

Second Quarter 2020

Corporate update and financial results

August 11, 2020

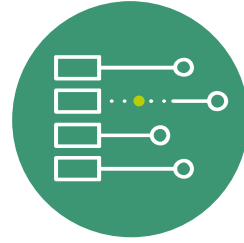


Forward-looking statements

Various statements in this slide presentation concerning the future expectations of BioNTech, its plans and prospects, including the Company's views with respect to the potential for mRNA therapeutics; the planned next steps in BioNTech's pipeline programs and specifically including, but not limited to, statements regarding plans to initiate clinical trials of BioNTech's product candidates and expectations for data announcements with respect to BioNTech's product candidates; the development of commercial capabilities and the transition of BioNTech to a fully integrated biopharmaceutical company; its expectations with respect to interactions with regulatory authorities such as FDA and EMA, including the potential approval of BioNTech's or its collaborators' current or future drug candidates; expected royalty and milestone payments in connection with BioNTech's collaborations; BioNTech's anticipated cash usage for fiscal year 2020 and beyond; the creation of long-term value for BioNTech shareholders; the ability of BioNTech to successfully develop and commercialize a vaccine for COVID-19 in partnership with Pfizer and Fosun Pharma; the timing for any potential emergency use authorizations or approvals for BNT162; and the ability of BioNTech to supply the quantities of BNT162 to support clinical development and, if approved, market demand, including its production estimates for 2020 and 2021 and the impact of COVID-19 on our clinical trials and business operations, are forward-looking statements reflecting the current beliefs and expectations of management made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, as amended. Words such as "expects," "plans," "potential," "target," "continue" and variations of these words or similar expressions are intended to identify forward-looking statements. Such statements are based on the current beliefs and assumptions of the management team of BioNTech and on the information currently available to the management team of BioNTech, and are subject to change. The Company will not necessarily inform you of such changes. These forward looking statements are subject to known and unknown risks, uncertainties, assumptions and other factors that could cause the Company's actual results, performance or achievements to be materially different than any future results, performance or achievements expressed or implied by the forward-looking statements. Actual results may differ materially from those indicated by these forward-looking statements as a result of various important factors, including the Company's ability to discover and develop its novel product candidates and successfully demonstrate the efficacy and safety of its product candidates; the pre-clinical and clinical results for its product candidates, which may not support further development of product candidates; actions of the Company's collaborators regarding continued product development and product commercialization; actions of regulatory authorities, which may affect the initiation, timing and progress of clinical trials or the ability of the Company to obtain marketing authorization for its product candidates; the Company's ability to obtain, maintain and protect its intellectual property; the Company's ability to enforce its patents against infringers and defend its patent portfolio against challenges from third parties; competition from others using technology similar to the Company's and others developing products for similar uses; the Company's ability to manage operating expenses; the Company's ability to obtain additional funding to support its business activities and establish and maintain its existing and future collaborations and new business initiatives; the Company's dependence on collaborators and other third parties for development, manufacture, marketing, sales and distribution of products; the outcome of litigation; and unexpected expenditures. Any forward-looking statements represent the Company's views only as of today and should not be relied upon as representing its views as of any subsequent date. The Company explicitly disclaims any obligation to update any forward-looking statements. The mRNA vaccines and other product candidates discussed in this slide presentation are investigational products being developed by BioNTech and its collaborators and are not currently approved by the FDA, EMA or any other regulatory authority.

Next generation immunotherapy

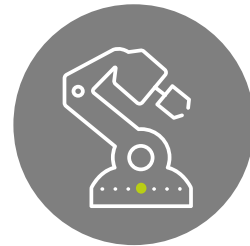
Harnessing the full potential of the immune system



Broad suite of novel technology platforms



Immunotherapies for cancer and infectious diseases



Fully integrated with in-house GMP manufacturing



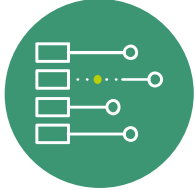
Industry-leading global collaborations

Agenda

- **Q2 Highlights**
- Oncology Pipeline Update
- BNT162 (COVID-19 vaccine program)
- Financial Update and 2H 2020 Outlook



Q2 2020 highlights



- 12 immunotherapies across 3 drug classes now in the clinic (mRNA, Antibodies, Small molecule)



- Initiated pivotal Phase 2b/3 trial for BNT162b2 COVID-19 vaccine
 - Commercial supply agreements signed for >250 million doses of BNT162 in 2020/21, subject to approval or emergency authorization
- Published Phase 1 data and started recruiting for randomized Phase 2 trials of iNeST in adjuvant cancers
- First patient dosed in FIH Phase 1/2 trial of BNT411 small molecule TLR7 agonist



- Ongoing scale-up of mRNA manufacturing infrastructure and supply chain in Germany



- Strategic collaboration with Regeneron to conduct randomized Phase 2 trial with Libtayo® and FixVac in Melanoma



- Entered agreements for ~\$1.1 billion in gross proceeds from non-dilutive payments and equity / debt financings in year to-date

We expanded our base of strategic collaborators in 2020 to-date

Collaborations for clinical stage programs

Covid-19 vaccine

50:50 Gross Profit share¹



FixVac Melanoma

Each company to keep 100% of rights to own product



iNeST

50:50 Cost & Profit share



Bispecific mABs

50:50 Cost & Profit share



Intra-tumoral mRNA

Cost & Profit share



Pre-clinical Collaborations

Seasonal Influenza

Royalties & Milestones



Up to 10 Infectious Disease Indications

Worldwide opt-in right

University of Pennsylvania

HIV, Tuberculosis

Developed world rights

BILL & MELINDA GATES foundation

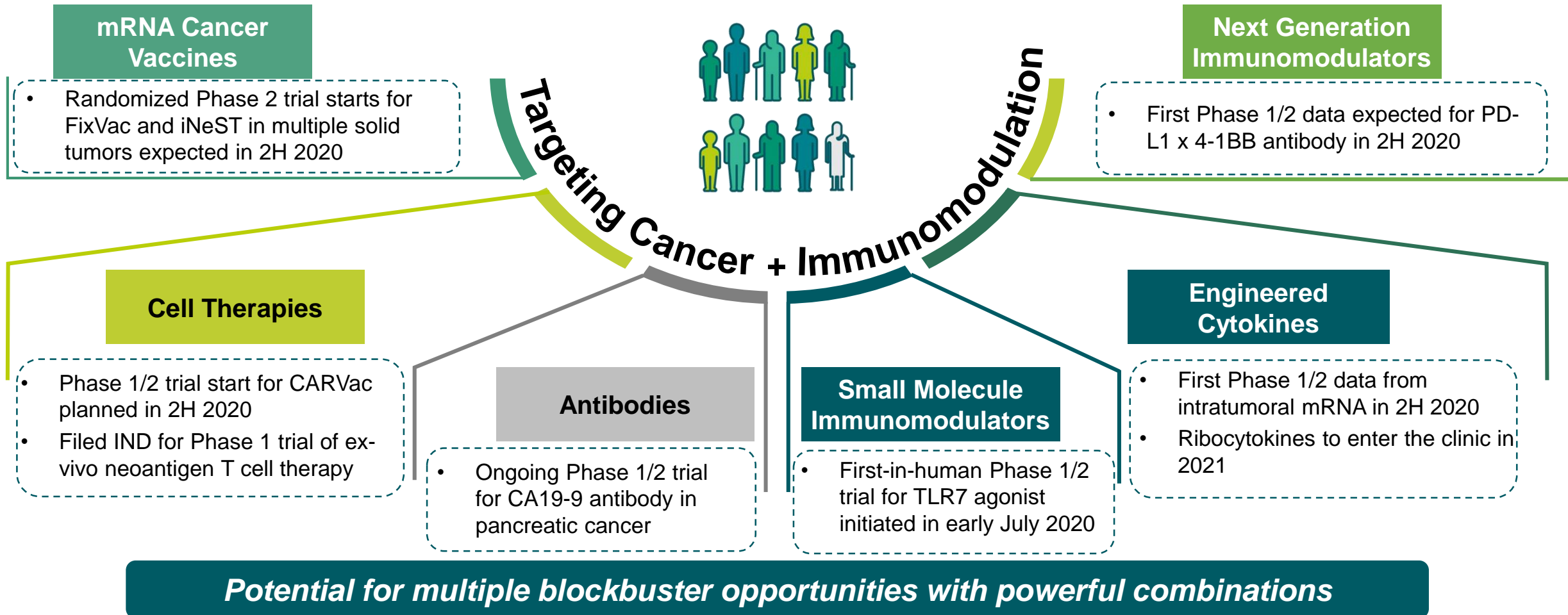
5 Rare Disease Indications

50:50 Cost & Profit share

GENEVANT

¹ 50:50 Cost & Profit share refers to terms of Pfizer collaboration only (world-wide ex-China)

Broad progress in executing our multi-platform IO strategy



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Expanded clinical stage pipeline to 12 product candidates across 13 trials

Drug class	Platform	Product Candidate	Indication (Targets)	Preclinical	Phase 1	Phase 2	Rights / Collaborator
mRNA	FixVac (fixed combination of shared cancer antigens)	BNT111	advanced melanoma (adjuvant & metastatic)	█	█		fully-owned (Regeneron)
		BNT112	prostate cancer	█	█		fully-owned
		BNT113	HPV16+ head and neck cancer ¹	█	█		fully-owned
		BNT114	triple negative breast cancer ⁴	█	█		fully-owned
		BNT115	ovarian cancer ¹	█	█		fully-owned
	iNeST (patient specific cancer antigen therapy)	RO7198457 (BNT122 ⁴)	1L melanoma with CPI ² multiple solid tumors	█	█	█	Genentech (global 50:50 profit/loss)
Intratumoral Immunotherapy	SAR441000 (BNT131)	solid tumors (<i>IL-12sc</i> , <i>IL-15sushi</i> , <i>GM-CSF</i> , <i>IFNα</i>)	█	█		Sanofi (global profit/loss share)	
Infectious Disease Immunotherapy	BNT162	COVID-19	█	█	█	Pfizer/Fosun	
Antibodies	Next-Gen CP ² Immunomodulators	GEN1046 (BNT311)	multiple solid tumors (<i>PD-L1</i> ×4-1BB)	█	█		Genmab (global 50:50 profit/loss)
		GEN1042 (BNT312)	multiple solid tumors (<i>CD40</i> ×4-1BB)	█	█		
	Targeted Cancer Antibodies	BNT321 (MVT-5873)	pancreatic cancer (sLea)	█	█		fully-owned
SMIM ⁶	Toll-Like Receptor Binding	BNT411	solid tumors (<i>TLR7</i>)	█	█		fully-owned

1 BNT111 FixVac Melanoma data in Nature and Regeneron collaboration

2 iNeST AACR Phase 1 data update and planned Phase 2 trials in adjuvant NSCLC and CRC

3 Update for anti-PDL1x4-1BB bi-specific antibody expected in 2H 2020

4 Initiation of Phase 1/2 trial for TLR-7 agonist in ES-SCLC

¹ BNT113 and BNT115 are currently being studied in investigator-initiated phase 1 trials; ² Checkpoint Inhibitor; ³ Update on the ongoing study including patient enrollment number, efficacy and safety data for an interim update expected in the second half of 2021; ⁴ BNT122 (iNeST) is also being investigated in arm 2 (N=15) of the 3 arm TNBC-MERIT trial, with BNT114 as an optional treatment; BNT114 is investigated in arm 1 (N=12) and arm 3 (N=15) of the TNBC-MERIT trial (total patients in study: N=42); ⁵ As the trial is sponsored and conducted by Sanofi, the timing of data updates is not under our control, and is subject to change by Sanofi; ⁶ Small Molecule Immunomodulators

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BNT111 Fixvac Melanoma: Planning to initiate randomized phase 2 trial

Ongoing Phase 1 trial in Advanced Melanoma published in Nature

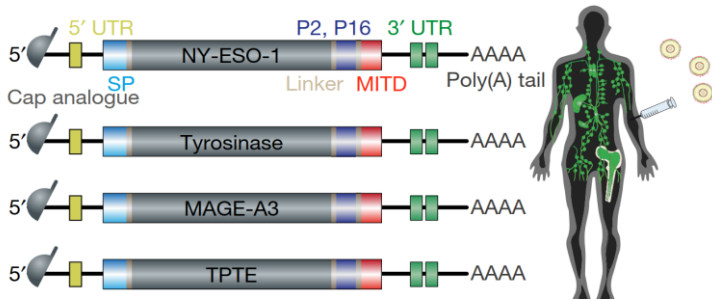
- Phase 1 trial data in CPI-experienced patients in monotherapy and in combination with anti-PD1 previously reported in July 2020 and published in Nature
- All patients showed tumor associated antigen (TAA) specific T cell responses with In vitro stimulation, and > 75% of patients showed immune responses against ≥ 1 TAA on an ex vivo basis
 - T cells responses ramped up over 4-8 weeks and increased or remained stable up to over one year with monthly maintenance therapy
- ***Reported durable clinical responses in monotherapy and in combination with anti-PD1 accompanied by high magnitude CD4+ and CD8+ response***

Regeneron strategic collaboration and planned Phase 2 trial

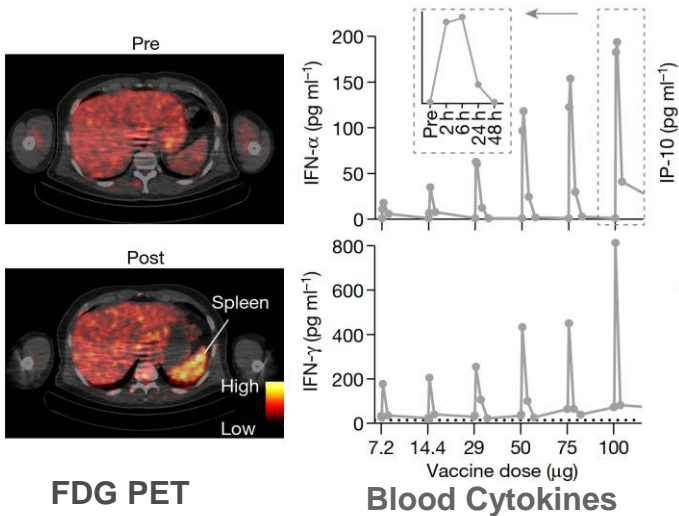
- Signed strategic collaboration to jointly conduct randomized Phase 2 trial with BNT111 and Libtayo® (cemiplimab anti-PD-1 therapy)
- Targeting patients with anti-PD1-refractory/relapsed, unresectable Stage III or IV cutaneous melanoma
- Companies to share development costs equally and keep full commercial rights to own programs
- ***Plan to initiate potentially registrational Phase 2 trial by the end of 2020 – more details on anticipated trial design to be released in Q3***

1 BNT111 publication in Nature highlights

Targeting of lymphoid DC for vaccine delivery & type I IFN activity



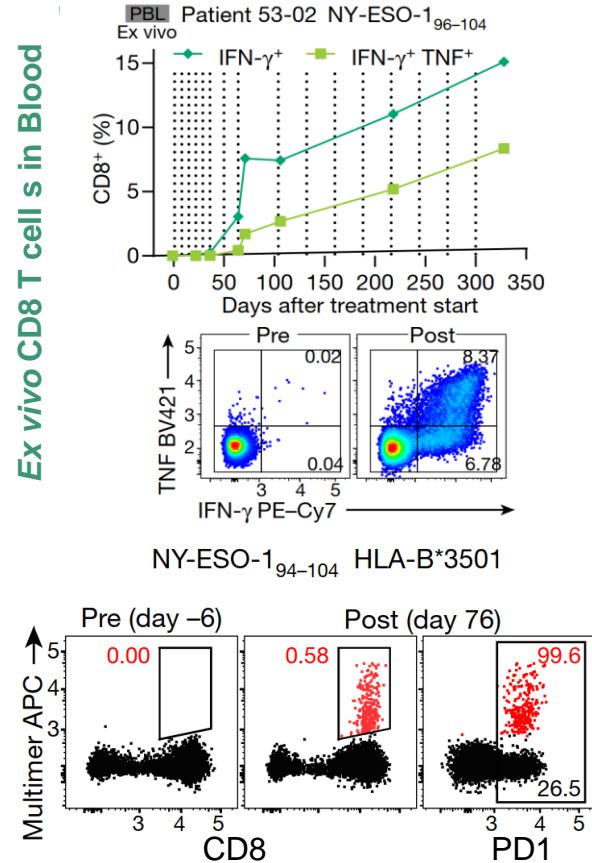
Vaccine constructs



FDG PET

Blood Cytokines

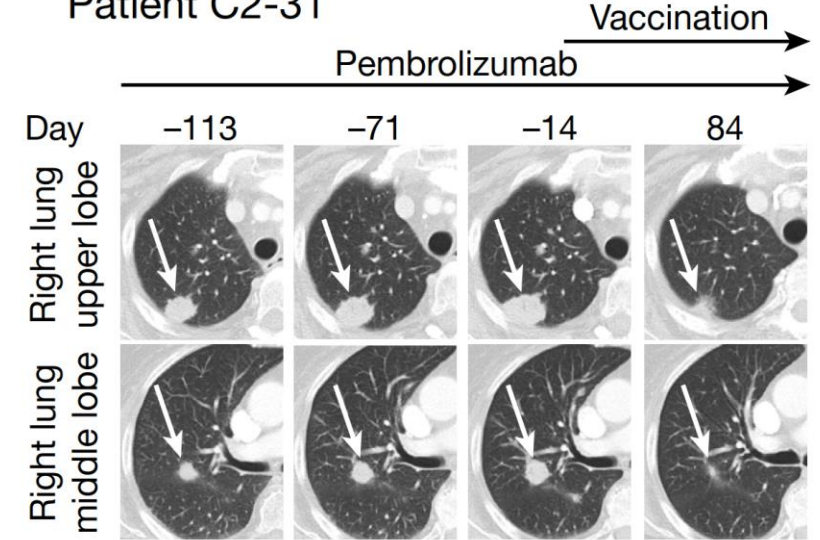
Strong CD4+, CD8+ T cell responses Multifunctional CD8+ PD1+ T cells



Objective responses in CPI-experienced melanoma patients with evaluable disease at baseline:

- ORR of BNT111 alone: 4/25
- ORR of BNT111 + anti-PD1: 6/17 (35%)
(CPI resensitizing activity of BNT111)

Patient C2-31



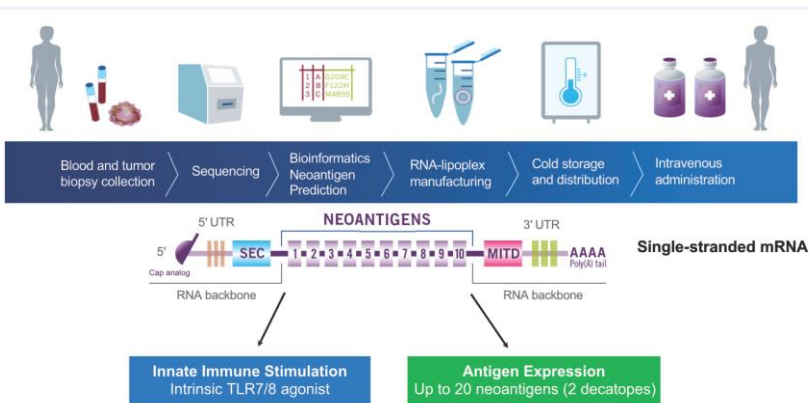
Lung CT scans before & after BNT111

2 iNeST: BNT122 recent AACR data update

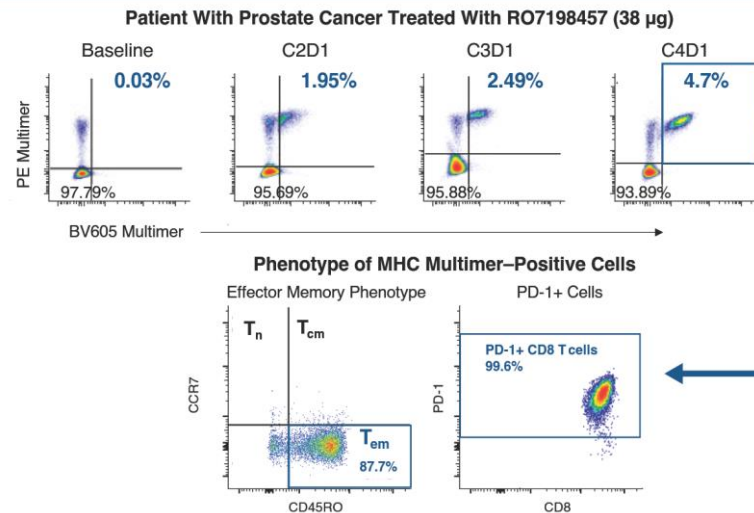
Ongoing Phase 1 trial of iNeST presented at AACR 2020

- Data from ongoing Phase 1 trial in heavily pre-treated, PD-1 low patients across multiple tumor types
- Demonstrated ability to elicit significant T cell responses of both effector and memory phenotype as monotherapy and in combination (multiple patients with > 5% T cell response per neoepitope)
- Treatment-related adverse events were primarily transient systemic reactions, manifesting as low grade CRS, IRR or flu-like symptoms
- Initial signals of clinical activity observed in monotherapy dose-escalation cohort (1 CR, 12 SD)

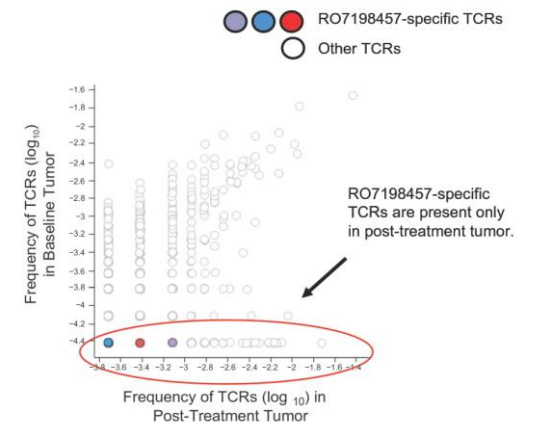
Evaluation of BNT122 safety & feasibility with/without Tecentriq in > 10 indications



BNT122 induces CD8+ T cells in CPI-sensitive and CPI-insensitive tumor types



BNT122 induces CD8+ T cell Infiltrates in tumors



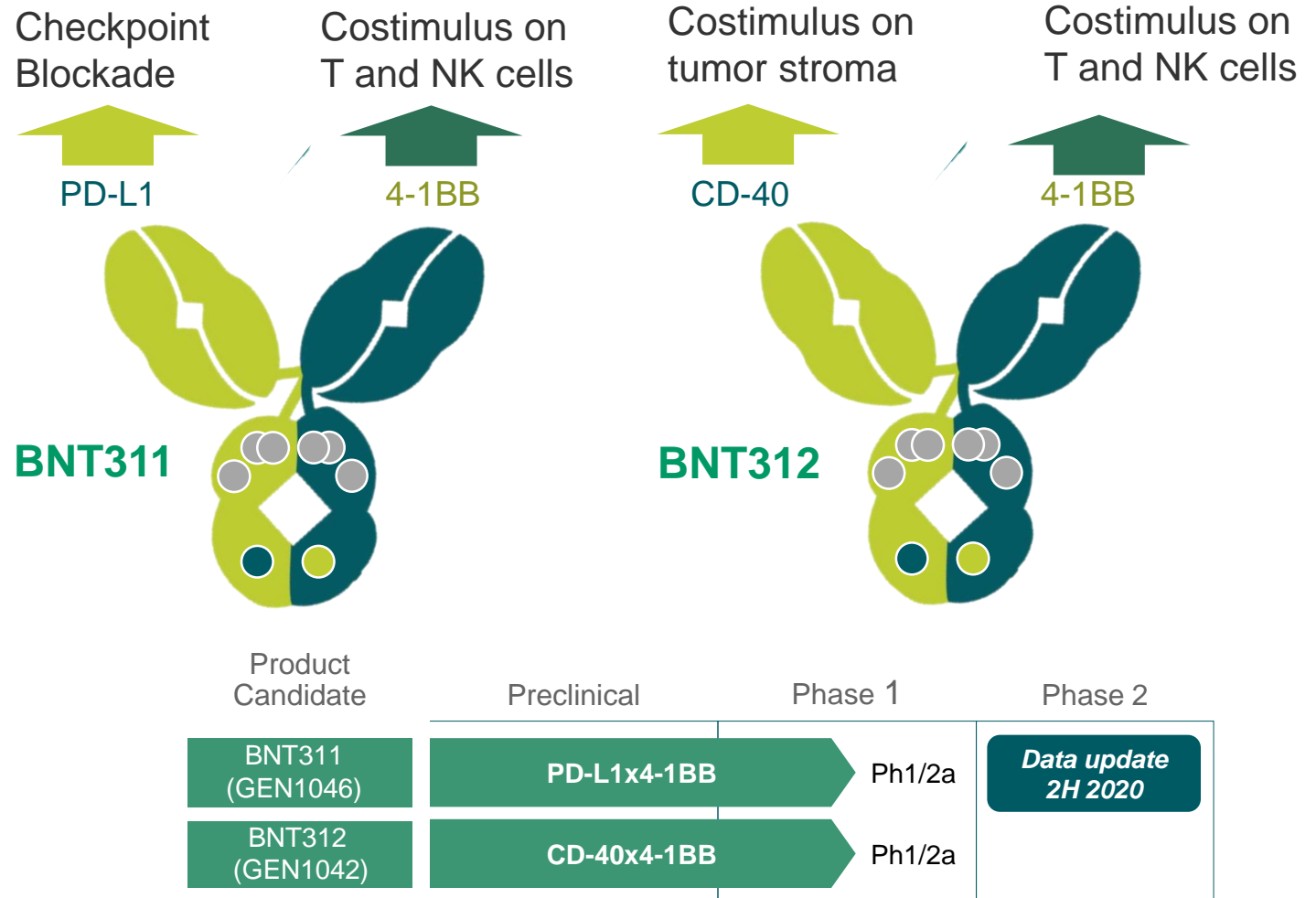
BNT122 iNeST randomized Phase 2 trials ongoing and planned

	First-Line Advanced Melanoma	Adjuvant Non-Small Cell Lung Cancer	Adjuvant Colorectal Cancer
Study Design and Patient Population	A Phase 2, open-label, multicenter randomized trial of the efficacy and safety of BNT122 in combination with pembrolizumab vs. pembrolizumab in patients with previously untreated Advanced Melanoma	A Phase 2, open-label, multicenter, randomized trial of the efficacy and safety of BNT122 in combination with atezolizumab vs. atezolizumab alone following adjuvant platinum-doublet chemotherapy in patients who are ctDNA positive after surgical resection of Stage II-III NSCLC	A Phase 2, open-label, multicenter randomized trial to compare the efficacy of BNT122 versus watchful waiting in patients with ctDNA positive, surgically resected Stage 2/3 rectal cancer, or Stage 2 high risk/stage 3 colon cancer
Rationale	<ul style="list-style-type: none"> Evaluate added benefit of 1L BNT122 in an advanced CPI-sensitive tumor (PFS, ORR) Success ungates 1L use of iNeST in CPI-sensitive advanced cancers for combination therapy 	<ul style="list-style-type: none"> Evaluate added benefit of BNT122 in a micrometastatic CPI-sensitive tumor (RFS) Success ungates adjuvant use of iNeST in CPI-sensitive ctDNA+ cancer types 	<ul style="list-style-type: none"> Evaluate added benefit of BNT122 in a micrometastatic CPI-insensitive tumor (RFS) Success ungates adjuvant use of iNeST for CPI-insensitive ctDNA+ cancer types
Status	<i>Enrollment update in 2H 2020</i>	<i>To start in 2H 2020</i>	<i>To start in 2H 2020</i>

3 Next-Gen checkpoint immunomodulators

Two bispecific antibodies partnered with Genmab

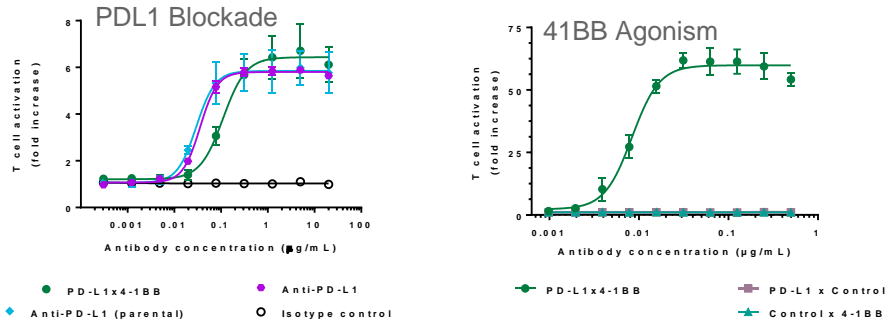
- 50:50 profit/loss share
- Both programs in the clinic
- Potential “first-in-class” bispecific antibodies
- Designed to address IO resistance mechanisms



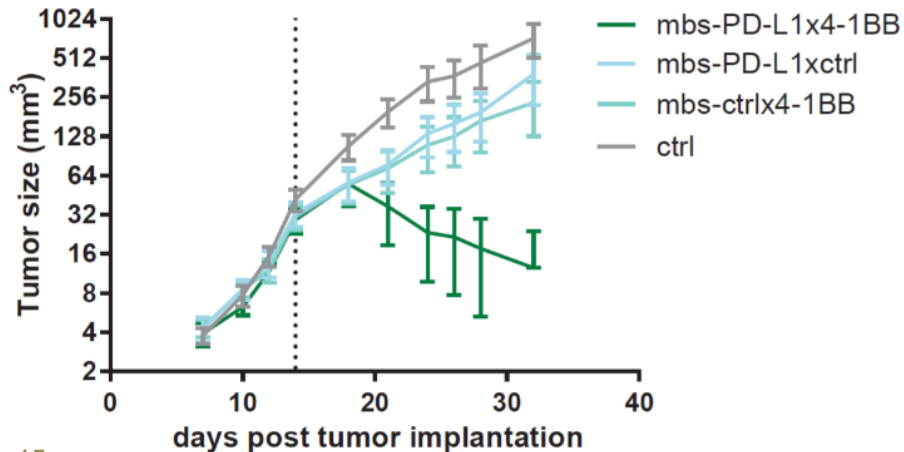
3 BNT311 (anti-PDL1-anti-4-1BB)

Mode of action

Constitutive PD-L1 blockade & Conditional 4-1BB agonism



Preclinical antitumor activity beyond PD1/PDL1 blockade



Clinical trial objectives

- 1 Evaluate safety, PK & mode of action
- 2 Evaluate clinical activity in
 - IO refractory, progressive tumors
 - IO insensitive tumor types

Study design:

- First-in-human, open-label, dose-escalation trial with expansion cohorts to evaluate safety of GEN1046 (BNT311) IV once every 21 days in subjects with malignant solid tumors
- Non-small Cell Lung Cancer, Urothelial Carcinoma, Endometrial Carcinoma, Triple Negative Breast Cancer, Squamous Cell Carcinoma of the Head and Neck, Ovarian and Cervical Cancer
- Enrollment: ~192 patients
- **First Data expected in 2H 2020**

BNT411: initiated FIH Phase 1 trial for our TLR7 agonist in July 2020

- BNT411 is an intravenously administered small molecule TLR7 (toll-like receptor 7) agonist
- Engineered for high potency and high TLR7 receptor-selectivity at the therapeutically active dose range
- Activation of both adaptive and innate immune system has been observed, in particular in combination with cytotoxic therapies and CPIs
- Type 1 interferon-dominated release of cytokines and chemokines and potent stimulation of antigen-specific CD8+ T cells, B cells and innate immune cells such as NK cells and macrophages
- Expected to have therapeutic potential across various solid tumor indications
- Phase 1/2a clinical trial as a mono and combination therapy initiated in July 2020

Study design:

- Phase 1/2a, first-in-human, open-label, dose-escalation trial
- Evaluation of safety, pharmacokinetics, pharmacodynamics, and preliminary efficacy of BNT411 as a monotherapy in patients with solid tumors and in combination with atezolizumab, carboplatin and etoposide in patients with chemotherapy-naïve extensive-stage small cell lung cancer (ES-SCLC)
- Enrollment: ~60 participants

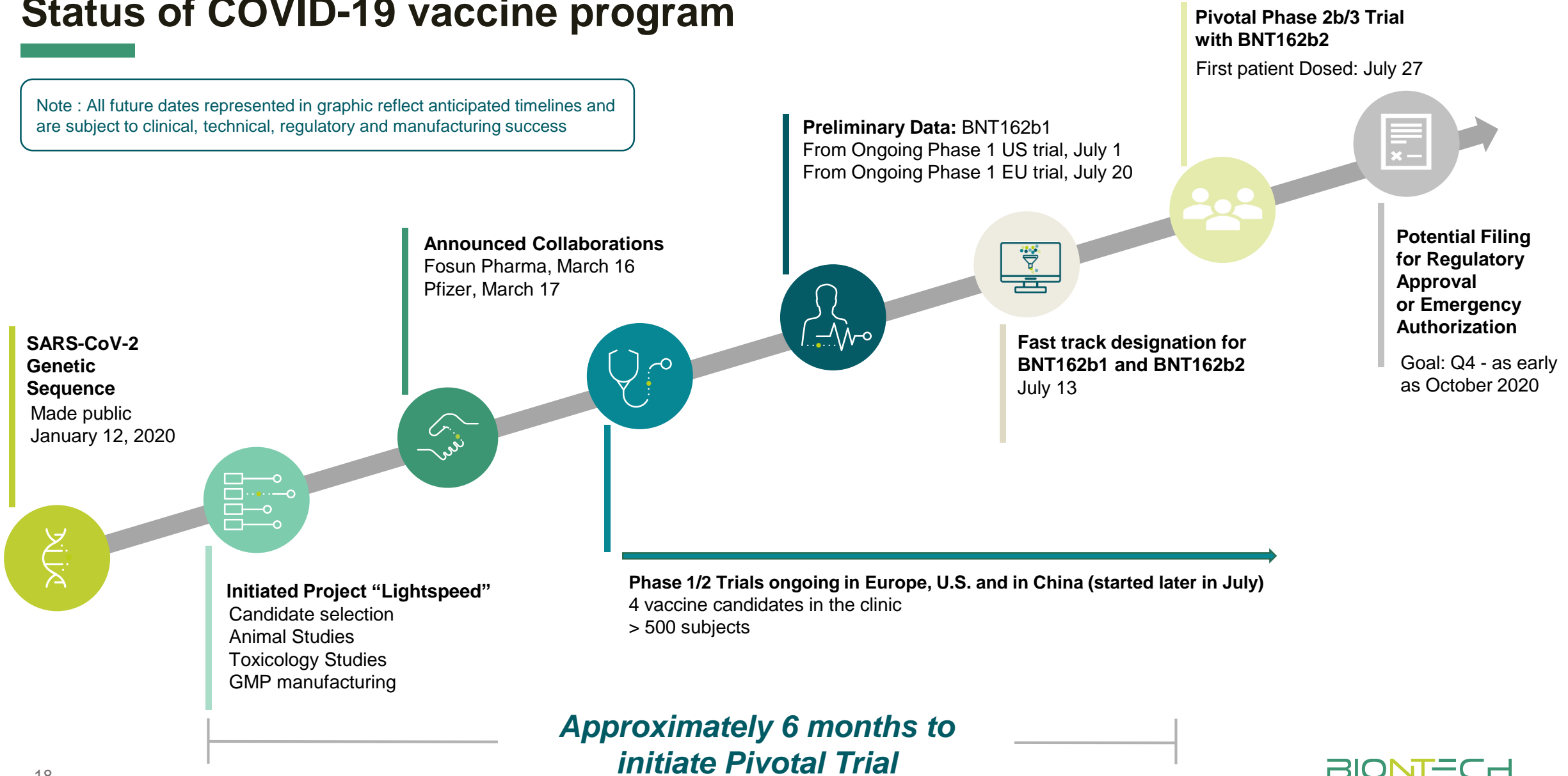
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- **Q2 Highlights**
- Oncology Pipeline Update
- **BNT162 (COVID-19 vaccine program)**
- Financial Update and 2H 2020 Outlook

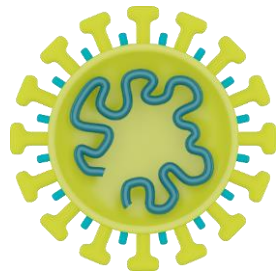


Status of COVID-19 vaccine program

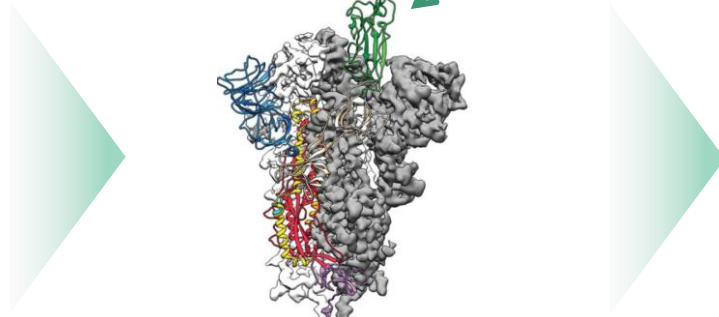
Note : All future dates represented in graphic reflect anticipated timelines and are subject to clinical, technical, regulatory and manufacturing success



BNT162b2 selected as lead candidate for Phase 2b/3



SARS-COV-2



SARS-COV-2
Spike Protein 3D Structure¹

Variant	Target	RNA construct	Immunization
162a1	RBD subunit	uRNA	prime/ boost
162b1	RBD subunit	modRNA	prime/ boost
162b2	2P-mutated full spike protein	modRNA	prime/ boost
162c2	2P-mutated full spike protein	saRNA	single injection

162b2 Received Fast Track designation

¹ Wrapp et al., Science, 2020

Rationale for selection of BNT162b2 for pivotal Phase 2/3 trial

- **BNT162b2 advanced into Phase 2/3 study, at 30 µg dose level as a 2-dose regimen, based on preclinical and clinical data**
- **Preliminary Phase 1/2 data from nearly 120 patients demonstrated favorable overall tolerability profile**
 - A reactogenicity profile that is more favorable than BNT162b1 in both younger and older adults
 - Generally mild to moderate and transient local and systemic adverse events and no serious adverse events
- **Two 30 µg doses of BNT162b2 elicited neutralizing GMTs generally similar to GMTs elicited by BNT162b1**
 - US and German Phase 1 data BNT162b1 demonstrated GMTs 2.8 and 3.3 times of COVID-19 patient convalescence serum panel at 30 µg (day 28)
 - In older adults BNT162b2 elicited GMT higher than COVID19 patient sera panel
- **BNT162b2 vaccinated participants displayed favorable breadth of epitopes recognized by T cell responses as compared to BNT162b1**
 - Concurrent induction of high magnitude CD4+ and CD8+
 - An evidence for broader T cell immunity and trend for stronger CD8+ T cell responses

BNT162b2 Phase 1 data is expected to be published within the upcoming weeks

BNT162b2: Global Phase 2b/3 design

- Planned to enroll up to 30,000 participants between 18 and 85 years of age at approximately 120 clinical investigational sites around world
- Designed as 1:1 vaccine candidate to placebo, randomized, observer-blinded study to obtain safety, immune response, and efficacy data needed for regulatory review
- **Co-Primary endpoints:**
 - Prevention of COVID-19 in those who have not been infected by SARS-CoV-2 prior to immunization
 - Prevention of COVID-19 regardless of whether participants have previously been infected by SARS-CoV-2
- **Secondary endpoints include prevention of severe COVID-19**
- Design allows for interim analyses and unblinded reviews by independent external Data Monitoring Committee

Goal of filing for emergency authorization or approval as early as October, if trial is deemed to be successful

BNT162 Commercial update



- Co-development and Co-commercialization worldwide (ex China) if approved
- Combined upfront payment and equity investment of \$185 million to BioNTech received in April
- Capital expenditures to be funded by each party independently
- Companies to share development expenses and gross profits on a 50:50 basis
- BioNTech eligible to receive further development & sales milestones up to \$563 million



- Co-development with Fosun Pharma to hold exclusive marketing rights in China if approved
- Combined upfront payment and equity investment of \$51 million to BioNTech received in April
- Fosun Pharma to fund development expenses in China
- BioNTech and Fosun to share gross profits on the sale of the vaccine in China
- BioNTech eligible to receive further China development & sales milestones up to \$84 million

BNT162 Commercial update

- Both BioNTech and Pfizer jointly scaling up manufacturing capacity to enable global supply:
 - BioNTech already producing vaccine for clinical supply at 2 manufacturing sites in Germany
 - Pfizer will activate 3 manufacturing sites in the U.S. and 1 site in Europe
- Joint BioNTech and Pfizer capacity targets for 2020 and 2021:
 - Up 100 million doses by the end of 2020
 - Approximately 1.3 billion doses by the end of 2021
- BioNTech and Fosun working separately to build up manufacturing capacity for China market

Commercial supply contracts signed to-date		
Region	# of doses	Contract value
United Kingdom	30 million	Not disclosed
United States	100 million with option for additional 500 million	\$1.95 billion for first 100 million doses
Japan	120 million	Not disclosed
Canada	Not disclosed	Not disclosed

- >250m doses contracted for 2020 and 2021 subject to clinical success and regulatory approval
- Commercial discussions ongoing with additional governments around the world

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Second Quarter 2020 Financial Results (unaudited) – Profit and Loss

(in millions)¹

	Three months ended		Six months ended	
	2020	June 30, 2019	2020	June 30, 2019
Revenues resulting from collaboration and license agreements	€ 32.6	€ 20.1	€ 53.7	€ 42.0
Revenues from other sales transactions	9.2	5.7	15.7	9.9
Total revenues	€ 41.8	€ 25.8	€ 69.4	€ 51.9
Cost of sales	(5.7)	(5.5)	(11.5)	(8.7)
Gross profit	€ 36.1	€ 20.3	€ 57.9	€ 43.2
Research and development expenses	(95.2)	(53.4)	(160.3)	(110.6)
Sales and marketing expenses	(3.0)	(0.7)	(3.5)	(1.2)
General and administrative expenses	(18.8)	(14.6)	(34.6)	(23.9)
Other operating income less expenses	0.0	0.5	0.3	0.8
Finance income less expenses	(9.6)	(2.2)	(3.7)	0.9
Income taxes	2.2	0.0	2.2	0.0
Loss for the period	€ (88.3)	€ (50.1)	€ (141.7)	€ (90.8)

¹ Due to rounding, numbers presented may not add up precisely to the totals.

Second Quarter 2020 Financial Results (unaudited) – Balance Sheet

Balance Sheet Position

- Cash and cash equivalents of €573.0m (\$641.6m¹) as of June 30, 2020
- After the end of the second quarter, the Company raised €680.7m (\$762.2m¹) in expected gross proceeds from private equity placement and follow-on underwritten offering leading to an expected pro-forma cash and cash equivalents balance of €1.25b (\$1.40b¹) as of June 30, 2020
- Announced debt financing of up to €100.0m (\$112.0m¹) from the EIB in June 2020²

2020 Full Year Financial Guidance

- As a result of increased spending related to BNT162, net cash used in operating activities and for purchases of property and equipment expected to be between €450m and €600m for the full year 2020
- Existing cash and cash equivalents, the net proceeds from the recent underwritten offering and the expected net proceeds from the private investment are expected to enable the Company to fund operating expenses and capital requirements through at least the next 24 months

Outlook for 2H 2020

Platform	Candidate	Indication (<i>Target</i>)	Next Expected Milestones ³
FixVac	BNT111	advanced melanoma	Start Phase 2 with in 2H 2020
	BNT113	HPV16+ H&N cancer	Start Phase 2 with in 2H 2020
	BNT114	triple negative breast cancer	Data update Phase 1 in 2H 2020⁴
iNeST	RO7198457 (BNT122)	1L melanoma with CPI	Enrollment update in 2H 2020 ¹
		NSCLC (adjuvant) CRC (adjuvant)	Start Phase 2 in 2H 2020 Start Phase 2 in 2H 2020
Intratumoral Immunotherapy	SAR441000 (BNT131)	Solid tumors (<i>IL-12sc, IL-15sushi, GM-CSF, IFNα</i>)	Data update Phase 1/2 in 2H 2020²
CAR-T Cells	BNT211	multiple solid tumors (<i>CLDN6</i>)	Start Phase 1/2 in 2H 2020
Neoantigen-based T cell therapy	BNT221 (NEO-PTC-01)	multiple solid tumors	Start Phase 1 in 2H 2020
Next-Gen CP Immunomodulators	BNT311	multiple solid tumors (<i>PD-L1x4-1BB</i>)	Data update Phase 1/2 in 2H 2020
Infectious Diseases	BNT162	COVID-19	Data update Phase 1 (BNT162b2) in Q3 2020 Data update Phase 2/3 in Q4 2020

Expected newsflow / milestones:

- Phase 1 data for BNT162b2 COVID-19 vaccine and update from Phase 2b/3 trial as early as October 2020
- Data updates for 3 oncology trials (BNT114, 131, and 311)
- To initiate up to 4 randomized phase 2 trials for FixVac and iNeST
- To initiate up to 2 first-in-human phase 1 trials for our Engineered Cell Therapy product candidates

¹We expect this update to include an update on the ongoing study, including patient enrollment numbers, with full efficacy and safety data for an interim update expected in the second half of 2021; ²As the trial is sponsored and conducted by Sanofi, the timing of data updates is not under our control, and is subject to change by Sanofi. ³Our expectations for timing of milestones beyond 2020 are premised on and subject to the achievement of earlier milestones on their expected timelines. Press releases will be issued once first patient has been dosed; ⁴BNT122 (iNeST) is also being investigated in arm 2 (N=15) of the 3 arm TNBC-MERIT trial, with BNT114 as an optional treatment; BNT114 is investigated in arm 1 (N=12) and arm 3 (N=15) of the TNBC-MERIT trial (total patients in study: N=42);

BIONTECH

Q&A