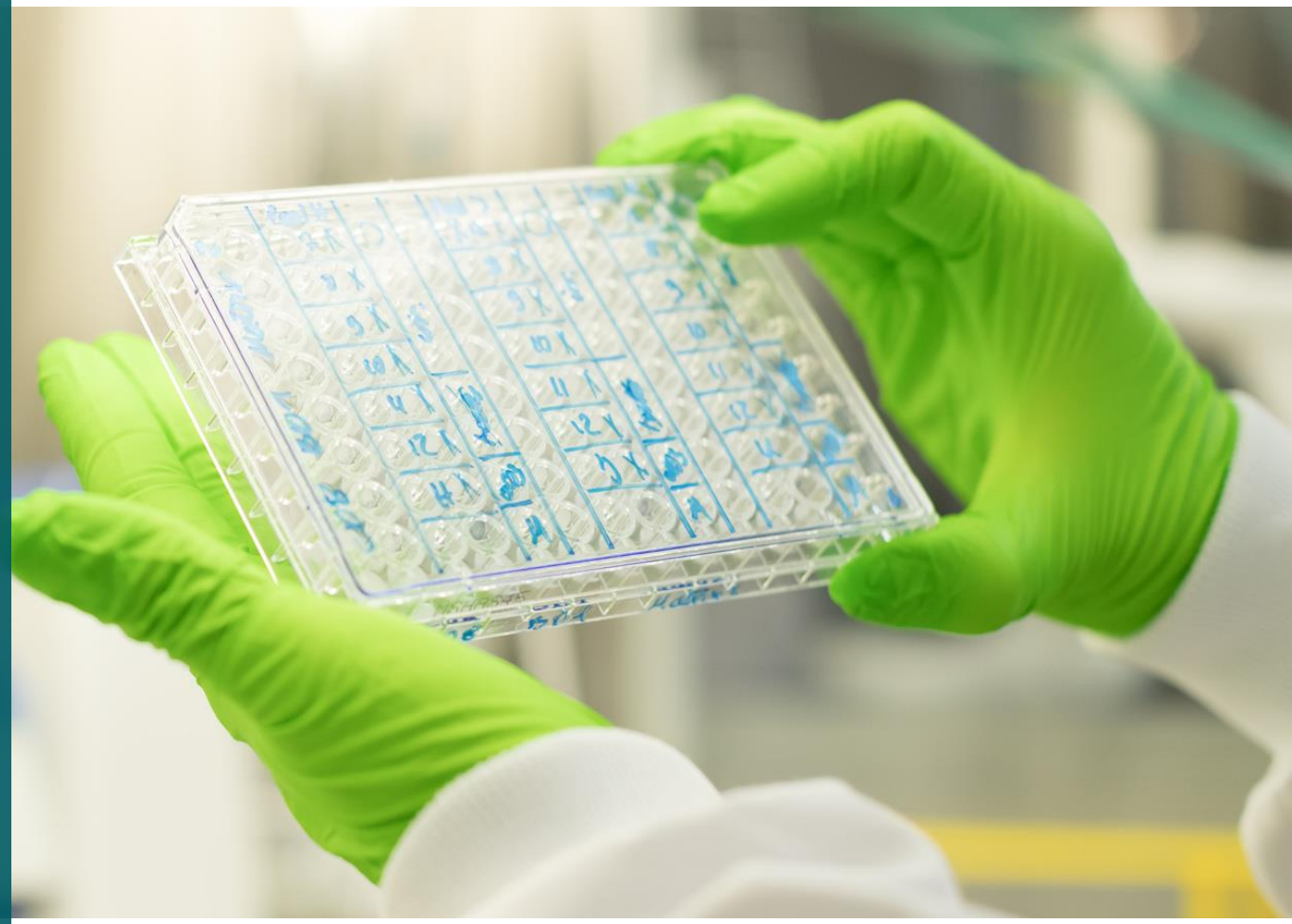
Second Quarter 2021

Corporate update and financial results

August 09, 2021



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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: our expected revenues and net profit related to sales of our COVID-19 vaccine, referred to as COMIRNATY® in the European Union as authorized for use under conditional marketing approval, in territories controlled by our collaboration partners, particularly for those figures that are derived from preliminary estimates provided by our partners; our pricing and coverage negotiations with governmental authorities, private health insurers and other third-party payors after our initial sales to national governments; the extent to which a COVID-19 vaccine continues to be necessary in the future; competition from other COVID-19 vaccines or related to our 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 our COVID-19 vaccine and our investigational medicines, if approved; the initiation, timing, progress, results, and cost of our research and development programs and our 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 our research and development programs; the timing of and our ability to obtain and maintain regulatory approval for our product candidates; 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; our ability to identify research opportunities and discover and develop investigational medicines; the ability and willingness of our third-party collaborators to continue research and development activities relating to our development candidates and investigational medicines; the impact of the COVID-19 pandemic on our development programs, supply chain, collaborators and financial performance; unforeseen safety issues and claims for personal injury or death arising from the use of our COVID-19 vaccine and other products and product candidates developed or manufactured by us; BioNTech's Malaria, Tuberculosis and HIV programs; 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; our estimates of research and development revenues, commercial revenues, cost of sales, research and development expenses, sales and marketing expenses, general and administrative expenses, other operating income less expenses, finance income less expenses, income taxes, shares outstanding and basic and diluted profit for the period per share and our needs for or ability to obtain additional financing; our ability to identify, recruit and retain key personnel; our and our collaborators' ability to protect and enforce our intellectual property protection for our proprietary and collaborative product candidates, and the scope of such protection; the development of and projections relating to our competitors or our industry; our ability and that of our collaborators to commercialize and market our product candidates, if approved, including our COVID-19 vaccine; the amount of and our ability to use net operating losses and research and development credits to offset future taxable income; our ability to manage our development and expansion; regulatory developments in the United States and foreign countries; our ability to effectively scale our production capabilities and manufacture our products, including our target COVID-19 vaccine pro-duction levels, and our product candidates; our ability to implement, maintain and improve effective internal controls; our plans for expansion in southeast Asia and China, including our planned regional headquarters and manufacturing facility in Singapore as well as the joint venture with Fosun Pharma; and other factors not known to us 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 quarterly report 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 forwardlooking statements. You should review the risks and uncertainties described under the head-ing "Risk Factors" in this quarterly report 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 for-ward-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.

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Safety Information

AUTHORIZED USE IN THE U.S.:
The Pfizer-BioNTech COVID19 Vaccine is authorized for use under an Emergency Use Authorization (EUA) for active immunization to prevent coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in individuals 12 years of age and older.

IMPORTANT SAFETY INFORMATION FROM U.S. FDA EMERGENCY USE AUTHORIZATION PRESCRIBING INFORMATION:

- Do not administer Pfizer-BioNTech COVID-19 Vaccine to individuals with known history of a severe allergic reaction (eg, anaphylaxis) to any component of the Pfizer-BioNTech COVID-19 Vaccine
- Appropriate medical treatment used to manage immediate allergic reactions must be immediately available in the event an acute anaphylactic reaction occurs following administration of Pfizer-BioNTech COVID-19 Vaccine
- Monitor Pfizer-BioNTech COVID-19 Vaccine recipients for the occurrence of immediate adverse reactions according to the Centers for Disease Control and Prevention guidelines (https://www.cdc.gov/vaccines/covid-19/clinical-considerations/managing-anaphylaxis.html)
- Reports of adverse events following use of the Pfizer-BioNTech COVID-19 Vaccine under EUA suggest increased risks of myocarditis and pericarditis, particularly following the second dose. The decision to administer the Pfizer-BioNTech COVID-19 Vaccine to an individual with a history of myocarditis or pericarditis should take into account the individual's clinical circumstances
- Syncope (fainting) may occur in association with administration of injectable vaccines, in particular in adolescents. Procedures should be in place to avoid injury from fainting
- Immunocompromised persons, including individuals receiving immunosuppressant therapy, may have a diminished immune response to the Pfizer-BioNTech COVID-19 Vaccine
- The Pfizer-BioNTech COVID-19 Vaccine may not protect all vaccine recipients
- In clinical studies, adverse reactions in participants 16 years of age and older included pain at the injection site (84.1%), fatigue (62.9%), headache (55.1%), muscle pain (38.3%), chills (31.9%), joint pain (23.6%), fever (14.2%), injection site swelling (10.5%), injection site redness (9.5%), nausea (1.1%), malaise (0.5%), and lymphadenopathy (0.3%)
- In a clinical study, adverse reactions in adolescents 12 through 15 years of age included pain at the injection site (90.5%), fatigue (77.5%), headache (75.5%), chills (49.2%), muscle pain (42.2%), fever (24.3%), joint pain (20.2%), injection site swelling (9.2%), injection site redness (8.6%), lymphadenopathy (0.8%), and nausea (0.4%)
- Following administration of the Pfizer-BioNTech COVID-19 Vaccine, the following have been reported outside of clinical trials:
    - severe allergic reactions, including anaphylaxis, and other hypersensitivity reactions, diarrhea, vomiting, and pain in extremity (arm)
    - myocarditis and pericarditis
- Additional adverse reactions, some of which may be serious, may become apparent with more widespread use of the Pfizer-BioNTech COVID-19 Vaccine
- Available data on Pfizer-BioNTech COVID-19 Vaccine administered to pregnant women are insufficient to inform vaccine-associated risks in pregnancy
- Data are not available to assess the effects of Pfizer-BioNTech COVID-19 Vaccine on the breastfed infant or on milk production/excretion
- There are no data available on the interchangeability of the Pfizer-BioNTech COVID-19 Vaccine with other COVID-19 vaccines to complete the vaccination series. Individuals who have received one dose of Pfizer-BioNTech COVID-19 Vaccine should receive a second dose of Pfizer-BioNTech COVID-19 Vaccine to complete the vaccination series
- Vaccination providers must report Adverse Events in accordance with the Fact Sheet to VAERS online at https://vaers.hhs.gov/reportevent.html. For further assistance with reporting to VAERS call 1-800-822-7967. The reports should include the words "Pfizer-BioNTech COVID-19 Vaccine EUA" in the description section of the report
- Vaccination providers should review the Fact Sheet for Information to Provide to Vaccine Recipients/Caregivers and Mandatory Requirements for Pfizer-BioNTech COVID-19 Vaccine Administration Under Emergency Use Authorization
- Before administration of Pfizer-BioNTech COVID-19 Vaccine, please see Emergency Use Authorization (EUA) Fact Sheet for Healthcare Providers Administering Vaccine (Vaccination Providers) including Full EUA Prescribing Information available at www.cvdvaccine-us.com.

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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 12 years of age. 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

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

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.

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.

In clinical studies, adverse reactions in participants 16 years of age and older included pain at the injection site (84.1%), fatigue (62.9%), headache (55.1%), muscle pain (38.4%), chills (31.9%) joint pain (23.6%), fever (14.2%), injection site swelling (10.5%), injection site redness (9.5%), nausea (1.1%), malaise (0.5%), and lymphadenopathy (0.3%)

The overall safety profile of COMIRNATY® in adolescents 12 to 15 years of age was similar to that seen in participants 16 years of age and older. The most frequent adverse reactions in clinical trial participants 12 to 15 years of age were injection site pain (> 90%), fatigue and headache (> 70%), myalgia and chills (> 40%), arthralgia and pyrexia (> 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.

Very rare cases of myocarditis and pericarditis have been observed following vaccination with COMIRNATY® primarily in younger males, after the second dose, within 14 days following vaccination

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/

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Agenda

- Second Quarter 2021 Highlights
- COVID-19 Vaccine Update
- Oncology Pipeline Update
- Financial Results
- Corporate Update & Outlook

2021

Accelerating our Vision to Build a Next Generation Immunotherapy Company

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BioNTech: A Global Immunotherapy Powerhouse

Fully Integrated

- **Deep Immunology Expertise** ✓
- **Broad Suite of Novel Technologies** ✓
- **Automation & Digitalization** ✓
- **Specialized Manufacturing** ✓
- **Commercial Capabilities** ✓
- **Global Team of 2,500+** ✓

A Diverse Pipeline of 20+ Candidates

Next-Generation Immunotherapies & Vaccines

Oncology,
Infectious Diseases
and Beyond

- ***Shipped >1bn doses of COVID-19 vaccine***
- ***Expanded clinical pipeline to 15 oncology programs in 18 ongoing trials***

Potential to Launch Multiple Products in the Next 5 Years

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Strong Performance in the First Half of 2021

Second Quarter 2021 Highlights

COVID-19 vaccine*

- Shipped >1 billion doses to >100 countries & territories worldwide
- Signed supply contracts for ~2.2 billion doses for delivery in 2021
- Committed to deliver >2 billion doses to low- and middle-income nations

Continued pipeline expansion

Randomized Phase 2 trial starts

- **Melanoma FixVac:** BNT111 (CPI-R/R)
- **HPV16 FixVac:** BNT113 (HPV16+ HNSCC)
- **iNeST:** BNT122 (Adjuvant CRC)

First-in-Human Phase 1 trial starts

- **CARVac:** BNT211 (Multiple solid tumors)
- **NEOSTIM:** BNT221 (Multiple s.t.)
- **RiboCytokines:** BNT151/2/3 (Multiple s.t.)

Further corporate updates

- Reported Q2 total revenues of €5.3 billion
- Jens Holstein appointed to Management Board as CFO as of July 1, 2021
- Acquired personalized TCR platform and cGMP manufacturing facility from Kite Pharma

*As of July 21, 2021: includes doses shipped by collaboration partner Pfizer;
s.t., solid tumors;

Infectious Diseases: A Long-term Growth Pillar

mRNA vaccines to combat major global health burden

Malaria[1]:

- Development of first mRNA-based Malaria vaccine recently started
- Implementation of sustainable end-to-end vaccine supply solutions in Africa planned

HIV and tuberculosis[2]:

- Preclinical development of multiple product candidates ongoing

Opportunity to impact infectious diseases with high unmet need

- Up to 10 mRNA vaccine candidates in preclinical development[3]

BNT161 influenza vaccine candidate designed to improve traditional vaccines

- FIH trial expected Q3 2021
- Eligible for milestone payments and royalties through Pfizer agreement

[1] Collaboration with kENUP Foundation; [2]Collaboration with Bill & Melinda Gates Foundation; [3]University of Pennsylvania collaboration

Disease Horizon: Expanding the Application Spectrum of Our Technology

Targeting Disease + Immunomodulation

mRNA Vaccines

- Cancer
- Infectious Disease
- Autoimmunity
- Allergy

Next Generation Immunomodulators

Bispecifics / Trispecifics

- Engineered binders
- Engineered MOAs

Next Gen T Cell Therapies

- CAR-T cells
- CAR-T_{regs}
- TCR therapies
- Polyspecific T cell therapies

Cell Therapies

- Cancer
- Infectious diseases

Targeted Antibodies

- Potently modulates innate immunity
- Potential for combination

Small Molecule Immunomodulators

Ribologicals

- Cancer
- Anti-Infectives

Engineered Biologicals

Grow & mature novel technologies across oncology, infectious diseases and beyond

New Product Paradigms

Broaden Disease Horizon

- Infectious disease
- Oncology
- Allergy
- Autoimmune and inflammatory disease
- Regenerative medicine

Expand on Traditional Modalities

- mRNA infectious disease vaccines
- mRNA therapeutic cancer vaccines
- CAR-T cell amplifying mRNA vaccine
- mRNA encoded protein immunotherapies

Immunology Expertise and Validated mRNA Technology Unlocks New Therapeutic Universe

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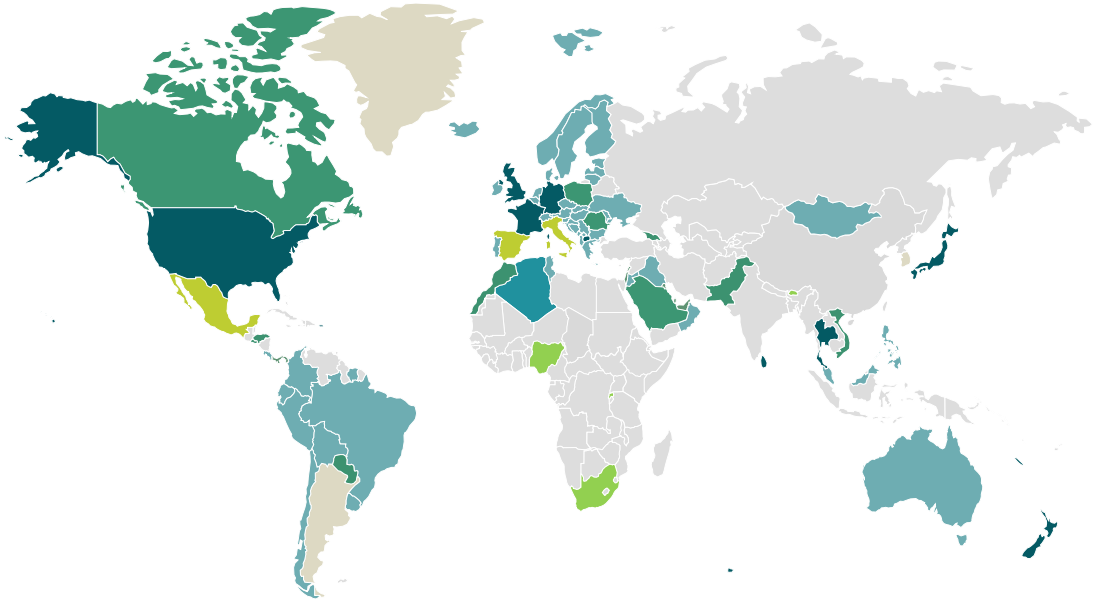
A Leading Provider Globally of COVID-19 Vaccines: ~2.2 bn Bn Doses Contracted for 2021*

Expanding Access to Low & Middle-Income Countries

Selected Regions	2021 Orders	2022 and Beyond
EU	660 m	900 m doses (plus option for additional 900 m)
US	410 m	90 m
Other	~1.150 m	Canada, Israel and others
TOTAL	**~2.2 bn**	**> 1 bn (excl. options)**
Ongoing discussions for additional doses in 2021/2022 and beyond		



- 2 bn doses pledged over the next 18 months to ensure global equitable vaccine access
- Plans to provide 500 m doses to U.S. government for donation to ~100 countries, including those in African Union via COVAX

*As of July 21, 2021; In combination with contracts entered into by Pfizer

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Significant Progress Across Six Key Levers to Expand COVID-19 Vaccine Reach

Increased Manufacturing Capacity

- South African collaboration with Biovac to expand BNT/Pfizer manufacturing network with fill and finish and distribution
- Continued efforts to establish multi-continent manufacturing capabilities to support global vaccine needs

Label Expansion to Additional Populations

- Expansion of authorizations for adolescents 12 years of age and older in U.S., EU and other countries
- Ongoing trial in children 2 to 11 years and 6 months to 2 years of age: data expected Q3 and Q4 2021
- Global Phase 2/3 trial in healthy pregnant women: data expected Q3 2021

Regulatory Advancement Across All Geographies

- U.S. rolling BLA submission finalized; FDA granted priority review; PDUFA date: Jan. 2022
- Converting existing emergency use authorizations into regulatory approvals globally
- Regulatory submission for BLA in China underway

Optimize Formulations to Further Simplify Access Worldwide

- Storage at 2-8 °C for 31 days approved by multiple regulators, including EMA and FDA
- Phase 3 trial for ready-to-use and lyophilized formulations: data expected Q3 2021

Addressing Waning Immune Reponses

Addressing SARS-CoV-2 Variants

- Expanded trials for third booster dose of BNT162b2 and multiple variant-specific approaches in both vaccine-naive and previously vaccinated individuals 6-12 months post dose 2
- Initial, preliminary booster data: ~6 months after dose 2 of BNT162b2 show overall consistent tolerability profile while eliciting SARS-CoV-2 neutralization titers against wild type, Beta and Delta variant

EMA, European Medicines Agency; FDA, U.S. Food and Drug Administration;

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Vaccine Efficacy Remains High up to 6 Months Following 2nd Dose[1,2]

Pivotal Phase 3 trial: ~46,000 participants, ~150 clinical sites globally

Subjects ≥12 Years of Age*	BNT162b2 (30 µg) N=23,040		Placebo N=23,037		Vaccine Efficacy, (95% CI)
Efficacy Endpoint	No. of cases	Surveillance time (n)†	No. of cases	Surveillance time (n)†	
First COVID-19 occurrence ≥7 days after Dose 2	82	6.649 (22,132)	889	6.371 (22,001)	91.2% (88.9-93.0)
First Severe COVID-19† occurrence ≥7 days after Dose 2	1	6.663 (22,142)	23	6.505 (22,048)	95.7% (73.9-99.90)

*Subjects with and without prior evidence of Infection
† Based on FDA definitions

Phase 3 Clinical data demonstrated clinical protection against the Beta strain[2]

- In 800 South African participants: 9 COVID-19 cases, all in the placebo group, eight of which were the B.1.351 variant

[1]Thomas SJ et al. *medRxiv Preprint, July 29, 2021. Available at https://www.medrxiv.org/content/10.1101/2021.07.28.21261159v1.full.pdf*.
[2]https://investors.biontech.de/news-releases/news-release-details/pfizer-and-biontech-confirm-high-efficacy-and-no-serious-safety accessed June2021

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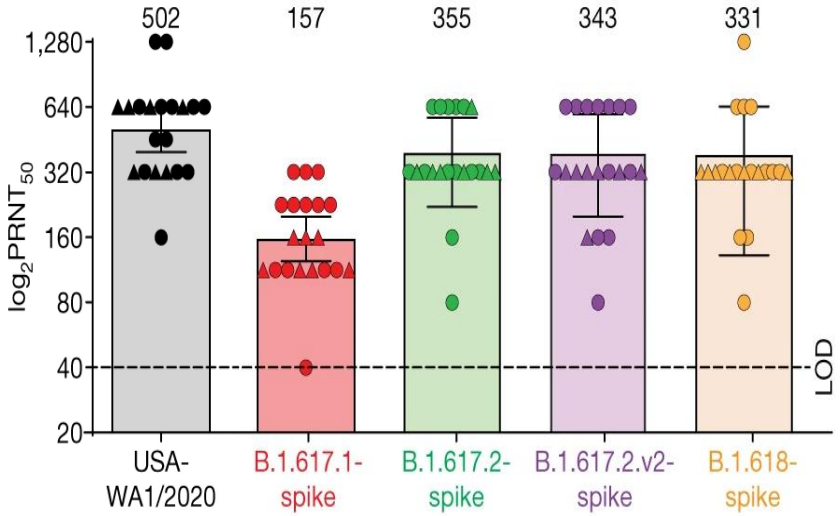
Data Demonstrates Protection Against Circulating SARS-CoV-2 Variants Including Delta Variant

Neutralizing antibody titers

Reduced, yet preserved *in vitro* neutralizing activity of immune sera against several variants of concern, including: Alpha, Gamma, Beta, Eta, Delta[1, 2, 3]



Poly-specific T cell responses

Vaccinated individuals generate a T cell response targeting epitopes conserved across a number of variants, including the Delta variant[2,4]

	84–92	269–277	321–329	448–456 (L452R)	896–904	1000–1008	1208–1216	1211–1220
BNT162b2	LPFNDGVYF	YLQPRTFLL	QPTESIVRF	NYNYLYRLF	IPFAMQMAY	RLQSLQTYV	QYIKWPWYI	KWPWYIWLGF
B.1.617.2 (Delta)	LPFNDGVYF	YLQPRTFLL	QPTESIVRF	NYNYRFRLF	IPFAMQMAY	RLQSLQTYV	QYIKWPWYI	KWPWYIWLGF
B.1.1.7 (Alpha)	LPFNDGVYF	YLQPRTFLL	QPTESIVRF	NYNYLYRLF	IPFAMQMAY	RLQSLQTYV	QYIKWPWYI	KWPWYIWLGF
B.1.351 (Beta)	LPFNDGVYF	YLQPRTFLL	QPTESIVRF	NYNYLYRLF	IPFAMQMAY	RLQSLQTYV	QYIKWPWYI	KWPWYIWLGF
P.1 (Gamma)	LPFNDGVYF	YLQPRTFLL	QPTESIVRF	NYNYLYRLF	IPFAMQMAY	RLQSLQTYV	QYIKWPWYI	KWPWYIWLGF

Real world data

Observed effectiveness against variants of concern including Delta variant (95%CI)

Real-World Study	Timepoint	Infection	Symptomatic	Hospitalization
Public Health England, NEJM July 2021[5]; preprint July 2021[6]	≥14d post 2d – up to 2-3m	88 (78-93)	--	96 (86-99)
Public Health Ontario, Canada, preprint July 2021[7]	≥7d post 2d – up to 1-2m	--	87 (64-95)	100
Public Health Scotland, Lancet June 2021[8]	≥14d post 2d – up to 2-3m	79 (75-82)	--	--
Israel, MoH[9]	≥7d post 2d – up to 6m	39 (9-59)	41 (9-61)	88 (79-93)

1. Liu J et al Nature 2021https://www.nature.com/articles/s41586-021-03693-y. 2. Xie X et al Nature Med https://doi.org/10.1038/s41591-021-01270-4 2021. 3. Liu J et al Nature Med 2021 https://doi.org/10.1038/s41586-021-03693-y. 4. Sahin U et al Nature 2021 https://www.nature.com/articles/s41586-021-03653-6 5. Bernal et al. NEJM 2021 https://www.nejm.org/doi/pdf/10.1056/NEJMoa2108891?articleTools=true 6. Stowe et al (preprint) available from https://media.tghn.org/articles/Effectiveness_of_COVID-19_vaccines_against_hospital_admission_with_the_Delta_B._G6gnngJ.pdf 7. Nasreen et al MedRxiv preprint 10.1101/2021.06.28.21259420 8. Sheikh et al. Lancet 2021 doi: 10.1016/s0140-6736(21)01358-1; 9. Press release Israel MoH https://www.gov.il/BlobFolder/reports/vaccine-efficacy-safety-follow-up-committee/he/files_publications_corona_two-dose-vaccination-data.pdf

Preemptive Strategy to Address SARS-CoV-2 Variants

- Establishing development, manufacturing and regulatory pathway for variant-specific prototype approach

Prototype Approach substantiated by broad clinical data

	1	2	3	4
	BNT162b2: 3rd dose **Safety & immunogenicity trial**	**BNT162b2: 3rd dose** **Safety & efficacy trial**	**Beta:** **3rd dose or naïve** **Safety & immunogenicity trial**	**Multivalent Delta + Alpha or Delta or Alpha:** **3rd dose or naïve:** **Safety & immunogenicity trial**
Study Start	**March 2021**	**July 2021**	**March 2021**	**Expected August 2021**
Nb of participants (trial phase)	• N=23 (ph 1) • N=~300 (ph 2/3)	• N=~10,000 (ph 3)	• N=~300 (ph 3) • N=~300 (naïve)	• N=~600 • N=~300 (naïve)
Boosting post dose 2	6-12 months	6 months	5-7 months	>6 months
Data expected	**First data published**	Q4 2021	Q3 2021	Q4 2021

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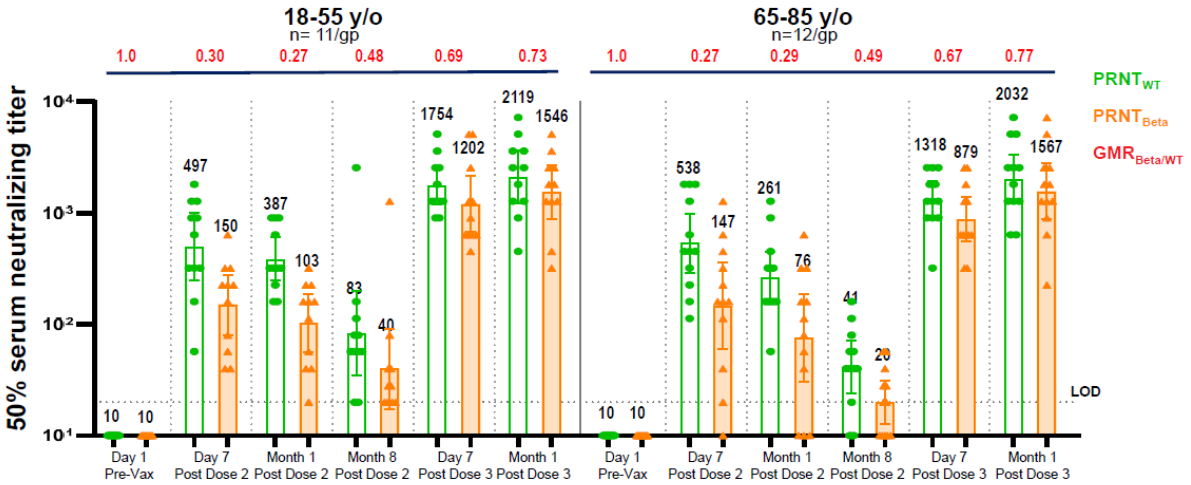
BNT162b2 Booster Dose Results in a Broad, Robust Neutralisation Response

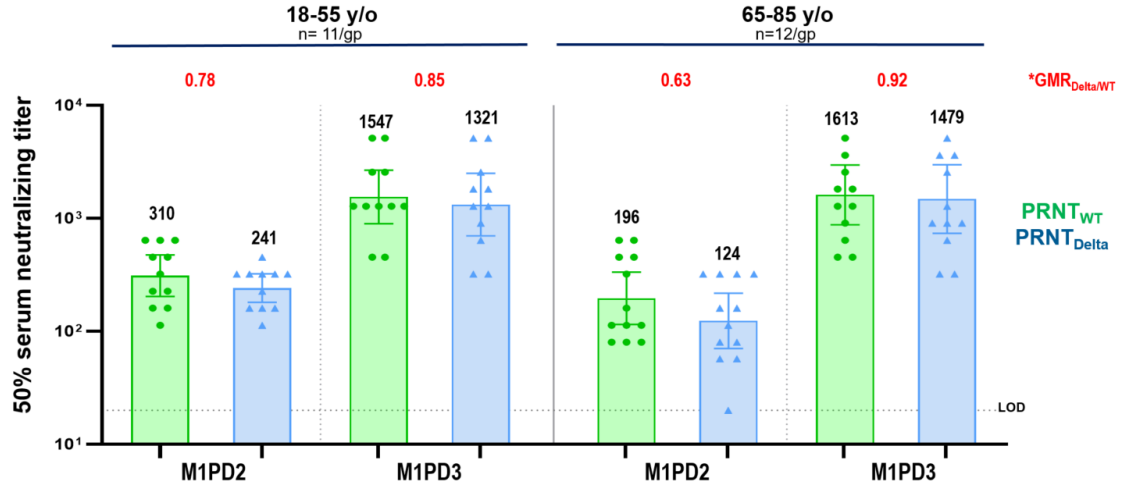
Booster dose could prolong protection and further increase breadth of protection against SARS-CoV-2 variants

- 3rd dose strongly boosts neutralizing titers both in younger and older adults against
  - Wild type > 5-8-fold
  - Delta variant > 5-11-fold
  - Beta variant > 15-21-fold

  when comparing month 1 data after dose 2 or dose 3
- Wild type and Beta variant titers continue to increase comparing day 7/month 1 data after dose 2 versus dose 3
- Overall consistent tolerability profile

Data being prepared for submission to regulatory authorities globally.





Data submitted for publication.

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Potential to Tackle Multiple Diseases with Different Therapeutic Modalities

mRNA Cancer Vaccines

iNeST FixVac

- Multi-specificity, multi-valency, high (neo)antigen specific T cell responses with unprecedented potency
- 3 Phase 2 randomized trials (iNeST and 2 FixVac)

Next Generation Immunomodulators

Bispecifics

- Next-generation checkpoint inhibitors to address a broad range of cancers
- Phase 1/2 trials of 2 bi-specific antibodies

Targeting Cancer + Immunomodulation

Next Gen CAR-T Cell / Neoantigen-based T Cell Therapy

- Phase 1 FIH trials started in Feb. and Apr 2021

Cell Therapies

Targeted Cancer Antibodies

- CA19-9 antibody in 1L pancreatic cancer
- Phase 1/2 trial

Antibodies

TLR-7 Agonist

- Potently modulates innate immunity
- Potential for combination with other IO agents
- Phase 1 trial

Small Molecule Immunomodulators

Ribocytokines

- mRNA encoded cytokines with a prolonged T1/2 and improved safety profile
- Potential to amplify vaccines and CPIs
- Phase 1 FIH trials started in Feb. and Jun. 2021

Engineered Biologicals

Oncology: Multiple product opportunities with unique combination potential in clinical testing

CAR, Chimeric antigen receptor; CA 19-9: Cancer antigen 19-9; IO, Immuno-oncology; CPI, Check-point Inhibitor; FIH, First-in-human; TLR-7, Toll-like receptor 7; T1/2, half-life

Oncology: Multiple Phase 2 Trials Starting in 2021

15 product candidates in 18 clinical trials

Three randomized Phase 2 trials

Drug Class	Platform	Product Candidate	Indication (Targets)	Phase 1	Phase 2
mRNA	FixVac (fixed combination of shared cancer antigens)	BNT111	CPI-R/R melanoma		
		BNT112	prostate cancer		
		BNT113	HPV16+ head and neck cancer		
	iNeST (patient specific cancer antigen therapy)	autogene cevumeran (BNT122)	1L melanoma		
			adjuvant colorectal cancer		
Antibodies	Next-Gen Checkpoint Immunomodulators	GEN1046 (BNT311)	solid tumors (PD-L1×4-1BB)		
		GEN1042 (BNT312)	solid tumors (CD40×4-1BB)		
Cell Therapies	CAR-T Cell Therapy	BNT211	solid tumors (CLDN6)		
	Neoantigen-based T Cell Therapy	BNT221	advanced or metastatic melanoma		

Near-Term Milestones

- FPD in Phase 2 in June 2021 ✓
- FPD in Phase 2 in July 2021 ✓
- Phase 2 to start in 2H 2021 (adjuvant CRC)
- Data update in 2H 2021
- Data update in 2H 2021
- Data update in 2H 2021

Planned randomized trial start in 2H 2021:

CPI, checkpoint inhibitor; R/R, relapsed or refractory; Next-Gen, Next generation; HPV, Human Papilloma Virus; FPD, first patient dosed; 1L, first-line; CRC, colorectal cancer; CAR, chimeric antigen receptor; CLDN6, Claudin-6

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FixVac: Leveraging Shared Antigens to Break Immune Tolerance

Off-the Shelf Concept: Scalable for multiple indications

Vaccine Backbone

Optimized, unmodified mRNA

+

Lipoplex

Proprietary RNA-LPX formulation (IV)

+

Shared Antigens

Multi-antigen approach per tailored to each indication

=

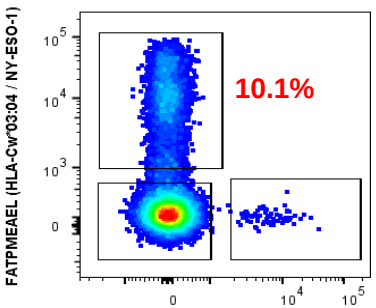
FixVac

Fixed vaccine combination against shared tumor-associated antigens

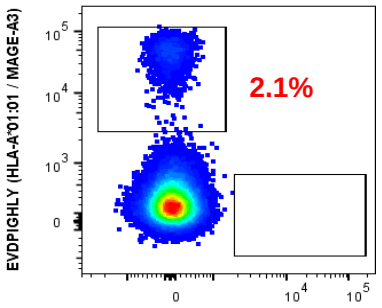
Targeting antigen presenting cells to stimulate antigen-specific T cell responses

- Strong immunogenicity observed *in vivo* via TLR-driven adjuvant effect[1]
- Potent induction of strong *ex vivo* CD4⁺ and CD8⁺ T cell responses[1]

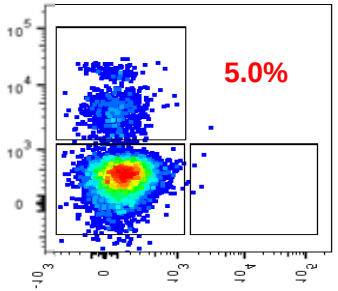
Antigen-specific CD8⁺ T cell responses[2]:



NY-ESO-1 | Melanoma
BNT111, Lipo-MERIT trial



MAGE-A3 | Melanoma
BNT111, Lipo-MERIT trial



HPV16-E7 | Head & Neck Cancer
BNT113, HARE-40 trial

RNA-LPX. RNA-Lipoplex; IV, intravenous; TLR7, Toll-like receptor; NY-ESO-1, New York esophageal squamous cell carcinoma-1; MAGE-A3, melanoma-associated antigen 3; HPV-E7, Human papillomavirus (type 16) E7 oncoprotein; HPV, Human papillomavirus; NSCLC, Non small cell lung cancer; HLA, human leukocyte antigen; CD, cluster of differentiation

[1]Sahin U, et al. Nature 2020; 585:107-112 ; [2]T cell responses analyzed by ex vivo multimer staining analysis in blood; [3]Additional exploratory indication: Ovarian Cancer

BIONTECH

BNT111: Treatment Options Needed to Address CPI Failure in Advanced Melanoma Patients

Melanoma Remains the Deadliest Skin Cancer

Incidence

↑ **50%**

Annual cases have increased by nearly 50% to over 287,000[1,2]

Deaths

↑ **20%**

WHO predicts by 2025, number of deaths will increase by 20%[3]

CPI R/R patients

~ 55%

patients refractory to or relapse on CPI treatment, leaving them with limited treatment options[4]

Significant Opportunity to Improve on Standard of Care

- 5-year survival for metastatic melanoma still only 29.8%[5]
- Frontline immunotherapy with CPI induces durable responses in max. 45-50% of patients but with relatively short PFS[4]
- CPI resistant/ refractory patients that fail to respond to CPI or relapse after CPI have an especially poor prognosis with survival as short as 6 months depending on risk factors
- Advanced CPI R/R melanoma is a high medical need population with highly unfavorable prognosis

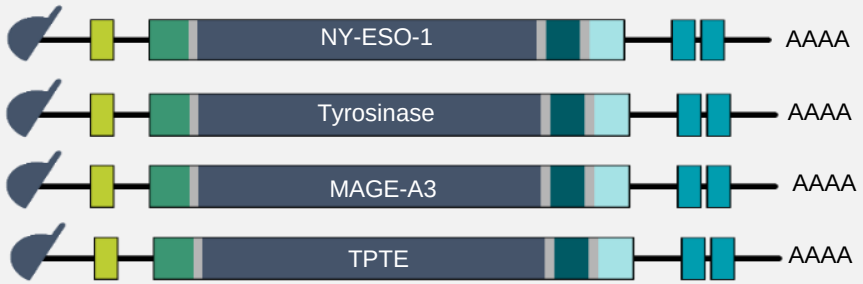
WHO, World Health Organization; CPI, check point inhibitor; R/R, refractory/resistant; mPFS, median progression free survival; ORR, Overall Response Rate; DoR, Duration of Response

[1]https://www.melanomauk.org.uk/2020-melanoma-skin-cancer-report; [2]Global Cancer Observatory – 2018 data from 'Cancer Today';
[3]Global Cancer Observatory – projected 2025 data from 'Cancer Tomorrow'; [4]Larkin J. et al. NEJM 2019;381(16):1535-1546; [5]https://seer.cancer.gov/statfacts/html/melan.html Accessed August 06, 2021

BNT111: Off-the Shelf Therapeutic Vaccine for Melanoma

Potential to Improve Outcomes in Combination with Anti-PD1 by Rescuing from T Cell Exhaustion

BNT111 encodes 4 tumor-associated antigens covering >90% of cutaneous melanoma patients [1]



nature[2]

An RNA vaccine drives immunity in checkpoint-inhibitor-treated melanoma

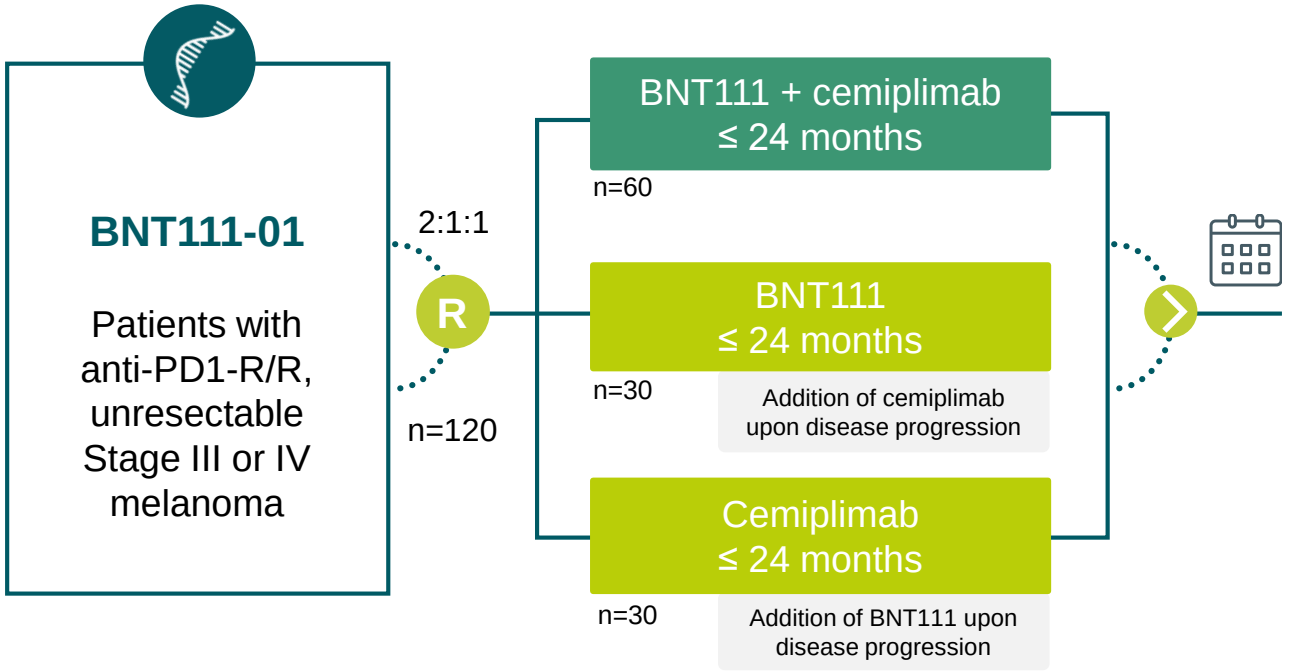
Ugur Sahin, Petra Oehm, [...]Özlem Türeci

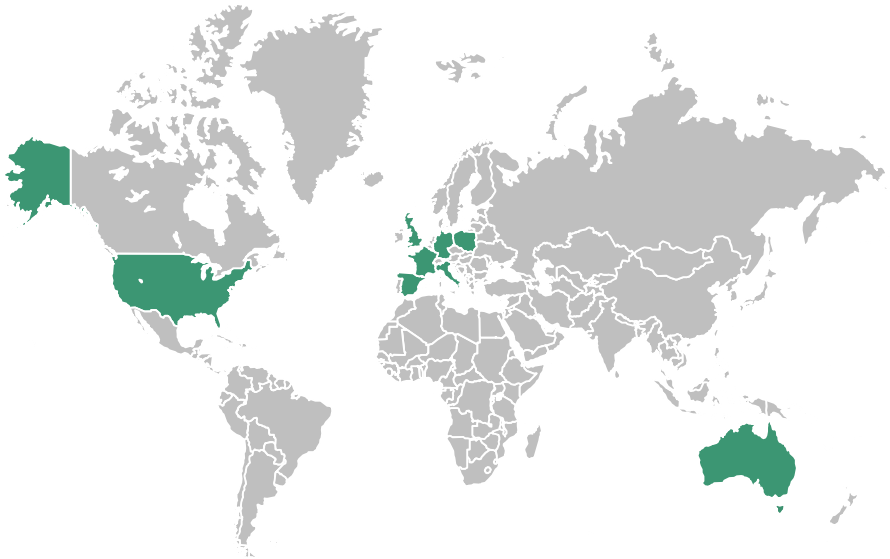
- Tolerable safety as monotherapy and in combination with anti-PD1
- Durable objective responses in CPI-experienced patients with unresectable melanoma
  - ORR: BNT111 monotherapy: 3/25 PR; 8/25 SD
  - ORR: 35% in combination with anti-PD1: 6/17 PR; 2/17 SD
- Clinical responses accompanied by strong $CD4^+$ and $CD8^+$ T cell immunity

NY-ESO-1, New York esophageal squamous cell carcinoma-1; MAGE-A3, melanoma-associated antigen 3; TPTE, transmembrane phosphatase with tensin homology; AAAA, Poly-A tail; PD1, Programmed cell death protein 1; CPI, check point inhibitor; R/R, refractory/resistant; PR, partial response; SD, stable disease; ORR, Overall Response Rate; CD, Cluster of Differentiation;
[1]Data on file; [2]Sahin U, et al. Nature 2020; 585:107-112 (https://www.nature.com/articles/s41586-020-2537-9)

BIONTECH

BNT111: Global Phase 2 Clinical Trial in Anti-PD1 R/R Melanoma Patients





Open-label, randomized Phase 2 trial

- BNT111 and cemiplimab in combination or as single agents
- Collaboration with Regeneron

Success Measures for BNT111 Trial

ORR 30%

Primary Endpoints

- Arm 1: ORR by RECIST 1.1

Secondary Endpoints

- ORR (key secondary endpoint arms 2, 3)
  DOR, DCR, TTR, PFS by RECIST 1.1
- OS, safety, tolerability, PRO

PD1, Programmed cell death protein 1; R/R, refractory/relapsed; ORR, overall response rate; DoR, Duration of Response; DCR, disease control rate; TTR, time to response; PFS, progression free survival; OS, overall survival; PRO, patient reported outcomes
https://clinicaltrials.gov/ct2/show/record/NCT04526899

BIONTECH

BNT113: Unmet medical need for HPV-Associated HNSCC

HPV+ Cancer is a Growing Global Public Health Concern

Worldwide HPV-attributable cases (2018) = 690,000
(de Martel et al. 2020, Lancet Glob Health)

- Several types: HNSCC, Cervical, Anal, Vulvar, Vaginal, Penile
- HNSCC is the sixth most common cancer worldwide, with 890,000 new cases and 450,000 deaths in 2018[2]
- Oropharyngeal is most common HNSCC, accounting for 70% of cases, and 80-90% are HPV16+[3]

Limited treatment options for patients not responding to or relapse on CPI[1]

- HPV16+ HNSCC typically occur in younger people and is not associated with tobacco or alcohol use
- >60% of patients diagnosed with late-stage HNSCC
- Current treatment options carry significant treatment burden or only work for some patients[4]:
  - Chemotherapy, surgery, radiation
  - CPI

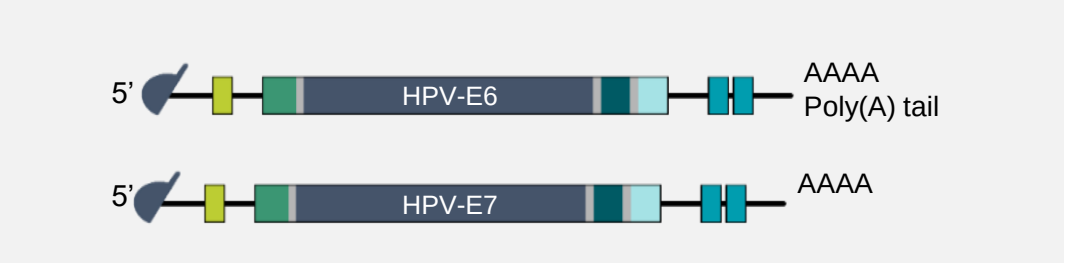
Current SOC for recurrent/metastatic HNSCC	ORR	mOS (months)	mPFS (months)
pembrolizumab[5]	17%	13.6	8.0
nivolumab[6]	13.3%	7.7	2.0
chemotherapy[6]	5.8%	5.1	2.3

HPV, human papilloma virus; HNSCC, head and neck squamous cell carcinoma, CPI, check point inhibitor; R/R refractory/recurrent
[1]Sabatini ME and Chiocca S. BJC 2020; 122:306-314, [2]Johnson DE, et al., 2020, Nature Reviews Disease Primers 6:92
[3]Saraiya et al. 2015, Vaccines; [4]HNSCC NCCN Guidelines 2020, HNSCC ESMO Guidelines 2020; [5]Burtness, et al. Lancet 2019 Nov 23; 394(10212):1915-28;
[6]https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6563923/pdf/nihms-1024161.pdf

BNT113: Potential to Increase Response Rate and DoR to CPI by Stimulating Immune Response Against HPV16 Proteins

BNT113 encodes HPV16 oncoproteins E6 & E7

- E6 and E7 proven to be well-suited for immunotherapy intervention
- Exclusively expressed in pre-malignant and malignant tissue
- Maintain the transformed state of infected malignant cells
- Demonstrated immunogenicity
- Not affected by central tolerance mechanisms



BNT113 combination with anti-PD1: Potential for synergistic antitumor effect delaying escalation to toxic chemo

HPV, human papilloma virus; DoR, Duration of Response, CPI, check point inhibitor

BIONTECH

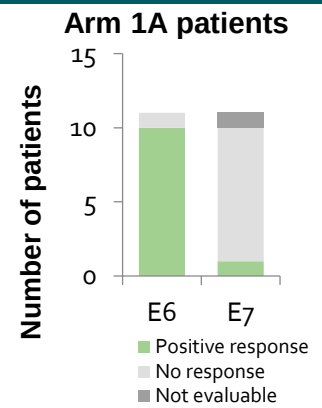
BNT113: Potent Antigen-Specific T Cell Responses in Phase 1 Trial[1,2]

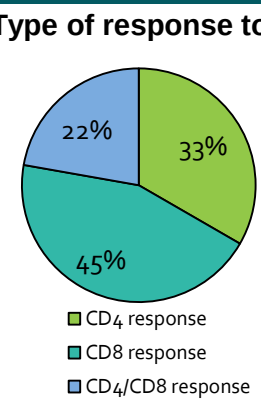
- CD4+ and CD8+ T cell responses
- Responses detectable ex vivo, implying high numbers of T cells
- Responses against multiple E6 or E7 epitopes

A

Overview of T cell responses Arm 1A

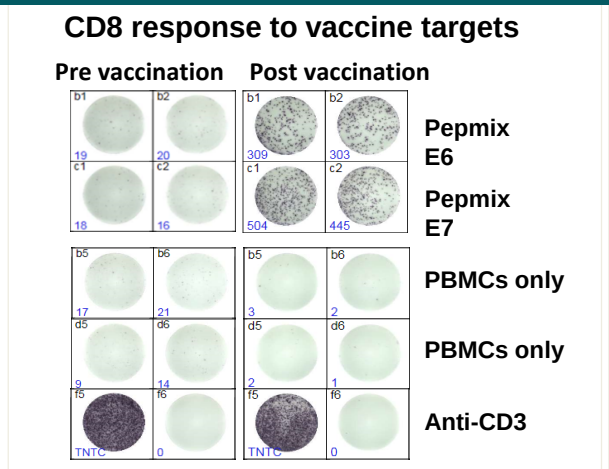
Arm 1A, adjuvantX	Antigen	Cohort 1 TD 29 µg						Cohort 2 TD 78.2 µg				
		Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6	Patient 7	Patient 8	Patient 9	Patient 10	Patient 11
	E6	CD8	CD8	CD4	CD8	CD4	CD4/ CD8	CD4/ CD8	CD4	Bulk	CD8	NR
	E7	NR	NR	NR	NR	NR	NR	CD8	NR	NE	NR	NR



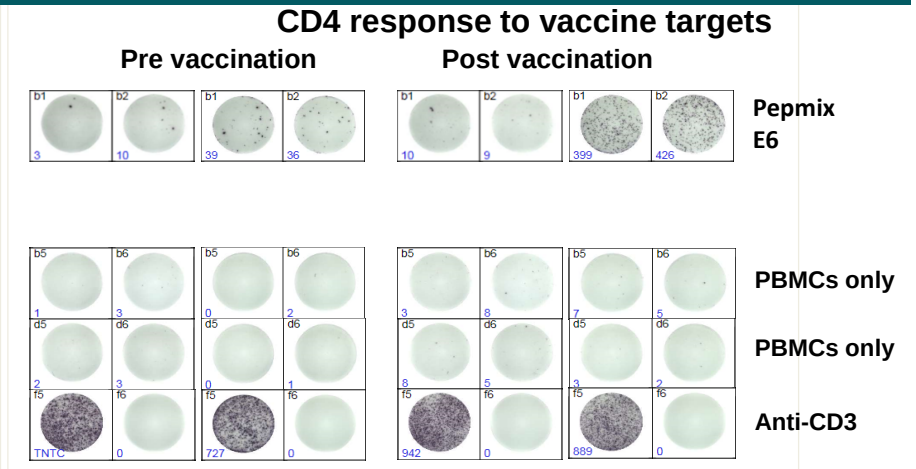


B

ELISPOTS[3] Patient 7



ELISPOTS[3] Patient 6



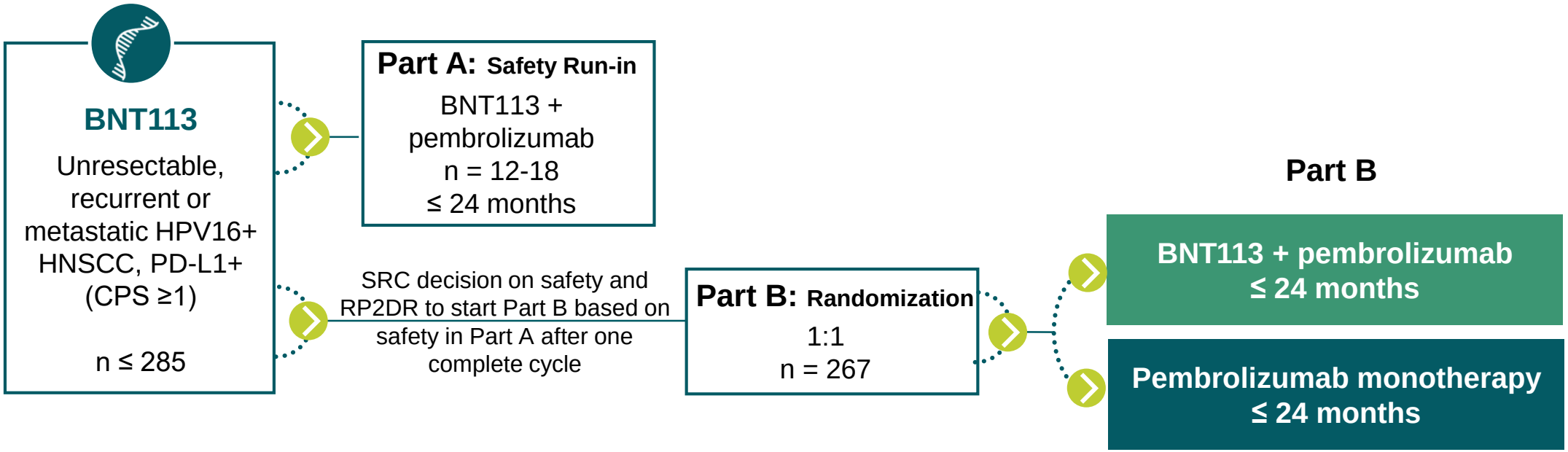
TD, total dose; CD, Cluster of Differentiation; NE, Not Evaluated; NR, Not Reported; PBMC, peripheral blood mononuclear cells

[1]HARE-40 trial

[2]Presented at CIMT 2019; BNT113 is currently being studied in an investigator-initiated Phase 1 trial.

[3]ELISPOT (Enzyme Linked Immuno Spot Assay) data of selected patients. Data were generated using IFN-γ ELISPOT directly ex-vivo with overlapping peptides covering the whole length of vaccine antigens (PepMix).

BNT113: First Patient Dosed in Potentially Registrational Phase 2 Trial in HPV16+ and PD-L1+ HNSCC



Open-label, controlled, Phase 2 study

- BNT113 in combination with pembrolizumab as frontline treatment for metastatic HPV16+ and PD-L1+ HNSCC
- HPV 16 companion diagnostic is being co-developed and will be clinically validated alongside the trial

Primary Endpoints

- Part A: Emergence of TEAEs
- Part B: OS, ORR

Secondary Endpoints

- PFS, DCR, DOR
- Safety
- Patient reported outcomes

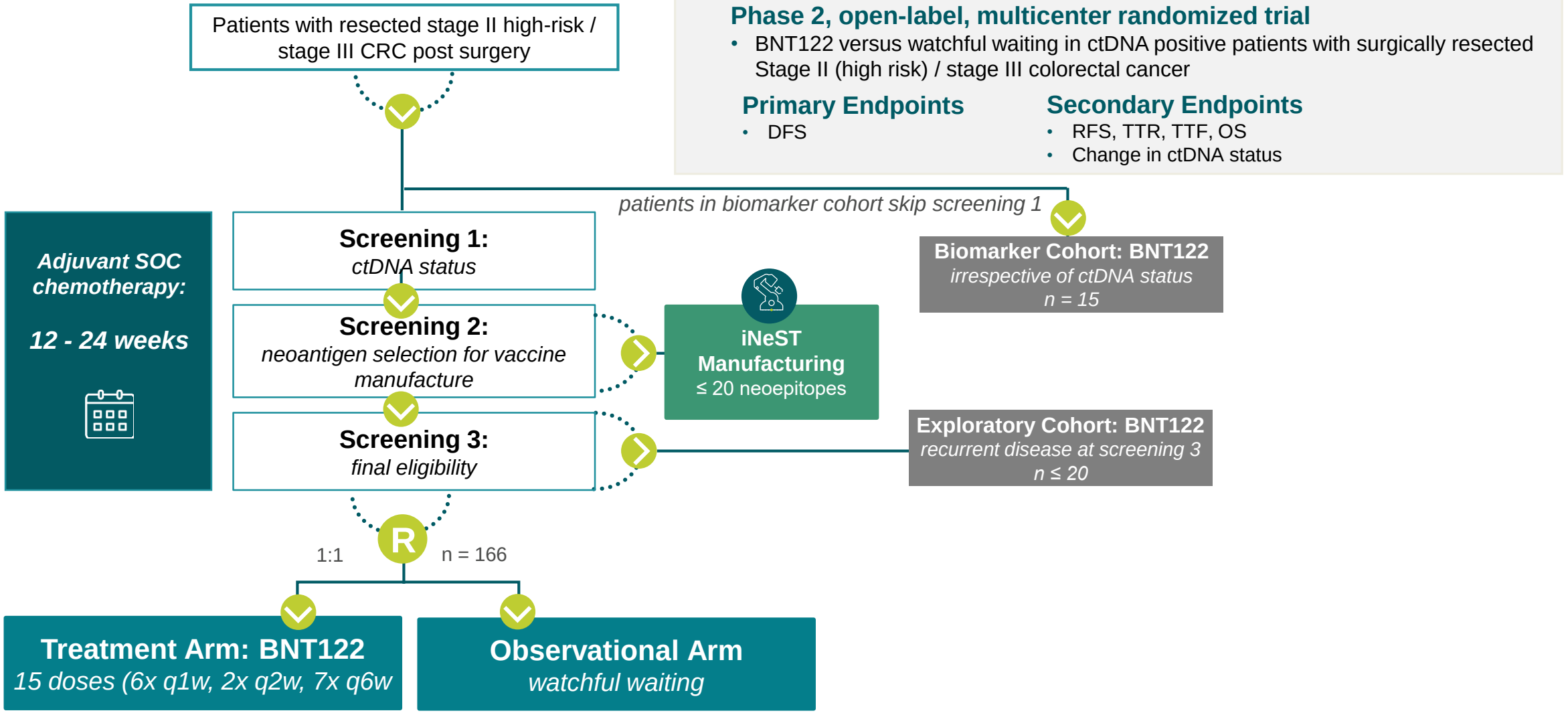
Success Measures for BNT113 Trial

- mOS: 18 months (HR=0.667)
- ORR: 40%

HPV, human papilloma virus; PD-L1, programmed death-ligand 1; CPS, Combined positive score; HNSCC, head and neck squamous cell carcinoma; SRC, safety review committee; TEAEs, treatment emergent adverse events; OS, overall survival; mOS, median overall survival; ORR, overall response rate; HR, hazard ratio; DOR, duration of response; DCR, disease control rate; PFS, progression free survival

[1]Burtness, et al. Lancet 2019 Nov 23; 394(10212):1915-28
https://www.clinicaltrials.gov/ct2/show/NCT04534205

BNT122: Randomized Phase 2 Trial in Adjuvant Colorectal Cancer



CRC, colorectal cancer; ctDNA, circulating tumor DNA; SOC, standard of care; q1w, once weekly; q2w, every two weeks; q6w, every six weeks; DFS, disease-free survival; RFS, relapse-free survival; TTR, time to response; TTF, time to treatment failure; OS, overall survival; https://www.clinicaltrials.gov/ct2/show/NCT04486378;
BNT122/iNeST is partnered with Genentech/Roche

RiboCytokines:
Designed to Overcome Limitations of Recombinant Cytokine Therapy

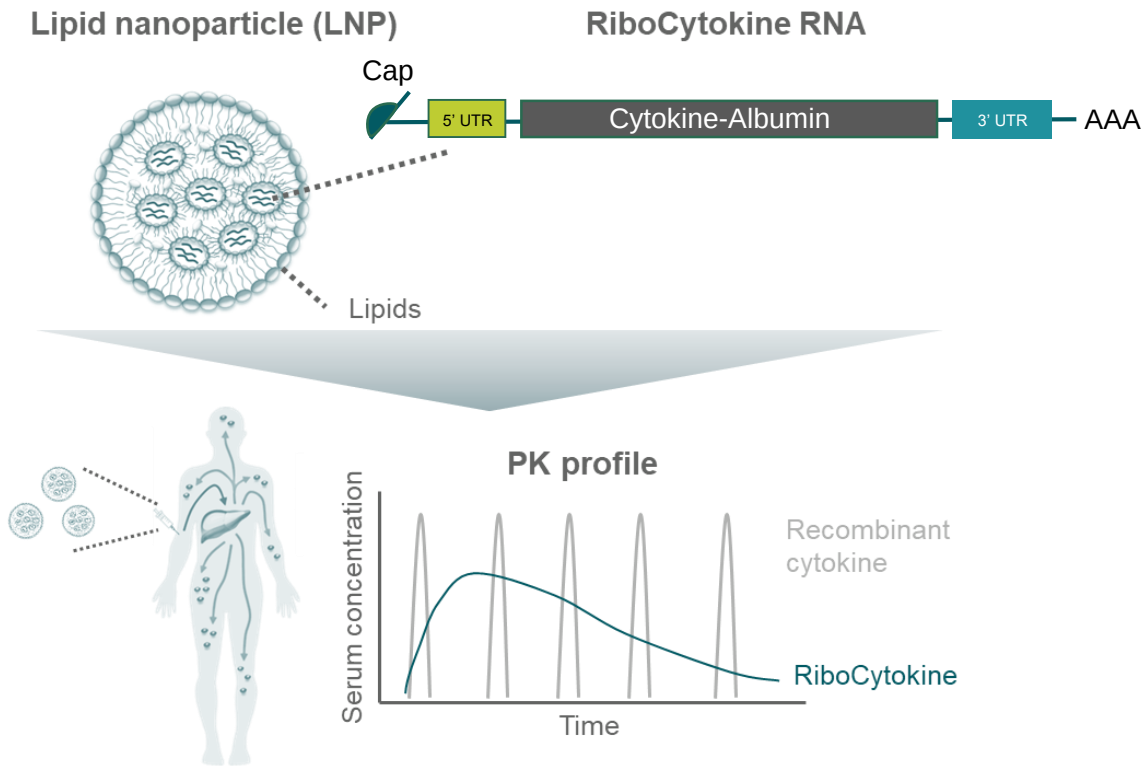
Cytokines encoded by mRNA: A novel therapeutic concept

Systemic delivery with minimal immunogenicity

- Backbone optimized and nucleoside-modified mRNA encoding cytokine fused to human albumin
- Liver-targeting LNP formulation with intravenous delivery
- Encoded cytokines translated within cells

Designed for optimized safety, tolerability and dosing

- Prolonged serum half-life
- High bioavailability
- Lower and less frequent dosing
- Lower toxicity



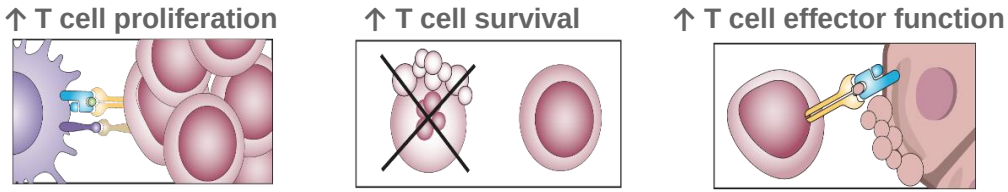
Product Candidate	Indication	Pre-clinical	Phase 1	Phase 2
BNT151 (modified IL-2)	Solid Tumors			
BNT152+153 (IL-7 + IL-2)	Solid Tumors			

LNP, lipid nanoparticle; PK, pharmacokinetic; IL-2, Interleukin-2; IL7, Interleukin-7; UTR, untranslated region

BIONTECH

RiboCytokines: A Tailored Approach to T Cell Regulation and Stimulation

IL-2 supports differentiation, proliferation, survival and effector functions of T cells



BNT151

mRNA encoding sequence-modified IL-2 variant

- Sequence modification that weakens binding to IL-2Rα (CD25)
- Designed to stimulate naïve and effector T cells with low to no expression of IL-2Rα ($CD25^{low/neg}$)
- Stimulates anti-tumor effector cells without extensively triggering immunosuppressive regulatory T cells

BNT152 + 153

mRNAs encoding IL-2 and IL-7

BNT153 (IL-2)

- Stimulates recently activated anti-tumor T cells and regulatory T cells

BNT152 (IL-7)

- Sensitizes effector T cells to IL2
- Controls fraction of immunosuppressive regulatory T cells

Combination with anti-PD-1/PD-L1 therapy

Combination with RNA vaccine

IL-2, interleukin-2; IL-7, interleukin-7; IL-2Rα, interleukin-2 receptor alpha subunit

On Track to Achieve Multiple Significant Data & Clinical Milestones in 2H 2021

Six Clinical Trial Initiations in 1H 2021, Including Two Randomized Phase 2

5+ Trial Updates

- **BNT162b2:** Multiple updates
- **BNT311:** Bi-specific CPI: PD-L1 x 4-1BB in solid tumors
- **BNT312:** Bi-specific CPI: CD40 x 4-1BB in solid tumors
- **BNT211:** CLDN-6 CAR-T + CARVac in solid tumors
- **BNT411:** TLR-7 agonist +/- CPI in solid tumors

3 Randomized Phase 2 Trial Starts

- **BNT111:** FixVac + CPI in CPI-R/R melanoma
- **BNT113:** FixVac HPV16+ + CPI in 1L HNSCC
- **BNT122:** iNeST (autogene cevumeran) in adjuvant mCRC

7 First-in-human Phase 1 Trial Starts

- **BNT211:** CLDN-6 CAR-T + CARVac in solid tumors
- **BNT221:** NEOSTIM individualized neoantigen-T cell therapy in melanoma
- **BNT151:** Ribocytokine (modified IL-2)
- **BNT152+153:** RiboCytokine IL-7 / IL-2 combo in solid tumors
- **BNT141**: RiboMab (undisclosed)
- **BNT142:** RiboMab bi-specific CPI in solid tumors (CD3xCLDN6)
- **BNT161:** Influenza vaccine program

PD-L1, programmed death-ligand 1; CLDN6, Claudin-6, CAR-T Cells, Chimeric Antigen Receptor T Cells; IL-2, Interleukin 2; IL-7, Interleukin 7; TLR-7, Toll-like receptor-7
CPI, Check-Point Inhibitor; HNSCC, Head and Neck Squamous Cell Carcinoma; mCRC, Metastatic Colorectal Cancer; iNeST is partnered with Genentech/Roche;
BNT311 and BNT312 partnered with Genmab;

Agenda

Second Quarter 2021 Highlights

COVID-19 Vaccine Update

Oncology Pipeline Update

Financial Results

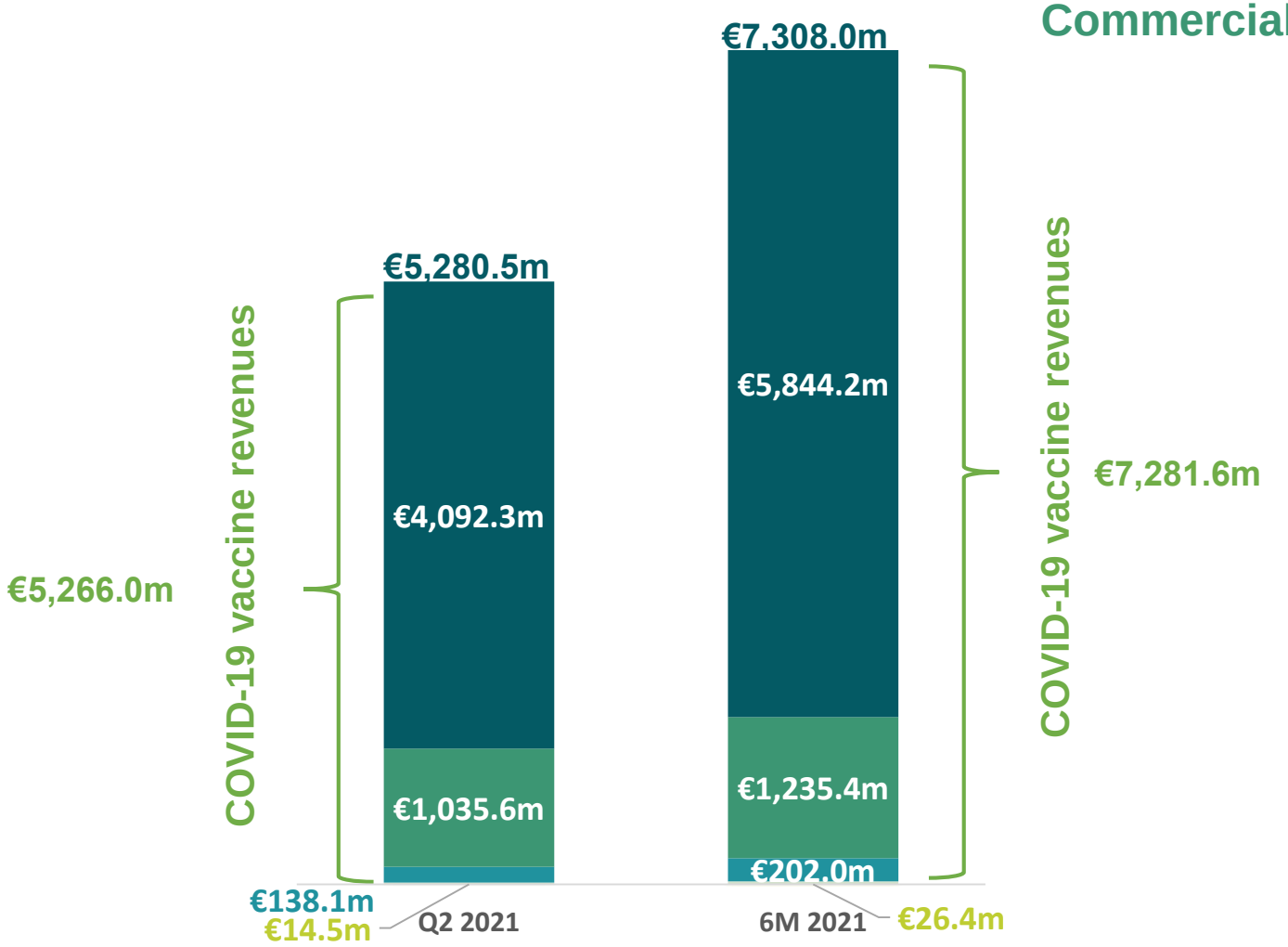
Corporate Update & Outlook

Q2 2021 and 6M 2021 Financial Results (unaudited) – Profit or Loss

*(in millions, except per share data)**	Three months ended June 30		Six months ended June 30	
	2021	**2020**	**2021**	**2020**
• Research & development revenues	€28.0	€32.5	€48.9	€53.7
• Commercial revenues	5,280.5	9.2	7,308.0	15.7
Total revenues	**€5,308.5**	**€41.7**	**€7,356.9**	**€69.4**
• Cost of sales	(883.8)	(5.6)	(1,116.9)	(11.5)
• Research and development expenses	(201.1)	(95.2)	(417.3)	(160.3)
• Sales and marketing expenses	(13.3)	(3.0)	(22.0)	(3.5)
• General and administrative expenses	(47.8)	(18.8)	(86.7)	(34.6)
• Other operating income less expenses	35.9	0.0	146.6	0.3
Operating profit / (loss)	**€4,198.4**	**€(80.9)**	**€5,860.6**	**€(140.2)**
• Finance income less expenses	(175.6)	(9.6)	(195.5)	(3.7)
• Income taxes	(1,235.6)	2.2	(1,749.8)	2.2
Profit / (loss) for the period	**€2,787.2**	**€(88.3)**	**€3,915.3**	**€(141.7)**
Earnings per share				
• Basic profit / (loss) for the period per share	€11.42	€(0.38)	€16.07	€(0.62)
• Diluted profit / (loss) for the period per share	€10.77	€(0.38)	€15.14	€(0.62)

*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 interim consolidated statements of profit or loss has been condensed.

Q2 2021 and 6M 2021 COVID-19 Vaccine Deliveries Drove Revenue Growth



Commercial revenues – identified revenue streams

- Share of gross profit from COVID-19 vaccine sales in the Pfizer and Fosun territory (net position) and sales milestones (€168.6m for Q2 2021 and €415.8m for 6M 2021, respectively)*
- Direct COVID-19 vaccine sales to customers in BioNTech's territory
- Sales to collaboration partners of products manufactured by BioNTech
- Other sales (mainly JPT and IMFS business)

*Represents 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.

Update of Previously Stated Financial Outlook for the 2021 Financial Year

Update on Current Signed COVID-19 Vaccine Order Book for the 2021 Financial Year

- Estimated COVID-19 vaccine revenues to BioNTech for the 2021 financial year upon delivery of currently signed supply contracts (~2.2 billion doses as of July 21, 2021): ~€15.9 billion*

Planned 2021 Financial Year Expenses and Capex*

- R&D expenses: **€950 million – €1,050 million**
- SG&A expenses: **€250 million – €300 million**
- Capital expenditures: **€175 million – €225 million**
- *Ranges reflect current base case projections*
- *Ramp-up of R&D investment in 2H 2021 planned to expand and accelerate the pipeline development*

Estimated 2021 Financial Year Tax Assumptions

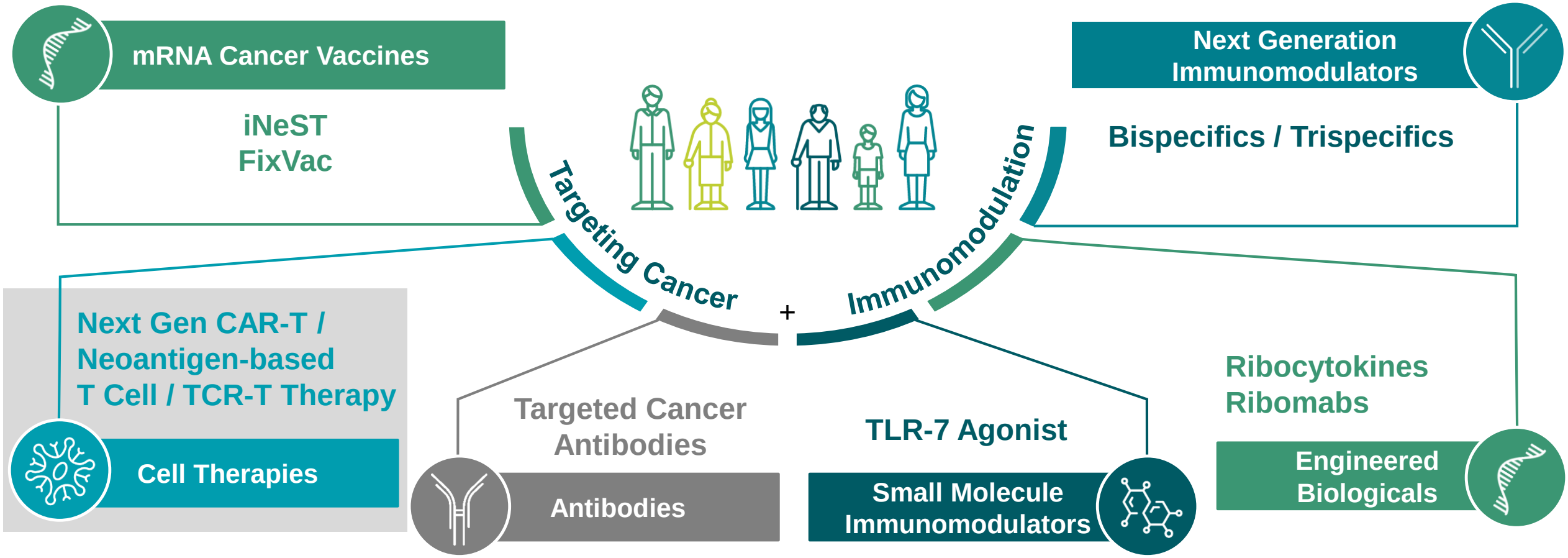
- BioNTech Group estimated annual effective income tax rate: **~31%**

*Figures have been estimated at constant foreign exchange rates and reflect current base case projections.

Agenda

- Second Quarter 2021 Highlights
- COVID-19 Vaccine Update
- Oncology Pipeline Update
- Financial Results
- Corporate Development & Outlook

We intend to expand and accelerate our IO pipeline development through a mix of targeted in-licensing, strategic collaborations, and M&A



Recently announced Kite transaction strengthens our Cell Therapy pipeline and capabilities

CAR, Chimeric antigen receptor; TLR-7, Toll-like receptor 7

Acquisition of Kite's Solid Tumor TCR-T cell platform and related assets

Transaction overview:

- On July 19, BioNTech announced an asset purchase agreement with Kite to acquire its Neoantigen TCR Cell Therapy R&D Platform and cGMP manufacturing facility in the U.S.
- Transaction closed on August 4, 2021

What we gain:

- Leased U.S. clinical-stage cell therapy manufacturing facility in Gaithersburg, Maryland
- Brings more than 50 highly trained cell & gene therapy scientists and production experts
- Personalized Neo-antigen TCR program
- Library of other preclinical TCR assets

Strategic rationale:

- ✓ Add turn-key U.S. cell therapy facility to complement existing facility in Idar-Oberstein, Germany
- ✓ Enable expansion of U.S. clinical supply of CARVac and other BioNTech cell therapies
- ✓ Strengthen U.S. team with highly skilled TCR scientists and manufacturing workforce
- ✓ Expand BioNTech’s proprietary cell therapy pipeline and capabilities

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Acquisition strengthens individualized IO pipeline

- Multiple individualized therapy approaches to address wide range of Solid Tumors indications

iNeST: Individualized mRNA cancer vaccine	**NEOSTIM** individualized neoantigen-T cell therapy	**Personalized TCR-T cell therapy**
Uses patient's cancer mutations to generate neoantigen specific CD4+ and CD8+ T cell responses in vivo	Patient's PBMCs used to induce and expand multiple $CD4^+$ and $CD8^+$ neoantigen T cell populations ex-vivo	Ex-vivo engineered neoantigen specific TCR-T cell therapy further strengthened by the acquistion from Kite
Early-stage / Adjuvant stage cancers	***CPI nonresponsive tumors***	***Advanced tumors***

IiO, immuno-oncology; PBMC, peripheral blood mononuclear cell;
iNeST: partnered with Genentech/Roche

Strong momentum moving into 2H 2021

Our Vision: Harnessing the immune system's full potential to fight human disease.

Robust pipeline with growing number of late and early stage programs

Diverse range of platform technologies with broad applications across diseases

Global team with deep expertise

World-class collaborators

Strong financial position to support organic innovation and continued corporate development

Building long-term value for patients, shareholders and society

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