UGUR SAHIN

“The COVID-19 vaccine has not only contributed significantly to BioNTech’s revenues but has also shown the efficiency of a business model which is based on innovative technologies.”

HELMUT JEGGLE
CHAIRMAN OF THE
SUPERVISORY BOARD

How would you summarize the year 2023?

HELMUT JEGGLE // While the years 2020 to 2022 were characterized by the development, large-scale production and supply of the COVID-19 vaccine together with Pfizer, 2023 was a year in which BioNTech refocused to advance a core area: our oncology pipeline. The Company tailored its strategy by in-licensing further product candidates in late-stage clinical development. These included antibody-drug conjugates, or ADCs, a new targeted form of chemotherapy. BioNTech’s goal is to be as efficient as possible in submitting these candidates for regulatory approval.

UGUR SAHIN // We believe antibody-drug conjugates represent an exciting and important advancement in medicine, and we expect their broad applicability in the treatment of cancer within the next 15 years. We have forged collaborations with powerful and innovative partners in this field with whom we are jointly developing these candidates. We envision an exciting opportunity to combine ADCs with our proprietary product candidates, which also aligns with our strategy of developing complementary and synergistic therapeutic approaches. By doing so, we aim to extend the reach of our therapies to broader patient populations, thereby making a tangible difference in their lives.

What goals did you set for yourself in 2023, and did you achieve them?

UGUR SAHIN // We had three overarching goals in 2023, all of which were successfully achieved at BioNTech. Our first goal was to close the financial year on a profitable note while maintaining our leadership in COVID-19 vaccines. This objective was met, largely due to our effective development and rollout of a variant-adapted vaccine. Second, we sought to strategically invest in our oncology pipeline, launching several potentially pivotal trials in 2023 while bolstering our technology platforms through strategic collaborations to further solidify our position in this area. Third, within the realm of infectious diseases, we successfully advanced our vaccine candidates targeting shingles, tuberculosis and mpox into clinical trials. We anticipate initial data for some of these candidates in 2024.

How significant is the COVID-19 vaccine business for BioNTech? Are there additional revenue streams for the Company?

UGUR SAHIN // The COVID-19 vaccine, including its seasonal adapted variant vaccines, are our only approved product to date. In 2023, we witnessed a pivotal transition from the pandemic phase to more and more seasonal vaccination campaigns. In many countries, a vaccination against COVID-19

is now recommended primarily for older individuals and those with underlying health conditions, leading to a corresponding decline in demand for the COVID-19 vaccine. Looking ahead, we anticipate an ongoing need for seasonal, variant-specific vaccines tailored to specific population groups. It's imperative for us to address this seasonal dynamic while simultaneously advancing the development of a combination vaccine targeting both COVID-19 and influenza. In addition to our COVID-19 vaccine business, we generate revenues through our service-based enterprises, including subsidiaries like InstaDeep, JPT Peptide Technologies, and IMFS, as well as revenues from our pandemic preparedness contract in Germany.

HELMUT JEGGLE // The COVID-19 vaccine has not only contributed significantly to BioNTech's revenues but has also shown the efficiency of a business model which is based on innovative technologies. From the initial stages of research and development to the establishment of robust production capacities and logistics infrastructure to meet the demand, BioNTech's comprehensive vertical integration exceeded the expectations set at the time of its IPO. This revenue stream is also serving as a valuable lesson in cost discipline, providing BioNTech with a defined financial framework to pursue other innovative projects. With this foundation in place, the Company now has the opportunity to solidify its business model and extend its success into oncology.

What expenditures do you expect in 2024, and where will you allocate investments in particular?

UGUR SAHIN // Our focus is specifically on three core areas: advancing potentially registrational trials with the aim of product launches in oncology, ensuring the Company's organizational launch readiness, and the ongoing development of our pipeline encompassing vaccine candidates targeting COVID-19 and other infectious diseases. The bulk of our expenditure is allocated to oncology, primarily to support more advanced-stage clinical trials and the launch readiness. Furthermore, we are advancing several vaccine candidates for infectious diseases into the next clinical phase. In addition, in 2024, we have further bolstered our international presence to facilitate clinical trials and prepare for potential market launches across various regions, including the US, the UK, Singapore, Rwanda, and Australia.

What are your goals for 2024 and the upcoming years in the field of oncology?

UGUR SAHIN // By the end of 2024, we aim to have a ten or more clinical trials with registrational potential across various indications within our pipeline. Our overarching target in oncology is to launch the first product, if approved, by 2026 and to secure ten indication approvals by 2030. Our vision is to transform BioNTech into a sustainable income-generating entity through a series of approvals, thereby delivering tangible value to patients, the society, investors, and the Company alike.

HELMUT JEGGLE // What Ugur Sahin is setting out here are very ambitious goals indeed. It is therefore important that the Company strikes a balance between R&D and commercialization. BioNTech had already started to build an organization to successfully commercialize its oncology products. This remains an important strategic aspect in 2024.

You have licensed new candidates. What is the rationale behind this?

UGUR SAHIN // The candidates we have in-licensed hold significant strategic importance for us because we believe they possess the potential to be used in patients to achieve a potent effect in advanced disease settings and could have synergies with our immunotherapies. For instance, ADCs offer the possibility to debulk large tumors to eradicate residual tumor cells through subsequent immunotherapy. Currently, we are assessing ADCs targeting specific types of cancer in the lung, breast, and gastrointestinal tract. In combination with ADCs, we expect to be able to extend the scope of our immunotherapies to advanced cancers.

HELMUT JEGGLE // At an early stage, BioNTech recognized the opportunity and combined a scientific pioneering spirit with strong entrepreneurship in the ADC space. It is noteworthy that two of the in-licensed product candidates, one an antibody candidate and the other an ADC candidate, are already being evaluated in Phase 3 studies.

Mr. Jeggle, in the 2021 annual report you said that BioNTech is fully financed until the next product launch. Do you stand by that statement? Will the Company propose a dividend to shareholders this year?

HELMUT JEGGLE // Given the Company’s ambitious targets, there is currently little latitude for dividends, which will not be proposed at the upcoming Annual General Meeting. BioNTech’s primary objective is to develop the Company into sustainable profitability by 2030 without the need for additional capital. The potential for future dividends is also contingent upon sales from our COVID-19 vaccine business. Hence, in 2023, we established a Product Committee at BioNTech to further develop the product pipeline with a target-oriented approach, paving the way for market access.

The feedback we have received by both private and institutional investors is that they recognize the Company’s potential, grounded in its scientific standing, and endorse the

strategy of leveraging BioNTech's financial position to spearhead the next wave of potential product launches.

What was BioNTech's strategic direction when it went public, and has the Company maintained that course?

UGUR SAHIN // Our objective was to pioneer the next generation of immunotherapies, aiming to significantly enhance treatment outcomes for cancer patients. Our focus was and still is to help shape a new era of personalized medicine as pioneers. In 2023, we found ourselves poised to realign with our original mission. The notable difference from 2019 lies in our newfound financial and organizational resources that empower us to turn our vision into reality on a grander scale. This achievement is based on the dedication and ambition of our teams, whose passion has propelled us forward. We extend our gratitude to our colleagues who work diligently with us every day to actively shape the medicine of tomorrow.

HELMUT JEGGLE // From my perspective, two key factors stand out: First, BioNTech now has the autonomy to self-finance, based on its COVID-19 vaccine business. Consequently, influence of external risks has been reduced. Second, the Company has experienced a remarkable surge in both growth and expertise – arguably surpassing what was foreseeable back in 2019.

You have a well-filled pipeline with over 30 candidates in oncology alone and across different drug classes. How is that made up? Why do you need so many candidates?

UGUR SAHIN // Cancer is not a single disease, but rather a spectrum of diseases, each unique in its characteristics. Hence, our pipeline is structured into three distinct therapeutic approaches. First, we are dedicated to developing candidates for targeted therapies, which encompass modalities such as CAR-T cell therapies or ADCs. These interventions are primarily tailored to combat cancer in patients at advanced stages of the disease. Second, our focus extends to the development of immunotherapies, exemplified by antibodies, aimed at fortifying the immune system. This holds the potential to exert long-term control over tumors in some patient populations. The third component of our pipeline centers on personalized mRNA cancer vaccine candidates designed to prevent relapses and metastases effectively.

We pride ourselves on being among the few companies committed to researching a diversified toolbox comprising of various mechanisms of action, including the aspect of whether and how these could be combined and act synergistically to enhance their effect. We are initially evaluating the therapeutic approaches in indications with a high medical need or for larger patient populations for which we see probability of approval. Our strategic intent is to position ourselves to commercialize these products across various indications in the future, thereby expanding their reach and impact.

What are you looking forward to in 2024?

HELMUT JEGGLE // It is an important year for BioNTech. The year 2024 marks a new beginning, and that always means something exciting. This year, our focus is on fortifying our organizational infrastructure for commercialization in furtherance of launch readiness, and on enhancing transparency in product development progress, particularly in potentially registrational trials. BioNTech has consistently demonstrated its strength as a cohesive team, and I want to extend my heartfelt appreciation for everyone's passion, dedication, and drive. Without each individual's contribution, the Company would not be where it stands today.

UGUR SAHIN // Thank you, Helmut, I share your sentiment wholeheartedly. As part of this remarkable team, I am eager to propel our candidates toward market launch, pending regulatory authorization, and demonstrate the value they bring to both the Company and to society. We have a unique opportunity to drive transformative change in the field of medicine, and I firmly believe we have everything it takes to establish BioNTech as one of the leading global immunotherapy companies.

REPORT OF THE SUPERVISORY BOARD ON THE FINANCIAL YEAR 2023

PROF. RUDOLF STAUDIGL, PH.D.

PROF. ANJA MORAWIETZ, PH.D.

PROF. CHRISTOPH HUBER, M.D.[1]

HELMUT JEGGLE
CHAIRMAN OF THE SUPERVISORY BOARD

NICOLA BLACKWOOD[1]

MICHAEL MOTSCHMANN

ULRICH WANDSCHNEIDER, PH.D.

1) Nicola Blackwood was elected to the Supervisory Board on May 25, 2023. She succeeded Prof. Christoph Huber, M.D., who left the Supervisory Board after reaching the retirement age limit.

In the past year, BioNTech SE continued to transition towards becoming a leading global immunotherapy Company. The Company maintained its leading position for COVID-19 vaccines in key markets. At the same time, BioNTech focused on its growing oncology pipeline and advanced several candidates from different drug classes to later stages of development. Part of this effort also included the Management Board's strategic decision to license clinical projects in late-stage development to be able to further additional candidates towards regulatory submission and to potentially develop new oncology treatment standards in-house and combine them with other therapies.

In addition, BioNTech strengthened its technology platforms, digital capabilities, and infrastructure through corresponding investments and strategic partnerships. This includes the acquisition of InstaDeep Ltd. ("InstaDeep") as part of BioNTech's strategy to build world-leading capabilities in AI-driven drug discovery and the development of next-generation immunotherapies and vaccines to address diseases with high unmet medical needs.

Combining all these factors with the Company's strong financial position places BioNTech well for 2024. In the current financial year, the aim will be to deploy resources with the necessary level of cost discipline, while the Management Board will continue to focus on the oncology segment, and the Company is preparing to potentially launch its first oncology products in various markets.

Throughout the financial year 2023, the Supervisory Board, under my Chairmanship, performed its duties and obligations in accordance with the law and the Articles of Association, as well as its Rules of Procedure. At the Annual General Meeting on May 25, 2023, the Supervisory Board changed its composition: Prof. Christoph Huber, M.D. stepped down, and Baroness Nicola Blackwood was elected as a member of the Supervisory Board of BioNTech SE as his successor.

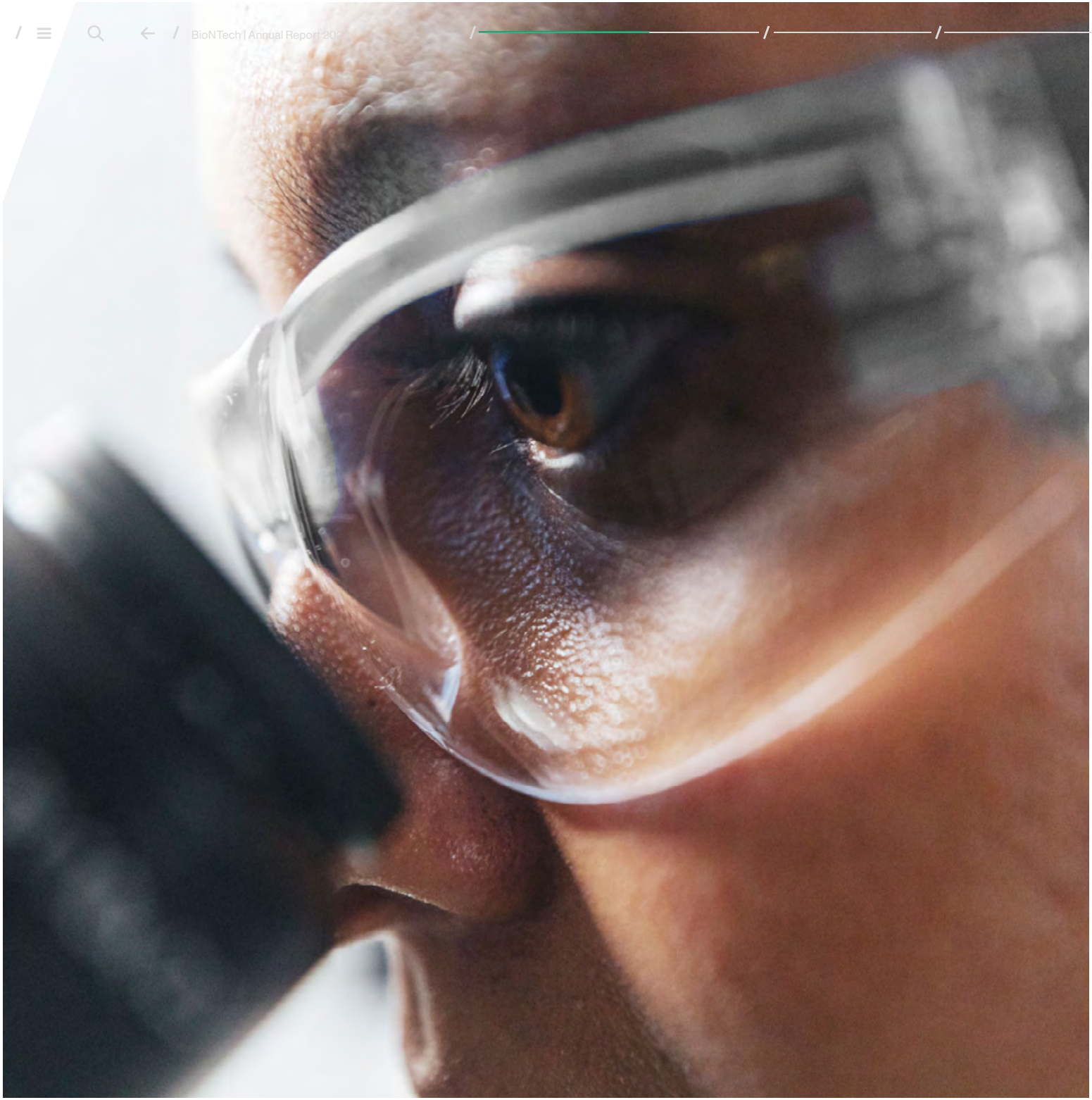
Nicola Blackwood is Chairwoman of the Advisory Board of Oxford University Innovation Ltd., CEO of Blackwood Intelligence Ltd., Chairwoman of the Advisory Board of Genomics England as well as an independent advisor. She complements the Board's established competence profile particularly with her expertise in the areas of science and innovation, as well as her strong strategic and analytical skills. Nicola Blackwood also has proven expertise in research and development, digitalization, and corporate social responsibility (CSR)/sustainability and international experience in the markets relevant to the Company. During the Annual General Meeting of the financial year 2023, Ulrich Wandschneider, Ph.D. and Michael Motschmann were re-elected, which contributes to the continuity and a sustainable long-term focus of the Company.

CONTROL AND MONITORING FUNCTION OF THE SUPERVISORY BOARD TOWARDS THE MANAGEMENT BOARD//

The Supervisory Board continuously monitored the Management Board, regularly advised it, and oversaw the strategic development of the Company.

As the Supervisory Board, we closely follow the rapid development of the Company, and we apply our know-how, entrepreneurial focus, and approach of agile control to support BioNTech's business activities and its team. Among other things, the Management Board regularly informed us about current business activities and future business planning (including financial, investment and personnel planning). In addition, we regularly consulted with the Management Board on the risk situation, risk management and compliance in the Company. As Chairman of the Supervisory Board, I was also in regular contact with the Management Board beyond the Supervisory Board meetings. Within this framework, I was routinely informed about all matters relating to the Company, including its legal and business relations with affiliated companies, and all significant business transactions and matters at affiliated companies.

On the basis of reporting by the Management Board, which was prepared in cooperation with the respective specialist departments, we discussed business developments and events of importance to the Company in detail. Where necessary, the Supervisory Board was supported in this by the respective responsible committees. We, as the Supervisory Board, maintain an active dialogue with the Management Board to embrace BioNTech's rapid development and to review their decisions, considering the opportunities and risks without any unnecessary delays. In doing so, we always keep in mind the Company's goals: for example, the goal of having several products that are market-ready by 2030.



The Supervisory Board was directly involved at an early stage in all decisions of fundamental importance to the Company. Where the law, the Articles of Association or the Rules of Procedure required the approval of the Supervisory Board for individual measures, a corresponding resolution was passed. The Supervisory Board approved the respective resolutions proposed by the Management Board after thorough examination and discussion.

Cooperation with the Management Board of BioNTech was characterized by responsible and goal-oriented action in every respect. The Management Board fully fulfilled its reporting obligations to the Supervisory Board, both verbally and in writing, to constantly enable the Supervisory Board to assure itself as to the legality and regularity, appropriateness, and economic efficiency of the management of the Company.

FOCUS TOPICS AND MEETINGS OF THE SUPERVISORY BOARD //

A total of six ordinary meetings were held in the financial year 2023, during which the strategic development of the Company was discussed, generally jointly with the Management Board. The 2023 meetings were held on March 08, March 23, May 10, May 25, September 14, and December 14, 2023. All members of the Supervisory Board attended the individual meetings except for the

meeting on March 23, which Prof. Rudolf Staudigl and I, Helmut Jeggle, were unable to attend. Members of the BioNTech Management Board also attended some of these meetings. All Management Board members attended the meetings on March 08, September 14, and December 14, 2023. In addition, Jens Holstein attended the meeting on March 23 and all Management Board members except for Prof. Özlem Türeci, M.D. attended the meeting on May 10. The meeting on May 25 was held without the Management Board. A short meeting was also held following the quarterly meeting on December 14, which was only attended by James Ryan, Ph.D. from the Management Board. A multi-day strategy workshop was held in March and September 2023, respectively, and was attended by the entire Supervisory Board and Management Board to discuss the Company's future strategic direction. Within the framework of the meetings and outside the meetings, the Supervisory Board also met and discussed regularly without the Management Board. All six ordinary meetings were held in person.

The focus of the ordinary meetings in the financial year 2023 was on deliberations regarding the continued development of the Company's business related to the Pfizer-BioNTech COVID-19 vaccine and the associated strategic decisions regarding adaptations to the Omicron variant and its sublineages, as well as decisions with regards to production, supply, delivery, and distribution of the vaccine worldwide. In addition, a focus was placed on deliberations regarding the Company's pipeline development in the areas of oncology and infectious diseases as well as on the completion of new strategic collaborations.

The Supervisory Board was also involved in decisions about the strengthening and extension of the developed corporate strategy, including the growth of the Company and the accompanying expansion into various regions worldwide.

In addition to the focus topic of the COVID-19 vaccine business and the pipeline expansion in the areas of oncology and infectious diseases, the Supervisory Board addressed the following topics during the 2023 financial year:

- Review of production of the COVID-19 vaccine, as well as its commercialization, network development, creation of a development plan adapted to changing population health needs worldwide, national and international distribution as well as facilitating global availability of the COVID-19 vaccine;
- Review of the expansion of distribution and commercialization of the COVID-19 vaccine and support of global vaccine supply to populations by entering into supply agreements as well as collaboration agreements with multiple companies and governments worldwide;
- Review of the advancement of the diversified portfolio of oncology product candidates and the achievement of clinical trial milestones in the areas of oncology and immunology, and development of IT processes to support clinical development;
- Review of strategy, structure and process development in the areas of commercialization, communication, digitization and cooperations at the respective sites;
- Review of the expansion of laboratory and production capacity and office space, as well as the development of new manufacturing facilities to expand production and distribution capacity worldwide, including development and construction of BioNTainers intended to expand vaccine production worldwide;
- Review of the Company's global growth and related measures, such as site expansion in Africa, Asia and Australia;
- Review of and participation in public-private partnerships to advance the development of immunotherapies through the expansion of clinical trials;
- Monitoring the Company's financing activities;

/ Completion of several collaborations, investments and licensing agreements, in particular with regard to strategic rationales;

/ Review of the established terms and parameters for determining the restricted stock units, or RSUs, announced in January 2024 under the BioNTech Employee 2020 Long-Term Equity Plan ("BioNTech Employee 2020 Equity Plan") for employees;

/ Setting the agenda and review of the draft resolutions for the 2023 Annual General Meeting;

/ Review and appraisal of the compensation granted and owed in the 2023 financial year and of the compensation system applied as part of the compensation report pursuant to Section 162 of the German Stock Corporation Act (AktG);

/ Review and monitor the achievement of the Company's 2023 goals and the setting of the budget for the 2024 financial year;

/ Review and discussion of the financial statements and the combined management report for BioNTech SE and the Group;

/ Review and discuss the effectiveness of the internal control system and risk management as well as the results of the annual auditor's review;

/ Consideration of all corporate governance issues and review of compliance with the recommendations of the Corporate Governance Code both in and after the 2023 financial year; and

/ Discussion and review of the Company's sustainability report.

COMMITTEES //

To implement its monitoring and advisory function, the Supervisory Board has formed three committees: an Audit Committee, a Compensation, Nomination and Governance Committee, and a Capital Markets Committee. The above-mentioned key topics were prepared by the committees, including the associated resolutions and issues, for subsequent consideration by the full Supervisory Board. Effective October 01, 2023, a new Product Committee was established.

The **Audit Committee** consisted of Prof. Anja Morawietz, Ph.D., Ulrich Wandschneider and Rudolf Staudigl throughout the 2023 financial year. Anja Morawietz is the Chair of the Audit Committee. In particular, the Audit Committee deals with monitoring the Company's accounting, monitoring the

establishment and effective functioning of internal controls over financial reporting, monitoring compliance with SOX regulations (Sarbanes-Oxley Act Section 404), and monitoring the establishment and effective functioning of the risk and compliance management system and the internal auditing system. For the quarterly financial statements as of March 31, June 30, and September 30, 2023, as well as the annual financial statements as of December 31, 2023, the Audit Committee held discussions with the auditors and representatives of the accounting department, discussed the key points of the audit, and discussed the publications in detail with the Management Board. For reports requiring approval by the Supervisory Board, the Audit Committee prepared the resolutions for the Supervisory Board's decision. The Committee met eight times in the 2023 financial year. Of these, a total of four meetings were held in person, three as hybrid meetings, and one meeting took place as a video conference. Ulrich Wandschneider was unable to attend one meeting; otherwise, all members of the Audit Committee attended all meetings.

All members of the Audit Committee qualify as "independent directors" for the financial year 2023 within the meaning of Rule 10A-3 under the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act") and Nasdaq Listing Rule 5605. In addition, all members have qualified as "audit committee financial experts" as defined under the Exchange Act. In addition, all members also have the special knowledge and experience in the field of accounting as well as expertise in the field of auditing as required by the German Corporate Governance Code. This includes knowledge and experience in the application of accounting principles and internal control and risk management systems, and special knowledge and experience in auditing financial statements. Anja Morawietz and Ulrich Wandschneider also possess knowledge of sustainability reporting and auditing.

Throughout the financial year 2023, Rudolf Staudigl and Michael Motschmann were members of the **Compensation, Nominating and Corporate Governance Committee**. Until May 25, 2023, Christoph Huber was part of the Committee. Since May 25, 2023, Nicola Blackwood has replaced Christoph Huber on this Committee. Rudolf Staudigl is the Chair of the Committee. The Compensation Committeedeals with fundamental issues relating to the compensation and determination of the salaries of the Management Board, and with the compensation of the Supervisory Board as well as the employee stock option programs. In the financial year 2023, it focused on the elections to the Supervisory Board and the implementation of new Management Board contracts to be concluded in 2023. For the new and re-elections of the Supervisory Board, the Committee made proposals to the full Supervisory Board. Furthermore, the Compensation, Nomination and Corporate Governance Committee reviewed the compensation system for the Management Board and Supervisory Board members by commissioning external consultants to conduct a benchmark analysis and discussed the result as well as possible future adjustments. In addition, the Committee held discussions to determine corporate goals, which were then discussed by the full Supervisory Board. The actual application of the compensation system in the 2023 financial year was assessed in the form of the compensation report in accordance with Section 162 of the German Stock Corporation Act (AktG). In the financial year 2023, the Committee also addressed the requirements for implementing a share repurchase program and discussed the introduction of shareholder guidelines with the Management Board. Additional possible performance-based employee shareholder programs which are in line with corporate objectives were discussed. In addition, the Committee addressed the development of a corporate governance standard for the Company that meets the requirements of both Nasdaq Global Select Market and the German Corporate Governance Code. The Committee met seven times during the 2023 financial year. The seven meetings took place as video conferences. Three meetings were only attended by Michael Motschmann and Rudolf Staudigl. All other meetings were attended by all members of the Committee.

The **Capital Markets Committee** consisted of me, Helmut Jeggle, Michael Motschmann, and Anja Morawietz throughout the financial year 2023. To this day, I continue to act as Chair of the Committee. The Capital Markets Committee advised the Supervisory Board on capital market measures which took place during the 2023 financial year, in particular measures taken to integrate InstaDeep following its acquisition, as well as other potential takeover, merger and acquisition activities. In the financial year 2023, the Committee also focused on the regular analysis of the Company's investor structure, investor expectations regarding BioNTech and their goals for the financial year 2023 as well as feedback from investors. The Committee held discussions on strategic corporate planning, share price performance, and analyst ratings. The Committee also held discussions on individual targets of potential M&A transactions, regularly discussed updates on planned or ongoing transactions, and engaged in discussions on the topic of communicating with investors. The Committee met four times during the 2023 financial year. All of these meetings took place as video conferences. All members of the Committee took part in all meetings.

Following extensive discussions in the Supervisory Board and two strategy workshops with the Management Board, it was decided to establish a new **Product Committee**. This Committee was formally formed on October 1, 2023. Its members are Ulrich Wandschneider, Nicola Blackwood and me, Helmut Jeggle. Ulrich Wandschneider serves as Chair of this Committee. The Product Committee's responsibilities include strategy, execution and communications advice in relation to relevant launch efforts as well as overseeing activities related to product development, launch plans and their implementation. Special attention is given to advising on the market potential of products in clinical development. Prior to the establishment of the Product Committee, several preliminary discussions were held between the members of the Committee and Ugur Sahin, a representative of the Management Board, to define the structure and responsibilities of the Product Committee. The Committee met once in the 2023 financial year. During this meeting, the focus was on discussing future work priorities, setting strategic goals, and laying the foundation for next steps. All members of the Committee took part in this in-person meeting.

CORPORATE GOVERNANCE //

Together with the Management Board, we thoroughly examined the recommendations of the Corporate Governance Code. BioNTech adheres to the recommendations of the Corporate Governance Code with the exception of the provisions explicitly listed in the Declaration of Conformity pursuant to Section 161 of the German Stock Corporation

Act (AktG) dated February 27, 2024, and for which an explanation is provided as to why these are not complied with. We will continue to support the Management Board in its efforts to fully comply with the recommendations of the German Corporate Governance Code in the future.

CONFLICTS OF INTEREST ON THE SUPERVISORY BOARD AND MANAGEMENT BOARD, SELF-ASSESSMENT, FURTHER TRAINING AND COMPETENCE PROFILE //

Conflicts of interest of Supervisory Board and Management Board members that may arise, for example, as a result of a consultancy or board function with customers, suppliers, lenders or other third parties, are disclosed in the interests of good corporate governance. There were no potential conflicts of interest for the Supervisory Board and Management Board in the 2023 financial year. Accordingly, neither the Supervisory Board nor the Management Board members waived their right to participate in the discussion of individual agenda items or to vote on the relevant resolutions.

As members of the Supervisory Board, we regularly participated in training and further education measures in the 2023 financial year. This included, e.g., various workshops and training events on topics relevant to the Company. In addition, the Supervisory Board received training from an external legal advisor commissioned by the Company on the topics of sustainability/CSR, cybercrime and common corporate risks. After the end of the financial year, the Supervisory Board conducted a self-assessment by completing a written questionnaire to evaluate the methods used by the Supervisory Board and the collaboration with the Management Board. This evaluation covered all key aspects of the Supervisory Board's work, including its committees, composition, competence profile, main topics, and its relationship with the Management Board. Following the evaluation of this self-assessment, the work of the Supervisory Board, its committees and the Management Board remains professional and cooperative. No fundamental need for change was identified.

The Supervisory Board established a competency profile for the entire body, which covers various specialist areas. As the Supervisory Board, we ensure that the competency profile is met by our members and updated as necessary. In addition, the Supervisory Board always endeavors to fill this competency profile when appointing members to the full body.

ANNUAL AND CONSOLIDATED FINANCIAL STATEMENTS AUDIT //

In accordance with the resolution of the Annual General Meeting on May 25, 2023, the Supervisory Board has commissioned EY GmbH & Co. KG Wirtschaftsprüfungsgesellschaft to audit the annual financial statements for the 2023 financial year.

The audit includes:

- the annual financial statements of BioNTech SE in accordance with HGB;
- the report on relations with affiliated companies pursuant to Section 313 para. 1 of the German Stock Corporation Act (AktG), the so-called dependency report;
- the consolidated financial statements prepared in accordance with Section 315e para. 3 in conjunction with para. 1 HGB on the basis of International Financial Reporting Standards (IFRS) as adopted by the EU;
- the consolidated financial statements, which have been prepared in accordance with IFRS as issued by the International Accounting Standards Board (IASB) and filed on Form 20-F with the U.S. Securities Exchange Commission after our approval;
- the combined management report; and
- the audit of the internal control system.

The financial statements prepared by the Management Board on March 18, 2024, i.e., the annual financial statements and the dependency report of BioNTech SE, and the

consolidated financial statements and the management report for the Group and the Company for the 2023 financial year, were submitted to all members of the Supervisory Board.

Together with the Management Board, we prepared a compensation report for the first time for the 2023 financial year in accordance with Section 162 of the German Stock Corporation Act (AktG), which was adopted on March 18, 2024, and is disclosed as a separate report.

We also received the auditors' reports on the accounting records, the annual financial statements, the dependency report, the consolidated financial statements as well as the management report on the Group and the Company for the financial year 2023, each of which was issued with an unqualified opinion on March 20, 2024. The auditors' report was discussed by the Audit Committee with the Management Board and the auditors. The Audit Committee particularly focused on key audit matters described in the auditors' report, including the audit procedures performed. This was followed by a discussion in the Supervisory Board.

On our part, we have audited the annual financial statements, the dependency report, the consolidated financial statements and the management report for the Group and the Company for the 2023 financial year.

Based on the final results of our audit, we have no objections to raise. We consider the auditor's assessment of the annual financial statements to be accurate. We approve the annual financial statements and the consolidated financial statements prepared by the Management Board. The former is thus adopted. The Supervisory Board also concurs with the management report on the Group and the Company. Based on the final result of its examination, the Supervisory Board also has no objections to the declaration by the Management Board on relations with affiliated companies in the dependency report.

EXPRESSION OF GRATITUDE OF THE SUPERVISORY BOARD //

Last year, BioNTech set important milestones for the future. The Company plans to drive clinical development in the field of oncology towards potential approvals. In addition, it is addressing infectious diseases with high medical need with its vaccine candidates.

As often is the case, success like this comes from the sum of several things.

The Supervisory Board would like to thank the investors for their trust, the members of BioNTech's Management Board and all employees across the globe for their performance over the past year.

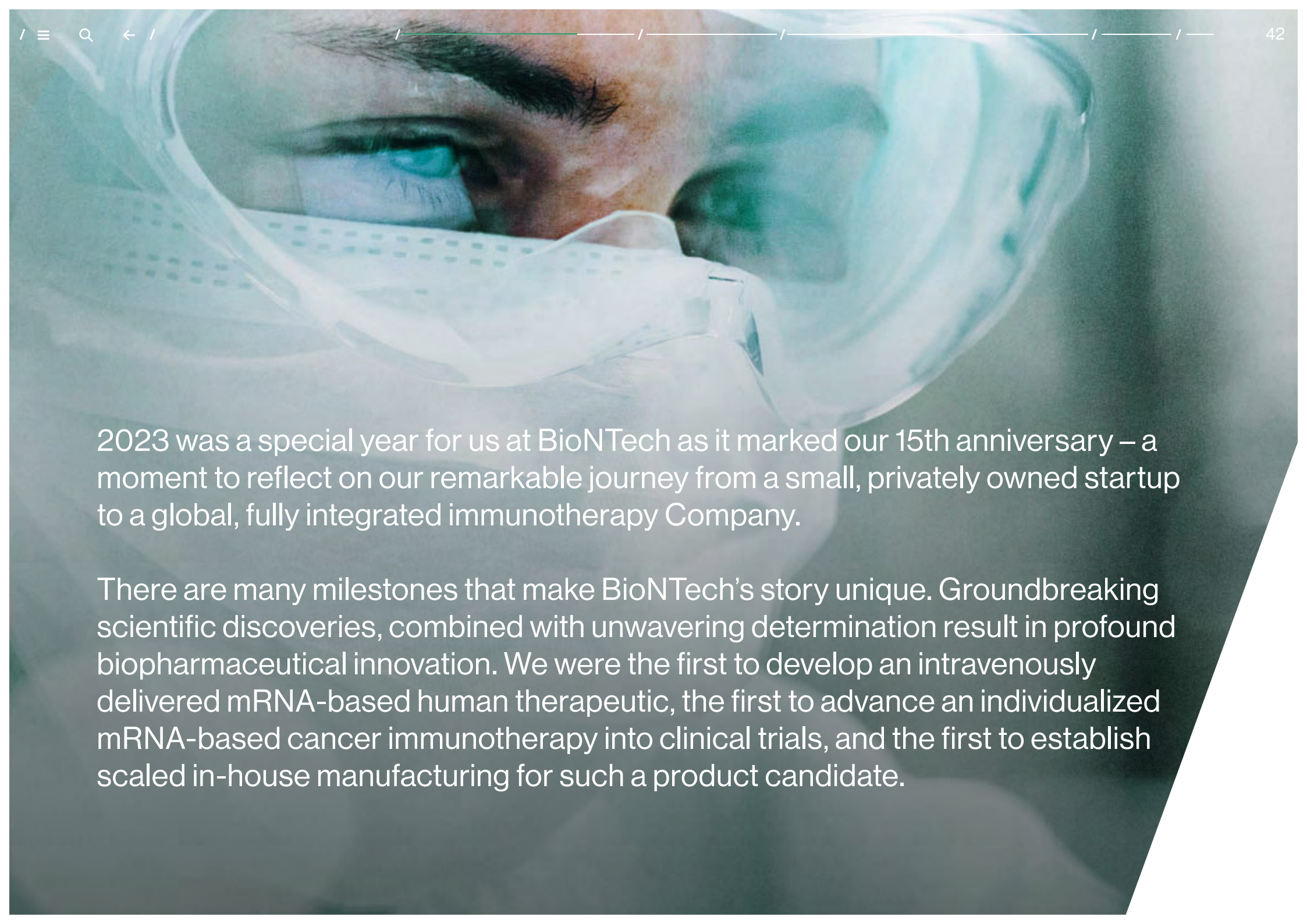
With great commitment, passion and an unwavering belief in the Company's vision, they have contributed significantly to its success and have always collaborated with the Company's corporate bodies.

Munich, March 20, 2024
BioNTech SE

Helmut Jeggle
Chairman of the Supervisory Board

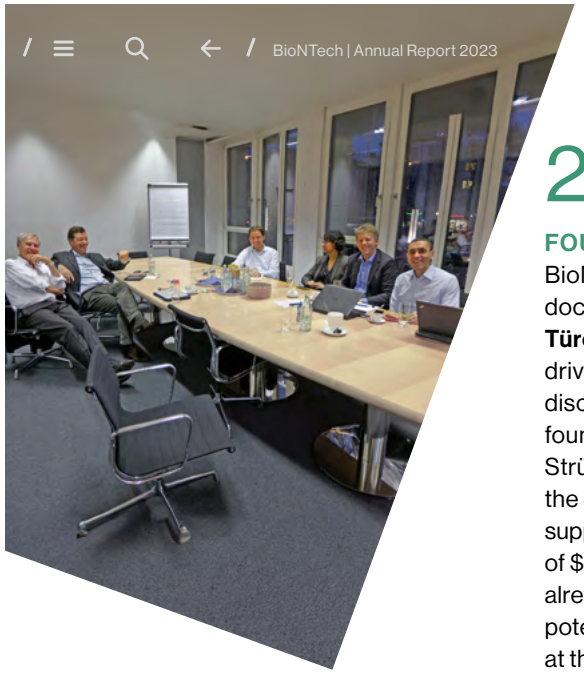
FROM FOUNDING VISION TO GLOBAL IMPACT

BioNTech's
15-year journey



2023 was a special year for us at BioNTech as it marked our 15th anniversary – a moment to reflect on our remarkable journey from a small, privately owned startup to a global, fully integrated immunotherapy Company.

There are many milestones that make BioNTech's story unique. Groundbreaking scientific discoveries, combined with unwavering determination result in profound biopharmaceutical innovation. We were the first to develop an intravenously delivered mRNA-based human therapeutic, the first to advance an individualized mRNA-based cancer immunotherapy into clinical trials, and the first to establish scaled in-house manufacturing for such a product candidate.



2008

FOUNDING OF THE COMPANY //

BioNTech was founded in 2008 by medical doctors and scientists **Ugur Sahin, Özlem Türeci and Christoph Huber.** They were driven by the vision to translate scientific discoveries into life-saving treatments. The founding also involved Andreas and Thomas Strüngmann, the MIG funds, and Chairman of the Supervisory Board Helmut Jeggle. They supported the founding idea with seed financing of $180 million. Profs. Sahin and Türeci had already spent decades researching innovative potential treatment options to address cancer at this point. With BioNTech, they sought to advance this research and develop potential individualized mRNA-based cancer vaccines and other precision cancer treatments.

CHRISTOPH HUBER

Pioneering hematologist, oncologist, and translational immunologist **Prof. Christoph Huber, M.D.** co-founded BioNTech and served as a member of the Company's Supervisory Board until his retirement in 2023. With his many years of dedication, his passion, and his pioneering spirit, he made decisive contributions to the translation of scientific research into practical applications, such as the characterization of surface structures of cancer cells, throughout his career and contributed significantly to the diversified pipeline the Company can draw on today.

2012

INITIATION OF FIRST CLINICAL TRIAL //

In 2012, we started our first Phase 1 clinical trial with an RNA immunotherapy in melanoma. While every patient's tumor is unique, tumors can share certain sets of markers, known as antigens, that are not found in healthy cells. This is the idea behind one of our mRNA-based immunotherapy approaches, now known as **FixVac**. In a Phase 1 clinical trial, which BioNTech initiated in 2015, patients with melanoma were treated with one of these FixVac investigational candidates; the first results of the trial were published in the high-ranking journal *Nature* in 2020.

KATALIN KARIKÓ

mRNA scientist **Prof. Katalin (Kati) Karikó** first met the BioNTech team in **2013** and decided to join the Company shortly afterward. Like Ugur Sahin and Özlem Türeci, she believed in the potential of mRNA from the very beginning and focused on improving the therapeutic potential of the molecule. In 2014, the three scientists published their findings in a comprehensive overview in *Nature Reviews Drug Discovery*. In 2023, Kati Karikó and her colleague Drew Weissman from the University of Pennsylvania received the Nobel Prize in Physiology or Medicine for pioneering nucleoside base modifications, which were one of the key innovations applied to develop the Pfizer-BioNTech COVID-19 vaccine.

2014

FIRST TRIAL WITH FULLY INDIVIDUALIZED mRNA VACCINE CANDIDATE //

We took a decisive step towards potential individualized cancer therapies in 2014 by initiating the first Phase 1 clinical trial with our individualized mRNA-based immunotherapy approach, called **iNeST** (individualized neoantigen specific immunotherapy). Results were published three years later in *Nature*.

2015

SEAN MARETT

Sean Marett joined BioNTech in **2012** and played a crucial role in ensuring BioNTech's liquidity in the early stages of development and supporting its growth. He successfully executed BioNTech's first collaboration agreement in his first year, followed by numerous revenue-generating agreements with high-profile pharmaceutical companies. Sean's outstanding negotiation and leadership skills have been instrumental in the Company's transformation into a next-generation immunotherapy Company.

EXPANDING OUR TOOLKIT //

We started to expand our toolkit in 2015. Cancer is not just one disease, but many. Cancer differs from patient to patient and even within a patient's tumor there are different cancer cells. This is why there is no one-size-fits-all approach to treating cancer that works for all patients. A whole toolkit of therapeutic approaches is needed. We at BioNTech are developing our proprietary technologies and are also teaming up with other organizations to build such a toolkit. In 2015, we entered into a **collaboration with Genmab** to jointly research and develop novel mono- and bispecific cancer antibodies. Many more collaborations have followed in the years to come. Today, we work together with Genmab, **DualityBio, Genentech, Genevant, OncoC4, Regeneron, Pfizer**, and others.

Together, we have developed a diversified toolkit consisting of platform technologies with combinational and synergistic potential which we evaluate in clinical trials, including **mRNA therapeutics, cell therapies, and protein-based precision therapeutics.**

2018

SERIES A FINANCING ROUND //

We secured a Series A funding of $270 million in 2018. As part of the financing, we gained additional investors who believed in BioNTech and our vision. They supported our global expansion and the accelerated development of our unique oncology pipeline with precision and personalized candidates.

2019

INITIAL PUBLIC OFFERING //

Our Initial Public Offering (IPO) was in 2019. With gross proceeds of $150 million, we have since been listed on the **NASDAQ** Global Select Market under the ticker symbol “BNTX”.

2020

PROJECT LIGHTSPEED //

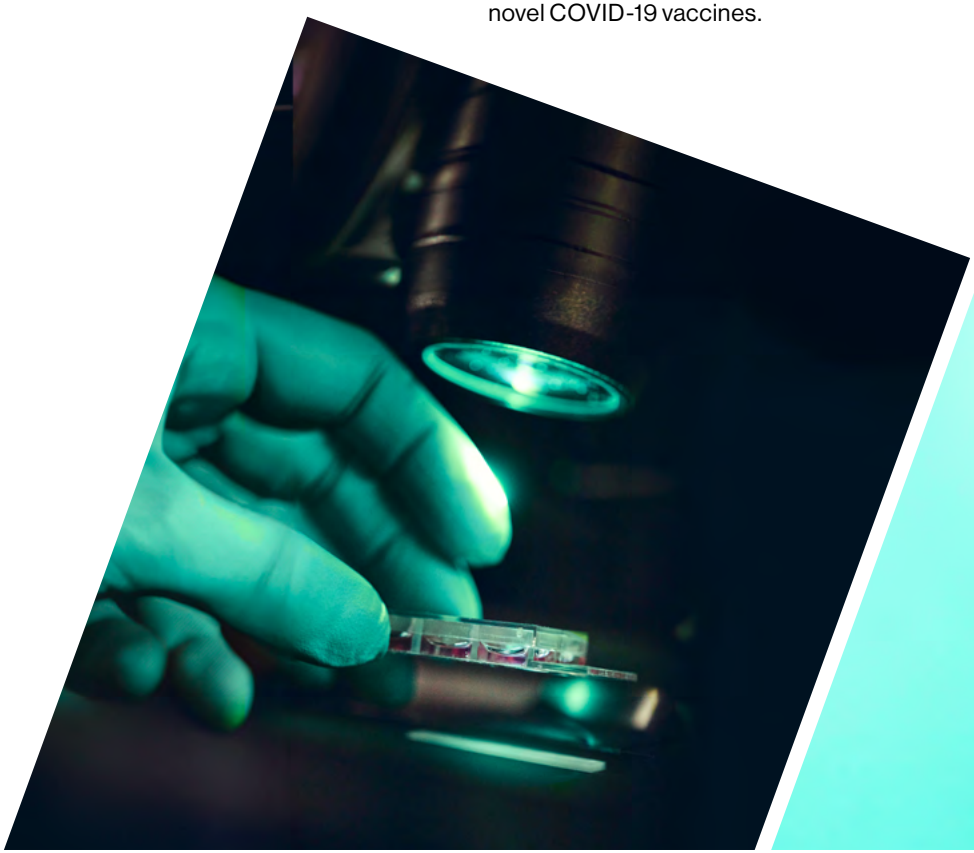
2020 changed everything – but not our vision. Our scientists decided decades ago to develop mRNA as a flexible platform technology. They saw the potential of mRNA as a technology for the treatment of cancer and as a vaccine against infectious diseases. At the beginning of 2020, we started the development of our COVID-19 vaccine, an endeavor we called **Project Lightspeed**. Our goal was to develop a safe and effective vaccine against COVID-19. Simultaneously, we enhanced our manufacturing capacities by acquiring our site in Marburg, which we expanded to become one of the largest mRNA manufacturing facilities in Europe in 2021.

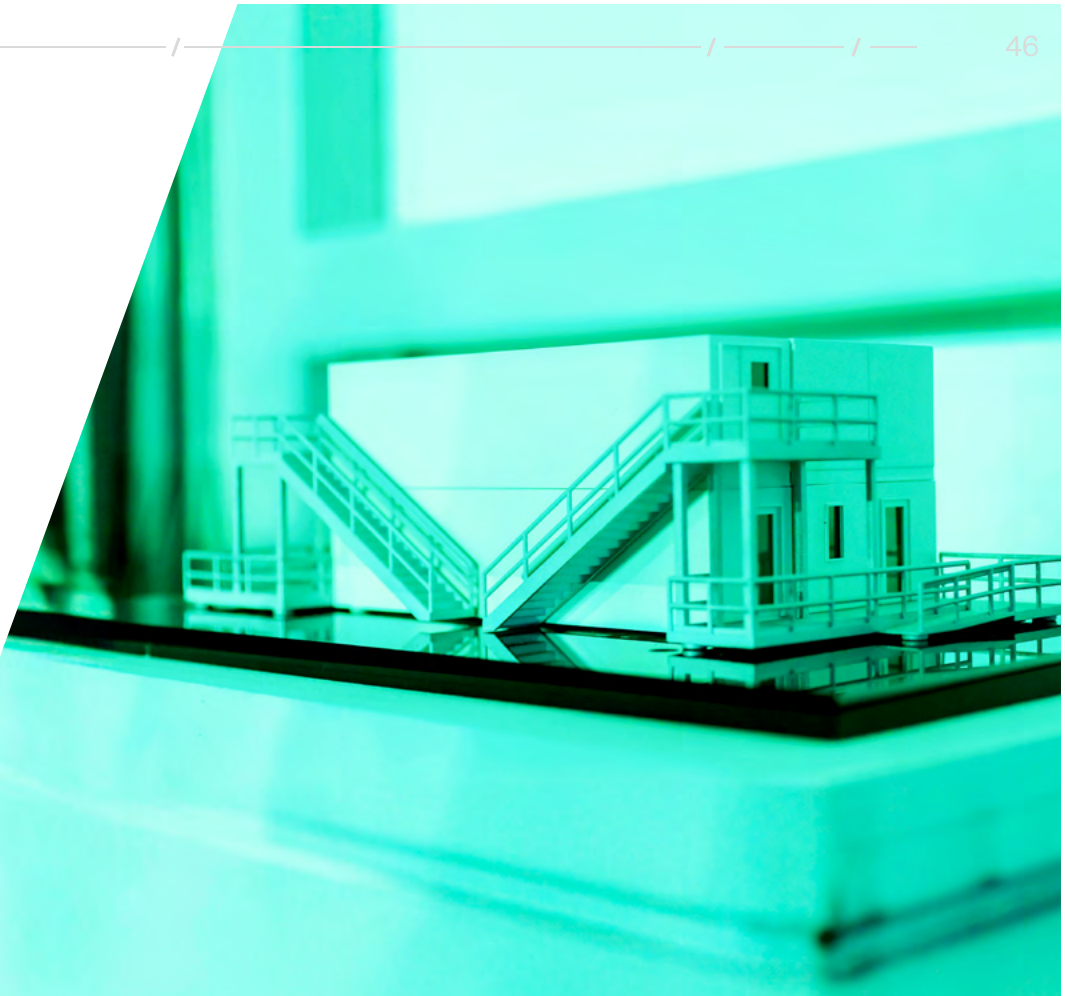
Within only 10 months we developed the **Pfizer-BioNTech COVID-19 Vaccine**, evaluated it in large clinical trials, and received (emergency or conditional) approval from authorities in different countries. For us at BioNTech, this was a tremendous success, as it was not only the fastest vaccine development against a new pathogen in medical history, but also proof that mRNA can become a new drug class.

2021

RE-FOCUS ON FIGHT AGAINST CANCER //

In 2021, we refocused on our roots by reinforcing our development of cancer therapies that can also be combined with each other. We used our resources to further accelerate the development of our cancer treatment candidates. This included the treatment of the first colorectal cancer patient in a Phase 2 trial with an individualized cancer vaccine candidate. In addition, we acquired a new manufacturing site in Gaithersburg in the US to expand our clinical production capacities for cell therapies. In parallel, we continued our work to develop novel COVID-19 vaccines.

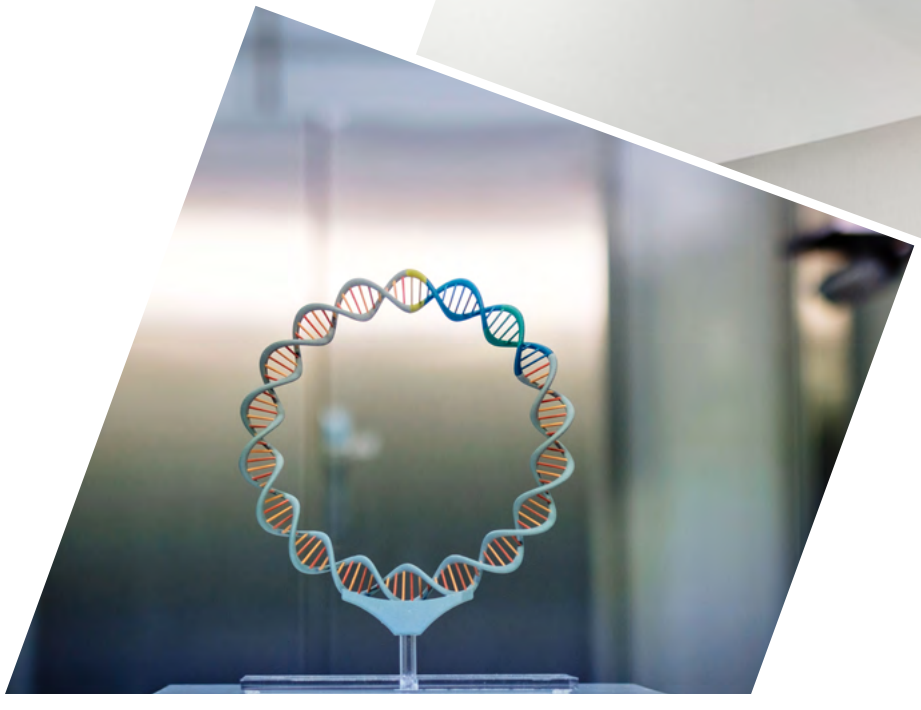




2022

INTRODUCTION OF OUR BIONTAINERS //

We introduced a new global manufacturing approach for mRNA-based products in 2022. Our container-based, modular **BioNTainers** are designed to enable the scalable production of mRNA-based medicines. The groundbreaking for the first BioNTainer-based facility was held in Rwanda in the same year. Groundbreaking for a BioNTainer-based facility in Melbourne, Australia, is intended to follow in 2024.



After 15 years of in parts invisible advancements, **2023** was marked by a number of significant milestones across various domains. As we turn the page to the next chapter, we will delve into the details of our anniversary year, exploring the impact of our work of the past year where we once again aimed at pushing the boundaries of science and making a difference in the lives of patients worldwide.

2023 HIGHLIGHTS

BioNTech signed a Memorandum of Understanding with the Government of the United Kingdom to benefit patients by expanding clinical trials for personalized mRNA immunotherapies with the aim to provide personalized cancer therapies for up to 10,000 patients by the end of 2030, either in clinical trials or as authorized treatments. The corresponding contracts were signed in July 2023.

FEB

INFECTIOUS DISEASES //

Pfizer and BioNTech started a Phase 1/2 trial exploring the safety, tolerability, and immunogenicity of the companies' mRNA vaccine program BNT167 against shingles.

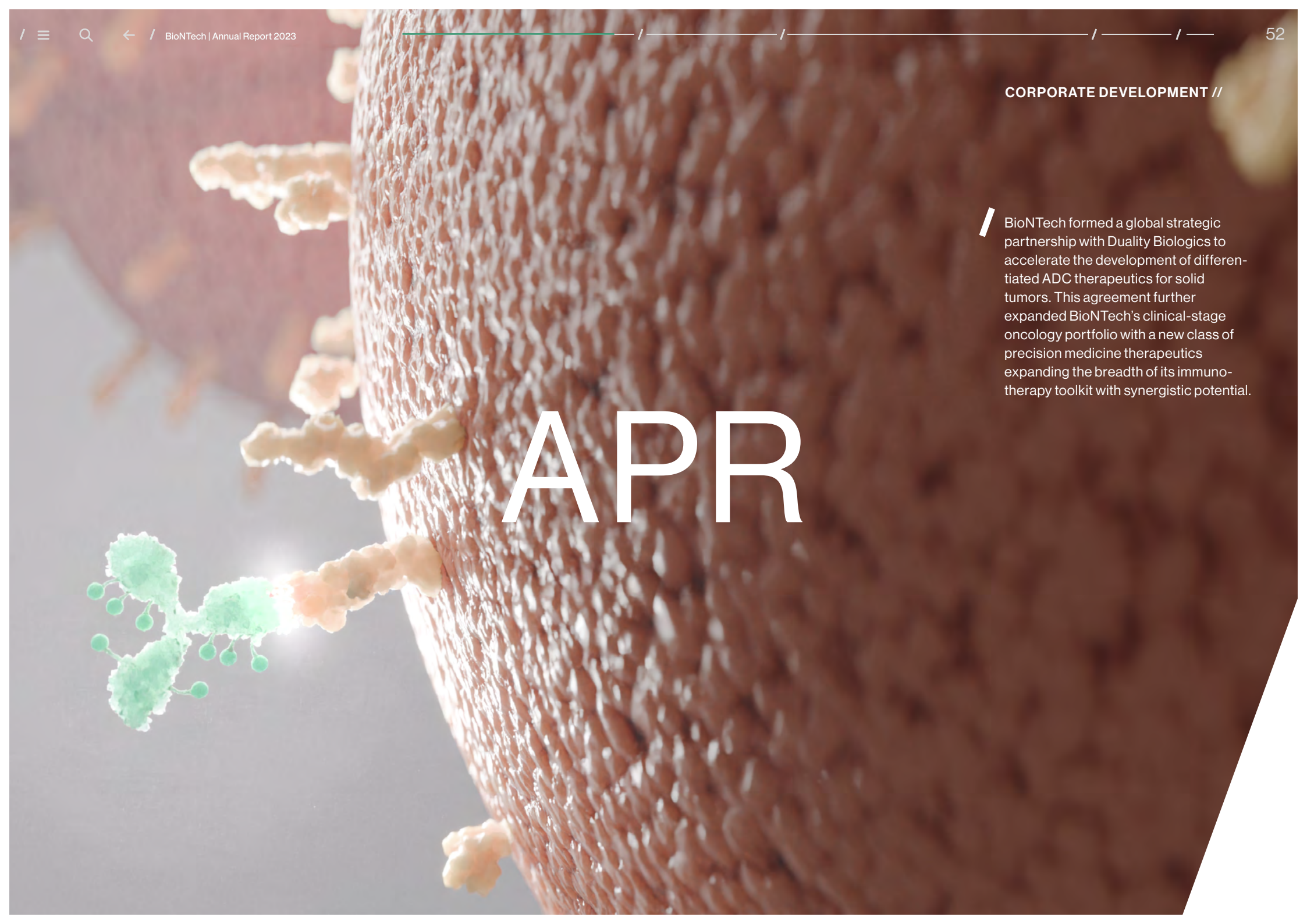
CORPORATE DEVELOPMENT //

German Chancellor Olaf Scholz visited BioNTech in Marburg, Germany, as we completed the construction of our first proprietary plasmid DNA manufacturing facility. Plasmid DNA is an important starting material for the manufacturing of mRNA-based vaccines and therapies, as well as cell therapies.

MAR

BioNTech signed a Memorandum of Understanding with the Weizmann Institute of Science in Israel, under which scientists from BioNTech and the Weizmann Institute would collaborate on basic and applied research with the aim of better understanding various diseases, including cancer.

We entered into a license and collaboration agreement with OncoC4 to co-develop and commercialize the monoclonal antibody candidate BNT316/ONC-392 (gotistobart) as monotherapy or combination therapy in various cancer indications.



CORPORATE DEVELOPMENT //

APR

BioNTech formed a global strategic partnership with Duality Biologics to accelerate the development of differentiated ADC therapeutics for solid tumors. This agreement further expanded BioNTech's clinical-stage oncology portfolio with a new class of precision medicine therapeutics expanding the breadth of its immunotherapy toolkit with synergistic potential.

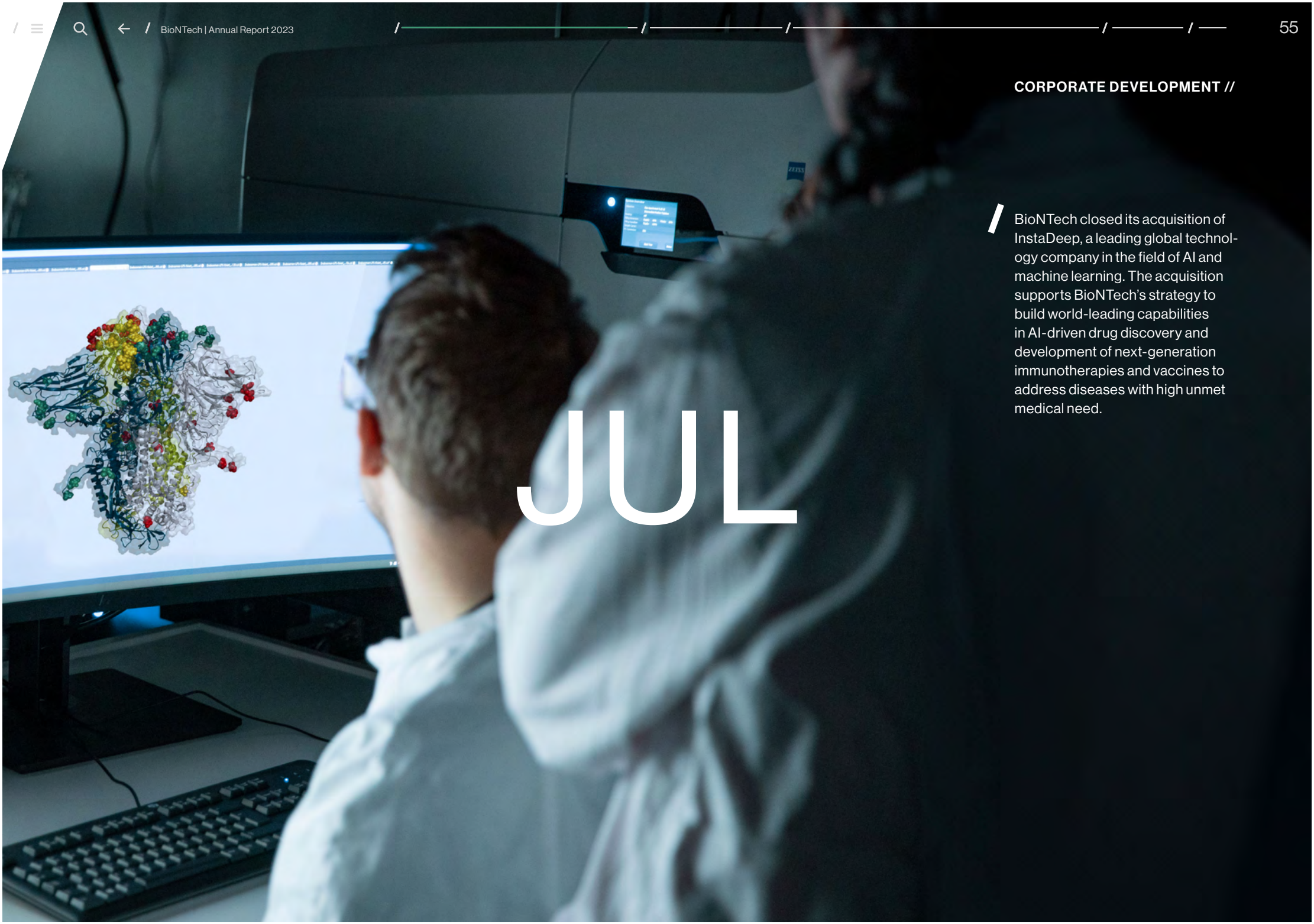
MAY

Baroness Nicola Blackwood was elected to BioNTech's Supervisory Board, succeeding Prof. Christoph Huber, M.D., who left the Supervisory Board after reaching the retirement age limit. Supervisory Board members Michael Motschmann and Ulrich Wandschneider, Ph.D., were reappointed.

ONCOLOGY //

JUN

The first patient with NSCLC was treated in a pivotal Phase 3 trial evaluating BioNTech's and OncoC4's antibody candidate BNT316/ONC-392 (gotistobart). The initiation of the trial was based on positive safety and efficacy data from a Phase 1/2 study with BNT316/ONC-392 alone and in combination with pembrolizumab in patients with advanced solid tumors. Follow-up data from this trial presented at the ASCO 2023 Annual Meeting showed encouraging anti-tumor activity and a manageable safety profile in a patient cohort with metastatic, anti-PD-(L)1-resistant NSCLC.



CORPORATE DEVELOPMENT //

JUL

BioNTech closed its acquisition of InstaDeep, a leading global technology company in the field of AI and machine learning. The acquisition supports BioNTech's strategy to build world-leading capabilities in AI-driven drug discovery and development of next-generation immunotherapies and vaccines to address diseases with high unmet medical need.

INFECTIOUS DISEASES //

Pfizer and BioNTech received approvals for individuals 12 years and older for their Omicron XBB.1.5-adapted monovalent COVID-19 vaccine in various markets, including the United States, Europe, Canada and Japan.

AUG/SEP

INFECTIOUS DISEASES //

BioNTech and the Coalition for Epidemic Preparedness Innovations (CEPI) formed a strategic partnership to advance mRNA-based vaccine candidates with the development of BNT166 for the prevention of mpox. CEPI agreed to provide funding of up to $90 million to support the development of mRNA-based vaccine candidates.

SEP

CORPORATE DEVELOPMENT //

The Supervisory Board appointed James Ryan, Ph.D., to the Management Board as Chief Legal Officer. As part of the Management Board, James Ryan has continued to lead the Company's corporate legal strategy and global legal operations including transactions, corporate governance, securities, intellectual property (IP), insurance, data privacy, among others.

ONCOLOGY //

- BioNTech expanded its late-stage oncology portfolio: The first patient was treated in a Phase 2 clinical trial evaluating the mRNA-based individualized cancer vaccine candidate BNT122 in resected pancreatic ductal adenocarcinoma (PDAC).
- We presented data across our oncology pipeline, covering multiple solid tumor types and novel mechanisms of action, at the ESMO Congress, including data from a Phase 1/2 trial for cell therapy candidate BNT211. BNT211 is being evaluated alone and in combination with an investigational CAR-T cell Amplifying RNA Vaccine (CARVac) in patients with solid tumors. The data showed encouraging signs of clinical activity and an increased persistence of cancer-specific CAR-T cells in the combinatory setting. In course of the dose escalation, a dose-dependent increase in adverse events was observed. In most cases, these were of grade 1 and 2.
- We presented data updates at the SITC Annual Meeting across multiple immuno-oncology programs, such as mRNA-based cancer vaccine candidates, investigational antibodies and cell therapies.

ONCOLOGY //

Together with our collaborator Duality Biologics, we were granted Breakthrough Therapy designation by the FDA for their investigational ADC BNT323/DB-1303 for the treatment of advanced endometrial cancer.

DEC

CORPORATE DEVELOPMENT //

BioNTech and the State of Victoria in Australia signed a multi-year strategic partnership to strengthen the local mRNA ecosystem and facilitate innovations deriving from it. This partnership is aimed at providing high-tech manufacturing capabilities and expertise to curate encouraging projects for further R&D.

We inaugurated our site in Kigali, Rwanda. The inauguration took place on the occasion of the set-up of the first BioNTainer, which was flown to Kigali, Rwanda, in March 2023.

From left to right: **John Nkengasong**, Africa CDC; **Sierk Poetting**, BioNTech; **Ugur Sahin**, BioNTech; **H.E. Ursula von der Leyen**, President of the European Commission; **H.E. Macky Sall**, former President of the Republic of Senegal; **H.E. Paul Kagame**, President of the Republic of Rwanda; **H.E. Nana Akufo-Addo**, President of the Republic of Ghana; **Hon. Mia Amor Mottley**, Prime Minister of Barbados; **H.E. Annalena Baerbock**, Federal Minister of Foreign Affairs of the Federal Republic of Germany.

FINANCIAL CALENDAR 2024

MAY 6
FIRST QUARTER EARNINGS

MAY 17
ANNUAL GENERAL MEETING

AUG 5
SECOND QUARTER EARNINGS

OCT 1
INNOVATION SERIES (DIGITAL & AI DAY)

NOV 4
THIRD QUARTER EARNINGS

NOV 14
INNOVATION SERIES

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CONCEPT, VISUAL DESIGN AND RENDERINGS //
heureka GmbH, Essen

PHOTOGRAPHY/ COPYRIGHT //
BioNTech SE

FORWARD-LOOKING STATEMENTS //

This document contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, but not limited to, statements concerning: BioNTech's expected revenues and net profit related to sales of BioNTech's COVID-19 vaccine, referred to as COMIRNATY where approved for use under full or conditional marketing authorization, in territories controlled by BioNTech's collaboration partners, particularly for those figures that are derived from preliminary estimates provided by BioNTech's partners; the rate and degree of market acceptance of BioNTech's COVID-19 vaccine and, if approved, BioNTech's investigational medicines; expectations regarding anticipated changes in COVID-19 vaccine demand, including changes to the ordering environment and expected regulatory recommendations to adapt vaccines to address new variants or sublineages; the initiation, timing, progress, results, and cost of BioNTech's research and development programs, including those relating to additional formulations of BioNTech's COVID-19 vaccine, and BioNTech's current and future preclinical studies and clinical trials, including statements regarding the timing of initiation, enrollment, and completion of studies or trials and related preparatory work and the availability of results, and the timing and outcome of applications for regulatory approvals and marketing authorizations; BioNTech's expectations with respect to its intellectual property; the impact of BioNTech's collaboration and licensing agreements and its acquisition of InstaDeep Ltd.; the development, nature and feasibility of sustainable vaccine production and supply solutions; and BioNTech's estimates of revenues, research and development expenses, cost of sales, general and administrative expenses, and capital expenditures for operating activities. In some cases, forward-looking statements can be identified by terminology such as "will," "may," "should," "expects," "intends," "plans," "aims," "anticipates," "believes," "estimates," "predicts," "potential," "continue," or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. The forward-looking statements in this press release are neither promises nor guarantees, and you should not place undue reliance on these forward-looking statements because they involve known and unknown risks, uncertainties, and other factors, many of which are beyond BioNTech's control and which could cause actual results to differ materially from those expressed or implied by these forward-looking statements.

These risks and uncertainties include, but are not limited to: BioNTech's pricing and coverage negotiations regarding its COVID-19 vaccine with governmental authorities, private health insurers and other third-party payors after BioNTech's initial sales to national governments; the future commercial demand and medical need for initial or booster doses of a COVID-19 vaccine; competition from other COVID-19 vaccines or related to BioNTech's other product candidates, including those with different mechanisms of action and different manufacturing and distribution constraints, on the basis of, among other things, efficacy, cost, convenience of storage and distribution, breadth of approved use, side-effect profile and durability of immune response; the timing of and BioNTech's ability to obtain and maintain regulatory approval for BioNTech's product candidates; the ability of BioNTech's COVID-19 vaccines to prevent COVID-19 caused by emerging virus variants; BioNTech's and its counterparties' ability to manage and source necessary energy resources; BioNTech's ability to identify research opportunities and discover and develop investigational medicines; the ability and willingness of BioNTech's third-party collaborators to continue research and development activities relating to BioNTech's development candidates and investigational medicines; the impact of the COVID-19 pandemic on BioNTech's development programs, supply chain, collaborators and financial performance; unforeseen safety issues and potential claims that are alleged to arise from the use of BioNTech's COVID-19 vaccine and other products and product candidates developed or manufactured by BioNTech; BioNTech's and its collaborators' ability to commercialize and market BioNTech's COVID-19 vaccine and, if approved, its product candidates; BioNTech's ability to manage its development and expansion; regulatory developments in the United States and other countries; BioNTech's ability to effectively scale its production capabilities and manufacture its products, including target COVID-19 vaccine production levels, and product candidates; risks relating to the global financial system and markets; and other factors not known to BioNTech at this time.

You should review the risks and uncertainties described under the heading "Risk Factors" in BioNTech's annual report on Form 20-F for the year ended December 31, 2023 and in subsequent filings made by BioNTech with the SEC, which are available on the SEC's website at https://www.sec.gov/. Except as required by law, BioNTech disclaims any intention or responsibility for updating or revising any forward-looking statements contained in this document in the event of new information, future developments or otherwise. These forward-looking statements are based on BioNTech's current expectations and speak only as of the date hereof.

mRNA is a natural information molecule that is translated to proteins. A protein that belongs to the body will have a specific function in the cell, while the protein that does not belong to the body can serve as a lesson to the immune system about what should be eliminated.

COMBINED MANAGEMENT REPORT 2023

2

1 GENERAL INFORMATION ON THE BioNTech GROUP

Pursuant to Section 315 para. 5 of the German Commercial Code (HGB) in conjunction with Section 298 para. 2 HGB, this combined management report comprises both the group management report of BioNTech SE and its group companies (together "BioNTech" or the "Group") and the management report of BioNTech SE (also "the Company"), hereinafter also referred to as "BioNTech", the "Group", "we" or "us". The combined management report has been prepared in accordance with the Regulation on the Statute for a European Company (SE) in conjunction with the German Stock Corporation Act (AktG). The comments on the Group have been prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union; the comments on BioNTech SE have been prepared in accordance with the German Commercial Code (HGB). Unless otherwise stated, the statements in the combined management report relate to both the Group and BioNTech SE. In addition to the reporting on the Group, the development of BioNTech SE is explained in ***Section 3.***

We prepare and publish our combined management report in euros and round figures to the nearest thousand or million euros. Accordingly, the figures presented as totals or as percentages in some tables may deviate slightly and the figures presented in the notes may not add up exactly to the totals presented.

1.1 Business Model

We are a global immunotherapy company pioneering the development of novel medicines against cancer, infectious diseases and other serious diseases. Our vision and mission are the same as when our Company was founded in 2008: We are committed to improving the health of people worldwide, harnessing the full potential of the immune system to develop drugs to fight diseases with high or unmet medical need.

Our fully integrated business model combines decades of research in immunology, translational drug discovery and development, technology-agnostic innovation, GMP manufacturing, artificial intelligence and machine learning, and commercial capabilities to develop and commercialize vaccines and therapies.

We have built a broad portfolio of product candidates across multiple technology platforms that encompass a diverse range of therapeutic approaches, including mRNA vaccines and therapeutics, cell and gene therapies, protein-based therapeutics (including monospecific and bispecific antibodies and antibody-drug conjugates or ADCs), cell therapies and small molecules. We believe that harnessing complementary, potentially synergistic modes of action increases the likelihood of therapeutic success, reduces the risk of emergence of secondary resistance mechanisms and could also unlock a larger potential patient population. Critically, this approach allows us to pursue a technology-agnostic path by developing an appropriate therapeutic platform or a combination thereof for the intended patient and purpose.

We have continued to develop and diversify our pipeline. There are currently 22 product candidates in oncology and seven product candidates in infectious diseases in clinical development.

In 2023, we remained committed to our goals and strengthened our technology platforms, our digital capabilities and our infrastructure through sustainable investments, strategic partnerships and tactical acquisitions to bring long-term value to patients and other stakeholder groups.

Leading the Development of COVID-19 Vaccines

In 2023, in partnership with Pfizer Inc., New York, United States (Pfizer), we developed an Omicron XBB.1.5-adapted monovalent COVID-19 vaccine and launched it in various markets worldwide. This is part of our efforts to build an enduring COVID-19 vaccine business.

Healthcare and Social Responsibility

We have made progress in making innovative medicines more accessible to wider populations around the world: In 2023, more than 30% of COVID-19 vaccine doses were delivered to low- and middle-income countries (LMICs) in line with demand. We work with NGOs, institutions and governments to provide more equitable access to novel medicines, especially in low- and middle-income countries and regions. In December 2023, we reached the next milestone in the establishment of mRNA vaccine manufacturing capacities in Africa with the inauguration of the our site in Kigali, Rwanda. We are progressing the development of mRNA vaccine candidates for infectious diseases with high medical need, including vaccine candidates against tuberculosis, malaria, and HIV, as well as against infectious diseases with pandemic potential, such as mpox.

Innovative and Diversified Pipeline

We are working on the development of innovative drugs for diseases with high or unmet medical need. We continue to build our pipeline, which has grown in recent years in line with the Company's fundamental vision of harnessing the power of the immune system to fight cancer and other serious diseases. In 2023, we commenced two Phase 3 trials in oncology, and we and our partners presented data on several product candidates at international medical meetings. We entered into four new collaborations and in-licensed six product candidates in oncology, some of which have advanced rapidly to later-stage clinical trials, in 2023. For infectious diseases, we initiated three Phase 1 clinical trials for vaccine candidates based on our proprietary mRNA technology in 2023. These include product candidates for a malaria vaccine, tuberculosis (in collaboration with the Bill & Melinda Gates Foundation) and mpox in partnership with the Coalition for Epidemic Preparedness Innovations (CEPI).

Innovation at Scale

We are building and scaling biotech innovations with the aim of becoming a patient-centric multi-product company. We expanded our team globally in 2023 and attracted talent, including clinical and regulatory experts, to advance the development of our pipeline. Our diverse workforce represents more than 80 nations, and we have subsidiaries in 18 countries across five continents. In 2023, we expanded our organization in Asia, Africa, the United States, Australia and Europe. We increased our overall research and development and production capabilities, including completing construction of our first proprietary plasmid DNA manufacturing facility in Marburg, Germany. Furthermore, we established a corporate office in Shanghai, China, and inaugurated our site in Kigali, Rwanda, on the occasion of the set-up of the first manufacturing unit called BioNTainer. With the acquisition of our long-time strategic collaboration partner InstaDeep, we have taken a further step in our strategy, aiming to build world-leading capabilities in AI-driven drug discovery and development of next-generation immunotherapies and vaccines to address diseases with high unmet medical need. The transaction adds approximately 290 highly skilled professionals to our organization.

1.2 Legal and Organizational Structure

Legal Structure

BioNTech SE was founded in 2008 as a spin-off from Johannes Gutenberg University Mainz. The underlying broad technology and patent portfolio was built up over a period of more than 20 years.

BioNTech SE is the parent company of the BioNTech Group and is responsible for the management and development of the Group. BioNTech SE has its registered office in Mainz, Germany (An der Goldgrube 12, 55131 Mainz). In addition, as of the end of the 2023 financial year, the BioNTech Group included 41 group companies.

The shares of BioNTech SE are publicly traded as American Depositary Shares (ADSs), each of which represents one ordinary share, on the Nasdaq Global Select Market.

Organizational Structure

As the parent company of the BioNTech Group, BioNTech SE has a dual management system: The Management Board, as the managing body, had seven members as of December 31 and is appointed and monitored by the Supervisory Board. On May 3, 2023, our Supervisory Board expanded our Management Board by appointing James Ryan as Chief Legal Officer (CLO), effective as of September 1, 2023. As CLO, James Ryan heads up our Legal department and is responsible for developing and leading the corporate legal strategy to promote and protect BioNTech's global operations. His current appointment to our Management Board ends on December 31, 2027. The Supervisory Board is elected by the Annual General Meeting. During the year ended December 31, 2023, Nicola Blackwood was appointed to the Supervisory Board on May 25, 2023. She succeeded Christoph Huber, who left the Supervisory Board after reaching the applicable retirement age limit. As a result, the Supervisory Board consisted of six members as of the reporting date December 31, 2023. As of the reporting date December 31, 2023, the Group had 6,292 employees, 3,166 of them at BioNTech SE (December 31, 2022: 4,692, 2,304 of them at BioNTech SE). An annual average of 5,640 people were employed in 2023, of which 2,882 were employed by BioNTech SE (previous year: 4,104, of which 1,936 were employed by BioNTech SE).

1.3 The BioNTech Approach

We work on the development of next-generation immunotherapies by pursuing a strategy based on a technology-agnostic approach. Our key objectives are to build a sustainable respiratory vaccines business based on the BioNTech-Pfizer-Comirnaty franchise and to advance an innovative oncology pipeline targeting multiple product approvals in the coming years. Our vision is to establish a multi-product company based on our technologies and science. In 2023, we expanded our access to a new technology – ADCs. We believe that this technology has the potential to replace highly toxic chemotherapy regimens in the long term and to become a new combination backbone of cancer treatment. Since our founding, we have been a multi-technology company. We believe that by combining complementary treatment modalities, we can leverage the potential of each technology to provide precise and personalized treatments to patients. Our approach is based on the following principles:

Exploiting the full potential of the immune system
Our pipeline comprises immunomodulators, including bispecific and monospecific antibodies, ADCs and cell therapies, including T-cell receptor and CAR-T cell therapies, as well as small molecules. Our broad clinical pipeline is unique in that it features mRNA-based vaccines, including cancer vaccines and prophylactic vaccines against infectious diseases. Our technology-agnostic innovation engine is driven by potential synergies between these technologies with the aim of enabling individualized treatment for cancer patients.

Programs to combat global health burdens
Our infectious disease product strategy is rooted in our global social responsibility to address diseases with high or unmet medical need. We are committed to democratizing global access to innovative medicines.

Broadening the universe of patients benefiting from cancer immunotherapy
Our aim is to cover cancer at early, adjuvant and metastatic stages and to extend the utility of immunotherapy to patient populations that are currently not amenable or do not benefit from current immunotherapies.

Improving the success rate through new combinations
We develop drug candidates that are precisely tailored to the respective target. To augment the immune response and to counteract resistance mechanisms, we seek to combine compounds with non-overlapping and/or synergistic mechanisms of action, such as the combination of our FixVac immunotherapy CARVac with our innovative CAR-T therapy candidates.

Individualized approaches
The challenge in the treatment of cancer is its interindividual variability and heterogeneity, which increases the risk of recurrence or treatment failure. Addressing this biological reality is one of our fundamental principles for the development of product candidates. For example, each of our mRNA cancer vaccine candidates incorporates multiple targets in order to account for this variability.

Integrating AI into our pipeline and processes
Since our founding, we have integrated computer-aided methods, data science, artificial intelligence (AI), and machine learning into our work. With the acquisition of InstaDeep, we aim to build world-leading capabilities in AI-driven drug discovery and development of next-generation immunotherapies and vaccines to address diseases with high unmet medical need. The objective is to enable high-throughput design and testing of novel drug candidates at scale.

1.4 Commercialization

Our COVID-19 vaccine is based on our proprietary mRNA technology. The COVID-19 vaccine development program was launched in late January 2020 in response to the COVID-19 pandemic. Under this program, two strategic collaborations with major pharmaceutical companies, Pfizer and Fosun Pharmaceutical Industrial Development Co. Ltd., Shanghai, China (Fosun Pharma), were completed and led to the first marketing authorizations of our vaccine in December 2020.

Under our collaboration with Pfizer, we are the marketing authorization holder in the United States, the European Union, the United Kingdom, Canada and other countries, and holder of emergency use authorizations, or EUAs, or equivalents in the United States (jointly with Pfizer) and other countries for the COVID-19 vaccine program. Pfizer has marketing and distribution rights worldwide with the exception of China, Germany and Turkey. Fosun Pharma has marketing and distribution rights in China, Hong Kong special administrative region, or SAR, Macau SAR and the region of Taiwan. We have the marketing and distribution rights for the COVID-19 vaccine, known as Comirnaty, in Germany and Turkey.

In 2023, we and Pfizer continued our global COVID-19 vaccine leadership with our Omicron XBB.1.5-adapted monovalent COVID-19 vaccine. Since the beginning of the pandemic, we have developed and commercialized four COVID-19 vaccine products: the original COVID-19 vaccine, two variant-adapted bivalent vaccines (Original/Omicron BA.1 and Original/Omicron BA.4-5-adapted bivalent vaccines) and the Omicron XBB.1.5-adapted monovalent COVID-19 vaccine.

As part of our and Pfizer's two billion COVID-19 vaccine doses pledge to support equitable access to medicines for low- and middle-income countries (LMICs), we and Pfizer have delivered a total of around 1.8 billion doses of Comirnaty to LMICs in line with demand.

We believe that we and our partner Pfizer are well positioned to maintain our leadership role in the development and commercialization of COVID-19 vaccines.

1.5 Research and Development

Pipeline of Clinical Product Candidates
Our diversified portfolio consists of product candidates from different drug classes focused on the treatment of cancer and infectious diseases. There are currently 22 product candidates in oncology and seven product candidates in infectious diseases in clinical development.

In 2023, we initiated seven global clinical trials in oncology, including two Phase 3 trials (BNT323/DB-1303 and BNT316/ONC-392, gotistobart), three Phase 2 trials (BNT116, BNT311/GEN1046 and BNT122) and one Phase 1/2 trial (BNT324/DB-1311). In 2023, we brought several product candidates into mid- and late stage development, namely Phase 2 and 3 clinical trials, including antibody drug conjugates (ADCs) and mRNA vaccines. In 2023, we expanded our technology base to include ADCs by initiating new collaborations with DualityBio and MediLink Therapeutics because we believe that this technology has the potential to supplement or replace highly toxic chemotherapy regimens as a new combination backbone of cancer treatment. Our growing pipeline now includes ADCs directed against four distinct targets and is of interest for a broad range of cancer types. Beyond ADCs, our collaborations with OncoC4 and Biotheus complement our pipeline with mid to late-stage clinical programs and have augmented our oncology pipeline.

We published clinical data for the following programs:

- **Autogene cevumeran/BNT122,** our individualized cancer vaccine program (iNeST) in collaboration with Genentech for patients with pancreatic ductal adenocarcinoma (PDAC) as an adjuvant therapy: Results from an investigator-initiated Phase 1 trial show that autogene cevumeran in combination with atezolizumab and mFOLFIRINOX induces significant T-cell response in patients with surgically resected pancreatic ductal adenocarcinoma (PDAC) that correlates with delayed recurrence.

- **BNT116,** our FixVac program for patients with non-small cell lung cancer (NSCLC): BNT116 was generally well tolerated and had a manageable safety profile as monotherapy and in combination with cemiplimab. In heavily pretreated NSCLC patients, early clinical activity was observed with treatment with BNT116 with the addition of cemiplimab from cycle 3 onward.

- **BNT211,** our most advanced cell therapy program, which is being investigated alone and in combination with a CLDN6-encoding CAR-T cell amplifying mRNA vaccine (“CARVac”) in patients with germ cell tumors and other solid tumors: The Phase 1/2 trial is evaluating the safety and efficacy of BNT211 in patients with CLDN6-positive relapsed or refractory advanced solid tumors. The data showed encouraging signs of clinical activity and improved persistence of cancer-specific CAR-T cells in combination with CARVac.

- **BNT221,** an autologous, fully personalized, polyspecific T-cell therapy candidate directed against individual neoantigens in patients with metastatic melanoma: The first monotherapy data from the dose escalation phase of the Phase 1 trial demonstrate a manageable tolerability profile and signs of clinical activity in patients with pretreated advanced or metastatic melanoma.

/ **BNT316/ONC-392** (gotistobart), an anti-CTLA-4 monoclonal antibody candidate in development in collaboration with OncoC4 Inc. for patients with metastatic NSCLC: The results show encouraging antitumor activity for BNT316/ONC-392 as monotherapy in patients with immunotherapy ("IO")-resistant NSCLC and a manageable safety profile.

/ **BNT323/DB-1303,** an ADC candidate directed against HER2 in development in collaboration with DualityBio and being evaluated in patients with metastatic breast cancer and endometrial cancer: BNT323/DB-1303 was well tolerated by patients with HR+/HER2-low breast cancer. Preliminary antitumor activity was observed in heavily pretreated patients with breast cancer. A manageable safety profile and encouraging antitumor activity was also observed in patients with endometrial cancer.

/ **BNT325/DB-1305,** an ADC candidate directed against TROP2 in development in collaboration with DualityBio: A manageable safety profile and encouraging antitumor activity in patients with metastatic NSCLC were observed.

In infectious diseases, we started three Phase 1 clinical trials for prophylactic vaccine candidates based on our mRNA technology platform. These include candidates against malaria (proprietary program), tuberculosis (in collaboration with the Bill & Melinda Gates Foundation) and mpox (in partnership with CEPI).

Collaborations

In addition to the strategic collaborations with Pfizer and Fosun Pharma entered into as part of the COVID-19 vaccine development program during the 2020 financial year, as well as the ongoing academic collaboration with the University Hospital Mainz and Translational Oncology at the University Medical Center of Johannes Gutenberg-Universität Mainz gemeinnützige GmbH (TRON), we have further developed the following collaborations with pharmaceutical and technology companies.

/ Genentech: development of individualized neo-epitope-specific mRNA immunotherapies for the treatment of various cancers within our iNeST platform.

/ Pfizer: development of an mRNA-based influenza vaccine and a combined mRNA-based influenza and COVID-19 vaccine as well as an mRNA-based herpes zoster virus vaccine.

/ Genmab: development of novel monospecific and bispecific checkpoint immunomodulators.

In 2023, we entered into multiple complementary agreements and collaborations, including:

/ The completion of the acquisition of our long-time strategic collaboration partner InstaDeep Ltd., or InstaDeep, which enables us to leverage AI and ML technologies across our therapeutic platforms and operations. With our acquisition of InstaDeep, we have added industry-leading AI and ML capabilities and approximately 290 professionals to our organization.

/ An exclusive worldwide license agreement with OncoC4 for the joint development and commercialization of BNT316/ONC-392 (gotistobart), an anti-CTLA-4 monoclonal antibody as monotherapy or combination therapy in various cancer indications. As part of the agreement, we will hold the exclusive worldwide commercialization rights with participation of OncoC4 in certain markets.

/ Exclusive license and collaboration agreements with DualityBio for the development, manufacture and global commercialization of three ADC candidates, BNT323/DB-1303 as well as BNT324/DB-1311 and BNT325/DB-1305, excluding Mainland China, Hong Kong Special Administrative Region, and Macau Special Administrative Region.

/ A strategic research collaboration and worldwide license agreement with MediLink Therapeutics (Suzhou) Co., or MediLink, for the development of a next-generation ADC, BNT326/YL202, against Human Epidermal Growth Factor Receptor 3 (HER3). Under the terms of the agreement, MediLink will grant BioNTech exclusive global rights, excluding Mainland China, Hong Kong Special Administrative Region, and Macau Special Administrative Region.

/ A strategic research collaboration, option and worldwide license agreement with Biotheus Inc. (Biotheus) granting us worldwide, exclusive options to a preclinical-stage bispecific antibody and a clinical-stage monoclonal antibody for cancer therapy, BNT327/PM8002. We hold the rights to develop, manufacture and potentially commercialize BNT327/PM8002, a bispecific antibody candidate targeting PD-L1 and VEGF-A, globally except in Greater China, where Biotheus retains the rights to BNT327/PM8002.

/ A strategic partnership with CEPI to advance mRNA-based vaccine candidates with the development of BNT166 for the prevention of mpox.

/ A strategic partnership with the Government of the United Kingdom ("UK") with the aim to provide personalized mRNA cancer immunotherapies for up to 10,000 patients by 2030, either in clinical trials or as authorized treatments. We are also planning to invest in an R&D hub in Cambridge, United Kingdom.

/ A multi-year strategic partnership with the State of Victoria in Australia to strengthen the local mRNA ecosystem and facilitate innovations deriving from it. As part of this partnership, BioNTech plans to build and operate a state-of-the-art mRNA manufacturing facility tailored to the needs of the local mRNA ecosystem and will set up an mRNA Innovation Center in Melbourne where the Company will leverage its expertise to support the development of the mRNA ecosystem in the State of Victoria.

2 ECONOMIC REPORT

2.1 Macroeconomic and Sector-Specific Conditions

The German economy declined in 2023. Inflation-adjusted gross domestic product was 0.3%[1] lower than in the previous year. The energy crisis and geopolitical tensions spawned uncertainty and weighed on the economy.

According to IMF experts, however, the global economy will have grown by 3.1% in 2023.[2]

Adjusted for inflation, the German pharmaceutical industry expects revenues to fall by 2.9% in 2023[3] and production to be 1.4[3] lower. The reason cited is vaccination fatigue among the population and thus a fall in demand for vaccines. In 2022, revenues rose by 6.5%[4] on the back of high demand for COVID-19 vaccines and production was up by 3.6%.[4]

In January 2023, the WHO's expert panel stated that the COVID-19 pandemic remained a public health emergency of international concern, but this status was finally lifted in May.[5] Since June 2023, the COVID-19 vaccination has been included in the general recommendations of the Standing Committee on Vaccination (STIKO) of the Robert Koch Institute.[6] These include the recommendation of baseline immunity for people without underlying diseases between the ages of 18 and 59 and an annual booster vaccination for risk groups.

With the development and advancement of the COVID-19 vaccine against diverse COVID-19 variants, as well as an early warning system designed to detect SARS-CoV2 risk variants more quickly, we are working with other companies, research institutes and governments to continue to contribute to the worldwide effort to protect against COVID-19. Our goal remains to make the vaccine available to a broad population worldwide after the transition of the pandemic to an endemic phase.

Therapeutics in Immunotherapy
The global market for mRNA therapeutics was estimated to be worth $45 billion[7] in 2023 and, according to a forecast by Precedence Research, will expand at a compound annual growth rate of 13%[7] to around $138 billion[7] by 2032. Currently, mRNA vaccines are only approved for vaccination against COVID-19, yet there are many more under development, e.g. to combat cancer.[8]

Marketing authorization, pricing, and reimbursement are highly regulated in healthcare. On the one hand, the strategy pursued by governments is to provide patients with highly effective and safe medicines in a timely manner. On the other hand, cost pressure on global healthcare systems has been increasing for years. Therefore, drug manufacturers not only need to demonstrate the efficacy and safety of their products to gain approval, but also need to demonstrate the cost-effectiveness of their new drug against the respective standard of care to gain reimbursability. The rapid development of the COVID-19 vaccine, based on BioNTech's proprietary mRNA technology, has demonstrated the potential of immunotherapies. The rapid, efficient and safe development was driven by BioNTech's decades of expertise in the research and development of mRNA-based vaccines. BioNTech's mRNA vaccine technology allows for faster development as well as shorter production cycles than would be possible with more traditional methods of vaccine production. This is critical in bringing a COVID-19 vaccine to market and meeting urgent medical needs.

(1) Source: https://www.destatis.de/EN/Themes/Economy/National-Accounts-Domestic-Product/Tables/gdp-bubbles.html
(2) Source: https://www.imf.org/en/Publications/WEO/Issues/2024/01/30/world-economic-outlook-update-january-2024
(3) Source: https://www.pharmazeutische-zeitung.de/pharmabranche-erwartet-weniger-umsatz
(4) Source: https://www.aerzteblatt.de
(5) Source: https://www.tagesschau.de/ausland/europa/coronapandemie-who-gesundheitsnotstand-100.html
(6) Source: https://www.kbv.de/html/1150_63927.php
(7) Source: https://www.precedenceresearch.com/mrna-therapeutics-market
(8) Source: https://www.vfa.de/de/arzneimittel-forschung

2.2 Business Development Compared to the Forecast

The following table compares the forecast and actual figures of the BioNTech Group for the 2023 financial year:

	Forecast for the 2023 financial year *(published in Q4 2022 earnings presentation)*	**Revised forecast for the 2023 financial year** *(published in the Q2 2023 earnings presentation)*	**Revised forecast for the 2023 financial year** *(published in the Q3 2023 earnings presentation)*	**Results for the 2023 financial year**
Commercial COVID-19 vaccine revenues	~ €5 billion	~ €5 billion	~ €4 billion	€3776.2 million
Research and development expenses	€2.4 billion to €2.6 billion	€2.0 billion to €2.2 billion	€1.8 billion to €2.0 billion	€1783.1 million
Sales, general and administrative expenses	€650 million to €750 million	€600 million to €700 million	€600 million to €650 million	€557.7 million
Investments in property, plant and equipment and intangible assets	€500 million to €600 million	€350 million to €450 million	€200 million to €300 million	€275.5 million
Annual effective tax rate of the BioNTech Group	~ 27%	~ 21%	~ 21%	21.6%

A total of €3.8 billion in commercial COVID-19 vaccine revenues was generated in the 2023 financial year. This was around €1.2 billion below the initial forecast. The shortfall is attributable to lower proprietary COVID-19 revenues due to weaker demand and a lower gross profit share from sales by our collaboration partner Pfizer, which was negatively impacted by write-downs of the partner's inventories, among other things.

The research and development expenses anticipated for the 2023 financial year were around €700.0 million below the initial forecast range at €1.8 billion. This effect was due to the postponement of clinical trials as well as efforts to carefully review our cost base in the context of a declining COVID-19 business with the aim of optimizing costs and forging partnerships to alleviate the financial burden.

Initially, we expected sales, general and administrative expenses in the range of €600 million to €750 million for the 2023 financial year. At €557.7 million, the actual costs for the internal administrative and coordinative functions associated with the expansion of research and development, such as finance, human resources, or business development, were around €100.0 million below the forecast costs. Altogether, we successfully reduced our sales, general and administrative expenses by actively managing our variable costs. We have optimized our corporate strategy to ensure that we use our resources effectively and efficiently and focus on the key areas. By systematically deprioritizing and postponing projects, we concentrated on our core initiatives and thus drove forward our success. We also reigned in our expenditure by reducing external costs and consultancy to ensure our financial stability. In addition, fees for external counsel in connection with our legal disputes were reclassified from general and administrative expenses to other operating expenses.

Operating investments in property, plant and equipment came to €275.5 million in the past financial year. The expenditures for the expansion and improvement of our research and development and manufacturing facilities and investments in IT infrastructure were thus around 50% below the lower end of the range that was originally forecast. This was mainly attributable to delays in and halted construction projects as have been prevalent in the entire construction sector due to global supply problems. Furthermore, planned investments were postponed due to short-term changes in priorities.

Our effective tax rate in the 2023 financial year was 21.6%, 5.4 percentage points lower that the originally forecast rate. A reorganization of the intellectual property rights within the Group became effective as of June 30, 2023 and July 1, 2023, which also led to tax effects. As a result, the effective tax rate fell in 2023.

2.3 Net Assets, Financial Position and Operating Results of the Group

2.3.1 Operating Results

Revenues

Our revenues mainly include commercial COVID-19 vaccine revenues in addition to research and development revenues from collaborations. Revenues from contracts with customers decreased by €13,491.6 million from €17,310.6 million during the 2022 financial year to €3,819.0 million during the 2023 financial year, as demand for our COVID-19 vaccine declined compared to the previous year and the strong revenue figures from the 2022 financial year could therefore again not be achieved. In addition, the shared write-downs of our collaboration partner Pfizer's inventories significantly reduced our gross profit share and hence our revenues for the year ended December 31, 2023.

Accordingly, commercial revenues from the sale of our COVID-19 vaccine decreased by €13,369.0 million from €17,145.2 million during the 2022 financial year to €3,776.2 million during the 2023 financial year.

Sales to collaboration partners represent sales of products manufactured by us and transferred to partners. Whenever responsibilities in the manufacturing and supply process of the COVID-19 vaccine shift and the COVID-19 vaccine is transferred, the vaccine is sold from one partner to the other. Revenues from our collaboration partner Pfizer are significantly influenced by amounts due to write-downs of inventories as well as costs related to contracts with contract manufacturing organizations, or CMOs, included therein. Those costs represent accrued manufacturing variances compared to the original manufacturing costs and are shared with our partner under the collaboration agreement. These manufacturing variances are recognized as transfer price adjustments once identified. The regular reassessment of these manufacturing variances may result in adjustments to the respective prior-period revenues. The associated effects in the 2023 financial year amounted to €74.5 million (previous year: €850.0 million). During the 2023 financial year, revenues from selling products manufactured by us to collaboration partners decreased by a total of €949.0 million from €1,224.3 million during the 2022 financial year to €275.3 million.

Revenues from direct COVID-19 vaccine sales in our territories, Germany and Turkey, fell by €2,711.1 million from €3,184.7 million to €473.6 million during the 2023 financial year, compared to the previous year. The share of gross profit received by Pfizer as a collaboration partner based on our sales is recognized as cost of sales.

Based on COVID-19 vaccine sales in the collaboration partners' territories, we are eligible to receive a share of their gross profit. This income is presented as a net figure in the statements of profit or loss and is recognized as collaboration revenue during the commercial phase, together with sales milestones. Manufacturing cost variances either reflected as

transfer price adjustments as described above or resulting from costs highly probable to be incurred by the partner were taken into account when determining the gross profit. Compared to the previous year, revenues in this context decreased by €9,708.9 million from €12,736.2 million to €3,027.3 million during the 2023 financial year.

Research and development revenues from collaborations decreased by €112.5 million from €116.0 million during the 2022 financial year to €3.5 million during the 2023 financial year. The decline was mainly attributable to one-time effects in connection with Pfizer (influenza) and Sanofi S.A. (intratumoral mRNA-based therapies) in the previous year.

Cost of Sales

From the year ended December 31, 2022 to the year ended December 31, 2023, cost of sales decreased by €2,395.2 million from €2,995.0 million to €599.8 million, mainly due to recognizing lower costs from our decreased COVID-19 vaccine sales, which included Pfizer's share of our gross profit based on our sales. Our cost of sales contains inventory write-offs and expenses for production capacities derived from contracts with CMOs that became redundant. The effects were driven by reducing production capacities as well as further fostering the global production network with our collaboration partners during the year ended December 31, 2023.

Research and Development Expenses

	Years ended December 31,		Change	
(in millions €)	**2023**	**2022**	**€**	**%**
Research and development expenses[1]	**1,783.1**	**1,537.0**	**246.1**	**16.0**
COVID-19	313.0	550.0	(237.0)	(43.1)
Non-COVID-19	1,470.1	987.0	483.1	48.9

(1) Breakdown according to internal cost allocation rules.

From the year ended December 31, 2022 to the year ended December 31, 2023, research and development expenses increased by €246.1 million from €1,537.0 million to €1,783.1 million, mainly influenced by progressing clinical studies for pipeline candidates as well as by our newly acquired

product candidates and the development of variant-adapted COVID-19 vaccines. The increase was further driven by an increase in wages, benefits and social security expenses resulting from a significant increase in headcount.

Sales and Marketing Expenses
From the year ended December 31, 2022 to the year ended December 31, 2023, sales and marketing expenses increased by €3.2 million from €59.5 million to €62.7 million, mainly due to increased expenses for setup and enhancement of the commercial IT platform and an increase in wages, benefits and social security expenses resulting from an increase in headcount.

General and Administrative Expenses
From the year ended December 31, 2022 to the year ended December 31, 2023, general and administrative expenses adjusted for external legal fees in connection with certain legal disputes increased by €13.3 million from €481.7 million to €495.0 million, mainly due to increased expenses for purchased IT services as well as an increase in wages, benefits and social security expenses resulting mainly from an increase in headcount.

Other Operating Result
From the year ended December 31, 2022 to the year ended December 31, 2023, the other operating result decreased by €593.3 million from positive €405.3 million to a negative result of €188.0 million.

During the year ended December 31, 2023, the other operating result reflected a negative effect from recognizing foreign exchange differences arising on operating items (expenses of €252.0 million during the 2023 financial year compared to gains of €727.4 million in the previous year). The decrease reflects the change in foreign exchange rates and is related to our U.S. dollar denominated trade receivables which were mainly incurred under our COVID-19 collaboration with Pfizer, U.S. dollar denominated trade payables as well as U.S. dollar denominated other financial liabilities which mainly relate to obligations incurred from our license agreements. To manage our transaction exposures, foreign currency forward contracts were entered into again during the year ended December 31, 2023 but were not designated as hedging instruments. Gains from foreign exchange forward contracts at fair value through profit or loss amounted to €67.6 million during the 2023 financial year compared to losses of €385.5 million in the previous year.

Finance Result
During the year ended December 31, 2023, the finance result increased compared to the year ended December 31, 2022 by €184.3 million from €311.4 million to €495.7 million.

During the year ended December 31, 2023, the finance income of €519.6 million was mainly due to interest income earned on financial securities and bank deposits as well as fair value adjustments in relation to money market funds. During the year ended December 31, 2022, fair value measurement adjustments of the derivative embedded within our convertible note had a significant impact on our finance result.

Income Taxes
Our tax expenses decreased by €3,263.9 million from €3,519.7 million in the previous year to €255.8 million in the 2023 financial year. Income taxes comprise current taxes of €243.1 million (previous year: €3,629.6 million) and deferred tax expenses of €12.7 million (previous year: deferred tax income of €109.9 million). Current income taxes include corporate income taxes and trade taxes of our German income tax group and are based on the calculated taxable income. Taxable income for 2023 is also net of deductible personnel expenses from our Employee Stock Ownership Plans. Due to the decision by the Supervisory Board on the settlement mechanism for the option rights at the end of September 2022, tax savings came to €19.8 million as of December 31, 2023, which are recognized directly in equity as the tax-deductible amount exceeds the amount of the related cumulative share-based payment expense.

In 2023, deferred tax assets are only recognized where the recognition criteria of IAS 12 are met as of December 31, 2023. Unrecognized deferred tax assets are re-assessed at each reporting date and are recognized to the extent that the recognition criteria of IAS 12 are met. The amount of deductible temporary differences, unused tax losses, and unused tax credits for which no deferred tax asset is recognized in the statement of financial position as of December 31, 2023 is €531.5 million. As of December 31, 2023, we recognize deferred tax assets on the losses of our U.S. tax group and other companies outside Germany. A reorganization of the intellectual property rights within the Group became effective as of June 30, 2023 and July 1, 2023, which also led to deferred tax effects in Germany, Austria and the U.S.

Annual Result
During the 2023 financial year, a profit of €930.3 million (previous year: €9,434.4 million) was generated.

2.3.2 Financial Position

The objective of financial management is to safeguard capital and to provide liquidity for the growth of the companies. The proceeds from commercial sales of our COVID-19 vaccine have become our most important source of liquidity and resulted in a significant increase in cash and cash equivalents in the 2023 financial year. Scenario and cash flow planning are used to determine liquidity needs.

Capital Structure
As of December 31, 2023, our share capital comprised 248,552,200 voting bearer shares, of which 10,826,465 were held as treasury shares. The par value of our shares is €1.00 and each confers one voting right at the Annual General Meeting. The financing of ongoing clinical trials, as well as the development, build-up of production capacity and commercialization of new formulations were primarily funded from cash flow from operating activities.

In March 2022, our Management Board and Supervisory Board authorized the 2022 share repurchase program of ADSs, pursuant to which ADSs with a value of up to $1.5 billion per ordinary share could be repurchased within a two-year period, commencing on May 2, 2022. In 2022, the first tranche of our 2022 share repurchase program of ADSs, with a value of up to $1.0 billion, concluded on October 10, 2022. The second tranche with a value of up to $0.5 billion commenced on December 7, 2022 and concluded on March 17, 2023. In March 2023, our Management Board and Supervisory Board authorized the 2023 share repurchase program, under which ADSs with a value of up to $0.5 billion could be purchased. It started on June 2, 2023 and concluded on September 18, 2023. During the year ended December 31, 2023, 6,868,136 ADSs were repurchased at an average price of $116.78 (€107.53), for total consideration of $802.1 million (€738.5 million).

Investments
During the 2023 financial year, investments were made in particular in property, plant and equipment in the amount of €249.4 million (previous year: €329.2 million). The investments were mainly made in connection with new buildings in Germany and investments in our BioNTainer. Investments in intangible assets amounted to €505.0 million during the 2023 financial year (previous year: €34.2 million), primarily in connection with the acquisition of license and collaboration agreements with Duality Biologics Co. Ltd and OncoC4 Inc. In addition, €187.4 million was invested in intangible assets in connection with business acquisitions, mainly in the context of the acquisition of the new subsidiary InstaDeep Ltd. There were no business acquisitions in the previous year.

Depreciation of property, plant and equipment amounted to €97.7 million during the 2023 financial year (previous year: €42.4 million). Amortization of intangible assets amounted to €40.5 million (previous year: €22.0 million).

For investing activities, we spent a total of €6,954.5 million during the 2023 financial year (previous year: €35.3 million), primarily for first-time investments in bonds in the amount of €7,128.4 million.

Liquidity
As of December 31, 2023, our cash and cash equivalents amounted to €11,663.7 million compared to €13,875.1 million as of December 31, 2022 and security investments to €5,989.7 million (previous year: nil), i.e. a total of €17,653.4 million. Primarily, the overall increase in cash inflow during the 2023 financial year is due to payments received from commercial sales of our COVID-19 vaccine and our share of gross profit from commercial sales of the COVID-19 vaccine by our partner Pfizer included therein. The contractual settlement of the gross profit share has a temporal offset of more than one calendar quarter. In addition, Pfizer's subsidiaries outside

the United States have a different financial quarter. We receive a large portion of these payments via our partner Pfizer in U.S. dollars, which exposes us to significant concentration and currency risks. Operating activities, which mainly comprise the share of gross profit received, as well as payments in connection with research and development activities, generated a cash flow from operating activities of €5,371.4 million (previous year: cash flow of €13,577.4 million).

Net cash used in financing activities for the year ended December 31, 2023 was €778.6 million (previous year: €1,419.3 million). The main component was the cash of €738.5 million used in connection with the share repurchase program.

2.3.3 Net Assets

As of December 31, 2023, total assets amounted to €23,006.3 million compared to €23,279.1 million as of December 31, 2022. The decrease was mainly due to lower receivables from Pfizer as a result of reduced COVID-19 vaccine sales, as well as the following developments:

Current and Non-Current Assets
Compared to December 31, 2022, non-current assets increased by €2,121.9 million from €1,357.1 million to €3,479.0 million as of December 31, 2023, due primarily to investments in non-current securities and intangible assets.

The €2,394.7 million decrease in current assets from €21,922.0 million as of December 31, 2022 to €19,527.3 million as of December 31, 2023 is mainly attributable to two contrasting effects: While total cash and cash equivalents and securities increased, receivables from our COVID-19 collaboration with Pfizer and receivables from our customers that we supply directly in our territory decreased due to lower demand at the end of the 2023 financial year.

Equity
Compared to December 31, 2022, equity increased by €190.3 million from €20,055.6 million to €20,245.9 million as of December 31, 2023. The increase mainly resulted from the profit during the 2023 financial year, partly offset by effects from the share repurchase program of €738.5 million. The equity ratio increased by 1.8 percentage points to 88.0% (previous year: 86.2%).

Current and Non-Current Liabilities
Compared to December 31, 2022, liabilities decreased by €463.1 million from €3,223.5 million to €2,760.4 million as of December 31, 2023. The decrease was mainly attributable to the remittance of wage taxes and social security expenses in connection with the settlement of the Employee Stock Ownership Plans (ESOP 2018 and LTI-plus) and lower obligations incurred from our license agreements.

Off-Balance Sheet Commitments
The off-balance sheet commitments include the following:

(in millions €)	December 31, 2023	December 31, 2022
Commitments under purchase agreements for property, plant and equipment	154.4	105.2
Contractual obligations to acquire intangible assets	1,721.1	—
Total	**1,875.5**	**105.2**

Contractual obligations to acquire intangible assets exist in connection with in-licensing and research and development cooperations. We have entered into obligations to pay milestone payments once specific targets have been reached. Provided that all of the milestone events are achieved, we would be obligated to pay up to €1,721.1 million as of December 31, 2023 (nil as of December 31, 2022) in connection with the acquisition of intangible assets. The amounts shown represent the maximum payments to be made, and it is unlikely that they will all fall due. The amounts and the dates of the actual payments may both vary considerably from those

stated in the table, since the achievement of the conditions for payment is possible but uncertain. Other financial obligations from possible future sales-based milestone and license payments were not included in the table above.

The expected maturities of payment obligations under purchase agreements for property, plant and equipment and contractual obligations to acquire intangible assets are as follows:

(in millions €)	Less than 1 year	1 to 5 years	More than 5 years
Commitments under purchase agreements for property, plant and equipment	152.5	1.9	—
Contractual obligations to acquire intangible assets	249.4	954.9	516.8
Total	**401.9**	**956.8**	**516.8**

2.4. Key Performance Indicators of the Group and BioNTech SE

2.4.1 Non-Financial Key Performance Indicators of the Group and BioNTech SE

Innovation was classified as a material non-financial key performance indicator during the 2023 financial year and was used for internal management.

We are working on the development of innovative drugs for diseases with high or unmet medical need. We continue to build our pipeline, which has grown in recent years in line with the Company's fundamental vision of harnessing the power of the immune system to fight cancer and other serious diseases. BioNTech supports the United Nations Sustainable Development Goals (SDGs). In this context, with our business model, we make a relevant contribution to supporting the third United Nations Sustainable Development Goal (SDG 3): Ensure healthy lives and promote well-being for all at all ages.

Progress in research achievements and the advancement and expanded commercialization of our COVID-19 vaccine are key performance indicators for our Company. We are working to clinically demonstrate the benefit of additional treatment approaches, further develop additional product candidates in studies with potential for approval, and continuously expand collaborations and manufacturing capabilities to offer innovative treatments to patients around the world.

2.4.2 Financial Key Performance Indicators of the Group and BioNTech SE

The following financial key performance indicators are in the focus of our operational business development management. We use the measures based on current exchange rates (not currency adjusted) and take effects from potential M&A activities or collaborations into account where these have been published.

Revenues
Total revenues mainly comprise expected commercial revenue, particularly in connection with our COVID-19 business as well as other revenue sources. Revenues are heavily influenced by the volumes available under the collaboration and the agreed upon purchase quantities. As our revenues represent our share of gross profits of the collaboration partners' gross profit, they are also influenced by the incurring costs. For further information on the composition of commercial COVID-19 vaccine sales and the components contained therein, see the comments on sales under ***2.3.1 Operating Results.*** Our sales serve as a performance indicator of our commercial earning power.

Research and Development Expenses
Research and development expenses are an indicator of our future earnings potential, as this is highly dependent on the development of the clinical pipeline and the responsible management of the financial resources generated. This figure mainly includes expenses for the development of our clinical product candidates, early exploratory research and research and development overhead costs.

Sales, General and Administrative Expenses
These costs include sales and marketing costs as well as general and administrative costs. We use this measure to manage the costs associated with the expansion of the sales and marketing organization to ensure the necessary infrastructure and digital capacity for future market-ready products, as well as to manage the internal administrative and coordinative functions associated with the expansion of research and development, such as finance, human resources, or business development, with regard to the associated cost development.

Investments in Property, Plant and Equipment and Intangible Assets
Capital expenditures for property, plant and equipment and intangible assets include expenditures for the acquisition of property, plant and equipment as well as expenditures for the acquisition of intangible assets and rights of use, unless they are made as part of mergers and acquisitions (M&A). These mainly include expenditures for the expansion and improvement of our research and development and manufacturing facilities and investments in a state-of-the-art IT infrastructure to support the Company in all digitization projects.

2.5 Overall Statement on the Business Development and Position of the Group and BioNTech SE

We are a global immunotherapy company pioneering the development of novel medicines against cancer, infectious diseases and other serious diseases. These activities still require high investments at this stage. In addition to financial metrics, we continue to measure our business success primarily by our research performance, and in particular by the achievement of the targets we have set. Together with collaboration partners, we have generated a robust and diversified oncology and infectious disease pipeline. There are currently 22 product candidates in oncology and seven product candidates in infectious diseases in clinical development. In the 2023 financial year, we continuously advanced and diversified our pipeline, progressing in line with expectations and planning. Among other things, we expanded our access to a new technology – ADCs – in 2023. In addition, with the acquisition of our long-time strategic collaboration partner InstaDeep, we have taken a further step in our strategy, aiming to build world-leading capabilities in AI-driven drug discovery and development of next-generation immunotherapies and vaccines to address diseases with high unmet medical need. We are well positioned to continue BioNTech's successful development in what remains a challenging market environment in 2024.

3 MANAGEMENT REPORT OF BioNTech SE

3.1 Supplementary Notes According to the German Commercial Code (HGB)

BioNTech SE is the parent company of the BioNTech Group and is headquartered in Mainz, Germany. In addition, as of the end of the 2023 financial year, the BioNTech Group included 41 group companies. Key management functions for the Group, such as corporate strategy, risk management, investment management tasks, executive and financial management, as well as communication with important target groups of the Group, are the responsibility of the Management Board of BioNTech SE. With its operating activities, in particular in connection with the two collaboration agreements with Pfizer and Fosun Pharma, which were concluded by BioNTech SE in the context of the COVID-19 vaccine program, BioNTech SE generated the bulk of the Group's revenues.

BioNTech SE is not managed separately using its own key performance indicators, as the Company is integrated into the group management system. The explanations given for the Group apply. The economic framework conditions of BioNTech SE essentially correspond to those of the BioNTech Group and are described in detail in ***Section 2.***

3.2 Net Assets, Financial Position and Operating Results of BioNTech SE

3.2.1 Operating Results

	Years ended December 31,	
(in millions €)	**2023**	**2022**
Revenues	3,270.1	12,514.5
Cost of sales	(250.0)	(1,615.7)
Gross profit	**3,020.1**	**10,898.8**
Research and development expenses	(1,743.6)	(1,519.7)
Sales expenses	(29.4)	(29.1)
General and administrative expenses	(535.1)	(475.4)
Other operating income	299.5	1,041.3
Other operating expenses	(315.6)	(717.1)
Operating income	**695.9**	**9,198.8**
Income from profit transfer	184.6	2,863.3
Income from other securities and loans classified as fixed financial assets	29.7	—
Other interest and similar income	366.7	51.8
Expenses from loss transfer	(166.2)	(86.9)
Interest and similar expenses	(78.0)	(30.9)
Profit before tax	**1,032.7**	**11,996.1**
Income taxes	(233.2)	(3,370.1)
Net income	**799.5**	**8,626.0**

Revenues
Revenues decreased by €9,244.4 million from €12,514.5 million during the 2022 financial year to €3,270.1 million during the 2023 financial year. Commercial revenues decreased due to lower demand for our COVID-19 vaccine and are largely attributable to revenue recognition under the collaboration agreement with Pfizer, to which BioNTech SE is a party.

Cost of Sales
From the year ended December 31, 2022 to the year ended December 31, 2023, cost of sales decreased by €1,365.7 million from €1,615.7 million to €250.0 million due to the decline in COVID-19 vaccine sales. Cost of sales primarily includes the share of our gross profit that Pfizer receives as a collaboration partner based on our sales. In addition, sales-related licensing costs for third-party intellectual property contribute to the cost of sales.

Research and Development Expenses
From the year ended December 31, 2022 to the year ended December 31, 2023, research and development expenses increased by €223.9 million from €1,519.7 million to €1,743.6 million, mainly due to progressing clinical studies for our pipeline candidates as well as our newly acquired product candidates and the development of variant-adapted COVID-19 vaccines. The increase was further driven by an increase in wages, benefits and social security expenses resulting from a significant increase in headcount.

General and Administrative Expenses
From the year ended December 31, 2022 to the year ended December 31, 2023, general and administrative expenses increased by €59.7 million from €475.4 million to €535.1 million, mainly due to the expenses from the remittance of wage taxes and social security expenses from the exercise of our share-based payments, increased expenses for purchased IT services as well as an increase in wages, benefits and social security expenses resulting mainly from an increase in headcount.

Other Operating Result
From the year ended December 31, 2022 to the year ended December 31, 2023, the other operating result decreased by €340.3 million from positive €324.2 million to a negative result of €16.1 million. This item mainly included foreign currency gains from the translation of our U.S. dollar denominated trade receivables, which mainly arose from our COVID-19 collaboration with Pfizer. The offsetting effects mainly include expenses from foreign exchange forward contracts.

Finance Result
During the year ended December 31, 2023, the finance result, comprising the effects of profit transfer and interest income and expenses, decreased by €2,460.5 million compared to the year ended December 31, 2022 from €2,797.3 million to €336.8 million. The decrease resulted in particular from the decline in income from the profit transfer from affiliated companies (net profit transfer of €18.4 million; previous year: net profit transfer of €2,776.4 million). During the year ended December 31, 2023, the interest result included in the finance result improved by €297.5 million compared to the year ended December 31, 2022 from €20.9 million to €318.4 million, which is mainly due to interest income earned on securities.

Income Taxes
Income taxes amounted to €233.2 million during the 2023 financial year (previous year: €3,370.1 million). Income taxes comprise current taxes of €233.2 million (previous year: €3,442.3 million) and no deferred tax expense or deferred tax income (previous year: deferred tax income of €72.3 million). The decrease in current taxes is due to a decline in revenue recognition related to our COVID-19 vaccine sales and includes corporate income taxes and trade taxes of our German income tax group and is based on calculated taxable income. Taxable income is also net of deductible personnel expenses from our share-based payments programs. In the HGB, or German GAAP accounts, the Supervisory Board decision on the ESOP 2018 resulted in a present obligation to settle in cash with regard to the wage tax from the exercise of the share-based payments. Consequently, pursuant to German GAAP, the difference between the value of the wage tax payment and the fair value of the pro rata rights was recognized as an additional expense as of the grant date. Our share-based payments programs resulted in aggregate actual tax savings of

€11.9 million, which are recognized directly in equity as the tax-deductible amount exceeds the amount of the related cumulative share-based payment expense.

Annual Result
During the 2023 financial year, net income of €799.5 million (previous year: €8,626.0 million) was reported.

3.2.2 Financial Position

The objective of the financial management of BioNTech SE is essentially identical to that of the Group and involves providing liquidity for the growth of the group companies.

Capital Structure
As of December 31, 2023, our share capital comprised 248,552,200 voting bearer shares, of which 10,826,465 were held as treasury shares. The capital reserve decreased mainly in connection with the share repurchase program.

Investments
Total investments of €2,598.1 million were made during the 2023 financial year (previous year: €703.5 million). The amount consisted of investments in property, plant and equipment amounting to €59.2 million (previous year: €75.7 million) and investments in intangible assets amounting to €667.2 million (previous year: €31.8 million) as well as investments in securities classified as fixed assets and shares in affiliated companies and other loans amounting to €1,871.7 million (previous year: €596.0 million), primarily driven by the acquisition of InstaDeep and, to a lesser extent, financing activities for subsidiaries.

Depreciation of buildings, other equipment, furniture and fixtures amounted to €21.4 million in 2023 (previous year: €14.4 million). Amortization of intangible assets amounted to €63.9 million (previous year: €12.0 million).

Liquidity
As of December 31, 2023, our cash and cash equivalents amounted to €11,409.5 million compared to €13,798.0 million as of December 31, 2022, securities classified as fixed assets amounted to €1,326.4 million (previous year: nil) and other securities amounted to €4,662.6 million (previous year: nil), i.e. a total of €17,398.5 million. Primarily, the overall increase in cash inflow during the 2023 financial year is due to payments received from commercial sales of our COVID-19 vaccine and our share of gross profit from commercial sales of the COVID-19 vaccine by our partner Pfizer included therein. The contractual settlement of the gross profit share has a temporal offset of more than one calendar quarter. In addition, Pfizer's subsidiaries outside the United States have a different financial quarter. We receive a large portion of these payments via our partner Pfizer in U.S. dollars, which exposes us to significant concentration and currency risks. Operating activities, which mainly include the share of gross profit received, as well as payments in connection with research and development activities, generated a cash flow from operating activities of €4,514.8 million (previous year: cash flow of €13,148.0 million).

Net cash used in financing activities for the year ended December 31, 2023 was €813.4 million (previous year: €552.9 million). The main component was the cash of €738.5 million used in connection with the share repurchase program.

3.2.3 Net Assets

(in millions €)	December 31, 2023	December 31, 2022
Assets		
Fixed assets		
Intangible assets	674.6	71.9
Property, plant and equipment	136.5	99.9
Financial assets	2,542.8	1,279.7
Total fixed assets	**3,353.9**	**1,451.5**
Current assets		
Inventories	1.2	0.7
Receivables and other assets	2,813.9	7,273.3
Other securities	4,662.6	—
Cash on hand and at banks	11,409.5	13,798.0
Total current assets	**18,887.2**	**21,072.0**
Prepaid expenses	216.3	63.5
Total assets	**22,457.4**	**22,587.0**

(in millions €)	December 31, 2023	December 31, 2022
Equity and liabilities		
Equity		
Share capital	248.6	248.6
Capital reserve	695.6	1,295.4
Treasury shares	(10.8)	(5.3)
Retained earnings	9,845.1	9,445.4
Accumulated profit	9,361.0	8,961.2
Total equity	**20,139.5**	**19,945.3**
Provisions		
Tax provisions	525.1	606.1
Other provisions	571.7	923.3
Total provisions	**1,096.8**	**1,529.4**
Liabilities		
Trade payables	254.2	57.2
Liabilities to affiliated companies	485.8	389.6
Other liabilities	93.4	651.6
Total liabilities	**833.4**	**1,098.4**
Deferred income	387.7	13.9
Total equity and liabilities	**22,457.4**	**22,587.0**

As of December 31, 2023, total assets amounted to €22,457.40 million compared to €22,587.0 million as of December 31, 2022. A significant part of this balance comprises cash on hand and at banks stemming from our COVID-19 collaboration with Pfizer and the payments received under the profit and loss transfer agreements derived from the COVID-19 vaccine sales of our subsidiaries. The changes in our total assets are mainly due to the following developments:

Fixed Assets and Current Assets
Compared to December 31, 2022, fixed assets increased by €1,902.4 million from €1,451.5 million to €3,353.9 million as of December 31, 2023. Besides additions in intangible assets, financial assets increased due to the investments in securities.

Compared to December 31, 2022, current assets decreased by €2,184.8 million from €21,072.0 million to €18,887.2 million as of December 31, 2023. The decline mainly resulted from the decrease in receivables from Pfizer as a result of lower demand for our COVID-19 vaccine.

Equity
Compared to December 31, 2022, equity increased by €194.2 million, from €19,945.3 million to €20,139.5 million as of December 31, 2023. The increase resulted primarily from the net income generated during the 2023 financial year. The equity ratio increased by 1.4 percentage points to 89.7% (2022: 88.3%).

Provisions and Liabilities
Compared to December 31, 2022, provisions and liabilities decreased by €697.6 million from €2,627.8 million to €1,930.2 million as of December 31, 2023, largely as a result of lower provisions for outstanding invoices and miscellaneous provisions as well as lower liabilities from wage taxes and social security expenses.

Off-Balance Sheet Commitments
Contingent liabilities relate to potential future events whose occurrence would give rise to an obligation. As of the reporting date, contingent liabilities from guarantees amounted to €642.8 million. The risk of claims is considered to be low due to the central management of the subsidiaries, taking into account the Group's good financial position.

Other financial obligations include the following rental and lease obligations:

(in millions €)	Less than 1 year	1 to 5 years	More than 5 years
Rental agreements	8.5	28.1	7.2

Rental and lease agreements offer the benefit of optimizing liquidity. There are no identifiable significant risks. The aforementioned transactions include expenses from rental agreements with ATHOS KG, Holzkirchen, Germany, or entities controlled by them.

There are also other financial obligations in connection with the purchase of property, plant and equipment and intangible assets:

(in millions €)	Less than 1 year	1 to 5 years	More than 5 years
Commitments under purchase agreements for property, plant and equipment	152.5	1.9	—
Contractual obligation to acquire intangible assets	249.4	954.9	516.8
Total	**401.9**	**956.8**	**516.8**

The financial obligations in connection with the purchase of intangible assets arise from the license and collaboration agreements concluded and the resulting obligations to make milestone payments to the collaboration partner as well as the contractual obligation under purchase agreements for property, plant and equipment. Provided that all contractually agreed milestones are reached, the Company would be obligated to pay up to €1,875.5 million as of December 31, 2023.

3.3 Forecast, Opportunity and Risk Report

The business development of BioNTech SE is essentially subject to the same risks and opportunities as the BioNTech Group, as BioNTech SE participates in the risks of the group companies via its investments. As a result of the central financial management of the BioNTech Group, all financing transactions are primarily conducted via BioNTech SE. As the parent company of the BioNTech Group, BioNTech SE is integrated into our Group-wide risk management.

3.4 Relationships with Affiliated Companies

Final declaration of the Management Board of BioNTech SE on the report on relationships with affiliated companies for the 2023 financial year (dependent company report pursuant to Section 312 para. 3 sentence 3 AktG):

“According to the circumstances known to us at the time when the legal transactions were carried out or the actions were taken, BioNTech SE received appropriate consideration for each legal transaction and was not disadvantaged. In the financial year, no actions were taken or omitted at the instigation of or in the interests of ATHOS KG or its affiliated companies in the period from January 1 to December 31, 2023.”

4 FORECAST, OPPORTUNITY AND RISK REPORT

4.1 Forecast

We as a company are part of the pharmaceutical and biotechnology industry, which stands out nationally and internationally for its innovative strength. The growth prospects for the industry are considered to be good, driven by its independence from economic cycles, global demographic change and medical and technological progress. Based on the Company's proprietary mRNA technology, we succeeded in becoming the first company worldwide to develop a highly effective and safe vaccine against COVID-19 in compliance with scientific standards within one year and to then successfully market it globally. This demonstrates our ability to develop and commercialize medicines and therapies based on innovative technologies that can add value for patients and society.

We expect consolidated revenues of €2.5 billion to €3.1 billion for the 2024 financial year.

The revenue forecast mainly comprises commercial revenues from our COVID-19 vaccine business and is based on various assumptions including, but not limited to, the transition still expected in 2024 from a market environment with purchase agreements between governments and vaccine manufacturers to commercial market orders and a regulatory recommendation to adapt the COVID-19 vaccines to the latest circulating variants or sublineages of SARS-CoV-2. Our estimated COVID-19 vaccine revenues reflect the deliveries anticipated under existing or promised supply agreements as well as expected sales from conventional commercial orders. While we anticipate an increase in demand due to a vaccine adaptation, we expect fewer primary vaccinations and a lower percentage of booster vaccinations within the population as a whole. We expect that our revenues will be shaped by purchases of our COVID-19 vaccine in the second half of the year.

Revenue is heavily influenced by the volumes available under the collaboration and the agreed upon purchase quantities, to which we have adjusted our production capabilities accordingly. As our revenues represent our share of gross profits of the collaboration partners' gross profit, they are also influenced by the incurring costs.

We aim to generate long-term sustainable revenues from the COVID-19 vaccine program and maintain our leadership role in the development and commercialization of COVID-19 vaccines. We have developed and marketed four COVID-19 vaccine products since the start of the pandemic. Going forward, we intend to continue our work with Pfizer to create the conditions to flexibly adapt the vaccine to other potential future mutations if necessary, to continually optimize the formulations and to make the product accessible to additional patient groups through indication extensions.

As described above, the range of revenue we forecast depends on various factors. Our revenue forecast is based on largely stable vaccination rates and can be influenced by a change in price levels, particularly in the more competitive U.S. market. The forecast factors in expected write-downs recognized by our collaboration partner Pfizer.

In addition to COVID-19 vaccine revenues, we plan to develop further revenue sources, such as from the framework agreement signed with the Federal Republic of Germany on pandemic preparedness including manufacturing and supply of mRNA vaccines and, for example, revenues from external sales by our subsidiaries InstaDeep Ltd., JPT Peptide Technologies GmbH and BioNTech Individualized mRNA Manufacturing GmbH.

With the successful production and commercialization of our COVID-19 vaccine, we have built up a wealth of expertise and a global network to develop, produce and commercialize products worldwide. Our future earnings potential is highly dependent on the development of the clinical pipeline and the responsible use of the financial resources generated. We have generated a broad pipeline of product candidates across a range

of technology platforms and, in addition, intend to reinvest the proceeds from the sale of our COVID-19 vaccine in our advanced clinical candidates and in the further expansion of our therapeutic platforms. During the 2024 financial year, we expect to make significant progress in several clinical trials and present data updates for numerous development programs. In connection with building our product pipeline in oncology and infectious disease and expanding into new areas such as autoimmune diseases, regenerative medicine and allergies, we expect our research and development expenses to continue to increase. In this context, we expect expenses of €2.4 billion to €2.6 billion for the 2024 financial year.

Costs are also expected to increase for the internal administrative and coordinative functions associated with the expansion of research and development, such as finance, human resources, or business development. For the 2024 financial year, we expect sales, general and administrative expenses in the range of €700.0 million to €800.0 million. This forecast does not include expenses for external legal counsel in connection with certain legal disputes, as these are recognized in the other operating result. Nor does it include potential payments that may arise from the results of current or future legal disputes or related judgments or settlements.

Operating investments in property, plant and equipment and intangible assets will also increase. For the 2024 financial year, we expect operating investments in property, plant, equipment and intangible assets in the range of €400.0 million to €500.0 million. This includes expenditures for the expansion and improvement of our research and development and manufacturing facilities described above and further investments in IT infrastructure to support the Company in its bio-digital transformation and our focus as a data-driven enterprise.

Based on the guidance for revenues and considering cost of sales, research and development expenses and all other costs, we do not expect to turn a profit in 2024.

In 2023, we strengthened our technology platforms, our digital capabilities, and our infrastructure through relevant investments, select strategic partnerships, licensing and acquisitions to bring long-term added value to patients, shareholders, and to society. In 2024, we intend to continue building our oncology pipeline towards our first oncology product launch in 2026 and to apply for ten further indication approvals by 2030. Longer term, we see potential applications for our technologies beyond oncology and infectious disease, including autoimmune diseases, inflammatory diseases, cardiovascular diseases, neurodegenerative diseases, and regenerative medicines.

4.2 Risk Report

4.2.1 Risk Governance Framework

Risk Management System
As a next-generation immunotherapy company, we are exposed to numerous uncertainties and changes resulting, for example, from new research approaches. These uncertainties can have a significant impact on the planned business performance. BioNTech is aware of the need to take risks in order to exploit opportunities that arise. Our risk management system (RMS) describes the systematic approach to identifying, assessing, managing, mitigating and communicating risks. As part of our risk governance framework, a functioning risk management system is a central element of value-based corporate governance and applies to all divisions, subsidiaries and locations throughout the Group. The risk management function belongs to the Business Planning & Analysis department and reports directly to the CFO.

Risk Management Process
Our Management Board and Supervisory Board jointly determine the risk strategy and risk appetite. Our company-wide risk management system covers strategic, operational, financial, legal, compliance and reputational risks. Our systems are constantly being reviewed and enhanced, and will, for instance, address environmental, climate and human rights aspects more systematically in the future. This also includes the requirements of double materiality in accordance with the EU Corporate Sustainability Reporting Directive (CSRD), whereby BioNTech will have to report on both the impact of the Company's activities on people and the environment and the impact of sustainability aspects on the Company from the 2025 financial year onwards.

The regular risk cycle is completed once every six months. Our risk owners and experts assess the risks and decide how to respond to them. Enterprise Risk Management regularly reports to the Management Board on the overall risk situation. Ad hoc risks are continuously identified, assessed and, if necessary, reported directly to the Management Board.

Risk Identification

At BioNTech, new risks are systematically identified and analyzed. Existing risks were re-assessed, and reviewed and refined with regard to their substance and assessment, and adjusted where necessary.

The individual risks are assigned to our risk owners, who are responsible for the management of these risks and who have the necessary competencies and level of responsibility to do so. The risk owners evaluate the individual risks quantitatively by determining the probability of occurrence and the estimated monetary impact. In addition, the risks are expanded to include the dimensions of “reputational damage” and “legal relevance” and assessed qualitatively.

The risk identification process is supported by a risk management tool, which catalogs risks within our risk universe. In order to capture the full range of possible outcomes, the risks are aggregated using a Monte Carlo simulation. A comparison of the resulting value-at-risk and our risk-bearing capacity enables us to manage risks comprehensively. The risk-bearing capacity plan refers to several metrics such as rating, our equity, EBIT and our cash and cash equivalents and compares them with the aggregated overall risk in the short, medium and long term.

Risk Assessment and Management

Risks are assessed in financial terms according to “probability of occurrence” and “damage potential”. Probability of occurrence is rated on a scale ranging from “very unlikely” to “very likely”, while damage potential is rated on a scale from “low” to “critical”. Risks arise depending on the combined magnitude of the two factors and are classified as “high”, “medium” or “low”. The order in which the risks are presented within the three categories reflects the current assessment of the relative magnitude of risk for us and therefore provides an indication of the current significance of these risks for us.

However, risks with a currently low estimated damage potential may have a greater impact in the future than currently assessed and are therefore continuously monitored by Central Risk Management.

We monitor identified risks continuously and respond to them in different ways. For each risk, we make an individual decision as to whether or not to accept the risk. Alternatively, we consider, for example, whether we can cover (or transfer) the risk by insurance or mitigate it by other means.

Risk Reporting

The aim is to identify, monitor and manage our risks at an early stage. Risks and their impact on the Company are presented transparently in order to enable effective management of these risks. We use internal and external sources of information for this purpose.

Central Risk Management prepares an overall risk report for the Management Board twice a year. The Risk Committee comments on the risk report and validates the greatest risks, recommends responses and identifies interdependencies between the risks. The Management Board then informs the Audit Committee. If unexpectedly high risks arise – in addition to the regular reporting of significant risks – these are reported directly to the Management Board. The Audit Committee of our Supervisory Board examines the effectiveness and adequacy of the risk management system and also calls on the Internal Audit department for this purpose.

Risk Culture

BioNTech practices and promotes an open risk culture. All employees can approach their manager or Enterprise Risk Management directly or report new risks (anonymously) via a reporting portal. Training courses are offered every six months for all risk owners and experts, and the training documents are available to all employees via the intranet. The information collected can then be forwarded directly to the relevant risk owner or discussed in workshops. Regular news articles are addressed to all employees and underline the open risk culture.

Three Lines Model
Our objective is to anticipate potential developments at an early stage and to systematically identify, assess and manage any resulting risks. In order to systematically manage risks, the governance structure of BioNTech is based around the three lines model. From an operational perspective, activities in the first line are aimed at compliance with the requirements defined in the second line and application of controls as part of day-to-day operations. The second line comprises risk management as well as our internal control system ***(see 4.2.3)*** and our compliance and ethics program ***(see 5.4 Integrity and Ethics).*** This line provides systems and expertise to systematically detect risks, defines the control framework and sets policies. Internal Audit, which was newly implemented in the 2022 financial year, is the third line ***(see 4.2.3).***

4.2.2 Risks

Risks with the Greatest Financial Impact

Risks from Strategic Transformation and Integration
We are in a constant process of strategic adjustments. If we cannot implement our plans as expected, we are exposed to certain risks. For example, the benefits of the measures may be less than originally estimated, they may have a later impact than anticipated, or they may not have any effect at all. On the other hand, constant growth also amplifies the complexity of integrating successful transactions, our pipeline, locations, processes and interfaces. Any of these factors – alone or in combination – could have a negative impact on our business, net assets, financial position and operating results. The transformation is being addressed through various strategic initiatives, including in particular the expansion of existing departments and cross-disciplinary teams as well as the expansion of our IT support and the underlying process landscape. The financial risk is assessed as high and has primarily a medium and long-term impact.

Risks Related to Commercial Products
BioNTech's future success depends largely on our ability to successfully commercialize our development candidates. The commercial function is constantly being enlarged and its processes refined in order to consolidate our position and establish ourselves as the market leader. Commercial scaling and the interaction between medical and public affairs are time-critical components. The financial risk is assessed as high.

In 2020, our COVID-19 vaccine was our first commercial product launched on the market and an effective component in the fight against the COVID-19 pandemic. Revenues projected on the basis of assumptions are subject to fluctuations and may thus fall short of our own expectations. These fluctuations can be caused, for example, by an incorrect assessment of market size or unforeseen changes in market demand. This also includes the transition to standard treatment, securing the supply chain and adapting our vaccine doses to the changing distribution channels. Changes in the requirements for our vaccine, missed or delayed adaptation to new virus variants or even superior products from competitors could also have an aggravating effect. We continuously monitor and analyze market and industry developments in order to identify market entry barriers, growing competition or changes in health legislation at an early stage and are further expanding the internal capacities needed to do so. In addition, we are in active exchange with government representatives, health insurance companies and other payers. The financial risk is assessed as medium.

The various contracts with our collaboration partners and the associated profit share are subject to certain expectations on our side. Despite various consultations and our own assessment, actual results may fall short of our expectations, e.g. due to lower revenues or market shares in our partners' regions as well as increased costs on our partners' side. In order to be able to better assess the developments, we are in intensive and constant exchange with our partners. The financial risk is assessed as medium.

Research and Development Risks
There are currently 22 product candidates in oncology and seven product candidates in infectious diseases in clinical development. Our main activity therefore continues to be research and development and the supervision of clinical trials. Naturally, this also involves the greatest risks. For scientific, procedural or regulatory reasons, product candidates may not be developed to market maturity, or only with a delay. Likewise, despite optimal preparation, unforeseeable complications or side effects may occur in the course of clinical trials, which in the worst case could lead to legal disputes and compensation payments. The increasing number of candidates in our product pipeline also has a growing impact on the Company's risk situation. We constantly monitor the development of our industry and the market in order to address uncertain factors during the research and development of our candidates in oncology and infectious disease (e.g. clinical care costs, the number of treatable patients, possible additional costs due to delays in clinical trials, a more difficult patient search or an additional trial to collect additional data). The financial risk is assessed as high.

People Risks
Our workforce plays a crucial role in our transformation. The skills of our employees are an important factor for our business success. If we are unable to attract or retain a sufficient number of experts, this could have a negative impact on our business in the future. New processes and capacities are being developed and built up to counteract the bottleneck caused by the generally high market demand for the recruitment of new employees and relevant specialist staff. The financial risk is assessed as high.

Geopolitical and External Risks
Our constant global expansion also increases the regulatory requirements placed on us. For example, working with collaboration partners in different countries and regions leads to additional requirements and regulations that we have to consider. This includes topics such as data protection, animal welfare and the protection of human rights. The financial risk is assessed as high.

Events on a global scale are also the focus of strategic consideration and include climate change and associated extreme weather events such as floods or droughts. We also monitor the effects of geopolitical tensions and conflicts in various regions of the world with a view to their potential impact on our business activities. These include armed conflicts such as those in Ukraine and the Middle East and their potential escalation, as well as trade conflicts. Even though the financial risk is currently assessed as low, the situation is being closely monitored.

Such tensions can have further consequences, such as a high inflation rate, disrupted supply chains, for example due to import restrictions, supply bottlenecks or resource shortages. These are continuously monitored and evaluated by our Business Continuity Management function. The financial risk is assessed as low.

Physical and IT Security Risks
The protection of our data and the security of our information also includes unauthorized access – from outside or inside – to our supply chain, infrastructure or intellectual property as well as extortionist acts, denial-of-service attacks, fraud and phishing or even a global IT blackout. We take various measures to counteract these risks; for example, we continuously enhance our security policies and guidelines and perform IT risk and application security assessments; a vulnerability scanner, awareness training for our employees and incident management function have been set up. The residual financial risk is classified as medium.

The continued visibility of the Company and the growing international presence have diversified security risks. Physical security risks include criminal threats against the assets of BioNTech, harassment of employees, unauthorized access and other undesired acts against BioNTech's operations. With a security transformation program, awareness training and the implementation of corresponding physical security standards, BioNTech aims to achieve and uphold a globally consistent level of protection for all BioNTech representatives and assets. A medium residual financial risk remains.

Legal, IP and Insurance Risks
The legal risks that are currently relevant to us can be grouped into two categories: contractual risks and patent-related risks.

On the contractual side, we are confronted with possible breaches of contract. Different interpretations of the contracts, the claims regulated in them and the allocation of revenues and costs could lead to disputes. Where the recognition criteria are met, provisions are made to counter this risk. We assess this as a medium residual financial risk.

It is possible that not all events or different events are fully insured. Our constant growth makes it difficult for insurance service providers to assess us, coverage amounts and related premiums may be set too high or too low. If coverage amounts are too low, there is a risk that events may not be fully covered, while excessively high coverage would impair our liquidity. We have established a central insurance management function and work with specialized insurance brokers and insurers with experience in the pharmaceutical industry. We liaise with our insurers to address any discrepancies. Identified risks are evaluated and mitigated whenever necessary. We assess this as a medium residual financial risk.

In addition, in the normal course of business, we could from time to time unintentionally infringe protected intellectual property of others. These patent-related risks are countered by continuous monitoring of patent applications. In addition, in such cases, we continuously assess whether the related circumstances will change in the future, including whether it may be necessary to recognize a provision and whether there are potential indemnification claims against such allegations. The financial risk is assessed as low.

Intentional or unintentional infringement of our intellectual property by third parties is currently considered to be a low financial risk, but would have mainly long-term effects.

Compliance and Regulatory Risks
The rapid growth of recent years augments the risk of a delay in quarterly or annual financial statements. Increased media attention and regulatory requirements also have an impact on timelines, as does the interaction between internal departments and external collaboration partners as sources of information. The necessary processes and systems have been established and are constantly being refined. The residual financial risk is classified as low, but reputational damage could be high.

The withholding and deduction of taxes on remuneration for the transfer of the use or the permission to use rights, in particular copyrights and intellectual property rights, is actively monitored by our Tax department. The financial risk is considered to be low, but reputational damage could be high.

In Compliance & Business Ethics, the focus is on combating corruption, bribery and money laundering. In addition, processes have been put in place and various training courses, guidelines and policies are available to our employees to actively address dealing with healthcare experts, conflicts of interest and discrimination. The financial risk from such misconduct is classified as low, but it could result in high reputational damage.

Processes and responsibilities need to keep pace and evolve with the rapid growth. It may not be possible to adequately meet the requirements of the Sarbanes-Oxley Act (U.S. federal law designed to improve reporting by companies using the U.S. public capital market). The confidence of the market or individual investors could be damaged. To counteract this, the internal control system is constantly being expanded and further developed. The financial risk is low.

Financial Risks
A large part of the incoming payments are in U.S. dollars. Consequently, we incur an exchange rate risk for the funds required in euros. With the aim of preserving capital, surplus liquidity is invested in short and longer-term securities and at various banks as well as in money market funds with investment grade ratings, subject to limits defined in a risk policy. Counterparty limits are derived from the respective banks' credit default swaps (CDSs) and monitored on an ongoing basis. Any interest rate risks in this context can also lead to opportunities. We also identify exchange rate risks with regard to foreign currency investments. Exchange rate and interest rate fluctuations can reduce the value of our financial positions. We limit the effects of the identified risks with the help of a coordinated and consistently implemented risk strategy. As a matter of principle, forward exchange transactions are concluded as hedging instruments. Our risk

strategy also takes into account natural hedging relationships. In addition, developments on the financial markets are continuously monitored to enable us to react to exceptional events at short notice. The financial risk is assessed as low.

Sustainability Risks

Since the 2023 financial year, Risk Performance and Corporate Social Responsibility (CSR) have worked together to identify material sustainability risks and integrate them into the company-wide risk management system. In 2023, the analyses focused on climate risks as identified by the Task Force on Climate-related Financial Disclosures (TCFD) and humans rights risks pursuant to the German Act on Corporate Due Diligence for the Prevention of Human Rights Violations in Supply Chains (LkSG), which has been applicable to BioNTech since January 1, 2023.

We integrate climate-related topics (climate risks pursuant to the TCFD and targets in accordance with the Science Based Targets initiative or SBTi) into risk management on a continuous basis. BioNTech added a separate category of potentially relevant financial and physical impacts of climate change to its corporate risk management in 2023 and continues to work on integrating more specific climate-related risk categories into risk management. The sustainability report for the 2023 financial year contains an overview of the climate risks identified as being of relevance for us and of climate risk governance and strategy. Metrics and targets (not externally audited) for assessing and managing relevant climate-related risks are published in the 2023 Sustainability Report and on our website at ***www.biontech.de.*** The climate targets for 2030 in accordance with the SBTi were confirmed by the SBTi in January 2024.

BioNTech has been conducting a proactive risk assessment since 2023 in order to identify potential and actual human rights and environmental risks and incidents in accordance with the LkSG at an early stage and to take action to prevent and mitigate them. The risk assessment will be carried out annually and, if necessary, on an ad hoc basis to assess potential risks arising from significant changes in the Company's business activities or business relationships or if specific concerns arise in relation to human rights and environmental risks under the LkSG. In 2023, BioNTech carried out risk assessments for its own business activities at both abstract and concrete levels, using information from external experts and internal sources. The risk assessment along the supply chain was based on country-specific and industry-specific risk data. The identified human rights risks are recorded in the Company's risk management system. One focus of the human rights management process in 2023 was the discussion and preparation of the integration of human rights risks into the Company's risk management system. The integration is being coordinated by the Human Rights Officer and BioNTech's risk management function and will continue in 2024. The establishment of formal governance structures will also continue in 2024.

We differentiate between human rights risks in our own sphere of responsibility and those in our supply chain. If we fail to comply with the legal requirements or do not handle reported violations in a timely or appropriate manner, we could be excluded from public tenders, suffer a loss of reputation or be fined. The financial risk for BioNTech is low in both areas (outside-in perspective).

On the other hand, the more we drive forward our transformation guided by the SBTi targets, the greater the transition risks will be. This can have a negative impact on our business activities and on our material, production and transportation costs. The financial impact on BioNTech is assessed as low.

We also consider the physical effects of climate risks, such as the impact of heatwaves, flooding or rising sea levels on our business units or our supply chain. The financial impact on BioNTech is currently considered to be low, but could rise in the longer term (outside-in perspective).

4.2.3 Internal Control System and Internal Audit

Internal Control System

Our internal control system (ICS) is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external reporting purposes in accordance with International Financial Reporting Standards (IFRS) or the German Commercial Code (HGB). Having listed our share on the Nasdaq Global Select Market, we have established our internal control system based on SOX regulations (Sarbanes-Oxley Act Section 404).

The standard ICS process is depicted in an ICS lifecycle, comprising the six steps presented below that are carried out either consecutively or in parallel:

- Scoping phase
- Testing of effectiveness
- Discussion of test results
- Monitoring of activities
- Quality assurance of the self-assessments
- ICS reporting

The results of the testing are communicated regularly to the Management Board and Supervisory Board and approved in connection with the annual financial statements. The scope of the ICS is defined across all processes. The test results include financial reporting topics as well as further processes and topics from general areas, such as treasury, tax, IT, compliance and operational topics.

Based on the COSO model (Committee of Sponsoring Organizations of the Treadway Commission), our internal control system for financial reporting is divided into five components: control environment, risk assessment, control activities, information and communication, and monitoring of the internal control system.

The effectiveness of internal control over financial reporting is regularly reviewed and assessed against the COSO components in accordance with Section 404 SOX. As of December 31, 2023, the control system over financial reporting was assessed as effective by our Management Board.

Given systemic limitations, the design of internal control over financial reporting and the diligence of control implementation do not provide absolute assurance that the financial reporting objectives will be achieved and misstatements will always be prevented or detected.

Internal Audit
The Internal Audit function was newly implemented in October 2022. Internal Audit reports to the CEO and the Audit Committee. As an independent audit and consulting function without operational responsibility, Internal Audit performs audits of organizational units, processes, corporate functions, applications and projects selected according to a risk-based approach on behalf of the Management Board and the Audit Committee. Various audits were conducted in the 2023 financial year. Audit findings lead to agreed actions that are overseen by Internal Audit until they have been fully implemented. Regular reporting to the Audit Committee and Management Board on the implementation status of the agreed actions has been established.

4.2.4 Assessment of the Internal Control System and Risk Management System by the Management Board

The company-wide risk situation is evaluated twice-yearly at Management Board meetings. The results of the internal control process are presented to the Audit Committee once a quarter and an overall assessment is given of the adequacy and effectiveness of the ICS and RMS. On this basis, the Management Board is not aware of any indications that our ICS and RMS were not appropriate or not effective overall as of December 31, 2023.

We are convinced that we will be able to master challenges and take advantage of opportunities in the future without taking unjustifiably high risks. In doing so, we strive for a balanced relationship between opportunities and risks. Our aim is to increase added value for our stakeholders by analyzing and seizing new opportunities.

4.2.5 Assessment of the Overall Risk Situation by the Management Board

The assessment of the overall risk situation is the result of the consolidated consideration of all significant risk categories and individual risks.

At the time the management report was prepared, the aforementioned risks did not pose any threat to the continued existence of BioNTech SE and its affiliated subsidiaries.

4.3 Opportunity Report

In pursuit of our vision, we are focused on transforming the treatment of cancer and infectious diseases and creating long-term value for patients, society and our shareholders through innovative and personalized medicines and therapies that harness the full potential of the human immune system. Based on the key building blocks listed below, we believe we are well positioned to provide people around the world with access to our therapies and medicines and to ensure that they benefit from them.

Pipeline of Clinical Product Candidates

Underpinning our vision is our understanding and long experience in immunology. We are a multi-technology company with specific expertise in the development of mRNA-based therapeutics, immunomodulators such as monospecific and bispecific antibodies and targeted therapies such as ADCs and CAR-T cell therapies. We believe that by combining complementary treatment modalities, we can leverage the full potential of each technology to develop precise and personalized treatments that increase the likelihood of therapeutic success, reduce the risk of treatment resistance and reach a broader patient population. We use AI and machine learning to build our pipeline, identify and optimize molecules and accelerate workflows on our journey to becoming an AI-integrated company.

Our diversified product portfolio encompasses a large array of product candidates with a growing pipeline of investigational compounds in advanced development. The breadth of the pipeline should enable us to advance product candidates to approval, while at the same time cushioning the impact of candidates that fail to reach market on the Company's overall performance. There are currently 22 product candidates in oncology and seven product candidates in infectious diseases in clinical development. In 2023, we initiated three Phase 1 clinical trials in infectious disease for mRNA-based prophylactic vaccine candidates against the herpes simplex virus, tuberculosis and mpox. In oncology, we started seven trials with product candidates from across a range of technologies against a number of solid tumors: ADCs (one Phase 1/2 and one Phase 3 trial), monoclonal antibodies (one Phase 3 trial), bispecific antibodies (one Phase 2 trial) and mRNA-based product candidates (two Phase 2 trials).

The rapid development, successful commercialization and delivery of our COVID-19 vaccine based on our proprietary mRNA technology has demonstrated the potential of immunotherapies. The speed and success of developing a vaccine based on mRNA technology has also demonstrated that not only can highly effective and safe vaccines be produced based on this technology, but that mRNA technology may also enable potentially faster product development and shorter production cycles than conventional vaccine technologies. In 2023, we and Pfizer continued our global COVID-19 vaccine leadership with the market launch of the Omicron XBB.1.5-adapted monovalent COVID-19 vaccine. Furthermore, we are focusing on building a sustainable respiratory infectious disease vaccine business, leveraging our existing COVID-19 vaccine franchise. In addition to our marketed product Comirnaty, we are collaborating with Pfizer on our development program for a shingles vaccine and for a combination vaccine against COVID-19 and influenza designed to potentially address two serious respiratory diseases with a single vaccine.

Our long-term oncology vision is to expand the number of available treatment options for cancer patients. We aim to address the full continuum of cancer treatment by developing novel therapies to best serve the needs of cancer patients from adjuvant to late-stage settings. We aim to achieve this by building a diverse toolkit and clinical portfolio with synergistic mechanisms of action. To increase the potential efficacy of our immunotherapies, we develop product candidates that are precisely targeted. By combining compounds with synergistic mechanisms of action, such as the combination of our FixVac immunotherapy (CARVac) with our novel CAR-T therapies, we aim to potentially increase the efficacy of our therapies and counteract resistance mechanisms. Our objective is to combine immunomodulators and/or targeted therapies with our mRNA cancer vaccines to polyspecifically target and potentially cure cancer.

We believe we are well positioned to develop the next generation of immunotherapies that have the potential to change treatment paradigms for therapies against cancer, infectious diseases and other serious diseases, and significantly improve clinical outcomes for patients.

We continued to build our pipeline in 2023 and are currently conducting 11 Phase 2 and 3 clinical trials in various modalities and indications as monotherapy or in combination with a standard therapy. Our future rests on the four pillars of our COVID-19 franchise, the oncology pipeline, the infectious disease pipeline and our strong financial position. In 2024, we will raise our R&D spending, particularly in oncology, in order to conduct potential pivotal studies. We plan to have ten potentially registrational trials running by the end of 2024. We will continue to pursue our active business development and M&A strategy. The aim is to secure several oncology product approvals by 2030 and to have a leading pipeline for late-stage infectious diseases. With our strong financial position, our market-leading COVID-19 vaccine and our expanding oncology and infectious disease pipeline, we believe we are well positioned to execute our vision of pioneering novel medicines against cancer, infectious diseases and other serious diseases.

Research and Development Employees

As of December 31, 2023, the BioNTech Group employed 6,292 people, 42.5% of whom worked in research and development. As of December 31, 2022, 38.1% of the Group's 4,692 employees worked in research and development. As of December 31, 2023, BioNTech SE employed 3,166 people (December 31, 2022: 2,304), 55.1% of whom worked in research and development (December 31, 2022: 54.6%). The large number of employees in R&D will enable us to continue and accelerate basic scientific research and, above all, clinical research, particularly for our approval-relevant studies.

Production

In 2020 to 2022, to accommodate the production of the COVID-19 vaccine we not only expanded our internal production capacities, most notably by acquiring the plant in Marburg, which is now one of the world's largest mRNA production facilities with a production capacity of up to three billion mRNA vaccine doses per year, but also built a global supply chain and production network. We are working hard to build or lease the laboratories, production facilities and office space necessary for the Company's further expansion and are convinced that the best way for us to expand our production capacities is to enlarge our existing internal production facilities and build additional new in-house facilities rather than outsource to external partners with the greater dependencies this would entail.

Since the beginning of 2023, a further manufacturing facility has been in operation in Marburg, where we are manufacturing plasmids for our clinical trials. Establishing our own plasmid DNA production enables us to manufacture the starting materials for mRNA- and cell-based drugs more flexibly and autonomously. In Mainz, the semi-automation of processes under the iNEST (individualized neoantigen-specific immunotherapy) program has resulted in the faster production of individualized mRNA cancer vaccines for clinical use. The aim is to improve processes in order to reduce turnaround times further.

We also plan to build our own fully integrated mRNA production sites in Asia and Africa with capacity to produce several hundreds of millions of doses of various mRNA-based vaccines. Our plans in Asia include constructing a fully integrated mRNA manufacturing facility in Singapore, with the option of extending it to produce other drug classes, such as cell therapies. The facility will be integrated into the Company's global production network and is an important building block for supplying the Asian region with our COVID-19 vaccine and other future products in oncology and infectious disease. Using a novel approach, we have also developed turnkey mRNA production facilities based on a container solution called BioNTainer, which are designed to enable scalable mRNA vaccine production. Several shipping containers for our first BioNTainer finished construction in Europe, underwent quality checks, were prepared for shipment and arrived in Kigali, Rwanda, in March 2023. The facility being established there will become a node in a decentralized and robust end-to-end manufacturing network in Africa. Vaccines to be manufactured in Africa will be dedicated to people residing in member states of the African Union. In addition, we announced in December 2023 that we also plan to build a BioNTainer-based production facility in Victoria, Australia.

Our continually growing global manufacturing capacity and our global COVID-19 vaccine supply chains and manufacturing network give us the opportunity to provide people around the world with fast and easy access to state-of-the-art medicines and therapies. In addition, the increasing

digitalization and automation of business processes, supported by effective process management, creates opportunities for us to create additional value and increase efficiency.

Commercialization

Last year, we continued our transformation into a globally operating, profitable and fully integrated biotechnology company. The main focus in 2023 was on ensuring the best possible supply of our COVID-19 vaccine. The financial resources gained in 2021, 2022 and 2023 have put us in a good position to accelerate the expansion of our portfolio in the field of oncology and to open up further therapeutic areas and sales markets. We remain on track for assuming a leading role in the rapidly growing market for immunotherapies in the coming years.

With the commercial team set up in 2020 and the establishment of two sales companies in Germany and Turkey, we are creating the necessary conditions to also be able to market future products on our own and thus significantly reduce dependency on our partners. The expansion of commercial capacity in preparation for product launches should be completed by the end of 2025 and allow us to achieve commercial readiness in oncology in multiple countries.

We also continued with the expansion of our digital commercial ecosystem to enable even better interaction with the Company's stakeholders, including a personalized customer journey, a sales performance program and a smart learning platform. In the future, we will continue to make use of opportunities to expand our own know-how to include promising complementary technologies such as artificial intelligence (AI) and machine learning (ML) and strengthen production capacities by making targeted acquisitions and investments in other companies.

The acquisition of InstaDeep Ltd., headquartered in London, United Kingdom, will strengthen our pioneering position in the field of AI-powered drug discovery, design and development. In this context, the increased attention on our Company due to the successful development and production of a COVID-19 vaccine as well as its commercialization also offers the opportunity to enter into new partnerships with leading global companies, foundations and academic research institutions for the development and distribution of further products. In 2023, we forged a strategic partnership with the UK government with the aim of providing personalized mRNA cancer therapies for patients, either in clinical trials or as authorized treatments. An R&D hub is being established in Cambridge for this purpose. Last but not least, in December last year BioNTech signed a strategic partnership agreement with the State of Victoria in Australia to strengthen the mRNA ecosystem.

Team and Corporate Culture

Standing behind the great successes of the past three years are our now more than 6,000 employees. In addition, we have a management team consisting of renowned scientists, experienced entrepreneurs and the biotechnology investors who support us.

In order to be able to continue our successful development, it is of great importance for us to continue to attract the best minds to the Company in the future. We owe our high profile worldwide to Project Lightspeed and the rapid and successful development of the COVID-19 vaccine. This improves our chances of attracting global talent to BioNTech.

Our corporate culture, which puts people first, and our inclusive and supportive working environment speak for themselves: For example, our BioNTech emotional well-being program led to the award of best-in-class employer in the United States from the Gallagher Biotech Benefits Alliance. In Germany, the Company was recognized in an independent ranking as the best employer in Germany in the pharmaceutical and medical technology sector. BioNTech's commitment to talent does not end with the Company's own needs: By participating in programs such as the GIZ's "Africa is coming!" or the WHO's "Tropical Disease Research", BioNTech is involved in capability-building initiatives that extend beyond the Company. BioNTech sees maintaining and developing our corporate culture as a cornerstone of our strategy to manage the expected future growth of our organization. We have set up a Culture Campus, an independent department that reports directly to CEO Ugur Sahin and CMO Özlem Türeci, to bring together employees from a wide range of disciplines who join forces to further develop the culture rooted in the founding team's vision.

Embedding the success factors of our leadership and corporate culture is the core task of cultural work at BioNTech – promoting cohesion, a pioneering spirit and a safe environment in which mistakes are accepted and viewed as elements of a learning process.

There are many helping hands – the number of cultural ambassadors has grown to more than 100 colleagues from all over the world in the last two years. They are committed to promoting a sense of community and developing the corporate culture through various initiatives, such as open office hours, an internal networking hub (“Connect with Colleagues”) and workshops. The success principles of our culture are systematically reflected in our HR processes and offerings and in our communication – from onboarding to company-wide buddy circles and leadership training.

5 CORPORATE GOVERNANCE DECLARATION PURSUANT TO SECTION 315D IN CONJUNCTION WITH SECTION 289F HGB

5.1 Declaration on the Corporate Governance Code Pursuant to Section 161 AktG

The German Stock Corporation Act (AktG) requires that the Management Board and Supervisory Board of German companies listed on a stock exchange regulated and supervised by a state-recognized body issue an annual declaration either (i) stating that the recommendations of the German Corporate Governance Code, or "Code" have been complied with or (ii) listing the recommendations with which the Company has not complied and explaining the reasons for the deviation from the recommendations of the Code (Declaration of Conformity). There is no obligation to comply with the recommendations or suggestions of the Code. A listed company in this sense is obliged to further indicate in this annual declaration whether it intends to comply with the recommendations or to list the recommendations it does not intend to comply with in the future. This statement shall be made publicly available online.

If the company changes its policy with regard to certain recommendations between these annual statements, it must disclose this fact and explain the reasons for the deviation from the recommendations. Non-compliance with the suggestions also contained in the Code in addition to the recommendations does not have to be disclosed.

The Management Board and Supervisory Board have dealt in detail with the recommendations of the Code and, on February 27, 2024, issued the following Declaration of Conformity pursuant to Section 161 para. 1 of the German Stock Corporation Act (AktG), which, in accordance with the Code, is issued in connection with the Corporate Governance Declaration pursuant to Section 315d in conjunction with Section 289f HGB:

BioNTech SE has complied and will continue to comply with all recommendations of the Code as amended on April 28, 2022, with the exception of the points listed below.

/ According to Item B.1 of the Code, the Supervisory Board shall take diversity in account in the composition of the Management Board. On March 8, 2023, the Supervisory Board of the Company set the target for the proportion of women on the Management Board at 25%. The deadline by which this target is to be achieved was set at December 31, 2025. James Ryan was appointed to the Management Board as Chief Legal Officer effective as of September 1, 2023. The position of Chief Legal Officer did not exist in the Company before this date. The Supervisory Board considered the appointment of a representative of the Company's Legal department to the Management Board to be important in order to attain the Company's strategic and economic objectives. As Senior Vice President Legal & IP and General Counsel, James Ryan had been head of the Legal department for many years and was the most suitable candidate for this position due to his great expertise and the trust placed in him by the Supervisory Board. The appointment was made after careful consideration and discussion and, in the opinion of the Supervisory Board, was in the best interests of the Company. The Supervisory Board addresses the newly set diversity targets for the Management Board and will take these into account in the future.

/ According to Item B.3 of the Code, the initial appointment of Management Board members shall be for a period of no more than three years. In a departure from this, the Management Board member James Ryan was appointed for a period of four years with effect from September 1, 2023. In view of James Ryan's many years of experience in the Company as Senior Vice President Legal & IP and General Counsel as well as his professional qualifications, the Supervisory Board considered an initial appointment for four years to be necessary and appropriate. Furthermore, the Supervisory Board considered the initial appointment for a four-year period to be in the best interests of the Company, enabling the implementation of long-term strategic corporate goals and decisions.

According to Item C.7 of the Code, it is recommended that more than half of the members of the Supervisory Board be independent of the Company and its Management Board. Accordingly, a Supervisory Board member is independent of the Company and its Management Board if he or she has no personal or business relationship with the Company or its Management Board that may cause a substantial – and not merely temporary – conflict of interest. In assessing independence, the length of service on the Supervisory Board is to be taken into account, among other factors. Despite the fact that two of the six members of the Supervisory Board have served on the Supervisory Board for longer than the 12 years recommended by the Code, all members of the Supervisory Board are considered independent. The Supervisory Board considers it advantageous and essential for the Company to retain the knowledge and experience currently available on the Supervisory Board. This includes many years of knowledge of the Company and its industry as well as comprehensive professional knowledge in the areas of finance, economics, science and the capital markets, which is particularly important in view of the current steady global growth and transformation of the Company. The duration of the membership of the two Supervisory Board members Helmut Jeggle and Michael Motschmann does not conflict with their respective independence due to their longstanding ties with the Company and their economic independence from the Company as well as the absence of other matters that could give rise to possible conflicts of interest (see Item C.8 of the Code).

5.2 Composition and Working Practices of the Management Board, Supervisory Board and Committees

We are a European public company with limited liability (Societas Europaea or SE) (also referred to as European stock corporation, and in the official terminology of the European legislation referred to as European public limited liability company), having its seat in Germany. We have chosen to have a two-tiered SE structure. Hence, our corporate bodies are the Management Board (Vorstand), the Supervisory Board (Aufsichtsrat) and the shareholders' meeting (Hauptversammlung). Our Management and Supervisory Boards are entirely separate, and, as a rule, no individual may simultaneously be a member of both boards.

Our Management Board is responsible for the day-to-day management of our business in accordance with applicable laws, our Articles of Association (Satzung) and the Management Board's internal rules of procedure (Geschäftsordnung). Our Management Board represents us in our dealings with third parties.

The principal function of our Supervisory Board is to supervise our Management Board. The Supervisory Board is also responsible for appointing and removing the members of our Management Board, representing us in connection with transactions between a current or former member of the Management Board and us, and granting approvals for certain significant matters.

Our Management Board and our Supervisory Board are solely responsible for, and manage, their own areas of competency (Kompetenztrennung); therefore, neither board may make decisions that, pursuant to applicable law, our Articles of Association or the internal rules of procedure are the responsibility of the other board. Members of both boards owe a duty of loyalty and care to us. In carrying out their duties, they are required to exercise the standard of care of a prudent and diligent businessperson. If they fail to observe the appropriate standard of care, they may become liable to us.

In carrying out their duties, the members of both boards must take into account a broad range of considerations when making decisions, including the interests of our shareholders, employees, creditors and, to a limited extent, the general public, while respecting the rights of our shareholders to be treated on equal terms. Additionally, the Management Board is responsible for implementing an appropriate and effective internal control system and risk management system.

Our Supervisory Board has comprehensive monitoring responsibilities. To ensure that our Supervisory Board can carry out these functions properly, our Management Board must, among other duties, regularly report to our Supervisory Board regarding our current business operations and future business planning (including financial, investment and personnel planning). In addition, our Supervisory Board or any of its members is entitled to request special reports from the Management Board on all matters regarding the Company, our legal and business relations with affiliated

companies and any business transactions and matters at such affiliated companies that may have a significant impact on our position at any time.

Under German law, our shareholders have, as a general rule, no direct recourse against the members of our Management Board or the members of our Supervisory Board in the event that they are believed to have breached their duty of loyalty and care to us. Apart from when we are unable to fulfill our third-party obligations, tortious conduct to board members or other special circumstances, only we have the right to claim damages against the members of our two boards.

We may waive these claims to damages or settle these claims only if at least three years have passed since a claim associated with any violation of a duty has arisen and only if our shareholders approve the waiver or settlement at a shareholders' meeting with a simple majority of the votes cast, provided that no shareholders who in the aggregate hold one-tenth or more of our share capital oppose the waiver or settlement and have their opposition formally recorded in the meeting's minutes.

5.2.1 Supervisory Board

German law requires that the Supervisory Board consists of at least three members, while a company's articles of association may stipulate a certain higher number. Our Supervisory Board consists of six members as of December 31, 2023. As we are not subject to co-determination, the members of our Supervisory Board are all elected by the shareholders' meeting in accordance with the provisions of the SE Regulation and the German Stock Corporation Act (Aktiengesetz).

The following table sets forth the names and functions of the current members of our Supervisory Board, their ages as of December 31, 2023, their terms (which expire on the date of the relevant year's general shareholders' meeting) and their principal occupations and other relevant Supervisory Board mandates outside of our Company:

Name (function)	Age	Term expires	Principal occupation (other relevant mandates)
Helmut Jeggle (Chair of the Supervisory Board)	53	2026	Managing partner and entrepreneurial venture capital investor of Salvia GmbH (Supervisory Board member 4SC AG, AiCuris AG, APK AG and Tonies SE)
Ulrich Wandschneider, Ph.D. (Deputy Chair of the Supervisory Board)	62	2027	Managing director of beebusy capital GmbH and independent consultant to companies in the life science and healthcare sector
Baroness Nicola Blackwood[1]	44	2027	Managing Director and Chair of Oxford University Innovations Limited (Equity Partner, ReCode Health Ventures LLC, Trustee and Director of the Alan Turing Institute, Chair of the Advisory Board of Genomics England Limited)
Prof. Christoph Huber, M.D. [2]	79	2023	Professor emeritus at the Johannes Gutenberg University Mainz (Deputy Chair of the Supervisory Board Tirol Kliniken GmbH)
Prof. Anja Morawietz, Ph.D.	46	2026	Certified Public Accountant and Management Consultant, Professor of External Accounting and General Business Administration at the Nuremberg University of Applied Sciences Georg Simon Ohm
Michael Motschmann	66	2027	Member of the Management Board and head of equity investments of MIG Capital AG (Supervisory Board member AFFiRiS AG, APK AG, HMW-Emissionshaus AG and HMW-Innovations AG)
Prof. Rudolf Staudigl, Ph.D.	69	2026	Independent consultant (Member of the Supervisory Board of TÜV Süd Aktiengesellschaft, member of the Supervisory Board of Groz-Beckert KG (Deputy Chair))

(1) Appointed effective as of May 25, 2023.
(2) Member of the Supervisory Board until May 25, 2023

The business address of the members of the Supervisory Board is the business address of BioNTech: An der Goldgrube 12, 55131 Mainz, Germany.

The competence profile of the members of the Supervisory Board is as follows as of December 31, 2023:

Qualification/name (function)	Helmut Jeggle (Chair of the Supervisory Board)	Ulrich Wandschneider, Ph.D. (Deputy Chair of the Supervisory Board)	Baroness Nicola Blackwood	Prof. Anja Morawietz, Ph.D.	Michael Motschmann	Prof. Rudolf Staudigl, Ph.D.
(Biotech) industry experience	x	x	x		x	x
(Biotech) industry sales and marketing	x	x	x			
Management		x				x
Innovation, research and development		x	x			x
Accounting, auditing and controlling (including sustainability reporting)	x	x		x	x	x
Compliance, internal controls and risk management		x		x	x	x
Human resources		x			x	x
Digitalization	x	x	x	x	x	
International experience/relevant markets	x	x	x	x	x	x
CSR/sustainability		x	x	x		
Elected to the Supervisory Board of the Company for the first time	2008	2018	2023	2022	2008	2022
End of term	2026	2027	2027	2026	2027	2026
Independence	x	x	x	x	x	x
Year of birth	1970	1961	1979	1977	1957	1954
Gender	m	m	f	f	m	m

German law does not require the majority of our Supervisory Board members to be independent and neither our Articles of Association (Satzung) nor the rules of procedure for our Supervisory Board provide otherwise. As per our Supervisory Board's assessment, an appropriate number of shareholder representatives on the Supervisory Board (i.e. the entire Supervisory Board) are independent if the Supervisory Board has two independent members. In addition to Ulrich Wandschneider, Nicola Blackwood, Anja Morawietz and Rudolf Staudigl, the Supervisory Board considers Helmut Jeggle and Michael Motschmann to be independent irrespective of the fact that they will soon have been members of the Supervisory Board for a period of more than 15 years. As stated in the declaration to the German Corporate Governance Code, or the Corporate Governance Code, (Entsprechenserklärung) published by the Company on February 27, 2024 pursuant to Section 161 para. 1 of the German Stock Corporation Act (Aktiengesetz), which in accordance with the Corporate Governance Code is issued in connection with the Declaration pursuant to Section 315d in conjunction with Section 289f of the German Commercial Code (HGB), the length of membership of the two named Supervisory Board members does not stand in the way of their independence. However, the rules of procedure for our Supervisory Board provide that the Supervisory Board should have an independent member with expertise in the field of accounting, internal control processes and auditing. Ulrich Wandschneider, Anja Morawietz, Michael Motschmann and Rudolf Staudigl fulfill this role.

Under European law, a member of a supervisory board of an SE may be elected for a maximum term to be specified in the articles of association, which must not exceed six years. Re-election, including repeated re-election, is permissible. The shareholders' meeting may specify a term of office for individual members or all of the members of our Supervisory Board which is shorter than the standard term of office and, subject to statutory limits, may set different start and end dates for the terms of members of our Supervisory Board. Our Articles of Association provide for a term of approximately five years, depending on the date of the annual general shareholders' meeting in the year in which the term of the relevant member is to expire.

The shareholders' meeting may, at the same time as it elects the members of the Supervisory Board, elect one or more substitute members. The substitute members replace members who cease to be members of our Supervisory Board and take their place for the remainder of their respective terms of office. Currently, no substitute members have been elected or have been proposed to be elected.

Members of our Supervisory Board may be dismissed at any time during their term of office by a resolution of the shareholders' meeting adopted by at least a simple majority of the votes cast. In addition, any member of our Supervisory Board may resign at any time by giving one month's written notice – or, in the event of cause, giving written notice with immediate effect – of his or her resignation to the Management Board.

Our Supervisory Board elects a chairperson and a deputy chairperson from its members. The deputy chairperson exercises the chairperson's rights and obligations whenever the chairperson is unable to do so. The members of our Supervisory Board have elected Helmut Jeggle as chairperson and Ulrich Wandschneider as deputy chairperson, each for the term of their respective membership on our Supervisory Board.

The Supervisory Board meets at least twice each calendar half-year. Our Articles of Association provide that a quorum of the Supervisory Board members is present if at least three of its members participate in the vote. Members of our Supervisory Board are deemed present if they attend the meeting via telephone or other (electronic) means of communication (including via video conference) or submit their written vote through another member. Additionally, our Articles of Association allow for resolutions to be taken via telephone or other (electronic) means of communications (including via video conference).

Resolutions of our Supervisory Board are passed by the vote of a simple majority of the votes cast unless otherwise required by law, our Articles of Association or the rules of procedure of our Supervisory Board. In the event of a tie, the chairperson of the Supervisory Board has the casting vote. Our Supervisory Board is not permitted to make management decisions, but in accordance with European and German law and in addition to its statutory responsibilities, it has determined that certain matters require its prior consent, including:

- entering into certain large transactions;
- creating or holding any interest in businesses (except wholly owned subsidiaries) or disposing of shares in businesses (except for a sale of JPT);
- issuing shares from authorized capital, unless the shares are issued pursuant to a redemption of stock appreciation rights; and
- acquiring treasury shares in return for valuable consideration.

The remuneration of the members of the Supervisory Board is described in the ***remuneration report,*** which is prepared for the 2023 financial year in accordance with the requirements of Section 162 AktG and published on the website.

Each member of the Supervisory Board shall disclose any conflicts of interest to the Supervisory Board, especially those that may arise from providing advice or holding any offices or board positions at customers, suppliers, creditors or other third parties. Material conflicts of interest that are not merely temporary and that are specific to a particular Supervisory Board member shall result in this particular member leaving office. Our Supervisory Board also puts in place adequate measures to limit, prevent or resolve conflicts of interest in accordance with applicable legal requirements and the Company's Conflicts of Interest Policy.

Our Supervisory Board conducted a self-assessment for the year ended December 31, 2023 by completing a written questionnaire. It covered all key aspects of the Supervisory Board's work, including its committees, its composition, its competence profile, its main topics and its relationship with the Management Board. The results of the self-assessment have been evaluated and will be presented to the Supervisory Board to serve as a basis for discussion on current challenges and suggestions for improvement. Based on the evaluation of the self-assessment to date, the Supervisory Board, its committees and the Management Board continue to operate at a professional and cooperative level. No fundamental need for change was identified.

Supervisory Board Practices

Decisions are generally made by our Supervisory Board as a whole, however decisions on certain matters may be delegated to committees of our Supervisory Board to the extent permitted by law. The chairperson, or if he or she is prevented from doing so, the deputy chairperson, chairs the meetings of the Supervisory Board and determines the order in which the agenda items are discussed, the method and order of voting, as well as any adjournment of the discussion and passing of resolutions on individual agenda items after a due assessment of the circumstances. Our Supervisory Board may designate further types of actions as requiring its approval.

In addition, each member of the Supervisory Board is obliged to carry out his or her duties and responsibilities personally, and such duties and responsibilities cannot be generally and permanently delegated to third parties. However, the Supervisory Board and its committees have the right to appoint independent experts for the review and analysis of specific circumstances in accordance with its control and supervision duties under applicable European and German law. We would bear the costs of any such independent experts that are retained by the Supervisory Board or any of its committees.

Pursuant to Section 107 para. 3 of the German Stock Corporation Act (Aktiengesetz), the Supervisory Board may form committees from among its members and charge them with the performance of specific tasks. The committees' tasks, authorizations and processes are determined by the Supervisory Board. Where permissible by law, important powers of the Supervisory Board may also be transferred to committees.

The Supervisory Board has established an Audit Committee, a Compensation, Nominating, Corporate Governance Committee and a Capital Markets and Product Committee by resolution. The Product Committee was established as of October 1, 2023. Set forth in the table below are the members of the respective committees during the year ended December 31, 2023.

Name of Committee	Members
Audit Committee	Prof. Anja Morawietz, Ph.D. (Chair), Prof. Rudolf Staudigl, Ph.D. and Ulrich Wandschneider, Ph.D.
Compensation, Nominating and Corporate Governance Committee	Prof. Rudolf Staudigl, Ph.D. (Chair), Baroness Nicola Blackwood (since May 25, 2023), Prof. Christoph Huber, M.D. (until May 25, 2023) and Michael Motschmann
Capital Markets Committee	Helmut Jeggle (Chair), Prof. Anja Morawietz, Ph.D. and Michael Motschmann
Product Committee (est. October 1, 2023)	Ulrich Wandschneider, Ph.D. (Chair), Baroness Nicola Blackwood and Helmut Jeggle

Audit Committee

Our Audit Committee for the year ended December 31, 2023, consisted of Anja Morawietz (Chair), Rudolf Staudigl and Ulrich Wandschneider. The Audit Committee assists the Supervisory Board in overseeing the accuracy and integrity of our financial statements, our accounting and financial reporting processes and audits of our financial statements, the effective functioning of our internal control system, our risk management system, our compliance with legal and regulatory requirements, our independent auditor's qualifications and independence, the performance of the independent auditor and the effective functioning of our internal audit functions, and, subject to certain limitations, adopts and implements pertinent decisions on behalf of the Supervisory Board. The Audit Committee's duties and responsibilities to carry out its purpose, include, among others:

- making a recommendation to the Supervisory Board with respect to the proposal for the appointment of the auditors;
- considering the commissioning of the audit engagement, as well as the compensation, retention and oversight of the independent auditor;
- evaluating the qualifications, independence and quality of performance of the independent auditor;
- reviewing and pre-approving the audit and non-audit services to be performed by the independent auditor;
- reviewing and discussing with the independent auditor and management the annual audit plan, as well as critical accounting policies and practices to be used;
- discussing and determining additional areas of audit focus, as appropriate;
- reviewing and discussing with the independent auditor and management the adequacy and effectiveness of our internal accounting controls and critical accounting policies;
- reviewing and discussing with the independent auditor and management the results of our annual audit;
- discussing and reviewing the sustainability report;
- reviewing the effectiveness of the compliance management system;
- reviewing and discussing with the independent auditor and management any quarterly or annual earnings announcements;

/ reviewing any related party transactions and reviewing and monitoring potential conflict of interest situations on an ongoing basis for compliance with our policies and procedures; and

/ overseeing procedures for the receipt, retention and treatment of complaints received regarding accounting, internal accounting controls or auditing matters.

Within the limits of applicable European and German law, the Audit Committee shall have the resources and authority appropriate to discharge its duties and responsibilities, including the authority to select, retain, terminate, and approve the fees and other engagement terms of special or independent counsel, accountants or other experts and advisors, as it deems necessary or appropriate for so discharging its duties and responsibilities, without seeking approval of the Management Board or Supervisory Board.

In addition, all members have the special knowledge and experience required by the German Corporate Governance Code in the field of accounting and expertise in the field of auditing. This includes in particular knowledge and experience in applying accounting principles and internal control and risk management systems and specific knowledge and experience in financial statement audits. Furthermore, Ulrich Wandschneider and Anja Morawietz have knowledge in sustainability reporting and in auditing such reports.

Compensation, Nominating and Corporate Governance Committee
Our Compensation, Nominating and Corporate Governance Committee for the year ended December 31, 2023 consisted of Rudolf Staudigl (Chair), Nicola Blackwood (since May 25, 2023), Christoph Huber (until May 25, 2023) and Michael Motschmann. The Compensation, Nominating and Corporate Governance Committee's duties and responsibilities to carry out its purpose include, among others:

/ preparing and discussing with management policies relating to the remuneration of the members of our Management Board;

/ reviewing and supervising corporate goals and objectives for the remuneration of the members of the Management Board, including evaluation of the performance of the members of the Management Board in light of these goals and proposals to the Supervisory Board for remuneration based on such evaluations;

/ reviewing all equity-based compensation plans and arrangements and making recommendations to the Supervisory Board regarding such plans;

/ assisting with identifying and recruiting candidates to fill positions on the Management Board and the Supervisory Board;

/ considering any corporate governance issue that arises and developing appropriate recommendations for the Supervisory Board; and

/ overseeing the evaluation of the Supervisory Board and reporting on its performance and effectiveness.

Capital Markets Committee
Our Capital Markets Committee for the year ended December 31, 2023 consisted of Helmut Jeggle (Chair) and Michael Motschmann. The Capital Markets Committee advises and makes recommendations to the Supervisory Board on issues in connection with capital measures and takeover, merger and acquisition activities. Its responsibilities include the following tasks:

/ overseeing the activities of the Company relating to its capital structure and capital raising, including preparation for and implementation of public offerings and share issuances; and

/ overseeing the activities of the Company relating to takeovers, mergers and acquisitions activities.

Product Committee

Our Product Committee was established as of October 1, 2023 and consisted of Ulrich Wandschneider (Chair), Nicola Blackwood and Helmut Jeggle in the year ended December 31, 2023. The Product Committee advises and makes recommendations to the Supervisory Board with respect to our strategy and investment in research and development programs and product launch preparations including commercialization. Its responsibilities include the following tasks:

- advising on strategy, execution and communication regarding relevant go-to-market efforts;
- overseeing the activities relating to a) product development, b) launch plans and c) their execution; and
- advising on market potential for products in clinical development.

5.2.2 Management Board

Our Supervisory Board determines the exact number of members of our Management Board, which must consist of at least two members. Pursuant to the Articles, the Supervisory Board may also appoint a chairperson or a spokesman of the Management Board. Ugur Sahin has been appointed the chair of the Management Board.

Name	Age	Term expires	Position (main responsibilities)
Prof. Ugur Sahin, M.D.	58	2026	Chief Executive Officer (Research and Development, Scientific Collaborations, Patent Filings, Quality Assurance and Project Management)
Jens Holstein	60	2025	Chief Financial Officer (Finance, Human Resources, Risk Management and Purchasing)
Sean Marett[1]	59	2024	Chief Business Officer and Chief Commercial Officer (Marketing and Sales)
Sierk Poetting, Ph.D.	51	2026	Chief Operating Officer (Production, IT, Laboratories and Infrastructure, Sustainability and Internal Communications)
Ryan Richardson	44	2026	Chief Strategy Officer (Corporate Strategy, Capital Market Responsibility and Investor Relations)
James Ryan, Ph.D.[2]	48	2027	Chief Legal Officer (Legal, Business Development, Alliance Management and Intellectual Property)
Prof. Özlem Türeci, M.D.	57	2025	Chief Medical Officer (Clinical Development, Regulatory and Medical Affairs)

(1) Sean Marett will retire as planned from the Management Board of BioNTech as of June 30, 2024. He will continue as a specialist advisor to the Company at least until the end of the year 2024.
(2) Appointed effective as of September 1, 2023.

The members of our Management Board are appointed by our Supervisory Board for a term of up to five years. They are eligible for reappointment or extension, including repeated reappointment and extension, after the completion of their term in office, in each case again for up to an additional five years. Under certain circumstances, such as a serious breach of duty or a vote of no confidence by the shareholders in a shareholders' meeting, a member of the Management Board may be removed from office by our Supervisory Board prior to the expiration of his or her term.

The members of our Management Board conduct the daily business of the Company in accordance with applicable laws, our Articles of Association and the rules of procedure for the Management Board adopted by our Supervisory Board. They are generally responsible for the management of our Company and for handling our daily business relations with third parties, the internal organization of our business and communications with our shareholders.

A member of the management board of an SE governed by German law may not deal with or vote on matters relating to proposals, arrangements or contractual agreements between himself or herself and the Company, and a member of our Management Board may be liable to us if he or she has a material interest in any contractual agreement between the Company and a third party which is not disclosed to and approved by our Supervisory Board.

The rules of procedure for our Management Board provide that certain matters require a resolution of the entire Management Board, in addition to transactions for which a resolution adopted by the entire Management Board is required by law or required by our Articles of Association. In particular, the entire Management Board shall decide on, among others:

- the budget plan for the following year, which is to be presented by the Management Board to the Supervisory Board by December 20 of each year;
- reporting to the Supervisory Board;
- all measures and transactions that require the Supervisory Board's approval;
- all measures and transactions relating to a business area that is of extraordinary importance or involves an extraordinary economic risk;
- establishing new lines of business or discontinuing existing ones;
- acquisitions or sales of interests or holdings; and
- certain material transactions.

The remuneration of the members of the Management Board is described in the ***remuneration report,*** which is prepared for the 2023 financial year in accordance with the requirements of Section 162 AktG and published on the website.

5.3 Objectives for the Composition of the Management Board Pursuant to Section 76 para. 4 AktG and of the Supervisory Board Pursuant to Section 111 para. 5 AktG and Diversity Policy

Our social aspirations in our core business are complemented by good corporate governance. In this context, the staffing of the Management Board and Supervisory Board as well as long-term succession planning must be appropriately adapted to the needs of the Company. In addition to the professional and personal qualifications of the members of the Management Board and the Supervisory Board, we take diversity and the appropriate participation of women into account in the composition of both bodies. Furthermore, we pay attention to a balanced age structure to ensure long-term succession planning and have set the maximum age of Management Board members at 70 years and Supervisory Board members at 80 years. The Management Board and the Supervisory Board are of the opinion that the current composition takes full account of the objectives thus defined for the composition of these bodies.

On March 8, 2023, the Supervisory Board set the target for the proportion of women on the Management Board at 25% and on the Supervisory Board at 25% in accordance with Section 111 para. 5 AktG. The deadline by which this target is to be achieved was set at December 31, 2025. In addition, the Supervisory Board has developed a competence profile for the entire Board. The competence profile takes into account the following areas: general (biotech) industry experience, experience in sales and marketing, management, innovation, research and development, accounting, auditing and controlling (including sustainability reporting), compliance, internal control and risk management, human resources, digitalization, international experience/relevant markets and CSR/sustainability. When making appointments to the entire Board, the Supervisory Board always strives to fill out this competence profile.

Özlem Türeci holds the position of Chief Medical Officer on our Management Board, which was expanded to include James Ryan as of September 1, 2023 and currently has seven members. This reduced the current female quota of the Management Board to 14%. Nevertheless, diversity on the Management Board is a key topic and will be the center of efforts to meet the targets by December 31, 2025.

Nicola Blackwood has been a member of our Supervisory Board since 2023, which currently consists of six members. The current percentage of women on the Supervisory Board is therefore 33%, which means that the target of 25% was reached for the first time in the 2023 financial year.

In accordance with Section 76 para. 4 AktG, the Management Board also decided on March 8, 2023 on the target number of women in management positions. The share of women in members of the top management level below the Management Board and the second highest management level below the Management Board is to be at least 30% in each case. The deadline by which this target is to be achieved at both management levels was set at December 31, 2025.

As of December 31, 2023, a total of 37% (previous year: 38%) of the members of the top management level below the BioNTech Management Board are women. At the second highest management level below the Management Board, 46% (previous year: 40%) of the positions at BioNTech are held by women as of December 31, 2023. The targets were therefore achieved in both the 2023 and the 2022 financial years.

5.4 Integrity and Ethics

Compliance & Business Ethics

BioNTech has implemented a comprehensive compliance and ethics program consisting of three common compliance program elements: Prevent – Detect – Respond.

Prevent
Policies and processes: All employees are actively informed about relevant policies and guidelines. Clearly defined processes help to prevent business practices that do not conform to regulations or the Company's values.

Training and communication: BioNTech's ethics and compliance rules are conveyed through regular training and practical supplementary materials. The training program comprises both in-person and online training sessions.

Detect
Early detection of compliance risks: In view of BioNTech's rapid growth, the compliance program provides for various measures to ensure that potential new compliance risks are identified on a timely basis.

Integrated controls: BioNTech's compliance program comprises controls that are embedded in the relevant business processes.

Whistleblower program: The contact point for ethics protection enables the anonymous reporting of misconduct of any kind. Reports can be made online or in person.

Respond
Internal investigations: As soon as a report of possible misconduct is received, a systematic review is carried out to determine whether further investigation is necessary. All investigations are subject to a process that ensures a professional, objective and confidential approach.

Disciplinary actions and optimizations: Based on the results of investigations, audits and risk assessments, the Compliance & Business Ethics department makes recommendations for disciplinary actions and optimizations. Disciplinary actions address personal responsibilities, while optimizations are aimed at improving structural and procedural aspects.

Continuous feedback: The Compliance & Business Ethics department systematically collects feedback from the organization in order to adapt the compliance program to the Company's requirements.

Digital Compliance Platform

The measures listed above are supported by a digital platform known as the BioNTech Best Practices Hub (BxP Hub). The BxP Hub offers a wide range of functions that support the introduction of policies, training and monitoring activities. Using various modules, the BxP Hub captures interactions on various compliance topics, such as transfers of value to/from healthcare industry representatives, dinner invitations, business gifts, as well as potential conflicts of interest and any violations or concerns reported through BioNTech's reporting channels.

Code of Business Conduct & Ethics

The Code of Business Conduct & Ethics applies to all members of the Supervisory Board, members of the Management Board, managing directors of the group companies and employees of BioNTech and is available online at www.biontech.de. It is considered to be the fundamental basis for conduct when performing activities for/on behalf of BioNTech. It provides an overview of the general requirements that reflect compliance with laws, regulations and BioNTech internal policies. It covers, among other topics, human rights, anti-discrimination, patient safety, data protection, occupational safety, anti-corruption and fair competition. The Code is communicated to all BioNTech employees and all employees are required to sign that they understand and will comply. If an employee violates the Code of Business Conduct & Ethics, this may result in a number of disciplinary consequences, up to and including termination of employment.

Progress in 2023

In 2023, the BioNTech compliance program evolved and made significant progress in terms of team size, specialization and content:

General
The compliance program was refined and continued to be rolled out at various locations around the world. Particular attention was paid to the United States, where a full-time compliance employee has started to tailor the program to local requirements. In addition, a compliance champions program was launched, with local contact persons for compliance issues being appointed. The contact persons are local multipliers of the compliance principles and serve as the first point of contact for questions and local requirements.

Policy Governance
The Global Policy Governance Framework is owned by the Compliance & Business Ethics department and defines the central process for the development, approval and implementation of global and local corporate policies and guidelines. In 2023, 12 new policies and guidelines were introduced.

Whistleblowing & Speak-Up Program
The German Whistleblower Protection Act, which came into force on July 2, 2023, sets out a wide range of legal requirements for whistleblower systems and the handling of tip-offs. Thanks to the Company's existing whistleblowing system and speak-up policy, the processes were already largely in line with the new law, and only minor adjustments had to be made.

Transparency Requirements
BioNTech complies with all legal requirements in the respective jurisdictions with regard to its donations or other transfers of value in the context of its interactions with healthcare professionals and patient organizations. All the necessary information has been published on the website. In addition, in Germany BioNTech has joined the vfa (Verband Forschender Arzneimittelhersteller: Association of Research-Based Pharmaceuticals Companies) and voluntarily endorsed the FSA Code (Freiwillige Selbstkontrolle für die Arzneimittelindustrie e.V.) and corresponding publications in 2022.

6 REMUNERATION REPORT

The remuneration report for the 2023 financial year is prepared in accordance with the requirements of Section 162 AktG and published on the website at ***www.biontech.de.***

7 NON-FINANCIAL REPORT

Since our founding, we have focused on our vision and mission of improving the health of people worldwide, harnessing the full potential of the immune system to develop drugs to fight diseases with high or unmet medical need.

We support the United Nations Sustainable Development Goals (SDGs). Our research and development work makes an important contribution to the United Nations' third Sustainable Development Goal (SDG 3): To ensure healthy lives and promote well-being at all ages. Target 3.3 (communicable diseases) and Target 3.B (vaccines and medicines) are of particular significance for us. This is in line with our core commitment to global social responsibility. At the heart of our business practices is the goal of ensuring that people around the globe benefit from our research and innovations. As part of this effort, we continue to focus on urgent medical needs and fair and equitable access to new medicines.

Climate Strategy

We see climate protection as a core element of our commitment to sustainability. If humanity does not succeed in limiting global warming to 1.5 °C compared to pre-industrial levels, severe consequences for people and nature all over the world are to be expected. We therefore support the global agreement on climate change, or Paris Agreement adopted at the 21st United Nations Climate Change Conference, or COP 21 at the end of 2015 and the UN's 13th Sustainable Development Goal (SDG 13) to take immediate action to address the climate crisis and its impacts.

BioNTech is addressing the climate crisis by minimizing the impact of our business activities and reducing greenhouse gas (GHG) emissions in operations and throughout the value chain. Based on the requirements of the Science Based Targets Initiative (SBTi) and after consultation with the Supervisory Board, the Management Board set binding emission reduction targets during the first quarter of 2022. For the Company's scope 1 and 2 GHG emissions, a target absolute reduction of 42% by 2030 (target amount: 1.9 kt CO_2e) compared to a 2021 baseline (3.2 kt CO_2e) was set. A supplier engagement target was adopted for scope 3 greenhouse gas emissions and further specified in the course of 2023 in accordance with the requirements of the SBTi: BioNTech has committed to having 72% of its suppliers by emissions, which comprise purchased goods and services, capital goods and upstream transportation and distribution, to have set science-based SBTi targets by 2027.

The Company's near-term and science-based emissions reduction targets for scopes 1, 2 and 3 were validated by the Science Based Targets Initiative in January 2024. This validation confirms that BioNTech's scope 1 and scope 2 climate targets are ambitious and in line with the United Nations Paris Climate Agreement, which aims to limit global warming to 1.5 degrees Celsius above pre-industrial levels.

In order to achieve these climate goals, in 2023 BioNTech started to integrate the targets for reducing its GHG emissions in its growth and investment planning, supply chain management and day-to-day operations. In September 2022, the Energy & Sustainability Projects (ESP) department was established for this purpose under the umbrella of the BioNTech Site Service unit (BSS). The new department now has six employees and its brief includes operationalizing the decarbonization goals in scopes 1 and 2. In 2023, BioNTech's Management Board also approved a multi-year budget to provide the ESP department with additional financial scope for decarbonization activities. The budget will be used for targeted modernization measures as part of the decarbonization roadmap. As an agile instrument, it supplements the decarbonization measures planned and

budgeted in property conversion projects. For new buildings, the topic of carbon emissions was added to the budget process with a view to achieving the sustainability targets and complying with sustainability requirements. At the same time, we continued our efforts to reduce scope 3 emissions in our supply chain in order to achieve our supplier engagement target. To this end, discussions with the key suppliers commenced in 2023 to agree on memoranda of understanding declaring these suppliers' intention to set science-based emissions reduction targets in accordance with the SBTi. In addition, the Code of Conduct for Suppliers was revised in 2023 and now contains specific climate protection requirements for suppliers.

We are aware of the effects of the climate crisis on our business and incorporate this risk outlook into our holistic climate strategy. For this purpose, in the 2022 financial year, we analyzed and identified climate-related risks based on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The TCFD was founded in 2015 by the Financial Stability Board and has developed recommendations on how to mitigate the risks of climate change and make use of the opportunities presented. In 2022, we conducted a qualitative and quantitative scenario analysis covering our entire value chain and focusing on both transition risks and physical risks. We have started to integrate the insights from the analysis into our risk management and our processes. Following the acquisition of InstaDeep in 2023, the 2022 analysis was supplemented by assessments of climate-related risks at the InstaDeep locations.

Human Rights Obligations

Motivated by the Guiding Principles on Business and Human Rights adopted by the United Nations in 2011 (UN Guiding Principles), many national action plans (NAP) for human rights due diligence in business have been developed worldwide. The German federal government adopted the German NAP in 2016. This was followed by the German Act on Corporate Due Diligence for the Prevention of Human Rights Violations in Supply Chains, or the German Supply Chain Act (LkSG), which came into force on January 1, 2023. BioNTech is monitoring the fast-moving regulatory developments on the topic of human rights in all countries in which the Company and strategic suppliers operate.

BioNTech first pledged its commitment to the basic principles of human rights in 2016 on the basis of the Universal Declaration of Human Rights and the fundamental principles of the International Labour Organization (ILO). In a new edition of the 2020 Code of Business Conduct & Ethics, the Company has pledged its commitment to the Universal Declaration of Human Rights, the fundamental principles of the ILO, the Guiding Principles of the United Nations on Business and Human Rights (UNGP) and the ten principles of the UN Global Compact to which we became a signatory in 2020. Following an initial gap analysis in 2022 to assess the measures taken to address human rights risks, we carried out a comprehensive human rights risk assessment for the first time in 2023, covering our own operations and direct suppliers. The assessment was the basis for defining the relevant human rights issues. As part of this process, BioNTech takes appropriate preventive measures to address the identified risks. We plan to continuously refine and adapt the human rights risk assessment and monitor its effectiveness.

As of January 1, 2023, our Management Board appointed a Human Rights Officer as part of the Company's preparations for the introduction of the German Supply Chain Act. Responsibility for human rights management was transferred to the Human Rights Officer. This role is responsible for all subsidiaries of the BioNTech Group and reports directly to the Chief Operating Officer (COO), who is the member of the Management Board responsible for human rights issues. The appointment of the Human Rights Officer does not release the Management Board from its oversight and monitoring responsibility for the protection of human rights. Details on BioNTech's human rights risk management in accordance with the LkSG can be found in the ***Risk Report (section 4.2)*** and in the BioNTech Human Rights Statement 2024.

ESG Ratings

In 2023, BioNTech was able to maintain the "Prime" rating issued by the rating agency Institutional Shareholder Services, ISS ESG (Environmental, Social, Governance) as in 2022 and remained in the benchmark "top 10% of the industry." ISS ESG awarded the Company as a whole a corporate rating of B- and a governance quality score of 5 (as of December 2023) on a risk scale of 1 (low risk) to 10 (high risk).

In 2022, BioNTech was able to improve its overall S&P Global Corporate Sustainability Assessment (S&P CSA) score – for the first time as an actively participating company – to 32 out of 100 points compared to the previous year. In 2023, BioNTech scored of 45 out of 100 points and thus improved once again.

The rating agency Morningstar Sustainalytics gave BioNTech an ESG risk rating of 24.1 in 2023 (2022: 22.3), which corresponds to a "medium risk," the third of five risk levels (negligible, low, medium, high and severe). The rating measures the degree to which a company's economic value is at risk driven by ESG factors. Sustainalytics uses absolute risk categories and quantitative scores from 0 to 40+ to allow a comparable assessment for all companies and sectors evaluated.

CSR Management

Our CSR management, including the fields of action and the material CSR topics, is presented in detail in the separate 2023 Sustainability Report and made available online at ***www.biontech.de.***

With the publication of relevant and material sustainability information, we address all stakeholders and especially investors with high expectations regarding the environmental, social and governance (ESG) performance of companies.

8 EVENTS AFTER THE REPORTING PERIOD

A detailed description of the events after the reporting period can be found in the notes to the ***consolidated financial statements and the annual financial statements*** of BioNTech SE.

Mainz, March 18, 2024

BioNTech SE

Prof. Ugur Sahin, M.D.
Chief Executive Officer

Sean Marett
Chief Business Officer and Chief Commercial Officer

Ryan Richardson
Chief Strategy Officer

Prof. Özlem Türeci, M.D.
Chief Medical Officer

Jens Holstein
Chief Financial Officer

Sierk Poetting, Ph.D.
Chief Operating Officer

James Ryan, Ph.D.
Chief Legal Officer

A tumor consists of cancer cells that have features on the surface that are not typical for healthy cells. Immune cells can be taught and equipped to recognize these features and orchestrate the elimination of the cancer.

GROUP REPORT 2023

CONSOLIDATED STATEMENTS OF PROFIT OR LOSS

		Years ended December 31,		
(in millions €, except per share data)	**Note**	**2023**	**2022**	**2021**
Revenues				
Commercial revenues	6	3,815.5	17,194.6	18,874.0
Research & development revenues	6	3.5	116.0	102.7
Total revenues		**3,819.0**	**17,310.6**	**18,976.7**
Cost of sales	7.1	(599.8)	(2,995.0)	(2,911.5)
Research and development expenses	7.1	(1,783.1)	(1,537.0)	(949.2)
Sales and marketing expenses	7.1	(62.7)	(59.5)	(50.4)
General and administrative expenses (1)	7.1	(495.0)	(481.7)	(276.8)
Other operating expenses (1)	7.2	(293.0)	(410.0)	(103.4)
Other operating income	7.3	105.0	815.3	598.4
Operating income		**690.4**	**12,642.7**	**15,283.8**
Finance income	7.4	519.6	330.3	67.7
Finance expenses	7.5	(23.9)	(18.9)	(305.1)
Profit before tax		**1,186.1**	**12,954.1**	**15,046.4**
Income taxes	8	(255.8)	(3,519.7)	(4,753.9)
Profit for the period		**930.3**	**9,434.4**	**10,292.5**
Earnings per share				
Basic earnings for the period per share	9	3.87	38.78	42.18
Diluted earnings for the period per share	9	3.83	37.77	39.63

(1) Adjustments to prior-year figures due to change in functional allocation of general and administrative expenses and other operating expenses ***(see Note 7.2).***

The accompanying notes form an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

		Years ended December 31,		
(in millions €)	**Note**	**2023**	**2022**	**2021**
Profit for the period		**930.3**	**9,434.4**	**10,292.5**
Other comprehensive income				
Other comprehensive income that may be reclassified to profit or loss in subsequent periods, net of tax				
Exchange differences on translation of foreign operations		(19.8)	11.2	8.4
Net other comprehensive income/(loss) that may be reclassified to profit or loss in subsequent periods		**(19.8)**	**11.2**	**8.4**
Other comprehensive loss that will not be reclassified to profit or loss in subsequent periods, net of tax				
Net gain on equity instruments designated at fair value through other comprehensive income		3.7	10.5	—
Remeasurement gain on defined benefit plans		0.3	0.6	0.3
Net other comprehensive income that will not be reclassified to profit or loss in subsequent periods		**4.0**	**11.1**	**0.3**
Other comprehensive income/(loss) for the period, net of tax		**(15.8)**	**22.3**	**8.7**
Comprehensive income for the period, net of tax		**914.5**	**9,456.7**	**10,301.2**

The accompanying notes form an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(in millions €)

Assets	Note	December 31, 2023	December 31, 2022
Non-current assets			
Goodwill	10	362.5	61.2
Other intangible assets	10	804.1	158.5
Property, plant and equipment	11	757.2	609.2
Right-of-use assets	20	214.4	211.9
Other financial assets	12	1,176.1	80.2
Other non-financial assets	14	83.4	6.5
Deferred tax assets	8	81.3	229.6
Total non-current assets		**3,479.0**	**1,357.1**
Current assets			
Inventories	13	357.7	439.6
Trade and other receivables	12	2,155.7	7,145.6
Contract assets	6	4.9	—
Other financial assets	12	4,885.3	189.4
Other non-financial assets	14	280.9	271.9
Income tax assets	8	179.1	0.4
Cash and cash equivalents	12	11,663.7	13,875.1
Total current assets		**19,527.3**	**21,922.0**
Total assets		**23,006.3**	**23,279.1**

Continued on next page

The accompanying notes form an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(in millions €)

Equity and liabilities	Note	December 31, 2023	December 31, 2022
Equity			
Share capital	15	248.6	248.6
Capital reserve	15	1,229.4	1,828.2
Treasury shares	15	(10.8)	(5.3)
Retained earnings		19,763.3	18,833.0
Other reserves	16	(984.6)	(848.9)
Total equity		**20,245.9**	**20,055.6**
Non-current liabilities			
Lease liabilities, loans and borrowings	12	191.0	176.2
Other financial liabilities	12	38.8	6.1
Income tax liabilities	8	—	10.4
Provisions	17	8.8	8.6
Contract liabilities	6	398.5	48.4
Other non-financial liabilities	19	13.1	17.0
Deferred tax liabilities	8	39.7	6.2
Total non-current liabilities		**689.9**	**272.9**
Current liabilities			
Lease liabilities, loans and borrowings	12	28.1	36.0
Trade payables and other payables	12	354.0	204.1
Other financial liabilities	12	415.2	785.1
Refund liabilities	6	—	24.4
Income tax liabilities	8	525.5	595.9
Provisions	17	269.3	367.2
Contract liabilities	6	353.3	77.1
Other non-financial liabilities	19	125.1	860.8
Total current liabilities		**2,070.5**	**2,950.6**
Total liabilities		**2,760.4**	**3,223.5**
Total equity and liabilities		**23,006.3**	**23,279.1**

The accompanying notes form an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

		Equity attributable to equity holders of the parent					
(in millions €)	Note	Share capital	Capital reserve	Treasury shares	Retained earnings	Other reserves	Total equity
As of January 1, 2021		**246.3**	**1,514.5**	**(4.8)**	**(409.6)**	**25.4**	**1,371.8**
Profit for the period		—	—	—	10,292.5	—	**10,292.5**
Other comprehensive income		—	—	—	—	8.7	**8.7**
Total comprehensive income		**—**	**—**	**—**	**10,292.5**	**8.7**	**10,301.2**
Issuance of treasury shares	15	—	162.6	1.0	—	—	**163.6**
Transaction costs		—	(2.7)	—	—	—	**(2.7)**
Share-based payments	16	—	—	—	—	59.8	**59.8**
As of December 31, 2021		**246.3**	**1,674.4**	**(3.8)**	**9,882.9**	**93.9**	**11,893.7**
Profit for the period		—	—	—	9,434.4	—	**9,434.4**
Other comprehensive income		—	—	—	—	22.3	**22.3**
Total comprehensive income		**—**	**—**	**—**	**9,434.4**	**22.3**	**9,456.7**
Issuance of share capital	15	0.5	67.1	—	—	—	**67.6**
Redemption of convertible note	12	1.8	233.2	—	—	—	**235.0**
Share repurchase program	15	—	(979.5)	(6.9)	—	—	**(986.4)**
Transaction costs		—	(0.1)	—	—	—	**(0.1)**
Dividends	15	—	—	—	(484.3)	—	**(484.3)**
Share-based payments	16	—	833.1	5.4	—	(1,519.8)	**(681.3)**
Deferred taxes	8	—	—	—	—	554.7	**554.7**
As of December 31, 2022		**248.6**	**1,828.2**	**(5.3)**	**18,833.0**	**(848.9)**	**20,055.6**
Profit for the period		—	—	—	930.3	—	**930.3**
Other comprehensive loss		—	—	—	—	(15.8)	**(15.8)**
Total comprehensive profit/(loss)		**—**	**—**	**—**	**930.3**	**(15.8)**	**914.5**
Share repurchase program	15	—	(731.6)	(6.9)	—	—	**(738.5)**
Share-based payments	16	—	30.2	0.3	—	(15.1)	**15.4**
Current and deferred taxes	8	—	—	—	—	(104.8)	**(104.8)**
Treasury shares used for acquisition of business combination	5	—	102.6	1.1	—	—	**103.7**
As of December 31, 2023		**248.6**	**1,229.4**	**(10.8)**	**19,763.3**	**(984.6)**	**20,245.9**

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Operating activities			
Profit for the period	930.3	9,434.4	10,292.5
Income taxes	255.8	3,519.7	4,753.9
Profit before tax	**1,186.1**	**12,954.1**	**15,046.4**
Adjustments to reconcile profit before tax to net cash flows			
Depreciation and amortization of property, plant, equipment, intangible assets and right-of-use assets	183.4	123.3	75.2
Share-based payment expenses	51.4	108.6	93.9
Net foreign exchange differences	(298.0)	625.5	(387.5)
Loss on disposal of property, plant and equipment	3.8	0.6	4.6
Finance income excluding foreign exchange differences	(519.6)	(265.3)	(1.5)
Finance expense excluding foreign exchange differences	7.9	18.9	305.2
Movements in government grants	2.4	0.3	(89.0)
Other non-cash income/(loss)	—	—	(2.2)
Net (gain)/loss on derivative instruments at fair value through profit or loss	175.5	(241.0)	57.3
Working capital adjustments			
Decrease/(increase) in trade and other receivables, contract assets and other assets	5,374.0	4,369.9	(11,808.1)
Decrease/(increase) in inventories	81.9	62.9	(438.4)
Increase in trade payables, other financial liabilities, other liabilities, contract liabilities, refund liabilities and provisions	118.9	85.7	1,516.1
Interest received and realized gains from cash and cash equivalents	258.2	29.3	1.2
Interest paid and realized losses from cash and cash equivalents	(5.4)	(21.5)	(12.2)
Income tax paid	(482.9)	(4,222.1)	(3,457.9)
Share-based payments	(766.2)	(51.8)	(13.4)
Net cash flows from operating activities	**5,371.4**	**13,577.4**	**889.7**

Continued on next page

The accompanying notes form an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Investing activities			
Purchase of property, plant and equipment	(249.4)	(329.2)	(127.5)
Proceeds from sale of property, plant and equipment	(0.7)	0.6	3.4
Purchase of intangible assets and right-of-use assets	(455.4)	(34.1)	(26.5)
Acquisition of subsidiaries and businesses, net of cash acquired	(336.9)	—	(20.8)
Investment in other financial assets	(7,128.4)	(47.8)	(19.5)
Proceeds from maturity of other financial assets	1,216.3	375.2	(375.2)
Net cash flows used in investing activities	**(6,954.5)**	**(35.3)**	**(566.1)**
Financing activities			
Proceeds from issuance of share capital and treasury shares, net of costs	—	110.5	160.9
Proceeds from loans and borrowings	0.3	0.8	—
Repayment of loans and borrowings	(0.1)	(18.8)	(52.6)
Payments related to lease liabilities	(40.3)	(41.1)	(14.1)
Share repurchase program	(738.5)	(986.4)	—
Dividends	—	(484.3)	—
Net cash flows from/ (used in) financing activities	**(778.6)**	**(1,419.3)**	**94.2**
Net increase/(decrease) in cash and cash equivalents	(2,361.7)	12,122.8	417.8
Change in cash and cash equivalents resulting from exchange rate differences	(14.5)	60.1	64.7
Change in cash and cash equivalents resulting from other valuation effects	164.8	(0.5)	—
Cash and cash equivalents at the beginning of the period	13,875.1	1,692.7	1,210.2
Cash and cash equivalents as of December 31	**11,663.7**	**13,875.1**	**1,692.7**

The accompanying notes form an integral part of these consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1 CORPORATE INFORMATION

BioNTech SE is a limited company incorporated and domiciled in Germany. American Depositary Shares (ADS) representing BioNTech SE's ordinary shares have been publicly traded on the Nasdaq Global Select Market since October 10, 2019. The registered office is located in Mainz, Germany (An der Goldgrube 12, 55131 Mainz). BioNTech SE is registered in the commercial register B of the Mainz Local Court under the number HRB 48720. These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as endorsed by the European Union (EU), and give a true and fair view of the financial position and results of operations of the Group in accordance with International Financial Reporting Standards (IFRS) and the results of operation of BioNTech SE and its subsidiaries, hereinafter also referred to as "BioNTech", the "Group", "we" or "us".

Our consolidated financial statements for the year ended December 31, 2023, were prepared by the Management Board on March 18, 2024.

2 SIGNIFICANT ACCOUNTING POLICIES

2.1 Basis of Preparation

General

The consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

We prepare and publish our consolidated financial statements in Euros and round numbers to thousands or millions of Euros, respectively. Accordingly, numerical figures shown as totals in some tables may not be exact arithmetic aggregations of the figures that preceded them and figures presented in the explanatory notes may not add up to the rounded arithmetic aggregations. Rounding applied may differ from rounding published in different units in the previous years.

Segment Information

Decisions with respect to business operations and resource allocations are made by our Management Board, as the chief operating decision maker (CODM) based on BioNTech as a whole. Accordingly, we operate and make decisions as a single operating segment, which is also our reporting segment.

2.2 Basis of Consolidation

The consolidated financial statements comprise the financial statements of BioNTech SE and its controlled investees (subsidiaries).

The Group controls an investee if, and only if, the Group has

- power over the investee (i.e., existing rights that give it the current ability to direct the relevant activities of the investee);
- exposure, or rights, to variable returns from its involvement with the investee; and
- the ability to use its power over the investee to affect its returns.

Generally, there is a presumption that a majority of voting rights results in control.

Whether an investee is controlled is re-assessed if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when control is obtained over the subsidiary and ceases when control over the subsidiary is lost.

The profit/(loss) and each component of other comprehensive income/(loss) for the period are attributed to the equity holders of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. When necessary, adjustments are made to the consolidated financial statements of subsidiaries to bring their accounting policies in line with the Group's accounting policies. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated on consolidation.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If control over a subsidiary is lost, the related assets (including goodwill), liabilities, non-controlling interests and other components of equity are derecognized, while any resultant gain or loss is recognized in the consolidated statements of profit or loss. Any investment retained is recognized at fair value.

2.3 Summary of Material Accounting Policies

2.3.1 Foreign Currencies

Our consolidated financial statements are presented in Euros, which is also our functional currency. For each entity, the Group determines the functional currency, and items included in the consolidated financial statements of such entities are measured using that functional currency. We use the direct method of consolidation and, on disposal of a foreign operation, the gain or loss that is reclassified to the consolidated statements of profit or loss reflects the amount that arises from using this method.

Transactions and Balances
Transactions in foreign currencies are initially recorded by the Group's entities at their respective functional currency spot rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

In determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability relating to advance consideration, the date of the transaction is the date on which the Group initially recognizes the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, the Group determines the transaction date for each payment or receipt of advance consideration.

Foreign Currency Translation
Foreign currency translation effects from the translation of operating activities include foreign exchange differences arising on operating items such as trade receivables and trade payables and are either shown as other operating income or expenses on a cumulative basis. Foreign currency translation effects presented within finance income and expenses include foreign exchange differences arising on financing items such as loans and borrowings as well as foreign exchange differences arising on cash and cash equivalents and are either shown as finance income or expenses on a cumulative basis.

Foreign Currency Translation on Consolidation
Upon consolidation, the assets and liabilities of foreign operations are translated into Euros at the rate of exchange prevailing at the reporting date and the transactions recorded in their consolidated statements of profit or loss are translated at exchange rates prevailing at the dates of the transactions.

The exchange differences arising on translation for consolidation are recognized in other comprehensive income. On disposal of a foreign operation, the component of other comprehensive income relating to that particular foreign operation is reclassified to profit or loss.

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising upon the acquisition are treated as assets and liabilities of the foreign operation and translated at the spot rate of exchange at the reporting date.

2.3.2 Current versus Non-Current Classifications

Assets and liabilities in the consolidated statements of financial position are presented based on current or non-current classification.

An asset is current when it is either: (i) expected to be realized or intended to be sold or consumed in the normal operating cycle, (ii) held primarily for the purpose of trading, (iii) expected to be realized within twelve months after the reporting period, or (iv) cash or cash equivalents, unless it is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period. All other assets are classified as non-current.

A liability is current when it is either: (i) expected to be settled in the normal operating cycle, (ii) held primarily for the purpose of trading, (iii) due to be settled within twelve months after the reporting period, or (iv) there is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period. The terms of the liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification. The Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities, respectively.

2.3.3 Revenue from Contracts with Customers

Revenue

Identification of the Contract

We generate revenues from collaboration and license agreements, which contain multiple elements, including licenses to use, research, develop, manufacture and commercialize candidates and products, research and development services as well as obligations to develop and manufacture preclinical and clinical material and products. We determined that those collaboration and license agreements qualify as contracts with customers. A contract is an agreement between two or more parties that establishes enforceable rights and obligations.

Identification of Performance Obligations

Our customer contracts often include bundles of licenses, goods and services. If the granting of a license is bundled together with delivering of goods and or the rendering of services, it is assessed whether these agreements are comprised of more than one performance obligation. A performance obligation is only accounted for as the grant of a license if the grant of a license is the sole or the predominant promise of the performance obligation.

Determining Transaction Prices

We apply judgment when determining the consideration that is expected to be received. If the consideration in an agreement includes a variable amount, we estimate the amount of consideration to which we will be entitled in exchange for transferring the goods to the customer. At contract inception, the variable consideration is estimated based on the most likely amount of consideration expected from the transaction and constrained until it is highly probable that a significant revenues reversal in the amount of cumulative revenues recognized will not occur when the associated uncertainty with respect to the variable consideration is subsequently resolved. The estimated revenues are updated at each reporting date to reflect the current facts and circumstances.

Allocation of Transaction Prices

If a contract with a customer contains more than one performance obligation, the transaction price is allocated to each performance obligation based on relative standalone selling prices. We have established the following hierarchy to determine the standalone selling prices.

/ Where standalone selling prices for offered licenses, goods or services are observable and reasonably consistent across customers, our standalone selling price estimates are derived from our respective pricing history. However, due to the limited number of customers and the limited company history, this approach can rarely be used.

/ Where sales prices for an offering are not directly observable or highly variable across customers, we follow a cost-plus-margin approach.

/ For offerings that have highly variable pricing and lack substantial direct costs to estimate based on a cost-plus-margin approach, we allocate the transaction price by applying a residual approach.

Judgment is required when estimating standalone selling prices.

Recognition of Revenues
For each separate performance obligation, it is evaluated whether control is transferred either at a point in time or over time. For performance obligations that are satisfied over time, revenues are recognized based on a measure of progress, which depicts the performance in transferring control to the customer. Under the terms of our licensing arrangements, we provide the licensee with a research and development license, which represents a right to access our intellectual property as it exists throughout the license period (as our intellectual property is still subject to further research). Therefore, the promise to grant a license is accounted for as a performance obligation satisfied over time as our customers simultaneously receive and consume the benefits from our performance.

Revenues based on the collaboration partners' gross profit, which is shared under the respective collaboration agreements, are recognized based on the sales-based or usage-based royalty exemption; i.e., when the underlying sales occur, which is when the performance obligation has been satisfied. As described further in ***Note 3,*** judgment is applied to certain aspects when accounting for the collaboration agreements.

Revenue arrangements that involve two or more partners who contribute to the provision of a specific good or service to a customer are assessed in terms of principal-agent considerations in order to determine the appropriate treatment for the transactions between us and the collaborator and the transactions between us and other third parties. The classification of transactions under such arrangements is determined based on the nature and contractual terms of the arrangement along with the nature of the operations of the participants. Any consideration related to activities in which we are considered the principal, which includes being in control of the good or service before such good or service is transferred to the customer, is accounted for as gross revenues. Any consideration related to activities in which we are considered the agent is accounted for as net revenues.

Revenues from the sale of pharmaceutical and medical products (e.g., COVID-19 vaccine sales and other sales of peptides and retroviral vectors for clinical supply) are recognized when we transfer control of the product to the customer. Control of the product normally transfers when the customer gains physical possession and we have not retained any significant risks of ownership or future obligations with respect to the product. In general, payments from customers are due within 30 days after invoice. However, with respect to our collaboration with Pfizer Inc., or Pfizer, there is a significant time lag between when revenues are recognized and the payments are received. The contractual settlement of the gross profit share has a temporal offset of more than one calendar quarter. As Pfizer's financial quarter for subsidiaries outside the United States differs from ours, it creates an additional time lag between the recognition of revenues and the payment receipt.

For certain contracts, the finished product may temporarily be stored at our location under a bill-and-hold arrangement. Revenues from bill-and-hold arrangements are recognized at the point in time when the customer obtains control of the product and all of the following criteria have been met: (i) the arrangement is substantive; (ii) the product is identified separately as belonging to the customer; (iii) the product is ready for physical transfer to the customer; and (iv) we do not have the ability to use the product or direct it to another customer. In determining when the customer obtains control of the product, we consider certain indicators, including whether title and significant risks and rewards of ownership have transferred to the customer and whether customer acceptance has been received.

Contract Balances

Contract Assets

A contract asset is the right to consideration in exchange for goods or services transferred to the customer. If we transfer goods or services to a customer before the customer pays the respective consideration or before payment is due, a contract asset is recognized for the earned consideration that is conditional.

Trade Receivables

A receivable represents our right to an amount of consideration that is unconditional (i.e., only the passage of time is required before payment of the consideration is due).

Contract Liabilities

A contract liability is the obligation to transfer goods or services to a customer for which we have received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before we transfer goods or services to the customer, a contract liability is recognized when the payment is made or when the payment is due (whichever is earlier). Contract liabilities are recognized as revenue when we fulfill our performance obligations under the contract.

Refund Liabilities

A refund liability is a consideration which has been received but which will need to be refunded to the customer in the future as it represents an amount to which we are ultimately not entitled under the contract. A refund liability is measured at the amount of consideration received (or receivable) to which we do not expect to be entitled (i.e., amounts not included in the transaction price). We update our estimates of refund liabilities (and the corresponding change in the transaction price) at the end of each reporting period.

2.3.4 Research and Development Expenses

Research and development costs are expensed in the period in which they are incurred. Regarding internal projects, we consider that regulatory approval and other uncertainties inherent in the development of new products preclude the capitalization of internal development expenses as an intangible asset until marketing approval from a regulatory authority is obtained. Payments made to third parties, such as contract research and development organizations as compensation for subcontracted research and development, that are deemed not to transfer intellectual property are expensed as internal research and development expenses in the period in which they are incurred. Such payments are only capitalized if they meet the criteria for recognition of an internally generated intangible asset, usually when marketing approval has been received from a regulatory authority. We have entered into agreements under which third parties grant licenses to us, which are known as in-license agreements. If in-licensing results in consideration for the acquisition of intellectual property that meets the definition of an identifiable asset, this is capitalized as an intangible asset unless the respective intellectual property is mainly used as part of our general ongoing research and development activities without any intent to market the respective product as such. If the transaction also includes research and development services to be provided by the licensor, the share of consideration attributable to these services is recognized in research and development expenses in line with the performance of the services. Sales-based milestone or royalty payments incurred under license agreements after the approval date of the respective pharmaceutical product are recognized as expenses in cost of sales as incurred.

Subsequent internal research and development costs in relation to intellectual property rights are expensed because the technical feasibility of the internal research and development activity can only be demonstrated by the receipt of marketing approval for a related product from a regulatory authority in a major market.

Prior to the second quarter of 2023, we had assessed that inventory produced prior to successful regulatory approval did not meet the criteria for capitalization as an asset, and accordingly expensed the costs of pre-launch inventory as research and development costs. Based on the experience of the past years and the developments since our COVID-19 vaccine was first authorized or approved for emergency or temporary use, our assessment regarding the potential to produce economic benefits changed. Beginning with the second quarter of 2023, pre-launch products from the Comirnaty product family with their potential for economic benefit fulfill the recognition criteria for an asset under the IFRS Conceptual Framework. At each reporting date, the respective inventory is measured at the lower of cost and net realizable value. However, because it is not probable until regulatory approval is obtained, we consider the net realizable value to be zero, as this is the probable amount expected to be realized from its sale until approval is obtained. The write-down is recognized in the statements of profit or loss as research and development expenses. If regulatory approval for a product candidate is obtained, the relevant write-down would be reversed to a maximum of the original cost. Subsequently, inventory is recognized as cost of sales. This reassessment has been treated as a change in estimate and the impacts on current period inventories, cost of sales and research and development expenses are described in ***Note 7.1.***

2.3.5 Government Grants

Government grants and similar grants which are accounted for in accordance with IAS 20 are recognized where there is reasonable assurance that the grant will be received and all attached conditions will be complied with. When the grant relates to an expense item, it is recognized as other income on a systematic basis over the periods that the related costs for which the grant is intended to compensate are expensed. When the grant relates to an asset, it is recognized as deferred income within the consolidated statements of financial position. Other income is subsequently recognized in our consolidated statements of profit or loss over the useful life of the underlying asset subject to funding.

2.3.6 Taxes

Current Income Tax
Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Group operates and generates taxable income.

In addition, current income taxes presented for the period include adjustments for uncertain tax payments or tax refunds for periods not yet finally assessed by tax authorities, excluding interest expenses and penalties on the underpayment of taxes. In the event that amounts included in the tax return are considered unlikely to be accepted by the tax authorities (uncertain tax positions), a provision for income taxes is recognized.

Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred Tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- when the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; or
- in respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognized to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, the carry forward of unused tax credits and unused tax losses can be utilized, except:

- when the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; or
- in respect of deductible temporary differences associated with investments in subsidiaries, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year in which the asset is realized, or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Unrecognized deferred tax assets are re-assessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Recognition of Taxes

Current and deferred tax items are recognized similarly to the underlying transaction either in profit or loss, other comprehensive income or directly in equity.

Current tax assets and current tax liabilities are offset if, and only if, we have a legally enforceable right to set off the recognized amounts and intend either to settle on a net basis, or to realize the asset and settle the liability simultaneously. Deferred tax assets and deferred tax liabilities are only offset when we have a legally enforceable right to set off current tax assets and current tax liabilities and the deferred tax assets and deferred tax liabilities relate to income taxes levied by the same taxation authority on either (i) the same taxable entity or (ii) different taxable entities, which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

Sales Tax
Expenses and assets are recognized net of sales tax, except when the sales tax incurred on a purchase of assets or services is not recoverable from the taxation authority.

The net amount of sales tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the consolidated statements of financial position.

Future Tax Legislation
Based on the Organisation for Economic Co-operation and Development (OECD) Base Erosion and Profit Shifting (BEPS) project to tackle tax avoidance, the OECD/G20 Inclusive Framework (an association of about 140 countries) decided to introduce a global minimum taxation for large multinational groups (known as Pillar 2). The Global Anti-Base Erosion Rules are intended to ensure that large multinational groups pay a minimum level of tax on the income arising in each jurisdiction where they operate. In December 2021, the OECD published its Model Rules, which serve as a draft bill for implementation into national domestic law, followed by guidelines and commentaries published in March 2022. In December 2022, the EU adopted a corresponding directive (EU 2022/2523) that obliges EU member states to transpose the rules into national domestic law. If the effective tax rate in any jurisdiction is below the minimum rate (15%), the Group may be subject to the so-called top-up tax or a so-called qualified domestic minimum top-up tax.

Several jurisdictions in which the Group operates have transposed the OECD Model Rules into national domestic law and brought them into force. In addition, the Group is closely following the progress of the legislative process in each country in which the Group operates. As of the balance sheet date, the BEPS Pillar 2 regulations (MinBestRL UmsG) had already been transposed into German law (MinStG). The date of application of the law in Germany is for financial years beginning after December 30, 2023. Subsequently, as the OECD Model Rules have entered into force in Germany, the Group is obliged to file top-up tax information returns for all entities which are part of the Group, beginning in financial year 2024. The Group falls within the scope of these regulations. The Group carried out an analysis as of the reporting date to determine the fundamental impact and the jurisdictions in which the Group is exposed to possible effects in connection with a Pillar 2 top-up tax.

Based on this analysis, no countries were identified in which the Group would be materially affected by a Pillar 2 top-up tax. Consequently, the average effective Group tax rate would not have changed if the Pillar 2 legislation had already been in force on the balance sheet date. BioNTech applies the exception in IAS 12, according to which no deferred tax assets and liabilities in connection with the second income taxes of the second pillar of the OECD are recognized and no disclosures are made.

2.3.7 Business Combinations and Goodwill

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, which is measured at acquisition date fair value, and the amount of any non-controlling interests in the acquiree.

Goodwill is initially measured at cost as the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests and any previous interest held over the net identifiable assets acquired and liabilities assumed.

Costs related to executing business combinations are recognized when they are incurred and are classified as general and administrative expenses.

After initial recognition, goodwill is tested at least annually or when there is an indication for impairment. ***See Note 2.3.10.*** For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill has been allocated to a cash-generating unit (CGU) and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed of in these circumstances is measured based on the relative values of the operation disposed of and the portion of the cash-generating unit retained.

2.3.8 Intangible Assets

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses.

The portion of the consideration in in-licensing agreements paid by us to acquire intellectual property is recognized as an intangible asset. If in-licensing includes research and development services, the share of consideration attributable to these services is deferred and recognized in research and development expenses according to the utilization thereof. Payments depending on the achievement of specific milestones as part of the purchase of intangible assets, except for intangible assets acquired in a business combination, are recognized as subsequent acquisition cost of the intangible asset and as a financial liability once the milestone is reached.

The useful lives of intangible assets are assessed as either finite or indefinite.

Intangible assets with finite lives are amortized generally on a straight-line basis over the useful life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at the end of each reporting period at the least. The amortization expense on intangible assets with finite lives is recognized in the consolidated statements of profit or loss in the expense category that is consistent with the function of the intangible assets.

A summary of the useful lives applied to the Group's intangible assets is as follows:

Intangible assets	**Useful life** *(years)*
Intellectual property rights	8-20
Licenses	3-20
Software	3-8

Intangible assets with indefinite useful lives are tested for impairment at least annually, or when there is an indication for impairment, either individually or at the level of a cash-generating unit ***(see Note 2.3.10 for further details).*** In the case of intangible assets not yet available for use, the point in time from which a capitalized asset can be expected to generate economic benefit for the Group cannot be determined. Such assets are not amortized, and therefore classified as having an indefinite useful life. The intangible assets not yet available for use are tested for impairment annually, or when there is an indication for impairment on an individual basis. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

We have classified advanced payments on intangible assets as intangible assets that are not yet ready for use. Advanced payments on intangible assets are tested for impairment on an annual basis.

An intangible asset is derecognized upon disposal (i.e., at the date the recipient obtains control) or when no future economic benefits are expected from its use or disposal. Any gain or loss arising upon derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the consolidated statements of profit or loss.

See Note 2.3.4 for further details in connection with our accounting of internally generated intangible assets.

2.3.9 Property, Plant and Equipment

Construction in progress is stated at cost. Property, plant and equipment are stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such cost includes the cost of replacing part of the property, plant and equipment if the recognition criteria are met. All other repair and maintenance costs are expensed as incurred.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets, as follows:

Property, plant and equipment	**Useful life** *(years)*
Buildings	10-33
Equipment, tools and installations	7-18

Operating and business equipment has a useful life of 1-10 years and is reported under equipment, tools and installations due to immateriality.

An item of property, plant and equipment initially recognized is derecognized upon disposal (i.e., at the date the recipient obtains control) or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the consolidated statements of profit or loss when the asset is derecognized.

The residual values, useful lives and methods of depreciation of property, plant and equipment are reviewed at each financial year-end and adjusted prospectively, if appropriate.

2.3.10 Impairment of Non-Financial Assets

At each reporting date, we assess whether there is an indication that a non-financial asset may be impaired. Goodwill is tested for impairment at least annually. Impairment is determined for goodwill by assessing the recoverable amount of each cash-generating unit (or group of CGUs) to which the goodwill relates. If any indication exists, or when annual impairment testing is performed, we estimate the asset's or CGU's recoverable amount. The recoverable amount is the higher of an asset's or CGU's fair value less costs of disposal and its value in use. The recoverable amount

is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. If the asset does not generate independent cash inflows, the impairment test is performed for the smallest group of assets that generate largely independent cash inflows from other assets (CGU). When the carrying amount of an asset or cash-generating unit exceeds its recoverable amount, the asset or the non-current assets of the CGU are considered impaired and written down to their recoverable amount.

Impairment losses are recognized in the consolidated statements of profit or loss in expense categories consistent with the function of the impaired asset.

Intangible assets with an indefinite useful life are tested for impairment annually at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

Intangible assets not yet available for use are not amortized, but rather tested for impairment when a triggering event arises or at least once a year. The identification of triggering events takes place on a quarterly or on an ad hoc basis with the involvement of the responsible departments, taking internal and external information sources into consideration. The impairment test is performed annually or if there are indications of impairment by determining the asset's value in use. In assessing value in use, the estimated discounted future cash flows are based on long-term forecast calculations reflecting the asset's estimated product life cycles. The assumptions are based on internal estimates along with external market studies. The result of the valuation depends to a large extent on the estimates by the management of the future cash flows of the assets and the discount rate applied, and is therefore subject to uncertainty.

2.3.11 Financial Instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

i) Financial Assets

Initial Recognition and Measurement

Financial assets mainly include money market funds, bank deposits and reverse repos, security investments, trade receivables, cash at banks as well as equity investments. Financial assets are initially measured at fair value as of the trade date and – depending on their classification – subsequently measured at amortized cost, fair value through other comprehensive income (OCI) or fair value through profit or loss.

Subsequent Measurement

The measurement of financial assets depends on their classification, as described below.

Financial Assets Measured at Amortized Cost

Financial assets measured at amortized cost include trade receivables and other financial assets are generally measured using the effective interest rate (EIR) method. With respect to trade receivables, we applied the practical expedient, which means that they are measured at the transaction price determined in accordance with IFRS 15. Refer to the accounting policies in Note 2.3.3. Other financial assets measured at amortized cost are held to collect contractual cash flows, which are solely payments of principal and interest. Gains and losses are recognized in our consolidated statements of profit or loss when the financial asset is derecognized, modified or impaired.

Financial Assets Designated at Fair Value through OCI (Equity Instruments)
Upon initial recognition, we can irrevocably elect to classify equity investments as equity instruments designated at fair value through OCI if they meet the definition of equity under IAS 32 and are not held for trading. The classification is determined on an instrument-by-instrument basis. Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognized as other income in the consolidated statements of profit or loss when the right of payment has been established. Equity instruments designated at fair value through OCI are not subject to impairment assessment. We elected to irrevocably classify our non-listed and listed equity investments under this category. They are recognized using trade date accounting.

Financial Assets at Fair Value through Profit or Loss
Derivatives not designated as hedging instruments are measured at fair value through profit or loss. A financial asset exists if the derivative has a positive fair value.

Derecognition
A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognized (i.e., removed from the consolidated statements of financial position) when the rights to receive cash flows from the asset have expired or have been transferred in terms of fulfilling the derecognition criteria.

Impairment of Financial Assets
An allowance for expected credit losses (ECLs) is considered for all non-derivative financial debt investments, including cash, time deposits and debt securities of the Group. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all of the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

Since our financial debt investments are considered to be investments with low risk, the expected credit loss in the upcoming twelve months is used to determine the impairment loss. Wherever a considerable increase in the default risk is assumed, the lifetime expected credit loss of the financial asset is considered.

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. This means that the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. We have established an ECL model that is based on the probability of default (PD), considers the respective country default probabilities and takes the maturities into account. In order to determine the PD of companies, we use the maturities of the trade receivables and the score of the companies.

If there is objective evidence that certain trade receivables or contract assets are fully or partially impaired, additional loss allowances are recognized to account for expected credit losses. A debtor's creditworthiness is assumed to be impaired if there are objective indications that the debtor is in financial difficulties, such as the disappearance of an active market for its products or impending insolvency.

ii) Financial Liabilities
Financial liabilities are generally measured at amortized cost using the effective interest rate (EIR) method. Derivatives with negative fair values not designated as hedging instruments and liabilities for contingent consideration in business combinations are measured at fair value.

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

Financial liabilities measured at amortized cost include loans and borrowings, trade payables and other financial liabilities. They are measured at amortized cost using the EIR method. Gains and losses are recognized in the consolidated statements of profit or loss when the liabilities are derecognized as well as through the EIR amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included as finance costs in the consolidated statements of profit or loss.

Derecognition
A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the consolidated statements of profit or loss.

iii) Expenses and Income from Exchange Forward Contracts
Effects from foreign exchange forward contracts, which are measured at fair value through profit or loss, are shown as either other operating income or other operating expenses on a cumulative basis and might switch between those two items during the year-to-date reporting periods.

2.3.12 Fair Value Measurement

Fair value is a market-based measurement. For some assets and liabilities, observable market transactions or market information is available. For other assets and liabilities, observable market transactions or market information might not be available. When a price for an identical asset or liability is not observable, another valuation technique is used. To increase consistency and comparability in fair value measurements, there are three levels of the fair value hierarchy:

- Level 1 contains the use of quoted prices in active markets for identical assets or liabilities.
- Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability either directly or indirectly.
- Level 3 inputs are unobservable.

Within this hierarchy, estimated values are made by management based on reasonable assumptions, including other fair value methods.

For assets and liabilities that are recognized in the financial statements at fair value on a recurring basis, we determine whether transfers have occurred between levels in the fair value hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

For the purpose of fair value disclosures, classes of assets and liabilities have been determined on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy, as explained above.

2.3.13 Inventories

Inventories are valued at the lower of cost and net realizable value.

Costs incurred in bringing each product to its present location and condition are accounted for as follows:

- raw materials and supplies: purchase cost on a first-in/first-out basis; or
- unfinished goods and finished goods: cost of direct materials and labor, including both internal manufacturing and third-party contract manufacturing organizations, or CMOs, and a proportion of manufacturing overheads based on the normal operating capacity, but excluding borrowing costs.

Net realizable value is the estimated selling price in the ordinary course of business less estimated costs of completion and the estimated costs necessary to make the sale. Write-offs are recorded if inventories are expected to be unsaleable, do not fulfill the specification defined by our quality standards or if their shelf-life has expired. For our inventories subject to the collaboration partners' gross profit share mechanism, we consider the contractual compensation payments in the estimate of the net realizable value.

Beginning with the second quarter of 2023, pre-launch products from the Comirnaty product family with their potential for economic benefit fulfill the recognition criteria for an asset under the IFRS Conceptual Framework. At each reporting date, the respective inventory is measured at the lower of cost and net realizable value. However, because is not probable until regulatory approval is obtained, we consider the net realizable value to be zero, as this is the probable amount expected to be realized from its sale until approval is obtained ***(see also Note 2.3.4*** for further information on our assessment regarding the potential of our pre-launch products to produce economic benefits).

2.3.14 Cash and Cash Equivalents

Cash and cash equivalents comprise cash at banks and on hand and short-term investments that we consider to be highly liquid (including deposits, money market funds and reverse repos) with an original maturity of three months or less that are readily convertible to a known amount of cash and subject to an insignificant risk of changes in value. Deposits with an original maturity of more than three months are recognized as other financial assets.

2.3.15 Treasury Shares

We apply the par value method to our repurchases of outstanding American Depositary Shares, or ADSs. Accordingly, the nominal value of acquired treasury shares is deducted from equity and shown in the separate item "Treasury shares". Any premium paid in excess of the nominal value of a repurchased ADS is deducted from the capital reserve. On the trade date, we recognize a liability, and on the settlement date, we settle in cash. We recognize the foreign exchange differences that may occur between the trade and settlement date as profit or loss.

2.3.16 Leases

At the inception of a contract, we assess whether the contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, we assess whether:

- the contract involves the use of an identified asset – this may be specified explicitly or implicitly and should be physically distinct or represent substantially all of the capacity of a physically distinct asset. If the supplier has a substantive substitution right, then the asset is not identified;

/ we have the right to obtain substantially all of the economic benefits from the use of the asset throughout the period of use; and

/ we have the right to direct the use of the asset. We possess this right when we hold the decision-making rights that are most relevant to changing how and for what purpose the asset is used. In rare cases where the decision about how and for what purpose the asset is used is predetermined, the Group has the right to direct the use of the asset if either:

- we have the right to operate the asset; or
- we designed the asset in a way that predetermines how and for what purpose it will be used.

At inception or on reassessment of a contract that contains a lease component, the consideration in the contract is allocated to each lease component on the basis of their relative standalone prices. However, for leases of land and buildings in which we are a lessee, we have elected not to separate non-lease components, and instead account for the lease and non-lease components as a single lease component.

We recognize a right-of-use asset and a lease liability at the lease commencement date.

The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of the costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received by the Group.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset and the end of the lease term. The estimated useful lives of right-of-use assets are determined on the same basis as those of property, plant and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the incremental borrowing interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. Generally, the incremental borrowing rate is used as the discount rate.

Lease payments included in the measurement of the lease liability comprise the following:

/ fixed payments, including in-substance fixed payments;

/ variable lease payments that depend on an index or a rate, initially measured using the index or rate as of the commencement date;

/ amounts expected to be payable under a residual value guarantee; and

/ the exercise price under a purchase option that is reasonably certain to be exercised, lease payments in an optional renewal period if it is reasonably certain that the extension option is exercised, and penalties for early termination of a lease unless it is reasonably certain that the contract will not be terminated early.

The lease liability is subsequently measured at amortized cost using the EIR method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the estimate of the amount expected to be payable under a residual value guarantee, or if we change our assessment of whether we will exercise a purchase, extension or termination option. When the lease liability is remeasured, a corresponding adjustment is made to the carrying amount of the right-of-use asset or is recorded in the consolidated statements of profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

Right-of-use assets are presented separately and lease liabilities are presented under "Financial liabilities" in the consolidated statements of financial position.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets or shorter lease term, as follows:

Right-of-use assets	**Useful life or shorter lease term** *(years)*
Buildings	2-25
Equipment, tools and installations	2-5
Production facilities	2-3
Automobiles	3-4

Short-Term Leases and Leases of Low-Value Assets
We have elected not to recognize right-of-use assets and lease liabilities for short-term leases of machinery that have a lease term of 12 months or less or leases of low-value assets. We recognize the lease payments associated with these leases as an expense in the consolidated statements of profit or loss on a straight-line basis over the lease term.

2.3.17 Provisions

Provisions are recognized when there is a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When we expect some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognized as a separate asset, but only when the reimbursement is virtually certain.

A provision is also recognized for certain contracts with suppliers for which the unavoidable costs of meeting the obligations exceed the economic benefits expected to be received. The economic benefits considered in the assessment comprise the future benefits we are directly entitled to under the contract as well as the anticipated future benefits that are the economic consequence of the contract if these benefits can be reliably determined.

The expense relating to a provision is presented in the consolidated statements of profit or loss net of any reimbursement.

2.3.18 Share-Based Payments

Employees (and others providing similar services) receive remuneration in the form of share-based payments, which are settled in equity instruments (equity-settled transactions) or in cash (cash-settled transactions).

In accordance with IFRS 2, share-based payments are generally divided into cash-settled and equity-settled. Both types of payment transactions are measured initially at their fair value as of the grant date. The fair value is determined using an appropriate valuation model, further details of which are given in Note 16. Rights granted under cash-settled transactions are remeasured at fair value at the end of each reporting period until the settlement date. The cost of share-based payment awards is recognized over the relevant service period, applying either the straight-line method or the graded vesting method, where applicable.

These costs are recognized in cost of sales, research and development expenses, sales and marketing expenses or general and administrative expenses, together with a corresponding increase in equity (other reserves) or other liabilities, over the period in which the service is provided (the vesting period). The cumulative expense recognized for cash- and equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired, and also reflects the best estimate of the number of equity instruments expected to ultimately vest.

Service and non-market performance conditions are not taken into account when determining the grant date fair value of awards, but the likelihood of the conditions being met is assessed as part of our best estimate of the number of equity instruments that will ultimately vest. Market performance conditions are reflected within the grant date fair value. Any other conditions attached to an award, but without an associated service requirement, are considered to be non-vesting conditions. Non-vesting conditions are reflected in the fair value of an award and lead to an immediate expensing of an award unless there are also service and/or performance conditions.

If we have a choice of settling either in cash or by providing equity instruments, the rights granted are accounted for as an equity-settled transaction, unless there is a present obligation to settle in cash.

If, due to local tax regulations, an amount is withheld for the employee's tax obligations and paid directly to the tax authorities in cash on the employee's behalf, the entire share-based payment program remains an equity-settled plan based on the IFRS 2 classification. Accordingly, the amount withheld for the employee's tax obligations expected to be paid directly to the tax authorities is reclassified from "Other reserves" to "Other non-financial liabilities".

2.3.19 Cash Dividend

We recognize a liability to pay a dividend when the distribution is authorized. As per the corporate laws of Germany, a distribution is authorized when it is approved by the general shareholder meeting. A corresponding amount is recognized directly in equity.

2.4 Standards Applied for the First Time

In 2023, the following potentially relevant new and amended standards and interpretations became effective, but did not have a material impact on our consolidated financial statements:

Standards/Interpretations	Date of application
IFRS 17 Insurance Contracts	January 1, 2023
Amendments to IFRS 17 Insurance contracts: Initial Application of IFRS 17 and IFRS 9 – Comparative Information	January 1, 2023
Amendments to IAS 1 and IFRS Practice Statement 2: Disclosure of Accounting Policies	January 1, 2023
Amendments to IAS 8 Accounting policies, Changes in Accounting Estimates and Errors: Definition of Accounting Estimates	January 1, 2023
Amendments to IAS 12 Income Taxes: Deferred Tax related to Assets and Liabilities arising from a Single Transaction	January 1, 2023
Amendments to IAS 12 Income taxes: International Tax Reform – Pillar Two Model Rules	January 1, 2023

2.5 Standards Issued but Not Yet Effective

The new and amended standards and interpretations that are issued but not yet effective by the date of issuance of the financial statements and that might have an impact on our financial statements are disclosed below. We have not adopted any standards early and intend to adopt these new and amended standards and interpretations, if applicable, when they become effective.

Standards/Interpretations		Date of application
Amendments to IFRS 16 Leases: Lease Liability in a Sale and Leaseback		January 1, 2024
Amendments to IAS 7 Statement of Cash Flows and IFRS 7 Financial Instruments: Disclosures: Supplier Finance Arrangements	(1)	January 1, 2024
Amendments to IAS 1 Presentation of Financial Statements: Classification of Liabilities as Current or Non-Current		January 1, 2024
Amendments to IAS 1 Presentation of Financial Statements: Non-current Liabilities with Covenants		January 1, 2024
Amendments to IAS 21 The Effects of Changes in Foreign Exchange Rates: Lack of Exchangeability	(1)	January 1, 2025

(1) Standards had not yet been endorsed in the European Union at the time of publication.

We do not expect a significant impact from the application of any of these standards and amendments.

3 SIGNIFICANT ACCOUNTING JUDGEMENTS, ESTIMATES AND ASSUMPTIONS

The preparation of the consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, the accompanying disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Significant accounting judgments, as well as key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. We based our assumptions and estimates on parameters available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Revenues from Contracts with Customers

We applied the following judgments, estimates and assumptions that significantly affect the determination of the amount and timing of revenues from contracts with customers:

Identification and Determination of Performance Obligations

We generate revenues from collaboration and license agreements, which contain multiple elements, including licenses to use, research, develop, manufacture and commercialize candidates and products, research and development services as well as obligations to develop and manufacture preclinical and clinical material and products. We determined that those collaboration and license agreements qualify as contracts with customers. A contract is an agreement between two or more parties that establishes enforceable rights and obligations. At inception of each agreement, we apply judgment when determining which promises represent distinct performance obligations. If promises are not distinct, they are combined until the bundle of promised goods and services is distinct. For some agreements, this results in accounting for goods and services promised in a collaboration and license agreement as a single performance obligation with a single measure of progress. For these combined performance obligations, we assess which of these promises is the predominant promise to determine the nature of the performance obligation. When licenses are granted, we determined that the grant of the license is the predominant promise within the combined performance obligations. In our view, we grant our customers a right to access or a right to use our intellectual property due to the collaboration and license agreements.

Measurement of the Transaction Price

Our collaboration and license agreements often include variable consideration, which is contingent on the occurrence or non-occurrence of a future event (i.e., reaching a certain milestone). When determining deferred revenues from a collaboration and license agreement, we need to estimate the amount of consideration to which we will be entitled in exchange for transferring the promised goods or services to our customers.

As there are usually only two possible outcomes (i.e., milestone is reached or not), we have assessed that the method of the most likely amount is the best method to predict the amount of consideration to which we will be entitled. At contract inception, the most likely amount for milestone payments is estimated to be zero. We have assessed that the likelihood of achieving the respective milestone decreases depending on how far the expected date of achieving the milestone lies in the future. At each reporting date, we use judgment to determine when to include variable consideration in the transaction price in such a way that it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognized will not occur when the associated uncertainty with respect to the variable consideration is subsequently resolved. We have concluded that future milestone payments are fully constrained at the end of the current financial year.

Future milestone payments would become unconstrained upon the satisfaction of the milestone event, specifically a development event, regulatory approval or achievement of a sales milestone.

Allocation of the Transaction Price to Performance Obligations and Revenue Recognition as Performance Obligations are Satisfied

We allocate the transaction price to performance obligations based on their relative standalone selling prices, which are generally based on our best estimates and interpretations of facts and circumstances of each contractual agreement and may require significant judgment to determine appropriate allocation.

Upfront payments and reimbursement for expenses are initially deferred on our consolidated statements of financial position. We assessed that no significant financing component exists within our collaboration agreements since the overall business purpose of advanced payments is to support the payment structure rather than to provide a significant benefit of financing. For performance obligations in which the costs vary based on progress, an input-based measure that takes into account cost incurred is the most reliable indicator of the progress of the related research activities. In other cases, revenue recognition on a straight-line basis may be the most reliable indicator of our performance toward complete satisfaction. If the contractual activities progress, the achievement of development milestones will be used to measure the progress toward complete satisfaction. We evaluate the measure of progress in each reporting period and, if necessary, adjust the measure of performance and related revenue recognition. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenues and net profit or loss in the period of adjustment.

Upon successfully commercializing a pharmaceutical product, the collaboration and license agreements also provide for additional profit-sharing or tiered royalties earned when customers recognize net sales of licensed products as well as sales milestone payments. Revenue is recognized based on the sales-based or usage-based royalty exemption; i.e., when, or as, the underlying sales occur, which is when the performance obligation has been satisfied.

Principal-Agent Considerations

Collaboration agreements that involve two or more partners who contribute to the provision of a specific good or service to a customer are assessed in terms of principal-agent considerations. Under our current collaboration agreements, the allocation of marketing and distribution rights defines territories in which the collaboration partner acts as a principal in each case. We recognize revenue net based on the collaboration partners' gross profit in territories where the partner is responsible for supply, and on a gross basis when directly supplying our customers in our territories when control has been transferred. Amounts paid to collaboration partners for their share of our profits earned where we are the principal in the transaction are recorded as cost of sales.

Pfizer Agreement Characteristics

With respect to our collaboration with Pfizer, commercial revenues are recognized based on our collaboration partner's gross profit from COVID-19 vaccine sales, which is shared under the respective collaboration agreement. In determining commercial revenues pursuant to this collaboration agreement, we are reliant on our collaboration partner for details regarding its gross profit for the period at hand. Some of the information which our collaboration partner provides us with to identify the gross profit is, by necessity, preliminary and subject to change.

Pfizer's gross profit share is calculated based on sales and takes into account transfer prices. The latter include manufacturing and shipping costs, which represent standard prices and include mark-ups on manufacturing costs as specified by the terms of the agreement. Manufacturing and shipping cost variances were considered as far as those have been identified. Nevertheless, those input parameters may be adjusted once actual costs are determined. The sales as reported by Pfizer have been used to estimate license obligations in terms of royalties and sales milestones. Sales milestones and royalties are recognized as they are earned by the partners. Sales milestones are shared equally, while royalty payments are borne by the partners on the basis of revenues in the territories for which the partners are responsible and subsequently deducted as cost under the gross profit shared. The estimated royalty fees applied to net sales reflect the license obligations to the extent currently identified from third-party contractual arrangements. Changes in estimates are accounted for prospectively, when determined.

Manufacturing cost variances include expenses from unused contract manufacturing capacities and overstock inventories finally scrapped. As only materialized costs – which means manufacturing capacities finally lapsed or inventories finally scrapped – are shared with the partner in a cash-effective manner, the gross profit share impact is anticipated once assessed as being highly probable to occur. Therefore, information on Pfizer's write-downs of inventories is considered. Any changes to this assessment will be recognized prospectively.

Pfizer's determination of manufacturing and shipping costs also affects the transfer prices that have been charged to COVID-19 vaccine supplies that it manufactures and supplies to us and may be subject to adjustment whenever manufacturing and shipping cost variances are identified. Likewise, our own cost of sales and the respective gross profit share owed to our partner may be adjusted prospectively, when changes are determined.

For contract balances related to the Pfizer agreement, ***see Note 6.*** Judgment is required in determining whether a right to consideration is unconditional and thus qualifies as a receivable.

Provisions and Contingencies

We are currently confronted with a number of claims and legal proceedings. They include claims from third parties demanding indemnification for alleged infringement of a third-party patent or other intellectual proprietary rights, as well as product liability claims. In respect of these matters, we assess whether provisions must be recorded and whether contingencies must be reported.

Due to uncertainties relating to these matters, provisions and contingencies are based on the best information available.

Significant judgment is required in the determination of whether and when a provision is to be recorded and what the appropriate amount for such provision should be. Notably, judgment is required in the following areas:

- Determining whether an obligation exists
- Determining the probability of an outflow of economic benefits
- Determining whether the amount of an obligation is reliably estimable
- Estimating the amount of the expenditure required to settle the present obligation

At the end of each reporting period, we reassess the potential obligations related to our pending claims and litigation and adjust our respective provisions and contingencies to reflect the current best estimate. In addition, we monitor and evaluate new information that we receive after the end of the respective reporting period, but before the consolidated financial statements are authorized for issue, in order to determine whether this provides additional information regarding conditions that existed at the end of the reporting period. Changes to estimates, assumptions and outcomes compared to previous estimates and assumptions could require material adjustments to the carrying amounts of the respective provisions recorded and additional provisions.

The expected timing or amounts of any outflows of economic benefits resulting from these lawsuits and claims are uncertain and difficult to estimate or even not estimable, as they generally depend on the duration of the legal proceedings and settlement negotiations required to resolve the litigation and claims and the unpredictability of the outcomes of legal disputes in several jurisdictions.

Disclosures in respect of third-party claims and litigation for which no provisions have been recognized are made in the form of contingent liabilities, unless a potential outflow of resources is considered remote. It is not practicable to estimate the financial impact of contingent liabilities due to the uncertainties around lawsuits and claims as outlined above.

For further disclosures and carrying amounts relating to provisions as well as contingencies, ***see Note 17 and Note 18.***

Research and Development Expenses

The nature of our business and primary focus of our activities, including development of our platforms and manufacturing technologies, generate a significant amount of research and development expenses. Research costs are expensed as incurred. Development expenditures on an individual project are recognized as an intangible asset if, and only if, the capitalization criteria are met. Based on our assessment, we have concluded that, due to the inherent risk of failure in pharmaceutical development and the uncertainty of approval, these criteria are usually not met before regulatory approval is achieved. The related expenditure is reflected in the consolidated statements of profit or loss in the period in which the expenditure is incurred. We have entered into agreements under which third parties grant licenses to us, which are known as in-license agreements. If in-licensing results in consideration for the acquisition of intellectual property that meets the definition of an identifiable asset, this is capitalized as an intangible asset. If the transaction also includes research and development services to be provided by the licensor, the share of consideration attributable to these services is recognized in research and development expenses in line with the performance of the services. The allocation of consideration attributable to the acquisition of intellectual property and consideration attributable to the research and development services provided by the licensor requires management to make judgements and assumptions. These judgments and assumptions can materially affect our research and development expenses.

Business Combinations

In our accounting for business combinations, judgment is required in determining whether an intangible asset is identifiable and whether it should be recorded separately from goodwill. Additionally, estimating the acquisition-date fair values in conjunction with purchase price allocation involves estimation uncertainty and discretionary decisions. The necessary measurements are based on information available on the acquisition date and on expectations and assumptions that have been deemed reasonable by management. These judgments, estimates and assumptions can materially affect our financial position and profit.

Intangible Assets

Significant assumptions and estimates are required to determine the appropriate amount of amortization of intangible assets. They relate in particular to the determination of the underlying useful life. The useful life of an intangible asset is based on our estimates regarding the period over which the intangible asset is expected to generate economic benefits for us.

Significant assumptions and estimates are also required for the identification of a potential need to recognize an impairment loss. These estimates include management's assumptions regarding future cash flow projections and economic risks that require significant judgment and assumptions about future developments. They can be affected by a variety of factors, including, but not limited to, changes in business strategy, internal forecasts and the estimation of weighted average cost of capital.

Changes to the assumptions underlying our assessment of the impairment of goodwill and intangible assets could require material adjustments to the carrying amount of our recognized goodwill and intangible assets, as well as to the amounts of impairment charges recognized in profit or loss.

Share-Based Payments

Determining the fair value of share-based payment transactions requires the most appropriate valuation for the specific program, which depends on the underlying terms and conditions. We used valuation models such as a binomial or Monte Carlo simulation model for the measurement of the cash- and equity-settled transactions' fair value, taking into account certain assumptions relating to a number of factors, including the volatility of the stock price, the determination of an appropriate risk-free interest rate, expected dividends and the probability of reaching a minimum hurdle to exercise the relevant options. For awards which were granted prior to the initial public offering, at a time where no quoted market prices existed, the valuation model assumptions included the option's underlying share price. For awards which were granted after the initial public offering, the grant date's share prices on the Nasdaq Global Select Market were included in the valuation.

A fluctuation assumption is applied when estimating the number of equity instruments for which service conditions are expected to be satisfied and will be revised if material differences arise. Ultimately, a true-up to the number satisfied by the settlement date will be recorded.

For further disclosures relating to share-based payments, ***see Note 16.***

Income Taxes

We are subject to income taxes in more than one tax jurisdiction. Due to the increasing complexity of tax laws and the corresponding uncertainty regarding the legal interpretation by the fiscal authorities, tax calculations are generally subject to an elevated amount of uncertainty. To the extent necessary, possible tax risks are taken into account in the form of provisions.

We do not recognize or we would impair deferred tax assets if it is unlikely that a corresponding amount of future taxable profit will be available against which the deductible temporary differences, tax loss carry forwards and tax credits can be utilized. The assessment whether a deferred tax asset can be recognized or is impaired requires significant judgment, as we need to estimate future taxable profits to determine whether the utilization of the deferred tax asset is probable. In evaluating our ability to utilize our deferred tax assets, we consider all available positive and negative evidence, including the level of historical taxable income and projections for future taxable income over the periods in which the deferred tax assets are recoverable. Based on the requirements in IAS 12, to not place reliance on future events that are uncertain as they for example cannot be controlled, managements assessment takes particular into account the fact that there is an inherent risk of failure in pharmaceutical development and an uncertainty of approval which is dependent on external regulatory agencies' opinions. This also includes management's assessment on the character and amounts of taxable future profits, the periods in which those profits are expected to occur, and the availability of tax planning opportunities.

Our management continued to take the view that deferred tax assets on tax losses carried forward that relate to subsidiaries which have a loss-making history cannot be recognized. This includes the assessment that those subsidiaries have neither any taxable temporary differences nor any tax planning opportunities available that could support the recognition of deferred tax assets.

For further disclosures relating to deferred taxes, ***see Note 8.***

4 GROUP INFORMATION

Information about Subsidiaries

The consolidated financial statements include the following subsidiaries:

			% equity interest	
Name	**Country of incorporation**	**Registered office**	**December 31, 2023**	**December 31, 2022**
BioNTech BioNTainer Holding GmbH	Germany	Mainz[3]	100%	100%
BioNTech Cell & Gene Therapies GmbH	Germany	Mainz[3]	100%	100%
BioNTech Delivery Technologies GmbH	Germany	Halle[3]	100%	100%
BioNTech Diagnostics GmbH	Germany	Mainz[3]	100%	100%
BioNTech Europe GmbH	Germany	Mainz[3]	100%	100%
BioNTech Idar-Oberstein Services GmbH	Germany	Idar-Oberstein[3]	100%	100%
BioNTech Individualized mRNA Manufacturing GmbH	Germany	Mainz[3]	100%	100%
BioNTech Innovation and Services Marburg GmbH	Germany	Marburg[3]	100%	100%
BioNTech Innovation GmbH	Germany	Mainz[3]	100%	100%
BioNTech Innovative Manufacturing Services GmbH	Germany	Idar-Oberstein[3]	100%	100%
BioNTech Manufacturing GmbH	Germany	Mainz[3]	100%	100%
BioNTech Manufacturing Marburg GmbH	Germany	Marburg[3]	100%	100%
BioNTech Real Estate Holding GmbH	Germany	Holzkirchen[3]	100%	100%
BioNTech Real Estate Verwaltungs GmbH	Germany	Holzkirchen[3]	100%	100%
InstaDeep DE GmbH	Germany	Berlin	100%	n/a[2]
JPT Peptide Technologies GmbH	Germany	Berlin[3]	100%	100%
NT Security and Services GmbH	Germany	Mainz[3]	100%	100%
reSano GmbH	Germany	Mainz[3]	100%	100%

(1) Included during the year ended December 31, 2023.
(2) Fully acquired during the year ended December 31, 2023.
(3) Subsidiary makes use of the exemption of Sections 264 para. 3 and 264b HGB for the 2023 financial year.

Continued on next page

Information about Subsidiaries

			% equity interest	
Name	**Country of incorporation**	**Registered office**	**December 31, 2023**	**December 31, 2022**
BioNTech Australia Pty Ltd.	Australia	Melbourne	100%	100%
BioNTech R&D (Austria) GmbH	Austria	Vienna	100%	100%
BioNTech (Shanghai) Pharmaceuticals Co. Ltd.	China	Shanghai	100%	100%
InstaDeep France SAS	France	Paris	100%	n/a[2]
Biopharma BioNTech Israel Ltd.	Israel	Tel Aviv	100%	n/a[1]
New Technologies Re	Luxembourg	Luxembourg	100%	n/a[1]
InstaDeep Nigeria Limited	Nigeria	Lagos	100%	n/a[2]
BioNTech Rwanda Ltd.	Rwanda	Kigali	100%	100%
BioNTech Sénégal Suarl	Senegal	Dakar	100%	n/a[1]
BioNTech Pharmaceuticals Asia Pacific Pte. Ltd.	Singapore	Singapore	100%	100%
BioNTech Pharmaceuticals Spain S.L	Spain	Barcelona	100%	n/a[1]
BioNTech Switzerland GmbH	Switzerland	Basel	100%	n/a[1]
BioNTech Taiwan Co. Ltd.	Taiwan	Taipei	100%	n/a[1]
InstaDeep Tunisia SARL	Tunisia	Tunis	100%	n/a[2]
BioNTech Turkey Tıbbi Ürünler Ve Klinik Araştirma Ticaret Anonim Şirketi	Türkiye	Istanbul	100%	100%
BioNTech UK Ltd.	United Kingdom	London	100%	100%
InstaDeep Ltd.	United Kingdom	London	100%	5.3%[2]
BioNTech Research and Development, Inc.	United States	Cambridge	100%	100%
BioNTech USA Holding, LLC	United States	Cambridge	100%	100%
BioNTech US Inc.	United States	Cambridge	100%	100%
BioNTech Delivery Technologies (US), LLC	United States	Cambridge	100%	n/a[2]
InstaDeep LLC	United States	Dover	100%	n/a[2]
JPT Peptide Technologies Inc.	United States	Cambridge	100%	100%

(1) Included during the year ended December 31, 2023.
(2) Fully acquired during the year ended December 31, 2023.
(3) Subsidiary makes use of the exemption of Sections 264 para. 3 and 264b HGB for the 2023 financial year.

All entities listed above are included in our consolidated financial statements.

Parent Company

ATHOS KG, Holzkirchen, Germany, is the sole shareholder of AT Impf GmbH, Munich, Germany, and beneficial owner of the following percentage of ordinary shares in BioNTech at the dates as indicated. ATHOS KG via AT Impf GmbH has de facto control over BioNTech based on its substantial shareholding, which practically enables it to exercise the majority of voting rights to pass resolutions at our Annual General Meeting, or AGM.

			Ownership of ordinary shares in BioNTech *(in %)*	
Name	**Country of incorporation**	**Registered office**	**December 31, 2023**	**December 31, 2022**
AT Impf GmbH	Germany	Munich	43.77%	43.42%

Entity with Significant Influence over the Group

Medine GmbH, Mainz, Germany, owned the following percentage of ordinary shares in BioNTech at the following dates as indicated:

			Ownership of ordinary shares in BioNTech *(in %)*	
Name	**Country of incorporation**	**Registered office**	**December 31, 2023**	**December 31, 2022**
Medine GmbH	Germany	Mainz	17.01%	17.38%

5 BUSINESS COMBINATIONS

Acquisition of InstaDeep Ltd.

In July 2023, we acquired InstaDeep Ltd., London, United Kingdom (InstaDeep), a leading global technology company in the field of artificial intelligence (AI) and machine learning, by purchasing 100% of the remaining shares in InstaDeep not already owned by us. The acquisition is intended to create a fully integrated, enterprise-wide capability that leverages AI and machine learning technologies across our therapeutic platforms and operations. InstaDeep also continues to provide its services to clients around the world in diverse industries, including in the technology, transport and logistics, and industrial and financial services sectors.

The completion of the acquisition took place in July 2023. We performed an allocation of the total consideration and the underlying assets acquired (including certain identified intangible assets such as InstaDeep's DeepChain technology and customer relationships) and liabilities assumed based on their fair values using the information available as of the acquisition date. The total consideration and the fair values in accordance with IFRS 3 of the identified net assets acquired of InstaDeep as of July 31, 2023, are as follows:

	Fair value recognized on acquisition
(in millions €)	**InstaDeep Ltd.**
Assets	
Intangible assets	187.6
Property, plant and equipment	2.1
Right-of-use assets	0.7
Trade receivables	2.4
Financial assets - current	52.5
Cash and cash equivalents	21.2
Other assets non-current and current	8.7
Total assets	**275.0**
Liabilities	
Deferred tax liabilities	45.8
Other liabilities long-term and short-term	18.2
Total liabilities	**64.0**
Total identifiable net assets at fair value	**211.0**
Goodwill from the acquisition	306.5
Total consideration	**517.5**
Consideration	
Cash paid	358.1
Cash to be paid in 2024	4.0
Designated FX hedge	(8.1)
Shares transferred (approx. 1.1 million shares)	103.7
Contingent consideration	31.8
Previously held non-listed equity investment (stake of 5.3%)	27.9
Total consideration	**517.5**

The intangible assets acquired comprise DeepChain technology and customer relationships. Their fair values were determined based on the multi-period excess earnings method (MEEM) and amount to €176.0 million and €7.8 million respectively.

The fair value of the shares transferred is determined based on the number of shares transferred and the closing price of the ADSs as of July 31, 2023.

The acquisition of InstaDeep is a step acquisition in accordance with IFRS 3.41-3.42A since we already held a 5.3% interest prior to the acquisition. In prior reporting periods, we recognized changes in the value of this equity interest in other comprehensive income. The amount of the remeasurement to fair value that was recognized in other comprehensive income is recognized on the same basis as would be required if we disposed directly of the previously held equity interest. Based on the total consideration for the acquired shares (94.7%), the value of the already held shares is €27.9 million, which results in a loss of €2.2 million shown in other comprehensive income in the year ended December 31, 2023.

At the acquisition date, the contingent consideration was recognized at its fair value of €31.8 million based on cash flow projections in connection with performance-based future milestone cash payments to eligible shareholders after a three-year earn-out period. The lower end of the bandwidth of possible outcomes of the contingent consideration is zero; the upper limit is €124.6 million. In addition, €12.5 million of potential earn-out payments are considered remuneration and will be recognized as personnel expense over a three-year period in which services are to be provided.

Transaction costs of €6.0 million were expensed and are included in general and administrative expenses.

The goodwill mainly comprises the value of expected synergies from including AI and machine learning technologies across our therapeutic platforms and operations and intangible assets that are not recognized separately, such as the acquired skilled workforce and its know-how. Therefore, the goodwill is allocated almost in full to the CGU immunotherapies and to a minor extent to a CGU comprising the external InstaDeep business. The goodwill is not tax deductible.

Deferred tax liabilities relating to temporary differences of the assets acquired in the business combination were recognized in an amount of €45.8 million. In line with the deferred tax liabilities assumed, deferred tax assets relating to temporary differences and tax loss carry forwards which existed as of the acquisition date were recognized. The deferred tax assets and liabilities were offset to the extent that the conditions for offsetting were fulfilled.

Since the acquisition, InstaDeep's impact on our revenue and profit for the period has been immaterial. Accordingly, hypothetical amounts for our revenue and profit for the financial year, which were calculated on the assumption that the acquisition had taken place at the beginning of the year, would not materially differ from the actual figures reported.

6 REVENUES FROM CONTRACTS WITH CUSTOMERS

6.1 Disaggregated Revenue Information

Set out below is the disaggregation of the Group's revenues from contracts with customers:

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Commercial revenues	**3,815.5**	**17,194.6**	**18,874.0**
COVID-19 vaccine revenues	3,776.2	17,145.2	18,806.8
Sales to collaboration partners	275.3	1,224.3	970.9
Direct product sales to customers	473.6	3,184.7	3,007.2
Share of collaboration partners' gross profit and sales milestones	3,027.3	12,736.2	14,828.7
Other sales	39.3	49.4	67.2
Research & development revenues from collaborations	**3.5**	**116.0**	**102.7**
Total	**3,819.0**	**17,310.6**	**18,976.7**

During the year ended December 31, 2023, revenues recognized from Pfizer Inc., or Pfizer (€3,293.0 million) and the German Federal Ministry of Health (€473.6 million), each account for more than 10% of total revenues. During the year ended December 31, 2022, revenues recognized from Pfizer (€13,795.8 million) and the German Federal Ministry of Health (€3,020.5 million) represented more than 10% of total revenues. During the year ended December 31, 2021, revenues recognized from Pfizer (€15,500.0 million) and the German Federal Ministry of Health (€1,945.6 million), accounted for more than 10% of total revenues. During the year ended December 31, 2023, based on the geographic region in which our customers and collaboration partners are located, we mainly recognized revenues in the United States (€3,010.9 million) and Germany (€482.7 million). During the year ended December 31, 2022, the main geographic regions were United States (€12,709.7 million) and Germany (€3,031.0 million). During the year ended December 31, 2021, the main geographic regions were United States (€14,636.5 million), Germany (€2,241.9 million) and Belgium (€675.0 million).

Commercial Revenues

During the year ended December 31, 2023, commercial revenues were recognized from the supply and sales of our COVID-19 vaccine worldwide. During the year ended December 31, 2023, our commercial revenues decreased in line with a lower COVID-19 vaccine market demand. In addition, write-downs by our collaboration partner Pfizer Inc. (Pfizer), significantly reduced our gross profit share and hence negatively influenced our revenues for the year ended December 31, 2023. We are the marketing authorization holder in the United States, the European Union, the United Kingdom, Canada and other countries, and holder of emergency use authorizations or equivalents in the United States (jointly with Pfizer) and other countries. Pfizer has marketing and distribution rights worldwide with the exception of China, Germany and Türkiye. Shanghai Fosun Pharmaceutical (Group) Co., Ltd, or Fosun Pharma, has marketing and distribution rights in China, Hong Kong special administrative region, or SAR, Macau SAR and the region of Taiwan. The allocation of marketing and distribution rights defines territories in which the collaboration partners act as a principal.

Sales to Collaboration Partners
Sales to collaboration partners represent sales of products manufactured by us to collaboration partners. Whenever responsibilities in the manufacturing and supply process of the COVID-19 vaccine shift and the COVID-19 vaccine is transferred, the vaccine is sold from one partner to the other. Under the collaboration with Pfizer, from time to time,

those sales are significantly influenced by amounts due to write-downs of inventories as well as costs related to production capacities derived from contracts with CMOs that became redundant. Those costs represent accrued manufacturing variances and are charged to our partner once finally materialized. These manufacturing variances are reflected as transfer price adjustments once identified. The regular reassessment of these manufacturing variances may result in adjustments to the respective prior-period revenues. Sales to collaboration partners during the years ended December 31, 2023, 2022 and 2021 of €74.5 million, €850.0 million and €31.0 million, respectively, related to the aforementioned manufacturing variances.

Direct Product Sales to Customers

Direct product sales are recognized from supplying COVID-19 vaccine in our territories Germany and Türkiye. During the years ended December 1, 2023, 2022 and 2021, we recognized €473.6 million, €3,184.7 million and €3,007.2 million of revenues, respectively. The share of gross profit that we owe our collaboration partner Pfizer based on our sales is recognized as cost of sales.

Share of Collaboration Partners' Gross Profit and Sales Milestones

Based on COVID-19 vaccine sales in the collaboration partners' territories, we are eligible to receive a share of their gross profit, which represents a seasonally affected net figure and is recognized as collaboration revenue during the commercial phase, together with sales milestones. Manufacturing cost variances either reflected as transfer price adjustments as described above or resulting from costs highly probable to be incurred by the partner, were taken into account when determining the gross profit. During the year ended December 31, 2021, those revenues included €476.6 million of sales milestones.

The revenues from contracts with customers disclosed above were recognized as follows:

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Timing of revenue recognition			
Goods and services transferred at a point in time	776.3	4,447.2	4,034.3
Goods and services transferred over time	15.4	127.2	113.7
Revenue recognition applying the sales-based or usage-based royalty recognition constraint model[1]	3,027.3	12,736.2	14,828.7
Total	**3,819.0**	**17,310.6**	**18,976.7**

(1) Represents sales based on the share of the collaboration partners' gross profit and sales milestones.

6. 2 Contract Balances

(in millions €)	**December 31, 2023**	**December 31, 2022**
Trade and other receivables	2,155.7	7,145.6
Contract liabilities	751.8	125.5
Refund liabilities	—	24.4

Trade and other receivables significantly decreased compared to the previous year and predominantly comprise trade receivables from our COVID-19 collaboration with Pfizer as well as our direct product sales to customers in our territory. The contractual settlement of the gross profit share has a temporal offset of more than one calendar quarter. As Pfizer's financial quarter for subsidiaries outside the United States differs from ours, it creates an additional time lag between the recognition of revenues and the payment receipt. Consequently, as of December 31, 2023, our trade receivables included, in addition to the profit share for the fourth quarter of 2023, trade receivables which related to the gross profit share for the third quarter of 2023.

Contract liabilities significantly increased compared to the previous year as advance payments in connection with the amendment of the COVID-19 vaccine purchase agreement with the European Commission, or EC, were received. As of December 31, 2023, the contract liabilities included €386.4 million of such payments under our collaboration with Pfizer (COVID-19 vaccine), €302.3 million from the German Federal Ministry of Health and €62.3 million of remaining upfront fees from our collaboration agreement with Pfizer (Zoster) (as of December 31, 2022: €65.7 million of remaining upfront fees from collaboration and commercial supply agreements and €56.3 million of advance payments for future COVID-19 vaccine sales).

The refund liabilities recognized as of December 31, 2022, represented consideration which was refunded to the collaboration partner during the year ended December 31, 2023.

Set out below is the amount of revenue recognized for the periods indicated:

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Amounts included in contract liabilities at the beginning of the year	3.5	63.1	73.7

6.3 Performance Obligations

The contract liabilities allocated to the remaining performance obligations from collaboration or commercial supply agreements (unsatisfied or partially unsatisfied) as of year-end are as follows:

(in millions €)	**December 31, 2023**	**December 31, 2022**
Within one year	353.3	77.1
More than one year	398.5	48.4
Total	**751.8**	**125.5**

7 INCOME AND EXPENSES

7.1 General Expenses

Cost of Sales

From the year ended December 31, 2022 to the year ended December 31, 2023, cost of sales decreased by €2,395.2 million or 80% from €2,995.0 million to €599.8 million, mainly due to recognizing lower cost of sales from our decreased COVID-19 vaccine sales, which included the share of gross profit that we owe our collaboration partner Pfizer based on our sales. In addition, cost of sales was impacted by expenses arising from inventory write-offs and expenses for production capacities derived from contracts with CMOs that became redundant. The effects were driven by reducing production capacities as well as further fostering the global production network with our collaboration partners during the year ended December 31, 2023. Based on the regulatory approval obtained with respect to our Omicron XBB.1.5-adapted monovalent COVID-19 vaccine during the third quarter of 2023, we reversed the initial write-down of pre-launch inventory recorded in research and development expensed to a maximum of the original cost of €46.9 million. Thereof €27.3 million resulted in cost of sales during the year ended December 31, 2023 as the respective inventory has been either sold or written down. The remainder is presented in inventories as of December 31, 2023 and amounted to €19.6 million. With respect to the year ended December 31, 2022 the amount was nil.

Research and Development Expenses

From the year ended December 31, 2022 to the year ended December 31, 2023, our research and development expenses increased by €246.1 million or 16% from €1,537.0 million to €1,783.1 million, mainly influenced by progressing clinical studies for pipeline candidates as well as by our newly acquired product candidates and the development of variant adapted COVID-19 vaccines. The increase was further driven by an increase in wages, benefits and social security expenses resulting from a significant increase in headcount.

Sales and Marketing Expenses

From the year ended December 31, 2022 to the year ended December 31, 2023, our sales and marketing expenses increased by €3.2 million or 5% from €59.5 million to €62.7 million, mainly due to increased expenses for setup and enhancement of commercial IT platforms and an increase in wages, benefits and social security expenses resulting from an increase in headcount.

General and Administrative Expenses

From the year ended December 31, 2022 to the year ended December 31, 2023, our general and administrative expenses increased by €13.3 million or 3% from €481.7 million to €495.0 million, mainly influenced by increased expenses for IT services as well as by wages, benefits and social security expenses resulting from an increase in headcount.

7.2 Other Operating Expenses

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Foreign exchange differences, net	252.0	—	—
Loss on derivative instruments at fair value through profit or loss	—	385.5	86.3
Litigation costs[1]	29.4	3.0	9.0
Other	11.6	21.5	8.1
Total	**293.0**	**410.0**	**103.4**

(1) Adjustments to prior-year figures relate to costs for external legal advice in connection with certain legal litigations from general and administrative expenses to other operating expense to reflect changes in internal reporting also in the external reporting.

During the year ended December 31, 2023, the other expenses increased compared to the year ended December 31, 2022, which was mainly derived from recognizing foreign exchange differences arising on operating items. The foreign exchange differences included in operating expenses primarily arose from valuing our U.S. dollar-denominated trade receivables which were mainly incurred under our COVID-19 collaboration with Pfizer, U.S. dollar-denominated trade payables as well as U.S. dollar-denominated other financial liabilities which mainly relate to obligations incurred from our license agreements.

During the year ended December 31, 2022, the other operating expenses increased compared to the year ended December 31, 2021, mainly from recording the change in fair value of foreign exchange forward contracts that were entered into during the year ended December 31, 2022, to manage some of our transaction exposures but were not designated as hedging instruments under IFRS.

7.3 Other Operating Income

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Gain on derivative instruments at fair value through profit or loss	67.6	—	5.7
Government grants	2.2	1.4	137.2
Foreign exchange differences, net	—	727.4	446.3
Other	35.2	86.5	9.2
Total	**105.0**	**815.3**	**598.4**

During the year ended December 31, 2023, the other income decreased compared to the year ended December 31, 2022, as foreign exchange differences arising on operating items changed from a positive effect to a negative effect, which is recorded in other operating expenses ***(see Note 7.2).***

During the year ended December 31, 2022, the other income increased compared to the year ended December 31, 2021, which was mainly due to recognizing foreign exchange differences arising on operating items. The foreign exchange differences included in operating income primarily arose from valuing our U.S. dollar-denominated trade receivables which were mainly incurred under our COVID-19 collaboration with Pfizer, U.S. dollar-denominated trade payables as well as U.S. dollar-denominated other financial liabilities which mainly relate to obligations incurred from our license agreements.

7.4 Finance Income

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Interest income	357.6	48.5	1.5
Fair value adjustments of financial instruments measured at fair value	162.0	216.8	—
Foreign exchange differences, net	—	65.0	66.2
Total	**519.6**	**330.3**	**67.7**

During the year ended December 31, 2023, the finance income increased compared to the year ended December 31, 2022, mainly due to interest income earned on bank deposits and financial securities as well as fair value adjustments in relation to our money market funds.

During the year ended December 31, 2022, the finance income included the final fair value measurement adjustments of the derivative embedded within the convertible note upon the early redemption of the convertible note as of March 1, 2022, the redemption date, as well as interest income from our bank deposits and increased compared to the year ended December 31, 2021.

7.5 Finance Expenses

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Foreign exchange differences, net	16.0	—	—
Fair value adjustments of financial instruments measured at fair value	—	—	277.8
Other	7.9	18.9	27.3
Total	**23.9**	**18.9**	**305.1**

During the year ended December 31, 2023, the finance expenses increased compared to the year ended December 31, 2022, mainly due to exchange differences derived from our foreign exchange bank deposits and cash accounts.

During the year ended December 31, 2022, the finance expenses decreased compared to the year ended December 31, 2021, mainly due to final settlement of the derivative embedded within the convertible note which led to financial income whereas during the year ended December 31, 2021, expenses in the amount of €277.8 million were derived from the respective fair value measurement adjustment.

7.6 Employee Benefits Expense

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Wages and salaries	617.8	544.8	345.9
Social security costs	76.7	58.6	31.7
Pension costs	4.1	2.1	1.2
Total	**698.6**	**605.5**	**378.8**

Wages and salaries include, among other things, expenses for share-based payments.

8 INCOME TAX

Income tax for the years ended December 31, 2023, December 31, 2022, and December 31, 2021, comprised current income taxes, other taxes and deferred taxes. We are subject to corporate taxes, the solidarity surcharge and trade taxes. Our corporate tax rate in the reporting year remained unchanged (15.0%) as did the solidarity surcharge (5.5%) whereas the average trade tax rate changed resulting in a combined income tax rate of 27.1% in the year ended December 31, 2023 (during the years ended December 31, 2022 and 2021: 27.2% and 30.7%, respectively). Deferred taxes are calculated at a rate of 27.1%. Current taxes for Austria are calculated at a corporate tax rate of 24.0%. Austria's decrease of its corporate tax rate down to 23.0% in 2024 is be recognized from 2023 onwards for deferred taxes. BioNTech USA Holding, LLC is subject to Federal Corporate Income Tax (21.0%) as well as State Income Tax in various state jurisdictions (effective rate of 4.5%). The deferred tax rates calculations basis remained unchanged compared to the previous period.

The following table illustrates the current and deferred taxes for the periods indicated:

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Current income taxes	243.1	3,629.6	4,535.0
Deferred taxes	12.7	(109.9)	218.9
Income taxes	**255.8**	**3,519.7**	**4,753.9**

The following table reconciles the expected income taxes to the income tax expenses. The expected income taxes were calculated using the combined income tax rate of BioNTech SE applicable to the Group and mentioned above which was applied to profit before taxes to calculate the expected income taxes.

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Profit before tax	**1,186.1**	**12,954.1**	**15,046.4**
Expected tax credit	321.8	3,529.7	4,622.5
Effects			
Deviation due to local tax basis	6.6	8.9	9.1
Deviation due to deviating income tax rate (Germany and foreign countries)	(0.1)	7.3	9.4
Change in valuation allowance	(14.3)	30.6	3.0
Effects from tax losses and tax credits	(66.5)	23.2	19.5
Change in deferred taxes due to tax rate change	(2.4)	(2.3)	(7.5)
Non-deductible expenses	3.1	2.5	90.5
Non tax-effective income	(0.6)	(87.9)	(0.3)
Non tax-effective share-based payment expenses	7.7	8.7	15.5
Tax-effective equity transaction costs	—	—	(1.2)
Adjustment prior year taxes	5.5	(31.5)	(2.9)
Non-tax effective bargain purchase	—	—	(0.7)
Other effects	(5.0)	30.5	(3.0)
Income taxes	**255.8**	**3,519.7**	**4,753.9**
Effective tax rate	**21.6%**	**27.2%**	**31.6%**

On November 15, 2018, we established a share option program pursuant to which we were permitted to grant selected employees and our Management Board options to receive shares in the Company. The program is designed as an Employee Stock Ownership Plan, or ESOP. We offered the participants a certain number of rights, or option rights, subject to their explicit acceptance. Grants under the ESOP took place from November 2018 until December 2019. An exercise of option rights in accordance with the terms of the ESOP gives a participant the right to obtain shares against payment of the exercise price. By way of an updated decision of the Supervisory Board at the end of September 2022 compared to the initial settlement mechanism, an ESOP settlement may be made by delivery to the participant of such number of ADSs equal to the net value of the exercised option rights after deduction of (i) the exercise price and (ii) the applicable wage taxes (including solidarity surcharge thereon and church tax, if applicable) and social security contributions resulting from such exercise. The respective number of ADS shall be settled with ADS acquired in the course of the share repurchase program. The applicable wage taxes (including solidarity surcharge thereon and church tax, if applicable) and social security contributions resulting from such exercise are paid in cash directly to the respective authorities. Expenses for taxation purposes resulting from the settlement are only recognized once the option rights have been exercised. After considering the settlements in the twelve months ended December 31, 2023 and taking into account the recognition criteria of IAS 12, a deferred tax is not recognized in our consolidated statement of financial position of €17.8 million which relates to future settlements.

The current tax savings associated with the excess were directly recognized in equity in a total amount of €19.8 million. Considering these tax amounts directly recognized in equity when calculating an effective tax rate, the tax rate would be decreased by about 1.6 percentage points.

The intended settlement mechanism of Option Rights of the Chief Executive Officer Grant ***(see Note 16.4 for plan details)*** led to a deferred tax asset in the total amount of €108.8 million as of December 31, 2023. Taking into account the recognition criteria of IAS 12 this deferred tax asset is not recognized in our consolidated statements of profit or loss neither recognized directly in equity as other reserves in our consolidated statements of changes in stockholders' equity.

Taxes

Deferred taxes for the periods indicated relate to the following:

Year ended December 31, 2023 *(in millions €)*	January 1, 2023	Recognized in P&L	Recognized in OCI	Recognized directly in equity	December 31, 2023
Fixed assets	15.8	20.2	—	(44.4)	(8.4)
Right-of-use assets	(55.8)	(0.8)	—	—	(56.6)
Inventories	148.9	(35.3)	—	—	113.6
Trade and other receivables	(162.7)	72.7	—	—	(90.0)
Lease liabilities	55.2	2.0	—	—	57.2
Contract liabilities	(10.0)	(33.0)	—	—	(43.0)
Loans and borrowings	7.6	(2.8)	—	—	4.8
Net employee defined benefit liabilities	0.7	(0.1)	—	—	0.6
Share-based payments	188.4	12.0	—	(58.3)	142.1
Other provisions	11.0	(1.2)	—	—	9.8
Other (incl. deferred expenses)	61.5	(106.4)	—	—	(44.9)
Tax losses/tax credits	99.5	(5.1)	—	—	94.4
Deferred tax assets net (before valuation adjustment)	**360.1**	**(77.8)**	**—**	**(102.7)**	**179.6**
Valuation adjustment	(136.7)	65.1	—	(66.4)	(138.0)
Deferred tax assets/(liabilities), net (after valuation adjustment)	**223.4**	**(12.7)**	**—**	**(169.1)**	**41.6**
Thereof deferred tax assets	**229.6**	**20.8**	**—**	**(169.1)**	**81.3**
Thereof deferred tax liability	**(6.2)**	**(33.5)**	**—**	**—**	**(39.7)**

Taxes

Year ended December 31, 2022

(in millions €)	January 1, 2022	Recognized in P&L	Recognized in OCI	Recognized directly in equity	December 31, 2022
Fixed assets	(6.5)	22.3	—	—	15.8
Right-of-use assets	(47.5)	(8.3)	—	—	(55.8)
Inventories	1.8	147.1	—	—	148.9
Trade and other receivables	(95.6)	(67.1)	—	—	(162.7)
Lease liabilities	48.7	6.5	—	—	55.2
Loans and borrowings	23.1	(15.5)	—	—	7.6
Contract liabilities	10.6	(20.6)	—	—	(10.0)
Net employee defined benefit liabilities	0.9	(0.5)	0.3	—	0.7
Other provisions	6.3	4.7	—	—	11.0
Share-based payments	—	8.5	—	179.9	188.4
Other (incl. deferred expenses)	1.6	59.9	—	—	61.5
Tax losses/tax credits	70.9	28.6	—	—	99.5
Deferred tax assets net (before valuation adjustment)	**14.3**	**165.6**	**0.3**	**179.9**	**360.1**
Valuation adjustment	(81.0)	(55.7)	—	—	(136.7)
Deferred tax assets/(liabilities), net (after valuation adjustment)	**(66.7)**	**109.9**	**0.3**	**179.9**	**223.4**
Thereof deferred tax assets	**229.6**	**20.8**	**—**	**(169.1)**	**81.3**
Thereof deferred tax liability	**(6.2)**	**(33.5)**	**—**	**—**	**(39.7)**

As of December 31, 2023, our accumulated tax losses comprised tax losses of German entities that were incurred prior to the establishment of a tax group with BioNTech SE or by entities that are not within the tax group (as of December 31, 2023: BioNTech Real Estate Verwaltungs GmbH; as of December 31, 2022: BioNTech BioNTainer Holding GmbH, BioNTech Idar-Oberstein Services GmbH, NT Security and Services GmbH, BioNTech Real Estate Verwaltungs GmbH and the Real Estate partnerships) or U.S. tax group. Up until the year ended December 31, 2022, our accumulated tax losses also comprised those of the German tax group. Our accumulated tax losses for the periods indicated amounted to the following:

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Corporate tax	260.7	352.3	272.0
Trade tax	140.1	204.1	170.6

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Federal tax credits	21.3	4.0	0.8
State tax credits	8.7	1.6	0.3

Up until the year ended December 31, 2023, deferred tax assets on tax losses were only partially recognized, as there was not sufficient probability in terms of IAS 12 that future taxable profits would have been available against which all the unused tax losses could have been utilized.

The amount of deductible temporary differences, unused tax losses, and unused tax credits for which no deferred tax asset is recognized in the statement of financial position as of December 31, 2023 is €531.5 million. Thus as of December 31, 2023, we have not recognized deferred tax assets for unused tax losses and temporary differences in an amount of €138.0 million (December 31, 2022: €136.7 million 31 December 2021 €81.0 million).

A reorganization of the intellectual property rights within the Group became effective as of June 30, 2023 and July 1, 2023 which led to deferred tax effects in Germany, the U.S. and Austria. As a result, BioNTech SE recognized deferred tax assets and deferred tax income at the time of the transaction. In addition, this transaction led to a revaluation of previously unrecognized U.S. federal and state deferred tax assets, including unused tax losses and unused tax credits. As of December 31, 2022, there were unrecognized U.S. federal and state deferred tax assets of €128.9 million. As of December 31, 2023, it is considered highly probable that taxable profits for the U.S. tax group will be available against which the deferred tax assets can be utilized in the near future, fulfilling the requirements set out by IAS 12. Therefore we no longer continue to maintain the full non-recognition of deferred tax assets of our U.S. tax group as there will be future taxable profits available against which the unused tax losses and temporary differences can be utilized. As of December 31, 2023, we maintain the non-recognition of deferred tax assets for unused U.S. federal and state tax losses and tax credits at an amount of €31.9 million and €2.8 million, respectively, as there is not sufficient probability in terms of IAS 12 that future taxable income will be available against which these unused tax losses can be utilized. The material unrecognized U.S. federal and state tax losses and tax credits will begin to expire in 2036.

The Group does not recognize deferred tax liabilities for taxable temporary differences associated with investments in subsidiaries, in cases where the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary differences will not reverse in the foreseeable future. The aggregate amount of temporary differences associated with investments in subsidiaries, for which deferred tax liabilities have not been recognized, is €2.8 million.

9 EARNINGS PER SHARE

Basic earnings per share (EPS) is calculated by dividing the profit for the year attributable to ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the year.

Diluted EPS is calculated by dividing the profit attributable to ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the year, plus the weighted average number of ordinary shares that would be issued on conversion of all the dilutive potential ordinary shares into ordinary shares.

The following table reflects the income and share data used in the basic and diluted EPS calculations:

	Years ended December 31,		
(in millions €, except per share data)	**2023**	**2022**	**2021**
Profit attributable to ordinary equity holders of the parent for basic earnings	**930.3**	**9,434.4**	**10,292.5**
Weighted average number of ordinary shares outstanding for basic EPS	**240.6**	**243.3**	**244.0**
Effects of dilution from share options	2.1	6.5	15.7
Weighted average number of ordinary shares outstanding adjusted for the effect of dilution	**242.7**	**249.8**	**259.7**
Earnings per share			
Basic earnings for the period per share	3.87	38.78	42.18
Diluted earnings for the period per share	3.83	37.77	39.63

10 OTHER INTANGIBLE ASSETS AND GOODWILL

Goodwill

(in millions €)	Goodwill
Acquisition costs	
As of January 1, 2022	57.8
Currency differences	3.4
As of December 31, 2022	**61.2**
As of January 1, 2023	61.2
Acquisition of subsidiaries and businesses	306.9
Currency differences	(5.6)
As of December 31, 2023	**362.5**

Intangible Assets with Indefinite Useful Lives

	CGU Immunotherapies		External Product Sales of JPT		External Business of InstaDeep		Total	
(in millions €)	As of December 31, 2023	As of December 31, 2022	As of December 31, 2023	As of December 31, 2022	As of December 31, 2023	As of December 31, 2022	As of December 31, 2023	As of December 31, 2022
Goodwill	352.2	60.7	0.5	0.5	9.8	—	362.5	61.2
Intangible assets with indefinite useful life	444.5	—	—	—	—	—	444.5	—
Total	**796.7**	**60.7**	**0.5**	**0.5**	**9.8**	**—**	**807.0**	**61.2**

For the year ended December 31, 2023, we have total goodwill of €362.5 million, which relates almost completely to the CGU immunotherapies. The CGU immunotherapies focuses on the development of therapies to address a range of rare and infectious diseases and comprises our broad pipeline that includes mRNA-based immune activators, antigen-targeting T cells and antibodies and defined immunomodulators of various immune cell mechanisms.

We performed our annual impairment test in October 2023.

The recoverable amount of the CGU immunotherapies has been determined based on a fair value less cost of disposal (FVLCD), which we derived based on our market capitalization as an observable input parameter.

The recoverable amount of the CGU JPT and the CGU external business of InstaDeep has been determined based on the value in use. In assessing value in use, the estimated future cash flows, which are derived based on the strategic business plan approved by the management, are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the assets. A long-term growth rate of 1.0% is applied to project future cash flows after the last year of the detailed planning period.

As a result of the analysis in October 2023, we did not identify an impairment for these CGUs.

Intangible assets with indefinite useful lives mainly comprised intangible assets not yet available for use of €443.5 million. Such assets are not amortized and therefore reviewed for impairment annually. An impairment test was performed on an individual basis of the assets in the fourth quarter of 2023. The recoverable amounts were determined based on value in use. The results did not give rise to any impairment losses.

Considering updated financial information regarding our COVID 19 vaccine business an additional impairment test for our CGU immunotherapies was performed as of December 31, 2023. The recoverable amount of the CGU immunotherapies was once again determined based on a fair value less cost of disposal (FVLCD), which we derived based on our market capitalization as of December 31, 2023.

As a result of the additional analysis for the CGU immunotherapies, we did not identify an impairment for the CGU immunotherapies. Even if our market capitalization had been approximately 10% lower, FVLCD would have still been above the respective carrying amount of the CGU.

The intangible assets resulting from licensing and collaboration agreements are combined into one class of assets due to their similar nature and use in our operations and are attributed to the CGU immunotherapies.

A sensitivity analysis of the key assumptions, future cash flows and weighted average cost of capital, was performed as part of the scheduled impairment testing of the intangible assets not yet available for use. The sensitivity analysis did not give rise to any impairment loss, either for a reduction of 10% in future cash flows or for a 10% increase in the weighted average cost of capital.

Other Intangible Assets

(in millions €)	Concessions, licenses, in-process R&D and similar rights	Advance payments	Total
Acquisition costs			
As of January 1, 2022	191.6	7.8	199.4
Additions	22. 8	11. 4	34.2
Disposals	(0.1)	—	(0.1)
Reclassifications	6.1	(6.1)	—
Currency differences	1.9	—	1.9
As of December 31, 2022	**222.3**	**13.1**	**235.4**
As of January 1, 2023	222.3	13.1	235.4
Additions	489.2	15.8	505.0
Acquisition of subsidiaries and businesses	187.4	—	187.4
Disposals	(1.6)	(1.6)	(3.2)
Reclassifications	4.9	(4.9)	—
Currency differences	(3.6)	—	(3.6)
As of December 31, 2023	**898.6**	**22.4**	**921.0**

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Other Intangible Assets

(in millions €)	Concessions, licenses, in-process R&D and similar rights	Advance payments	Total
Cumulative amortization and impairment charges			
As of January 1, 2022	54.8	—	54.8
Amortization	22.0	—	22.0
Disposals	(0.1)	—	(0.1)
Currency differences	0.2	—	0.2
As of December 31, 2022	**76.9**	**—**	**76.9**
As of January 1, 2023	76.9	—	76.9
Amortization	40.5	—	40.5
Disposals	(0.3)	—	(0.3)
Currency differences	(0.2)	—	(0.2)
As of December 31, 2023	**116.9**	**—**	**116.9**

(in millions €)	Concessions, licenses, in-process R&D and similar rights	Advance payments	Total
Carrying amount			
As of December 31, 2022	**145.4**	**13.1**	**158.5**
As of December 31, 2023	**781.7**	**22.4**	**804.1**

The increase in other intangible assets by €645.6 million from December 31, 2022 to December 31, 2023 was mainly related to the acquisition of InstaDeep ***(see Note 5)*** and licenses fulfilling the definition of identifiable assets acquired. We entered into license and collaboration agreements in which we work together with partners to develop pharmaceutical products and, provided regulatory approval is granted, commercialize them. The upfront payments in connection with the license and collaboration agreements described below resulted in the recognition of intangible assets not yet available for use in the amount of €443.5 million and a prepayment for future development activities recognized in the other non-financial assets (€22.5 million as at December 31, 2023, ***see also Note 14).***

In March 2023, we entered into license and collaboration agreements with Duality Biologics (Suzhou) Co. Ltd., Shanghai, China, or Duality, for exclusive licenses to two investigational ADC assets (BNT323/DB-1303 and BNT324/DB-1311) directed against targets expressed in a broad range of human cancers. In August 2023, we signed another exclusive agreement with Duality to develop, manufacture and commercialize an additional ADC, BNT325/DB-1305. Duality received upfront payments totaling $220.0 million (€203.7 million) and is eligible to receive future milestone payments as well as tiered royalties.

In April 2023, we entered into a licensing and collaboration agreement with OncoC4 Inc., Rockville (Maryland), United States, or OncoC4, which includes joint development of BNT316/ONC-392 in a range of solid tumor indications, with the parties equally sharing development costs for such joint development studies. BioNTech holds the exclusive worldwide commercialization rights for this product candidate. OncoC4 received an upfront payment of $200.0 million (€181.5 million, thereof €125.2 million paid for the acquisition of an intangible asset) and is eligible to receive future milestone payments as well as tiered royalties.

In November 2023, we entered into a strategic research collaboration and worldwide license agreement with MediLink Therapeutics (Suzhou) Co., Ltd., or MediLink Therapeutics, for the development of a next-generation ADC, BNT326/YL202, against Human Epidermal Growth Factor Receptor 3 (HER3). MediLink Therapeutics received an upfront payment of $70.0 million (€64.1 million) and is eligible to receive future milestone payments as well as tiered royalties.

In December 2023, we entered into an exclusive global license and collaboration with Biotheus Inc., or Biotheus, under which we will be developing, manufacturing and commercializing Biotheus' bispecific antibody candidate BNT327/PM8002 globally ex-Greater China. We agreed to an upfront payment of $55.0 million (€50.6 million) plus future milestone and royalty payments.

In July 2023, in connection with the acquisition of InstaDeep we acquired DeepChain technology. As of December 31, 2023 the book value of DeepChain technology amounted to €163.3 million with a remaining useful life of 6.6 years.

11 PROPERTY, PLANT AND EQUIPMENT

(in millions €)	Land and buildings	Equipment, tools and installations	Construction in progress and advance payments	Total
Acquisition and production costs				
As of January 1, 2022	104.1	198.3	94.3	396.7
Additions	100.2	46.7	182.3	329.2
Disposals	—	(1.1)	(0.5)	(1.6)
Reclassifications	12.0	28.2	(40.2)	—
Currency differences	0.7	0.9	(0.4)	1.2
As of December 31, 2022	**217.0**	**273.0**	**235.5**	**725.5**
As of January 1, 2023	217.0	273.0	235.5	725.5
Additions	9.7	50.3	189.4	249.4
Acquisition of subsidiaries and businesses	—	2.1	—	2.1
Disposals	—	(2.4)	(0.2)	(2.6)
Reclassifications	9.3	22.3	(31.6)	—
Currency differences	(0.6)	(1.2)	(3.6)	(5.4)
As of December 31, 2023	**235.4**	**344.1**	**389.5**	**969.0**

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PROPERTY, PLANT AND EQUIPMENT

(in millions €)	Land and buildings	Equipment, tools and installations	Construction in progress and advance payments	Total
Cumulative depreciation and impairment charges				
As of January 1, 2022	14.2	60.0	—	74.2
Depreciation	7.8	34.6	—	42.4
Disposals	—	(0.4)	—	(0.4)
Currency differences	—	0.1	—	0.1
As of December 31, 2022	**22.0**	**94.3**	**—**	**116.3**
As of January 1, 2023	22.0	94.3	—	116.3
Depreciation	14.4	83.3	—	97.7
Disposals	—	(1.7)	—	(1.7)
Currency differences	(0.2)	(0.3)	—	(0.5)
As of December 31, 2023	**36.2**	**175.6**	**—**	**211.8**

(in millions €)	Land and buildings	Equipment, tools and installations	Construction in progress and advance payments	Total
Carrying amount				
As of December 31, 2022	**195.0**	**178.7**	**235.5**	**609.2**
As of December 31, 2023	**199.2**	**168.5**	**389.5**	**757.2**

Non-Current Assets by Region

As of December 31, 2023, non-current assets comprised €158.2 million in other intangible assets, goodwill, property, plant and equipment, right-of-use assets and other assets of our subsidiaries incorporated in the United States (as of December 31, 2022: €188.0 million) as well as €511.7 million in the United Kingdom (as of December 31, 2022: nil), respectively. The remaining non-current assets of €1,469.0 million (as of December 31, 2022: €871.9 million) mainly relate to entities incorporated in Germany.

12 FINANCIAL ASSETS AND FINANCIAL LIABILITIES

12.1 Capital Risk Management

Our capital management objectives are designed primarily to finance our growth strategy.

Our treasury committee reviews the total amount of cash and cash equivalents on a regular basis. As part of this review, the committee considers total cash and cash equivalents, cash outflow, currency translation differences and refinancing activities. We monitor cash using a burn rate. The cash burn rate is defined as the average monthly net cash flow from operating and investing activities during a financial year.

(in millions €)	December 31, 2023	December 31, 2022
Cash at banks and on hand	**453.1**	**1,325.2**
Cash equivalents	**11,210.6**	**12,549.9**
Bank deposits	2,589.5	9,401.0
Money market funds	7,446.1	3,148.9
Reverse Repo	1,175.0	—
Total	**11,663.7**	**13,875.1**

In general, the aim is to protect and maximize the financial resources available for further research and development projects.

Since December 1, 2021, we have an investment and asset management policy in place that contains policies and processes for managing cash and cash equivalents. Under this policy, our investment portfolio is to be maintained in a manner that minimizes risks to the invested capital. These risks include mainly credit risk and concentration risk. The portfolio must provide liquidity in a timely manner to accommodate operational and capital needs. The portfolio is managed by the Treasury department.

We are not subject to externally imposed capital requirements. Our capital management objectives were achieved in the years ended December 31, 2023, and 2022.

12.2 Categories of Financial Instruments

Financial Assets and Liabilities at Amortized Cost and at Fair Value through OCI and Profit or Loss

Set out below is an overview of financial assets and liabilities at amortized cost and at fair value through OCI and profit or loss, as of the dates indicated:

December 31, 2023

(in millions €)	Category[1]	Carrying amount	Level 1 (Fair value)	Level 2 (Fair value)	Level 3 (Fair value)	Total
Financial assets measured at fair value						
Money market funds	FVTPL	7,446.1	7,446.1	—	—	7,446.1
Non-listed equity investments	FVTOCI	27.1	—	—	27.1	27.1
Listed equity investments	FVTOCI	26.0	26.0	—	—	26.0
Financial assets not measured at fair value						
Trade and other receivables	AC	2,155.7	—	—	—	2,155.7
Security investments	AC	5,989.7	—	—	—	5,989.7
Other financial assets	AC	18.6	—	—	—	18.6
Bank deposits	AC	2,589.5	—	—	—	2,589.5
Reverse Repo	AC	1,175.0	—	—	—	1,175.0
Cash at banks and on hand	AC	453.1	—	—	—	453.1
Financial liabilities measured at fair value						
Foreign exchange forward contracts	FVTPL	0.4	—	0.4	—	0.4
Contingent consideration	FVTPL	38.8	—	—	38.8	38.8
Financial liabilities not measured at fair value						
Lease liabilities	n/a	216.7	—	—	—	216.7
Loans and borrowings	AC	2.3	—	—	—	2.3
Trade payables and other payables	AC	354.0	—	—	—	354.0
Other financial liabilities	AC	414.9	—	—	—	414.9

(1) Financial assets and liabilities categorized at amortized costs mainly correspond to fair value. Fair values are not disclosed because the book values represent a reasonable approximation of fair value. We do not make a disclosure for cash and cash equivalents, trade receivables and trade payables.

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December 31, 2022

(in millions €)	Category[1]	Carrying amount	Level 1 (Fair value)	Level 2 (Fair value)	Level 3 (Fair value)	Total
Financial assets measured at fair value						
Foreign exchange forward contracts	FVTPL	183.7	—	183.7	—	183.7
Money market funds	FVTPL	3,148.9	3,148.9	—	—	3,148.9
Non-listed equity investments	FVTOCI	57.1	—	57.1	—	57.1
Listed equity investments	FVTOCI	20.0	20.0	—	—	20.0
Financial assets not measured at fair value						
Trade and other receivables	AC	7,145.6	—	—	—	7,145.6
Other financial assets	AC	8.8	—	—	—	8.8
Bank deposits	AC	9,401.0	—	—	—	9,401.0
Cash at banks and on hand	AC	1,325.2	—	—	—	1,325.2
Financial liabilities measured at fair value						
Contingent consideration	FVTPL	6.1	—	—	6.1	6.1
Financial liabilities not measured at fair value						
Lease liabilities	n/a	210.1	—	—	—	210.1
Loans and borrowings	AC	2.1	—	—	—	2.1
Trade payables and other payables	AC	204.1	—	—	—	204.1
Other financial liabilities	AC	785.1	—	—	—	785.1

(1) Financial assets and liabilities categorized at amortized costs mainly correspond to fair value. We do not make a disclosure for cash and cash equivalents, trade receivables and trade payables. Fair values are disclosed because the book values represent a reasonable approximation of fair value.

Equity investments designated at Fair Value through OCI

Financial investments in equity securities measured at fair value through other comprehensive income comprise the following effects:

(in millions €)	December 31, 2023	December 31, 2022
Net gain on equity instruments designated at fair value through other comprehensive income	3.7	10.5
Total	**3.7**	**10.5**

Measurement of fair values

The following table shows the valuation techniques used in measuring fair values for financial instruments in our consolidated statements of financial position, as well as the significant unobservable inputs used.

Type	Valuation technique	Significant unobservable inputs
Forward exchange contracts	Discounted cash flow using par method. Expected future cash flows based on foreign exchange forwards discounted over the respective remaining term of the contracts using the respective deposit interest rates and spot rates.	n/a
Non-listed equity investments	Quantitative and qualitative factors such as actual and forecasted results, cash position and financing round valuations.	/ Actual and forecasted results / Cash position / Nature and pricing indication of latest financing round
Listed equity investments	Stock prices of the listed companies and applicable exchange rates, if the listing is in a foreign currency.	n/a
Money market funds	Quoted prices on an active market	n/a
Contingent consideration	Present value of expected future payments and reflecting changes in expected achievement of underlying performance parameters and compounding effects.	/ Expected future payments / Applied cost of capital

12.3 Recurring Fair Values (Level 3)

The following table shows the recurring fair value measurement of the contingent considerations and the effect of the measurements on our consolidated statements of profit or loss for the current period.

(in millions €)	Contingent consideration
As of January 1, 2022	**6.1**
As of January 1, 2023	**6.1**
Purchases	31.8
Net effect on profit or loss	
Net change in fair value	0.9
As of December 31, 2023	**38.8**

The sensitivity of the fair values of contingent considerations in fair value level 3 to the significant, unobservable, variable input factors, with all other factors remaining constant, is shown in the following table:

Contingent consideration

Input factor	Change in assumptions	Change in fair value with increasing input factor *(in millions €)*	Change in fair value with decreasing input factor *(in millions €)*
Cash flow projections	10%	3.4	(3.4)
Discount rate	1%	(0.8)	0.8

The estimated fair value of non-listed equity investments would, for example, increase (decrease) if price of latest financing round were to increase (decrease) and the overall company value were higher (lower).

12.4 Financial Instruments Risk Management Objectives and Policies

Our financial liabilities mainly comprise obligations derived from license agreements, trade and other payables, lease liabilities, contingent consideration, loans and borrowings, hedging liabilities as well as other financial liabilities. The main purpose of these financial liabilities is to enable our operations. Our principal financial assets include mainly cash, security investments and trade receivables that derive directly from our operations.

We are exposed to market risk, credit risk and liquidity risk. Our Management Board oversees the management of these risks.

The treasury committee provides assurance to our Management Board that our financial risk activities are governed by appropriate policies and procedures and that financial risks are identified, measured and managed in accordance with our policies and risk objectives. The Management Board reviews and agrees policies for managing each of these risks, which are summarized below.

12.5 Market Risks

Market risks address the risks that the fair value or future cash flows of a financial instrument will fluctuate due to changes in market prices. Market risks comprise three types of risk: interest risks, foreign currency risks and other price risks. Financial instruments affected by market risks include financial assets such as security investments, trade and other receivables, cash and cash equivalents as well as financial liabilities such as trade payables and other financial liabilities. We do not consider interest risks as well as other price risks as material risks to us.

There were no material changes in the way the risks were managed and valued during the years ended December 31, 2023, and 2022. Because of the significantly higher cash balance and security investments – the market risk exposure on counterparty risk increased compared to the previous period.

Foreign Currency Risks

Foreign currency risks address the risks that the fair value or future cash flows of an exposure will fluctuate because of changes in foreign exchange rates. We are subject to currency risks, as our income and expenditures are denominated in Euro and the U.S. dollar. As such, we are exposed to exchange rate fluctuations between these currencies. Cash inflows denominated in U.S. dollar mainly result from generating proceeds under our collaboration agreements. Our commercial revenues are primarily collaboration revenues from earnings based on our partners' gross profit, which is shared under the respective collaboration agreements and represents payments we receive in U.S. dollar. Cash outflows dominated in U.S. dollar mainly result from amounts spent on research and development activities and license obligations as well as expanding our global footprint further. With the aim of preserving capital, surplus liquidity is mainly invested in domestic currency investments as exchange rate fluctuations can reduce the value of our financial positions. We limit the effects of the identified risks by means of a coordinated and consistently implemented risk strategy. Besides applying natural hedging relationships where possible, foreign exchange forward contracts are concluded, as a matter of principle, as instruments to mitigate foreign currency exchange risk associated with foreign currency-denominated payments. However, the foreign exchange forward contracts which we entered into were not designated as hedging instruments under IFRS.

The carrying amount of the monetary assets and liabilities denominated in U.S. dollar at the dates indicated are as follows:

(in millions €)	December 31, 2023	December 31, 2022
Cash and cash equivalents in U.S. dollar	122.6	1,487.4
Monetary assets in U.S. dollar	1,191.9	7,098.5
Monetary liabilities and provisions in U.S. dollar	567.3	1,527.8
Total	**747.2**	**7,058.1**

The following tables demonstrate the sensitivity to a reasonable, possible change in U.S. dollar exchange rates or U.S. dollar forward rates, with all other variables held constant. The impact on our profit before tax is due to changes in the fair value of monetary assets and liabilities. The exposure to foreign currency changes for all other currencies is not material.

1 € =		Closing rate		Average rate	
Currency	**Country**	**2023**	**2022**	**2023**	**2022**
U.S. dollar	United States	1.1050	1.0666	1.0813	1.0530

(in millions €)	Change in U.S. dollar rate	Effect on profit/ (loss) before tax	Effect on pre-tax equity
2023	+5%	(35.5)	(35.5)
	-5%	39.2	39.3
2022	+5%	(195.2)	(191.5)
	-5%	215.7	211.7

12.6 Credit Risk Management

Credit risks address the risks that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. We are exposed to credit risks from our operating activities, including security investments, bank deposits, reverse repos, foreign exchange transactions, trade and other receivables and cash at banks. The maximum exposure to credit risk for the components of the consolidated statements of financial position as of December 31, 2023, and December 31, 2022, are the carrying amounts as illustrated in ***Note 12.1 and Note 12.2.***

Security Investments, Bank Deposits, Reverse Repos and Cash at banks

Our financial management is dedicated predominantly to the goal of capital preservation. Thus, all our financial activities are focused towards avoiding risks and, where they cannot be avoided, actively managing and minimizing them. Credit risks from balances with security investments, bank deposits, reverse repos and cash at banks are managed by our Treasury department in accordance with our investment and asset management policy.

Our security investments are solely invested in the highest-quality liquid assets (e.g. core European sovereign, supranational and agency bonds) and bank deposits with a maturity of more than 3 months (held at selected banks, exclusively rated as investment grade). They do not bear any currency risks or material credit risks. The bank deposits are held at selected banks, exclusively rated as investment grade. We limit our investment engagements individually and track each credit risk continuously. For reverse repos, only investment-grade counterparties qualify as our business partners and even secured investments are solely collateralized by high-quality liquid assets.

Accordingly, credit risks from these financial assets are limited. Before entering into new business relationships and during ongoing business relationships, we evaluate our business partners with regard to their individual default risk. Therefore, we do not presume an increased credit risk as of the balance sheet date and determine the impairment loss based on the upcoming twelve months.

The calculated expected credit losses were not material as of December 31, 2023, and December 31, 2022.

Trade and Other Receivables

Our exposure to credit risks of trade and other receivables is primarily related to transactions with corporate customers in the biopharma/biotech industry that operate in the United States or Germany, as well as governments which are customers, in connection with fulfilling our commercial obligations in our territories as defined in our contracts with customers. An analysis of the aging of receivables and the creditworthiness of customers is used to evaluate this risk at each reporting date. We follow risk control procedures to assess the credit quality of our customers taking into account their financial position, past experience and other factors.

As of December 31, 2023, outstanding trade and other receivables were mainly due from our collaboration partner Pfizer. Besides well-established pharmaceutical companies and governmental institutions, our other customers – to a smaller extent – are medical universities, other public institutions and peers in the biopharma industry, which have good credit ratings. Due to this customer portfolio, the credit risk on trade and other receivables is generally very low. We have not incurred material bad debt expense and do not expect that this will change with respect to the trade and other receivables outstanding as of December 31, 2023.

The expected credit risk on trade and other receivables derived from applying the simplified approach in calculating expected credit losses was not material as of December 31, 2023, and December 31, 2022.

12.7 Liquidity Risk

We plan to invest heavily in R&D as we make a strong drive to build out our global development organization and diversify our therapeutic area footprint. Additionally, we plan to enhance capabilities through complementary acquisitions, technologies, infrastructure and manufacturing. Our liquidity management ensures the availability of cash and cash equivalents, short term financial instruments for operational activities and further investments through appropriate budget planning. In addition, a sufficient level of cash and cash equivalents, which are managed centrally, is always maintained to finance the operational activities.

We monitor liquidity risks using a liquidity planning tool.

Ultimately, the responsibility for liquidity risk management lies with our Management Board, which has established an appropriate approach to managing short-, medium- and long-term financing and liquidity requirements. We manage liquidity risks by holding appropriate reserves based on our COVID-19 sales, as well as by monitoring forecasted and actual cash flows and reconciling the maturity profiles of financial assets and liabilities. Significant reserves currently exist and were generated during the Covid-19 pandemic.

Risk Concentration

Concentrations arise when the number of counterparties is small or when a larger number of counterparties is engaged in similar business activities, or activities in the same geographical region, or has economic features that would cause their ability to meet contractual obligations to be affected similarly by changes in economic, political or other conditions. Concentrations indicate the relative sensitivity of our performance to developments affecting a particular industry. We only have a limited number of customers mainly comprising pharmaceutical companies and governmental institutions.

The maturity profile of our financial liabilities based on contractual undiscounted payments is summarized as follows:

Year ended December 31, 2023

(in millions €)	Less than 1 year	1 to 5 years	More than 5 years	Total
Loans and borrowings	—	2.3	—	**2.3**
Trade and other payables	354.0	—	—	**354.0**
Lease liabilities	34.1	136.6	73.7	**244.4**
Contingent consideration	—	57.5	0.3	**57.8**
Foreign exchange forward contracts	0.4	—	—	**0.4**
Other financial liabilities	414.9	—	—	**414.9**
Total	**803.4**	**196.4**	**74.0**	**1,073.8**

Year ended December 31, 2022

(in millions €)	Less than 1 year	1 to 5 years	More than 5 years	Total
Loans and borrowings	—	2.1	—	**2.1**
Trade and other payables	204.1	—	—	**204.1**
Lease liabilities	40.5	112.9	79.1	**232.5**
Contingent consideration	—	—	6.1	**6.1**
Other financial liabilities	785.1	—	—	**785.1**
Total	**1,029.7**	**115.0**	**85.2**	**1,229.9**

12.8 Changes in Liabilities Arising from Financing Activities

Year ended December 31, 2023

(in millions €)	January 1, 2023	Cash flows	New leases and disposals	Reclassification	Other	December 31, 2023
Current obligations under lease contracts	36.0	(40.3)	(0.6)	34.1	(1.1)	**28.1**
Non-current obligations under lease contracts	174.1	—	51.1	(34.1)	(2.5)	**188.6**
Loans and borrowings	2.1	0.2	—	—	—	**2.3**
Total	**212.2**	**(40.1)**	**50.5**	**—**	**(3.6)**	**219.0**

Year ended December 31, 2022

(in millions €)	January 1, 2022	Cash flows	New leases and disposals	Reclassification	Other	December 31, 2022
Current obligations under lease contracts	27.9	(41.1)	14.8	33.3	1.1	**36.0**
Non-current obligations under lease contracts	153.7	—	52.6	(33.3)	1.1	**174.1**
Loans and borrowings	119.9	(18.0)	—	—	(99.8)[1]	**2.1**
Convertible note – embedded derivative	308.7	—	—	—	(308.7)[1]	**—**
Total	**610.2**	**(59.1)**	**67.4**	**—**	**(406.3)**	**212.2**

(1) Related to the early redemption of our convertible note during the year ended December 31, 2023, ***as further described in Note 15.***

13 INVENTORIES

(in millions €)	December 31, 2023	December 31, 2022
Raw materials and supplies	347.5	409.7
Unfinished goods	4.0	21.0
Finished goods	6.2	8.9
Total	**357.7**	**439.6**

During the year ended December 31, 2023 expenses from inventory write-downs to net realizable value due to inventories expected to be unsellable, not fulfilling the specification defined by our quality standards, shelf-life expiry or disposals resulted in €94.5 million, compared to €484.6 million in the previous period. The inventories valued at net realizable value in our consolidated statements of financial position as of December 31, 2023, take contractual compensation payments into consideration. We have not pledged any inventories as securities for liabilities. During the years ended December 31, 2023, and 2022, costs of inventories in the amount of €354.4 million and €1,550.6 million, respectively, were recognized as cost of sales.

14 OTHER NON-FINANCIAL ASSETS

(in millions €)	December 31, 2023	December 31, 2022
Deferred expenses	313.2	120.0
Sales tax receivable	5.2	93.8
Prepayments related to CRO and CMO contracts	—	35.3
Other	45.9	29.3
Total	**364.3**	**278.4**
Total current	280.9	271.9
Total non-current	83.4	6.5

Deferred expenses mainly comprise prepayments for future expenses of €151.1 million (nil as of December 31, 2022) for the settlement fee of the European Commission to our collaboration partner and prepayments for our collaborations with OncoC4 Inc., Rockville, USA, €22.5 million (nil as of December 31, 2022), Ryvu Therapeutics S.A., Krakau, Poland, €15.7 million (€19.7 million as of December 31, 2022) and Medigene Immunotherapies GmbH, Planegg/Martinsried, €5.1 million (€9.4 million as of December 31, 2022). Prior year deferred expenses mainly comprise service contracts and insurance obligations.

15 ISSUED CAPITAL AND RESERVES

As of December 31, 2023, the number of shares outstanding was 237,725,735. This amount excludes 10,826,465 shares held in treasury. For the year ended December 31, 2022, the number of shares outstanding was 243,215,169, excluding 5,337,031 shares held in treasury.

Capital Transactions During the Year Ended December 31, 2023

In March 2022, our Management Board and Supervisory Board authorized the 2022 share repurchase program of ADSs, pursuant to which we were permitted to repurchase ADSs, each representing one ordinary share, with a value of up to $1.5 billion a two-year period, commencing on May 2, 2022. The first tranche of our 2022 share repurchase program of ADSs, with a value of up to $1.0 billion, concluded on October 10, 2022. The second tranche with a value of up to $0.5 billion commenced on December 7, 2022 and concluded on March 17, 2023.

The following repurchases under the programs occurred:

2022 Program first tranche *($1.0 billion)*

Period	Number of ADSs purchased	Average price paid per ADS	Net amount spent *(in millions)*
May 2022	917,988	$151.76 (€143.99)	$139.3 (€132.2)
June 2022	1,160,219	$140.82 (€133.35)	$163.4 (€154.7)
July 2022	519,320	$162.03 (€159.40)	$84.1 (€82.8)
August 22	1,666,515	$149.08 (€148.24)	$248.4 (€247.0)
September 22	2,280,988	$135.95 (€137.66)	$310.1 (€314.0)
October 2022	400,483	$136.37 (€139.09)	$54.6 (€55.7)
Total	**6,945,513**		**$999.9 (€986.4)**

Continued on next page

2022 Program second tranche *($0.5 billion)*

Period	Number of ADSs purchased	Average price paid per ADS	Net amount spent *(in millions)*
January 2023	618,355	$142.26 (€131.12)	$88.0 (€81.1)
February 2023	857,620	$138.05 (€129.06)	$118.4 (€110.7)
March 2023	745,196	$128.49 (€121.08)	$95.7 (€90.2)
Total	**2,221,171**		**$302.1 (€282.0)**

In March 2023, our Management Board and Supervisory Board authorized the 2023 share repurchase program, under which we were permitted to purchase ADSs, each representing one ordinary share, with a value of up to $0.5 billion, which started June 2, 2023 and concluded on September 18, 2023.

The following repurchases under the programs occurred:

Program 2023 *($0.5 billion)*

Period	Number of ADSs purchased	Average price paid per ADS	Net amount spent *(in millions)*
June 2023	1,532,685	$108.92 (€100.45)	$166.9 (€154.0)
July 2023	1,738,061	$107.92 (€97.57)	$187.6 (€169.6)
Aug 23	1,261,706	$105.07 (€95.85)	$132.6 (€120.9)
Sep 23	114,513	$112.22 (€105.07)	$12.9 (€12.0)
Total	**4,646,965**		**$500.0 (€456.5)**

Capital Transactions During the Year Ended December 31, 2022

In January 2022, we announced a new research, development and commercialization collaboration with Pfizer to develop potentially the first mRNA-based vaccine for the prevention of shingles (herpes zoster virus, or HZV). In connection with this collaboration, Pfizer agreed to make an equity investment in us, acquiring 497,727 ordinary shares paying a total amount of €110.6 million. The issuance of 497,727 ordinary shares with the nominal amount of €0.5 million was registered with the commercial register (Handelsregister) on March 24, 2022. The equity investment, which was issued in a foreign currency, represents a derivative from the date of signing until the date of closing of the transaction. From the fair value measurement of this derivative, €43.0 million were recognized in finance income in our consolidated statements of profit or loss during the year ended December 31, 2022. At the closing date, in February 2022, this derivative and the agreed investment amount were recognized in our capital reserve and, taking an increase in share capital of €0.5 million into account, led to a net increase of the capital reserve of €67.1 million in our consolidated statements of financial position.

In March 2022, we redeemed our convertible note by exercising our early redemption option ***(see Note 12),*** which was fulfilled in April 2022, by issuing 1,744,392 ordinary shares. The nominal amount of €1.8 million was recorded in share capital and, finally, as a result of the transaction, the capital reserve increased by €233.2 million in our consolidated statements of financial position. The declaratory registration with the commercial register (Handelsregister) was made on May 20, 2022.

In June 2022, at the Annual General Meeting, our shareholders approved the proposed special cash dividend of €2.00 per ordinary share (including those held in the form of ADSs), which led to an aggregate payment of €484.3 million.

In November and December 2022, the ESOP 2018 and LTI-plus awards were settled by transferring ordinary shares previously held in treasury to the entitled employees and Management Board members ***(see Note 16).***

16 SHARE-BASED PAYMENTS

During the years ended December 31, 2023, 2022, and 2021, our share-based payment arrangements led to the following expenses:

		Years ended December 31,		
(in millions €)	Note	2023	2022	2021
Expense arising from equity-settled share-based payment arrangements		44.1	46.5	61.0
Employee Stock Ownership Plan	16.5	—	13.8	20.2
Chief Executive Officer Grant	16.4	1.2	3.1	5.9
Management Board Grant [1]	16.3	3.2	4.3	2.4
BioNTech 2020 Employee Equity Plan for Employees Based Outside North America	16.1	36.3	25.3	32.5
InstaDeep Employee Incentive Plan [2]		3.4	—	—
Expense/(Income) arising from cash-settled share-based payment arrangements		7.3	61.5	32.7
Employee Stock Ownership Plan	16.5	(0.9)	53.4	6.3
Management Board Grant [1]	16.2, 16.3	(2.4)	—	3.6
BioNTech Restricted Stock Unit Plan for North America Employees	16.1	10.6	8.1	22.8
Total		**51.4**	**108.0**	**93.7**
Cost of sales		6.5	3.0	7.0
Research and development expenses		33.4	84.6	60.5
Sales and marketing expenses		1.0	0.8	0.5
General and administrative expenses		10.5	19.6	25.7
Total		**51.4**	**108.0**	**93.7**

(1) In May 2021 and 2022, phantom options were granted under the Management Board Grant for the years 2021 and 2022 which led to a modification from an equity-settled to cash-settled share-based payment arrangement and a reclassification of €1.1 million and €3.3 million between equity and non-current other liabilities, respectively. Expenses incurred before and after the modification dates have been disclosed as equity-settled or cash-settled share-based payment arrangement, respectively. The amount includes expenses incurred with respect to a one-time signing bonus granted to Jens Holstein as of his appointment to the Management Board ***(see Note 21.2).***

(2) As part of the acquisition of InstaDeep ***(see Note 5),*** it was agreed to issue long-term equity awards with a total target incentive value of £15.0 million, each for options and RSUs. The allocation shall be made in a manner consistent with BioNTech's existing share-based payment arrangements. The arrangement was communicated to the employees as part of the acquisition but relates to future services. Following the rules of IFRS 2, starting with the service commencement date during the year ended December 31, 2023 and in advance of the grant date, expenses were recorded based on the estimated grant date fair values and numbers of equity instruments.

During the years ended December 31, 2023, 2022 and 2021, our share-based payment arrangements led to a cash outflow of €766.2 million, €51.8 million and €13.4 million, respectively. We expect to settle the equity-settled share-based payment arrangements of our 2020 Management Board Grant ***(see Note 16.3),*** the Chief Executive Officer Grant ***(see Note 16.4)*** and the Employee Stock Ownership Plan ***(see Note 16.5)*** on a net basis by delivering to the participant a number of ADSs equal to the net value of the exercised option rights after deduction of (i) the exercise price and (ii) the applicable wage taxes (including solidarity surcharge thereon and church tax, if applicable) and social security contributions resulting from such exercise. This reduces the dilutive impact of the respective rights compared to an all-equity settlement. If all of the equity-settled rights outstanding as of December 31, 2023, were to be exercised accordingly, the cash outflow to the tax authority in 2024 would amount to approximately €213.0 million (based on the share price as of December 31, 2023).

16.1 BioNTech Employee Equity Plan

BioNTech 2020 Employee Equity Plan for Employees Based Outside North America (Equity-Settled)

Description of Share-Based Payments

In December 2020, we approved the BioNTech 2020 Employee Equity Plan for employees based outside North America, or the European Plan. Under the European Plan, Restricted Stock Units, or RSUs, are offered to our employees.

Award agreements were entered as of the respective grant dates in February 2021 (LTI 2020 and LTI-plus program), January 2022 (LTI 2021 program) and December 2022 (LTI 2022 program). RSUs issued under the LTI 2020, LTI 2021 and LTI 2022 programs vest annually in equal installments over respective waiting periods of four years, commencing in December 2020, December 2021 and December 2022, respectively. RSUs issued under the LTI-plus program vested annually in equal installments over the waiting period of two years, which elapsed in December 2022. Hence, during the year ended December 31, 2022, the LTI-plus awards were settled by transferring shares previously held in treasury, ***see Note 15.*** All programs were classified as equity-settled as we have the ability to determine the method of settlement.

Measurement of Fair Values

The fair values of the awards issued under the European Plan were based upon the price of our ADSs representing ordinary shares at the grant date.

Reconciliation of Outstanding Share-Options

	LTI-plus program	LTI 2020 program	LTI 2021 program	LTI 2022 program
As of January 1, 2022	372,011	242,416	110,036	—
Forfeited/Modified	(7,932)	(7,111)	(5,428)	—
Granted/Allocated	—	—	—	396,11
Settled[1]	(364,079)	—	—	—
As of December 31, 2022	**—**	**235,305**	**104,608**	**396,11**
As of January 1, 2023	—	235,305	104,608	396,11
Forfeited/Modified	—	(4,400)	(3,497)	(16,141)
As of December 31, 2023	**—**	**230,905**	**101,111**	**379,969**
Thereof vested	—	*175,523*	*51,905*	*96,466*
Thereof unvested	—	*55,382*	*49,206*	*283,503*

(1) The closing price of an American Depositary Share of BioNTech on Nasdaq on December 15, 2022, the settlement date, converted from USD to Euro using the exchange rate published by the German Central Bank (Deutsche Bundesbank) on the same day was €171.40.

Inputs Used in Measurement of the Fair Values at Grant Dates

	LTI-plus program	LTI 2020 program	LTI 2021 program	LTI 2022 program
Weighted average fair value	87.60	92.21	203.22	165.03
Waiting period (in years)	2.0	4.0	4.0	4.0

BioNTech 2020 Restricted Stock Unit Plan for North America Employees (Cash-Settled)

Description of Share-Based Payments
In December 2020, we approved the BioNTech 2020 Restricted Stock Unit Plan for North America Employees, or the North American Plan. Under the North American Plan, RSUs are offered to our employees. These RSUs vest over four years, with 25% vesting one year after the service commencement date and the remainder vesting in equal quarterly installments thereafter. The first awards under the North American Plan were granted in February 2021. The service date for these awards is the date as of which the employee became employed by BioNTech US. During the years ended December 31, 2023, and 2022, further awards were granted under the North American Plan, which included awards granted to new-hire employees and ongoing, recurring awards to existing employees on the approximate anniversary of each employee's start date of employment with BioNTech US. As these RSUs are intended to be cash-settled upon vesting, the awards were defined as a cash-settled share-based payment arrangement. During the years ended December 31, 2023, 2022 and 2021, the exercise of RSUs resulted in a cash outflow of €10.0 million, €9.4 million and €10.1 million, respectively.

As of December 31, 2023, the liability related to these awards amounted to €14.4 million (€13.4 million as of December 31, 2022).

16.2 Management Board Grant – Short-Term Incentive (Cash-Settled)

Management Board's service agreements also include a short-term incentive compensation component, which is an annual performance-related bonus for the years of their respective service periods.

50% of those yearly awards are paid out one year after the achievement of the performance targets for the respective bonus year has been determined, subject to an adjustment relative to the performance of the price of the American Depositary Shares representing our ordinary shares during that year (second installment). The second installments represent cash-settled share-based payment arrangements. The fair values of the liabilities are recognized over the awards' vesting periods beginning when entering or renewing service agreements, i.e., the service commencement date, until each separate determination date and are remeasured until the settlement date. As of December 31, 2023, the liability related to these awards amounted to €2.1 million (€2.3 million as of December 31, 2022).

16.3 Management Board Grant Long-Term Incentive (Partly Equity-Settled, Partly Cash-Settled)

Description of Share-Based Payments

Our Management Board's service agreements provide for long-term incentive compensation (Management Board Grant – LTI) through an annual grant of options to acquire BioNTech shares during their respective service periods. The options granted each year are subject to the terms and conditions of the respective authorizations of the Annual General Meeting creating our Employee Stock Ownership Plan (ESOP) and the applicable option agreements thereunder.

The options vest annually in equal installments over four years commencing on the first anniversary of the allocation date and are exercisable four years after the allocation date. The vested options can only be exercised if each of the following performance criteria has been achieved: (i) at the time of exercise, the current price is equal to or greater than the threshold amount (that is, the exercise price, provided that such amount increases by seven percentage points on each anniversary of the allocation date); (ii) at the time of exercise, the current price is at least equal to the target price (that is, (a) for the twelve-month period starting on the fourth anniversary of the allocation date, $8.5 billion divided by the total number of the ordinary shares outstanding immediately following the initial public offering (other than ordinary shares owned by BioNTech), and (b) for each twelve-month period starting on the fifth or subsequent anniversary of the allocation date, 107% of the target share price applicable for the prior twelve-month period); and (iii) the closing price for the fifth trading day prior to the start of the relevant exercise window is higher than the exercise price by at least the same percentage by which the Nasdaq Biotechnology Index or a comparable successor index as of such time is higher than such index was as of the last trading day before the allocation date. Following the expiry of the waiting period, option rights may be exercised during the exercise windows as set out in the ESOP agreement. The option rights can be exercised up to ten years after the allocation date. If they have not been exercised by that date, they will be forfeited without compensation.

The right to receive options generally represents an equity-settled share-based payment arrangement. The allocation of the number of issued options in 2020 occurred in February 2020. In May 2021 and May 2022, the Management Board received phantom options equivalent to the number of options the Management Board members would have been entitled to receive for 2021 and 2022, which led to a modification from equity-settled to cash-settled share-based payment arrangement and a reclassification of €1.1 million and €3.3 million between equity and non-current other liabilities as of the respective allocation dates. During 2023, options were granted in May 2023.

Measurement of Fair Values

A Monte-Carlo simulation model has been used to measure the fair values at the (estimated) allocation dates of the Management Board Grant. This model incorporates the impact of the performance criteria regarding share price and index development described above. The parameters used for measuring the fair values as of the respective (estimated) allocation dates were as follows:

	Allocation date February 2020	Allocation date May 12, 2021[1]	Allocation date May 17, 2021[1]	Allocation date May 2022[1]
Weighted average fair value	€10.83	€29.05	€27.64	€38.88
Weighted average share price	€28.20	€168.44	€179.46	€147.84
Exercise price[2]	€28.32	€167.63	€169.08	€137.65
Expected volatility	36.6%	49.7%	49.7%	49.7%
Expected life (years)	4.8	4.6	4.6	5.8
Risk-free interest rate	1.6%	3.9%	3.9%	3.9%

(1) Classified as cash-settled share-based payment arrangement; all other share-based payment arrangements are classified as equity-settled.

(2) The share options allocated as of February 2020 and May 2023 as well as the phantom share options allocated as of May 2021 and 2022 are subject to an effective exercise price cap.

	Allocation date May 2023	Estimated allocation date 2024	Estimated allocation date 2025	Estimated allocation date 2026
Weighted average fair value[1]	€46.29	€43.67	€39.97	€32.86
Weighted average share price[1]	€98.93	€95.51	€95.51	€95.51
Exercise price[1]	€105.42	€96.82	€99.74	€105.13
Expected volatility	47.2%	47.7%	43.0%	36.8%
Expected life (years)[1]	5.8	5.8	5.8	5.8
Risk-free interest rate	3.7%	3.9%	3.9%	3.9%

(1) Valuation parameter for estimated allocation dates derived from the Monte-Carlo simulation model.

For the awards with estimated allocation dates, the exercise prices of options expected to be allocated have been derived from the Monte-Carlo simulation model. Those will be adjusted until the actual allocation has occurred and the exercise price has ultimately been determined.

All options are subject to an effective exercise price cap, which means that the exercise price shall be adjusted to ensure that the current price of an ADS as of the exercise date does not exceed 800% of the exercise price. With respect to the LTI 2020 agreement, the maximum economic benefit receivable in respect of any exercised option is capped at $246.24, with the effective exercise price being capped at a Euro amount equivalent to $30.78. With respect to the phantom share options issued under the LTI 2021 and 2022 as well as the options issued under the LTI 2023 programs, the maximum compensation that the Management Board members are entitled to receive under such programs, together with other compensation components received by each such board member in the respective grant year, shall not exceed €20.0 million for Ugur Sahin as Chief Executive Officer (CEO) and €10.0 million for all other Management Board members.

Expected volatility was based on an evaluation of the historical volatilities of comparable companies over the historical period commensurate with the expected option term. The expected term was based on general option holder behavior for employee options.

Reconciliation of Outstanding Share-Options

The (phantom) share options allocated and expected to be allocated to our Management Board as of December 31, 2023, are presented in the table below.

	Allocation date February 2020	Allocation date May 12, 2021[1]	Allocation date May 17, 2021[1]	Allocation date May 2022[1]
(Phantom) share options outstanding	248,096	45,279	6,463	86,118
Thereof allocated and vested but subject to performance and waiting requirements	186,072	22,640	3,232	21,531
Thereof allocated and unvested	62,024	22,639	3,231	64,587
Weighted average exercise price (€)	28.32	167.63	169.08	137.65

(1) Classified as cash-settled share-based payment arrangement; all other share-based payment arrangements are classified as equity-settled.

	Allocation date May 2023[1]	Estimated allocation date 2024[1]	Estimated allocation date 2025[1]	Estimated allocation date 2026[1]
Share options outstanding/expected to be allocated	130,586	164,148	118,312	93,561
Thereof allocated and unvested	130,586	—	—	—
Weighted average exercise price (€)	105.42	96.82	99.74	105.13

(1) Valuation parameter derived from the Monte-Carlo simulation model.

For the awards with estimated allocation dates, the numbers of options expected to be allocated have been derived from a Monte-Carlo simulation model. Those will be adjusted until the actual allocation has occurred and the number of options granted has ultimately been determined.

As of December 31, 2023, the share options allocated and expected to be allocated under our equity-settled share-based payment arrangements had a remaining weighted average expected life of 4.1 years (as of December 31, 2022: 4.0 years).

As of December 31, 2023, the liability related to the phantom option awards amounted to €3.6 million (€5.6 million as of December 31, 2022).

16.4 Chief Executive Officer Grant (Equity-Settled)

Description of Share-Based Payments

In September 2019, we granted Ugur Sahin an option to purchase 4,374,963 of our ordinary shares, subject to Sahin's continuous employment with us. The options' exercise price per share is the Euro translation of the public offering price from our initial public offering, €13.60 ($15.00), which is subject to the effective exercise price cap and the maximum cap mechanism. Under the exercise price cap the exercise price shall be adjusted to ensure that the current price of an ADS as of the exercise date does not exceed 800% of the exercise price. Under the maximum cap mechanism the maximum economic benefit receivable in respect of any exercised option is capped at $240.00 with the effective exercise price being capped at a Euro amount equivalent to $30.00.

The options vest annually in equal installments after four years commencing on the first anniversary of the initial public offering and have a waiting period of four years after the initial public offering. The vested option rights can only be exercised if and to the extent that each of the following performance criteria has been achieved: (i) at the time of exercise, the current price is equal to or greater than the threshold amount (that is, the exercise price, provided that such amount increases by seven percentage points on each anniversary of the allocation date); (ii) at the time of exercise, the current price is at least equal to the target price (that is, (a) for the twelve-month period starting on the fourth anniversary of the allocation date, $8.5 billion divided by the total number of the shares outstanding immediately following the initial public offering (other than shares owned by us), and (b) for each twelve-month period starting on the fifth or subsequent anniversary of the allocation date, 107% of the target share price applicable for the prior twelve-month period); and (iii) the closing price for the fifth trading day prior to the start of the relevant exercise window is higher than the exercise price by at least the same percentage by which the Nasdaq Biotechnology Index or a comparable successor index as of such time is higher than such index was as of the last trading day before the allocation date. Following the expiry of the waiting period, option rights may be exercised during the exercise windows as defined by our ESOP. The option rights can be exercised up to ten years after the allocation date. If they have not been exercised by that date, they will be forfeited without compensation.

Measurement of Fair Values

A Monte-Carlo simulation model has been used to measure the fair value at the grant date of the Chief Executive Officer Grant. This model incorporates the impact of the performance criteria regarding share price and index development described above in the calculation of the award's fair value at the grant date. The inputs used in the measurement of the fair value at the grant date of the Chief Executive Officer Grant were as follows:

	Grant date October 9, 2019
Weighted average fair value	€5.63
Weighted average share price	€13.60
Exercise price	€13.60
Expected volatility	41.4%
Expected life (years)	5.4
Risk-free interest rate	1.5%

Expected volatility was based on an evaluation of the historical volatilities of comparable companies over the historical period commensurate with the expected term. The expected term was based on general option holder behavior for employee options.

Reconciliation of Outstanding Share-Options

On October 9, 2023, with the final installment vesting, all 4,374,963 options became exercisable under the rules of the ESOP and the ESOP agreement. During the year ended December 31, 2023, no options were exercised.

As of December 31, 2023, the share options outstanding had a remaining weighted average expected life of 1.1 years (as of December 31, 2022: 2.1 years).

16.5 Employee Stock Ownership Plan (Partly Equity-Settled, Partly Cash-Settled)

Description of Share-Based Payments

Based on an authorization of the general meeting on August 18, 2017, we established a share option program under which we granted selected employees options to receive our shares. The program is designed as an Employee Stock Ownership Plan, or ESOP. We offered participants a certain number of option rights by their explicit acceptance of an option rights agreement. The exercise of option rights in accordance with the agreement gives the participants the right to obtain shares against payment of the exercise price. With respect to the Management Board members serving at the time of allocation, the options are subject to the effective exercise price cap and maximum cap mechanisms. Under the exercise price cap, the exercise price shall be adjusted to ensure that the current price of an ADS as of the exercise date does not exceed 800% of the exercise price. Under the maximum cap mechanism, the maximum economic benefit receivable in respect of any exercised option, is capped at $240, with the effective exercise price being capped at a Euro amount equivalent to $30.00. Under the ESOP, the option rights (other than Özlem Türeci's, and Ryan Richardson's options) fully vest after four years and can be exercised if: (i) the waiting period of four years has elapsed; and (ii) at the time of exercise, the average closing price of the shares of the Company or the average closing price of the right or certificate to be converted into an amount per share on the previous ten trading days preceding the exercise of the option right exceeds the strike price by a minimum of 32%, with this percentage increasing by eight percentage points as of the fifth anniversary of the respective issue date and as of each subsequent anniversary date. Following the expiry of the waiting period, option rights may be exercised within a period of four weeks from the date of the Annual General Meeting or the publication of the annual financial statements, the semi-annual report or our most recent quarterly report or interim report (exercise windows). The option rights can be exercised up to eight years after the allocation date. If they have not been exercised by that date, they will be forfeited without compensation.

By way of a shareholders' resolution of the general meeting on August 19, 2019, the authorization to issue such option rights was amended such that, in order for the options to be exercisable, the average closing price of the Company's shares or the average closing price of the right or certificate to be converted into an amount per share on the ten trading days immediately preceding the exercise must exceed the strike price by a minimum of 28%, with this percentage increasing by seven percentage points as of the fifth anniversary of the issue date and as of each subsequent anniversary date. Furthermore, in addition to the aforementioned requirements, the exercise is only possible if the share price (calculated by reference to the price of the ordinary share underlying the ADS) has performed similar to or better than the Nasdaq Biotechnology Index. The changes made do not affect option rights already issued.

Measurement of Fair Values

The fair value of the ESOP has been measured using a binomial model. Service conditions attached to the arrangement were not taken into account in measuring the fair value.

The share options can only be exercised by the grantee if the price of the share is equal or greater to the threshold amount as defined in the arrangement. Moreover, the option rights can only be exercised if the IPO has occurred. Both conditions have been incorporated into the fair value at the grant date.

The inputs used in the measurement of the fair values at the grant date of the ESOP were as follows:

	Grant date November 15, 2018	Grant dates between February 21 and April 3, 2019	Grant dates between April 29 and May 31, 2019	Grant date December 1, 2019
Weighted average fair value	€7.41	€6.93	€7.04	€9.49
Weighted average share price	€14.40	€15.72	€16.03	€19.84
Exercise price[1]	€10.14	€15.03	€15.39	€15.82
Expected volatility	46.0%	46.0%	46.0%	46.0%
Expected life (years)	5.8	6.0	6.0	5.5
Risk-free interest rate	0.1%	0.1%	0.1%	0.1%

(1) With respect to the Management Board members appointed as such at the time the options were granted, the options are subject to the effective exercise price cap as well as the maximum cap mechanism.

Expected volatility has been based on an evaluation of the historical and the implied volatilities of comparable companies over the historical period commensurate with the expected term. The expected term has been based on general option holder behavior for employee options.

Reconciliation of Outstanding Share-Options (Equity-Settled)

Set out below is an overview of changes to share options outstanding and number of ordinary shares underlying these options that occurred during the periods indicated:

	Share options outstanding	Number of ordinary shares underlying options	Weighted average exercise price (€)[1]
As of January 1, 2022	642,007	11,556,124	10.23
Modified[2]	(1,040)	(18,720)	10.14
Exercised[3]	(583,383)	(10,500,890)	10.14
As of December 31, 2022	**57,584**	**1,036,514**	**11.10**
As of January 1, 2023	57,584	1,036,514	11.10
Exercised[3]	(39,785)	(716,121)	11.04
As of December 31, 2023	**17,799**	**320,393**	**11.24**
Thereof vested	17,799	320,393	11.24
Thereof unvested	—	—	—

(1) With respect to the Management Board members appointed as such at the time the options were granted, the options are subject to the effective exercise price cap as well as the maximum cap mechanism.
(2) Rights have been modified to cash-settled righ ts, all other terms remained unchanged.
(3) The average closing price of an American Depositary Share of BioNTech on Nasdaq weighted over the various dates immediately preceding the settlement dates, converted from USD to Euro using the exchange rate published by the German Central Bank (Deutsche Bundesbank) on the same days was €96.49 and €160.44 for all settlements during the years ended December 31, 2023 and 2022, respectively.

In September 2022, the Supervisory Board determined the ESOP settlement by the delivery of treasury shares (in the form of ADSs) equal to the net value of the exercised option rights after deduction of (i) the exercise price and (ii) the applicable wage taxes (including solidarity surcharge thereon and church tax, if applicable) and social security contributions resulting from such exercise. The settlement was applied during the exercise windows in 2022 and 2023. The applicable wage taxes (including solidarity surcharge thereon and church tax, if applicable) and social security contributions resulting from and withheld upon the exercise amounted to €724.0 million and were paid in January 2023 in cash directly to the respective authorities. The settlement mechanism decision did not change the rights as such, neither did it change the classification as equity-settled option rights.

As of December 31, 2023, the share options outstanding under our equity-settled share-based payment arrangements had a remaining weighted average expected life of 0.8 years (as of December 31, 2022: 1.7 years).

Development of Share-Options (Cash-Settled)

Phantom options which were granted under the ESOP mainly during the year ended December 31, 2022 each give the participants the right to receive a cash payment equal to the difference between an exercise closing price (average closing price of an American Depositary Share of BioNTech on Nasdaq over the last ten trading days preceding the exercise date) and the exercise price. The majority of options have an exercise price of €10.14. During the years ended December 31, 2023, and 2022, 52,100 and 289,168 cash-settled phantom option rights were exercised and resulted in a cash outflow of €4.5 million and €42.2 million, respectively. The average closing prices (10-day averages) of an American Depositary Share of BioNTech on Nasdaq weighted over the various settlement dates converted from USD to Euro using the exchange rate published by the German Central Bank (Deutsche Bundesbank) on the same days was €96.25 and €155.39. As of December 31, 2023, 109,651 cash-settled option rights remained outstanding. As of December 31, 2023, the liability related to cash-settled share-based payment option rights amounted to €8.5 million (€14.5 million as of December 31, 2022), of which €8.3 million (€11.2 million as of December 31, 2022) related to rights already vested (partly subject to performance and waiting requirements). The liability is based on the fair value of the respective rights. The fair value is measured using a binomial model consistent with the grant date fair value measurement of the equity-based option rights described above, which is updated on every reporting date.

17 PROVISIONS

(in millions €)	December 31, 2023	December 31, 2022
Contractual disputes	118.2	88.9
Obligations from onerous CMO contracts	80.2	235.5
Other	79.7	51.4
Total	**278.1**	**375.8**
Total current	269.3	367.2
Total non-current	8.8	8.6

As of December 31, 2023, our current provisions included €118.2 million in contractual disputes mainly related to purported obligations arising out of certain contractual disputes unrelated to the below-mentioned patent proceedings (€88.9 million as of December 31, 2022). Acknowledging an increase in obligations identified as contractual disputes, the change of €29.3 million compared to the previous period related mainly to additions.

As of December 31, 2023, our current provisions included €80.2 million (€235.5 million as of December 31, 2022) of obligations for production capacities derived from contracts with Contract Manufacturing Organizations, or CMOs, that became redundant The effects were driven by reducing production capacities as well as further fostering the global production network with our collaboration partners during the year ended December 31, 2023. The related expenses were recognized in cost of sales in our consolidated statements of profit or loss. The change of €(155.3) million compared to the previous period related to addition (€45.1 million), to release (€126.0 million) and usage (€74.5 million).

As of December 31, 2023, our current provisions included €79.7 million in other obligations mainly comprising inventor remunerations as well as customs and duties (€51.4 million as of December 31, 2022, mainly comprising inventor remunerations as well as customs and duties). The change of €28.3 million compared to the previous period related mainly to additions.

18 CONTINGENCIES AND OTHER FINANCIAL COMMITMENTS

Contingencies

Our contingencies include, but are not limited to, intellectual property disputes and product liability and other product-related litigation. From time to time, in the normal course and conduct of our business, we may be involved in discussions with third parties about considering, for example, the use and/or remuneration for use of such third party's intellectual property. As of December 31, 2023, none of such intellectual property-related considerations that we have been notified of, and for which potential claims could be brought against us or our subsidiaries in the future, fulfill the criteria for recording a provision. We are subject to an increasing number of product liability claims. Such claims often involve highly complex issues related to medical causation, correctness and completeness of product information (Summary of Product Characteristics/package leaflet) as well as label warnings and reliance thereon, scientific evidence and findings, actual and provable injury, and other matters. These complexities vary from matter to matter. As of December 31, 2023, none of these claims fulfill the criteria for recording a provision. Substantially all of our contingencies are subject to significant uncertainties and, therefore, determining the likelihood of a loss and/or the measurement of any loss can be complex. Consequently, we are unable to estimate the range of reasonably possible loss. Our assessments, which result from a complex series of judgments about future events and uncertainties, are based on estimates and assumptions that have been deemed reasonable by management, but that may prove to be incomplete or inaccurate, and unanticipated events and circumstances may occur that might cause us to change those estimates and assumptions. We currently do not believe that any of these matters will have a material adverse effect on our financial position, and will continue to monitor the status of these and other claims that may arise. However, we could incur judgments, enter into settlements or revise our expectations regarding the outcome of matters, which could have a material adverse effect on our results of operations and/or our cash flows in the period in which the amounts are accrued or paid. We will continue to evaluate whether, if circumstances were to change in the future, the recording of a provision may be needed and whether potential indemnification entitlements exist against any such claim.

Certain pending matters to which we are a party are discussed below.

Alnylam Proceedings

In March 2022, Alnylam Pharmaceuticals, Inc., or Alnylam, filed a lawsuit against Pfizer and Pharmacia & Upjohn Co. LLC in the U.S. District Court for the District of Delaware alleging that an existing patent owned by Alnylam, U.S. Patent No. 11,246,933, or the '933 Patent, is infringed by the cationic lipid used in Comirnaty, and seeking monetary relief, which is not specified in their filings. We filed a counterclaim to become party to the Alnylam proceeding, and in June 2022, Alnylam added to its claims allegations that we induced infringement of the '933 Patent. Additionally, in July 2022, Alnylam filed a lawsuit against us, our wholly owned subsidiary, BioNTech Manufacturing GmbH, Pfizer and Pharmacia & Upjohn Co. LLC in the U.S. District Court for the District of Delaware alleging that we also induced infringement of a newly issued patent, U.S. Patent No. 11,382,979, or the '979 Patent, which is a continuation of the '933 Patent. The two lawsuits were consolidated on July 28, 2022. In May 2023, Alnylam filed a third lawsuit against Pfizer Inc. and Pharmacia & Upjohn Co. LLC in the U.S. District Court for the District of Delaware alleging infringement of U.S. Patent Nos. 11,633,479; 11,633,480; 11,612,657; and 11,590,229, all of which are continuations of the '933 Patent. We filed a counterclaim to become party to the new proceeding, and in July 2023, Alnylam added to its claims allegations that we induced infringement of the four new patents. All of the proceedings have been consolidated and are currently pending.

We believe we have strong defenses against the allegations claimed relative to each of the patents and intend to vigorously defend ourselves in the proceedings mentioned above. However, our analysis of Alnylam's claims is ongoing and complex, and we believe the outcome of the suit remains substantially uncertain. Taking into account discussions with our external lawyers, we do not consider the probability of an outflow of resources to be sufficient to recognize a provision at the balance sheet date. In our opinion, these matters constitute contingent liabilities as of the balance sheet date. However, it is currently impractical for us to estimate with sufficient reliability the respective contingent liabilities.

CureVac Proceedings

Germany

Infringement Proceedings – EP'122, DE'961, DE'974, DE'575, and EP'668

In July 2022, CureVac AG, or CureVac, filed a lawsuit against us and our wholly owned subsidiaries, BioNTech Manufacturing GmbH and BioNTech Manufacturing Marburg GmbH, in the Düsseldorf Regional Court, alleging Comirnaty's infringement of one European patent, EP1857122B1, or the EP'122 Patent, and three Utility Models DE202015009961U1, DE202015009974U1, and DE202021003575U1. In August 2022, CureVac added European Patent EP3708668B1, or the EP'668 Patent, to its German lawsuit.

On August 15, 2023, the Düsseldorf Regional Court held a hearing on infringement with respect to all five IP rights. At the hearing, the Court suspended its infringement ruling with respect to EP'122 until December 28, 2023. On September 28, 2023, the Court issued orders suspending its infringement rulings with respect to the remaining four IP rights (DE'961, DE'974, DE'575, and EP'668) pending validity decisions in the DE'961, DE'974, and DE'575 cancellation proceedings before the German Patent and Trademark Office and in the EP'668 opposition proceedings before the Opposition Division of the European Patent Office. In the September 28th orders, the Court explained that it was suspending its infringement rulings until validity decisions are reached, while contemporaneously noting concerns regarding the validity of DE'961, DE'974, DE'575, and EP'668. On December 28, 2023, the Düsseldorf Regional Court stayed the infringement proceedings as to EP'122 until a final appellate decision is rendered as to the validity of EP 122 by the Federal Court of Justice.

Infringement Proceedings – EP'755, DE'123, and DE'130

In July 2023, CureVac SE filed a second lawsuit against us and our wholly owned subsidiaries, BioNTech Manufacturing GmbH and BioNTech Manufacturing Marburg GmbH, in the Düsseldorf Regional Court, alleging Comirnaty's infringement of one European patent, EP4023755B1, or the EP'755 Patent, and two Utility Models DE202021004123U1, and DE202021004130U1.

Nullity Proceedings – EP'122

In September 2022, we filed a nullity action in the Federal Patent Court of Germany seeking a declaration that the EP'122 Patent is invalid. In April 2023, the Federal Patent Court of Germany issued a preliminary opinion in the EP'122 nullity action in support of the validity of the EP'122 Patent. The preliminary opinion did not address any infringement of the EP'122 Patent. The preliminary opinion is a preliminary assessment by the court of the merits of a claim, and is non-binding. On December 19, 2023, the Federal Patent Court held an oral hearing, after which it nullified EP'122.

Cancellation Proceedings– DE'961, DE'974, and DE'575

In November 2022, we filed cancellation actions seeking the cancellation of the three German Utility Models in the German Patent and Trademark Office. On December 27, 2023, the German Patent Office issued a preliminary opinion that DE'974 is likely to be cancelled based on invalidity pursuant to para. 1 (2) no. 5 Utility Model Act.

United States
In July 2022, we and Pfizer filed a complaint for a declaratory judgment in the U.S. District Court for the District of Massachusetts, seeking a judgment of non-infringement by Comirnaty of U.S. Patent Nos. 11,135,312, 11,149,278 and 11,241,493. In May 2023, the action in the U.S. District Court for the District of Massachusetts was transferred to the U.S. District Court for the Eastern District of Virginia, where CureVac filed counterclaims asserting infringement of six additional U.S. patents, U.S. Patent Nos. 10,760,070; 11,286,492; 11,345,920; 11,471,525; 11,576,966; and 11,596,686. In July 2023, CureVac filed amended counterclaims to assert an additional U.S. patent, U.S. Patent No. 11,667,910.

United Kingdom
In September 2022, we and Pfizer filed a declaration of non-infringement and revocation action against the EP'122 Patent and the EP'668 Patent in the Business and Property Courts of England and Wales. In October 2022, CureVac responded by filing a counterclaim alleging infringement of the EP'122 and EP'668 patents in the Business And Property Courts of England and Wales. On December 18, 2023, we amended our pleadings to further allege non-infringement and invalidity against EP'755.

All of the above proceedings are currently pending.

We believe we have strong defenses against the allegations claimed relative to each of the patents and utility models and intend to vigorously defend ourselves in the proceedings mentioned above. However, our analysis of CureVac's claims is ongoing and complex, and we believe the ultimate outcomes remain substantially uncertain. Taking into account discussions with our external lawyers, we do not consider the probability of an outflow of resources to be sufficient to recognize a provision at the balance sheet date. In our opinion, these matters constitute contingent liabilities as of the balance sheet date. However, it is currently impractical for us to estimate with sufficient reliability the respective contingent liabilities.

Moderna Proceedings

Germany
Infringement Proceedings – EP'949 and EP'565
In August 2022, Moderna filed a lawsuit against us and Pfizer and our wholly owned subsidiaries, BioNTech Manufacturing GmbH, BioNTech Europe GmbH and BioNTech Manufacturing Marburg GmbH, Pfizer Manufacturing Belgium NV, Pfizer Ireland Pharmaceuticals and Pfizer Inc. in the Düsseldorf Regional Court alleging Comirnaty's infringement of two European Patents, 3590949B1, or the EP'949 Patent, and 3718565B1, or the EP'565 Patent. On November 7, 2023, the European Patent Office ("EPO") Opposition Division revoked EP'565 after a one-day oral hearing. The Opposition Division issued a preliminary opinion on December 8, 2023 noting that it believes EP'949 is likely invalid. As a result of these EPO proceedings, the Düsseldorf Regional Court postponed its hearing on infringement, originally scheduled for December 12, 2023, to January 21, 2025.

United Kingdom
In August 2022, Moderna filed a lawsuit asserting Comirnaty's infringement of the EP'949 Patent and EP'565 Patent against us and our wholly owned subsidiaries, BioNTech Manufacturing GmbH, BioNTech Europe GmbH and BioNTech Manufacturing Marburg GmbH, Pfizer Limited, Pfizer Manufacturing Belgium NV and Pfizer Inc. in the Business and Property Courts of England and Wales. In September 2022, we and Pfizer filed a revocation action in the Business and Property Courts of England and Wales requesting revocation of the EP'949 Patent and EP'565 Patent.

United States

U.S. District Court Litigation

In August 2022, Moderna filed a lawsuit in the United States District Court for the District of Massachusetts against us and our wholly owned subsidiaries BioNTech Manufacturing GmbH and BioNTech US Inc. and Pfizer Inc. alleging Comirnaty's infringement of U.S. Patent Nos. 10,898,574, 10,702,600 and 10,933,127 and seeking monetary relief.

Inter Partes Review

In August 2023, Pfizer and we filed petitions seeking inter partes review of U.S. Patent Nos. 10,702,600 and 10,933,127 before the United States Patent Trial and Appeal Board.

Netherlands

In September 2022, Moderna filed a lawsuit against us and our wholly owned subsidiary BioNTech Manufacturing GmbH and Pfizer B.V., Pfizer Export B.V., C.P. Pharmaceuticals International C.V. and Pfizer Inc. in the District Court of The Hague alleging Comirnaty's infringement of the EP '949 Patent and the EP '565 Patent. The District Court of the Hague held a hearing on October 6, 2023 on infringement and validity with respect to the EP '949 Patent. On December 6, 2023, the Court found EP'949 to be invalid. The EP'565 case has been stayed pending Moderna's appeal of the Opposition Division's revocation of EP'565.

Ireland

In May 2023, Moderna filed a lawsuit against us and our wholly owned subsidiary BioNTech Manufacturing GmbH, Pfizer Inc., Pfizer Healthcare Ireland, Pfizer Ireland Pharmaceuticals, and C.P. Pharmaceuticals International C.V. alleging Comirnaty's infringement of the EP'949 Patent and EP'565 Patent in the High Court of Ireland.

Belgium

In May 2023, Moderna filed a lawsuit against us, our wholly owned subsidiary BioNTech Manufacturing GmbH, Pfizer Inc. and Pfizer Manufacturing Belgium alleging Comirnaty's infringement of the EP'949 Patent and the EP'565 Patent in the Brussels Dutch-speaking Enterprise Court.

All of the above proceedings are currently pending.

We believe we have strong defenses against the allegations claimed relative to each of the patents and intend to vigorously defend ourselves in the proceedings mentioned above. However, our analysis of Moderna's claims is ongoing and complex, and we believe the outcome of the suit remains substantially uncertain. Taking into account discussions with our external lawyers, we do not consider the probability of an outflow of resources to be sufficient to recognize a provision at the balance sheet date. In our opinion, these matters constitute contingent liabilities as of the balance sheet date. However, it is currently impractical for us to estimate with sufficient reliability the respective contingent liabilities.

Arbutus and Genevant Proceedings

In April 2023, Arbutus Biopharma Corp., or Arbutus, and Genevant Sciences GmbH, or Genevant, filed a lawsuit against Pfizer and us in the U.S. District Court for the District of New Jersey alleging that Pfizer and we have infringed the following patents owned by Arbutus: U.S. Patent Nos. 9,504,651; 8,492,359; 11,141,378; 11,298,320; and 11,318,098, through the use of Genevant's lipid nanoparticle technology and methods for producing such lipids in Comirnaty, and seeking monetary relief. This proceeding is currently pending.

We believe we have strong defenses against the allegations claimed relative to each of the patents and intend to vigorously defend ourselves in the lawsuit mentioned above. However, our analysis of Arbutus and Genevant's claims is ongoing and complex, and we believe the outcome of the suit remains substantially uncertain. Taking into account discussions with our external lawyers, we do not consider the probability of an outflow of resources to be sufficient to recognize a provision at the balance sheet date. In our opinion, these matters constitute contingent liabilities as of the balance sheet date. However, it is currently impractical for us to estimate with sufficient reliability the respective contingent liabilities.

Promosome Proceedings

In June 2023, Promosome LLC filed a lawsuit against Pfizer, us, and BioNTech Manufacturing GmbH in the U.S. District Court for the Southern District of California alleging that Pfizer and our Comirnaty vaccine has infringed U.S. Patent No. 8,853,179, and seeking monetary relief. On October 4, 2023, the parties filed a joint stipulation of dismissal, dismissing the lawsuit with prejudice. As part of this stipulation of dismissal, Promosome agreed to a covenant not to assert U.S. Patent No. 8,853,179 against Pfizer and us or any of their products, including Comirnaty. This matter is considered closed.

Other financial commitments

The other financial commitments were as follows:

(in millions €)	December 31, 2023	December 31, 2022
Commitments under purchase agreements for property, plant and equipment	154.4	105.2
Contractual obligation to acquire intangible assets	1,721.1	—
Total	**1,875.5**	**105.2**

Contractual obligations to acquire intangible assets exist in connection with in-licensing and research and development collaborations. We have entered into obligations to make milestone payments once specific targets have been reached. Provided that all of the milestone events are achieved, we would be obligated to pay up to €1,721.1 million as of December 31, 2023 (nil as of December 31, 2022) in connection with the acquisition of intangible assets. The amounts shown represent the maximum payments to be made, and it is unlikely that they will all fall due. The amounts and the dates of the actual payments may both vary considerably from those stated in the table, since the achievement of the conditions for payment is possible but uncertain. Other financial obligations from possible future sales-based milestone and license payments were not included in the table above.

The expected maturities of payment obligations under purchase agreements for property, plant and equipment and contractual obligations to acquire intangible assets are as follows:

Year ended December 31, 2023

(in Millionen €)	Less than 1 year	1 to 5 years	More than 5 years	Total
Commitments under purchase agreements for property, plant and equipment	152.5	1.9	—	**154.4**
Contractual obligation to acquire intangible assets	249.4	954.9	516.8	**1,721.1**
Total	**401.9**	**956.8**	**516.8**	**1,875.5**

Other financial obligations were recognized at nominal value.

19 OTHER NON-FINANCIAL LIABILITIES

(in millions €)	December 31, 2023	December 31, 2022
Liabilities to employees	73.3	50.6
Liabilities from share-based payment arrangements	29.0	36.2
Liabilities from wage taxes and social securities expenses	15.1	761.8
Other	20.8	29.2
Total	**138.2**	**877.8**
Total current	125.1	860.8
Total non-current	13.1	17.0

20 LEASES

20.1 Amounts Recognized in the Consolidated Statements of Financial Position

Right-of-Use Assets

The following amounts are presented as right-of-use assets within the consolidated statements of financial position as of the dates indicated:

(in millions €)	December 31, 2023	December 31, 2022
Buildings	209.8	206.5
Production facilities	—	3.0
Other operating equipment	4.6	2.4
Total	**214.4**	**211.9**

Additions to the right-of-use assets during the year ended December 31, 2023, were €66.4 million (during the year ended December 31, 2022: €118.3 million).

Lease Liability

The following amounts are included in lease liabilities, loans and borrowings as of the dates indicated:

(in millions €)	December 31, 2023	December 31, 2022
Current	28.1	36.0
Non-current	188.6	174.1
Total	**216.7**	**210.1**

20.2 Amounts Recognized in the Consolidated Statements of Profit or Loss

Depreciation Charge of Right-of-Use Assets

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Buildings	40.7	35.2	14.7
Production facilities	3.0	23.1	14.0
Other operating equipment	1.5	0.5	0.3
Total depreciation charge	**45.2**	**58.8**	**29.0**
Interest on lease liabilities	5.7	5.1	2.9
Expense related to short-term leases and leases of low-value assets	58.9	27.1	9.5
Total amounts recognized in profit or loss	**109.8**	**91.0**	**41.4**

20.3 Amounts Recognized in the Consolidated Statements of Cash Flows

During the year ended December 31, 2023, the total cash outflow for leases amounted to €46.0 million (during the year ended December 31, 2022: €46.2 million; during the year ended December 31, 2021: €17.0 million).

20.4 Extension Options

The Group has several lease contracts that include extension options. These options are negotiated by management to provide flexibility in managing the leased asset portfolio and align with the Group's business needs. Management exercises judgment in determining whether these extension options are reasonably certain to be exercised. The undiscounted potential future lease payments, which relate to periods after the exercise date of renewal options and are not included in lease liabilities, amount to up to €157.2 million as of December 31, 2023, considering terms up until 2049 (as of December 31, 2022: €163.1 million considering terms up until 2049).

21 RELATED PARTY DISCLOSURES

21.1 Parent and Ultimate Controlling Party

ATHOS KG, Holzkirchen, Germany is the sole shareholder of AT Impf GmbH, Munich, Germany and beneficial owner of our ordinary shares. ATHOS KG via AT Impf GmbH has de facto control over BioNTech based on its substantial shareholding, which practically enables it to exercise the majority of voting rights to pass resolutions at our Annual General Meeting, or AGM.

21.2 Transactions with Key Management Personnel

In May 2023, at the Annual General Meeting, our shareholders reappointed Ulrich Wandschneider and Michael Motschmann as members of the Supervisory Board. In addition, Nicola Blackwood was appointed to our Supervisory Board. She succeeded Christoph Huber, who left the Supervisory Board after reaching the applicable retirement age limit.

Key Management Personnel Compensation

Our key management personnel has been defined as the members of the Management Board and the Supervisory Board. Key management personnel compensation is comprised of the following:

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Management Board	**8.3**	**15.0**	**20.4**
Fixed compensation	3.9	2.9	2.2
Short-term incentive – first installment	0.7	0.6	0.6
Short-term incentive – second installment[1]	1.0	0.7	1.2
Other variable compensation[2]	0.8	0.1	—
Share-based payments (incl. long-term incentive)[3]	1.9	10.7	16.4
Supervisory Board	**0.6**	**0.5**	**0.4**
Total compensation paid to key management personnel	**8.9**	**15.5**	**20.8**

(1) The fair value of the second installment of the short-term incentive compensation which has been classified as a cash-settled share-based payment arrangement was determined pursuant to the regulations of IFRS 2 "Share-based Payments." This table shows the pro-rata share of personnel expenses for the respective financial year that are recognized over the award's vesting period beginning as of the service commencement date (date when entering or renewing service agreements) until each separate determination date and are remeasured until settlement date.

(2) Includes a one-time signing and retention cash payment agreed when renewing the service agreement agreed with Sean Marett.

(3) The fair value of the share-based payments was determined pursuant to the regulations of IFRS 2 "Stock-based Payments". This table shows the pro-rata share of personnel expenses resulting from stock-based compensation for the respective financial year. During the years ended December 31, 2023, 2022, and 2021, the amounts included expenses derived from a one-time signing bonus granted to Jens Holstein as of his appointment to the Management Board in the form of 4,246 phantom shares.

Management Board members participated in our ESOP program ***(see Note 16).*** Out of the 5,152,410 option rights granted to our Management Board under the ESOP 2018 program 4,921,630 options were exercised during the year ended December 31, 2022. The remaining 230,780 option rights were exercised by Sean Marett in May 2023. As of December 31, 2023, no further options issued to our Management Board members are outstanding.

21.3 Related Party Transactions

The total amount of transactions with ATHOS KG or entities controlled by it was as follows for the periods indicated:

	Years ended December 31,		
(in millions €)	**2023**	**2022**	**2021**
Purchases of various goods and services from entities controlled by ATHOS KG	0.3	0.3	0.9
Purchases of property and other assets from entities controlled by ATHOS KG	—	62.5	—
Total	**0.3**	**62.8**	**0.9**

On December 22, 2022, we entered into a purchase agreement with Santo Service GmbH, pursuant to which we acquired the real estate property An der Goldgrube 12 and the existing laboratory and office building including any movable assets for a total consideration of €62.5 million. The purchase price was paid during the year ended December 31, 2022. Santo Service GmbH is wholly owned by AT Impf GmbH, that is controlled by ATHOS KG.

The outstanding balances of transactions with ATHOS KG or entities controlled by them were as follows as of the periods indicated:

(in millions €)	**December 31, 2023**	**December 31, 2022**
ATHOS KG	0.4	—
Total	**0.4**	**—**

None of the balances are secured and no bad debt expense has been recognized in respect of amounts owed by related parties.

22 NUMBERS OF EMPLOYEES

The average number of employees is:

Quarterly average number of employees by function	Years ended December 31, 2023	2022	2021
Clinical Research & Development	434	243	137
Scientific Research & Development	1,871	1,302	875
Operations	1,469	1,240	863
Quality	470	383	322
Support Functions	1,217	828	431
Commercial & Business Development	179	108	66
Total	**5,640**	**4,104**	**2,694**

The average number of employees as of the reporting date is:

Number of employees by function as of the reporting date	Years ended December 31, 2023	2022	2021
Clinical Research & Development	592	274	153
Scientific Research & Development	2,080	1,512	1,026
Operations	1,562	1,365	1,036
Quality	474	413	301
Support Functions	1,390	983	539
Commercial & Business Development	194	145	83
Total	**6,292**	**4,692**	**3,138**

23 FEES FOR AUDITORS

The following fees were recognized for the services provided by EY GmbH & Co. KG Wirtschaftsprüfungsgesellschaft for the fiscal years ended December 31, 2023 and December 31, 2022:

	Years ended December 31,	
(in millions €)	**2023**	**2022**
Audit fees	3.2	2.9
Audit-related fees	0.3	0.4
Tax fees	0.1	0.2
All other fees	—	0.2
Total fees for professional audit services and other services	**3.6**	**3.7**

24 CORPORATE GOVERNANCE

The declaration of conformity pursuant to Section 161 para. 1 of the German Stock Corporation Act (Aktiengesetz) is issued in accordance with the Corporate Governance Code in connection with the corporate governance declaration pursuant to Section 315d in conjunction with Section 289f HGB and can be found in the combined management report of BioNTech SE.

25 EVENTS AFTER THE REPORTING PERIOD

On February 8, 2024, we and Autolus Therapeutics plc, or Autolus, a clinical-stage biopharmaceutical company developing next-generation programmed T cell therapies, announced a strategic collaboration aimed at advancing both companies' autologous CAR-T programs towards commercialization. We have entered into a license and option agreement and a securities purchase agreement under which we purchased $200.0 million of Autolus' American Deposit Shares in a private placement closed on February 13, 2024 resulting in a stake in Autolus ordinary shares of 12.5%. Under the terms of the license and option agreement, we made a $50.0 million upfront payment in exchange for the right to receive royalties on net sales of Autolus' lead asset obe-cel, co-commercialization options for Autolus' AUTO1/22 and AUTO6NG programs as well as an exclusive license and exclusive options to certain technologies owned by Autolus.

The Supervisory Board has appointed Annemarie Hanekamp to the Management Board as Chief Commercial Officer (CCO), effective as of July 1, 2024. She will take over the role from Sean Marett, who will retire as planned from the Management Board as of June 30, 2024.

Mainz, March 18, 2024

BioNTech SE

Prof. Ugur Sahin, M.D.
Chief Executive Officer

Jens Holstein
Chief Financial Officer

Sean Marett
Chief Business Officer and Chief Commercial Officer

Sierk Poetting, Ph.D.
Chief Operating Officer

Ryan Richardson
Chief Strategy Officer

James Ryan, Ph.D.
Chief Legal Officer

Prof. Özlem Türeci, M.D.
Chief Medical Officer

COMPENSATION REPORT 2023

A. COMPENSATION REPORT

The Compensation Report describes the structure and individualized amount of the compensation components of the Management Board and Supervisory Board of BioNTech SE, hereinafter also referred to as "BioNTech", the "Group", "we" or "us", as well as the compensation system applied for the year ended December 31, 2023.

The Compensation Report is aligned with the requirements of Sec. 162 German Stock Corporation Act (Aktiengesetz, "AktG") and the recommendations of the German Corporate Governance Code, as amended on April 28, 2022. The disclosures in our Compensation Report are explicitly not expense-related and do not follow the IFRS regulations as published in our consolidated financial statements or the German Commercial Code (HGB) regulations as published in the statutory financial statements of BioNTech.

Our Management Board and Supervisory Board have jointly agreed to engage our external auditor to perform a formal audit of the Compensation Report.

We prepare and publish this Compensation Report in Euros and round numbers to thousands or millions of Euros respectively. Accordingly, numerical figures shown as totals in some tables may not be exact arithmetic aggregations of the figures that preceded them, and figures presented in the explanatory notes may not precisely add up to the rounded arithmetic aggregations.

The compensation system of the Management Board and the compensation system of the Supervisory Board approved by the Annual General Meeting on June 22, 2021 is published on our website at ***www.biontech.de*** (https://investors.biontech.de/corporate-governance/overview).

B. REVIEW OF THE YEAR ENDED DECEMBER 31, 2023

On May 3, 2023, our Supervisory Board expanded our Management Board by appointing James Ryan as Chief Legal Officer (CLO), effective as of September 1, 2023. As CLO, James Ryan heads up our legal department and is responsible for developing and leading the Company's corporate legal strategy to promote and protect BioNTech's global operations. His current appointment to our Management Board will end on August 30, 2027. Overall, the service agreements with current Management Board members encompass terms with end dates that fall between December 31, 2024 and August 31, 2027. The Management Board's compensation system is applied whenever service agreements with members of our Management Board are entered into, amended or extended.

During the year ended December 31, 2023, the term of office of the Supervisory Board members Ulrich Wandschneider, Christoph Huber, and Michael Motschmann, who were elected by the shareholders at the Annual General Meeting (AGM) on September 17, 2018, ended at the close of the Annual General Meeting on May 25, 2023. As part of the 2023 AGM, Ulrich Wandschneider and Michael Motschmann were re-elected as Supervisory Board members. In addition, Nicola Blackwood was appointed to our Supervisory Board. She succeeded Christoph Huber, who left the Supervisory Board after reaching the applicable retirement age limit. Ulrich Wandschneider's, Nicola Blackwood's and Michael Motschmann's current appointment to our Supervisory Board will end at the AGM in 2027. The compensation system for Supervisory Board members for 2023 was retained from 2022. As of October 1, 2023, our Supervisory Board established a Product Committee. The Product Committee advises and makes recommendations to the Supervisory Board with respect to our strategy and investment in research and development programs and product launch preparations including commercialization.

The elements of the compensation system and the actual compensation according to Sec. 87a AktG are set out below.

C. COMPENSATION OF SUPERVISORY BOARD MEMBER

The compensation system of our Supervisory Board as included in our Articles of Association is structured as 100% fixed compensation. The compensation system for Supervisory Board members for 2023 was retained from 2022.

Pursuant to Sec. 113 para. 3 AktG, as amended by the Act Implementing the Second Shareholder Rights Directive, the Annual General Meeting of a listed company must pass a resolution on the compensation of the members of the Supervisory Board at least every four years.

The members of the Supervisory Board receive an annual compensation of €70,000, the Chair €210,000 and the Vice Chair €105,000. The Chair of the Audit Committee receives an additional annual compensation of €30,000. The respective Chair of another committee receives an additional annual compensation of €15,000. An ordinary committee member receives an additional annual remuneration of €5,000 per committee.

Members of the Supervisory Board who are only members of the Supervisory Board or committees, or who chair or vice-chair the Supervisory Board or the Audit Committee or another committee, for part of the financial year receive the respective compensation on a pro-rata basis. Hence, the compensation of the Supervisory Board members who either left or joined in 2023, namely Christoph Huber and Nicola Blackwood, was paid on a pro-rata basis with respect to their departure or appointment at our AGM on May 25, 2023. In addition, compensation was paid to the members of the Product Committee with effect from the date of its establishment as of October 1, 2023.

All members of the Supervisory Board are reimbursed for their expenses.

The compensation of our Supervisory Board for the years ended December 31, 2023, and 2022 was paid out during December 2023 and December 2022. The fixed compensation and the compensation for committee activities of our Supervisory Board members is considered owed and granted in the respective financial year in which the underlying services were performed.

The compensation granted and owed to our Supervisory Board members during the years ended December 31, 2023, and 2022 are presented in the following table:

in thousands €	**Helmut Jeggle** *Chair*	**Ulrich Wandschneider, Ph.D.** *Vice Chair*	**Baroness Nicola Blackwood[1]**	**Prof. Christoph Huber, M.D.[2]**	**Prof. Anja Morawietz, Ph.D.**	**Michael Motschmann**	**Prof. Rudolf Staudigl, Ph.D.**
Base Compensation							
2023	210	105	42	28	70	70	70
2022	210	105	—	70	35	70	35
Committee Compensation							
2023	16	9	4	2	35	10	20
2022	15	35	—	10	—	25	—
Total							
2023	**226**	**114**	**46**	**30**	**105**	**80**	**90**
2022	**225**	**140**	**—**	**80**	**35**	**95**	**35**

(1) Nicola Blackwood was appointed to the Supervisory Board by the Annual General Meeting on May 25, 2023.
(2) Christoph Huber served as a member of our Supervisory Board from 2008 and left the Supervisory Board on May 25, 2023 after reaching the retirement age limit.

If the reimbursement of expenses or the compensation is subject to value-added tax, the value-added tax shall be paid in addition.

The Supervisory Board members are included in our D&O liability insurance and are co-insured at our expense.

The current appointments of our Supervisory Board will end with the Annual General Meeting during the respective year set forth below:

- Helmut Jeggle: 2026
- Ulrich Wandschneider: 2027
- Nicola Blackwood: 2027
- Anja Morawietz: 2026
- Michael Motschmann: 2027
- Rudolf Staudigl: 2026

D. COMPENSATION OF MANAGEMENT BOARD MEMBERS

1 Compensation System

1.1 Compensation System Philosophy

The compensation structure of the Company's Management Board is designed to promote corporate governance and is oriented towards the Company's sustainability and long-term development. Compensation is also linked to ethical, ecological and social criteria, reflecting our overall strategy and culture. The compensation system therefore sets incentives for the sustainable, long-term positive development of the Company as a whole and for the long-term commitment of the Management Board members. The compensation system is designed to be clear and comprehensible. It is aligned with the requirements of the AktG and the recommendations of the German Corporate Governance Code as amended on April 28, 2022 and ensures that the Company's Supervisory Board can react to organizational changes and flexibly take into account changing market conditions.

1.2 Responsibility for Determining the Compensation of the Management Board

The Supervisory Board is responsible for determining the structure of the compensation system, including targets and caps and the specific compensation of individual Management Board members. The Supervisory Board determines the compensation of the Management Board competitively and in line with the market in order to continue to attract and retain outstanding individuals.

When determining the specific compensation, the Supervisory Board ensures that the compensation of the Management Board is appropriate and in line with market customary standards.

1.3 Involvement of the Annual General Meeting

Pursuant to Sec. 120a para. 1 AktG, the Annual General Meeting (AGM) of a listed company must approve the compensation system of the Management Board presented by the Supervisory Board at least every four years and in addition whenever there is a significant change to such system. Taking the requirements of Sec. 87a para. 1 AktG into account, the Supervisory Board adopted a compensation system for the members of the Management Board on May 7, 2021. The compensation system for members of the Management Board was approved by the AGM on June 22, 2021 with a majority of 99.38% of the votes cast and is implemented whenever new service agreements are entered into, existing service agreements are extended or specific compensation components are initiated.

The Supervisory Board expects to submit modifications to the current compensation system for the Management Board and to the compensation for the Supervisory Board to our 2024 AGM for approval.

2 Compensation Components, Target Total Compensation and further Provisions

The following table gives an overview of the key provisions of the compensation system, including compensation components and target total compensation as approved by the AGM on June 22, 2021.

	Basis of Assessment/Parameters	Strategic Reference
Non-Performance related Compensation		
Fixed compensation	Fixed contractually agreed compensation paid in twelve equal monthly installments.	The compensation of the Management Board is based on customary market standard. It is also in line with their duties and performance, as well as the situation and success of the Group.
Fringe benefits	Mainly allowances for health and long-term care insurance and supplementary insurance, conclusion of D&O insurance with deductible in accordance with Sec. 93 para. 2 sentence 3 AktG, non-cash benefits from bicycles and travel allowances.	
Performance-related Compensation		
Short-term performance-related variable compensation (short-term incentive, STI)	/ Target bonus / Limit on payout amount: up to a maximum of 60% of the amount of fixed compensation; / Performance criteria: Company targets and ESG targets; / Of the STI, 50% is payable in cash in the month following approval of the consolidated financial statements; / Of the STI, 50% is payable in cash one year after the end of the financial year to which the STI relates and subject to an adjustment in relation to the share price development one year following the date, when the STI achievement is determined.	Incentivizes strong annual (non-financial and financial) performance as the foundation of the Group's long-term strategy and sustainable value creation with achieving strategic sustainability targets.
Long-term performance-related variable compensation (long-term incentive, LTI)	/ Stock Option Program and/or Restricted Stock Unit Program (RSUP); / Performance targets: Relative share price development and absolute share price development; / Waiting period: Four years after allocation of the stock options or allocation of the remaining restricted stock units.	The regular LTI is intended to promote the Management Board's long-term commitment to the Group and its sustainable growth. Therefore, the performance targets of the LTI are linked to the Group's long-term share price development.

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	Basis of Assessment/Parameters	Strategic Reference
Other Compensation Rules		
Target total compensation	/ For each Management Board member for the upcoming financial year the Supervisory Board sets Target Total Compensation corresponding to the sum of fixed compensation (~40%), target STI (~20%) and target LTI (~40%, each as percentage of the Target Total Compensation). Relative to the Target Total Compensation the individual compensation components shall reflect the following percentage ranges. / Chief Executive Officer – Fixed compensation: 25-35% – Variable compensation: 65-75% – Target STI: 12-18% – Target LTI: 50-60% / Other Management Board members – Fixed compensation: 35-45% – Variable compensation: 55-65% – Target STI: 17-23% – Target LTI: 30-40%	Sets targets to the compensation of the Management Board to ensure a well-weighted combination between fixed and variable compensation components.
Maximum compensation	Maximum compensation for the financial year in accordance with Sec. 87a para. 1 sentence 2 no. 1 AktG: / Chief Executive Officer (CEO): €20 million / Other Management Board members: €10 million Maximum compensation can only be achieved if the value of the stock options granted under the LTI at the time of exercise of the stock options is at least eight times the exercise price.	Caps the compensation of Management Board members to avoid uncontrollably high payouts and thus disproportionate costs and risks for the Group.
Further provisions	/ Supervisory Board mandates within the BioNTech group: fully compensated for with the compensation as a member of the Management Board. / Supervisory Board mandates outside the BioNTech group: Supervisory Board has to approve and decides within the scope of the approval whether and to what extent compensation is to be offset against the compensation of the Management Board member.	Further provisions also function as a cap in case of different mandates within the BioNTech Group to avoid uncontrollably payouts and risks for the Group.

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	Basis of Assessment/Parameters	Strategic Reference
Claw-back and malus rules	/ Service contracts of Management Board members to be newly concluded or extended and the terms and conditions of the Stock Option Plans and the RSUPs will contain malus and claw-back provisions entitling the Company to withhold or reclaim variable compensation components in whole or in part in the event of a breach by the Management Board member concerned of internal company policies or statutory obligations. / Service contracts of Management Board members to be newly concluded or extended and the terms and conditions of the Stock Option Plan will in future contain a provision obliging Management Board members to repay variable compensation already paid out if it transpires after payment that the basis for calculating the amount paid out was incorrect.	Ensures sustainable corporate development and ensures avoiding taking inappropriate risks.
Severance payment cap	In the event of premature termination, Management Board members are granted a severance payment in the amount of the compensation expected to be owed by the Company for the remaining term of the employment contract, up to a maximum of two years' compensation.	Caps the compensation of Management Board members in the case of premature termination to avoid uncontrollably high payouts and risks for the Group.

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3 Terms of the Current Service Agreements

The following sets forth the termination dates of the current service agreements of our Management Board:

- Prof. Ugur Sahin, M.D.: December 31, 2026
- Jens Holstein: June 30, 2025
- Sean Marett: December 31, 2024
- Sierk Poetting, Ph.D.: November 30, 2026
- Ryan Richardson: December 31, 2026
- James Ryan, Ph.D.: August 31, 2027
- Prof. Özlem Türeci, M.D.: May 31, 2025

4 Review of the Appropriateness of Management Board Compensation for the year ended December 31, 2023

Our current compensation system was derived from a thorough review performed by our Supervisory Board, which considered the major transformational changes we underwent in the past, and was approved as of June 22, 2021. The service agreements with our Management Board, which were extended or concluded during the years ended December 31, 2021, 2022 and 2023 until the respective dates outlined in section 3, have been designed to comply with the compensation system.

Consistent with previous years, in the year ended December 31, 2023, we conducted a review of the compensation system to ensure appropriateness and to re-assess current compensation. The assessment took into account BioNTech's market position. We engaged an external independent compensation consultant to assess the compensation level and structure of our compensation system to ensure that the members of the Management Board are retained and to be able to attract new appointments to the Management Board, which are in the Company's long-term interest. The analysis showed that our compensation system, which includes targets and caps, is in line with market standards and complies with the German Corporate Governance Code. The Supervisory Board will continue to examine the compensation system on a regular basis and critically review the need for adjustments in light of sustained internal and external developments. In connection with new Nasdaq listing rules and U.S. securities regulations, the Supervisory Board expects to submit modifications to the current compensation system for the Management Board to our 2024 AGM for approval in the event of a future accounting restatement. Due to the changes in BioNTech's operational and financial situation since the existing compensation system was adopted in 2021, the Compensation, Nominating and Corporate Governance Committee has proposed a modification to the compensation system during the course of the year ended December 31, 2023, which is currently being discussed with the Supervisory Board and it is expected to be proposed for approval at the 2024 AGM. The main changes will affect the LTI for the Management Board, whereby Performance Share Units (PSUs) will be implemented and the performance hurdles for stock options will also be increased. Furthermore, the pay out structure of the STI will be modified and the Company plans to implement a Share Ownership Guideline, which will require Management Board members to hold a certain value of BioNTech shares or American Depositary Shares (ADSs).

5 Compensation during the year ended December 31, 2023

5.1 Target Total and Maximum Compensation

The Management Board's target total compensation (TTC) for the years ended December 31, 2023, and 2022 is presented below. The following table discloses the compensation instruments and demonstrates their compliance with the defined target percentage ranges.

	Prof. Ugur Sahin, M.D. Years ended December 31,				Jens Holstein[1] Years ended December 31,			
	2023		2022		2023		2022	
	in thousand €	*in % of TTC*	*in thousand €*	*in % of TTC*	*in thousand €*	*in % of TTC*	*in thousand €*	*in % of TTC*
Non-performance related compensation								
Fixed compensation	700	32	360	28	550	39	550	39
Fringe benefits	6		6		5		7	
Performance-related compensation								
Short-term incentive	350	16	180	14	300	21	300	21
Management Board Grant – LTI	1,150	52	750	58	550	39	550	39
Target Total Compensation (TTC)	**2,206**	**100**	**1,296**	**100**	**1,405**	**100**	**1,407**	**100**

(1) Jens Holstein's compensation overview excludes a one-time special payment during the year ended 2023. For further information, ***see section 5.4.***

	Sean Marett[1]				Sierk Poetting, Ph.D.			
	Years ended December 31,				Years ended December 31,			
	2023		2022		2023		2022	
	in thousand €	*in % of TTC*	*in thousand €*	*in % of TTC*	*in thousand €*	*in % of TTC*	*in thousand €*	*in % of TTC*
Non-performance related compensation								
Fixed compensation	550	39	513	37	550	39	550	39
Fringe benefits	12	1	8	1	5		4	
Performance-related compensation								
Short-term incentive	300	21	300	22	300	21	300	21
Management Board Grant – LTI	550	39	550	40	550	39	550	39
Target Total Compensation (TTC)	**1,412**	**100**	**1,371**	**100**	**1,405**	**100**	**1,404**	**100**

(1) Sean Marett's compensation overview excludes the one-time signing and retention cash payment granted to him at the time of the extension of his service agreement during the year ended 2022.

	Ryan Richardson				James Ryan, Ph.D.[1]			
	Years ended December 31,				Years ended December 31,			
	2023		2022		2023		2022	
	in thousand €	*in % of TTC*	*in thousand €*	*in % of TTC*	*in thousand €*	*in % of TTC*	*in thousand €*	*in % of TTC*
Non-performance related compensation								
Fixed compensation	550	39	340	42	183	65	—	—
Fringe benefits	26	2	27	3	-		—	—
Performance-related compensation								
Short-term incentive	300	21	170	21	100	35	—	—
Management Board Grant – LTI	550	39	280	34	-		—	—
Target Total Compensation (TTC)	**1,426**	**100**	**817**	**100**	**283**	**100**	—	—

(1) James Ryan was appointed to the Management Board as Chief Legal Officer (CLO) as of September 1, 2023. His compensation overview excludes the one-time signing bonus granted to him at the time of such appointment. For further information, ***see section 5.3.***

	Prof. Özlem Türeci, M.D.			
	Years ended December 31,			
	2023		2022	
	in thousand €	*in % of TTC*	*in thousand €*	*in % of TTC*
Non-performance related compensation				
Fixed compensation	550	39	518	38
Fringe benefits	—		—	
Performance-related compensation				
Short-term incentive	300	21	300	22
Management Board Grant – LTI	550	39	550	40
Target Total Compensation (TTC)	**1,400**	**100**	**1,368**	**100**

Starting with the phantom share options issued in May 2021 ***(see section 5.5),*** the agreements are subject to a maximum limit on the total compensation that the member is entitled to receive in the grant year, taking into account all other compensation received by such member during the applicable year. These amounts are €20.0 million for our Chief Executive Officer (CEO), and €10.0 million for all other members. For the purposes of this limitation, compensation components are attributed to the financial year they are granted, irrespective of when they are ultimately paid out.

5.2 Fixed Compensation and Fringe Benefits

Fixed compensation is primarily paid out as a salary in twelve monthly installments. Other components of fixed compensation include fringe benefits, such as allowances for health and long-term care insurance and supplementary insurance, non-cash benefits for bicycles, and travel allowances. The Management Board also benefits from our D&O insurance policy. Our D&O insurance expenses are not considered compensation, as they are incurred in the Company's own interests to cover risks for our Management Board and Supervisory Board, and senior executives and managing directors of BioNTech group entities.

Effective January 1, 2023, Ugur Sahin's annual fixed compensation was increased to €700,000 from €360,000 as part of an annual compensation review to ensure competitive compensation comparable to that of companies in a comparable sector and relevant peer group. Jens Holstein's effective annual fixed compensation was €550,000 during each of the years ended December 31, 2023 and 2022. Effective April 1, 2022, Sean Marett's annual fixed compensation was increased from €400,000 to €550,000. Hence, during the years ended December 31, 2023 and 2022, his effective annual fixed compensation amounted to €550,000 and €512,500, respectively. Sierk Poetting's effective annual fixed compensation amounted to €550,000, respectively, during the years ended December 31, 2023 and 2022. Effective as of his appointment to the Management Board as of September 1, 2023, James Ryan's annual fixed compensation was €550,000. His compensation is partly paid in the U.K. (in GBP) by the Company's subsidiary, BioNTech UK Limited, and partly in Germany (in Euro). During the year ended December 31, 2023, his effective annual fixed compensation as a Management Board member amounted to €183,333. Ryan Richardson's annual fixed compensation was increased from €340,000 to €550,000 leading to the respective effective annual fixed compensation during the years ended December 31,

2023 and 2022. Effective March 1, 2022, Özlem Türeci's annual fixed compensation was increased from €360,000 to €550,000. Hence, during the years ended December 31, 2023 and 2022, her effective annual fixed compensation amounted to €550,000 and €518,333, respectively. The increase in the fixed compensation payable to Sean Marett, Ryan Richardson and Özlem Türeci increased to €550,000 to align with the fixed compensation payable to Jens Holstein under his 2021 service agreement, which was considered necessary and in the Company's interest to retain our existing Management Board members. All of the Management Board members' activities for BioNTech Group companies are compensated by their base compensation of €550,000 and in the case of Ugur Sahin, €700,000.

5.3 Short-Term Incentive Compensation (STI)

The STI is a performance-related bonus with a one-year assessment period. The compensation system provides for STI amounts up to a maximum of 60% of the amount of the fixed compensation per year. The payout amount of the short-term incentive compensation depends on the achievement of certain financial and non-financial performance criteria of the Group in a particular financial year, which goals are set uniformly for all members of the Management Board. The Supervisory Board exercises reasonable discretion in determining whether such criteria have been achieved. A detailed description of the STI and potential performance targets are included in our compensation system.

During the year ended December 31, 2022, the maximum short-term incentive compensation for each of Ugur Sahin, Jens Holstein, Sean Marett, Sierk Poetting, Ryan Richardson and Özlem Türeci was €180,000; €300,000; €300,000; €300,000; €170,000; and €300,000, respectively, which, considering the 2022 target achievement of 85%, led to respective annual bonus amounts of €153,000; €255,000; €255,000; €255,000; €144,500; and €255,000. Following the extension of their respective service agreements and in line with the changes in their annual fixed compensation, the maximum short-term incentive compensation for Ugur Sahin and Ryan Richardson was increased to €350,000 and €300,000 respectively. Following his appointment to the Management Board as of September 1, 2023, the maximum short-term compensation for James Ryan was defined on a pro-rata basis and amounted to €100,000 for the year ended December 31, 2023. Based on the 2023 target achievement of 90%, the annual bonus amounts for Ugur Sahin, Jens Holstein, Sean Marett, Sierk Poetting, Ryan Richardson, James Ryan and Özlem Türeci for the year ended December 31, 2023 amounted to €315,000; €270,000; €270,000; €270,000; €270,000; €90,000; and €270,000, respectively.

During the year ended December 31, 2023, upon the recommendation of the Compensation, Nomination and Corporate Governance Committee, the Supervisory Board approved a special payment in the gross amount of €600,000 to Jens Holstein. The special payment was made to honor Jens Holstein's contribution to the extraordinary financial performance of BioNTech and recognize his efforts to strengthen the Company's long-term financial performance. Of this payment, Jens Holstein used €150,000 net of costs and expenses to purchase 1,620 BioNTech shares during the year ended December 31, 2023 to further strengthen his long-term commitment.

During the year ended December 31, 2023, as part of his appointment to the Management Board, James Ryan received a one-time signing cash payment in the amount of €180,000. The one-time signing cash payment provided compensation in lieu of participation in the LTI 2023 program, which was allocated before his appointment, and a pro-rata allocation for 2023 would not have been permitted under our current AGM authorizations, as ESOPs may only be issued within the first six months of each calendar year. Of this payment, James Ryan shall use 50% net of costs and expenses to purchase BioNTech shares on or before August 31, 2024 to further strengthen his long-term commitment.

The following table summarizes the overall target achievement and the resulting annual bonus payout amount per Management Board member.

		Compensation Corridor			STI Payment *(in thousand)*	
Short-Term Incentive Compensation (STI) for the year ended December 31, 2023	**Relative to fixed compensation** *(in %)*	Lower Limit (0%)	Upper Limit (100%)	**Overall Target Achieve-ment** *(in %)*	**Thereof First Installment to be paid out in April 2024**	**Thereof Second Installment deferred and to be paid out in February 2025**[1]
Prof. Ugur Sahin, M.D.	50	—	350	90	158	158
Jens Holstein	55	—	300	90	135	135
Sean Marett	55	—	300	90	135	135
Sierk Poetting, Ph.D.	55	—	300	90	135	135
Ryan Richardson	55	—	300	90	135	135
James Ryan, Ph.D.[2]	55	—	100	90	45	45
Prof. Özlem Türeci, M.D.	55	—	300	90	135	135

(1) Deferred amount is dependent on the share price development during the year following the determination date in Februar 2024.
(2) Appointed effective as of September 1, 2023.

The performance targets defined by our Supervisory Board for the year ended December 31, 2023 are related both to our financial performance and to our strategic and operational objectives, as we aim to advance our pipeline into market readiness. As shown in the table below, the ambitious and measurable financial and non-financial performance targets include various Company Goals as well as Environmental, Social and Corporate Governance, or ESG, targets and were defined in line with the applicable compensation system.

The Supervisory Board made the following determinations at the beginning of the 2024 financial year.

	Performance Targets 2023 Financial Year	Target Performance *(in %)*	Level of Target Achievement *(in %)*	Achieved Target Performance *(in %)*
Company Goals	Achieve financial targets	30%	53%	16%
	Accelerate Oncology Pipeline	20%	75%	15%
	Expand Comirnaty Franchise	18%	100%	18%
	Advance technological and manufacturing capabilities	16%	81%	13%
ESG Targets	Enable entrepreneurial spirit at scale, care for people and culture and achieve highest quality, CSR and compliance standards	31%	84%	26%
Additional Incentives	Achievements with significant value for the company that were not planned or known at the beginning of 2023	10%	20%	2%
	Total	**125%**		**90%**

During the year ended December 31, 2023, we advanced and diversified our innovation pipeline to serve a larger patient population; in particular, we advanced our mid- to late-stage oncology and our infectious disease pipeline by progressing various programs into and within the clinic. Furthermore, we continued to help fight the pandemic by broadening access to Comirnaty worldwide. We also advanced our technological and manufacturing capabilities with different construction projects worldwide and became a leading artificial intelligence and machine learning company with the acquisition of InstaDeep. While we went from a pandemic to an endemic market situation and continued investing into our pipeline, we were able to remain profitable during the 2023 financial year and ended with a €17.7 billion cash and security investment balance as of December 31, 2023. Additionally, during the year ended December 31, 2023 we further improved our governance to achieve and maintain highest possible quality, CSR and compliance standards. Furthermore, we continued our Company's growth strategy, by elevating our corporate function, hiring qualified personnel and caring for our people. The determination on the actual achievement of the performance targets by the Supervisory Board for the year ended December 31, 2023 was 90%.

The first installment of the STI for the year ended December 31, 2023 will be paid out in April 2024, the month after the approval of the consolidated financial statements. The first installment of the STI for the year ended December 31, 2023 was considered granted and owed in 2023, the year in which the activity to which the compensation relates, was performed. The first installment of the STI for the year ended December 31, 2022 was considered granted and owed in 2022 and was paid out in April 2023.

The second installment of the STI for the year ended December 31, 2023 was also considered granted and owed in 2023, as the Management Board had already completed the activity to which it relates. It will be paid out in February 2025 subject to an adjustment due to the share-price development. The second installment of the STI for the year ended December 31, 2022 was considered granted and owed in 2022 and was paid out in March 2024 with adjustments due to the share-price development.

The second STI installment is subject to adjustments in relation to the development of the share price between the determination date, when the STI achievement is determined, and the respective anniversary of

that date (i.e., in the event of an increase or decrease in the share price, based on the market price of ADSs representing our ordinary shares, the payment amount is multiplied by the factor of the development of the share price).

Outlook for the 2024 Short-Term Incentive Compensation

For the year ending December 31, 2024 the Supervisory Board defined the following performance targets and their weighting for all Management Boards Members. The building blocks of the ambitious and measurable financial and non-financial performance targets comprise various Company Goals as well as an Environmental, Social and Corporate Governance-targets and Additional Incentives. Each of the performance targets containing sub-targets with a relative weighting that adds to a maximal total achievable target of 125%, whereby the maximum payout on the STI is capped at 100% .

	Performance Targets 2024 Financial Year	Target Performance *(in %)*
Company Goals	Maintain sustainable Financials targets	15%
	Continue to build a competitive commercial business	15%
	Advance pipeline towards market	65%
ESG Targets	Further improve ESG & Global Health impact	20%
Additional Incentives	Rewards for achievements at the discretion of the Supervisory Board	10%
	Total	**125%**

5.4 Share-Based Payments (incl. Long-Term Incentive (LTI) and other one-time awards)

Our Management Board's service agreements provide for long-term incentive compensation (Management Board Grant - LTI) through an annual grant of options to acquire BioNTech shares during their respective service periods. These LTI awards are in line with our compensation system approved by the AGM on June 22, 2021. The options granted each year are subject to the terms and conditions of the respective authorizations of the Annual General Meeting creating our Employee Stock Ownership Plan (ESOP) and the applicable option agreements thereunder ***(see section 5.5 below).***

During the year ended December 31, 2022, the number of options granted to Ugur Sahin, Jens Holstein, Sean Marett, Sierk Poetting, Ryan Richardson and Özlem Türeci was calculated based on a target value of €750,000; €550,000; €550,000; €550,000; €280,000; and €550,000, respectively. Beginning on January 1, 2023, the target for the number of options to be granted each year for Ugur Sahin and Ryan Richardson was increased to a value of €1,050,000 and €550,000, respectively, as part of an annual compensation review to ensure competitive compensation. As a result, the number of options granted to Ugur Sahin, Jens Holstein, Sean Marett, Sierk Poetting, Ryan Richardson and Özlem Türeci was calculated based on a target value of €1,050,000; €550,000; €550,000; €550,000; €550,000; and €550,000, respectively. The service agreement with James Ryan provides that granted options will generally be calculated based on a target value of €550,000. However, as the annual grant is generally made in the first half of the year, no LTI was granted for the period from his appointment on September 1, 2023 to December 31, 2023.

The Supervisory Board granted Jens Holstein a one-time signing bonus of €800,000 in connection with his appointment in the form of 4,246 phantom shares. The phantom shares vest in four equal installments on July 1 of 2022, 2023, 2024, and June 30, 2025 but will only be settled in cash on July 1, 2025. The cash payment is subject to an effective settlement closing price cap. This means that the settlement closing price shall effectively be adjusted to ensure that the current price of an ADS as of the settlement date does not exceed 800% of the closing price applied when the award was initially granted. In addition, the total cash payment under the award shall not exceed €6.4 million.

We have also entered into one-time share-based payment arrangements with our Management Board members, including the Employee Stock Ownership Plan (ESOP) granted in 2018 (ESOP 2018 Program) and the Chief Executive Officer Grant granted in 2019 (CEO Grant 2019), which are explained in detail in section 5.5 below.

During the year ended December 31, 2022, option rights granted under the ESOP 2018 vested and became exercisable on September 16, 2022 for James Ryan, and on November 15, 2022 for Ugur Sahin, Sierk Poetting and Sean Marett. The option rights granted to Ryan Richardson and Özlem Türeci, which had vested in 2019 but were subject to performance and waiting conditions, became exercisable on September 16, 2022 and November 15, 2022, respectively. During the exercise period, the options rights remain subject to performance conditions which must be fulfilled as of the date the relevant option rights are exercised. Following the vesting of 25% on an annual basis since 2019, the CEO Grant 2019 vested and became exercisable on October 9, 2023. In addition, the various LTI awards vest at a rate of 25% annually over four years. The annual vesting dates starting the year after the options were awarded are as follows: February 13 for the LTI 2020 award, May 12 (for all Management Board members except Jens Holstein; May 17 for Jens Holstein) for the LTI 2021 award, May 31 for the LTI 2022 award, and May 22 for the LTI 2023 award. While vesting, the LTI awards continue to be subject to performance and waiting conditions. Jens Holstein's one-time signing bonus also vests at a rate of 25% annually over four years until June 30, 2025. The award continues to be subject to waiting conditions over the vesting period.

The benefits from our share-based payment arrangements (including long-term incentive) are considered granted and owed when the awards are settled. For further explanations, see section 5.6. During the years ended December 31, 2023 and 2022, this definition applies to the option rights granted under the ESOP 2018 Program as a result of their exercise and settlement. Although the entire CEO Grant 2019 became exercisable during the year ended December 31, 2023, it was not considered granted and owed, as it was not actually exercised and remains accessible. With respect to the ESOP 2018 Program, the table "Compensation Granted and Owed" in section 5.6 shows the implied market value calculated using the closing price of an American Depositary Share of BioNTech on Nasdaq on the respective last day preceding the exercise dates converted from USD to Euro using the exchange rates published by the German Central Bank *(Deutsche Bundesbank)* on the same days, as well as using the effective exercise price and maximum cap mechanism for all Management Board members. The implied market value may vary from the benefit in kind.

5.5 Additional Disclosures on Share-Based Payment Instruments

In accordance with Sec. 162 para. 1 no. 3 AktG, the table below provides an overview of the share options and other share-based payment instruments allocated to our Management Board and outstanding as of December 31, 2023.

	Grant Date/ Allocation Date	Number of Ordinary Shares Underlying Share Options/Number of Phantom Share Options[1]	Option Exercise Price (€)[11]	Earliest Option Exercise Date[9]	Option Expiration Date	Name of the Program
Prof. Ugur Sahin, M.D.	10/09/2019[2]	4,374,963	13.57	10/9/2023	10/9/2029	CEO Grant 2019
	2/13/2020[3]	97,420	27.86	2/13/2024	2/13/2030	LTI 2020[10]
	5/12/2021[4]	17,780	167.63	5/12/2025	5/12/2031	LTI 2021[10]
	5/31/2022[5]	19,997	137.65	5/31/2026	5/31/2032	LTI 2022[10]
	5/20/2023[6]	38,506	103.12	5/20/2027	5/20/2033	LTI 2023[10]
Jens Holstein	5/17/2021[4]	6,463	169.08	5/17/2025	5/17/2031	LTI 2021[10]
	7/1/2021[8]	4,246	n/a[8]	7/1/2025[8]	n/a[8]	Signing Bonus
	5/31/2022[5]	14,664	137.65	5/31/2026	5/31/2032	LTI 2022[10]
	5/20/2023[6]	18,416	103.12	5/20/2027	5/20/2033	LTI 2023[10]
Sean Marett	11/15/2018	—	10.14	11/15/2022	11/15/2026	ESOP 2018
	2/13/2020[3]	38,968	27.86	2/13/2024	2/13/2030	LTI 2020[10]
	5/12/2021[4]	7,112	167.63	5/12/2025	5/12/2031	LTI 2021[10]
	5/31/2022[5]	14,664	137.65	5/31/2026	5/31/2032	LTI 2022[10]
	5/20/2023[6]	18,416	103.12	5/20/2027	5/20/2033	LTI 2023[10]
Sierk Poetting, Ph.D.	2/13/2020[3]	38,968	27.86	2/13/2024	2/13/2030	LTI 2020[10]
	5/12/2021[4]	7,112	167.63	5/12/2025	5/12/2031	LTI 2021[10]
	5/31/2022[5]	14,664	137.65	5/31/2026	5/31/2032	LTI 2022[10]
	5/20/2023[6]	18,416	103.12	5/20/2027	5/20/2033	LTI 2023[10]
Ryan Richardson	2/13/2020[3]	33,772	27.86	2/13/2024	2/13/2030	LTI 2020[10]
	5/12/2021[4]	6,163	167.63	5/12/2025	5/12/2031	LTI 2021[10]
	5/31/2022[5]	7,465	137.65	5/31/2026	5/31/2032	LTI 2022[10]
	5/20/2023[6]	18,416	103.12	5/20/2027	5/20/2033	LTI 2023[10]
James Ryan, Ph.D.[7]	12/15/2020	1,163	n/a	12/15/2024	n/a	LTI 2020 (EEP)
	12/10/2021	313	n/a	12/10/2025	n/a	LTI 2021 (EEP)
	12/09/2022	740	n/a	12/9/2026	n/a	LTI 2022 (EEP)
	12/08/2023	750	n/a	12/8/2027	n/a	LTI 2023 (EEP)
Prof. Özlem Türeci, M.D.	2/13/2020[3]	38,968	27.86	2/13/2024	2/13/2030	LTI 2020[10]
	5/12/2021[4]	7,112	167.63	5/12/2025	5/12/2031	LTI 2021[10]
	5/31/2022[5]	14,664	137.65	5/31/2026	5/31/2032	LTI 2022[10]
	5/20/2023[6]	18,416	103.12	5/20/2027	5/20/2033	LTI 2023[10]

(1) The 18-for-1 stock split of our ordinary shares, which became effective on September 18, 2019 upon registration with the commercial register (Handelsregister) is reflected in share amounts granted in advance.
(2) Options vested in four equal installments on October 9 of 2020, 2021, 2022 and 2023. With the final installment vesting in 2023, the entire award became exercisable. As Ugur Sahin did not exercise in 2023, the options remain exercisable and can only be exercised during the exercise windows as defined by our ESOP.
(3) Options vested in four equal installments on February 13 of 2021, 2022, 2023 and 2024, and are now exercisable following the expiry of the waiting period on February 13, 2024 and can only be exercised during the exercise windows as defined by our ESOP.
(4) Options were issued as phantom share options and vest in four equal installments on May 12 of 2022, 2023, 2024 and 2025 for all Management Board members except Jens Holstein, and in the case of Jens Holstein, vest in four equal installments on May 17 of 2022, 2023, 2024 and 2025. The options will not become exercisable before the expiry of the waiting period on May 12, 2025 and May 17, 2025, respectively, and can only be exercised during the exercise windows as defined by our ESOP.
(5) Options were issued as phantom share options and vest in four equal installments on May 31 of 2023, 2024, 2025 and 2026 for all Management Board members. The options will not become exercisable before the expiry of the waiting period on May 31, 2026 and can only be exercised during the exercise windows as defined by our ESOP.
(6) Options vest in four equal installments on May 20 of 2024, 2025, 2026 and 2027. The options will not become exercisable before the expiry of the waiting period on May 20, 2027 and can only be exercised during the exercise windows as defined by our ESOP.
(7) As James Ryan was not part of the Management Board at the time the 2023 LTI award was allocated, he did not receive any options under the ESOP. Prior to his appointment to the Management Board, RSUs were granted to him under the BioNTech 2020 Employee Equity Plan (EEP). RSUs issued under the LTI 2020 (EEP), LTI 2021 (EEP), LTI 2022 (EEP) and LTI 2023 (EEP) programs vest annually in equal installments over four years commencing in December 2020, December 2021, December 2022 and December 2023 respectively and will be settled after a waiting period of four years.
(8) In connection with Jens Holstein's appointment to the Management Board as Chief Financial Officer (CFO) as of July 1, 2021, the Supervisory Board granted him a one-time signing bonus as outlined in section 5.4. n/a = not applicable
(9) Indicates end of the respective waiting periods, additional restrictions with respect to exercise windows may apply.
(10) Management Board Grant (Long-Term Incentive) in the respective years.
(11) All options are subject to an effective exercise price cap. This means that the exercise price shall effectively be adjusted to ensure that the current price of an ADS as of the exercise does not exceed 800% of the exercise price. With respect to the ESOP 2018 Program and the CEO Grant 2019, the maximum economic benefit receivable in respect of any exercised is capped at $240.00 with the effective exercise price being capped at a Euro amount equivalent to $30.00. With respect to the LTI 2020, the maximum economic benefit receivable in respect of any exercised option is capped at $246.24, with the effective exercise price being capped at a Euro amount equivalent to $30.78. With respect to the phantom share options issued under the LTI 2021 and 2022 as well as the options issued under the LTI 2023 programs, the maximum compensation that the Management Board members are entitled to receive under such programs, together with other compensation components received by each such board member in the respective grant year, shall not exceed €20.0 million for Ugur Sahin as Chief Executive Officer (CEO) and €10.0 million for all other Management Board members.

Management Board Grant (Long-Term Incentive)

Our Management Board's service agreements provide for long-term incentive compensation (Management Board Grant - LTI) through an annual grant of options to acquire BioNTech shares during their respective service periods. The options granted each year are subject to the terms and conditions of the respective authorizations of the Annual General Meeting creating our Employee Stock Ownership Plan (ESOP) and the applicable option agreements thereunder. The allocation of the number of issued options in 2020 occurred in February 2020. In May 2021 and May 2022, the Management Board received phantom options equivalent to the number of options the Management Board members would have been entitled to receive for 2021 and 2022. During 2023, options were granted in May 2023.

For the awards allocated as of February 13, 2020; May 12, 2021; May 17, 2021; May 31, 2022 and May 20, 2023, the exercise prices are $30.78 (€27.86); $185.23 (€167.63); $186.83 (€169.08); $152.10 (€137.65)and $113.94 (€103.12) respectively (all amounts calculated as of December 31, 2023 using the foreign exchange rate as published by the German Central Bank *(Deutsche Bundesbank)*).

All options are subject to an effective exercise price cap, which means that the exercise price shall be adjusted to ensure that the current price of an ADS as of the exercise date does not exceed 800% of the exercise price. With respect to the LTI 2020, the maximum economic benefit receivable in respect of any exercised option is capped at $246.24, with the effective exercise price being capped at a Euro amount equivalent to $30.78. With respect to the phantom share options issued under the LTI 2021 and 2022 as well as the options issued under the LTI 2023 programs, the maximum compensation that the Management Board members are entitled to receive under such programs, together with other compensation components received by each such board member in the respective grant year, shall not exceed €20.0 million for Ugur Sahin as Chief Executive Officer (CEO) and €10.0 million for all other Management Board members. The options vest annually in equal installments over four years commencing on the first anniversary of the allocation date and become exercisable four years after the allocation date.

The vested options can only be exercised if each of the following performance criteria has been achieved: (i) at the time of exercise, the current price is equal to or greater than the threshold amount (that is, the exercise price, provided that such amount increases by seven percentage points on each anniversary of the allocation date); (ii) at the time of exercise, the current price is at least equal to the target price (that is, (a) for the twelve-month period starting on the fourth anniversary of the allocation date, $8.5 billion divided by the total number of the ordinary shares outstanding immediately following the initial public offering (other than ordinary shares owned by BioNTech), and (b) for each twelve-month period starting on the fifth or subsequent anniversary of the allocation date, 107% of the target share price applicable for the prior twelve-month period); and (iii) the closing price for the fifth trading day prior to the start of the relevant exercise window is higher than the exercise price by at least the same percentage by which the Nasdaq Biotechnology Index or a comparable successor index as of such time is higher than such index was as of the last trading day before the allocation date. Following the expiry of the waiting period, option rights may be exercised during the exercise windows as set out in the ESOP agreement. The option rights can be exercised up to ten years after the allocation date. If they have not been exercised by that date, they will be forfeited without compensation.

The tables below show the development and the outstanding number of share options as of and between the dates indicated:

Management Board Grant (LTI 2020)

Number of Ordinary Shares Underlying Share Options	Prof. Ugur Sahin, M.D.	Jens Holstein[1]	Sean Marett	Sierk Poetting, Ph.D.	Ryan Richardson	James Ryan, Ph.D.[2]	Prof. Özlem Türeci, M.D.
As of December 31, 2022	97,420	—	38,968	38,968	33,772	—	38,968
Exercised	—	—	—	—	—	—	—
As of December 31, 2023	97,420	—	38,968	38,968	33,772	—	38,968

(1) Jens Holstein was appointed to the Management Board as Chief Financial Officer (CFO) as of July 1, 2021, subsequent to the allocation of the Management Board Grant (LTI 2020).
(2) James Ryan was appointed to the Management Board as Chief Legal Officer (CLO) as of September 1, 2023, subsequent to the allocation of the Management Board Grant (LTI 2020).

Management Board Grant (LTI 2021)

Number of Phantom Share Options	Prof. Ugur Sahin, M.D.	Jens Holstein	Sean Marett	Sierk Poetting, Ph.D.	Ryan Richardson	James Ryan, Ph.D.[1]	Prof. Özlem Türeci, M.D.
As of December 31, 2022	17,780	6,463	7,112	7,112	6,163	—	7,112
Exercised	—	—	—	—	—	—	—
As of December 31, 2023	17,780	6,463	7,112	7,112	6,163	—	7,112

(1) James Ryan was appointed to the Management Board as Chief Legal Officer (CLO) as of September 1, 2023, subsequent to the allocation of the Management Board Grant (LTI 2021).

Management Board Grant (LTI 2022)

Number of Phantom Share Options	Prof. Ugur Sahin, M.D.	Jens Holstein	Sean Marett	Sierk Poetting, Ph.D.	Ryan Richardson	James Ryan, Ph.D.(1)	Prof. Özlem Türeci, M.D.
As of December 31, 2022	19,997	14,664	14,664	14,664	7,465	—	14,664
Exercised	—	—	—	—	—	—	—
As of December 31, 2023	19,997	14,664	14,664	14,664	7,465	—	14,664

(1) James Ryan was appointed to the Management Board as Chief Legal Officer (CLO) as of September 1, 2023, subsequent to the allocation of the Management Board Grant (LTI 2022).

Management Board Grant (LTI 2023)

Number of Share Options	Prof. Ugur Sahin, M.D.	Jens Holstein	Sean Marett	Sierk Poetting, Ph.D.	Ryan Richardson	James Ryan, Ph.D.[1]	Prof. Özlem Türeci, M.D.
As of December 31, 2022	—	—	—	—	—	—	—
Allocated	38,506	18,416	18,416	18,416	18,416	—	18,416
Exercised	—	—	—	—	—	—	—
As of December 31, 2023	38,506	18,416	18,416	18,416	18,416	—	18,416

(1) James Ryan was appointed to the Management Board as Chief Legal Officer (CLO) as of September 1, 2023, subsequent to the allocation of the Management Board Grant (LTI 2023).

The following is a presentation of the one-time programs that were approved prior to the adoption of the compensation system during the year ended December 31, 2021:

Chief Executive Officer Grant 2019
In September 2019, we granted Ugur Sahin an option to purchase 4,374,963 of our ordinary shares, subject to his continuous employment with us. The exercise price per share of each option is $15.00 (€13.57), being the public offering price from our initial public offering converted into Euros as of December 31, 2023, and which is subject to the effective exercise price cap and the maximum cap mechanism. Under the effective exercise price cap, the exercise price shall be adjusted to ensure that the current price of an ADS as of the exercise date does not exceed 800% of the exercise price. Under the maximum cap mechanism, the maximum economic benefit receivable in respect of any exercised option is capped at $240, with the effective exercise price being capped at a Euro amount equivalent to $30.00. Under this CEO Grant, the options vested annually in equal installments over four years commencing on the first anniversary of our initial public offering.

The vested option rights can only be exercised if and to the extent that each of the following performance criteria has been achieved: (i) at the time of exercise, the current price is equal to or greater than the threshold amount (that is, the exercise price, provided that such amount increases by seven percentage points on each anniversary of the allocation date); (ii) at the time of exercise, the current price is at least equal to the target price (that is, (a) for the twelve-month period starting on the fourth anniversary of the allocation date, $8.5 billion divided by the total number of the shares outstanding immediately following the initial public offering (other than shares owned by us), and (b) for each twelve-month period starting on the fifth or subsequent anniversary of the allocation date, 107% of the target share price applicable for the prior twelve-month period); and (iii) the closing price for the fifth trading day prior to the start of the relevant exercise window is higher than the exercise price by at least the same percentage by which the Nasdaq Biotechnology Index or a comparable successor index as of such time is higher than such index was as of the last trading day before the allocation date. Following the expiry of the waiting period, option rights may be exercised during the exercise windows as defined by our ESOP. The option rights can be exercised up to ten years after the allocation date. If they have not been exercised by that date, they will be forfeited without compensation.

On October 9, 2023, with the final installment vesting, all 4,374,963 options became exercisable under the rules of the ESOP and the ESOP agreement. During the year ended December 31, 2023, no options were exercised.

Employee Stock Ownership Plan 2018
Based on an authorization of the general meeting on August 18, 2017, we established a share option program under which we granted selected employees options to receive our shares. The program is designed as an Employee Stock Ownership Plan, or ESOP. We offered participants a certain number of option rights by their explicit acceptance of an option rights agreement. The exercise of option rights in accordance with the agreement gives the participants the right to obtain shares against payment of the exercise price. With respect to the Management Board members serving at the time of allocation, the options are subject to the effective exercise price cap and maximum cap mechanisms. Under the exercise price cap, the exercise price shall be adjusted to ensure that the current price of an ADS as of the exercise date does not exceed $30.00. Under the ESOP, the option rights (other than Özlem Türeci's, and Ryan Richardson's options) fully vest after four years and can be exercised if: (i) the waiting period of four years has elapsed; and (ii) at the time of exercise, the average closing price of the shares of the Company or the average closing price of the right or certificate to be converted into an amount per share on the previous ten trading days preceding the exercise of the option right exceeds the strike price by a minimum of 32%, with this percentage increasing by eight percentage points as of the fifth anniversary of the respective issue date and as of each subsequent anniversary date. Following the expiry of the waiting period, option rights may be exercised within a period of four weeks from the date of the Annual General Meeting or the publication of the annual financial statements, the semi-annual report or our most recent quarterly report or interim report (exercise windows). The option rights can be exercised up to eight years after the allocation date. If they have not been exercised by that date, they will be forfeited without compensation.

By way of a shareholders' resolution of the general meeting on August 19, 2019, the authorization to issue such option rights was amended such that, in order for the options to be exercisable, the average closing price of the Company's shares or the average closing price of the right or certificate to be converted into an amount per share on the ten trading days immediately preceding the exercise must exceed the strike price by a minimum of 28%, with this percentage increasing by seven percentage points as of the fifth anniversary of the issue date and as of each subsequent anniversary date. Furthermore, in addition to the aforementioned requirements, the exercise is only possible if the share price (calculated by reference to the price of the ordinary share underlying the ADS) has performed similar to or better than the Nasdaq Biotechnology Index. The changes made do not affect option rights already issued.

In September 2022, the Supervisory Board determined the ESOP settlement by the delivery of treasury shares (in the form of ADSs) equal to the net value of the exercised option rights after deduction of (i) the exercise price and (ii) the applicable wage taxes (including solidarity surcharge thereon and church tax, if applicable) and social security contributions resulting from such exercise. The settlement was applied during the exercise windows in 2022 and 2023.

The table below shows the development and the outstanding number of share options as of and between the dates indicated:

ESOP 2018

Number of Ordinary Shares Underlying Share Options	Prof. Ugur Sahin, M.D.	Jens Holstein[1]	Sean Marett	Sierk Poetting, Ph.D.	Ryan Richardson	James Ryan, Ph.D.[2]	Prof. Özlem Türeci, M.D.
As of December 31, 2022	**—**	**—**	**230,780**	**—**	**—**	**—**	**—**
Exercised	—	—	(230,780)	—	—	—	—
As of December 31, 2023	—	—	—	—	—	—	—

(1) Jens Holstein was appointed to the Management Board as Chief Financial Officer (CFO) as of July 1, 2021.
(2) James Ryan was appointed to the Management Board as Chief Legal Officer (CLO) as of September 1, 2023.

Except for Sean Marett, all Management Board members exercised all their option rights during the year ended December 31, 2022. Sean Marett exercised his remaining 230,780 option rights in 2023. The members of the Management Board do not have any options from the ESOP 2018 program outstanding as of December 31, 2023. The members of the Management Board have mainly retained most of the shares resulting from the settlement and therefore hold an important stake in our company's future.

5.6 Compensation Granted and Owed during the year ended December 31, 2023

The total compensation granted or owed according to Sec. 162 para. 1 AktG to all members of the Management Board for the years ended December 31, 2023, and 2022 is presented in the table below. Compensation is considered granted if it either has been actually received or the activities to which it relates have been performed. Compensation is considered owed if the compensation components are legally due, but have not yet been received. Hereinafter, when the former definition applies, compensation is referred to only as being "granted and owed." The Institute of Public Auditors in Germany, Incorporated Association *(Institut der Wirtschaftsprüfer, IDW)* has provided two interpretations for the presentation. According to interpretation 1, compensation is only shown as granted and owed in the year in which it is received (inflow principle; *"Zuflussprinzip"*). According to interpretation 2, compensation may also be disclosed in the compensation report for the financial year in which the activity underlying the compensation was performed (vesting principle; *"Erdienungsprinzip"*). The Supervisory Board and the Management Board have decided to apply interpretation 2 for short-term compensation components such as fixed compensation and short-term incentives (STI) and interpretation 1 for share-based payments (incl. long-term incentives (LTI)). An approach which deviates from interpretation 1 was chosen because it allows a fair presentation of the actual benefits, which are, for example, subject to final underlying share price developments.

As outlined in section 5.4, during the year ended December 31, 2022, the options granted under the ESOP 2018 Program vested and became exercisable (option rights allocated to Ryan Richardson and Özlem Türeci had already vested in 2019, but continued to be subject to performance and waiting conditions). During the year ended December 31, 2023, the options granted under the CEO Grant 2019 vested and became exercisable. During the exercise period, the options rights remain subject to performance conditions which have to be fulfilled as of the date the relevant option rights are exercised. The benefits from our share-based payment arrangements (including long-term incentive) are considered granted and owed when the awards are settled. During the years ended December 31, 2023 and 2022, this definition applies to the option rights granted under the ESOP 2018 Program as a result of their exercise and settlement. Although the entire CEO Grant 2019 became exercisable during the year ended December 31, 2023, it was not considered granted and owed, as it was not actually exercised and remains accessible.

The amounts shown as share-based payments (including long-term incentives) in the table below are based on the implied market value at the time the awards fulfill the "granted and owed" definition. The ESOP 2018 Program, designed in line with market standards, comprises provisions as outlined in section 5.5 above that include effective exercise price cap and maximum cap mechanisms. Although those cap mechanisms were applied, our unique and outstanding share price development between the time of grant and settlement, led to extraordinary high amounts, as shown below. The share price was driven by our extraordinary revenues and net profit increases at that time. While unprecedented and driven by the COVID-19 pandemic, these developments were also largely attributable to the exceptional performance and contribution of the Management Board as a whole, including their determination to help fight the pandemic since early 2020. They are not to be seen as cash payments to the Management Board, as the exercise was settled by delivering American Depositary Shares, or ADSs, representing our ordinary shares. The members of the Management Board have mainly retained most of the shares resulting from the after-tax settlement and therefore hold an important stake in our Company's future.

in thousands €	Prof. Ugur Sahin, M.D.	Jens Holstein	Sean Marett	Sierk Poetting, Ph.D.	Ryan Richardson	James Ryan, Ph.D.[2]	Prof. Özlem Türeci, M.D.
Fixed compensation[1]							
2023	700	550	550	550	550	183	550
2022	360	550	513	550	340	—	518
Fringe benefits[3]							
2023	6	5	12	5	26	—	—
2022	6	7	8	4	27	—	—
Short-term incentive – first installment[4]							
2023	158	135	135	135	135	45	135
2022	77	128	128	128	72	—	128
Short-term incentive – second installment[5]							
2023	158	135	135	135	135	45	135
2022	77	128	128	128	72	—	128
Other variable compensation							
2023	—	600[7]	—	—	—	180[6]	—
2022	—	—	60	—	—	—	—
Share-based payments (incl. long-term incentive)[8]							
2023							
Management Board Grant – LTI	—	—	—	—	—	—	—
ESOP 2018[9]	—	—	19,289	—	—	—	—
Other share-based payment arrangements	—	—	—	—	—	—	—
2022							
Management Board Grant – LTI	—	—	—	—	—	—	—
ESOP 2018[9]	257,076	—	53,479	86,015	22,555	—	274,209
Other share-based payment arrangements	—	—	—	—	—	—	—
Total							
2023	**1,022**	**1,425**	**20,121**	**825**	**846**	**453**	**820**
2022	**257,596**	**813**	**54,316**	**86,825**	**23,066**	—	**274,983**

(1) For James Ryan, a part of the fixed compensation was paid by BioNTech UK Limited, a subsidiary of BioNTech SE. Approximately 30% of his total compensation is attributable to his position as a member of the Management Board and approximately 70% is attributable to his position as a director of BioNTech UK Limited.

(2) James Ryan was appointed to the Management Board as Chief Legal Officer (CLO) effective as of September 1, 2023. His compensation for the year ended December 31, 2023 was granted on a pro-rata basis.

(3) Includes social security, health and additional insurance, company bike and travel expenses. Other fringe benefits, e.g., costs for security services, which are integral to the performance of business duties, are not included in the amount.

(4) The STI in a given year is always paid out in two installments over two years. The first installment of the STI for the year ended December 31, 2023 will be paid out in April 2024, the month after the approval of the consolidated financial statements. The first installment of the STI for the year ended December 31, 2023 was considered granted and owed in 2023, the year in which the activity to which the compensation relates, was performed. The first installment of the STI for the year ended December 31, 2022 was considered granted and owed in 2022 and was paid out in April 2023.

(5) The second installment of the STI for the year ended December 31, 2023 was also considered granted and owed in 2023, as the Management Board had already completed the activity to which it relates. It will be paid out in February 2025 subject to an adjustment due to the share-price development. The second installment of the STI for the year ended December 31, 2022 was considered granted and owed in 2022 and was paid out in March 2024 with adjustments due to the share-price development. The amounts ultimately paid were as follows: Ugur Sahin €50 thousand, Jens Holstein €83 thousand, Sean Marett €83 thousand, Sierk Poetting €83 thousand, Ryan Richardson €47 thousand and Özlem Türeci €83 thousand.

(6) During the year ended December 31, 2023, as part of his appointment to the Management Board, James Ryan received a one-time signing cash payment in the amount of €180,000. The one-time signing cash payment provided compensation in lieu of participation in the LTI 2023 program, which was allocated before his appointment, and a pro-rata allocation for 2023 would not have been permitted under our current AGM authorizations, as ESOPs may only be issued within the first six months of each calendar year. Of this payment, James Ryan shall use 50% net of costs and expenses to purchase BioNTech shares on or before August 31, 2024 to further strengthen his long-term commitment.

(7) During the year ended December 31, 2023, upon the recommendation of the Compensation, Nomination and Corporate Governance Committee, the Supervisory Board approved a special payment in the gross amount of €600,000 to Jens Holstein. The special payment was made to honor Jens Holstein's contribution to the extraordinary financial performance of BioNTech and recognize his efforts to strengthen the Company's long-term financial performance. Of this payment, Jens Holstein used €150,000 net of costs and expenses to purchase 1,620 BioNTech shares during the year ended December 31, 2023 to further strengthen his long-term commitment.

(8) Explanations of our share-based payment arrangements are given in section 5.5 and include the LTI arrangements, the ESOP 2018, the CEO Grant 2019 and a one-time signing bonus agreed with Jens Holstein as outlined in detail under section 5.4. The benefits from our share-based payment arrangements (including long-term incentive) are considered granted and owed when the awards are settled. During the years ended December 31, 2023 and 2022, this definition applies to the option rights granted under the ESOP 2018 Program as a result of their exercise and settlement. Although the entire CEO Grant 2019 became exercisable during the year ended December 31, 2023, it was not considered granted and owed, as it was not actually exercised and remains accessible. .

(9) The amounts shown are related to the option rights granted one-time under the ESOP 2018 Program. The table shows the implied market value calculated using the closing price of an American Depositary Share of BioNTech on Nasdaq on the respective last day preceding the exercise dates converted from USD to Euro using the exchange rates published by the German Central Bank (Deutsche Bundesbank) on the same days, as well as using the effective exercise price and maximum cap mechanism for all Management Board members. The implied market value may vary from the benefit in kind.. Our unique and outstanding share price development between the time of grant and settlement, led to extraordinary high amounts. They are not to be seen as cash payments to the Management Board, as the exercise was settled by delivering ADSs, representing our ordinary shares. The members of the Management Board have mainly retained most of the shares resulting from the after-tax settlement and therefore hold an important stake in our Company's future.

For the years ended December 31, 2023, and 2022 we did not make use of the malus and claw-back provisions, which would entitle us to withhold or reclaim variable STI compensation components in whole or in part, as no event incurred which would be considered a breach in this respect.

For the years ended December 31, 2023, and 2022, no event of termination occurred under the Management Board service contracts. As a result, we did not apply the termination-related rules and regulations, which state that outstanding variable compensation components in the period up to termination shall be granted and, in the event of premature termination due to revocation of the appointment, the Board member shall receive a severance payment.

A detailed description of the malus and claw-back and termination provisions are included in our compensation system.

E. INFORMATION ON THE RELATIVE DEVELOPMENT OF THE COMPENSATION OF THE MANAGEMENT BOARD, THE COMPENSATION OF THE EMPLOYEES AND THE DEVELOPMENT OF THE COMPANY'S EARNINGS

The table below shows the relative development of the compensation granted and owed to the Supervisory Board and Management Board members, the average compensation of our employees and selected key earning indicators for the periods indicated.

Selected key earning indicators considered by Sec. 162 para. 1 no. 2 AktG generally measure the development of earnings on the basis of revenues, operating income of the BioNTech Group (IFRS) and net income (HGB) of the Company. Considering our operational and financial development, our key earnings indicators fluctuated exceptionally over the past years. Therefore, the development of those indicators relative to the compensation our Supervisory and Management Board members is not considered meaningful.

The compensation of our members of the Management Board significantly changed comparing the 2023 to 2022 and 2022 to 2021 financial years, mainly as the options granted one-time under the ESOP 2018 Program vested and became exercisable and were almost entirely settled in 2022 (option rights allocated to Ryan Richardson and Özlem Türeci had already vested in 2019 but continued to be subject to performance and waiting conditions and only Sean Marett had 230,780 options outstanding as of December 31, 2022, which were exercised and settled in May 2023). The definition of granted and owed applies to the option rights granted under the ESOP 2018 Program, as they were exercised and settled in those years ended December 31, 2023 and 2022. Even though the entire CEO Grant 2019 became exercisable during the year ended December 31, 2023, it was not considered granted and owed, as it was not exercised and remains accessible. As outlined in section 5.6, the compensation is based on the implied market value at the time the options are considered granted and owed in terms of Sec. 162 AktG. Our unique and outstanding share price development between the time of grant and settlement, led to extraordinary high amounts. Therefore, the development of the compensation of the members of the Management Board is mainly not considered meaningful.

The presentation of the average compensation of employees is based on the compensation of BioNTech Group employees excluding apprentices. The average employee compensation is calculated using the average full-time equivalent at the beginning and end of the respective period. The number of full-time equivalent employees employed by the Group increased from 1,941 as of December 31, 2020 to 3,082 as of December 31, 2021; 4,530 as of December 31, 2022; and 6,133 as of December 31, 2023.

In order to be in line with the compensation of the Management Board members, the presentation of the workforce compensation also corresponds in principle to the granted and owed compensation within the meaning of Section 162 para. 1 sentence 1 AktG and is shown with and without share-based payment compensation. The compensation comprises the total expenses for wages, benefits and social security contributions. In addition, for our workforce, share-based payment programs are considered with their implied market value, to the extent considered granted and owed during the years ended December 31, 2023, and 2022 (which applies to the ESOP 2018 Program and the LTI-plus program awarded to employees who did not participate in the ESOP 2018 Program). The share-based payment compensation was calculated using the closing price of an American Depositary Share of BioNTech on Nasdaq on the last trading day preceding the various respective exercise dates (ESOP 2018 Program) or on December 15, 2022 (LTI-plus settlement day) converted from USD to Euro using the exchange rate published by the German Central Bank *(Deutsche Bundesbank)* on the relevant days. The implied market values may vary from the benefit in kind.

The compensation of the workforce significantly changed comparing the year-on-year development between the 2020 and 2023 financial years, as the option rights and restricted stock units granted one-time under the ESOP 2018 Program and LTI-plus programs were considered granted and owed mainly during the year ended December 31, 2022. Considering the compensation of the workforce without the share-based payment consideration, the change over the years was impacted by bonus payments mainly made in 2022. While the base salary from 2021 to 2022 as well as 2022 to 2023 increased (10% and 7% respectively), the overall compensation decreased from 2022 to 2023 due special one-time bonus payments in 2022. The overall compensation was additionally impacted by other factors including a changed personnel structure in connection with new hires.

In 2023, the average per head target compensation of the Management Board amounted to 9-times the average per head target compensation of all BioNTech employees (excluding the Management Board) in 2023.

in %	Change 2023 vs. 2022	Change 2022 vs. 2021	Change 2021 vs. 2020
Management Board			
Prof. Ugur Sahin, M.D.	n.m.[4]	n.m.[4]	—
Jens Holstein[5]	75	n.m.[5]	n.m.[5]
Sean Marett	n.m.[4]	n.m.[4]	2
Sierk Poetting, Ph.D.	n.m.[4]	n.m.[4]	2
Ryan Richardson	n.m.[4]	n.m.[4]	2
James Ryan, Ph.D.[7]	—	—	—
Prof. Özlem Türeci, M.D.	n.m.[4]	n.m[4]	(1)
Supervisory Board			
Helmut Jeggle	—	24	21
Ulrich Wandschneider, Ph.D.	(19)	25	18
Baroness Nicola Blackwood[1]	—	—	—
Prof. Christoph Huber, M.D.[6]	n.m.	36	18
Prof. Anja Morawietz, Ph.D.[11]	n.m.	—	—
Michael Motschmann	(16)	51	26
Prof. Rudolf Staudigl, Ph.D.[11]	n.m.	—	—
Earnings indicators			
Revenues from contracts with customers (IFRS BioNTech Group)	n.m.[8]	(9)	n.m.[8]
Operating income/(loss) (IFRS BioNTech Group)	n.m.[9]	(17)	n.m.[9]
Net income (HGB BioNTech SE)	n.m.[10]	(20)	n.m.[10]
Compensation of the workforce[2]			
Total workforce compensation	(67)	272	17
Total workforce compensation excl. share-based payments	(5)	35	5

(1) Nicola Blackwood was appointed to the Supervisory Board as of May 23, 2023. Therefore, a comparison with the prior year is not possible.
(2) The average employee compensation is based on the compensation of BioNTech Group employees including social security contributions and the implied market value from share-based payment arrangements, which are considered granted and owed. Considering the compensation of the workforce without the share-based payment consideration, the change over the years was impacted by bonus payments mainly made in 2022. While the base salary from 2021 to 2022 as well as 2022 to 2023 increased (10% and 7% respectively), the overall compensation decreased from 2022 to 2023 due to special one-time bonus payments in 2022. The overall compensation was additionally impacted by other factors including a changed personnel structure in connection with new hires. The average employee compensation is calculated using the average full-time equivalent at the beginning and end of the periods indicated.
(3) n.m. = not meaningful.
(4) The compensation of our members of the Management Board significantly changed comparing the 2023 to 2022 and 2022 to 2021 financial years, mainly as the options granted one-time under the ESOP 2018 Program vested and became exercisable and were almost entirely settled in 2022 (option rights allocated to Ryan Richardson and Özlem Türeci had already vested in 2019 but continued to be subject to performance and waiting conditions and only Sean Marett had 230,780 options outstanding as of December 31, 2022, which were exercised and settled in May 2023). The definition of granted and owed applies to the option rights granted under the ESOP 2018 Program, as they were exercised and settled in those years ended December 31, 2023 and 2022. Even though the entire CEO Grant 2019 became exercisable during the year ended December 31, 2023, it was not considered granted and owed, as it was not exercised and remains accessible. As outlined in section 5.6, the compensation is based on the implied market value at the time the options are considered granted and owed in terms of Sec. 162 AktG and, our unique and outstanding share price development between the time of grant and settlement, led to extraordinary high amounts. Therefore, the development of the compensation of the members of the Management Board is mainly not considered meaningful. The compensation changes in % between the 2022 and 2021 financial year for the members of the Management Board is the following: Ugur Sahin 47,079, Sean Marett 8,632, Sierk Poetting 15,404, Ryan Richardson 4,550 and Özlem Türeci 50,823. For the changes in % between the 2023 and 2022 financial year, the compensation of the Management Board is the following: Ugur Sahin (100), Sean Marett (63), Sierk Poetting (99), Ryan Richardson (96) and Özlem Türeci (100).
(5) Jens Holstein was appointed to the Management Board as Chief Financial Officer (CFO) as of July 1, 2021. His compensation for the year ended December 31, 2021 was granted on a pro-rata basis. Therefore, a comparison with the prior year is not meaningful (comparing the 2022 and 2021 financial year) or not possible (comparing the 2021 and 2020 financial year).
(6) Christoph Huber, served as a member of our Supervisory Board from 2008 and left the Supervisory Board on May 25, 2023 after reaching the retirement age limit set by Supervisory Board. Therefore, a comparison with the partial year period is not meaningful (comparing the 2023 and 2022 financial year).
(7) James Ryan was appointed to the Management Board as Chief Legal Officer (CLO) as of September 1, 2023. His compensation for the year ended December 31, 2023 was granted on a pro-rata basis. Therefore, a comparison with the prior year is not possible.
(8) Revenues changed significantly from €482,3 million in the year ended December 31, 2020 to €18,976.7 million during the year ended December 31, 2021, to €17,310.6 million in the year ended December 31, 2022 and to €3,819.0 million during the year ended December 31, 2023.
(9) Operating profit/(loss) changed significantly from an operating loss of €82,4 million in the year ended December 31, 2020 to an operating profit of €15,283.8 million during the year ended December 31, 2021 to €12,642.7 million operating profit during the year ended December 31, 2022 and to a €690.4 million operating profit during the year ended December 31, 2023.
(10) Net income (HGB) changed significantly from a €128.4 million net loss during the year ended December 31, 2020 to €10,777.6 million net income during the year ended December 31, 2021, to €8,626.0 million net profit during the year ended December 31, 2022 and to €799.5 million net income during the year ended December 31, 2023. The information on net income (HGB) is not representative for the Group but is considered to be a key earning indicator in terms of Sec. 162 para. 1 no. 2 AktG.
(11) Anja Morawietz and Rudolf Staudigl were appointed to the Supervisory Board as of June 1, 2022. Their compensation for the year ended December 31, 2022 was granted on a pro-rata basis. Therefore, a comparison with the partial year period is not meaningful (comparing the 2023 and 2022 financial year) or not possible (comparing the 2022 and 2021 financial year).

F. CONCLUSION ON COMPENSATION SYSTEM FOR THE YEAR ENDED DECEMBER 31, 2023

The year ended December 31, 2023 was a year in which we continued to translate our vision into strong performance and during which our Management Board was extended to include James Ryan as Chief Legal Officer. Our Supervisory Board expanded by the appointment of Nicola Blackwood. She succeeded Christoph Huber, who left the Supervisory Board after reaching the retirement age set by the Supervisory Board. Ulrich Wandschneider and Michael Motschmann were re-elected as Supervisory Board Members. The term of office of Ulrich Wandschneider, Nicola Blackwood and Michael Motschmann will end at the Annual General Meeting in 2027.

To promote the business strategy and the long-term development of BioNTech, we examined our compensation system during the year ended December 31, 2023. We engaged an external independent compensation consultant to assess the compensation level and structure of our compensation system to ensure that the members of the Management Board are retained and to be able to attract new appointments to the Management Board, which are in the Company's long-term interest. The analysis showed that our compensation system, which includes targets and caps, is in line with market standards and complies with the German Corporate Governance Code. The Management Board and the Supervisory Board have followed the IDW interpretations for the presentation of compensation in accordance with Sec. 162 of the German Stock Corporation Act (AktG), according to which short-term compensation components such as fixed compensation and short-term incentives (STI) are presented in accordance with interpretation 2 (vesting principle; *"Erdienungsprinzip"*) and share-based payments (incl. long-term incentives (LTI) are presented in accordance with IDW interpretation 1 (inflow principle; *"Zuflussprinzip"*).

Compensation is significantly driven by, and fluctuates, with compensation derived from our share-based payment arrangements, which are not to be seen as cash payments to the Management Board, as the exercise was settled by delivering American Depositary Shares, or ADSs, representing our ordinary shares. The definition of granted and owed applies to the option rights granted under the ESOP 2018 Program, as they were exercised and settled in those years ended December 31, 2023 and 2022. Even though the entire CEO Grant 2019 became exercisable during the year ended December 31, 2023, it was not considered granted and owed, as it was not exercised and remains accessible. Those arrangements were granted prior to, and alongside with, our IPO. The compensation is significantly impacted by our unique and outstanding share price development, which incurred between the time the awards were granted and the time they were settled. Hence, extraordinary high amounts of the compensation of our members of the Management Board and also a large number of select employees were incurred once options were exercised and settled mainly during the year ended December 31, 2022 and to a lesser extent during the year ended December 31, 2023. With respect to the members of the Management Board, we are pleased that they mainly retained most of the shares resulting from the after-tax settlement of our ESOP 2018 Program and, therefore, they continue to hold an important stake in our Company's future.

During the year ended December 31, 2023, the compensation system for our Supervisory Board members was retained from the prior year.

Based on the overall analysis, the Supervisory Board comes to the conclusion that the compensation system for the Management Board and Supervisory Board, as adopted at the Annual General Meeting, was applied in all aspects during the year ended December 31, 2023. All agreements with the Management Board contribute to our business strategy.

Given the operational and financial development of BioNTech since the launch of the current compensation system, the Compensation, Nominating and Corporate Governance Committee is developing a revised compensation system, which the Supervisory board will submit to our 2024 AGM for approval. The most important changes relate to the LTI for the Management Board, whereby Performance Share Units (PSU) will be introduced in addition to the existing stock option program. With the

introduction of PSUs, the performance hurdle for stock options will be also increased. In addition, it is planned that the Management Board will be subject to a Share Ownership Guideline, which will require them to hold a certain value of BioNTech's shares or ADRs. Furthermore, the remuneration system for the Supervisory Board is also being reviewed in terms of the appropriateness of the current level of remuneration given the significant increase in the number and complexity of tasks and increasing responsibility for the members of the Supervisory Board and its committees. It is also planned to present an adjusted remuneration system for the Supervisory Board to our 2024 Annual General Meeting for resolution.

Mainz, March 18, 2024

BioNTech SE

For the Management Board

Prof. Ugur Sahin, M.D.
Chief Executive Officer

Jens Holstein
Chief Financial Officer

For the Supervisory Board

Helmut Jeggle
Chair of the Supervisory Board

Prof. Rudolf Staudigl, Ph.D.
(Chair of Compensation, Nominating and Corporate Governance Committee)

A CAR-T cell is a patient's immune cell that was equipped with a special antenna called receptor, so the immune cell can recognize cancer cells better.

FURTHER INFORMATION

5

INDEPENDENT AUDITOR'S REPORT

To BioNTech SE

Opinions
We have audited the consolidated financial statements of BioNTech SE, Mainz, and its subsidiaries (the Group), which comprise the consolidated balance sheet as at 31 December 2023, and the consolidated income statement, consolidated statement of other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the fiscal year from 1 January to 31 December 2023, and notes to the financial statements, including a summary of significant accounting policies. In addition, we have audited the combined group management report of BioNTech SE for the fiscal year from 1 January to 31 December 2023. In accordance with the German legal requirements, we have not audited the group statement on Group corporate governance declaration pursuant to Secs. 315d HGB ["Handelsgesetzbuch": German Commercial Code] in section 5 of the combined group management report. In addition, we have not audited the content of the non-management report disclosures contained in sections 4.2.3 and 4.2.4 based on recommendation A.5 of the German Corporate Governance Code (GCGC 2022) and the non-financial report contained in section 7 of the combined group management report, which contains non-management report disclosures.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e (3) in conjunction with (1) HGB and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at 31 December 2023 and of its financial performance for the fiscal year from 1 January to 31 December 2023, and

- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. We do not express an opinion on the content of the statement on corporate governance or on the sections 4.2.3, 4.2.4 and 7 of the combined management report referred to above.

Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the opinions
We conducted our audit of the consolidated financial statements and of the group management report in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report" section of our auditor's report. We are independent of the Group entities in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

Other information
The Supervisory Board is responsible for the report of the Supervisory Board in the "Report of the Supervisory Board" section. The executive directors and the Supervisory Board are responsible for the declaration pursuant to Sec. 161 AktG ["Aktiengesetz": German Stock Corporation Act] on the German Corporate Governance Code, which is part of the Group corporate governance declaration. In all other respects, the executive directors are responsible for the other information. The other information comprises the aforementioned corporate governance declaration and the sections 4.2.3, 4.2.4 and 7 of the Group management report. The other information also comprises parts to be included in the annual report, of which we received a version prior to issuing this auditor's report, in particular:

- Sustainability Report,
- Report of the Supervisory Board,
- Remuneration report,

but not the consolidated financial statements, not the management report disclosures whose content is audited and not our auditor's report thereon.

Furthermore, the other information includes other components intended for the annual report which are expected to be made available to us after the audit opinion has been issued, in particular:

- the letter from the Executive Board to the shareholders,
- the multi-year overview of business development.

Our opinions on the consolidated financial statements and on the combined group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the executive directors and the supervisory board for the consolidated financial statements and the group management report
The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec 315e (3) in conjunction with (1) HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud (i.e., fraudulent financial reporting and misappropriation of assets) or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting, unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than the risk of not detecting a material misstatement resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

/ Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (3) in conjunction with (1) HGB.

/ Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

/ Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with law, and the view of the Group's position it provides.

/ Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Cologne, 20. March 2024

EY GmbH & Co. KG
Wirtschaftsprüfungsgesellschaft

Schlebusch
Wirtschaftsprüfer
(German Public Auditor)

Weigel
Wirtschaftsprüfer
(German Public Auditor)

REPORT OF THE INDEPENDENT AUDITOR ON THE AUDIT OF THE REMUNERATION REPORT PURSUANT TO SEC. 162 (3) AKTG

To BioNTech SE

Opinion
We have audited the formal aspects of the remuneration report of BioNTech SE, Mainz, for the fiscal year from 1 January to 31 December 2023 to determine whether the disclosures required by Sec. 162 (1) and (2) AktG ["Aktiengesetz": German Stock Corporation Act] have been made therein. In accordance with Sec. 162 (3) AktG, we have not audited the content of the remuneration report.

In our opinion, the disclosures required by Sec. 162 (1) and (2) have been made in the accompanying remuneration report in all material respects. Our opinion does not cover the content of the remuneration report.

Basis for the opinion
We conducted our audit of the remuneration report in accordance with Sec. 162 (3) AktG and in compliance with the IDW Auditing Standard: Audit of the Remuneration Report in Accordance with Sec. 162 (3) AktG (IDW AuS 870 (09.2023)). Our responsibilities under this provision and standard are further described in the "Responsibilities of the auditor" section of our report. As an audit firm, we applied the IDW Standard on Quality Management: Requirements for Quality Management in the Audit Firm (IDW QS 1). We complied with the professional obligations pursuant to the WPO ["Wirtschaftsprüferordnung": German Law Regulating the Profession of Wirtschaftsprüfer (German Public Auditor)] and the BS WP/vBP ["Berufssatzung für Wirtschaftsprüfer/vereidigte Buchprüfer": Professional Charter for German Public Accountants/German Sworn Auditors] including the requirements regarding independence.

Responsibilities of the management board and supervisory board
The management board and supervisory board are responsible for the preparation of the remuneration report and the related disclosures in compliance with the requirements of Sec. 162 AktG. In addition, they are responsible for such internal control as they determine is necessary to enable the preparation of a remuneration report and the related disclosures that are free from material misstatement, whether due to fraud (i.e., fraudulent financial reporting and misappropriation of assets) or error.

Responsibilities of the auditor
Our objectives are to obtain reasonable assurance about whether the disclosures required by Sec. 162 (1) and (2) AktG are made in the remuneration report in all material respects and to express an opinion thereon in a report.

We planned and performed our audit so as to determine the formal completeness of the remuneration report by comparing the disclosures made in the remuneration report with the disclosures required by Sec. 162 (1) and (2) AktG. In accordance with Sec. 162 (3) AktG, we have not audited the accuracy of the disclosures, the completeness of the individual disclosures or the fair presentation of the remuneration report.

Consideration of misrepresentations
In connection with our audit, our responsibility is to read the remuneration report considering the knowledge obtained in the audit of the financial statements and, in doing so, remain alert for indications of whether the remuneration report contains misrepresentations in relation to the accuracy of the disclosures, the completeness of the individual disclosures or the fair presentation of the remuneration report.

If, based on the work we have performed, we conclude that there is a misrepresentation, we are required to report that fact. We have nothing to report in this regard.

Cologne, 20. March 2024

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Wirtschaftsprüfer
(German Public Auditor)

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