

BIONTECH

3rd Quarter 2022 Financial Results & Corporate Update

November 07, 2022



BIONTECH

This Slide Presentation Includes Forward-Looking Statements

This presentation 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; BioNTech's pricing and coverage negotiations 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 rate and degree of market acceptance of BioNTech's COVID-19 vaccine and, if approved, BioNTech's investigational medicines; 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 and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available and BioNTech's research and development programs; 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 vaccine 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 claims for potential personal injury or death arising from the use of BioNTech's COVID-19 vaccine and other products and product candidates developed or manufactured by BioNTech; BioNTech's ability to progress BioNTech's Malaria, Tuberculosis and HIV programs, including timing for selecting clinical candidates for these programs and the commencement of a clinical trial, as well as any data readouts; the development of sustainable vaccine production and supply solutions on the African continent, including its BioNTainers, and the nature and feasibility of these solutions; BioNTech's estimates of research and development revenues, commercial revenues, cost of sales, research and development expenses, sales and marketing expenses, general and administrative expenses, capital expenditures, income taxes, and shares outstanding; BioNTech's ability and that of BioNTech's collaborators to commercialize and market BioNTech's product candidates, if approved, including BioNTech's COVID-19 vaccine; BioNTech's ability to manage BioNTech's development and expansion; regulatory developments in the United States and foreign countries; BioNTech's ability to effectively scale BioNTech's production capabilities and manufacture BioNTech's products, including BioNTech's target COVID-19 vaccine production levels, and BioNTech's product candidates; and other factors not known to BioNTech at this time. 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 presentation 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. You should review the risks and uncertainties described under the heading "Risk Factors" in BioNTech's quarterly report on Form 6-K for the three and nine months ended September 30, 2022 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 presentation 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.

Safety Information

COMIRNATY® ▼ (the Pfizer-BioNTech COVID-19 vaccine) has been granted standard marketing authorization (MA) by the European Commission to prevent coronavirus disease 2019 (COVID-19) in people aged 5 years and older. The vaccine is administered as a 2-dose series, 3 weeks apart. Adults and adolescents from the age of 12 are given 30 micrograms per dose; children aged 5 to 11 years are given 10 micrograms per dose. In addition, the MA has been expanded to include a booster dose (third dose) at least 3 months after the second dose in individuals 12 years of age and older. A third primary course dose may be administered at least 28 days after the second dose to people aged 5 years and older with a severely weakened immune system. The European Medicines Agency's (EMA's) Committee for Medicinal Products for Human Use (CHMP) has completed its rigorous evaluation of COMIRNATY, concluding by consensus that sufficiently robust data on the quality, safety and efficacy of the vaccine are now available. In addition, COMIRNATY has also been granted standard MA for two adapted vaccines: COMIRNATY Original/Omicron BA.1, which contains mRNA encoding for the spike protein of the wild-type and of the Omicron BA.1 subvariant of SARS-CoV-2; and COMIRNATY Original/Omicron BA.4-5, which contains mRNA encoding for the spike protein of the wild-type and of the Omicron BA.4/BA.5 subvariant of SARS-CoV-2. COMIRNATY Original/Omicron BA.1 or COMIRNATY Original/Omicron BA.4-5 may be administered as a booster in people aged 12 years and older who have received at least a primary vaccination course against COVID-19. There should be an interval of at least 3 months between administration of COMIRNATY Original/Omicron BA.1 or COMIRNATY Original/Omicron BA.4-5 and the last prior dose of a COVID-19 vaccine.

IMPORTANT SAFETY INFORMATION:

- Events of anaphylaxis have been reported. Appropriate medical treatment and supervision should always be readily available in case of an anaphylactic reaction following the administration of the vaccine.
- There is an increased, but very rare risk (<1/10,000 cases) of myocarditis and pericarditis following vaccination with COMIRNATY. These conditions can develop within just a few days after vaccination and have primarily occurred within 14 days. They have been observed more often after the second vaccination, and more often in younger males. Available data suggest that the course of myocarditis and pericarditis following vaccination is not different from myocarditis or pericarditis in general. The risk of myocarditis after a booster dose of COMIRNATY, COMIRNATY Original/Omicron BA.1 or COMIRNATY Original/Omicron BA.4-5 has not yet been characterized.
- Rare cases of acute peripheral facial paralysis; uncommon incidence of insomnia, hyperhidrosis and night sweats; and unknown incidence of paraesthesia, hypoaesthesia and erythema multiforme have been identified in post-marketing experience.
- Anxiety-related reactions, including vasovagal reactions (syncope), hyperventilation or stress-related reactions (e. g. dizziness, palpitations, increases in heart rate, alterations in blood pressure, tingling sensations and sweating) may occur in association with the vaccination process itself. Stress-related reactions are temporary and resolve on their own. Individuals should be advised to bring symptoms to the attention of the vaccination provider for evaluation. It is important that precautions are in place to avoid injury from fainting.
- Vaccination should be postponed in individuals suffering from acute severe febrile illness or acute infection. The presence of a minor infection and/or low-grade fever should not delay vaccination.
- As with other intramuscular injections, the vaccine should be given with caution in individuals receiving anticoagulant therapy or those with thrombocytopenia or any coagulation disorder (such as haemophilia) because bleeding or bruising may occur following an intramuscular administration in these individuals.
- The efficacy, safety and immunogenicity of the vaccine has not been assessed in immunocompromised individuals, including those receiving immunosuppressant therapy. The efficacy of COMIRNATY, COMIRNATY Original/Omicron BA.1 or COMIRNATY Original/Omicron BA.4-5 may be lower in immunosuppressed individuals.
- As with any vaccine, vaccination with COMIRNATY, COMIRNATY Original/Omicron BA.1 or COMIRNATY Original/Omicron BA.4-5 may not protect all vaccine recipients. Individuals may not be fully protected until 7 days after their second dose of the vaccine.
- Adverse reactions observed during clinical studies are listed below according to the following frequency categories: Very common (≥ 1/10), Common (≥ 1/100 to < 1/10), Uncommon (≥ 1/1,000 to < 1/100), Rare (≥ 1/10,000 to < 1/1,000), Very rare (< 1/10,000).
- Very common side effects: injection site pain, injection site swelling, tiredness, headache, muscle pain, chills, joint pain, diarrhea, fever
- Common side effects: injection site redness, nausea, vomiting
- Uncommon side effects: enlarged lymph nodes (more frequently observed after the booster dose), feeling unwell, arm pain, insomnia, injection site itching, allergic reactions such as rash or itching, feeling weak or lack of energy/sleepy, decreased appetite, excessive sweating, night sweats
- Rare side effects: temporary one-sided facial drooping, allergic reactions such as hives or swelling of the face
- Very rare side effects: inflammation of the heart muscle (myocarditis) or inflammation of the lining outside the heart (pericarditis), which can result in breathlessness, palpitations or chest pain, anaphylaxis, extensive swelling of vaccinated limbs; facial swelling, pins and needles/tingling, reduced sense of touch or sensation, a skin reaction that causes red spots or patches on the skin
- A large amount of observational data from pregnant women vaccinated with the initially approved COMIRNATY vaccine during the second and third trimester have not shown an increase in adverse pregnancy outcomes. While data on pregnancy outcomes following vaccination during the first trimester are presently limited, no increased risk for miscarriage has been seen. COMIRNATY can be used during pregnancy. No effects on the breast-fed newborn/infant are anticipated since the systemic exposure of breast-feeding woman to the initially approved COMIRNATY vaccine is negligible. Observational data from women who were breast-feeding after vaccination have not shown a risk for adverse effects in breast-fed newborns/infants. COMIRNATY can be used during breast-feeding.
- No data are available yet regarding the use of COMIRNATY Original/Omicron BA.1 or COMIRNATY Original/Omicron BA.4-5 during pregnancy. Since differences between products are confined to the spike protein sequence, and there are no clinically meaningful differences in reactogenicity between those COMIRNATY variant adapted vaccines that have been clinically evaluated, COMIRNATY Original/Omicron BA.1 or COMIRNATY Original/Omicron BA.4-5 can be used during pregnancy.
- No data are available yet regarding the use of COMIRNATY Original/Omicron BA.1 or COMIRNATY Original/Omicron BA.4-5 during breast-feeding. Observational data from women who were breast-feeding after vaccination with the initially approved COMIRNATY vaccine have not shown a risk for adverse effects in breast-fed newborns/infants. COMIRNATY Original/Omicron BA.1 or COMIRNATY Original/Omicron BA.4-5 can be used during breast-feeding
- Interactions with other medicinal products or concomitant administration of COMIRNATY, COMIRNATY Original/Omicron BA.1 or COMIRNATY Original/Omicron BA.4-5 with other vaccines has not been studied.
- Animal studies with COMIRNATY Original do not indicate direct or indirect harmful effects with respect to reproductive toxicity.
- The safety of a COMIRNATY Original/Omicron BA.1 booster dose in individuals from 18 to ≤ 55 years of age is extrapolated from safety data from a subset of 315 adults 18 to ≤ 55 years of age who received a booster (fourth dose) of Omicron BA.1 30 µg (monovalent) after completing 3 doses of COMIRNATY. The most frequent adverse reactions in these participants 18 to ≤ 55 years of age were injection site pain (> 70%), fatigue (> 60%), headache (> 40%), myalgia (> 30%), chills (> 30%) and arthralgia (> 20%).
- In a subset from the Phase 3 study, 305 adults > 55 years of age who had completed 3 doses of COMIRNATY, received a booster of COMIRNATY Original/Omicron BA.1 after receiving Dose 3. The overall safety profile for the COMIRNATY Original/Omicron BA.1 booster (fourth dose) was similar to that seen after the COMIRNATY booster (third dose). The most frequent adverse reactions in participants greater than 55 years of age were injection site pain (> 50%), fatigue (> 40%), headache 69 (> 30%), myalgia (> 20%), chills and arthralgia (> 10%). No new adverse reactions were identified for COMIRNATY Original/Omicron BA.1.
- The safety of a booster dose of COMIRNATY Original/Omicron BA.4-5 is inferred from safety data for a booster dose of COMIRNATY Original/Omicron BA.1, as well as for a booster dose of COMIRNATY Original.
- The duration of protection afforded by the vaccine is unknown as it is still being determined by ongoing clinical trials. As with any vaccine, vaccination with Comirnaty Original/Omicron BA.1 or COMIRNATY Original/Omicron BA.4-5 may not protect all vaccine recipients
- For complete information on the safety of COMIRNATY, COMIRNATY Original/Omicron BA.1 and COMIRNATY Original/Omicron BA.4-5, always make reference to the approved Summary of Product Characteristics and Package Leaflet available in all the languages of the European Union on the EMA website.

The black equilateral triangle ▼ denotes that additional monitoring is required to capture any adverse reactions. This will allow quick identification of new safety information. Individuals can help by reporting any side effects they may get. Side effects can be reported to [EudraVigilance](#) or directly to BioNTech using email medinfo@biontech.de, telephone +49 6131 9084 0, or via the website www.biontech.de

Safety Information

AUTHORIZED USE IN THE U.S.

Pfizer-BioNTech COVID-19 Vaccine, Bivalent (Original And Omicron BA.4/BA.5)

- Pfizer-BioNTech COVID-19 Vaccine, Bivalent (Original and Omicron BA.4/BA.5) is FDA-authorized under Emergency Use Authorization (EUA) for use in individuals 5 years of age and older as a single booster dose administered at least 2 months after either:
 - completion of primary vaccination with any authorized or approved monovalent* COVID-19 vaccine; or
 - receipt of the most recent booster dose with any authorized or approved monovalent COVID-19 vaccine.

*Monovalent refers to any authorized and approved COVID-19 vaccine that contains or encodes the spike protein of only the Original SARS-CoV-2 virus

COMIRNATY® (COVID-19 Vaccine, mRNA)

- COMIRNATY® (COVID-19 Vaccine, mRNA) is an FDA-approved COVID-19 vaccine for active immunization to prevent coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in individuals 12 yrs of age and older. It is also authorized as a third primary series dose to individuals 12 years of age and older who have certain kinds of immunocompromise
- The COVID-19 vaccine is FDA authorized under Emergency Use Authorization (EUA) for use in individuals 6 months and older to provide:
 - a 3-dose primary series to individuals 6 months through 4 years of age
 - a 2-dose primary series to individuals 5 years through 11 years of age
 - a third primary series dose to individuals 5 years through 11 years of age with certain kinds of immunocompromise

EMERGENCY USE AUTHORIZATION

Emergency uses of the vaccines have not been approved or licensed by FDA but have been authorized by FDA under an Emergency Use Authorization (EUA) to prevent Coronavirus Disease 2019 (COVID-19) in individuals aged 6 months and older for the Pfizer-BioNTech COVID-19 Vaccine and 5 years and older for the Pfizer-BioNTech COVID-19 Vaccine, Bivalent. The emergency uses are only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of the medical product under Section 564(b)(1) of the FD&C Act unless the declaration is terminated or authorization revoked sooner.

IMPORTANT SAFETY INFORMATION

Pfizer-BioNTech COVID-19 Vaccine, Bivalent (Original and Omicron BA.4/BA.5), COMIRNATY® (COVID-19 Vaccine, mRNA) and Pfizer-BioNTech COVID-19 Vaccine

- Individuals should tell the vaccination provider about all of their medical conditions, including if they:
 - have any allergies
 - have had myocarditis (inflammation of the heart muscle) or pericarditis (inflammation of the lining outside the heart)
 - have a fever
 - have a bleeding disorder or are on a blood thinner
 - are immunocompromised or are on a medicine that affects the immune system
 - are pregnant, plan to become pregnant, or are breastfeeding
 - have received another COVID-19 vaccine
 - have ever fainted in association with an injection
- Individuals should not get COMIRNATY (COVID-19 Vaccine, mRNA), the Pfizer-BioNTech COVID-19 Vaccine, or the Pfizer-BioNTech COVID-19 Vaccine, Bivalent if they have had a severe allergic reaction after a previous dose of COMIRNATY or the Pfizer-BioNTech COVID-19 Vaccine or any ingredient in these vaccines
- There is a remote chance that these vaccines could cause a severe allergic reaction. A severe allergic reaction would usually occur within a few minutes to 1 hour after getting a dose of the vaccine. For this reason, your vaccination provider may ask you to stay at the place where you received the vaccine for monitoring after vaccination. If you experience a severe allergic reaction, call 9-1-1 or go to the nearest hospital

The vaccine may not protect everyone. Side effects reported with the vaccine include:

- Severe allergic reactions; Non-severe allergic reactions such as rash, itching, hives, or swelling of the face; Myocarditis (inflammation of the heart muscle); Pericarditis (inflammation of the lining outside the heart); Injection site pain; Tiredness; Headache; Muscle pain; Chills; Joint pain; Fever; Injection site swelling; Injection site redness; Nausea; Feeling unwell; Swollen lymph nodes (lymphadenopathy); Decreased appetite; Diarrhea; Vomiting; Arm pain; Fainting in association with injection of the vaccine; Unusual and persistent irritability; Unusual and persistent poor feeding; Unusual and persistent fatigue or lack of energy; Unusual and persistent cool, pale skin
- Individuals should seek medical attention right away if they have any of the following symptoms: difficulty breathing, swelling of the face and throat, a fast heartbeat, a bad rash all over the body, dizziness, and weakness
- Myocarditis (inflammation of the heart muscle) and pericarditis (inflammation of the lining outside the heart) have occurred in some people who have received COMIRNATY® (COVID-19 vaccine, mRNA) or Pfizer-BioNTech COVID-19 Vaccine. The observed risk is higher among adolescent males and adult males under 40 years of age than among females and older males, and the observed risk is highest in males 12 through 17 years of age. In most of these people, symptoms began within a few days following receipt of the second dose of vaccine. The chance of having this occur is very low
- These may not be all the possible side effects of the vaccine. Call the vaccination provider or healthcare provider about bothersome side effects or side effects that do not go away.

Individuals should always ask their healthcare providers for medical advice about adverse events. Report vaccine side effects to the US Food and Drug Administration (FDA) and the Centers for Disease Control and Prevention (CDC) Vaccine Adverse Event Reporting System (VAERS). The VAERS toll-free number is 1-800-822-7967 or report online to www.vaers.hhs.gov/reportevent.html. In addition, individuals can report side effects to Pfizer Inc. at www.pfizersafetyreporting.com or by calling 1-800-438-1985

Agenda

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3rd Quarter 2022 Highlights

Ugur Sahin, Chief Executive Officer

02

COVID-19 Vaccine & Pipeline Update

Özlem Türeci, Chief Medical Officer

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Financial Results

Jens Holstein, Chief Financial Officer

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Corporate Outlook

Ryan Richardson, Chief Strategy Officer

Q3 Highlights: Corporate & Oncology Pipeline



Corporate Updates

- Reported Q3 total revenues of €3.5 bn¹ and year-to-date revenues of €13 bn¹
- Raised full year 2022 revenue guidance to the upper end of our prior range: €16-17 bn
- Signed letter of intent with Australia's State of Victoria to establish an mRNA research and innovation center and clinical scale BioNTainer manufacturing facility
- Expanded team to more than 4,000 employees around the world



Oncology Pipeline Advancement

- Expanded Oncology pipeline to 19 clinical-stage programs in 24 ongoing clinical trials including five Phase 2 trials
 - Initiated Phase 1 clinical testing for three new programs: BNT116 (FixVac in NSCLC), BNT142 (RiboMab, CD3xCLDN6), BNT313² (Hexabody, CD27)
- Presented positive follow-up data from Phase 1/2 trial of CAR-T candidate BNT211 in solid tumors at ESMO

¹ BioNTech's profit share is estimated based on preliminary data shared between Pfizer and BioNTech as further described in the Annual Report on Form 20-F for the year ended December 31, 2021 as well as the Quarterly Report as of and for the three and nine months ended September 30, 2022, filed as an exhibit to BioNTech's Current Report on Form 6-K filed on November 7, 2022. Any changes in the estimated share of the collaboration partner's gross profit will be recognized prospectively

² Collaboration with Genmab

Q3 Highlights: COVID-19 Vaccine / COMIRNATY



Strong global distribution

- First-to-market Omicron BA.4/BA.5-adapted bivalent vaccine
- ~300 m doses of variant adapted vaccines invoiced¹



Rapid regulatory advancement

COMIRNATY (Original vaccine)

Ongoing conversion to full approvals globally

- Conversion to full marketing authorization in the EU²
- Label expansion in EU
 - 3 dose primary series in ages 6 months to <5 years
 - 3rd dose booster for ages 5-11 years
 - 4th dose booster for ages 12+ years

Omicron BA.4/BA.5-adapted bivalent vaccine booster

Approvals in 45+ countries or regions worldwide

- EU: Full Marketing Authorization for ages 12+ years³
- US: FDA EUA for ages 5+ years⁴



Broad and diverse clinical program

- Initiated Phase 2/3 trial of Omicron BA.4/BA.5-adapted bivalent booster in individuals 12+ and reported positive data from 18+ years cohorts at 30-day timepoint
- Initiated Phase 1/2/3 trial of Omicron BA.4/BA.5-adapted booster in children 6 months to 11 years of age
- Initiated Phase 1 trial with COMIRNATY / influenza combo mRNA vaccine⁵

¹ As of mid of October 2022; includes BA1- and BA4/5 bivalent adapted vaccines; - ² Approved for prevention of COVID-19 as a 2-dose series in individuals 5 yrs of age and older and as a 3-dose series in individuals 6 months through 4 years of age; for all existing and future indications and formulations; - ³ COMIRNATY Original/Omicron BA.4/5 may be administered as a booster in people aged 12 years and older who have received at least a primary vaccination course against COVID-19;

⁴ Bivalent (Original and Omicron BA.4/BA.5) is FDA-authorized under Emergency Use Authorization (EUA) for use in individuals 5 years of age and older as a single booster dose administered at least 2 months after either completion of primary vaccination with any authorized or approved monovalent COVID-19 vaccine; or receipt of the most recent booster dose with any authorized or approved monovalent COVID-19 vaccine.; ⁵ Collaboration with Pfizer

Rapid Omicron Response: ~ 2 Months from Regulator Recommendation to Launch

CMC/Manufacturing of BA.1 and BA.4/BA.5 Vaccine Product →

→ Ongoing Submissions, Approvals & Pediatric Label Expansion in Various Geographies

FDA RECOMMENDS

Omicron adapted bivalent vaccine encoding BA.4/BA.5 sublineages

June 30

~2 MONTHS

FIRST SHIPMENTS

COMIRNATY BA.4/BA.5-adapted bivalent vaccine

September 1



Approved in **45+** countries and regions¹

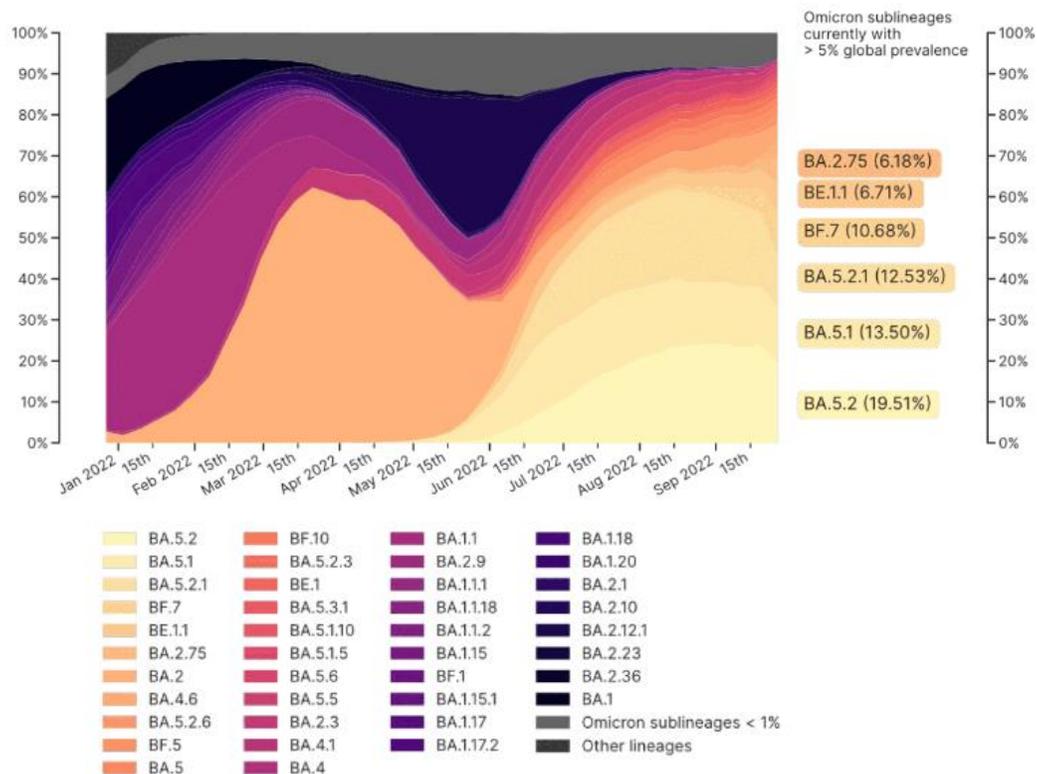


Rapid deployment supports framework for sustainable vaccine business for COVID-19 and other infectious diseases

Epidemiology and Scientific Data Support Need for Omicron BA.4/BA.5-Adapted Bivalent Booster

BA.4/BA.5 and sublineages continue to be dominant strains¹

Timecourse of Omicron variant sublineage distribution 2022-10-04



bioRxiv

THE PREPRINT SERVER FOR BIOLOGY

New Results

Follow this preprint

Exposure to BA.4/BA.5 Spike glycoprotein drives pan-Omicron neutralization in vaccine-experienced humans and mice

Alexander Muik, Bonny Gaby Lui, Maren Bacher, Ann-Kathrin Wallisch, Aras Toker, Carla Iris Cadima Couto, Alptekin Güler, Veena Mampilli, Geneva J. Schmitt, Jonathan Mottl, Thomas Ziegenhals, Stephanie Fesser, Jonas Reinholz, Florian Wernig, Karla-Gerlinde Schraut, Hossam Hefesha, Hui Cai, Qi Yang, Kerstin C. Walzer, Jessica Grosse, Stefan Strauss, Andrew Finlayson, Kimberly Krüger, Orkun Ozhelvaci, Katharina Grikscheit, Niko Kohmer, Sandra Ciesek, Kena A. Swanson, Annette B. Vogel, Özlem Türeci, Ugur Sahin

Original/Omicron BA.4/BA.5-adapted bivalent boosters may

- Provide broad protection against currently circulating Omicron sublineages and the WT virus²
- Confer robust protection against future emerging Omicron sublineages or new VoCs that are closer to the WT virus²

Original/Omicron adapted bivalent vaccines may enhance neutralization breadth

- Expansion of memory B cells against epitopes shared broadly among variants
- Expansion and preservation of T cell responses may protect against severe disease

¹ WHO Website. www.who.int/en/activities/tracking-SARS-CoV-2-variants. Accessed 7 October 2022

² Muik et al. Exposure to BA.4/BA.5 Spike glycoprotein drives pan-Omicron neutralization in vaccine-experienced humans and mice; bioRxiv 2022.09.21.508818
WT = wild-type; VoC = variant of concern

Long-Term Need for Annually Adapted Boosters Anticipated

Continuous evolution

of SARS-CoV-2 creates possibility of waves driven by new immune-evasive strains^{1,2,3}

Long-term health consequences

of COVID-19 infections significant, but still not fully understood



Risk remains high

for severe COVID-19 in vulnerable populations^{3,4}

Booster vaccination restores

waning immunity⁵

¹ WHO Website. www.who.int/en/activities/tracking-SARS-CoV-2-variants. Accessed 7 October 2022

² GISAIID. <https://gisaid.org/> Accessed 7 October 2022.

³ FDA VRBPAC. <https://www.fda.gov/media/159491/download> Accessed 7 October 2022

⁴ Office for National Statistics. <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/selfreportedlongcovidafterinfectionwiththemicronvariant/6may2022> Accessed 7 October 2022

⁵ Goldberg Y, et al. N Engl J Med 2022; 386:2201-2212 DOI: 10.1056/NEJMoa211

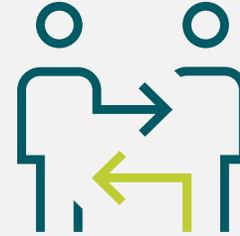
Framework in Place for Building a Sustainable Business for COVID-19 and Multi-Product Opportunities in Other Infectious Diseases



**Safety,
Tolerability
& Efficacy**



**Rapid
Adaptation**



**Expert
Regulatory
Navigation**



**Continued
Innovation**

Built on BioNTech's validated platform of proven science, discovery, development, manufacturing & commercialization

Agenda

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Ryan Richardson, Chief Strategy Officer

Multi-Pronged Strategy for Continued Innovation

Variant Adapted Vaccines

Vaccine Boosters to Address
Evolving Virus

Novel Combinations

Vaccine for Seasonal Protection
with Convenient Single-Dose
Administration

Next- Generation Constructs

Vaccines Designed for Extended
Durability and Breadth of
Protection

Innovation supported by insights from continuous variant surveillance and robust clinical program

Omicron BA.4/BA.5-Adapted Bivalent Vaccine Approved in 45+ Countries¹

	FDA EUA ²	EC Marketing Authorization ³	FDA Submission	EMA Submission	Phase 1/2/3 Clinical Trial
BA.4/5-Adapted					
Ages 12+ yrs	✓	✓	✓	✓	Ongoing ⁴
Ages 5-11 yrs	✓		✓	✓	Ongoing ⁵
Ages 6 mo-4 yrs			Planned for 1Q 2023	Planned for 1Q 2023	Ongoing ⁵
BA.1-Adapted					
Ages 12+ yrs		✓		✓	✓

¹ As of October 25, 2022

² Bivalent (Original and Omicron BA.4/BA.5) is FDA-authorized under Emergency Use Authorization (EUA) for use in individuals 5 years of age and older as a single booster dose administered at least 2 months after either completion of primary vaccination with any authorized or approved monovalent COVID-19 vaccine; or receipt of the most recent booster dose with any authorized or approved monovalent COVID-19 vaccine;

³ COMIRNATY Original/Omicron BA.4/5 or COMIRNATY Original/Omicron BA.1 and may be administered as a booster in people aged 12 years and older who have received at least a primary vaccination course against COVID-19;

⁴ Phase 2/3 trial of Omicron BA.4/BA.5 adapted bivalent booster in individuals 12+ years old

⁵ Phase 1/2/3 trial of Omicron BA.4/BA.5 adapted booster in children 6 months – 11 years of age

Positive Data from 30 Day Time Point in Omicron BA.5/BA.5-Adapted Vaccine Study

Randomized, controlled, Phase 2/3 trial in healthy volunteers aged 12 and older

Study design:

- N=900
- Previously received at least 3 vaccine doses
- Ages 18+: 30- μ g or 60- μ g booster
- Ages 12-17: 30- μ g booster
- Original vaccine served as comparator arm

Primary endpoints:

- Safety, tolerability and immunogenicity



Updated data from sentinel cohort >18 years

Sentinel cohort (n=40/group):

- Bivalent Original/BA.4/5 30- μ g: 18-55 years of age
- Bivalent Original/BA.4/5 30- μ g: >55 years of age
- Comparator group: Original BNT162b2 30- μ g (>55 years of age)

Safety and tolerability profile of bivalent booster remains favorable and similar to original vaccine

Omicron BA.4/BA.5-adapted bivalent vaccine substantially increased Omicron BA.4/BA.5 neutralizing antibody titers above pre-booster levels in adults 18+

Omicron BA.4/BA.5 Adapted Bivalent Vaccine Demonstrates Strong Immune Response in Adults 18+

		Vaccine Group (as randomized)					
		BNT162b2 Bivalent (WT/OMI BA.4/BA.5) ¹ 30 µg				BNT162b2 ¹ 30 µg	
Age		18-55 Years		>55 Years		>55 Years	
Assay	Baseline SARS-CoV-2 Status	n	GMFR (95% CI)	n	GMFR (95% CI)	n	GMFR (95% CI)
SARS-CoV-2 FFRNT – Omicron BA.4/BA.5 - NT50 (titer)	All	38	9.5 (6.7, 13.6)	36	13.2 (8.0, 21.6)	40	2.9 (2.1, 3.9)
	Positive	20	6.0 (3.5, 10.1)	19	6.7 (3.5, 12.7)	20	2.8 (1.9, 4.1)
	Negative	18	16.0 (10.8, 23.7)	17	28.3 (15.2, 52.8)	20	3.0 (1.8, 4.9)
SARS-CoV-2 FFRNT – reference strain - NT50 (titer)	All	38	5.1 (3.5, 7.3)	36	5.8 (3.9, 8.6)	40	3.0 (2.1, 4.3)
	Positive	20	3.1 (2.0, 4.9)	19	3.5 (2.1, 6.0)	20	2.0 (1.4, 2.9)
	Negative	18	8.8 (5.4, 14.4)	17	10.2 (6.3, 16.6)	20	4.4 (2.3, 8.2)

Improved responses with bivalent vaccine most pronounced in elderly and baseline negative individuals

Initiated Phase 1 Combination Trial of Influenza mRNA Vaccine + Omicron BA.4/BA.5-Adapted Bivalent COVID-19 Vaccine¹

Quadrivalent Influenza (qFlu) modRNA vaccine (2 type A strains, 2 type B strains selected annually)

+ Omicron BA.4/BA.5 adapted bivalent COVID-19 vaccine

30 µg qFlu + 30 µg Omicron BA.4/BA.5	30 µg qFlu + 60 µg Omicron BA.4/BA.5	60 µg qFlu + 30 µg Omicron BA.4/BA.5	30 µg qFlu	60 µg qFlu	Standard of Care Flu Vaccine (control arm) N=30
-----------------------------------------------	-----------------------------------------------	-----------------------------------------------	------------	------------	-------------------------------------------------------

N~180 adults aged 18-64
Primary endpoints: safety, tolerability and immunogenicity

Flu + COVID-19 vaccine combination may offer convenient seasonal administration for protection in a single shot

Next Generation Vaccine Approaches to Provide Durable, Broad Protection

Engineered Spike Protein Vaccines

Multiple candidates being explored

- Designed to elicit more broadly neutralizing antibodies
- Potential to protect against multiple, not-yet-seen coronavirus variants
- Potential to be combined with T cell enhancing vaccine



Additional trial initiations planned for:
Engineered spike protein candidates

BNT162b4: T Cell Enhancing Vaccine Candidate

Targets highly-conserved non-spike proteins and aims to

- Increase immune resilience
- Enhance and broaden T cell response
- Provide memory T cell persistence
- Enhance B cell response durability



Start Phase 1 expected in 4Q 2022:
BNT162b4 + Omicron BA.4/BA.5-adapted
bivalent vaccine

Constructs designed to engage different arms of the immune system including antibodies and T cells

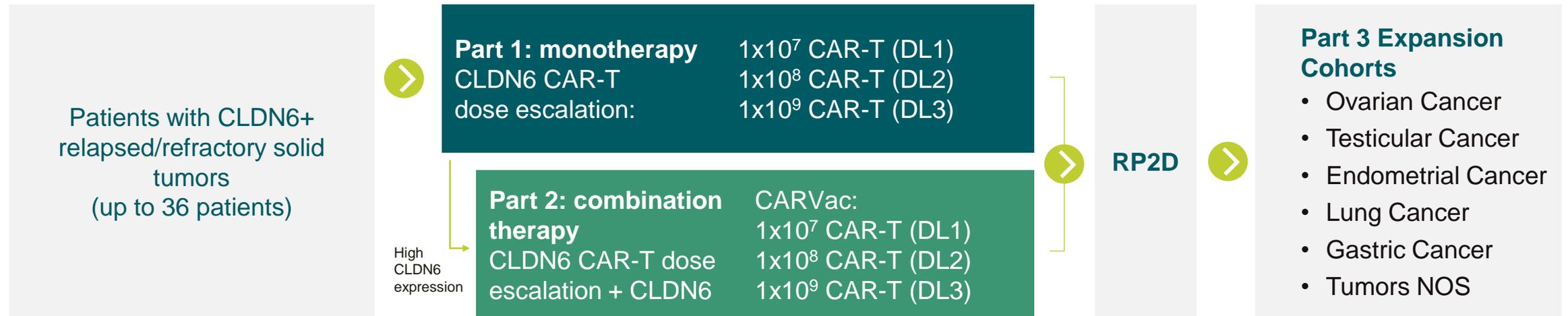
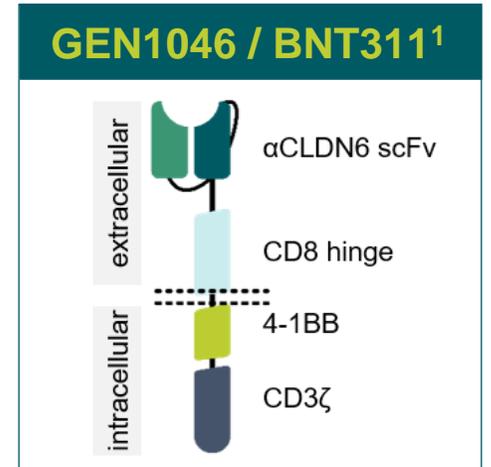
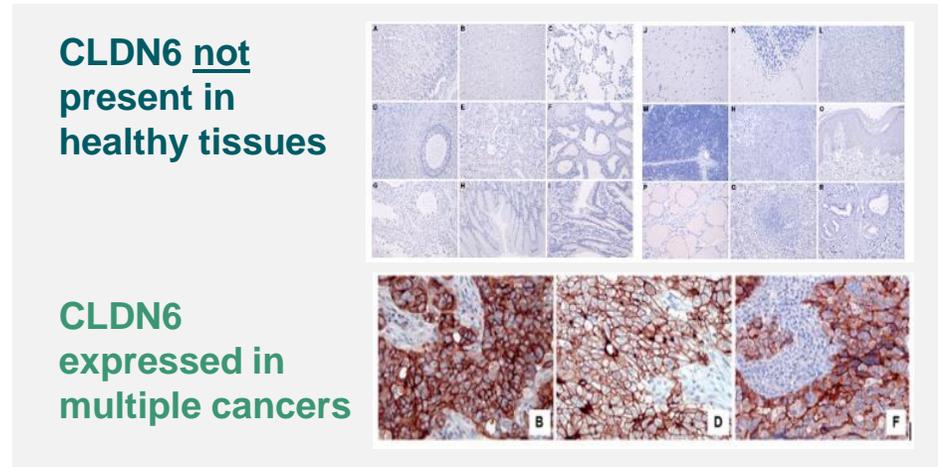
BNT211: CAR-T Cell Program with Potential Targeting Multiple High-Need Solid Tumors

2nd generation CAR

- Directed against CLDN6
 - Cancer specific carcino-embryonic antigen
 - Expressed in multiple solid cancers with high medical need

CARVac

- Drives *in vivo* expansion, persistence and efficacy of CAR-T cells



BNT211: Follow-up Data of Novel CAR-T Cell Program in Solid Tumors Presented at ESMO 2022

Safety

CLDN6 CAR-T cells as monotherapy or combined with CARVac **well tolerated** at dose levels evaluated to date (1×10^7 and 1×10^8 CAR-T)

- Mostly grade 1-2 CRS seen in 45% of patients, manageable by administration of tocilizumab if needed
- 2 DLTs observed, both patients fully recovered and showed clinical benefit
- MTD not reached yet



Efficacy

Dose-dependent expansion of CAR-T cells achieved in all patients translating into clinical activity:

ORR 33%, DCR of 67% in evaluable patients (n=21; 1×10^7 and 1×10^8 CAR-T)¹

- 1 CR, 6 PR, 7 SD

Testicular cancer patients (n=7)² with particularly encouraging responses at 1×10^8 CAR-T:

- ORR 57%, DCR 85%
- 1 CR, 3 PR, 2 SD



BNT211 continues to show encouraging efficacy and safety profiles

¹ Including lymphodepletion free cohort; ² Excluding lymphodepletion free cohort

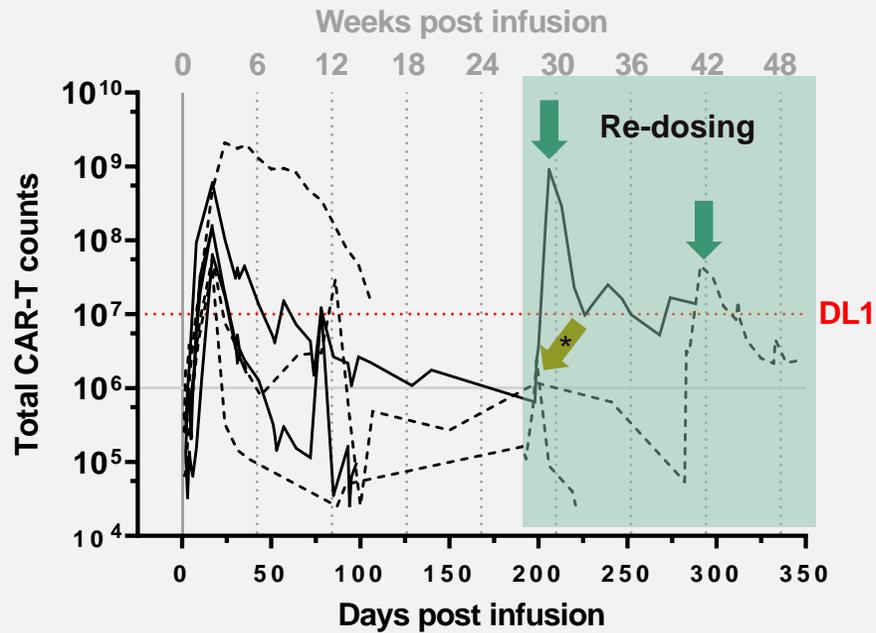
Data cut-off: August 16, 2022

DL1: 1×10^7 CAR-T; DL2: 1×10^8 CAR-T

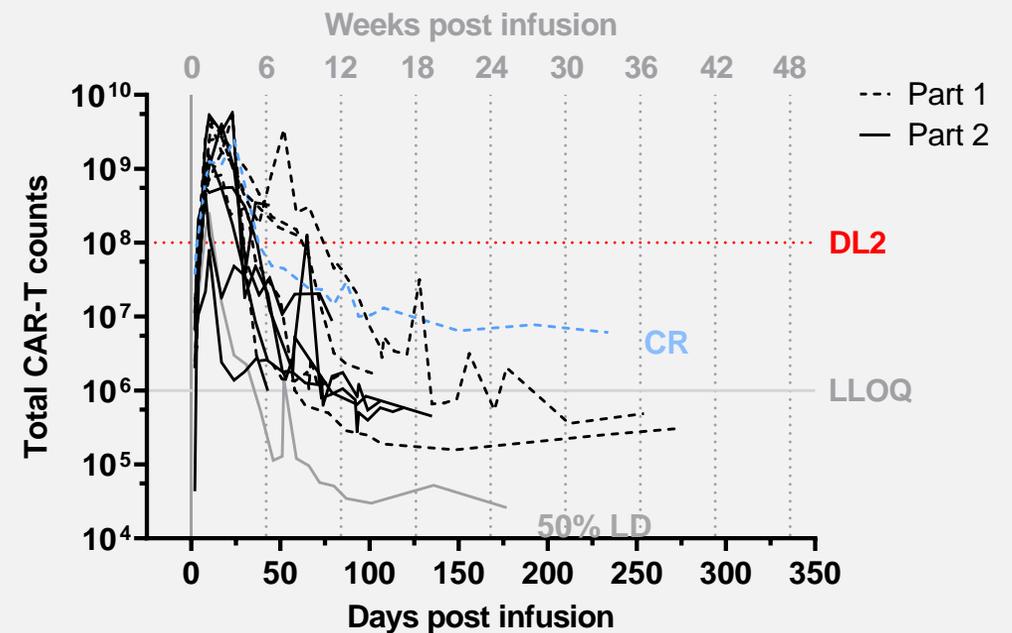
CLDN6 = Claudin-6; DLT = dose-limiting toxicity; MTD = maximum tolerated dose; CRS = cytokine release syndrome; CR = complete response; DCR = disease control rate; DL = dose level; ORR = overall response rate; PR = partial response; RP2D = recommended Phase 2 dose; SD = stable disease

Dose Dependent CAR-T Expansion Seen in All Patients

DL1 (1x10⁷ CLDN6 CAR-T)



DL2 (1x10⁸ CLDN6 CAR-T)

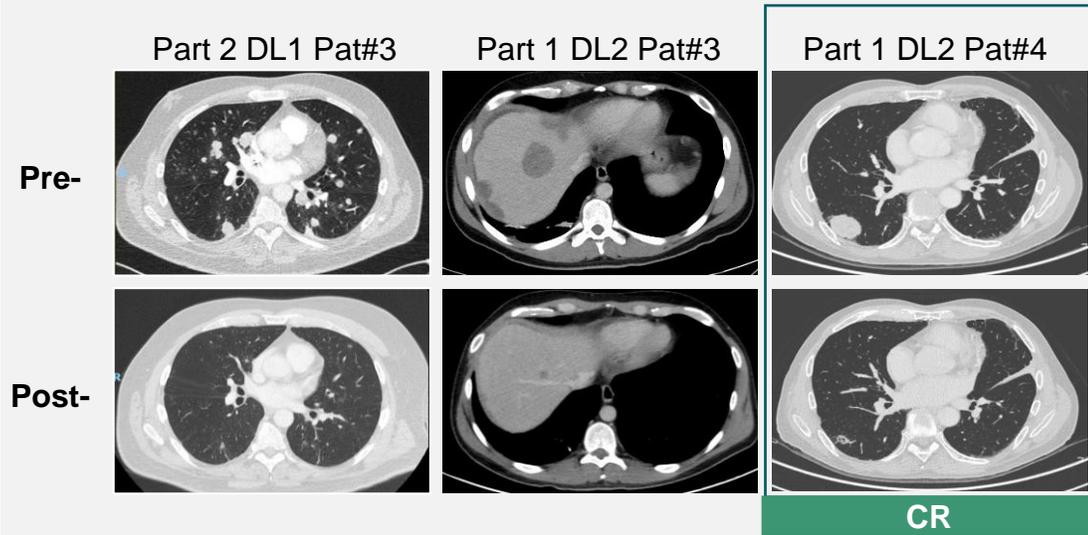


Strong persistence of CAR-T observed for more than 100 days, with some patients showing persistence for more than 200 days

Two patients were treated with CAR T without prior LD and engraftment was unsuccessful.
 *Redosing without prior LD
 Data cut-off: 15 Jun 2022. CR = complete response; DL = dose level; LD = lymphodepletion; LLOQ = lower limit of quantification.

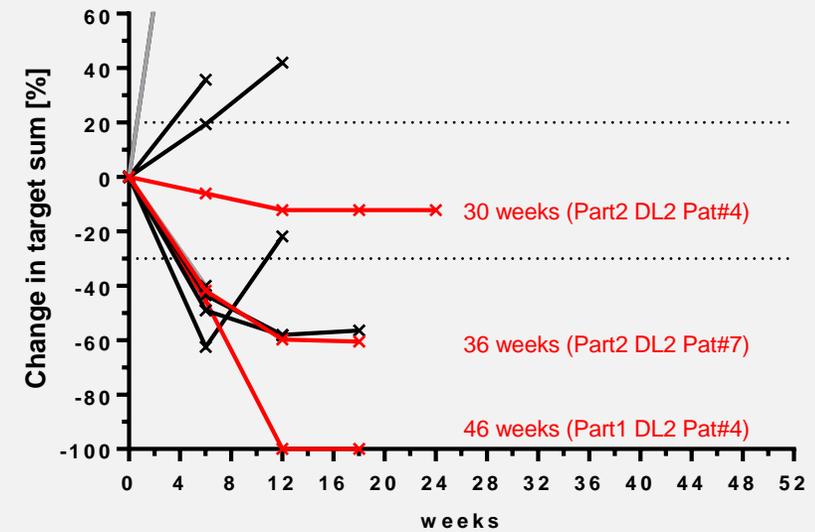
Robust Tumor Shrinkage and Durable Responses observed in Testicular Cancer Patients

Selected scans of responses in various patients



- **One testicular cancer patient investigator-assessed as CR after 12 weeks** (metabolic response in PET-CT and tumor-marker negative)
- **CR confirmed at 18 and 52 weeks**

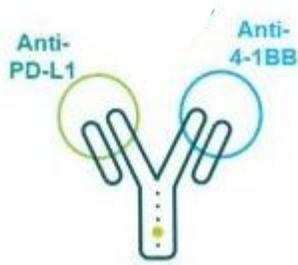
Deepening of responses over time



	DL1 w/ LD	DL2 w/ LD	Total w/ LD
Testicular, n	4	7	11
ORR, %	25	57	45
DCR, %	25	85	54

Rapid Advancement of Next Generation Immuno-Modulators for Cancer

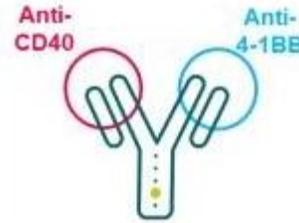
GEN1046 / BNT311¹



Phase 2: R/R NSCLC
Phase 1/2: Advanced solid tumors

Bispecific antibody: Conditional 4-1BB co-stimulation while blocking PD-(L)1 axis

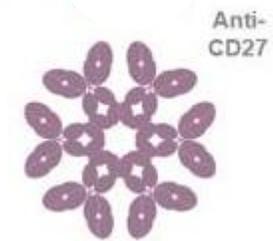
GEN1042 / BNT312¹



Phase 1/2: Advanced solid tumors
• **Data update at ESMO I/O 2022**

Bispecific antibody: Combines targeting and conditional activation of CD40 and 4-1BB on immune cells

GEN1053 / BNT313¹



Phase 1/2: Solid tumors
• **Initiated Phase 1/2 in November**
• **Preclinical data and MOA at SITC 2022**

Monospecific HexaBody² targeting CD27 on naïve and activated T cells

Designed to prime and activate anti-tumor T cell and Natural Killer cell function

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COVID-19 Vaccine & Pipeline Update

Özlem Türeci, Chief Medical Officer

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Jens Holstein, Chief Financial Officer

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Corporate Outlook

Ryan Richardson, Chief Strategy Officer

Key Highlights for 3Q 2022

Total Revenues¹



€3.5 bn

Operating Result



€2.4 bn

Diluted EPS



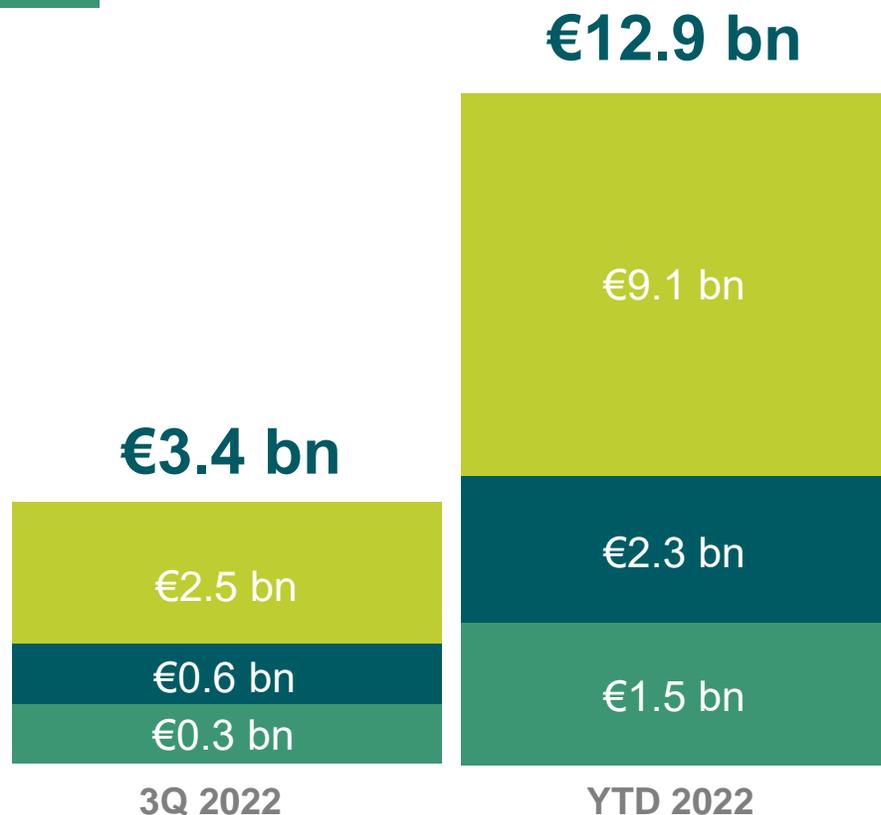
€6.98

Cash and Trade Receivables



€13.4 bn + €7.3 bn

3Q and YTD 2022 COVID-19 Vaccine Revenues



- 
 Share of gross profit from COVID-19 vaccine sales in the Pfizer and Fosun Pharma territory (100% gross margin)¹
- 
 Direct COVID-19 vaccine sales to customers in BioNTech's territory
- 
 COVID-19 vaccine sales to collaboration partners of products manufactured by BioNTech

3Q 2022 revenues in line with our expectations

¹ BioNTech's profit share is estimated based on preliminary data shared between Pfizer and BioNTech as further described in the Annual Report on Form 20-F for the year ended December 31, 2021 as well as the Quarterly Report as of and for the three and nine months ended September 30, 2022, filed as an exhibit to BioNTech's Current Report on Form 6-K on November 7, 2022. Any changes in the estimated share of the collaboration partner's gross profit will be recognized prospectively.

3Q and YTD 2022 Financial Results – Profit or Loss

(in millions, except per share data) ¹	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Commercial revenues ²	€3,394.8	€6,040.1	€12,923.3	€13,348.1
Research & development revenues	66.4	47.2	109.0	96.1
Total revenues	€3,461.2	€6,087.3	€13,032.3	€13,444.2
Cost of sales	(752.8)	(1,211.4)	(2,811.5)	(2,328.3)
Research and development expenses	(341.8)	(260.4)	(1,027.2)	(677.7)
Sales and marketing expenses	(12.8)	(10.5)	(44.9)	(32.5)
General and administrative expenses	(141.0)	(68.2)	(361.8)	(154.9)
Other operating income less expenses	174.7	186.7	562.9	333.3
Operating income	€2,387.5	€4,723.5	€9,349.8	€10,584.1
Finance income less expenses	56.6	(56.1)	431.7	(251.6)
Income taxes	(659.2)	(1,456.4)	(2,625.8)	(3,206.2)
Profit for the period	€1,784.9	€3,211.0	€7,155.7	€7,126.3
Earnings per share				
Basic profit for the period per share	€7.43	€13.14	€29.47	€29.22
Diluted profit for the period per share	€6.98	€12.35	€27.70	€27.46

¹ Numbers have been rounded, numbers presented may not add up precisely to the totals and may have been adjusted in the table context. Presentation of the consolidated statements of profit or loss has been condensed.

² BioNTech's profit share is estimated based on preliminary data shared between Pfizer and BioNTech as further described in the Annual Report on Form 20-F for the year ended December 31, 2021 as well as the Quarterly Report as of and for the three and nine months ended September 30, 2022, filed as an exhibit to BioNTech's Current Report on Form 6-K on November 7, 2022. Any changes in the estimated share of the collaboration partner's gross profit will be recognized prospectively.

2022 Financial Year Guidance Update

COVID-19 Vaccine Revenues for FY 2022¹

Estimated BioNTech COVID-19 vaccine revenues € 16 – 17 bn (previously € 13 – 17 bn)

Planned FY 2022 Expenses and Capex¹

R&D expenses € 1,400 - 1,500 m

SG&A expenses € 450 - 550 m

Capital expenditure € 450 - 550 m

Estimated FY 2022 Tax Assumptions

BioNTech Group estimated annual effective income tax rate ~27% (previously ~28%)²

Share Repurchase Program

- **Repurchase American Depositary Shares (ADS)** in the amount of up to \$ 1.5 bn
- **Term of up to two years**
- **Repurchased ADSs** are to be used in whole or in part to satisfy upcoming settlement obligations under share-based payment arrangements
- **First tranche worth up to \$ 1 bn** began May 2, 2022, and ended October 10, 2022
- **Second tranche worth up to \$ 0.5 bn** commencing December 7, 2022, has been approved in November

Period	Number of acquired ADS	Percentage of share capital ¹	Average price (in \$)	Volume (in million \$)
May 2, 2022 to October 10, 2022	6,945,513	2.8%	143.98	1,000.0

31 ¹ For the share repurchase, the "percentage of share capital" ratio is calculated based on the shares issued as of April 30, 2022 (248,552,200 ordinary shares).

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Outlook for COVID-19 Vaccine Franchise

2022 year-to-date recap

~300 m variant adapted vaccine doses invoiced since August 2022 with approvals in >45 countries or territories^{1,2}

Outlook for Full Year 2022 and beyond

Full-year 2022 deliveries:

- Up to 2.1 bn doses expected to be invoiced globally
- Expect to fulfill 105 m dose US contract and 650 m dose EU contract by year-end

2023/24 market outlook:

- Hybrid public-private market expected to develop in 2023 and beyond
- United States market to shift to commercial model as early as 1Q 2023, with list price between \$110 - \$130 expected per single dose vial for adults
- Global demand expected to be second-half weighted, driven by seasonality of vaccine administration

Select COVID-19 and Infectious Disease Pipeline Milestones

	Program	Milestone	Anticipated Timeline
COVID-19	BNT162b2 + BNT161 (BA.4/BA.5-adapted bivalent + qIRV)	Phase 1 FPD	November 2022
	BNT162b5 (Enhanced spike antigen) ¹	Phase 2 data	4Q 2022
	BNT162b4 (T cell enhancing) ¹	Phase 1 FPD	4Q 2022
	Additional next-generation vaccines ¹	Multiple Phase 1 trials	4Q 2022
Other BioNTech-Pfizer collaboration programs	mRNA Shingles vaccine ¹	Phase 1 FPD	4Q 2022
Other BioNTech Infectious Disease vaccine programs	BNT163 (mRNA HSV2 vaccine) ²	Phase 1 FPD	4Q 2022
	BNT164 (mRNA tuberculosis vaccine) ³	Phase 1 FPD	early 2023
	BNT165 (mRNA malaria vaccine)	Phase 1 FPD	4Q 2022 / early 2023

2023 Outlook

Up to 5 new Infectious Disease trial initiations

¹ Partnered with Pfizer

² University of Pennsylvania collaboration

³ Collaboration with BMGF

HSV 2 = Herpes simplex virus type 2; FPD = first patient dosed

Select Oncology Pipeline Milestones

	Program	Milestone	Anticipated Timeline
First-in-Human Trial Starts	BNT313 (GEN1053)	Phase 1/2 in solid tumors FPD ¹	November 2022
	BNT116 FixVac	Phase 1/2 in 1L NSCLC in combo with cemiplimab FPD ²	4Q 2022
Data Updates	BNT312 (GEN1042)	Phase 1/2 in solid tumors data ¹	ESMO IO 2022
	Autogene cevumeran / BNT122 (iNeST)	Phase 2 in combo with pembrolizumab in frontline melanoma data ³	1H 2023

2023 Outlook

Up to 10 Oncology clinical trial updates

2023 Outlook

Once in a generation opportunity to transform medicine

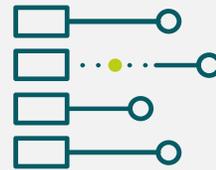
Continue to invest for the long-term in leading COVID-19 vaccine franchise

Expand reach of vaccine franchise and deliver data for next-generation candidates



Rapidly expand and accelerate innovative pipeline

Catalyst-heavy 2023 expected with multiple late-stage data readouts and FIH trial starts



Build on and leverage strong financial position

Re-investing to transform capabilities, accelerate organic growth complemented by bolt-on BD/M&A



Focused on creating long-term value to patients, shareholders and society

THANK YOU



BIONTECH