

BIONTECH

**J.P. MORGAN
HEALTHCARE CONFERENCE**

January 11th 2022



Ugur Sahin, M.D.
CEO and Co-founder



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 extent to which initial or booster doses of a COVID-19 vaccine continue to be necessary in the future; 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 collaboration between BioNTech and Pfizer to develop a COVID-19 vaccine (including a potential booster dose of BNT162b2 and/or a potential booster dose of a variation of BNT162b2 having a modified mRNA sequence); the ability of BNT162b2 to prevent COVID-19 caused by emerging virus variants; BioNTech's ability to identify research opportunities and discover and develop investigational medicines; the initiation, timing, progress, results, and cost of BioNTech's research and development programs 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 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 personal injury or death arising from the use of BioNTech's COVID-19 vaccine and other products and product candidates developed or manufactured by us; 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 nature of the collaboration with the African Union and the Africa CDC; the nature and duration of support from WHO, the European Commission and other organizations with establishing infrastructure; the development of sustainable vaccine production and supply solutions on the African continent 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, 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 for the three and nine months ended September 30, 2021 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 quarterly report 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® ▼(COVID-19 mRNA Vaccine) has been granted conditional marketing authorisation by the European Medicines Agency to prevent coronavirus disease 2019 (COVID-19) in people from 5 years of age and older. EMA's human medicines committee (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.

IMPORTANT SAFETY INFORMATION

- Do not administer Pfizer-BioNTech COVID-19 Vaccine to individuals with a known hypersensitivity to the active substance or to any of the excipients listed
- 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 risk 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. Healthcare professionals should be alert to the signs and symptoms of myocarditis and pericarditis
- 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. 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® may be lower in immunosuppressed individuals.
- 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® may not protect all vaccine recipients. Individuals may not be fully protected until 7 days after their second dose of vaccine.
- Comirnaty® has no or negligible influence on the ability to drive and use machines. However, some of side effects mentioned below, may temporarily affect the ability to drive or use machines.
- The overall safety profile of Comirnaty® in participants 5 to 15 years of age was similar to that seen in participants 16 years of age and older.
- The most frequent adverse reactions in children 5 to 11 years of age were injection site pain (>80%), fatigue (>50%), headache (>30%), injection site redness and swelling (>20%), myalgia and chills (>10%).
- The most frequent adverse reactions in adolescents 12 to 15 years of age that received 2 doses were injection site pain (> 90%), fatigue and headache (> 70%), myalgia and chills (> 40%), arthralgia and pyrexia (> 20%).
- In clinical studies, the most frequent adverse reactions in participants 16 years of age and older that received 2 doses were injection site pain (> 80%), fatigue (> 60%), headache (> 50%), myalgia (> 40%), chills (> 30%), arthralgia (> 20%), pyrexia and injection site swelling (> 10%) and were usually mild or moderate in intensity and resolved within a few days after vaccination. A slightly lower frequency of reactogenicity events was associated with greater age.
- In clinical trials, the most frequent adverse reactions in participants 18 to 55 years of age who received a booster were injection site pain (> 80%), fatigue (> 60%), headache (> 40%), myalgia (> 30%), chills and arthralgia (> 20%).
- There is limited experience with use of COMIRNATY® in pregnant women. Administration of COMIRNATY® in pregnancy should only be considered when the potential benefits outweigh any potential risks for the mother and foetus.
- It is unknown whether COMIRNATY® is excreted in human milk.
- Interactions with other medicinal products or concomitant administration of COMIRNATY® with other vaccines has not been studied.
- For complete information on the safety of COMIRNATY® 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. You can help by reporting any side effects you may get. Side effects can be reported to EudraVigilance [<http://www.adrreports.eu/>] or directly to BioNTech using email medinfo@biontech.de, telephone +49 6131 9084 0, or our website <https://medicalinformation.biontech.de/>

Safety Information

AUTHORIZED USE IN THE U.S.

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 16 years of age and older. It is also authorized under EUA to provide a 2-dose primary series to individuals 5 years of age and older, a third primary series dose to individuals 12 years of age and older who have been determined to have certain kinds of immunocompromise, a single booster dose to individuals 16 years of age and older who have completed a primary series with Pfizer-BioNTech COVID-19 Vaccine or COMIRNATY®, a single booster dose to individuals 18 years of age and older who have completed primary vaccination with a different authorized COVID-19 vaccine. The booster schedule is based on the labeling information of the vaccine used for the primary series.

IMPORTANT SAFETY INFORMATION

Individuals should not get the vaccine if they:

- had a severe allergic reaction after a previous dose of this vaccine
- had a severe allergic reaction to any ingredient of this 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

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

- There is a remote chance that the vaccine could cause a severe allergic reaction
 - A severe allergic reaction would usually occur within a few minutes to one hour after getting a dose of the vaccine. For this reason, vaccination providers may ask individuals to stay at the place where they received the vaccine for monitoring after vaccination
 - Signs of a severe allergic reaction can include difficulty breathing, swelling of the face and throat, a fast heartbeat, a bad rash all over the body, dizziness, and weakness
 - If an individual experiences a severe allergic reaction, they should call 9-1-1 or go to the nearest hospital
- Myocarditis (inflammation of the heart muscle) and pericarditis (inflammation of the lining outside the heart) have occurred in some people who have received the vaccine. In most of these people, symptoms began within a few days following receipt of the second dose of the vaccine. The chance of having this occur is very low. Individuals should seek medical attention right away if they have any of the following symptoms after receiving the vaccine:
 - chest pain
 - shortness of breath
 - feelings of having a fast-beating, fluttering, or pounding heart
- Additional side effects that have been 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
- These may not be all the possible side effects of the vaccine. Serious and unexpected side effects may occur. The possible side effects of the vaccine are still being studied in clinical trials. Call the vaccination provider or healthcare provider about bothersome side effects or side effects that do not go away

Data on administration of this vaccine at the same time as other vaccines have not yet been submitted to FDA. Individuals considering receiving this vaccine with other vaccines, should discuss their options with their healthcare provider.

Patients should always ask their healthcare providers for medical advice about adverse events. Individuals are encouraged to report negative side effects of vaccines to the US Food and Drug Administration (FDA) and the Centers for Disease Control and Prevention (CDC). Visit <https://www.vaers.hhs.gov> or call 1-800-822-7967. In addition, side effects can be reported to Pfizer Inc. at www.pfizersafetyreporting.com or by calling 1-800-438-1985.

Our Vision

Harnessing the power of the immune system to fight human diseases

BioNTech 2021 Highlights | A Year of Historic Impact



First ever approved mRNA therapy¹

Fastest pharma product development and launch

~ **2.6 bn** doses shipped^{2, 3}

~ **1 bn** to low- and middle-income countries²

> **1 bn** individuals vaccinated⁴

> **160** countries / regions reached

Millions of cases of severe illness or death likely averted⁴

Trillions of dollars of global economic impact⁵

¹Approved for emergency use/temporary supply or Conditional Marketing Authorization in more than 90 countries worldwide including the U.S. and EU, December 2021

²As of mid December 2021 3. Manufactured approximately 3 bn doses in 2021 4. Efficacy against symptomatic infection, Polack FP, et al. NEJM 2020, 383:2603-2615;

⁴Eric C. Schneider et al., The U.S. COVID-19 Vaccination Program at One Year: How Many Deaths and Hospitalizations Were Averted?

(Commonwealth Fund, December 2021); European Centre for Disease Prevention and Control; ⁵Statista

BioNTech 2021 Highlights (cont.) | A Year of Historic Impact



Pipeline expansion

9 oncology clinical trial starts, including 4 Phase 2 trials and 5 FIH studies



R&D expansion

Increased R&D team by >40% to more than 850 professionals



Global presence

Acquired and integrated new site in Gaithersburg, US; Established offices in Singapore, China and Turkey



Production capacity

Commercial scale mRNA production and addition of US cell therapy manufacturing facility



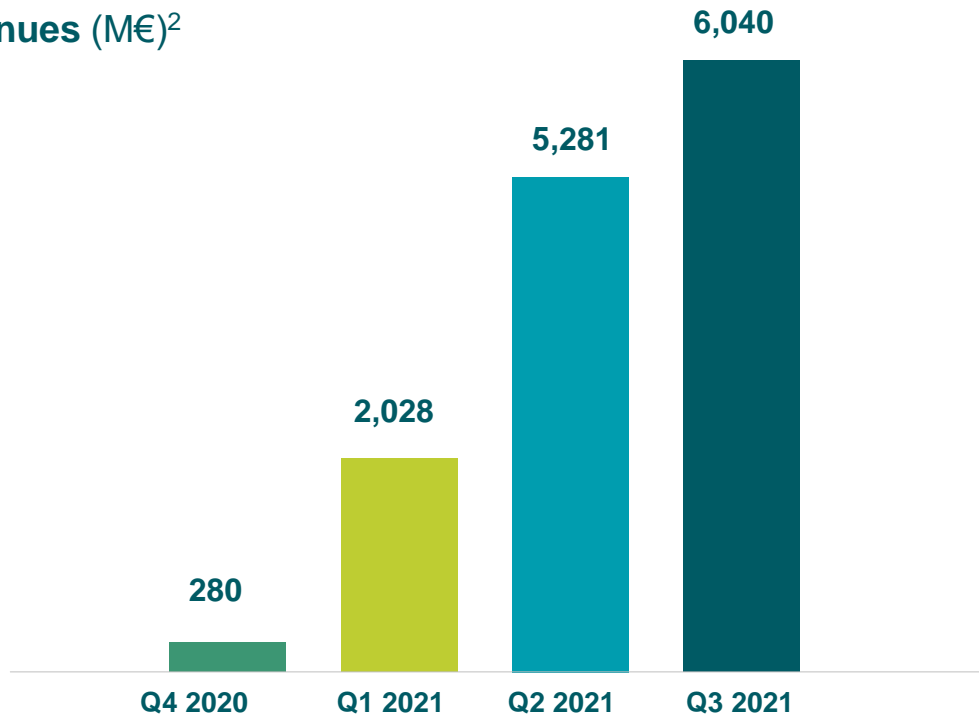
Commercial infrastructure

Deployed commercial team in Germany

Strong Financial Performance

Historic Chance to Accelerate our Vision Through Reinvestment in the Company

BioNTech Commercial Revenues (M€)²



Enabled by early scale up of production capacity:
~3 bn doses manufactured in 2021

Estimated COMIRNATY market share
74% in U.S. and **80%** in Europe¹

Outlook for COVID-19 vaccine revenues booked by BioNTech

FY 2021 guidance: **€16-17 bn**

FY 2022 estimate: **€13-17 bn**

¹As of December 2021;

²Represents an estimated figure based on preliminary data shared between Pfizer and BioNTech.

Changes in share of the collaboration partner's gross profit will be recognized prospectively. Graphic is for illustration only

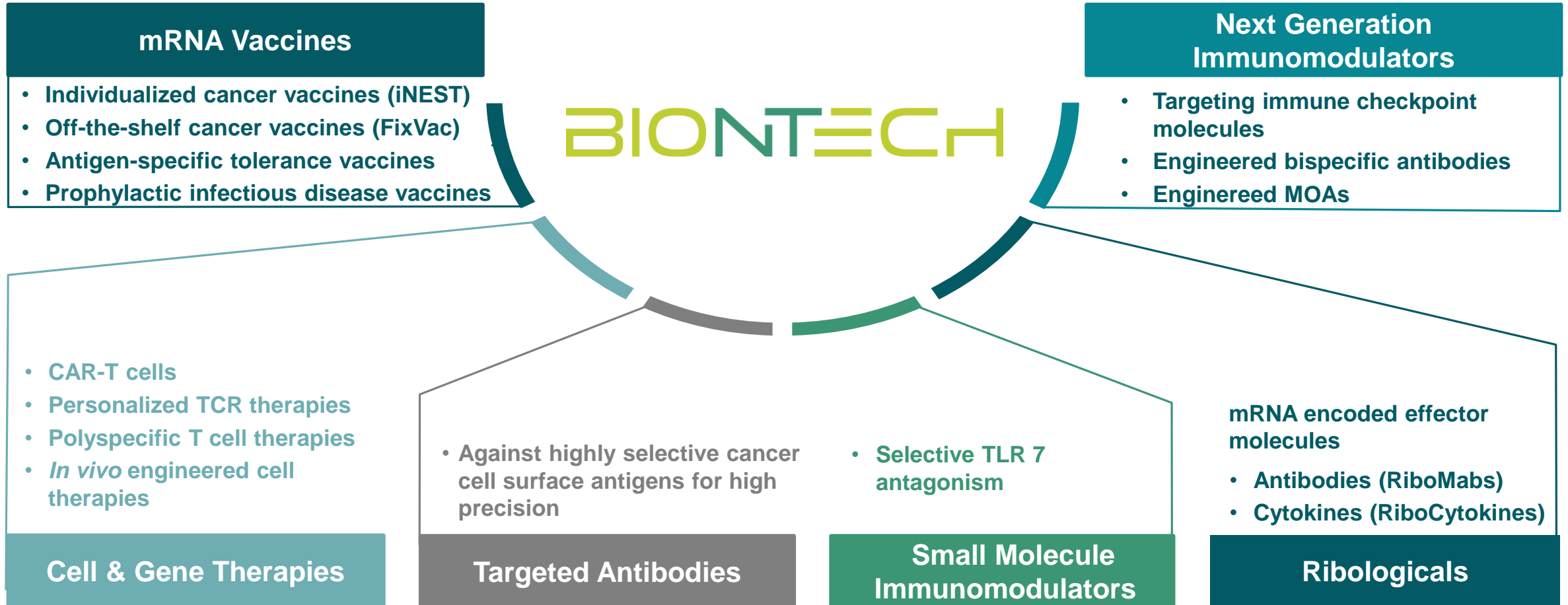
BioNTech Today | A 21st Century Immunotherapy Powerhouse





MULTI-PLATFORM STRATEGY

Multi-Platform Strategy | Technology Agnostic Innovation Engine



Multiple product classes with unique combination potential

Entering a New Era of mRNA Technology & Synthetic Biology

Impact poised to be comparable to introduction of recombinant technology

mRNA vaccines **validated**
as a new drug class



mRNA to **deliver** a variety of
biologically active molecules



mRNA poised to **broaden**
therapeutic horizons

**BNT162b2 success accelerates
diversification & maturation of
mRNA technology**

mRNA vaccines



CAR-T cell amplifying
mRNA vaccines



Systemic mRNA encoded
immuno-therapies



In vivo engineered cell therapies



Precision anti-bacterials



Cancer



Infectious diseases



Autoimmune diseases



Inflammatory diseases



Cardiovascular & neuro-
degenerative diseases



Regenerative medicines



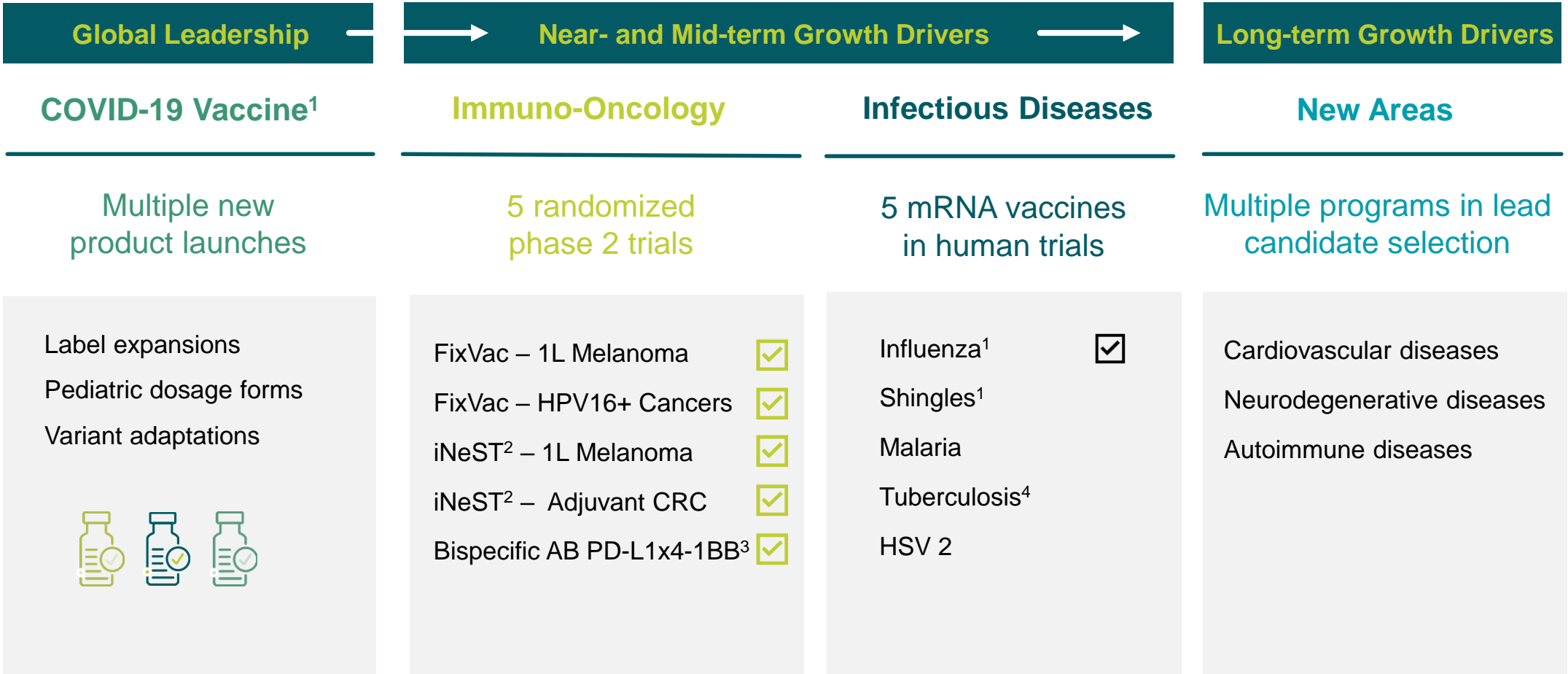
We believe that in 15 years, one-third of all newly approved drugs will be based on mRNA



DIVERSIFIED PRODUCT PIPELINE

Significant Pipeline Expansion and Maturation in 2022

GOALS



BNT162b2 Poised for Continued Global Impact in 2022

Up to
4B
doses
manufacturing
capacity
in 2022

Ensuring equitable access

- **2 bn doses** pledged to low- and middle-income countries through end of 2022

Doses for the unvaccinated

- **>3 billion** people globally **not yet vaccinated**¹

Adolescent / pediatric doses

- **> 25%** of global population **ages 0-14**²
- First **vaccine to launch for children 6 mths – 5 yrs of age** pending marketing authorization

3rd Booster

- **> 600 m** people **already boosted**³
- **Booster** vaccination **vital to mitigate impact** of Omicron⁴

Variant-specific vaccine

- **Omicron variant-specific vaccine approach** could be ready as early as **March 2022**, subject to regulatory approval
- **Rapid vaccine adaption** process for future variants, if needed

COVID-19: The long road to an endemic disease

Continued need for regular booster vaccinations and pediatric vaccinations

Huge global SARS-CoV-2 virus reservoir drives fast evolution of the virus

New variants rapidly spreading at global level

Risk for Long COVID and organ damage associated even with mild / moderate infections²

Significant impact on infrastructure and economy

**COVID-19
will remain a high-
medical need
global challenge**

Waning of protection over time in broader population

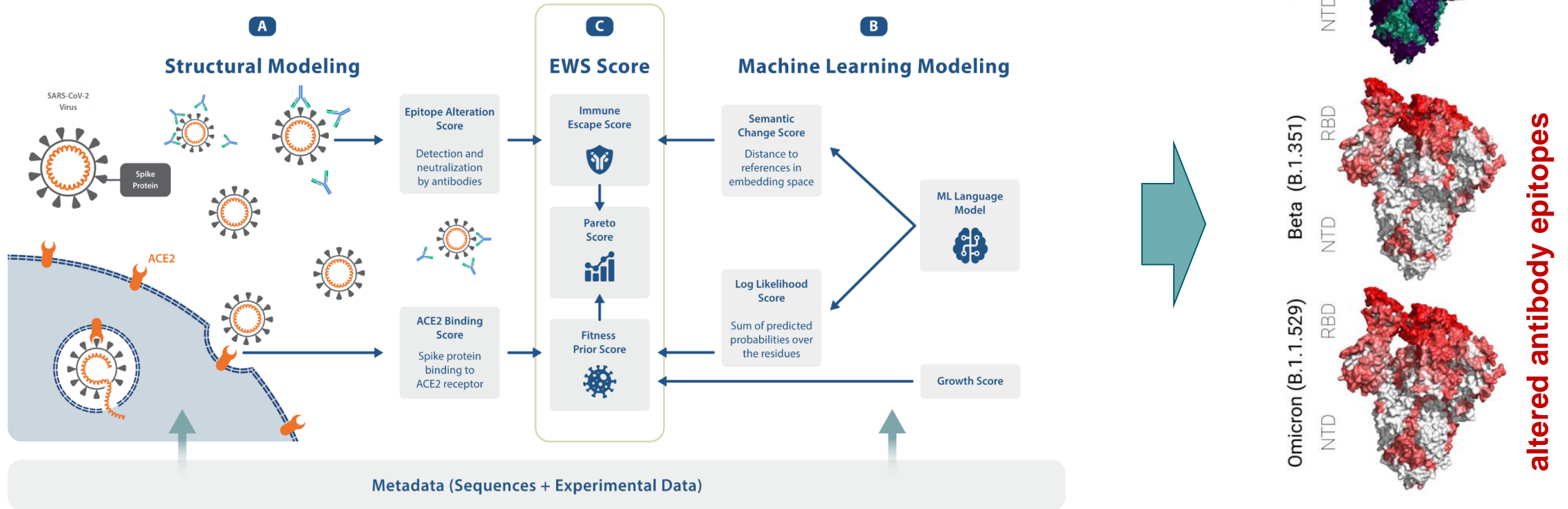
Risk of MIS-C; incidence of 0.5% – 3.1% of all children¹

Need for sterilizing immunity in frontline workers

Protection of Individuals with immune compromises and medical conditions at risk

Early Computational Detection of High Risk SARS-CoV-2 Variants*

Early Warning System (EWS) combines **Spike protein structural modeling** with **artificial intelligence (AI)** to detect and monitor high risk SARS-CoV-2 variants



EWS identifies and scores >90% of new variants on average two months prior to their official designation by WHO

Infectious Disease Product Strategy Rooted in Global Social Responsibility

Advancing programs to
combat major health burdens

mRNA-based vaccines and therapeutics

Malaria: 229 million cases and 409,000 deaths annually¹

Tuberculosis*: 10 million people contracted TB in 2019²

HIV*: 37.7 million people living with HIV, two-thirds in WHO African region³

Democratizing global
access to mRNA
medicines

Ensuring equitable COVID-19 vaccine access to LMICs⁴

Expanding COVID-19 manufacturing network to Africa and South America

Construction of state-of-the-art mRNA manufacturing sites in Africa and Asia in mid-2022 to establish sustainable local supply

mRNA Vaccines | Ribologicals | Synthetic Lysins

¹ World Health Organization <https://www.who.int/news-room/fact-sheets/detail/malaria>

² World Health Organization <https://www.who.int/news-room/fact-sheets/detail/tuberculosis>

³ World Health Organization <https://www.who.int/data/gho/data/themes/hiv-aids>

⁴Low- and low-middle income countries

* Collaboration with Bill & Melinda Gates Foundation.

5 mRNA Vaccines in Human Trials in 2022

BIONTECH
3 mRNA vaccines
partnered w/Pfizer

10+ other infectious
disease programs

Platform	Pre-clinical	Phase 1	Phase 2	Commercial	Economics
COVID-19 Vaccine	[Progress bar spanning Pre-clinical, Phase 1, and Phase 2]				Cost / Gross profit split
Influenza	[Progress bar spanning Pre-clinical and Phase 1]				Milestones and royalties
Shingles	[Progress bar in Pre-clinical]	[Yellow arrow in Phase 1]			Cost / Gross profit split
Malaria	[Progress bar in Pre-clinical]	[Yellow arrow in Phase 1]			Worldwide rights to BioNTech
Tuberculosis ¹	[Progress bar in Pre-clinical]	[Yellow arrow in Phase 1]			
HSV 2	[Progress bar in Pre-clinical]	[Yellow arrow in Phase 1]			
HIV ¹	[Progress bar in Pre-clinical]				
Additional mRNA vaccine programs ²	[Progress bar in Pre-clinical]				
Precision antibacterials	[Progress bar in Pre-clinical]				

[Yellow arrow] Expected Phase 1 trial initiation in 2022

¹ Collaboration with Bill & Melinda Gates Foundation. BioNTech holds worldwide distribution rights except developing countries where BMG holds distribution rights;

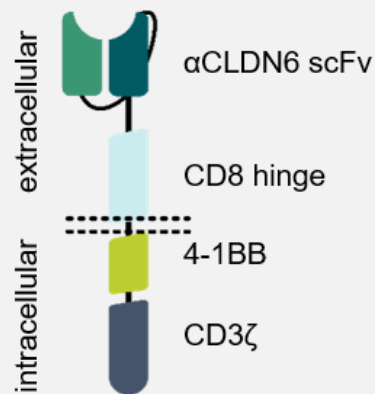
² University of Pennsylvania collaboration

BNT211: Phase 1/2 Trial Evaluating Next Generation CAR-T Targeting Claudin-6 with CARVac in Solid Tumors

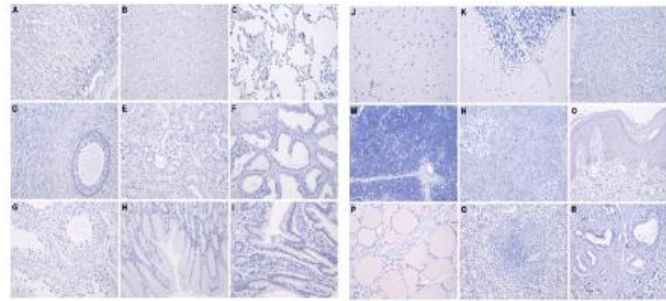
CAR-T cell therapy + RNA Vaccine to amplify CAR-T cell (CARVac) *in vivo*

- 2nd generation CAR directed against CLDN6, a cancer specific carcino-embryonic antigen
- CLDN6 is expressed in multiple solid cancers with high medical need
- CARVac drives *in vivo* expansion, persistence and efficacy of CAR-T

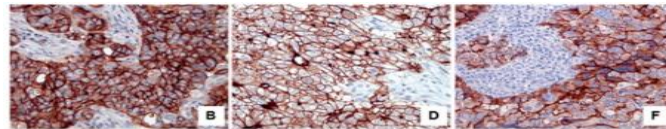
BNT211 CAR Structure



CLDN6 not present in healthy tissues



CLDN6 expressed in multiple cancers

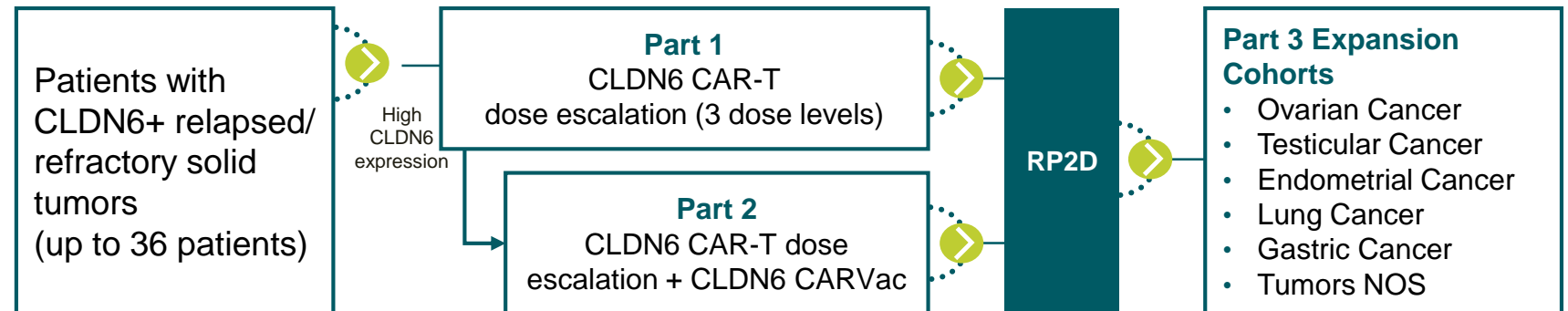


CANCER IMMUNOTHERAPY

An RNA vaccine drives expansion and efficacy of claudin-CAR-T cells against solid tumors

Katharina Reinhard^{1*}, Benjamin Rengstl^{1*}, Petra Oehm^{1*}, Kristina Michel¹, Arne Billmeier¹, Nina Hayduk¹, Oliver Klein¹, Kathrin Kuna¹, Yasmina Ouchan¹, Stefan Wöll¹, Elmar Christ¹, David Weber², Martin Suchan², Thomas Bukur², Matthias Birtel¹, Veronika Jahndel¹, Karolina Mroz¹, Kathleen Hobohm¹, Lena Kranz¹, Mustafa Diken², Klaus Kühlicke¹, Özlem Türeci^{1†}, Ugur Sahin^{1,2,3††}

Science



ESMO-IO 2021/BNT211 Phase 1/2: CAR-T Engraftment and Tolerable Safety Profile with CLDN6 CAR-T without (Part 1) and with (Part 2) CARVac

Cohort/Patient Characteristics	Part 1 DL1 (n=3)	Part 2 DL1 (n=3)	Part 1 DL2 (n=6)	Part 2 DL2 w/ LD (n=2)	Part 2 DL2 w/o LD (n=1)	All patients (n=15)
Median (range) age, years	33 (25-68)	41 (27-56)	56 (35-66)	53.5 (46-61)	56	54 (25-68)
Cancer type, n						
Testicular	1	3	2	0	1	7
Ovarian	1	0	1	2	0	4
Endometrial	0	0	1	0	0	1
Fallopian tube	0	0	1	0	0	1
Sarcoma	1	0	0	0	0	1
Gastric	0	0	1	0	0	1
Median (range) CLDN6 II/III+ cells, %	60 (60-80)	90 (90-95)	82.5 (50-90)	95 (90-100)	85	85 (50-100)
Median (range) of prior treatment lines	4 (3-5)	4 (3-4)	5 (2-11)	6 (5-7)	4	4 (2-11)

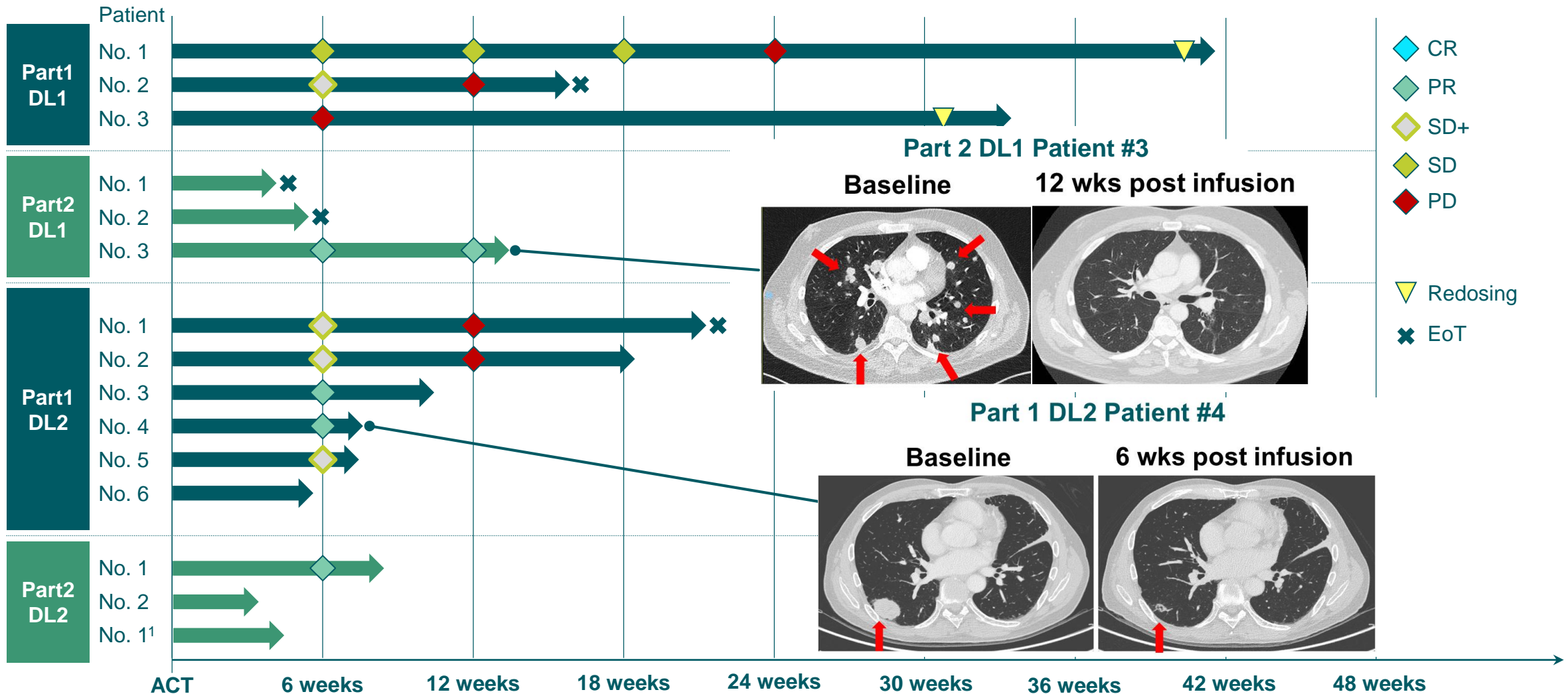
Safety

- CLDN6 CAR-T cells alone or combined with CARVac well tolerated at the dose levels evaluated to date with only 1 DLT observed
- CRS was seen in 1 patient at DL1 + CARVac and 6 patients at DL2, and was manageable by administration of tocilizumab

Efficacy

- Robust engraftment of CAR-T cells resulting in a total amount of around 10^9 achieved in most patients and seems predictive for clinical activity
- 9 of 10 patients evaluable for efficacy assessment showed initial disease control including 4 PRs (3 in testicular cancer patients with recent relapse after HDCT/ASCT)

BNT211 Phase 1/2: First Indications of Clinical Activity - 4 PR, 4 SD+, 1 SD at 6 Weeks Post Infusion (ORR 4/10, DCR 9/10)



OUTLOOK 2022 AND BEYOND

Outlook 2022 and Beyond

Once in a generation opportunity to transform medicine



Further COVID-19 vaccine launches

of new formulation, pediatric dosage form, and potentially variant adapted vaccine



Accelerate late-stage Oncology

programs towards the market and expand earlier stage pipeline



Ramp up R&D investment

and make strategic investments in cutting edge digital technologies and capabilities



Pursue complementary acquisitions

of synergistic technologies, infrastructure, and product candidates



Expand global organization

in Europe, the U.S., Asia, and Africa and deploy pandemic response capability

Bring long-term value to patients, shareholders, and society

**THANK
YOU**

BIONTECH