# BioNTech Presents Encouraging Phase 1/2 Follow-up Data for CAR-T Candidate BNT211 in Hard-To-Treat Solid Tumors at ESMO

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- *Follow-up data further demonstrate encouraging signs of clinical anti-tumor activity and a manageable safety and tolerability profile, building on the positive interim data presented at AACR in April*
- *Strongest responses seen in testicular cancer patients treated at dose level 2 after lymphodepletion with overall response rate of 57% and a disease control rate of 85%; product candidate recently received Priority Medicines designation by the European Medicines Agency for this indication*

**MAINZ, Germany, September 9, 2022** – BioNTech SE (Nasdaq: BNTX, "BioNTech" or "the Company") today presented positive follow-up data from its ongoing first-in-human Phase 1/2 trial evaluating the safety and efficacy of the Company's novel CAR-T cell therapy candidate, BNT211, in patients with relapsed or refractory advanced solid tumors. The results demonstrated encouraging signs of anti-tumor activity and the safety profile remained manageable for the two tested dose levels. The data were presented in the Investigational Immunotherapy Proffered Paper Session at the European Society for Medical Oncology (ESMO) Congress 2022 by Prof. Andreas Mackensen, M.D., University Hospital Erlangen, Germany.

BNT211 is a novel therapeutic approach which comprises a synergistic combination of two of BioNTech's proprietary platforms. The candidate combines an autologous chimeric antigen receptor (CAR) T cell therapy targeting the oncofetal antigen Claudin-6 (CLDN6) with a CLDN6-encoding CAR-T cell amplifying RNA vaccine (CARVac). The product candidate recently received Priority Medicines (PRIME) designation by the European Medicines Agency (EMA) for the third- or later-line treatment of testicular germ cell tumors. The designation was granted based on the encouraging initial data particularly in patients with testicular cancer which is the most common type of germ cell tumors. BioNTech presented data from the ongoing Phase 1/2 trial (NCT04503278; 2019-004323-20) at the American Association for Cancer Research (AACR) annual meeting in April 2022 and at the annual meeting of the Association for Cancer Immunotherapy (CIMT) in May 2022.

"This new dataset further supports the encouraging results we have seen for BNT211 to date. Together with the recently granted PRIME designation for BNT211 in testicular cancer it also reinforces our strategy to combine two of our key technology platforms in hard-to-treat tumor indications," said **Prof. Özlem Türeci, M.D., Chief Medical Officer and Co-Founder at BioNTech**. "We are grateful for the continued support from both clinicians and regulators that enables us to rapidly advance the clinical evaluation of BNT211 as a novel treatment option for cancer patients with an otherwise very poor prognosis."

The updated data read-out presented at ESMO (data cut-offs: June 15, 2022 for safety and August 16, 2022 for efficacy) included data from 22 patients (21 evaluable for efficacy) who received CLDN6 CAR-T cells at dose levels 1 ($1x10^7$ CAR-T cells, n=7, including one patient with CAR-T dose below dose level 1) and 2 ($1x10^8$ CAR-T cells, n=15) alone or combined with CARVac. Tumor indications included testicular cancer (n=13), ovarian cancer (n=4), endometrial cancer, fallopian tube cancer, sarcoma, gastric cancer (one patient each) and one patient with a tumor of unknown primary origin. Treatment with CLDN6 CAR-T alone or in combination with CARVac up to dose level 2 showed encouraging signs of clinical activity and was well tolerated. All 22 patients showed robust, dose-dependent CAR-T cell expansion after infusion with cell frequencies close to $10^9$ total counts in dose level 2. At the cut-off date, available data demonstrated the long-term persistence of CAR-T cells observed in some patients for more than 100 days, and in one patient for 200 days. Two patients have been treated without lymphodepletion as preconditioning and a strongly reduced CAR-T expansion was observed. Adverse events, including cytokine release syndromes (CRS) and dose limiting toxicities were manageable. One transient occurrence of neurotoxicity grade 1 and one grade 3 CRS were observed that quickly resolved.

Efficacy assessment of the 21 evaluable patients showed a best overall response rate (ORR) of 33% and a disease control rate (DCR) of 67% with one complete response, six partial responses and seven patients with stable disease. In line with the earlier data set initially presented at AACR this year, particularly encouraging clinical responses were seen in patients with testicular cancer treated with dose level 2 after lymphodepletion (n=7), where one complete response, three partial responses and two stable diseases were observed, representing an ORR of 57% and a DCR of 85%. As previously reported, antitumor activity tended to be higher at the higher dose of CAR-T cells and when combined with the mRNA vaccine. 5 of 10 patients in the CARVac combination group showed a partial response compared to 2 of 9 patients in the monotherapy cohort (CAR-T cell treatment only) excluding two patients that have been treated without lymphodepletion.

**About BNT211**
Aiming to harness the power of cell therapies for solid cancers and to overcoming hurdles to date, BioNTech has combined their CAR-T and FixVac platform technologies to develop a highly tumor-specific CAR-T cell therapy product which is consecutively enhanced by a **C**AR-T Cell **A**mplifying **R**NA **Vac**cine (CARVac) that is based on BioNTech's mRNA-lipoplex technology and encodes for the respective CAR-T target antigen. CARVac is based on BioNTech's backbone-optimized uridine mRNA (uRNA)-lipoplex technology which through its inherent adjuvant function enables a potent T cell stimulation to improve persistence and functionality of the adoptively transferred CAR-T cells, thereby enabling the investigation of a therapeutic effect even at low CAR-T doses. BNT211 is an investigational CAR-T cell therapy directed against the novel oncofetal antigen Claudin-6 (CLDN6), a target discovered by BioNTech founders and expressed on multiple solid tumors such as ovarian cancer, sarcoma, testicular cancer, endometrial cancer and gastric cancer. The program is currently being evaluated in a first-in-human Phase 1/2 trial as a monotherapy and in combination with a CLDN6-encoding CARVac, aiming to boost persistence and functionality of the CLDN6-CAR-T cells, in patients with CLDN6-positive relapsed or refractory advanced solid tumors.

**About BioNTech**
Biopharmaceutical New Technologies is a next generation immunotherapy company pioneering novel therapies for cancer and other serious diseases. The Company exploits a wide array of computational discovery and therapeutic drug platforms for the rapid development of novel biopharmaceuticals. Its broad portfolio of oncology product candidates includes individualized and off-the-shelf mRNA-based therapies, innovative chimeric antigen receptor T cells, bispecific immune checkpoint modulators, targeted cancer antibodies and small molecules. Based on its deep expertise in mRNA

vaccine development and in-house manufacturing capabilities, BioNTech and its collaborators are developing multiple mRNA vaccine candidates for a range of infectious diseases alongside its diverse oncology pipeline. BioNTech has established a broad set of relationships with multiple global pharmaceutical collaborators, including Genmab, Sanofi, Genentech, a member of the Roche Group, Regeneron, Genevant, Fosun Pharma, and Pfizer. For more information, please visit www.BioNTech.com.

**BioNTech Forward-Looking Statements**

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements may include, but may not be limited to statements concerning: BioNTech's CAR-T program candidate BNT211; timing for any data readouts of the Phase 1/2 trial; the registrational potential of any trial we may initiate for BNT211; the nature and characterization of and timing for release of clinical data across BioNTech's platforms, which is subject to peer review, regulatory review and market interpretation; the planned next steps in BioNTech's pipeline programs and specifically including, but not limited to, statements regarding timing or plans for initiation of clinical trials, enrollment or submission for and receipt of product approvals with respect to BioNTech's product candidates; the ability of BioNTech's mRNA technology to demonstrate clinical efficacy outside of BioNTech's infectious disease platform; the potential safety and efficacy of our other product candidates; and BioNTech's anticipated market opportunity and size for its product candidates, the rate and degree of market acceptance of BioNTech's investigational medicines, if approved. Any forward-looking statements in this press release are based on BioNTech's current expectations and beliefs of future events, and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to: discussions with regulatory agencies regarding timing and requirements for additional clinical trials; and the ability to produce comparable clinical results in future clinical trials.

For a discussion of these and other risks and uncertainties, see BioNTech's Quarterly Report as Form 6-K for the quarter ended June 30, 2022, filed with the SEC on August 8, 2022, which is available on the SEC's website at www.sec.gov. All information in this press release is as of the date of the release, and BioNTech undertakes no duty to update this information unless required by law.

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