2.7.4 SUMMARY OF CLINICAL SAFETY

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ABBREVIATIONS

Abbreviation	Definition
ADR	adverse drug reaction
AE	adverse event
AESI	adverse events of special interest
ALT	alanine aminotransferase
AST	aspartate aminotransferase
BLA	Biologics License Application
BMI	body mass index
BUN	blood urea nitrogen
C4591001 Efficacy Final Analysis Interim CSR	Study C4591001 interim clinical study report including prespecified final analysis of efficacy and available immunogenicity and safety data up to data cutoff date of 14 November 2020
C4591001 6-Month Update Interim CSR	Study C4591001 interim clinical study report including updated efficacy, immunogenicity, and safety up to 6 months after Dose 2 up to data cutoff date of 13 March 2021
CBER	(US Food and Drug Administration) Center for Biologics Evaluation and Research
CDC	(US) Centers for Disease Control and Prevention
CDS	Core Data Sheet
CI	confidence interval
CO	Clinical Overview
COVID-19	Coronavirus Disease 2019
CRF	case report form
CRP	c-reactive protein
CSR	Clinical Study Report
CTA	Clinical Trial Application
DART	Developmental and Reproductive Toxicology
DMC	(US Study C4591001) Data Monitoring Committee
ECG	electrocardiogram
EoS	end of study
FDA	(US) Food and Drug Administration
FIH	first-in-human
FU	follow-up
HBV	hepatitis B virus

Abbreviation	Definition
HBc Abs	hepatitis B core antibodies
HBsAg	hepatitis B surface antigen
HCV	hepatitis C virus
HCV Abs	hepatitis C virus antibodies
HIV	human immunodeficiency virus
HLT	high level term
ICD	informed consent document
IgG	immunoglobulin G
IgM	immunoglobulin M
IM	intramuscular(ly)
IND	Investigational New Drug
IR	incidence rate
IRC	(US Study C4591001) Internal Review Committee
IRT	interactive response technology
IV	intravenous
IWR	interactive Web-based response
LLN	lower limit of normal
MedDRA	Medical Dictionary for Regulatory Activities
MIS-C	multisystem inflammatory syndrome in children
NAAT	nucleic acid amplification testing
NHP	non-human primate
P/B	prime/boost: dosing regimen of a priming immunization and a booster immunization
PCR	polymerase chain reaction
PT	Preferred Term
PY	person-years
RNA	ribonucleic acid
SAF	Safety Set
SAP	statistical analysis plan
SAE	serious adverse event
SARS-CoV-2	SARS Coronavirus-2; virus causing the disease COVID-19
SCE	Summary of Clinical Efficacy
SCS	Summary of Clinical Safety

Abbreviation	Definition
SIRVA	shoulder injury related to vaccine administration
SMQ	Standardised MedDRA Queries
SoA	schedule of activities
SOC	System Organ Class
SRC	Safety Review Committee
US	United States
VOC	variant of concern
TEAE	treatment-emergent adverse events

2.7.4. SUMMARY OF CLINICAL SAFETY

This SCS presents the safety and tolerability data for BNT162b2. BNT162b2 (BioNTech code number BNT162, Pfizer code number PF-07302048) is an investigational vaccine developed by BioNTech and Pfizer intended to prevent COVID-19, which is caused by SARS-CoV-2. The data are derived from the pivotal registration study, Phase 1/2/3 Study C4591001 (BNT162-02), conducted under IND 19736. Supporting data are presented from the FIH, dose level-finding, Phase 1/2 Study BNT162-01 conducted in Germany (which is not being conducted under the IND, but under a CTA).

The proposed indication and dosing administration for BNT162b2 (30 µg) is:

- Proposed indication: Active immunization against COVID-19 disease caused by SARS-CoV-2 virus in individuals ≥16 years of age.

- Proposed dosing administration: single 0.3 mL intramuscular (IM) dose followed by a second 0.3 mL dose 21 days later.

Nonclinical studies in this development program are summarized in the CO (Module 2.5 Section 2.5.1.2.3.1).

Phase 1 of Study C4591001 evaluated 2 vaccine candidates, BNT162b1 and BNT162b2. These 2 candidates were selected based on safety and immunogenicity data from Study BNT162-01 (which is evaluating four vaccine candidates). Phase 1 of Study C4591001 comprised of dose-level finding evaluations of the 2 selected vaccine candidates; multiple dose levels were evaluated, including some that corresponded to those evaluated in Study BNT162-01 (BNT162b1 and BNT162b2 at 10 µg, 20 µg, and 30 µg). Study vaccine was administered using the same 2-dose regimen as in Study BNT162-01 (21 days apart). Dose levels were administered first to an 18 to 55 years of age cohort, then to a 65 to 85 years of age cohort.

Evaluation of Phase 1 safety and immunogenicity results led to the selection of a single candidate. Both constructs were safe and well tolerated (except for BNT162b1 at 100 µg). Given that the reactogenicity profile for BNT162b2 was more favorable than BNT162b1 in both younger and older adults with similar immunogenicity results, and with non-human primate (NHP) challenge studies showing that BNT162b2 led to earlier virus clearance and no evidence of virus in the lung, BNT162b2 at the 30 µg dose level was selected and advanced into the Phase 2/3 expanded cohort and efficacy evaluation.

Phase 2 of the study (for which enrollment has completed) comprised the evaluation of safety and immunogenicity data for the first 360 participants (180 from active vaccine group and 180 from placebo group) that entered the study after completion of Phase 1.

The Phase 3 part of the study is ongoing, and participants (including the first 360 participants from Phase 2) are continuing to be evaluated at the time of this SCS. The minimum age for inclusion in Phase 3 was lowered from 18 to 16 years of age after the approval of Study C4591001 protocol amendment 6 and from 16 to 12 years of age after the approval of

Study C4591001 protocol amendment 7. As such, Phase 3 has completed enrollment of adolescents ≥12 years of age (stratified as 12-15, 16-55, or >55 years of age).

C4591001 protocol amendment 10 allowed participants ≥16 years of age who originally received placebo the opportunity to receive BNT162b2 following local or national recommendations, or following completion of the active safety surveillance period. On 14 December 2020, the process of disclosing vaccine assignments for all trial participants ≥16 years of age began. Hence, for each trial participant, there are 2 periods in the study: enrollment into the observer-blind phase until the date of vaccine disclosure and the time in the study after disclosure. Participants who originally were randomized to BNT162b2, are continuing to be followed for safety as specified in the protocol. The safety data for participants who originally were randomized to and received placebo prior to disclosure of vaccine assignment are standard blinded data that contribute to controlled assessment of safety compared to individuals who randomly assigned to BNT162b2. After vaccine treatment disclosure and the administration of BNT162b2, the placebo participants can no longer be used for direct comparison with those who originally were randomized to BNT162b2. Given that individuals were unblinded on different days after 14 December 2020, the analysis of the observer-blinded, placebo-controlled portion of the study as well as the open-label portion displays rates of AEs adjusted for exposure time.

Safety data for Phase 3 of Study C4591001, based on the data cutoff date of 13 March 2021, presented in this SCS include:

- Blinded placebo-controlled period: Dose 1 to 1 month after Dose 2 and to unblinding date:
    - Phase 1 participants randomized to BNT162b2 30 μg (up to ~6 months after Dose 2)
    - Phase 2/3 ≥16 years of age participants including HIV+ subset (up to ~6 months after Dose 2)
- Open-label observational period: from time of unblinding to data cutoff date:
    - Phase 2/3 participants ≥16 years of age originally randomized to BNT162b2
    - Phase 2/3 participants ≥16 years of age originally randomized to placebo who then received BNT162b2
- Cumulative follow-up from Dose 1 to 6 months after Dose 2: Phase 2/3 participants originally randomized to BNT162b2 (inclusive of blinded data and open-label data) comprised of at least 3000 in each age group (16 to 55 years of age, >55 years of age)

Overall, this SCS summarizes the safety data obtained from Study C4591001 (Phases 1 to 3) and Study BNT162-01 (Phase 1) to support registration of BNT162b2. The following data are presented in this document by study and phase:

- The overall safety evaluation plans for each study (including objectives, endpoints, methods, and criteria for narratives) are presented in Section 2.7.4.1.1.
- Data regarding exposure, disposition, and study population characteristics are presented in Section 2.7.4.1.2.
- The results of safety evaluations are presented in Section 2.7.4.2. These evaluations include:
    - Reactogenicity (local reactions and systemic events)
    - AEs (by SOC, related, immediate, severe, deaths, SAEs, and withdrawals due to AEs)
    - Other safety assessments
    - Narratives
- Safety in special groups and situations is presented in Section 2.7.4.3.
- Post-Authorization Data in Section 2.7.4.4.
- Overall conclusions are stated in Section 2.7.4.5.

The safety results presented in this SCS demonstrate that BNT162b2 is both safe and well-tolerated when administered on a 2-dose schedule (21 days apart) in individuals ≥16 years of age. The cutoff dates for safety data presented in this SCS are shown in Table 1.

Table 1. Cutoff Dates for Safety Data Presented in Summary of Clinical Safety

Phase/Study	Safety Data Available (Through)	N (number randomized)	Age (years of age)	Data Cutoff Date
Study BNT162-01	Reactogenicity: up to 7 days after each dose AEs: 1 month post-dose 2	216	Younger: 18 to 55 Older: 56 to 85	23 Oct 2020
Phase 1 (Study C4591001)	Reactogenicity: up to 7 days after each dose AEs: 1 month post-dose 2 SAEs: through the data cutoff date Laboratory Data: 7 days post-dose 2 BNT162b1 100 µg dose level (younger age group): 3 weeks post-dose 1 or to before Dose 2 (based on the data cutoff date)	195	Younger: 18 to 55 Older: 65 to 85	24 Aug 2020
	Long-term follow-up for AEs & SAEs for BNT162b2 30 µg group only: • From 1 month post-dose 2 to unblinding date (approximately 6 months post-dose 2)	30		13 Mar 2021
Phase 2 (Study C4591001)	Reactogenicity: up to 7 days after each dose AEs/SAEs: 7 days post-dose 2[a]	360[b]	18 to 85 • Younger: 18 to 55 • Older: 56 to 85	02 Sep 2020

Table 1. Cutoff Dates for Safety Data Presented in Summary of Clinical Safety

Phase/Study	Safety Data Available (Through)	N (number randomized)	Age (years of age)	Data Cutoff Date
Phase 3 (Study C4591001)	Reactogenicity: up to 7 days after each dose	9839[c]	Younger: 16 to 55 Older: >55	13 Mar 2021
	Blinded AEs/SAEs: • 1 month post-dose 2 (including HIV positive subset) • up to unblinding date (including HIV positive subset)[d]	43,847		
	Open-label AEs/SAEs (participants originally randomized to BNT162b2): • Date of unblinding to data cutoff	20,309		
	Blinded and open-label AEs/SAEs • BNT162b2 participants with at least 6 months follow-up post-dose 2	12,006		
	Open-label AEs/SAEs (participants originally randomized to placebo but were vaccinated with BNT162b2 after treatment disclosure): • Date of BNT162b2 vaccination (after treatment disclosure) to data cutoff	19,525		

a. Adverse event results beyond 7 days after Dose 2, as defined in the protocol objectives, are included in Phase 3 analyses.
b. The 360 Phase 2 participants are included in the Phase 3 analyses.
c. This subset of 9839 participants (which includes Phase 2 participants) completed the e-diary for reporting local reactions and systemic events.
d. Up to ~6 months after Dose 2

2.7.4.1. Exposure to BNT162b2

2.7.4.1.1. Overall Safety Evaluation Plan and Narratives of Safety Studies

The overall safety evaluation plan for Study BNT162-01 is presented in Section 2.7.4.1.1.1.

The overall safety evaluation plan for Study C4591001 is presented in Section 2.7.4.1.1.2.

Study BNT162-01 and Study C4591001 use different designs and safety data collection methods and definitions. For these reasons, safety data from Study BNT162-01 and Study C4591001 will not be pooled for analysis. As BNT162b1 and BNT162b2 were the 2 vaccine candidates evaluated in Phase 1 of the C4591001 study, only these 2 constructs will be discussed in the SCS as it relates to how the final candidate and dose level was determined.

2.7.4.1.1.1. Phase 1/2 Study BNT162-01

Safety and immunogenicity data from Study BNT162-01 are summarized in this BLA in support of the larger dataset from Phase 1/2/3 registration Study C4591001.

2.7.4.1.1.1.1. Safety Objectives and Endpoints (Study BNT162-01)

The safety objectives and endpoints for Study BNT162-01 are presented in Table 2.

Table 2. Safety Objectives and Endpoints for Study BNT162-01[a]

Objective	Endpoint
Primary:	

To describe the safety and tolerability profiles of prophylactic BNT162 vaccines in healthy adults after single dose (prime only) or P/B immunization.	• Solicited local reactions at the injection site (pain, tenderness, erythema/redness, induration/swelling) recorded up to 7±1 day after each immunization.
	• Solicited systemic reactions (nausea, vomiting, diarrhea, headache, fatigue, myalgia, arthralgia, chills, loss of appetite, malaise, and fever) recorded up to 7±1 day after each immunization.
	• The proportion of subjects with at least 1 unsolicited TEAE:
	  • For BNT162a1, BNT162b1, BNT162b2, and BNT162c2 (P/B): occurring up to 21±2 d after the prime immunization and 28±4 d after the boost immunization.
	  • For BNT162c2 (single dose): The proportion of subjects with at least 1 unsolicited TEAE occurring up to 28±4 days after the immunization.

a. Only BNT162b1 and BNT162b2 are discussed in this SCS.

2.7.4.1.1.1.2. Overall Design (Study BNT162-01)

Details regarding the study design of Study BNT162-01 are presented in the study protocol (Module 5.3.5.1 BNT162-01 Protocol Section 4).

German Study BNT162-01 is the ongoing, FIH, Phase 1/2 dose level-finding study, in which healthy adults aged 18 to 55 or 56 to 85 all receive active vaccine (open-label and non-randomized). Four vaccine candidates from 3 different RNA platforms are being tested. The trial has two parts: a dose-finding part (Part A) and a part dedicated to recruiting expansion cohorts with dose levels which were selected from data generated in Part A (Part B). The study schema for Part A is presented in Appendix A (Section 2.7.4.6.1).

BNT162b1 and BNT162b2 were administered in a prime/boost two-dose regimen separated by approximately 21 days:

- BNT162b1 (dose levels: 1, 3, 10, 20, 30, 50, 60 µg)
- BNT162b2 (dose levels: 1, 3, 10, 20, 30 µg).

The safety review committee (SRC) recommended that a second dose of BNT162b1 at the 60 µg dose level not be administered due to the reactogenicity after the first dose.

Subject safety was to be monitored from Visit 0 (screening) until approximately 6 months after the last immunization.

The following data are summarized and presented in this SCS as primary endpoints:

- Local reactions and systemic event data (acquired through the subject paper diaries) through Visit 5 (up to 7 days post-dose 2)
- TEAEs through Visit 7 (1-month follow-up visit post-dose 2)

Complete details regarding planned time points for all safety assessments during Phase 2/3 are provided in the SoA in Appendix A (Section 2.7.4.6.1).

2.7.4.1.1.1.3. Study Population (Study BNT162-01)

The full eligibility criteria for Study BNT162-01 can be found in the protocol (Module 5.3.5.1 BNT162-01 Protocol Section 5.1.1 and 5.2.1).

The study enrolled healthy adults 18 to 85 years of age. Healthy participants with preexisting stable disease, defined as disease not requiring significant change in therapy or hospitalization for worsening disease during the 6 weeks prior to enrollment, were eligible for the study. Individuals with certain medical conditions that could affect participant safety or evaluation of vaccine safety or immunogenicity were excluded. A complete list of inclusion and exclusion criteria is available in the protocol (Module 5.3.5.1 BNT162-01 Protocol Section 5).

2.7.4.1.1.1.4. Analysis Sets (Study BNT162-01)

Populations from Study BNT162-01 discussed in this SCS include the following:

Population	Description
Screened Set	The screened set is defined as all subjects who signed informed consent
Safety Set (SAF)	The safety set is defined as all subjects who received at least one dose of study intervention

2.7.4.1.1.1.5. Safety Assessments (Study BNT162-01)

Details regarding safety assessments for Study BNT162-01 are found in Module 5.3.5.1 BNT162-01 Protocol Section 8.2.

Safety assessments were collected at planned time points as described in the Schedule of Activities (Appendix A, Section 2.7.4.6.1.2). Key Safety Assessments included:

- Physical examinations, Vital Signs, ECGs
- Clinical laboratory tests were performed at the times defined in the SoA and the specific tests are presented in Module 5.3.5.1 BNT162-01 Protocol Section 10.2. The classification of laboratory tests is presented in Module 5.3.5.1 BNT162-01 Statistical Analysis Plan Section 6.7.2.
- Local reactions after IM immunization were assessed by the investigator at the times given in the SoA (Appendix A, Section 2.7.4.6.1.2). In the 7 days after administration of the study intervention, participants used subject diaries to record any reactions between visits: solicited local reactions at the injection site and solicited systemic reactions (see Appendix A [Section 2.7.4.6.1.3.2] for further details). Grading scales used in this study to assess local reactions and systemic events are derived from the FDA CBER guidelines on toxicity grading scales for healthy adult volunteers enrolled in preventive vaccine clinical trials.[1]
- SARS-CoV-2 testing (PCR-based and antibody-based). This includes PCR-based testing for SARS-CoV-2 as an eligibility criterion and blood draws for anti-SARS-CoV-2 antibody testing as baseline reference for immunogenicity analysis. If required, this reference will allow the discrimination between vaccinated and infected subjects.
- AEs and SAEs were collected, recorded, and reported as defined in Module 5.3.5.1 BNT162-01 Protocol Section 8.3 and further discussed in Appendix A (Section 2.7.4.6.1.3.3).
- AESI were considered to be enhanced respiratory disease or flu-like symptomatology that did not resolve after 7 days or with symptom kinetics that are inconsistent with a relationship to RNA immunization.

2.7.4.1.1.1.6. Statistical Methods (Study BNT162-01)

There is no hypothesis testing in Study BNT162-01. Statistical methods are described in the study protocol (Module 5.3.5.1 BNT162-01 Protocol Section 9.4) and in the SAP (Module 5.3.5.1 BNT162-01 SAP).

In general, data will be summarized by groups and groups may be combined as appropriate. Part A and Part B will be analyzed separately and may be combined as appropriate.

All AEs will be coded using MedDRA terms. TEAEs will be summarized using the safety set (SAF). In general, AEs will be analyzed by group (ie, by type and dose level) and for each immunization. Additionally, AEs will be summarized for all dose levels combined for each type. For each analysis, the number and percentage of subjects reporting at least one AE will be summarized by PT nested within SOC for each AE type. The number and percentage of subjects with any AE will be summarized by worst grade by PT nested within SOC.

For each immunization, the number and percentage of subjects reporting at least one local reaction or systemic reaction (ie, solicited data collected using subject diaries) will be summarized for any local reactions or systemic reactions and for Grade ≥3 local reactions or systemic reactions in the SAF.

The analysis of local and systemic reactions will be repeated with a reduced set of terms (called the "comparability analysis"), to facilitate like-for-like comparisons between different trials in the clinical development program for BNT162 vaccines. The number and percentage of subjects reporting at least one local reaction will be summarized by worst grade using the SAF.

Safety data other than AEs that will be summarized includes clinical laboratory parameters, vital signs, and ECGs. All safety analyses will be based on the safety set and will be summarized descriptively by group unless otherwise stated.

Clinical laboratory parameters at each timepoint and change from baseline to each post-baseline time point will be summarized using descriptive summary statistics for each parameter by group.

The occurrence of clinically significant abnormal laboratory results within a study subject will be analyzed using descriptive summary statistics for each parameter and visit by group.

Abnormal laboratory results will be graded using criteria based on the guidance given in the FDA CBER guidelines on toxicity grading scales for healthy adult volunteers enrolled in preventive vaccine clinical trials.[1]

2.7.4.1.1.2. Pivotal Phase 1/2/3 Safety, Immunogenicity, and Efficacy Study C4591001

2.7.4.1.1.2.1. Safety Objectives, Estimands, Endpoints (Study C4591001)

Safety objectives, estimands, and endpoints for Study C4591001 are presented in Table 3.

Table 3. Safety Objectives, Estimands, and Endpoints for Study C4591001

Objectives[a]	Estimands	Endpoints	Reference
Primary:	**Primary:**	**Primary:**	
PHASE 1			
To describe the safety and tolerability profiles of prophylactic BNT162 vaccines in healthy adults after 1 or 2 doses	In participants receiving at least 1 dose of study intervention, the percentage of participants reporting: • Local reactions for up to 7 days following each dose • Systemic events for up to 7 days following each dose • AEs from Dose 1 to 1 month after the last dose • SAEs from Dose 1 to 6 months after the last dose	• Local reactions (pain at the injection site, redness, and swelling) • Systemic events (fever, fatigue, headache, chills, vomiting, diarrhea, new or worsened muscle pain, and new or worsened joint pain) • AEs • SAEs	Interim data for local reactions and systemic events reported up to 7 days after each dose, and AEs and SAEs are reported from Dose 1 to 1 month after the last dose for all groups evaluated, and to the cutoff date after Dose 2 for the BNT162b2 30 µg group only in final analysis interim CSR dated 03 December 2020. AEs and SAEs from Dose 1 to the unblinding date for the BNT162b2 30 µg group only are reported in this CSR.
	In addition, the percentage of participants with: • Abnormal hematology and chemistry laboratory values 1 and 7 days after Dose 1; and 7 days after Dose 2 • Grading shifts in hematology and chemistry laboratory assessments between baseline and 1 and 7 days after Dose 1; and before Dose 2 and 7 days after Dose 2	Hematology and chemistry laboratory parameters detailed in Module 5.3.5.1 C4591001 Protocol Section 10.2.	Interim data are reported in final analysis interim CSR dated 03 December 2020.
Exploratory			
To describe the safety profile of a third dose of prophylactic BNT162b2 administered to healthy adults 6 to 12 months after the second dose of either BNT162b1 or BNT162b2	In participants receiving a third dose of BNT162b2, the percentage of participants reporting: • Local reactions for up to 7 days after Dose 3 • Systemic events for up to 7 days after Dose 3 • AEs and SAEs from Dose 3 to 1 month after Dose 3	• Local reactions (pain at the injection site, redness, and swelling) • Systemic events (fever, fatigue, headache, chills, vomiting, diarrhea, new or worsened muscle pain, and new or worsened joint pain) • AEs • SAEs	Data will be reported at a later time.

Table 3. Safety Objectives, Estimands, and Endpoints for Study C4591001

Objectives[a]	Estimands	Endpoints	Reference
PHASE 2/3			
Primary Safety			
To define the safety profile of prophylactic BNT162b2 in the first 360 participants randomized (Phase 2)	In participants receiving at least 1 dose of study intervention, the percentage of participants reporting: • Local reactions for up to 7 days following each dose • Systemic events for up to 7 days following each dose • AEs from Dose 1 to 7 days after the second dose • SAEs from Dose 1 to 7 days after the second dose	• Local reactions (pain at the injection site, redness, and swelling) • Systemic events (fever, fatigue, headache, chills, vomiting, diarrhea, new or worsened muscle pain, and new or worsened joint pain) • AEs • SAEs	Interim data are reported in final analysis interim CSR dated 03 December 2020.
To define the safety profile of prophylactic BNT162b2 in all participants randomized in Phase 2/3	In participants receiving at least 1 dose of study intervention, the percentage of participants reporting: • Local reactions for up to 7 days following each dose • Systemic events for up to 7 days following each dose • AEs from Dose 1 to 1 month after the second dose • SAEs from Dose 1 to 6 months after the second dose	• AEs • SAEs • In a subset of at least 6000 participants: o Local reactions (pain at the injection site, redness, and swelling) o Systemic events (fever, fatigue, headache, chills, vomiting, diarrhea, new or worsened muscle pain, and new or worsened joint pain)	Interim data are reported up to 1 month after Dose 2 and to the data cutoff date (14 November 2020) in final analysis interim CSR dated 03 December 2020. Cumulative interim data up to cutoff date are reported in this CSR.
To define the safety profile of prophylactic BNT162b2 in participants 12 to 15 years of age in Phase 3	In participants receiving at least 1 dose of study intervention, the percentage of participants reporting: • Local reactions for up to 7 days following each dose • Systemic events for up to 7 days following each dose • AEs from Dose 1 to 1 month after the second dose • SAEs from Dose 1 to 6 months after the second dose	• Local reactions (pain at the injection site, redness, and swelling) • Systemic events (fever, fatigue, headache, chills, vomiting, diarrhea, new or worsened muscle pain, and new or worsened joint pain) • AEs • SAEs	Data will be reported separately.

Table 3. Safety Objectives, Estimands, and Endpoints for Study C4591001

Objectives[a]	Estimands	Endpoints	Reference
To describe the safety and tolerability profile of BNT162b2$_{SA}$ given as 1 or 2 doses to BNT162b2-experienced participants, or as 2 doses to BNT162b2-naïve participants To describe the safety and tolerability profile of BNT162b2 given as a third dose to BNT162b2-experienced participants	In participants receiving at least 1 dose of study intervention, the percentage of participants reporting: • Local reactions for up to 7 days following each dose • Systemic events for up to 7 days following each dose • AEs from Dose 1 to 1 month after the second dose • SAEs from Dose 1 to 5 or 6 months after the second dose	• Local reactions (pain at the injection site, redness, and swelling) • Systemic events (fever, fatigue, headache, chills, vomiting, diarrhea, new or worsened muscle pain, and new or worsened joint pain) • AEs • SAEs	Data will be reported at a later time.
Exploratory			
To describe the safety, immunogenicity, and efficacy of prophylactic BNT162b2 in individuals with confirmed stable HIV disease		All safety, immunogenicity, and efficacy endpoints described above	Safety data only in participants with confirmed stable HIV disease are reported in this CSR.
To describe the safety and immunogenicity of prophylactic BNT162b2 in individuals 16 to 55 years of age vaccinated with study intervention produced by manufacturing "Process 1" or "Process 2"[b]		• AEs • SAEs • SARS-CoV-2 neutralizing titers	Data will be reported at a later time.

a. HIV-positive participants in Phase 3 will not be included in analyses of the objectives, with the exception of the specific exploratory objective.
b. See Module 5.3.5.1 C4591001 Protocol Section 6.1.1 for a description of the manufacturing process. The safety results for individuals 16 to 55 years of age vaccinated with study intervention produced by manufacturing "Process 1" or "Process 2" will be summarized descriptively when data become available.

2.7.4.1.1.2.2. Overall Design (Study C4591001)

US Study C4591001 is the ongoing, randomized, placebo-controlled, observer-blind, Phase 1/2/3 pivotal registration study. The study consists of 2 parts:

1. Phase 1: to identify preferred vaccine candidate(s) and dose level(s);

2. Phase 2/3: an expanded cohort and efficacy part.

These parts, and the progression between them, are detailed in the schema presented in Appendix B (Section 2.7.4.6.2.1).

Study C4591001 was conducted at sites in the US, Brazil, Argentina, Turkey, South Africa, and Germany

Phase 1

In Phase 1, 13 groups were studied, corresponding to a total of 195 participants. Each group (vaccine candidate/dose level/age group) was comprised of 15 participants randomized 4:1 to receive active vaccine or placebo (12 participants randomized to active vaccine and 3 to placebo, such that the placebo participants across the groups would produce a roughly comparably-sized cohort). Study intervention was to be administered intramuscularly into the deltoid muscle, preferably of the nondominant arm to 2 age cohorts (18 to 55 and 65 to 85 years of age,) in a two-dose regimen separated by 21 days at the following dose levels:

- **BNT162b1** (dose levels: 10, 20, 30, 100 µg)
- **BNT162b2** (dose levels: 10, 20, 30 µg).

The Internal Review Committee (IRC) recommended that a second dose of BNT162b1 at 100 µg not be administered due to reactogenicity after the first dose in the younger age group. Participants in this group of younger adults instead received a second dose of BNT162b1 at the 10 µg dose level.

Participants received active vaccine or placebo at Visit 1, with next day and 1-week follow-up visits (Visits 2 and 3) post-dose 1. Participants received dose 2 at Visit 4 (19 to 23 days after Visit 1). Follow-up visits were scheduled at 1-week, 2-weeks, 1-month, 6-months, 12-months- and 24-months.

Participants who originally received placebo may have become eligible for receipt of BNT162b2 or another COVID-19 vaccine.

Phase 1 participants who originally received BNT162b1 or BNT162b2 at dose levels of 10, 20, or 30 µg at Doses 1 and 2 were offered an additional dose of BNT162b2 at 30 µg approximately 6 to 12 months after their second dose of BNT162. This would provide an early assessment of the safety of a third dose of BNT162, as well as its immunogenicity. The booster analyses will be reported at a later time.

Participants were expected to participate for up to a maximum of approximately 26 months.

All participants in Phase 1 recorded local reactions, systemic events, and antipyretic/pain medication usage for 7 days, each evening following administration of study intervention using an e-diary. This allowed recording of these assessments only within a fixed time window, thus providing the accurate representation of the participant's experience at that time.

The following data are summarized and presented in this SCS as Phase 1 safety endpoints:

- Local reactions and systemic event data (acquired through the e-diaries) for up to 7 days after Dose 1 and Dose 2
- AEs through Visit 7 (1-month follow-up visit post-dose 2) and SAEs through the data cutoff date of 24 August 2020 (safety results for BNT162b1 at the 100 µg dose level in the younger age group are presented up to 3 weeks after Dose 1 or to before Dose 2 based on the data cutoff date).
- Long-term follow-up (approximately 6 months after Dose 2 [as of cutoff date 13 March 2021]) of AEs and SAEs for Phase 1 participants who were randomized to receive BNT162b2 30 µg or control.
- Abnormal hematology and chemistry laboratory values, as well as grading shifts in hematology and chemistry laboratory assessments, through Visit 5 (7 days post-dose 2).

Complete details regarding planned time points for all safety assessments during Phase 1 are provided in the SoA in Appendix B (Section 2.7.4.6.2.2.1). The investigator may have scheduled visits (unplanned visits) in addition to those listed in the SoA table in order to conduct evaluations or assessments required to protect the well-being of the participant.

Safety assessments for Study C4591001 are detailed in Section 2.7.4.1.1.2.5 and 2.7.4.6.2.3.

The Sponsor/agent study team was not blinded in this part of the study. Participants enrolled in Phase 1 were followed for cases of COVID-19 but did not contribute to the overall efficacy assessment. Details regarding efficacy and immunogenicity methods, results, and conclusions are presented in the SCE (Module 2.7.3).

Based upon review of safety and immunogenicity from the Phase 1 part of the study, a final candidate and dose level of 30 µg BNT162b2 was selected.

Phase 2/3

BNT162b2 at the 30 µg dose level was the vaccine candidate chosen by Pfizer/BioNTech to proceed into Phase 2/3. Participants ≥12 years of age (stratified as 12-15, 16-55 or >55 years of age, with the intention that a minimum of 40% of participants would be in the >55-year stratum) were randomized 1:1 to receive vaccine or placebo. The Phase 2 part of the study evaluated safety and immunogenicity for the first 360 participants enrolled (180 to active vaccine and 180 to placebo) in order to confirm the safety profile of BNT162b2 as seen in Phase 1. Participants enrolled into Phase 2 contributed to the overall efficacy assessment.

It was planned for the Phase 2/3 part of the study to comprise of approximately 21,999 vaccine recipients per group, for a total sample size of 43,998. The 12- to 15-year stratum will be comprised of up to approximately 2000 participants (1000 vaccine recipients) enrolled at selected investigational sites.

Participants received active vaccine or placebo at Visit 1 (dose 1) and Visit 2 (dose 2, 19 to 23 days after Visit 1). Follow-up visits were scheduled at 1-month, 6-months, 12-months- and 24-months (as described in the SoA, Appendix B, Section 2.7.4.6.2.2.2).

Participants ≥16 years of age who originally received placebo and became eligible for receipt of BNT162b2 according to recommendations detailed separately, had the opportunity to receive BNT162b2 in a phased manner as part of the study (no later than 6 months after Vaccination 2 [at the time of the originally planned Visit 4]). The investigator ensured that the participant met at least 1 of the recommendation criteria. Any participant ≥16 years of age who originally received placebo but then went on to receive BNT162b2 moved to a new visit schedule (2.7.4.6.2.2.3) and received 1 dose of BNT162b2 at each additional vaccination visit (Visits 101 and 102, receiving Dose 3 and Dose 4, respectively).

The following data are summarized and presented in this SCS as Phase 2/3 safety endpoints:

- For Phase 2 (first 360 participants), reactogenicity results for up to 7 days after Dose 1 and Dose 2, AEs and SAEs through the data cutoff date (2 September 2020), which includes up to 7 days follow-up after Dose 2.

- For Phase 3, reactogenicity results for up to 7 days after Dose 1 and Dose 2, AEs and SAEs through the data cutoff date (13 March 2021), which includes up to 6 months follow-up after Dose 2 (see Section 2.7.4.2.4.2 for more details).

Complete details regarding planned time points for all safety assessments during Phase 2/3 are provided in the SoA in Appendix B (Section 2.7.4.6.2.2.2). An unplanned potential COVID-19 illness visit and unplanned potential COVID-19 convalescent visit were required at any time between Visit 1 and Visit 6 (24-month follow-up visit) that potential COVID-19 symptoms were reported, including MIS-C.

Prior infection with SARS-CoV-2 was assessed at baseline and evaluated per serological samples over 24 months to explore efficacy against asymptomatic SARS-CoV-2 infections and to ensure safety in both sero-negative and sero-positive participants. Safety assessments for Study C4591001 are detailed in Section 2.7.4.1.1.2.5 and 2.7.4.6.2.3.

Planned Analyses

The following analyses are not included in this report and will be reported at a later time:

- For evaluation of boostability, a subset of Phase 3 participants 18 to 55 years of age will receive a third dose of BNT162b2 or a third and potentially a fourth dose of prototype BNT162b2$_{VOC}$ (based upon the South African variant and hereafter referred to as BNT162b2$_{SA}$). The third dose of BNT162b2 or BNT162b2$_{SA}$ will be administered approximately 5 to 7 months after their second dose of BNT162 (at

Visit 301) and a subset of those participants who received the third dose of BNT162b2$_{SA}$ will receive a further dose of BNT162b2$_{SA}$ one month after Dose 1 of BNT162b2$_{SA}$ (at Visit 303).

- To further describe potential homologous and heterologous protection against emerging SARS-CoV-2 VOCs, a new cohort of participants will be enrolled who are COVID-19 vaccine-naïve (ie, BNT162b2-naïve) and have not experienced COVID-19. They will receive BNT162b2$_{SA}$ given as a 2-dose series, separated by 21 days.

2.7.4.1.1.2.3. Study Population (Study C4591001)

The full eligibility criteria for Study C4591001 can be found in the protocol (Module 5.3.5.1 C4591001 Protocol Section 5).

The following eligibility criteria were designed to select participants for whom participation in the study was considered appropriate.

Key inclusion criteria:

Participants were eligible to be included in the study only if all of the following criteria apply:

- Male or female participants in the following age groups:
    - Phase 1: Between the ages of 18 and 55 years, inclusive, and between 65 and 85 years, inclusive, at randomization
    - Phase 2/3: ≥12 years, at randomization
- Healthy participants as determined by medical history, physical examination (if required), and clinical judgment of the investigator to be eligible for inclusion in the study

  Note: Healthy participants with preexisting stable disease, defined as disease not requiring significant change in therapy or hospitalization for worsening disease during the 6 weeks before enrollment, could be included. Specific criteria for Phase 3 participants with known stable infection with HIV, HCV, or HBV can be found in Module 5.3.5.1 C4591001 Protocol Section 10.8.
- Phase 2/3 only: Participants who, in the judgment of the investigator, were at higher risk for acquiring COVID-19 (including, but not limited to, use of mass transportation, relevant demographics, and frontline essential workers).

Key exclusion criteria:

Participants were excluded from the study if any of the following criteria applied:

- Other medical or psychiatric condition including recent (within the past year) or active suicidal ideation/behavior or laboratory abnormality that may increase the risk of study participation or, in the investigator's judgment, make the participant inappropriate for the study.
- Phases 1 and 2 only: Known infection with HIV, HCV, or HBV.
- History of severe adverse reaction associated with a vaccine and/or severe allergic reaction (eg, anaphylaxis) to any component of the study intervention(s).
- Receipt of medications intended to prevent COVID 19.
- Previous clinical (based on COVID-19 symptoms/signs alone, if a SARS-CoV-2 NAAT result was not available) or microbiological (based on COVID-19 symptoms/signs and a positive SARS-CoV-2 NAAT result) diagnosis of COVID 19.
- **Phase 1 only:** Individuals at high risk for severe COVID-19, including those with any of the following risk factors:
  - Hypertension
  - Diabetes mellitus
  - Chronic pulmonary disease
  - Asthma
  - Current vaping or smoking
  - History of chronic smoking within the prior year
  - Chronic liver disease
  - Stage 3 or worse chronic kidney disease (glomerular filtration rate <60 mL/min/1.73 m^2)
  - Resident in a long-term facility
  - BMI >30 kg/m^2
  - Anticipating the need for immunosuppressive treatment within the next 6 months
- **Phase 1 only:** Individuals currently working in occupations with high risk of exposure to SARS-CoV-2 (eg, healthcare worker, emergency response personnel).
- Immunocompromised individuals with known or suspected immunodeficiency, as determined by history and/or laboratory/physical examination.

- **Phase 1 only:** Individuals with a history of autoimmune disease or an active autoimmune disease requiring therapeutic intervention, including but not limited to: systemic or cutaneous lupus erythematosus, autoimmune arthritis/rheumatoid arthritis, Guillain-Barré syndrome, multiple sclerosis, Sjögren's syndrome, idiopathic thrombocytopenia purpura, glomerulonephritis, autoimmune thyroiditis, giant cell arteritis (temporal arteritis), psoriasis, and insulin-dependent diabetes mellitus (type 1).

- Bleeding diathesis or condition associated with prolonged bleeding that would, in the opinion of the investigator, contraindicate intramuscular injection.

- Women who are pregnant or breastfeeding.

- Previous vaccination with any coronavirus vaccine.

- Individuals who receive treatment with immunosuppressive therapy.

- **Phase 1 only:** Regular receipt of inhaled/nebulized corticosteroids.

- Receipt of blood/plasma products or immunoglobulin, from 60 days before study intervention administration or planned receipt throughout the study.

- Participation in other studies involving study intervention within 28 days prior to study entry through and including 6 months after the last dose of study intervention, with the exception of interventional studies for prevention of COVID 19, which are prohibited throughout study participation.

- Previous participation in other studies involving study intervention containing lipid nanoparticles.

- For Phase 1 only:

    - Positive serological test for SARS-CoV-2 IgM and/or IgG antibodies at the screening visit.
    - Any screening hematology and/or blood chemistry laboratory value that meets the definition of a ≥ Grade 1 abnormality.

    - Positive test for HIV, HBsAg, HBc Abs, or HCV Abs at the screening visit.

    - SARS-CoV-2 NAAT-positive nasal swab within 24 hours before receipt of study intervention.

2.7.4.1.1.2.4. Analysis Sets (Study C4591001)

Populations discussed in this SCS include the following:

Population	Description
Enrolled	All participants who had a signed ICD
Randomized	All participants who were assigned a randomization number in the IWR system
Safety	All randomized participants who received at least 1 dose of the study intervention. Analyses of reactogenicity endpoints will be based on a subset of the safety population that includes participants with any e-diary data reported after vaccination.

2.7.4.1.1.2.5. Safety Assessments (Study C4591001)

Safety assessments were collected at planned time points as described in Appendix B (Section 2.7.4.6.2). Key safety assessments included:

- A clinical assessment, including medical history, was performed on all participants at his/her first visit to establish a baseline. Significant medical history and observations from any physical examination, if performed, were documented in the CRF.

- The safety parameters included reactogenicity e-diary reports of local reactions and systemic events, fever, and use of antipyretic medication that occurred in the 7 days after administration of the study intervention in a subset of participants (see Appendix B [Section 2.7.4.6.2.3.1] for further details). Grading scales used in this study to assess local reactions and systemic events were derived from the FDA CBER guidelines on toxicity grading scales for healthy adult volunteers enrolled in preventive vaccine clinical trials.[1]

- AEs and SAEs were collected, recorded, and reported as defined in Module 5.3.5.1 C4591001 Protocol Section 8.3 and further discussed below in Appendix B (Section 2.7.4.6.2.3.2).

- Acute reactions within the first 4 hours after administration of the study intervention (for the first 5 participants vaccinated in each Phase 1 group), and within the first 30 minutes (for the remainder of participants), were assessed and documented in the AE CRF.

- Safety subgroup analyses by age, country, ethnicity, sex, and race were performed.

- Targeted medical events of potential clinical interest by PT, HLT, or SMQ (full scope, including broad and narrow) were monitored.

- Participants in all phases of the study were surveilled for potential COVID-19 illness from Visit 1 onwards. Further details are in Appendix B (Section 2.7.4.6.2.3.4). Note

that while this was monitored throughout the study, analyses were only planned for Phase 2/3 as efficacy endpoints.

- For Phase 1, safety laboratory tests were performed at the times defined in the SoA (Appendix B [Section 2.7.4.6.2.2.1]). The specific tests are presented in the Statistical Analysis Plan (Module 5.3.5.1 C4591001 Statistical Analysis Plan Section 3.1.1.6) and further described in Module 5.3.5.1 C4591001 Protocol Section 8.2.1. The primary criterion for abnormality followed the Pfizer safety rule book.

- For Phase 1, a physical examination was performed. It evaluated any clinically significant abnormalities within the following body systems: general appearance; skin; head, eyes, ears, nose, and throat; heart; lungs; abdomen; musculoskeletal; extremities; neurological; and lymph nodes. Clinically significant abnormal results were recorded in the CRF.

No adverse events of special interest were defined for Study C4591001; however, targeted medical events were monitored throughout the study.

2.7.4.1.1.2.6. Statistical Methods (Study C4591001)

Statistical methods are described in the study protocol (Module 5.3.5.1 C4591001 Protocol Section 9.4) and in the statistical analysis plan (Module 5.3.5.1 C4591001 Statistical Analysis Plan)

Safety objectives were evaluated by descriptive summary statistics for local reactions and systemic events, AEs/SAEs, and abnormal hematology and chemistry laboratory parameters (Phase 1 only) for each vaccine group. A 3-tier approach was used to summarize AEs in Phase 2/3. Under this approach, AEs were classified into 1 of 3 tiers:

Tier 1 events: prespecified events of clinical importance, identified in the product's safety review plan; there are no Tier 1 AEs identified for this program.

Tier 2 events: those that are not Tier 1 but are considered "relatively common"; a MedDRA preferred term is defined as a Tier 2 event if there are at least 1% of participants in at least 1 vaccine group reporting the event; and

Tier 3 events: those that are neither Tier 1 nor Tier 2 events.

For Tier 2 events, 2-sided 95% CIs for the difference between the vaccine and placebo groups in the percentage of participants reporting the events based on the Miettinen and Nurminen method will be provided.[2] For Tier 3 events, counts and percentages for each vaccine group will be provided. The safety analyses are based on the safety population. Analyses of reactogenicity endpoints are based on a subset of the safety population that includes participants with any e-diary data reported after vaccination. Participants will be summarized by vaccine group according to the study interventions they actually received. Missing reactogenicity e-diary data will not be imputed; missing AE dates will be handled according to the Pfizer safety rules.

AEs and SAEs reported during the open-label follow-up period will be summarized separately for participants who were unblinded at the time of being eligible for receipt of BNT162b2 according to recommendations detailed separately, and available in the electronic study reference portal, or no later than at approximately Visit 4.

AE analyses of participants who had different durations of follow-up time due to unblinding in the study (per protocol) were summarized as incidence rates (IR) adjusted for exposure time. This was calculated as: (number of participants reporting event) / (total exposure time across all participants in the specified group). This accounts for variable exposure since unblinding began for individual participants. Two-sided 95% CIs for the IRs were provided based on Poisson distribution.

Planned Analyses

For Phase 3 participants enrolled for assessment of boostability and protection against emerging VOCs, descriptive summary statistics will be provided at a later time.

2.7.4.1.1.3. Narratives

Narrative summaries were written for the following participants in Study BNT162-01:

- Participants who died;
- Participants who experienced SAEs assessed as related to study intervention by the investigator;
- Participants with any AEs leading to withdrawal from the study
- Participants with COVID-19

These participant narratives are available in Module 5.3.5.1 BNT162-01 CSR Section 12.6.

Narrative summaries were written for the following participants in Study C4591001:

- Deaths, vaccine-related SAEs, all other SAEs, safety-related withdrawals
- AEs of interest requested by FDA: anaphylaxis, Bell's palsy, lymphadenopathy, appendicitis, and pregnancy exposures and outcomes
- AESIs with a numerical imbalance with a higher frequency (or incidence rate) in the vaccine group vs placebo group that led to withdrawal, were related, or had biological plausibility
- COVID-19 cases (participants with severe and/or multiple episodes).

These participant narratives are available in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 14 Subject Narratives (for data available as of the

14 November 2020 cutoff date) or Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 14 Subject Narratives (for data available as of the 13 March 2021 cutoff date)

2.7.4.1.2. Overall Extent of Exposure, Disposition, and Study Population Characteristics

2.7.4.1.2.1. Study BNT162-01

Study results presented below are for Part A through the data cutoff date of 23 October 2020 and may not be representative of the final data. The full interim CSR for Study BNT162-01 is provided in Module 5.3.5.1 BNT162-01 CSR.

2.7.4.1.2.1.1. Disposition (Phase 1, Study BNT162-01)

In the BNT162b1 younger age group, a total of 84 participants were enrolled, with 12 participants in each dose group (1 µg, 3 µg, 10 µg, 20, µg, 30 µg, 50 µg, and 60 µg dose groups) (note: 60 µg group received only Dose 1 per SRC decision due to Dose 1 reactogenicity). In the BNT162b1 older age group, a total of 36 participants were enrolled, with 12 participants in each dose group (10 µg, 20, µg, 30 µg dose groups) (note: 10 µg group had data to 1 month after Dose 2; 20 and 30 µg groups had available data to 7 days after Dose 2). 80/84 younger and 11/36 older participants in the BNT162b1 group completed the study (ie, through the end of treatment visit), and 4 premature discontinuations have occurred (none in the 30 µg dose group or the older participant age group).

In the BNT162b2 younger age group, a total of 60 participants were enrolled, with 12 participants in each dose group (1 µg, 3 µg, 10 µg, 20, µg, and 30 µg groups). In the BNT162b2 older age group, a total of 36 participants were enrolled, with 12 participants in each dose group (10 µg, 20, µg, 30 µg dose groups). 53/60 younger and 30/36 older participants in the BNT162b2 group completed the study (ie, through end of treatment visit). Two premature discontinuations have occurred (none in the 30 µg dose group or the older participant age group).

2.7.4.1.2.1.2. Exposure (Phase 1, Study BNT162-01)

For BNT162b1, dosing of participants in the younger age group with the second 60 µg BNT162b1 dose was not performed. After 12 participants had received Dose 1, the SRC decided not to administer Dose 2 to these participants. 95.8% (69/72) of participants in all other dose levels received Dose 2. In the BNT162b1 older age group, 97.2% (35/36) of participants in all dose levels received Dose 2.

For the BNT162b2 group, 96.7% (58/60) and 100% (36/36) of participants in the younger and older age groups, respectively (in all dose levels) received Dose 2.

2.7.4.1.2.1.3. Safety Data Sets Analyzed (Phase 1, Study BNT162-01)

For BNT162b1 and BNT162b2, all participants randomized to receive study intervention in the younger and older age groups were included in the SAF.

2.7.4.1.2.1.4. Demographic and Other Characteristics of Study Population (Phase 1, Study BNT162-01)

In the BNT162b1 younger age group, BNT162b1 was administered to 84 participants, among whom 52% were male and 48% were female, 96% were White and 2% were Hispanic/Latino, with a median 36 years of age. In the BNT162b1 older age group (56 to 85 years of age), BNT162b1 was administered to 36 participants, among whom 36% were male and 64% were female, all were White and none were Hispanic/Latino, with a median 67 years of age.

In the BNT162b2 younger age group, BNT162b2 was administered to 60 participants, among whom 43% were male and 57% were female, 100% were White, none were Hispanic/Latino, with a median 42 years of age. In the BNT62b2 older age group, BNT162b2 was administered to 36 participants, among whom 50% were male and 50% were female, 100% were White, none were Hispanic/Latino, with a median 65 years of age.

Baseline Medical History

Participants in both the BNT162b1 and BNT162b1 groups were healthy with a medical history profile consistent with that of a healthy general population in the younger age group.

2.7.4.1.2.1.5. Diary Compliance (Phase 1, Study BNT162-01)

For BNT162b1 and BNT162b2, the participant's diary compliance for reporting reactogenicity was ≥99% 0 to 6 days after Dose 1. The participant's diary compliance for reporting reactogenicity was ≥64% and ≥92% from 0 to 6 days after Dose 2 for BNT162b1 and BNT162b2, respectively.

Overall, lower percentages postdose 2 were due to the ongoing nature of the study. These results are as of the data cutoff date and may not be representative of the final data.

2.7.4.1.2.2. Phase 1 (Study C4591001)

Results for healthy adults 18 to 85 years of age (younger age group: 18 to 55; older age group: 65 to 85) in the Phase 1 portion of Study C4591001 are presented through the data cutoff date of 24 August 2020. Updated disposition is provided through the cutoff date of 13 March 2021. For the BNT162b1 100 µg dose group in the younger age group, results are only presented after Dose 1 but before Dose 2.

Full details and outputs regarding disposition, exposure, data sets, demographics, and diary compliance for Phase 1 of Study C4591001 through the data cutoff date of 24 August 2020 (to 1 month after Dose 2) are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 10.1.1, Section 10.3.1, Section 10.4.1, Section 10.5.1, and Section 10.6.2.1, respectively. Full details and outputs regarding disposition through the data cutoff date of 13 March 2021 for the BNT162b2 (30 µg) group are in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 10.1.1.

2.7.4.1.2.2.1. Disposition (Phase 1, Study C4591001)

Overall, 195 participants were randomized. No participants have been withdrawn due to an AE as of the data cutoff date (24 August 2020).

In the BNT162b1 younger age group, 12 participants were randomized to each of the 3 dose groups (10 µg, 20 µg, and 30 µg dose groups) and 9 participants to the placebo group (in the 100 µg dose group, 12 participants were randomized to vaccine and 3 participants were randomized to placebo). In the BNT162b1 older age group, 12 participants were randomized to each of the 3 dose groups and 9 participants were randomized to the placebo group.

In the BNT162b2 group, both the younger and older age groups, 12 participants were randomized to each of the 3 dose groups and 9 participants were randomized to placebo.

To the Data Cutoff Date of 13 March 2021 for BNT162b2 (30 µg)

All participants in each age group randomized to receive BNT162b2 30 µg completed the visit at 6 months after Dose 2, with most of these 6-month visits occurring during the open-label follow-up period. All participants in each age group randomized to the placebo group received both doses of BNT162b2 (Dose 3 and Dose 4 in the study) during the open-label period and completed the visit at 1 month after Dose 4, as of the data cutoff date of 13 March 2021. No participants were withdrawn from the study up to the data cutoff date.

2.7.4.1.2.2.2. Exposure (Phase 1, Study C4591001)

In the BNT162b1 younger age group, all participants randomized to the 10 µg, 20 µg, and 30 µg dose groups received both doses of BNT162b1 or placebo, and all participants randomized to the 100 µg dose group (from younger age group only) received Dose 1 of BNT162b1 or placebo. The IRC determined not to administer the second dose of 100 µg due to reactogenicity (these participants received BNT162b1 at 10 µg as their second dose). All participants in the BNT162b1 older age group randomized to each dose group received both doses of BNT162b1 or placebo. (No participants in the older age group received BNT162b1 100 µg.) All participants in the BNT162b1 group received Dose 2 within the protocol specified time.

In the BNT162b2 group, all participants randomized to each dose group in the younger and older age groups received both doses of study intervention, and all participants received Dose 2 within the protocol-specified time.

2.7.4.1.2.2.3. Safety Data Sets Analyzed (Phase 1, Study C4591001)

For BNT162b1 and BNT162b2, all participants randomized to receive study intervention in the younger and older age groups were included in the safety population.

2.7.4.1.2.2.4. Demographic and Other Characteristics of Study Population (Phase 1, Study C4591001)

Demographic characteristics were similar across the vaccine groups within each age group for participants who received BNT162b1.

Most participants in the BNT162b1 group were White in both the younger age group and older age group. Median age for this group was 35.0 years in the younger age group and 69.0 years in the older age group. In the BNT162b1 younger age group (up to 30 µg), 17 (37.8%) were female and 28 (62.2%) were male (9 [60%] female and 6 [40%] male in the 100 µg dose group); in the older age group, 32 (71.1%) were female and 13 (28.9%) were male.

Most participants in the BNT162b2 group were White in the younger age group, and all participants were White in the older age group. Median age in this group was 37.0 years in the younger age group and 68.0 years in the older age group. In the BNT162b2 younger age group, 26 (57.8%) were female and 19 (42.2%) were male; in the older age group, 28 (62.2%) were female and 17 (37.8%) were male.

Baseline Medical History

The study population of the BNT162b1 and BNT162b2 groups were healthy with medical history profiles consistent with those of the healthy general population in each age group.

2.7.4.1.2.2.5. E-Diary Compliance (Phase 1, Study C4591001)

Transmission of e-diary data after either dose of BNT162b1 or placebo was ≥77.8% for each day during the 7 days following any vaccination in the younger age group and older age group, and transmission rates were similar across dose groups in both age groups. Transmission of e-diary data after either dose of BNT162b2 or placebo was ≥75.0% for each day during the 7 days following any vaccination in the younger and older age groups, and transmission rates were similar across dose groups in both age groups.

2.7.4.1.2.3. Phase 2 (Study C4591001)

Results for participants in the younger (18 to 55 years) and older (56 to 85 years) age groups in the Phase 2 portion of Study C4591001 are presented through the data cutoff date of 02 September 2020.

Full details and outputs regarding disposition, exposure, data sets, demographics, and diary compliance for Phase 2 of Study C4591001 are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 10.1.2, Section 10.3.2, Section 10.4.2, Section 10.5.2, and Section 10.6.2.2, respectively.

2.7.4.1.2.3.1. Disposition (Phase 2, Study C4591001)

The first 360 participants enrolled as part of Phase 2 were randomized equally (180 participants each) to the BNT162b2 and placebo groups. Among participants randomized to the BNT162b2 group, 88 participants were in the younger age group and 92 participants were in the older age group.

2.7.4.1.2.3.2. Exposure (Phase 2, Study C4591001)

Except for 1 participant in the BNT162b2 younger age group who was withdrawn after Dose 1 but before Dose 2 and 1 participant in the placebo group (who had not yet received Dose 2 at the time of data cutoff [02 September 2020]), all other participants received both doses of study intervention. The participant in the BNT162b2 younger group was withdrawn

from the study 23 days after receiving Dose 1 (after Dose 1 but before Dose 2 because of an SAE of gastric adenocarcinoma (Section 2.7.4.2.3.4.2). All other participants received both doses of vaccine. No participants received the incorrect study intervention. The majority of participants received Dose 2 between 19 to 23 days after Dose 1 in the BNT162b2 (97.2%) and placebo (96.7%) groups.

2.7.4.1.2.3.3. Safety Data Sets Analyzed (Phase 2, Study C4591001)

At the time of the data cutoff (02 September 2020), the proportions of participants in the safety population were the same in the BNT162b2 group and the placebo group (180 participants each). Within the BNT162b2 group, 88 participants were in the younger age group and 92 were in the older age group.

2.7.4.1.2.3.4. Demographic and Other Characteristics of Study Population (Phase 2, Study C4591001)

Demographic characteristics for Phase 2 were similar in the BNT162b2 group and the placebo group for the safety population. For the BNT162b2 younger age group, 42 (47.7%) were female and 46 (52.3%) were male. In the BNT162b2 older age group, 42 (45.7%) were female and 50 (54.3%) were male. Most participants were White (85.8%), followed by Black or African American (9.2%). The proportions of Hispanic/Latino participants were similar in the BNT162b2 and placebo groups. The median age was 56.0 years across participants ages 18 to 85 (44.0 years for the younger age group and 65.0 years for the older age group).

Baseline Medical History

The 360 participants in Phase 2 had a diverse medical history profile consistent with individuals of the same age group in the general population. In the BNT162b2 group, conditions in the surgical and medical procedures, immune system disorders, and metabolism and nutrition disorders SOCs were most frequently reported.

2.7.4.1.2.3.5. E-Diary Compliance (Phase 2, Study C4591001)

Overall, transmission of e-diary data was ≥91.7% for each day during the 7 days after Dose 1 of BNT162b2. After Dose 2 of BNT162b2, transmission of e-diary data was 80.6% on Day 1 and ranged from 88.9% to 91.7% for each day during Day 2 through Day 7. Transmission rates were similar in the BNT162b2 group and the placebo group.

2.7.4.1.2.4. Phase 3 (Study C4591001)

Results for participants (≥16 years of age) in the Phase 3 portion of Study C4591001 are presented through the data cutoff date of 13 March 2021.

Study population details and outputs (including subpopulation analyses) for Phase 3 of Study C4591001 are presented fully in the C4591001 6-Month Update Interim CSR:

- Disposition: Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 10.1.2
- Protocol deviations: Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 10.2

- Exposure: Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 10.3.2
- Safety Data sets: Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 10.4.2
- Demographics and Other Characteristics: Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 10.5.2
- Diary compliance: Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 10.6.2.2

Note: Phase 3 tables and figures are titled as "Phase 2/3" to capture the fact that the 360 Phase 2 participants are included in the overall phase 3 analyses.

2.7.4.1.2.4.1. Disposition (Phase 3, Study C4591001)

The disposition of all Phase 2/3 participants randomized is presented for the blinded placebo controlled and open-label follow-up periods in Table 31 (Appendix D).

In this ongoing study, tables summarizing participant withdrawals may include some participants who were reported as withdrawn but remain in the study and are continuing to be evaluated. These participants are documented in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Errata.

2.7.4.1.2.4.1.1. Blinded Placebo-Controlled Follow-Up Period

During the blinded placebo-controlled follow-up period, most participants randomized received Dose 1 (99.8%) and Dose 2 (98.1%). There were 352 (1.6%) participants in the BNT162b2 group and 528 (2.4%) participants in the placebo group who discontinued from the vaccination period (Dose 1 to 1 month after Dose 2) (Table 31). Most participants completed the 1 month post-Dose 2 visit 2 (≥96.4%). Few participants in the BNT162b2 and placebo groups were withdrawn from the study (1.6% and 2.2%, respectively), and most were due to withdrawals by the participant, or they were lost to follow-up.

There were 7 participants with special data issues: 8 participant identification numbers from 4 participants who enrolled into the study more than once and 3 participants whose vaccine assignment was not confirmed in IRT at the time of data cutoff.

- Three participants who were randomized and vaccinated, but actual vaccine assignment was not confirmed in IRT at the time of data cutoff. Participants were vaccinated as per CRF, but due to the inability to confirm consistency between the data in the CRF and IRT, these participants were not assigned to any actual dosing group. Safety data from these 3 participants were excluded from safety summary tables but their safety data are listed separately (Table 34).
- During the conduct of this study, 4 participants were each randomized twice with different participant identification numbers at 2 different sites. Because the significant misconduct of these participants compromised the integrity of the study data, results from these participants were excluded from all efficacy and safety analyses, including

disposition and demographic tabulations. These participants who were discontinued from vaccination and/or from the study are listed separately.

2.7.4.1.2.4.1.2. Open-Label Follow-Up Period

Individuals ≥16 years of age have been unblinded as they became locally eligible and wished to know their treatment assignment to confirm prior vaccination with BNT162b2 (if randomized to this group), or to receive BNT162b2 (if randomized to placebo). Unblinded recipients originally randomized to BNT162b2 continue to be followed in an open-label manner. Unblinded recipients originally randomized to placebo are offered BNT162b2 vaccination (Doses 3 and 4 [first and second dose of BNT162b2 30 µg, respectively]) and thereafter followed in an open-label manner.

Most participants in the BNT162b2 (96.8%) and placebo (96.4%) groups completed the 1 month post-Dose 2 visit before unblinding (Table 31).

A total of 87 (0.4%) Phase 2/3 original BNT162b2 participants received Dose 1 of BNT162b2 during the blinded placebo-controlled follow-up period and then received Dose 2 of BNT162b2 30 µg during the open-label follow-up period (when they were unblinded). There were 105 (0.5%) participants withdrawn from the study, and most were due to withdrawals by the participant, or they had a protocol deviation.

During the open-label follow-up period, most participants originally randomized in the placebo group received Doses 3 and 4 (88.8% and 72.4%, respectively) of BNT162b2. There were few participants in this group (0.1%) who were withdrawn from the study, and most were due to withdrawals by the participant.

The disposition of HIV-positive participants is included in this summary but summarized separately in safety analyses.

Disposition of all participants ≥16 years of age randomized was similar by age group.

There were no clinically meaningful differences in disposition by age group, baseline SARS-CoV-2 status, ethnicity, race, or sex.

2.7.4.1.2.4.2. Exposure (Phase 3, Study C4591001)

Almost all participants were administered study intervention as randomized; 99.7% received Dose 1 and 98.5% received Dose 2 of BNT162b2 in the BNT162b2 group, and 99.8% received Dose 1 and 98.0% received Dose 2 of placebo in the placebo group (Table 32 in Appendix D).

For Dose 1, 4 participants randomized to the placebo group received BNT162b2, and 2 participants randomized to the BNT162b2 group received placebo. Two participants randomized to the BNT162b2 group and 1 participant randomized to the placebo group received an indeterminate vaccine for Dose 1.

For Dose 2, 5 participants randomized to the placebo group received BNT162b2, and 3 participants randomized to the BNT162b2 group received placebo.

After unblinding, 88.8% of original placebo participants received Dose 3 (first dose of BNT162b2 30 µg) and 72.4% received Dose 4 (second dose of BNT162b2 30 µg) at the time of the data cutoff date.

The majority of participants received Dose 2 between 21 to 27 days after Dose 1 in the BNT162b2 (62.6%) and placebo (62.7%) groups (Table 33 in Appendix D). After unblinding, most original placebo participants received Dose 4 (second dose of BNT162b2 30 µg) between 14 to 20 (22.6%) and 21 to 27 (48.1%) days after Dose 3.

2.7.4.1.2.4.3. Safety Data Sets Analyzed (Phase 3, Study C4591001)

The safety population included a total of 44,050 participants: 22,026 participants in the BNT162b2 group and 22,021 participants in the placebo group (Table 34 in Appendix D). Most of the total 115 (0.3%) participants excluded from the safety population were excluded because those participants did not receive study vaccine.

There were no clinically meaningful differences in the safety population by age group, baseline SARS-CoV-2 status, ethnicity, race, or sex.

During the blinded placebo-controlled follow-up period, 51.1% of participants in the BNT162b2 group and 51.4% of participants in the placebo group had follow-up time between ≥4 months to <6 months after Dose 2 (Table 35 in Appendix D). From Dose 2 to the cutoff date, 54.5% of participants in the BNT162b2 group had a total follow-up time of ≥6 months.

In the younger age group, 48.5% of participants in the BNT162b2 group and 48.3% of participants in the placebo group had follow-up time between ≥4 months to <6 months after Dose 2 during the blinded placebo-controlled follow up period. From Dose 2 to the cutoff date, 51.0% of participants in the BNT162b2 group had a total follow-up time of ≥6 months.

In the older age group, 54.8% of participants in the BNT162b2 group and 55.9% of participants in the placebo group had follow-up time between ≥4 months to <6 months after Dose 2 during the blinded placebo-controlled follow-up period. From Dose 2 to the cutoff date, 59.6% of participants in the BNT162b2 group had a total follow-up time of ≥6 months.

During the open-label follow-up period, 47.5% of original placebo participants had follow-up time between ≥1 month to <2 months after Dose 1 of BNT162b2.

2.7.4.1.2.4.4. Demographic and Other Characteristics of Study Population (Phase 3, Study C4591001)

2.7.4.1.2.4.4.1. Overall – Participants ≥16 Years of Age (Phase 3, Study C4591001, Demographic and Other Characteristics of Study Population)

Demographic characteristics for all Phase 3 participants ≥16 years of age were similar in the BNT162b2 and placebo groups (Table 4). Overall, most participants were White (82.0%), with 9.6% Black or African American participants and 4.3% Asian participants, and all other racial groups were ≤2.5%. There were 25.9% Hispanic/Latino participants. Median age was

51.0 years and 50.9% of participants were male. Obesity was reported in 34.4% of participants in this safety population.

Baseline SARS-CoV-2 status was positive (defined as a positive N-binding antibody result at Visit 1, positive NAAT result at Visit 1, or medical history of COVID-19) in 3.1% of participants in the BNT162b2 group and 3.3% of participants in the placebo group.

Demographic data including participants 12 through 15 years of age enrolled in this study are summarized in Section 2.7.4.1.2.4.4.4. Safety data for participants 12 through 15 years of age will be reported separately.

Table 4. Demographic Characteristics – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=22026) n[b] (%)	Placebo (N[a]=22021) n[b] (%)	Total (N[a]=44047) n[b] (%)
Sex			
Male	11322 (51.4)	11098 (50.4)	22420 (50.9)
Female	10704 (48.6)	10923 (49.6)	21627 (49.1)
Race			
White	18056 (82.0)	18064 (82.0)	36120 (82.0)
Black or African American	2098 (9.5)	2118 (9.6)	4216 (9.6)
American Indian or Alaska Native	221 (1.0)	217 (1.0)	438 (1.0)
Asian	952 (4.3)	942 (4.3)	1894 (4.3)
Native Hawaiian or other Pacific Islander	58 (0.3)	32 (0.1)	90 (0.2)
Multiracial	550 (2.5)	533 (2.4)	1083 (2.5)
Not reported	91 (0.4)	115 (0.5)	206 (0.5)
Racial designation			
Japanese	78 (0.4)	78 (0.4)	156 (0.4)
Ethnicity			
Hispanic/Latino	5704 (25.9)	5695 (25.9)	11399 (25.9)
Non-Hispanic/non-Latino	16211 (73.6)	16212 (73.6)	32423 (73.6)
Not reported	111 (0.5)	114 (0.5)	225 (0.5)
Country			
Argentina	2883 (13.1)	2881 (13.1)	5764 (13.1)
Brazil	1452 (6.6)	1448 (6.6)	2900 (6.6)
Germany	249 (1.1)	250 (1.1)	499 (1.1)
South Africa	401 (1.8)	399 (1.8)	800 (1.8)
Turkey	249 (1.1)	249 (1.1)	498 (1.1)
USA	16792 (76.2)	16794 (76.3)	33586 (76.3)
Age group (at vaccination)			
16-55 Years	13069 (59.3)	13095 (59.5)	26164 (59.4)
>55 Years	8957 (40.7)	8926 (40.5)	17883 (40.6)
Age at vaccination (years)			
Mean (SD)	49.7 (15.99)	49.6 (16.05)	49.7 (16.02)
Median	51.0	51.0	51.0
Min, max	(16, 89)	(16, 91)	(16, 91)
Baseline SARS-CoV-2 status			
Positive[c]	689 (3.1)	716 (3.3)	1405 (3.2)
Negative[d]	21185 (96.2)	21180 (96.2)	42365 (96.2)
Missing	152 (0.7)	125 (0.6)	277 (0.6)
Body mass index (BMI)			
Underweight (<18.5 kg/m^2)	271 (1.2)	304 (1.4)	575 (1.3)

Table 4. Demographic Characteristics – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=22026) n[b] (%)	Placebo (N[a]=22021) n[b] (%)	Total (N[a]=44047) n[b] (%)
Normal weight (≥18.5 kg/m^2 - 24.9 kg/m^2)	6535 (29.7)	6524 (29.6)	13059 (29.6)
Overweight (≥25.0 kg/m^2 - 29.9 kg/m^2)	7670 (34.8)	7558 (34.3)	15228 (34.6)
Obese (≥30.0 kg/m^2)	7543 (34.2)	7629 (34.6)	15172 (34.4)
Missing	7 (0.0)	6 (0.0)	13 (0.0)

Abbreviation: SARS-CoV-2 = severe acute respiratory syndrome coronavirus 2.
Note: Human immunodeficiency virus (HIV)-positive subjects are included in this summary but analyzed and reported separately.
a. N = number of subjects in the specified group, or the total sample. This value is the denominator for the percentage calculations.
b. n = Number of subjects with the specified characteristic.
c. Positive N-binding antibody result at Visit 1, positive NAAT result at Visit 1, or medical history of COVID-19.
d. Negative N-binding antibody result at Visit 1, negative NAAT result at Visit 1, and no medical history of COVID-19.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (23:24) Source Data: adsl Table Generation: 27MAR2021 (15:19)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/adsl_s005_demo_all_p3_saf

Within each age group, most demographic characteristics were similar in the BNT162b2 group and the placebo group. Overall, 4.0% of participants in the younger age group were SARS-CoV-2 baseline positive, and 1.9% of participants in the older age group were SARS-CoV-2 baseline positive, and the proportions were similar in the BNT162b2 and placebo groups. There was a lower proportion of non-Hispanic/non-Latino participants in the younger BNT162b2 and placebo groups (68.6% and 68.8%, respectively) than in the older BNT162b2 and placebo groups (80.9% and 80.7%, respectively).

Within each baseline SARS-CoV-2 status group, demographic characteristics were similar in the BNT162b2 group and the placebo group. Most participants were White regardless of baseline status; however, there was a higher proportion of White participants with a negative baseline status (82.9%) than with a positive baseline status (57.7%). The median age was 43.0 years in participants with a positive baseline status and 51.0 years in participants with a negative baseline status. There were 41.4% and 34.2% of participants who were obese with positive and negative baseline status, respectively.

Baseline Medical History

Participants ≥16 years of age had a diverse medical history profile consistent with that of individuals in the general population in the same age group. In the BNT162b2 group, conditions in the surgical and medical procedures (8430 [38.3%]), metabolism and nutrition disorders (6587 [29.9%]), and immune system disorders (5987 [27.2%]; of which 3303 [15.0%] were seasonal allergy) SOCs were most frequently reported.

Overall, 20.7% had any comorbidity (per the Charlson comorbidity index). The most frequently reported comorbidities were diabetes without chronic complications (7.7%), chronic pulmonary disease (8.1%), and any malignancy (3.6%), which were reported at similar frequencies in each group.

In the younger age group, 13.3% of participants had any comorbidity. The most frequently reported comorbidities were diabetes without chronic complications (3.7%) and chronic pulmonary disease (7.4%), which were reported at similar frequencies in each vaccine group.

In the older age group, 31.6% of participants had any comorbidity. The most frequently reported comorbidities were diabetes without chronic complications (13.6%) and chronic pulmonary disease (9.1%), which were reported at similar frequencies in each vaccine group.

2.7.4.1.2.4.4.1.1. Participants With Confirmed Stable HIV Disease (Phase 3, Study C4591001, Demographic and Other Characteristics of Study Population)

Demographic characteristics for participants with confirmed stable HIV disease were similar in the BNT162b2 and the placebo groups. Overall, 54.5% of participants were Black or African American, 40.5% of participants were White, and all other racial groups were ≤1.5%. There were 16.0% Hispanic/Latino participants. Median age was 49.5 years and 67.5% of participants were male. Obese participants made up 39.0% of this population.

2.7.4.1.2.4.4.2. Participants With At Least 6 Months Follow-Up Time – Original BNT162b2 Participants ≥16 Years of Age (Phase 3, Study C4591001, Demographic and Other Characteristics of Study Population)

Demographic characteristics for all original BNT162b2 Phase 2/3 participants ≥16 years of age and had at least 6 months of follow-up time after Dose 2 are presented in Table 36 in Appendix D. Overall, most participants were White (86.4%), with 7.1% Black or African American participants and 3.8% Asian participants, and other racial groups were ≤1.6%. There were 27.8% Hispanic/Latino participants. Median age was 53.0 years and 50.3% of participants were male. Obese participants made up 34.2% of this safety population.

2.7.4.1.2.4.4.3. Original Placebo Participants ≥16 Years of Age Who Then Received BNT162b2 (Phase 3, Study C4591001, Demographic and Other Characteristics of Study Population)

Demographic characteristics for all original placebo Phase 2/3 participants ≥16 years of age who then received BNT162b2 later during the open-label follow-up period are presented in Table 37 in Appendix D. Overall, most participants were White (83.1%), with 8.3% Black or African American participants and 4.3% Asian participants, and all other racial groups were ≤2.6%. There were 25.5% Hispanic/Latino participants. Median age was 51.0 years and 50.2% of participants were male. Obese participants made up 34.4% of this safety population.

2.7.4.1.2.4.4.4. All Participants (Phase 3, Study C4591001, Demographic and Other Characteristics of Study Population)

Demographic characteristics for all participants (including adolescents 12 through 15 years of age) were similar in the BNT162b2 group and the placebo group.

2.7.4.1.2.4.5. E-Diary Compliance (Phase 3, Study C4591001)

Overall, transmission of e-diary data was ≥90.1% (range: 90.1% to 94.0%) for each day during the 7 days after Dose 1 of BNT162b2. After Dose 2 of BNT162b2, transmission of e-diary data was 76.5% on Day 1 and ranged from 83.8% to 85.6% for each day during Day 2 through Day 7. Transmission rates were similar in the BNT162b2 group and the placebo group.

2.7.4.2. Safety Results for BNT162b2

Safety data for the primary and exploratory safety endpoints (as described in Section 2.7.4.1.1.2.1) for Phase 1, Phase 2, and Phase 3 for Study C4591001 and for Study BNT162-01 are presented in the following sections:

- BNT162-01: Section 2.7.4.2.1
- Phase 1: Section 2.7.4.2.2
- Phase 2: Section 2.7.4.2.3
- Phase 3: Section 2.7.4.2.4

Safety methods are described in Section 2.7.4.1.1 with more details in Appendix B (Section 2.7.4.6.2).

Full details of safety results, including for additional endpoints, are presented as follows:

Study BNT162-01: Module 5.3.5.1 BNT162-01 CSR.

Study C4591001:

- Phase 1, to 1 month after Dose 2: Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR; to 6 months after Dose 2: Module 5.3.5.1 C4591001 6-Month Update Interim CSR
- Phase 2, to 7 days after Dose 2: Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR
- Phase 2/3, to 1 month after Dose 2: Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR; to 6 months after Dose 2: Module 5.3.5.1 C4591001 6-Month Update Interim CSR.

Note that data from Phase 2 participants were included in Phase 3 safety analyses.

2.7.4.2.1. Study BNT162-01

Safety data (reactogenicity and AE analyses) are available up through the data cutoff date (23 October 2020) and are summarized below up to 1 month after Dose 2 for the younger and older age groups. Data from the safety set are presented. This summary focuses on the 10 µg, 20 µg, and 30 µg dose levels, which correspond to the primary dose levels investigated in the Phase 1 part of pivotal registration study, C4591001.

2.7.4.2.1.1. Reactogenicity (Phase 1, Study BNT162-01)

Reactogenicity results are up to 7 days after Dose 1 and Dose 2.

2.7.4.2.1.1.1. Local Reactions (Phase 1, Study BNT162-01)

Overall, solicited local reactions following administration across doses of BNT162b2 were milder and less frequent for participants compared with BNT162b1. Local reactions generally increased in frequency and/or severity with increasing dose level and number of doses of BNT162b1 and BNT162b2. Most local reactions were mild or moderate in severity and resolved within several days of onset.

For BNT162b1, the incidence of any local reactions after each dose was similar between younger and older age groups, but local reactions were generally milder in the older group. For BNT162b2, incidence of local reactions was generally less after each dose in the older group compared with the younger group, and severity of reactions was similar between both age groups.

Full details and outputs regarding local reactions for Study BNT162-01 are in Module 5.3.5.1 BNT162-01 CSR Section 12.3.

2.7.4.2.1.1.2. Systemic Events (Phase 1, Study BNT162-01)

Overall, solicited systemic events following administration across doses of BNT162b2 were milder and less frequent for participants compared with BNT162b1. Systemic events generally increased in frequency and/or severity with increasing dose level and number of doses of BNT162b1 and BNT162b2. Most systemic events were mild or moderate, arose within the first 1 to 2 days after dosing, and were short-lived.

For BNT162b1, the incidence of any systemic events after each dose was similar between younger and older age groups, but systemic events were generally milder in the older group. For BNT162b2, the incidence of systemic events after each dose was similar in the older group compared with the younger group. Reports of severe systemic events were similar between the younger and older BNT162b2 groups and were substantially less frequent than the severe events reported for younger and older BNT162b1 groups.

Full details and outputs regarding systemic events for Study BNT162-01 are in Module 5.3.5.1 BNT162-01 CSR Section 12.4.

2.7.4.2.1.2. Summary of Treatment-Emergent Adverse Events (Phase 1, Study BNT162-01)

Full details and outputs regarding the summary of adverse events for Study BNT162-01 are in Module 5.3.5.1 BNT162-01 CSR Section 12.5.1.

Overall, 40% to 45% of participants who received BNT162b1 and BNT162b2 across age groups and across dose levels reported one or more AEs from Dose 1 through 28 days (ie, 1 month) after Dose 2. There was no overall pattern between vaccine candidates with regard to AE incidence or severity; however, AEs considered by the investigator as related to study intervention (after omitting events captured in paper diaries for reactogenicity) were less frequently reported for BNT162b2 groups compared with BNT162b1.

Most AEs reported were considered by the investigator as not related to study intervention. Most AEs were mild to moderate in severity. All AEs were reported as resolved.

In the BNT162b1 group, 2 younger participants discontinued from the study (see Section 2.7.4.2.1.4.3) and 1 older participant experienced SAE (see Section 2.7.4.2.1.4.2). In the BNT162b2 group, 1 younger participant discontinued from the study (see Section 2.7.4.2.1.4.3) and 1 older participant experienced an SAE (see Section 2.7.4.2.1.4.2). No deaths occurred through the data cutoff date.

2.7.4.2.1.3. Analysis of Treatment-Emergent Adverse Events (Phase 1, Study BNT162-01)

Details and outputs regarding AEs by SOC and PT, related AEs, and severe AEs for Study BNT162-01 are in Module 5.3.5.1 BNT162-01 CSR Section 12.5.2.

2.7.4.2.1.3.1. Treatment-Emergent Adverse Events by System Organ Class and Preferred Term (Phase 1, Study BNT162-01)

From Dose 1 up to Day 28 after Dose 2 or Dose 1 (if no Dose 2), after omitting events captured in paper diaries for reactogenicity: In the BNT162b1 younger age group, the most frequently reported SOCs were general disorders and administration site conditions (most common PT: injection site reaction), nervous system disorders (most common PT: headache), and respiratory, thoracic and mediastinal disorders (most common PTs: cough and oropharyngeal pain). In the BNT162b1 older age group, the most frequently reported SOC was respiratory, thoracic and mediastinal disorders (most common PTs: cough and oropharyngeal pain); other SOCs were only reported by 1 or 2 participants each.

From Dose 1 up to Day 28 after Dose 2 or Dose 1 (if no Dose 2), after omitting events captured in paper diaries for reactogenicity: In the BNT162b2 younger age group, the most frequently reported SOC was general disorders and administration site conditions (most common PT: vessel puncture site pain. In the BNT162b2 older age group, the most frequently reported SOC was musculoskeletal and connective tissue disorders (most common PT: back pain).

2.7.4.2.1.3.2. Related Treatment-Emergent Adverse Events (Phase 1, Study BNT162-01)

From Dose 2 up to Day 28 after Dose 2: In the BNT162b1 younger age group, the most frequently reported related SOCs were general disorders and administration site conditions (most common PT: influenza like illness), nervous system disorders (most common PT: headache), and musculoskeletal and connective tissue disorders (most common PT: myalgia). In the BNT162b1 older age group, 1 related TEAE was reported in the 30 µg group in each of the following SOCs: ear and labyrinth disorders, gastrointestinal disorders, and urinary disorders.

From Dose 2 up to Day 28 after Dose 2: In the BNT162b2 younger age group, the most frequently reported related SOC was general disorders and administration site conditions (most common PT: injection site reaction). In the BNT162b2 older age group, 1 related TEAE was reported in the vascular disorders SOC (PT: hot flush).

2.7.4.2.1.3.3. Severe Treatment-Emergent Adverse Events (Phase 1, Study BNT162-01)

The most frequently reported SOC with severe and related TEAEs was general disorders and administration site conditions for the BNT162b1 younger groups. In the BNT162b1 older age group, nervous system disorders was the most frequently reported SOC with severe TEAEs (none were sever and related).

The most frequently reported SOC with severe TEAEs was musculoskeletal and connective tissue disorder and nervous system disorders for the BNT162b2 younger and older age groups, respectively (no severe TEAEs were assessed as related).

2.7.4.2.1.4. Deaths, Serious Adverse Events, Safety-Related Participant Withdrawals, and Other Significant Adverse Events (Phase 1, Study BNT162-01)

Details and outputs regarding deaths, serious adverse events, safety-related participant withdrawals, and other significant adverse events for Study BNT162-01 are in Module 5.3.5.1 BNT162-01 CSR Section 12.6.

2.7.4.2.1.4.1. Deaths (Phase 1, Study BNT162-01)

There were no Study BNT162-01 participants who died through the data cutoff date of 23 October 2020.

2.7.4.2.1.4.2. Treatment-Emergent Serious Adverse Events (Phase 1, Study BNT162-01)

Among BNT162b1 participants, 1 older participant in the 20 µg group had an SAE of severe syncope (considered as not related to study intervention) after Dose 1 and study treatment was withdrawn.

Among BNT162b2 participants, 1 older participant in 20 µg group had an SAE of ankle fracture (considered as not related to study intervention) after receiving both doses, was listed as recovering, and remains in follow-up.

2.7.4.2.1.4.3. Safety-Related Participant Withdrawals (Phase 1, Study BNT162-01)

Among BNT162b1 recipients, 1 younger participant in the 10 µg group discontinued the study due to a moderate AE of malaise (considered as not related to study intervention) after Dose 1 and 1 younger participant in the 60 µg group discontinued due to a dose-limiting toxicity of pyrexia after Dose 1.

Among BNT162b2 recipients, 1 younger participant in the in the 10 µg group discontinued the study due to a moderate AE of nasopharyngitis (considered as not related to study intervention) after Dose 1.

2.7.4.2.1.4.4. Adverse Events of Special Interest (Phase 1, Study BNT162-01)

There were no Study BNT162-01 participants who reported any AEs of special interest through the data cutoff date of 23 October 2020.

2.7.4.2.1.5. Clinical Laboratory Evaluations (Phase 1, Study BNT162-01)

Full details and outputs regarding clinical laboratory evaluations for Phase 1 of Study BNT162-01 are in Module 5.3.5.1 BNT162-01 CSR Section 12.7.

Changes from baseline in lymphocyte (low) count were reported in all dose groups after 48 hours of dosing with both BNT162b1 and BNT162b2 as a pharmacodynamics effect. However, their values came back to normal at the subsequent visit without any clinical consequence and without sequelae.

Changes from baseline were small in all dose groups following the administration of both BNT162b1 and BNT162b2. Likewise, the changes from baseline did not indicate a particular trend in the time course of all clinical chemistry parameters, except for CRP in both BNT162b1 and BNT162b2 younger age groups, as a pharmacodynamics effect. However, their values came back to normal at the subsequent visit without any clinical consequence. In the older participants group, no elevated values of CRP were seen.

There were a few abnormal urinalysis parameters, but none were clinically significant except for 1 elevated value of leukocytes (on Day 50 in younger participant in 1 µg group).

2.7.4.2.1.6. Vital Signs, Physical Findings, and Other Observations Related to Safety (Phase 1, Study BNT162-01)

Full details and outputs regarding physical examination findings for Phase 1 of Study BNT162-01 are in Module 5.3.5.1 BNT162-01 CSR Section 12.8.

A few abnormal vital signs were reported but none of them were clinically relevant abnormalities, except for mild or moderate elevated body temperature reported on Day 2 by 5 participants in the BNT162b1 younger age group. The events were assessed as related TEAEs, and the elevated body temperature values came back to normal at the subsequent visit with medication.

No participants presented clinically significant ECG findings or physical examination findings at screening or when assessed during the ongoing study.

2.7.4.2.1.7. Conclusions (Phase 1, Study BNT162-01)

Based on Phase 1 data from the FIH Study BNT162-01, BNT162b2 was safe and well-tolerated in healthy adults 18 to 85 years of age, with no unanticipated safety findings. Reactogenicity and AEs tended to increase in incidence and/or severity with increasing dose of BNT162b2. Reactogenicity was mostly mild to moderate and short-lived after dosing, and the AE profile and clinical laboratory results did not suggest any safety concerns.

2.7.4.2.2. Phase 1 (Study C4591001)

Safety data are available up through the data cutoff dates noted below and are summarized at various time points relative to Dose 1 or Dose 2 as follows:

- Safety results for Phase 1 vaccine candidates BNT162b1 and BNT162b2 for both adult age groups are presented up to 1 month after Dose 2 (or 24 August 2020 data cutoff date) at the 10 µg, 20 µg, and 30 µg dose levels.

- Safety results for BNT162b1 at the 100 µg dose level in the younger age group are presented up to 3 weeks after Dose 1 or to before Dose 2 based on the data cutoff date of 24 August 2020. Note that the group of participants 18 to 55 years of age who received 100 µg BNT162b1 did not receive a second dose of 100 µg BNT162b2 per IRC decision, and instead, they were given 10 µg for Dose 2. At the time of the data cutoff date, 11 of 12 participants in this group received Dose 2 of BNT162b1 at 10 µg but results for Dose 2 are not yet available at the time of this report.

- Long-term follow-up from 1 month after Dose 2 to approximately 6 months after Dose 2 (as of unblinding date) of AEs and SAEs for Phase 1 participants who received BNT162b2 30 µg are also presented (these data are based on the 13 March 2021 data cutoff date). Note: Adverse event data for the BNT162b2 30 µg group, from Dose 1 to the unblinding date, are summarized in Module 5.3.5.1 C4591001 6-Month Update CSR Section 12.1.2 and Section 12.1.3.

All doses tested for BNT162b1 and BNT162b2 (10 µg, 20 µg, and 30 µg) were safe and well tolerated except for BNT162b1 at 100 µg, which was discontinued after the first dose due to the reactogenicity profile. BNT162b2 at 30 µg was selected to proceed into the Phase 2/3 portion of the study because this dose and construct provided the optimum combination of a favorable reactogenicity profile and a robust immune response.

2.7.4.2.2.1. Reactogenicity (Phase 1, Study C4591001)

Reactogenicity results are up to 7 days after Dose 1 and Dose 2.

2.7.4.2.2.1.1. Local Reactions (Phase 1, Study C4591001)

Overall, for both the BNT162b1 and the BNT162b2 recipients, and in both age groups, pain at the injection site was the most frequent local reaction. Redness and swelling occurred less frequently in the BNT162b2 group and in the BNT162b1 group. In both the BNT162b1 and BNT162b2 groups, the frequency of local reactions was lower in the older age group

compared to the younger age group, and there was a trend of a higher frequency of local reactions with increased dose. Local reactions were short-lived.

Full details and outputs regarding local reactions for Phase 1 of Study C4591001 are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 12.1.1.

2.7.4.2.2.1.2. Systemic Events (Phase 1, Study C4591001)

Overall, within 7 days after Dose 1, fatigue was generally the most frequently reported systemic event in the both the younger and older BNT162b1 groups and in the older BNT162b2 group; while headache and fatigue were most frequently reported in the younger BNT162b2 dose group. Overall, within 7 days after Dose 2, headache was the most frequently reported systemic event in the both the younger and older BNT162b1 groups and fatigue was the most frequently reported systemic event in the both the younger and older BNT162b2 groups. Chills was generally reported at a higher frequency after Dose 2 and at a higher frequency in the BNT162b1 group than in the BNT162b2 group. Fever was reported more frequently in the younger BNT162b1 group after Dose 2 than in the older BNT162b2 group. For both the BNT162b1 and the BNT162b2 recipients, after the first and second dose and in both age groups, the majority of systemic events were mild or moderate in severity (no Grade 4 systemic events) and generally short-lived.

Full details and outputs regarding systemic events for Phase 1 of Study C4591001 are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 12.1.2.

2.7.4.2.2.2. Summary of Adverse Events (Phase 1, Study C4591001)

Full details and outputs regarding the summary of adverse events for Phase 1 of Study C4591001 (including for participants in the BNT162b1 100 µg dose group) are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 12.1.3.1 (24 August 2020 data cutoff date).

All AEs from Dose 1 through the data cutoff date of 24 August 2020 were included in the summary for all dose levels for each vaccine candidate and age group other than BNT162b1 100 µg group for which AEs from Dose 1 to before Dose 2 were summarized. Additionally, long-term follow-up (from 1 month to approximately 4 months after Dose 2 [as of 14 November 2020 cutoff date]) of AEs for Phase 1 participants who received BNT162b2 30 µg were summarized.

Overall, fewer participants reported at least 1 AE after Dose 1 in the older BNT162b2 group (8.3% to 25.0%) compared to the younger (41.7% to 50.0%) and older (25.0% to 58.3%) BNT162b1 groups and the younger BNT162b2 group (33.3% to 41.7%).

No SAEs, AEs leading to withdrawals, or deaths were reported in either age group for either the BNT162b1 or BNT162b2 groups up to 1 month after Dose 2.

To the Data Cutoff Date of 13 March 2021 for BNT162b2 (30 µg)

For the BNT162b2 30 µg group, during the additional follow-up to the unblinding date (approximately 6 months of follow-up after Dose 2), no additional AEs were reported in the

younger or older age group except for 1 severe SAE (neuritis due to an antecubital fossa blood draw) reported in the younger age group (Section 2.7.4.2.2.3.1).

2.7.4.2.2.3. Analysis of Adverse Events (Phase 1, Study C4591001)

Details and outputs regarding AEs by SOC and PT, related AEs, immediate AEs, and severe AEs for Phase 1 of Study C4591001 (including for participants in the BNT162b1 100 µg dose group) are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 12.1.3.2.

2.7.4.2.2.3.1. Adverse Events by System Organ Class and Preferred Term (Phase 1, Study C4591001)

AE by SOC and PT summaries included AEs from Dose 1 to 1 month after Dose 2 for all groups other than BNT162b1 100-ug group for which AEs from Dose 1 to 3 weeks after Dose 1 or from Dose 1 to before Dose 2 were summarized.

General disorders and administration site conditions was the most commonly reported SOC in the older BNT162b1 group and the younger BNT162b2 group. The most commonly reported SOC was gastrointestinal disorders in the younger BNT162b1 group and nervous system disorders in the older BNT162b2 group. Generally, most PTs were reported by ≤2 participants per dose group.

To the Data Cutoff Date of 13 March 2021 for BNT162b2 (30 µg)

For the BNT162b2 30 µg group, during the additional follow-up to the unblinding date (approximately 6 months of follow-up after Dose 2), an additional severe SAE (neuritis) was reported by 1 participant in the younger age group; per the participant's medical examination and history, this event was linked to a blood draw, and the investigator considered there was a reasonable possibility that the event neuritis was related to clinical trial procedure (antecubital fossa blood draw) but unrelated to vaccination.

2.7.4.2.2.3.2. Related Adverse Events (Phase 1, Study C4591001)

Overall, general disorders and administration site conditions was the most commonly reported SOC for the younger and older BNT162b1 groups and the younger BNT162b2 group. In the older BNT162b2 group, nausea, reported in 1 (8.3%) participant, was the only related AE.

To the Data Cutoff Date of 13 March 2021 for BNT162b2 (30 µg)

Additional follow-up through the unblinding date (approximately 6 months of follow-up after Dose 2) did not identify any additional participants with related AEs in the BNT162b2 30 µg group.

2.7.4.2.2.3.3. Immediate Adverse Events (Phase 1, Study C4591001)

In the BNT162b1 group, no participants in the younger group reported an immediate AE after Dose 1 at the 30 µg dose level, and there were no participants in either age group who reported any immediate AEs after Dose 2 of BNT162b1.

In the BNT162b2 group, 3 participants in the younger age group reported an immediate AE after Dose 1 (including 1 report of injection site pain from a participant in the 30 µg dose group). After Dose 2 of BNT162b2, 1 participant in the 20 µg dose group reported an immediate AE. There were no participants in the older age group who reported any immediate AE after any dose of BNT162b2.

2.7.4.2.2.3.4. Severe Adverse Events (Phase 1, Study C4591001)

In the BNT162b1 group, 2 severe AEs were reported in the younger age group (pyrexia [102.4°F] 2 days after Dose 2 [30 µg dose group] and sleep disorder 1 day after Dose 1 [100 µg dose group]; both were determined by the investigator to be related to study intervention) and 2 severe AEs were reported in the older age group (herpes zoster 2 days after Dose 1 [20 µg dose group], which was considered unrelated, and fatigue 1 day after Dose 2 [30 µg dose group], which was considered related).

In the BNT162b2 younger age group, 1 participant with a history of migraines reported a severe migraine 7 days after Dose 1 (30 µg dose group, considered unrelated). In the BNT162b2 older age group, 2 participants reported a severe AE: muscle spasms 2 days after Dose 2 (30 µg dose group, considered unrelated to BNT162b2) and radiculopathy 3 days after Dose 1 (placebo), considered unrelated to study intervention.

To the Data Cutoff Date of 13 March 2021 for BNT162b2 (30 µg)

Additional follow-up through the unblinding date (approximately 6 months of follow-up after Dose 2) for the BNT162b2 30 µg group identified an additional severe SAE (neuritis due to an antecubital fossa blood draw), reported in the younger age group (Section 2.7.4.2.2.3.1).

2.7.4.2.2.4. Deaths, Serious Adverse Events, Safety-Related Participant Withdrawals, and Other Significant Adverse Events (Phase 1, Study C4591001)

Details and outputs regarding deaths, serious adverse events, safety-related participant withdrawals, and other significant adverse events for Phase 1 of Study C4591001 are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 12.1.4.

2.7.4.2.2.4.1. Deaths (Phase 1, Study C4591001)

There were no Phase 1 participants who died through the 24 August 2020 data cutoff date and through the unblinding date.

2.7.4.2.2.4.2. Serious Adverse Events (Phase 1, Study C4591001)

There were no Phase 1 participants who reported any SAEs from Dose 1 through the data cutoff date of 24 August 2020.

To the Data Cutoff Date of 13 March 2021 for BNT162b2 (30 µg)

Additional follow-up through the unblinding date (approximately 6 months of follow-up after Dose 2) for the BNT162b2 30 µg group identified an additional severe SAE (neuritis due to an antecubital fossa blood draw), reported in the younger age group (Section 2.7.4.2.2.3.1).

2.7.4.2.2.4.3. Safety-Related Participant Withdrawals (Phase 1, Study C4591001)

There were no Phase 1 participants with any AEs leading to withdrawal from the study through the 24 August 2020 data cutoff date and through the unblinding date.

2.7.4.2.2.4.4. Other Significant Adverse Events (Phase 1, Study C4591001)

AEs of special interest were not defined for Phase 1 of this study.

2.7.4.2.2.4.5. Other Safety Assessments (Phase 1, Study C4591001)

2.7.4.2.2.4.5.1. Pregnancy – Phase 1

Pregnancy was not reported in any Phase 1 participants through the 24 August 2020 data cutoff date and through the unblinding date.

2.7.4.2.2.5. Clinical Laboratory Evaluations (Phase 1, Study C4591001)

Details and outputs regarding clinical laboratory evaluations for Phase 1 of Study C4591001 are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 12.1.5.

Overall, 1 to 3 days after Dose 1, there were transient decreases in lymphocytes (<0.8 × LLN), which returned to normal by 6 to 8 days after Dose 1, in the younger and older BNT162b1 and BNT162b2 groups. Most shifts were from normal or Grade 1 to Grade 1, 2, or 3 decrease in lymphocyte counts, which returned to normal by 6 to 8 days after Dose 1 and were observed in all age and dose groups. The incidence of decreased lymphocyte counts was lower for BNT162b2 recipients compared with BNT162b1 recipients. Shifts from normal to Grade 1 (younger BNT162b1 group) or Grade 2 (older BNT162b2 group) neutrophil decrease were also observed but were infrequent.

Overall, clinical chemistry and other hematology abnormalities were observed infrequently. None of the laboratory abnormalities were associated with clinical findings.

2.7.4.2.2.6. Physical Examination Findings (Phase 1, Study C4591001)

Overall, there were fewer abnormalities noted during physical examinations after BNT162b2 than after BNT162b1 in both age groups. Full details and outputs regarding physical examination findings for Phase 1 of Study C4591001 are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 12.1.6.

2.7.4.2.2.7. Narratives (Phase 1, Study C4591001)

Narratives generated for Phase 1 are provided in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 14.

2.7.4.2.2.8. Conclusions (Phase 1, Study C4591001)

Based on Phase 1 data from Study C4591001, BNT162b2 was safe and well-tolerated in younger healthy adults 18 to 55 years of age, and in older healthy adults 65 to 85 years of age, with no unanticipated safety findings. Reactogenicity and AEs were generally milder and less frequent in participants in the older group compared with the younger group and overall tended to increase with increasing BNT162b2 dose. Reactogenicity was mostly mild to moderate and short-lived after dosing, and the AE profile did not suggest any safety concerns. Clinical laboratory evaluations showed a transient decrease in lymphocytes that was observed in all age and dose groups after Dose 1, which resolved within approximately 1 week, was not associated with any other clinical sequelae, and was not considered clinically relevant.

2.7.4.2.3. Phase 2 (Study C4591001)

Reactogenicity, AE, and SAE data for the 360 participants in the Phase 2 portion of the study are presented up to the data cutoff date of 02 September 2020. Adverse event results beyond 7 days after Dose 2, as defined in the protocol objectives, are included in Phase 3 analyses (see Section 2.7.4.2.4).

2.7.4.2.3.1. Reactogenicity (Phase 2, Study C4591001)

Reactogenicity results are up to 7 days after Dose 1 and Dose 2.

2.7.4.2.3.1.1. Local Reactions (Phase 2, Study C4591001)

Details and outputs regarding local reactions for Phase 2 of Study C4591001 are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 12.2.1.

Frequency and Severity of Local Reactions

After the first and second dose of BNT162b2 and in both age groups, the majority of local reactions were mild or moderate in severity, and no Grade 4 (potentially life-threatening) local reactions were reported. In the BNT162b2 group, pain at the injection site was reported more frequently in the younger age group (N=88 post-dose 1; N=86 post-dose 2) than in the older age group (N=92 post-dose 1; N=91 post-dose 2), and frequency was similar after Dose 1 compared with Dose 2 of BNT162b2 in the younger age group (85.2% vs. 80.2%, respectively) and in the older age group (70.7% vs. 72.5%, respectively). In the placebo group, pain at the injection site was reported at similar frequencies (7.8% to 10.2%) in the younger and older age groups after Dose 1 and Dose 2.

In the BNT162b2 group, redness and swelling were similar in the younger and older age group after Dose 1. After Dose 2, the frequency of redness and swelling was slightly higher in the older age group (7.7% and 12.1%, respectively) than in the younger age group (3.5% and 3.5%, respectively). In the placebo group, only 1 participant in the older age group reported redness after Dose 1, and no swelling was reported.

One participant in the BNT162b2 group (older age group) reported severe injection site pain after Dose 1, and 1 participant in the younger age group reported severe injection site pain

after Dose 2. One participant in the BNT162b2 group (older age group) reported severe redness after Dose 2.

Overall, across age groups, pain at the injection site was the most frequent local reaction and did not increase after Dose 2, and redness and swelling were generally similar in frequency after Dose 1 and Dose 2.

Onset and Duration

Across age groups, local reactions for the BNT162b2 group after either dose had a median onset day between Day 1.0 and Day 3.0 (Day 1.0 was the day of vaccination), and ranges were generally similar in the younger and older age groups. Across age groups, after either dose of BNT162b2, local reactions resolved after a median duration of 1.0 to 3.0 days, which was generally similar in the younger and older age groups.

2.7.4.2.3.1.2. Systemic Events (Phase 2, Study C4591001)

Details and outputs regarding systemic events for Phase 2 of Study C4591001 are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 12.2.2.

Frequency and Severity of Systemic Events

In the BNT162b2 group, systemic events were generally reported more frequently and were of higher severity in the younger group (N=88 post-dose 1; N=86 post-dose 2) compared with the older group (N=92 post-dose 1; N=91 post-dose 2), with frequencies and severity increasing with number of doses (Dose 1 vs Dose 2). Vomiting and diarrhea were exceptions with vomiting infrequent and similar in both age groups and vomiting and diarrhea similar after each dose. Frequencies of systemic events in the younger and older BNT162b2 groups (Dose 1 vs Dose 2) are listed below:

- Fatigue: younger group (50.0% vs 59.3%) compared to older group (35.9% vs 52.7%)
- Headache: younger group (31.8% vs 51.2%) compared to older group (27.2% vs 36.3%)
- Muscle pain: younger group (23.9% vs 45.3%) compared to older group (14.1% vs 28.6%)
- Chills: younger group (9.1% vs 40.7%) compared to older group (7.6% vs 20.9%)
- Joint pain: younger group (9.1% vs 17.4%) compared to older group (4.3% vs 16.5%)
- Fever: younger group (3.4% vs 17.4%) compared to older group (0.0% vs 11.0%).
- Vomiting: similar in both age groups and after either dose.
- Diarrhea: reported less frequently in the older group and was similar after each dose.

Systemic events were generally reported less frequently in the placebo group than in the BNT162b2 group, for both age groups and doses, with some exceptions. In the younger age group, fever, headache, chills, vomiting, and diarrhea after Dose 1, and vomiting after Dose 2 were reported at similar frequencies in both the placebo and BNT162b2 groups. In the older age group, vomiting, diarrhea, muscle pain, and joint pain after Dose 1, and vomiting and diarrhea after Dose 2 were reported at similar frequencies in the placebo and BNT162b2 groups.

Use of antipyretic/pain medication was slightly less frequent in the older age group after both doses but increased in both age groups overall after Dose 2 as compared with after Dose 1. Use of antipyretic/pain medication was less frequent in the placebo group than in the BNT162b2 group.

After the first and second dose and in both age groups, the majority of systemic events were mild or moderate in severity, and no Grade 4 (potentially life-threatening) systemic events were reported. Across age groups, severe systemic events were only reported after Dose 2 of BNT162b2 overall and included fever (1.1%), fatigue (4.0%), headache (2.8%), chills (2.3%), and muscle pain (1.7%).

Onset and Duration

Across age groups, systemic events after both doses of BNT162b2 had a median onset day between Day 2.0 to Day 3.0 (Day 1.0 was the day of vaccination), and ranges were similar in the younger and older age groups. Across age groups, systemic events for this group after either dose resolved with a median duration of 1 day, which was similar in the younger and older age groups. The median duration of fever and chills after either dose for both age groups was 1 day. There was no clear difference in the durations of systemic events that occurred after Dose 1 compared to those that occurred after Dose 2.

2.7.4.2.3.2. Summary of Adverse Events (Phase 2, Study C4591001)

Full details and outputs regarding the summary of adverse events for Phase 2 of Study C4591001 are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 12.2.3.1.

AE reporting for 360 participants evaluated in Phase 2 as of the data cutoff date (14 November 2020) includes at least 2 months of follow-up. The number of participants who reported at least 1 AE from Dose 1 to 7 days after Dose 2 was similar in the BNT162b2 group compared with the placebo group, which was generally similar in the 2 vaccine groups in the younger and older age groups. (9.1% vs 11.1% and 4.3% vs 8.9%, respectively). Two severe events were reported for 2 participants in the BNT162b2 younger age group: myalgia (AE) and gastric adenocarcinoma (SAE) (Section 2.7.4.2.3.3.4 and Section 2.7.4.2.3.4.2, respectively). The SAE of gastric adenocarcinoma occurred 23 days after receiving Dose 1. Both events were assessed by the investigator as not related to study intervention.

2.7.4.2.3.3. Analysis of Adverse Events (Phase 2, Study C4591001)

Full details and outputs regarding AEs by SOC and PT, related AEs, immediate AEs, and severe AEs for Phase 2 of Study C4591001 are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 12.2.3.2.

2.7.4.2.3.3.1. Adverse Events by System Organ Class and Preferred Term (Phase 2, Study C4591001)

The number of participants who reported at least 1 AE was similar in the BNT162b2 group compared to the placebo group from Dose 1 to 7 days after Dose 2.

In the younger age group, 8 (9.1%) and 10 (11.1%) participants reported at least 1 AE in the BNT162b2 group and the placebo group, respectively. In the older age group, 4 (4.3%) and 8 (8.9%) participants reported at least 1 AE in the BNT162b2 group and the placebo group, respectively.

Overall, most AEs reported up to 7 days after Dose 2 were in the SOCs of gastrointestinal disorders (3 [1.7%] in the BNT162b2 group and 2 [1.1%] in the placebo group), general disorders and administration site conditions (3 [1.7%] in the BNT162b2 group and 7 [3.9%] in the placebo group), and musculoskeletal and connective tissue disorders (3 [1.7%] in the BNT162b2 group and 1 [0.6%] in the placebo group).

The most frequently reported AE by PT was injection site pain (3 [3.4%]) in the younger BNT162b2 group, which all occurred on the day of vaccination with Dose 1 during the reporting period for local reactions. Two events resolved within 3 days, and 1 event resolved 11 days later. All other AEs by PT were reported in ≤2 participants in each vaccine group.

One participant in the older BNT162b2 group had an AE of contusion in the upper left arm deltoid region, which was assessed by the investigator as related to study intervention.

2.7.4.2.3.3.2. Related Adverse Events (Phase 2, Study C4591001)

The number of participants with AEs assessed by the investigator as related to study intervention from Dose 1 to 7 days after Dose 2 were low in frequency and similar in the BNT162b2 group and placebo group. Within the BNT162b2 group, a similar proportion of participants in the young and old age groups reported related AEs. Most investigator-assessed related AEs were reactogenicity events in the SOC of general disorders and administration site conditions, and they were reported by a similar proportion of participants in the BNT162b2 group overall compared with the placebo group, with injection site pain being the PT reported most frequently and exclusively in the BNT162b2 younger age group.

2.7.4.2.3.3.3. Immediate Adverse Events (Phase 2, Study C4591001)

There were no immediate AEs after any dose of BNT162b2 30 µg or placebo.

2.7.4.2.3.3.4. Severe or Life-Threatening Adverse Events (Phase 2, Study C4591001)

Two participants (both in the BNT162b2 younger age group) reported severe events of myalgia (AE) and gastric adenocarcinoma (SAE, discussed in Section 2.7.4.2.3.4.2). The

participant who reported myalgia had scapular muscle pain, which began 2 days after Dose 2 and which lasted 12 days. Both events were assessed by the investigator as not related to study intervention.

2.7.4.2.3.4. Deaths, Serious Adverse Events, Safety-Related Participant Withdrawals, and Other Significant Adverse Events (Phase 2, Study C4591001)

Full details and outputs regarding deaths, serious adverse events, safety-related participant withdrawals, and other significant adverse events for Phase 2 of Study C4591001 are in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 12.2.4.

2.7.4.2.3.4.1. Deaths (Phase 2, Study C4591001)

There were no Phase 2 participants who died through the data cutoff date of 02 September 2020.

2.7.4.2.3.4.2. Serious Adverse Events (Phase 2, Study C4591001)

From Dose 1 to 7 days after Dose 2, 1 participant (BNT162b2 younger age group) had an SAE of gastric adenocarcinoma 23 days after Dose 1, which was assessed by the investigator as not related to study intervention. The SAE was ongoing at the time of the data cutoff, and the participant was withdrawn from the study because of the SAE.

2.7.4.2.3.4.3. Safety-Related Participant Withdrawals (Phase 2, Study C4591001)

The participant in the BNT162b2 younger age group who reported an SAE of gastric adenocarcinoma (Section 2.7.4.2.3.4.2) was discontinued from the study on Day 23 after Dose 1 of BNT162b2.

2.7.4.2.3.4.4. Other Significant Adverse Events (Phase 2, Study C4591001)

AEs of special interest were not defined for Phase 2 of this study; however, targeted medical events were monitored throughout the study (see Section 2.7.4.2.4.3.4).

2.7.4.2.3.5. Narratives (Phase 2, Study C4591001)

Narratives for the Phase 2 participants who were withdrawn from the study because of an SAE through the data cutoff date (14 November 2020) are provided in Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR Section 14.

2.7.4.2.3.6. Conclusions (Phase 2, Study C4591001)

Based on Phase 2 data from 360 participants in Study C4591001, BNT162b2 at 30 µg was safe and well-tolerated in adults 18 to 85 years of age. Reactogenicity and AEs were generally milder and less frequent in participants in the older group (≥56 years of age) compared with the younger group (≤55 years of age). Reactogenicity was mostly mild to moderate and short-lived after dosing, and the AE profile did not suggest any serious safety concerns. No treatment-related SAEs were reported, and incidence of discontinuations due to AEs up to the data cutoff date (representing at least 2 months of follow-up after Dose 2) was low. There were no deaths as of the data cutoff date (02 September 2020). Phase 2 safety

data were concordant with safety data in the Phase 1 portion of the study, both overall and with regard to younger and older participants.

2.7.4.2.4. Phase 3 (Study C4591001)

Safety data are available up to the data cutoff date of 13 March 2021. Reactogenicity data are from the 9839 participants in the reactogenicity subset (Section 2.7.4.2.4.1). Adverse Event data are provided for ~44,000 participants as described in Section 2.7.4.2.4.2.

2.7.4.2.4.1. Reactogenicity (Phase 3, Study C4591001)

The reactogenicity data were collected by participants' e-diary for reporting prompted local reactions and systemic events for 7 days after each dose.

Reactogenicity results are up to 7 days after Dose 1 and Dose 2.

2.7.4.2.4.1.1. Local Reactions (Phase 3, Study C4591001)

Details and outputs regarding local reactions for Phase 3 of Study C4591001 are in Module 5.3.5.1 C4591001 6-Month Update CSR Section 12.2.1.

Frequency and Severity of Local Reactions

In the BNT162b2 group, pain at the injection site was reported more frequently in the younger age group (N=2899 post-Dose 1; N=2682 post-Dose 2) than in the older age group (N=2008 post-Dose 1; N=1860 post-Dose 2), and frequency was similar after Dose 1 compared with Dose 2 of BNT162b2 in the younger age group (83.7% vs 78.3%) and in the older group (70.1% vs 66.1%) (Figure 1 and Figure 2, respectively). In the placebo group, pain at the injection site after Doses 1 and 2 was reported at slightly higher frequencies in the younger age group (14.2% and 11.6%, respectively) than in the older age group (9.3% and 7.8%, respectively).

In the BNT162b2 group, frequencies of redness and swelling were similar in the younger and older age group after Doses 1 and 2. Frequencies of redness were similar after Dose 1 compared with Dose 2 of BNT162b2 in the younger age group (5.4% vs 5.6%) and in the older age group (5.3% vs 7.2%). Frequencies of swelling were similar after Dose 1 compared with Dose 2 of BNT162b2 in the younger age group (6.3% vs 6.8%, respectively) and in the older age group (7.0% vs 7.8%). In the placebo group, redness and swelling were reported infrequently in the younger (≤1.0%) and older (≤1.2%) groups after Doses 1 and 2.

Overall, across age groups, pain at the injection site did not increase after Dose 2, and redness and swelling were generally similar in frequency after Dose 1 and Dose 2. Severe redness and swelling were reported infrequently and were similar between the younger and older age groups (≤0.7%) after any dose. Severe pain at the injection site occurred more frequently in the younger age group compared to the older age group (2.5% vs 0.7%). After the first and second dose and in both age groups, the majority of local reactions were mild or moderate in severity, and no Grade 4 local reactions were reported.

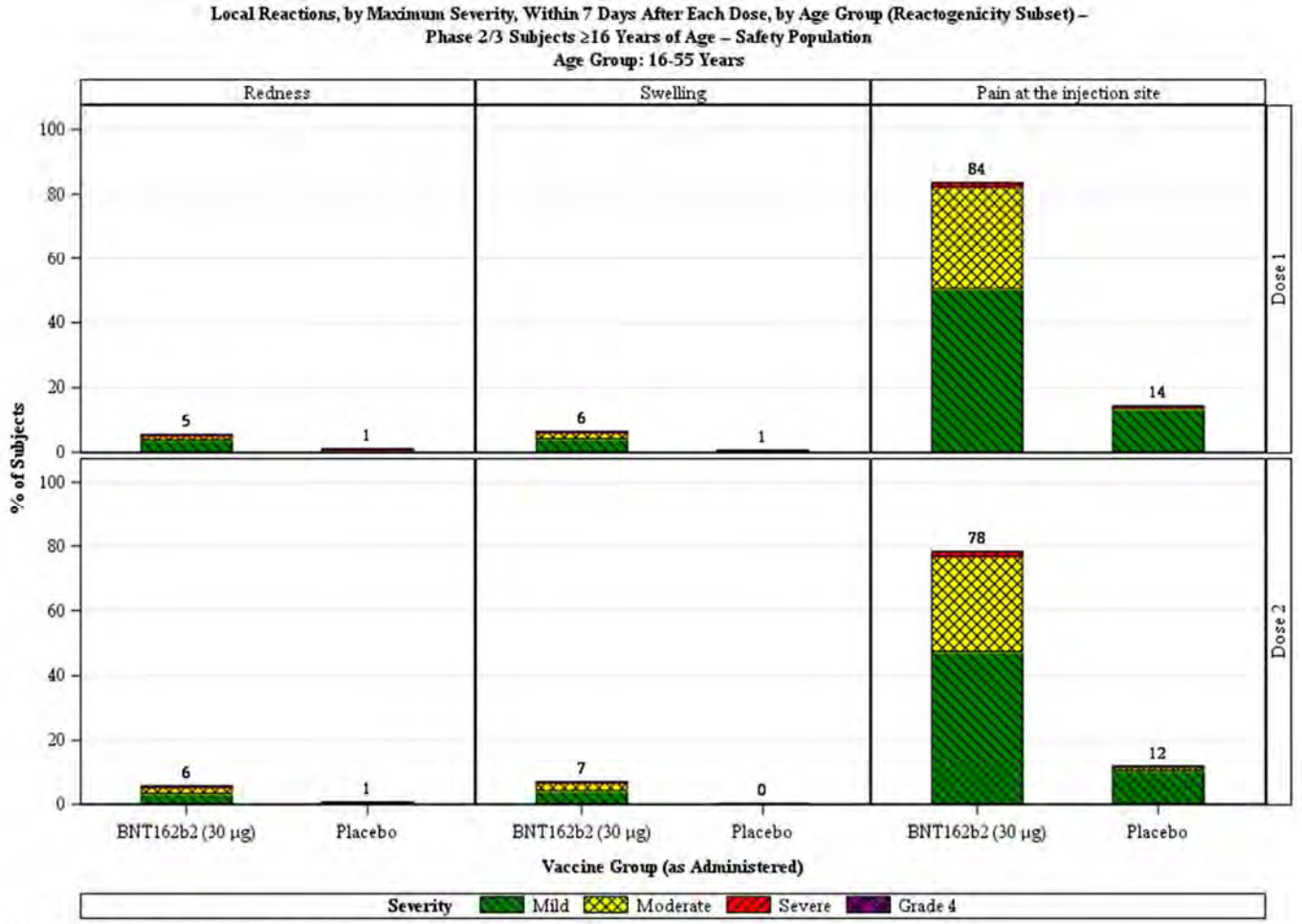
Subgroup Analyses

There were 177 BNT162b2 and 187 placebo participants with baseline positive SARS-CoV-2 status, and 4701 BNT162b2 and 4690 placebo participants with baseline negative SARS-CoV-2 status, respectively. For local reactions the frequency of redness, swelling, and pain at the injection site after any dose of BNT162b2 was 8.5%, 10.2%, and 80.2% compared with 9.9%, 11.1%, and 84.5% for those positive and negative at baseline, respectively. While the frequency of local reactions was numerically higher in those negative at baseline, these differences are not clinically meaningful.

Onset and Duration

The median onset for local reactions after either dose of BNT162b2 was between Day 1.0 and Day 2.0 (Day 1.0 was the day of vaccination) in the younger age group and between Day 1.0 and Day 3.0 in the older age group. Local reactions resolved with median durations between 1.0 and 2.0 days in both age groups.

Figure 1. Subjects Reporting Local Reactions, by Maximum Severity, Within 7 Days After Each Dose, by Age Group (Reactogenicity Subset) – Phase 2/3 Subjects ≥16 Years of Age – Safety Population
Age Group: 16 Through 55 Years of Age – Safety Population



Note: Number above each bar denotes percentage of subjects reporting the reaction with any severity.
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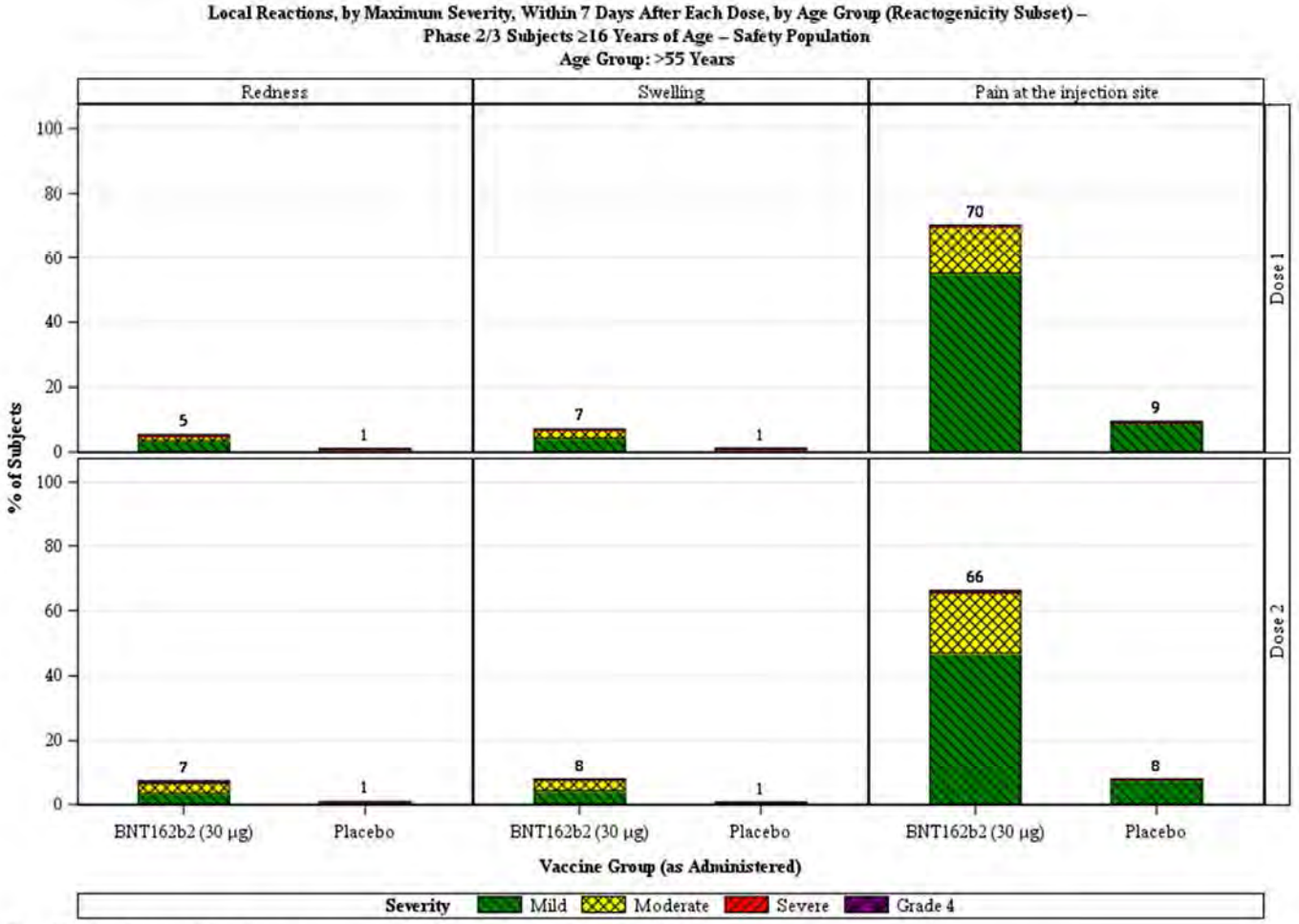
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: /nda2_unblinded/C4591001_BLA/adce_f001_lr_max_age_p3

Figure 2. Subjects Reporting Local Reactions, by Maximum Severity, Within 7 Days After Each Dose, by Age Group (Reactogenicity Subset) – Phase 2/3 Subjects ≥16 Years of Age – Safety Population
Age Group: >55 Years of Age

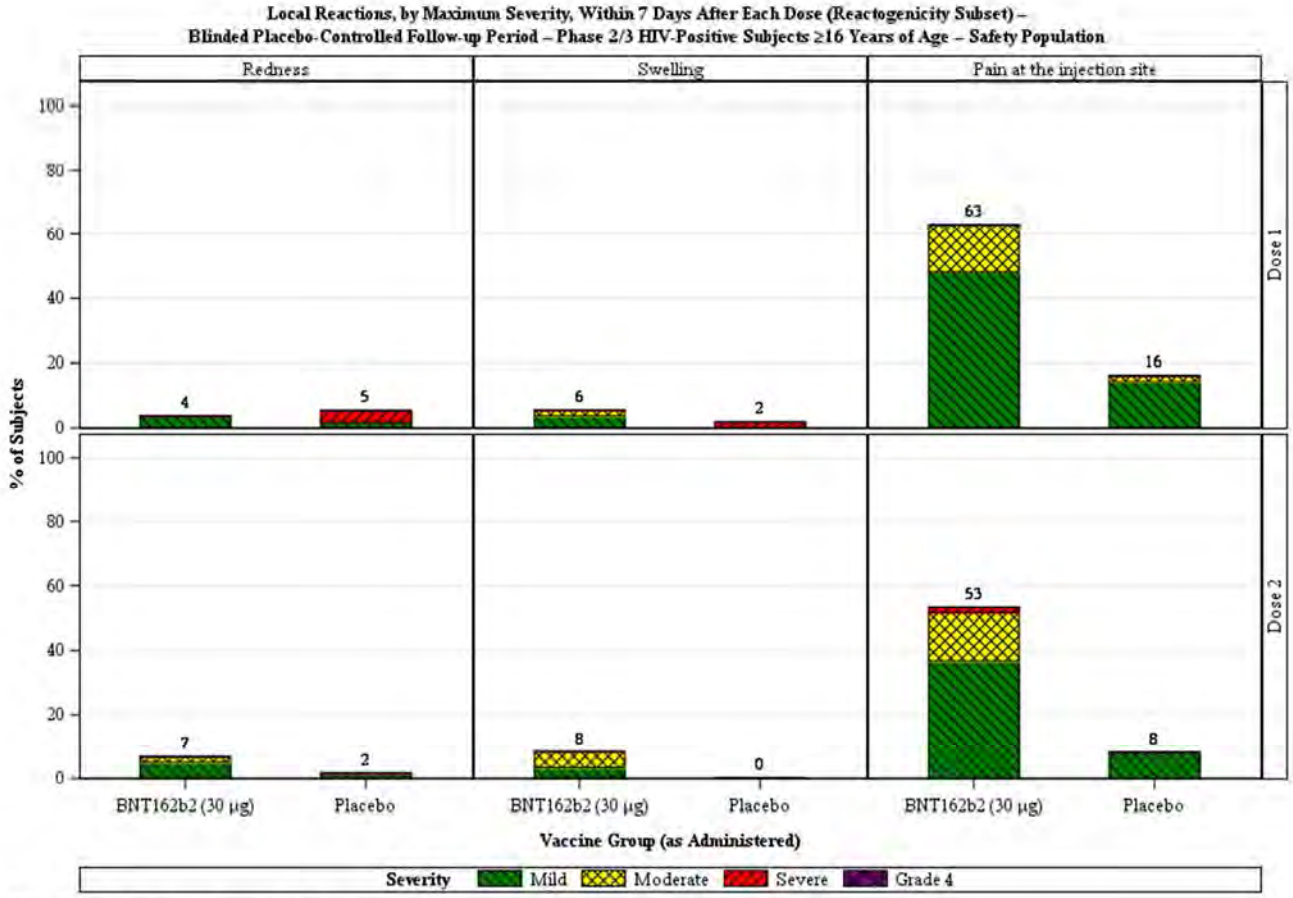


Note: Number above each bar denotes percentage of subjects reporting the reaction with any severity.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (19:22) Source Data: adfacevd Table Generation: 27MAR2021 (01:55)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: /nda2_unblinded/C4591001_BLA/adce_f001_lr_max_age_p3

2.7.4.2.4.1.1.1. Participants with Confirmed Stable HIV Disease (Phase 3, Study C4591001, Local Reactions)

Local reactions in participants with confirmed stable HIV disease were similar to those observed for all participants ≥16 years of age by severity (Figure 3), onset day, and median duration. The frequency of pain at the injection site was similar after Dose 1 compared with Dose 2 of BNT162b2 (63.0% vs 53.3%). The frequency of redness and swelling was similar after Dose 1 compared with Dose 2 of BNT162b2 (redness: 3.7% vs 6.7%; swelling: 5.6% vs 8.3%, respectively). There was 1 (1.7%) severe reaction (pain at the injection site) reported after Dose 2 of BNT162b2 and no Grade 4 reactions were reported.

Figure 3. Subjects Reporting Local Reactions, by Maximum Severity, Within 7 Days After Each Dose (Reactogenicity Subset) – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 HIV-Positive Subjects ≥16 Years of Age – Safety Population



Abbreviation: HIV = human immunodeficiency virus.
Note: Number above each bar denotes percentage of subjects reporting the reaction with any severity.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (19:22) Source Data: adfacevd Table Generation: 27MAR2021 (01:55)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: /nda2_unblinded/C4591001_BLA/adce_f001_lr_max_hiv_p3

2.7.4.2.4.1.2. Systemic Events (Phase 3, Study C4591001)

Details and outputs regarding systemic events for Phase 3 of Study C4591001 are in Module 5.3.5.1 C4591001 6-Month Update CSR Section 12.2.2.

Frequency and Severity of Local Reactions

Systemic events were generally increased in frequency and severity in the younger group (Figure 4) compared with the older group (Figure 5), with frequencies and severity increasing with number of doses (Dose 1 vs Dose 2). Vomiting and diarrhea were exceptions, which were reported similarly infrequently in both age groups and at similar incidences after each dose.

Systemic events in the younger group compared with the older group, with frequencies increasing with number of doses (Dose 1 vs Dose 2), were:

- fatigue: younger group (49.4% vs 61.5%) compared to older group (33.7% vs 51.0%)
- headache: younger group (43.5% vs 54.0%) compared to older group (25.0% vs 39.4%)
- muscle pain: younger group (22.9% vs 39.3%) compared to older group (13.6% vs 28.9%)
- chills: younger group (16.5% vs 37.8%) compared to older group (6.5% vs 23.4%)
- joint pain: younger group (11.8% vs 23.8%) compared to older group (8.7% vs 19.0%)
- fever: younger group (4.1% vs 16.4%) compared to older group (1.3% vs 11.8%)
- vomiting: younger group (1.2% vs 2.2%) compared to the older group (0.5% vs 0.7%)
- diarrhea: younger group (10.7% vs 10.0%) compared to the older group (8.4% vs 8.2%).

Systemic events were generally reported less frequently in the placebo group than in the BNT162b2 group, for both age groups and doses, with some exceptions. In the younger age group, vomiting and diarrhea (after Dose 1 and Dose 2) were reported at similar frequencies in the placebo group and the BNT162b2 group (Figure 4). In the older age group, vomiting and diarrhea (after Dose 1 and Dose 2) were reported at similar frequencies in the placebo group and the BNT162b2 group (Figure 5).

Following both Dose 1 and Dose 2, use of antipyretic/pain medication was slightly less frequent in the older age group (19.0% vs 37.0%) than in the younger age group (27.8% vs 45.2%) after both doses, and medication use increased in both age groups after Dose 2 as compared with after Dose 1. Use of antipyretic/pain medication was less frequent in the placebo group than in the BNT162b2 group and was similar after Dose 1 and Dose 2 in the younger and older placebo groups (ranging from 9.3% to 13.7%).

Severe fever (>38.9°C to 40.0°C) increased in frequency with the number of doses (Dose 1 versus Dose 2) in younger (0.3% vs 1.5%) and older (0.0% vs 0.4%) participants who received BNT162b2 and was reported in 0.1% of participants who received placebo in both age groups after both doses. One participant in the younger BNT162b2 group reported fever of 41.2°C only on Day 2 after Dose 2 and was nonfebrile for all other days of the reporting period. Grade 4 fever was not reported in the older BNT162b2 group or in any placebo participants.

After the first and second dose and in both age groups, the majority of systemic events were mild or moderate in severity.

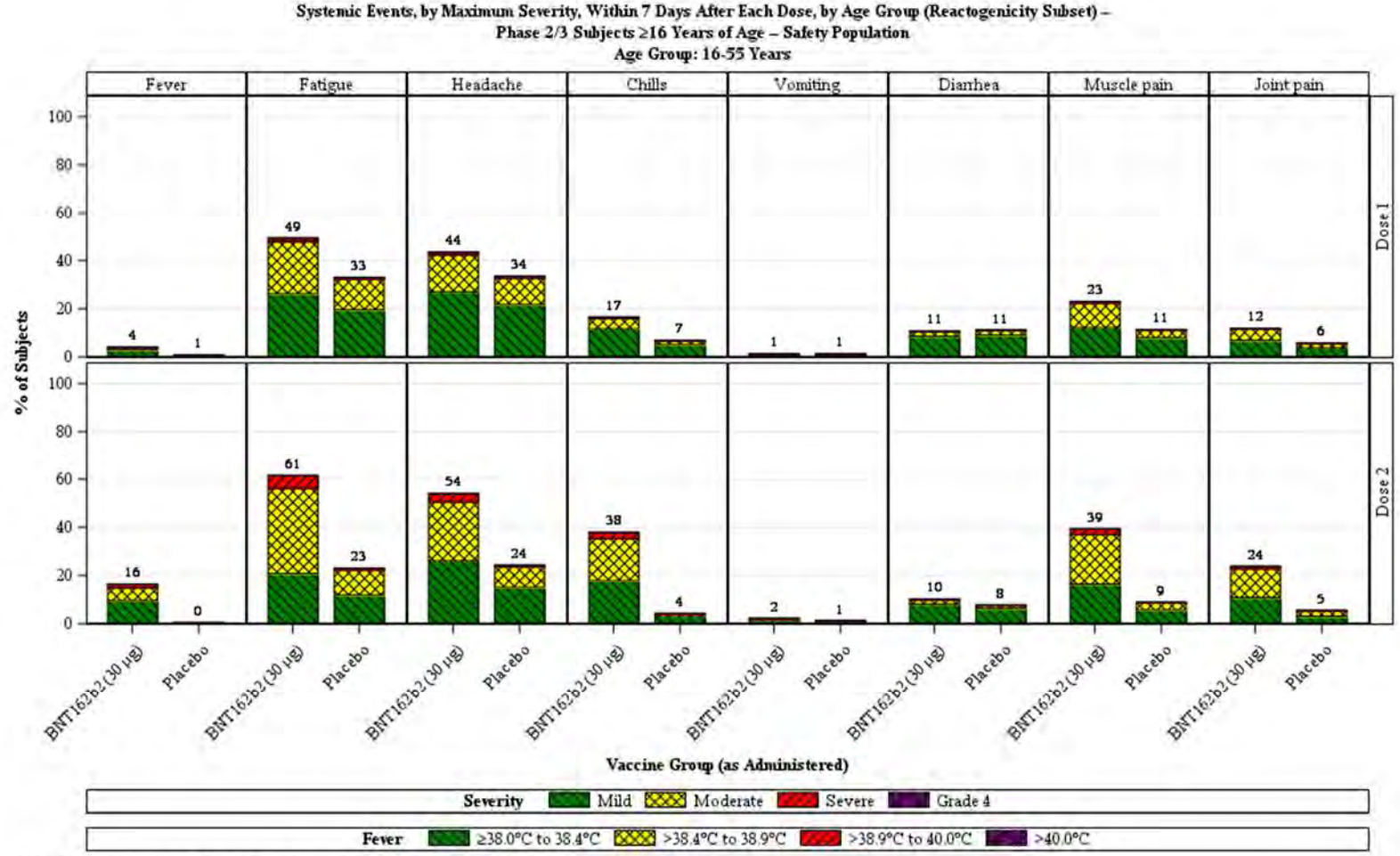
Subgroup Analyses

There were 177 BNT162b2 and 187 placebo participants with baseline positive SARS-CoV-2 status, and 4701 BNT162b2 and 4690 placebo participants with baseline negative SARS-CoV-2 status. For any fever after either dose there were 31 (17.5%) compared to 714 (15.1%) in those positive and negative for SARS-CoV-2 at baseline, respectively. Severe fever (>38.9°C to 40.0°C) was reported in 1 (0.6%) participant and 49 (1.0%) participants in those positive and negative for SARS-CoV-2 at baseline, respectively. The frequency for other systemic events after any dose was numerically lower for those positive at baseline: fatigue, headache and chills the frequency was 54.2%, 49.7% and 32.8% compared with 65%, 57.4%, 34.7% for those positive and negative for SARS-CoV-2 at baseline, respectively. Joint pain was another exception where 27.1% compared to 25.0% were reported between those positive and negative for SARS-CoV-2 at baseline. Note that the baseline SARS-CoV-2 positive subgroup included far fewer participants the negative subgroup, so their results should be interpreted with caution.

Onset and Duration

Systemic events in the younger and older age groups after either dose of BNT162b2 had a median onset day between Day 2.0 and Day 4.0 (Day 1.0 was the day of vaccination) and resolved with a median duration of 1 day in both age groups.

Figure 4. Subjects Reporting Systemic Events, by Maximum Severity, Within 7 Days After Each Dose, by Age Group (Reactogenicity Subset) – Phase 2/3 Subjects ≥16 Years of Age – Safety Population
Age Group: 16 Through 55 Years



Note: Number above each bar denotes percentage of subjects reporting the event with any severity.
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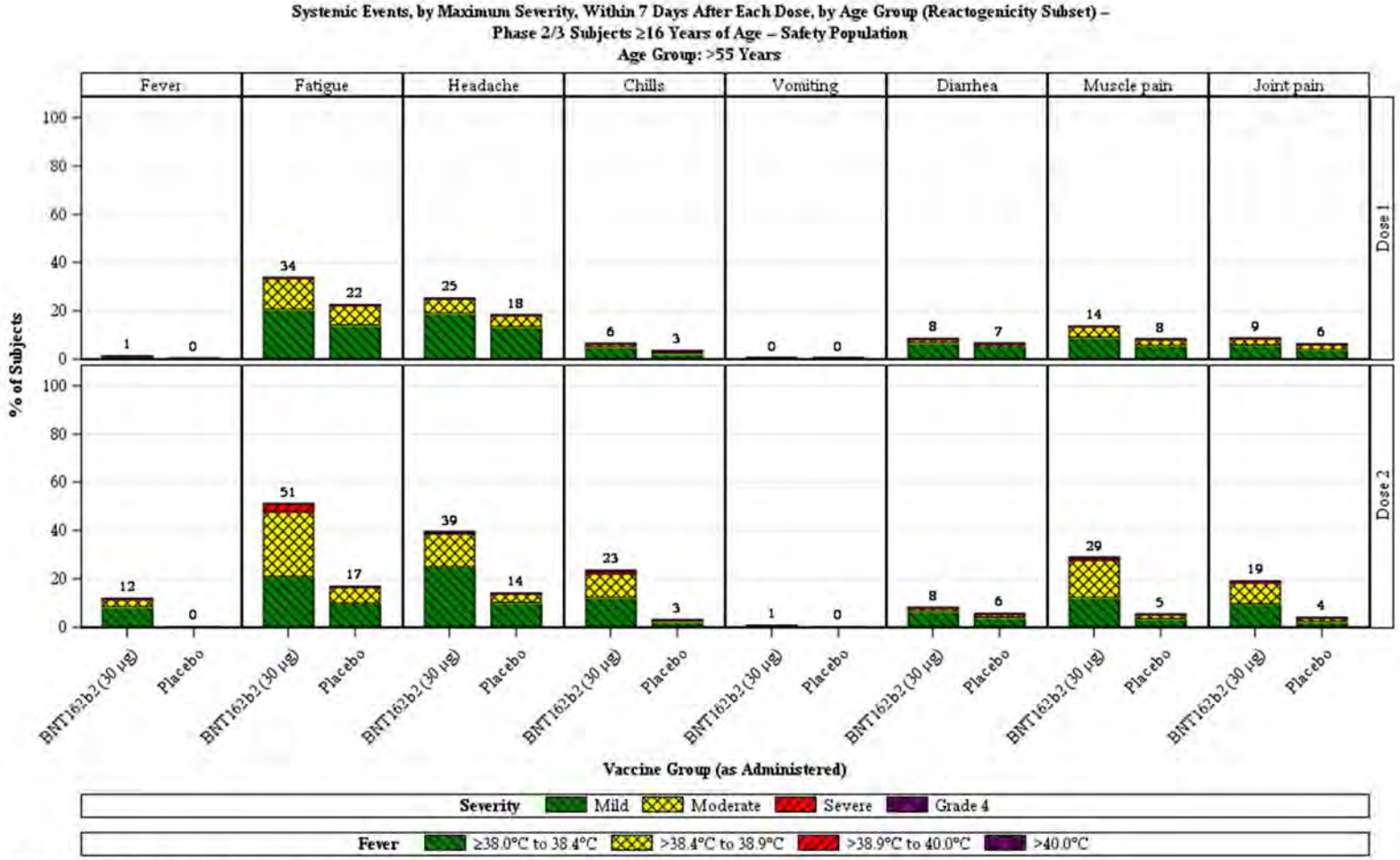
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/adce_f001_se_max_age_p3

Figure 5. Subjects Reporting Systemic Events, by Maximum Severity, Within 7 Days After Each Dose, Age Group (Reactogenicity Subset) – Phase 2/3 Subjects ≥16 Years of Age – Safety Population
Age Group: >55 Years



Note: Number above each bar denotes percentage of subjects reporting the event with any severity.
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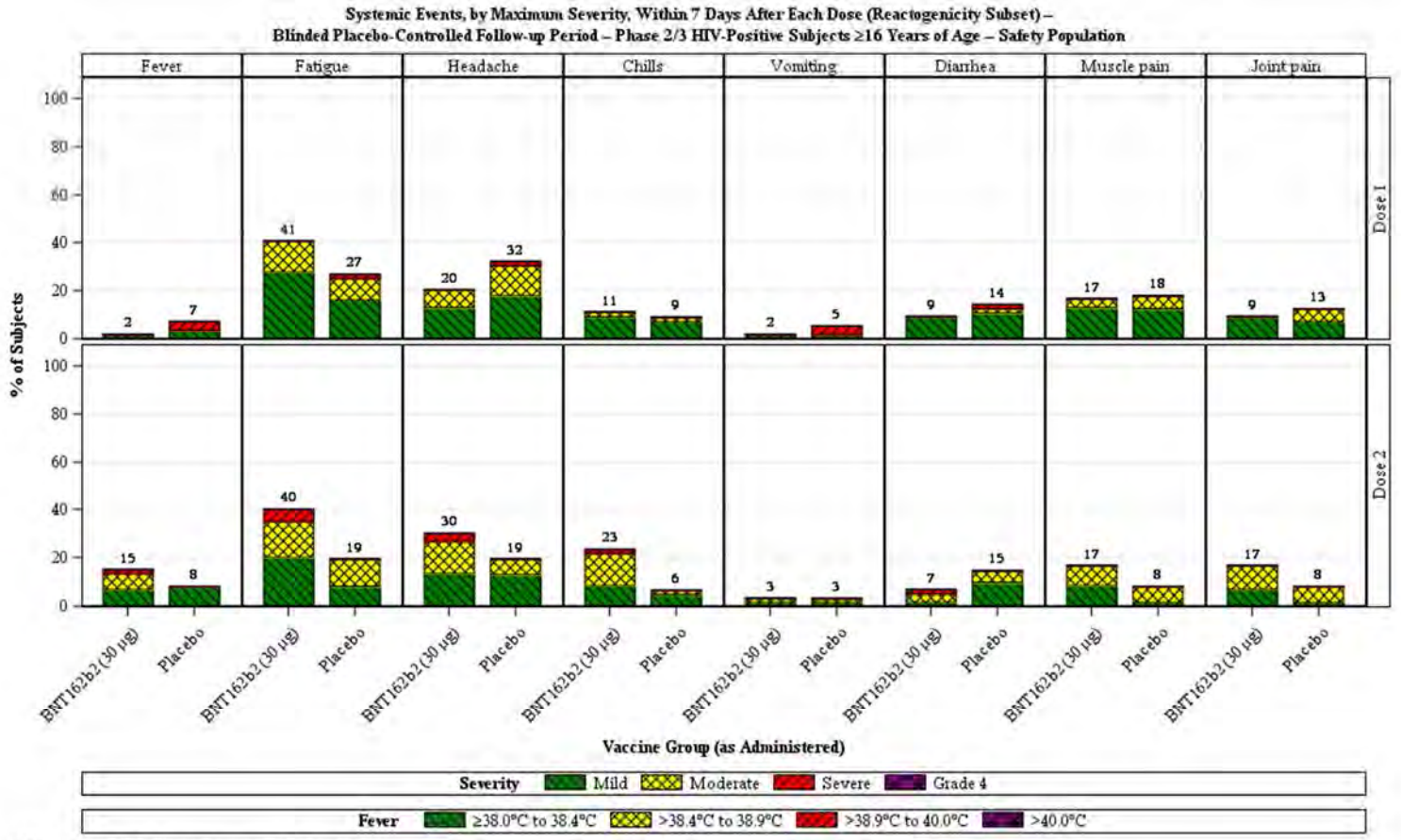
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: /nda2_unblinded/C4591001_BLA/adce_f001_se_max_age_p3

2.7.4.2.4.1.2.1. Participants with Confirmed Stable HIV Disease (Phase 3, Study C4591001, Systemic Events)

Systemic events from participants with confirmed stable HIV disease were similar to those observed for all participants ≥16 years of age by severity (Figure 6), onset day, and duration. Fever, headache, chills, and joint pain increased in frequency from Dose 1 to Dose 2 while fatigue, vomiting, diarrhea, and muscle pain were similar after each dose. There were no severe systemic events after Dose 1 of BNT162b2 but after Dose 2, there was 1 (1.7%) severe fever (>38.9°C to 40.0°C), 3 (5.0%) participants with severe fatigue, 2 (3.3%) participants with severe headache, 1 (1.7%) participant with severe chills, and 1 (1.7%) participant with severe diarrhea. There were no grade 4 systemic events reported after either dose.

Figure 6. Subjects Reporting Systemic Events, by Maximum Severity, Within 7 Days After Each Dose (Reactogenicity Subset) – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 HIV-Positive Subjects ≥16 Years of Age – Safety Population



Abbreviation: HIV = human immunodeficiency virus.
Note: Number above each bar denotes percentage of subjects reporting the event with any severity.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (19:22) Source Data: adfacevd Table Generation: 27MAR2021 (01:55)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: /nda2_unblinded/C4591001_BLA/adce_f001_se_max_hiv_p3

2.7.4.2.4.2. Adverse Events (Phase 3, Study C4591001)

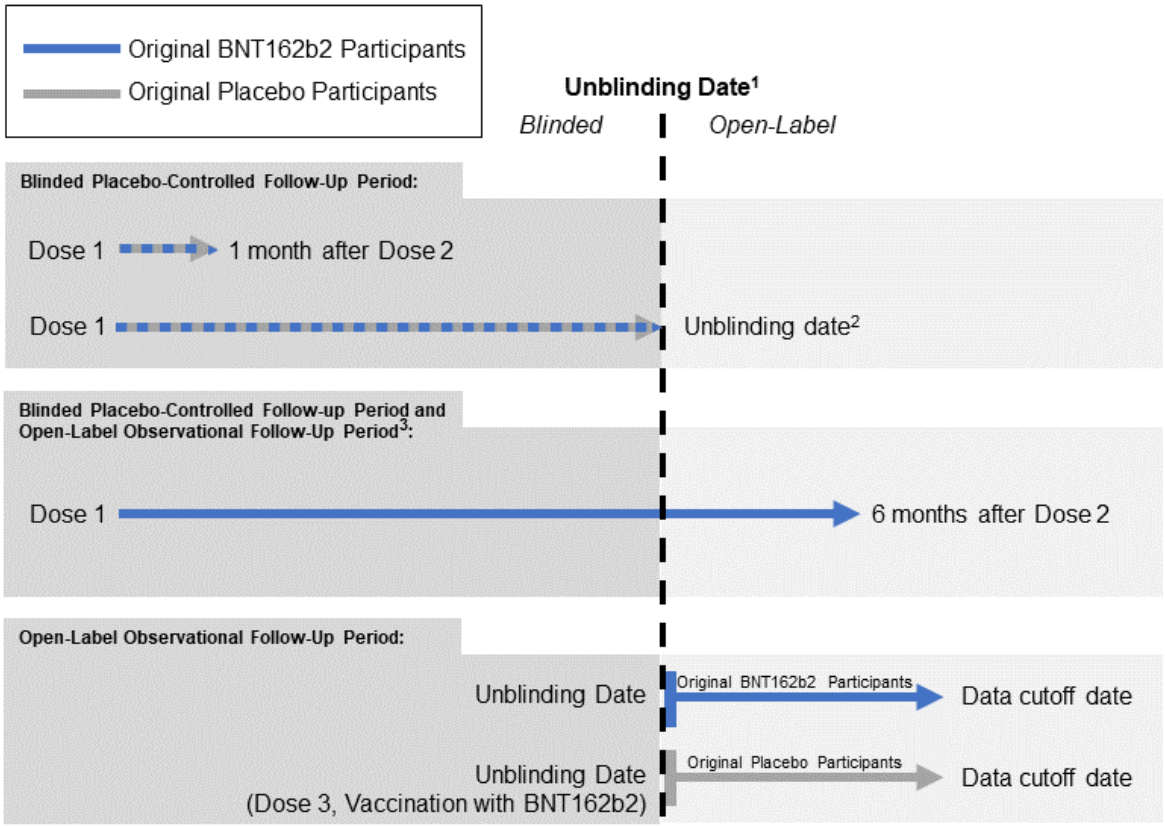
AE safety data are from either the blinded placebo-controlled follow-up period, the open-label observational follow-up period, or both. The time periods and safety analysis groups are presented below and in Figure 7.

- Blinded placebo-controlled follow-up period from Dose 1 to 1 month after Dose 2 (frequencies) (Section 2.7.4.2.4.2.1)
- Blinded placebo-controlled follow-up period from Dose 1 to the unblinding date (IRs) (Section 2.7.4.2.4.2.2)
- Open-label follow-up period – original BNT162b2 participants (IRs) (Section 2.7.4.2.4.2.3)
- Blinded placebo-controlled and open-label follow-up periods from Dose 1 to 6 months after Dose 2 – original BNT162b2 participants (frequencies) (Section 2.7.4.2.4.2.4)
- Open-label follow-up period – original placebo participants who then received BNT162b2 (IRs) (Section 2.7.4.2.4.2.5)

For AE analyses beyond 1 month after Dose 2, and for AEs after unblinding, incidence rates (IRs) per 100 Person-Years are reported (as opposed to frequencies) to account for the variable exposure since unblinding began for individual participants.

In this ongoing study, tables summarizing participant withdrawals may include some participants who were reported as withdrawn but remain in the study and are continuing to be evaluated. These participants are documented in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Errata.

Figure 7 Study C4591001 Phase 3 Safety Analyses: Time Periods and Analysis Groups



[1] Will vary by participant. Adverse event data analyzed from Dose 1 to unblinding date (on or after 14 December 2020), or from unblinding date to data cutoff date, are reported as incidence rates adjusted for exposure time.
[2] Up to ~6 months after Dose 2.
[3] Cumulative BNT162b2 follow-up to at least 6 months after Dose 2.

Full details and outputs regarding adverse events for Phase 3 of Study C4591001 are in Module 5.3.5.1 C4591001 6-Month Update CSR Section 12.2.3.

2.7.4.2.4.2.1. Blinded Placebo-Controlled Follow-Up Period From Dose 1 to 1 Month After Dose 2 (Phase 3, Study C4591001)

2.7.4.2.4.2.1.1. Summary of Adverse Events: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to 1 Month After Dose 2 (Phase 3, Study C4591001)

An overview of AEs from Dose 1 to 1 month after Dose 2 for the 43,847 participants during the blinded placebo-controlled follow-up period (including those analyzed in Phase 2) is presented in Table 5. The numbers of overall participants who reported at least 1 AE and at least 1 related AE were higher in the BNT162b2 group (30.2% and 23.9%, respectively) as compared with the placebo group (13.9% and 6.0%, respectively). The higher frequencies in the BNT162b2 group was due to terms consistent with reactogenicity reported at greater frequency in the BNT162b2 group vs the placebo group. This pattern is further described in Section 2.7.4.2.4.2.1.2.1. Severe AEs were reported by 1.2% and 0.7% in in the BNT162b2

and placebo groups respectively, and life-threatening AEs were similar (0.1% in both groups).

SAEs and AEs leading to withdrawal were reported by ≤0.6% and ≤0.2%, respectively, in both groups. Discontinuations due to related AEs were reported in 13 participants in the BNT162b2 group and 11 participants in the placebo group (0.1% in both groups).

From Dose 1 to 1 month after Dose 2, there were 3 deaths in the BNT162b2 group and 5 deaths in the placebo group during the blinded follow-up period (Section 2.7.4.2.4.3.1).

In the younger age group, the number of participants who reported at least 1 AE from Dose 1 to 1 month after Dose 2 was 4233 (32.6%) and 1871 (14.4%) in the BNT162b2 and placebo groups, respectively. In the older age group, the number of participants who reported at least 1 AE from Dose 1 to 1 month after Dose 2 was 2384 (26.7%) and 1177 (13.2%) in the BNT162b2 and placebo groups, respectively.

Table 5. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2 – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=21926)	Placebo (N[a]=21921)
Adverse Event	n[b] (%)	n[b] (%)
Any event	6617 (30.2)	3048 (13.9)
Related[c]	5241 (23.9)	1311 (6.0)
Severe	262 (1.2)	150 (0.7)
Life-threatening	21 (0.1)	26 (0.1)
Any serious adverse event	127 (0.6)	116 (0.5)
Related[c]	3 (0.0)	0
Severe	71 (0.3)	66 (0.3)
Life-threatening	21 (0.1)	26 (0.1)
Any adverse event leading to withdrawal	32 (0.1)	36 (0.2)
Related[c]	13 (0.1)	11 (0.1)
Severe	10 (0.0)	10 (0.0)
Life-threatening	3 (0.0)	7 (0.0)
Death	3 (0.0)	5 (0.0)

a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects reporting at least 1 occurrence of the specified event category. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
c. Assessed by the investigator as related to investigational product.
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(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/adae_s091_all_pd2_p3_saf1

2.7.4.2.4.2.1.1.1. Participants with Confirmed Stable HIV Disease: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to 1 Month After Dose 2 (Phase 3, Study C4591001, Summary of Adverse Events)

From Dose 1 to 1 month after Dose 2, the subset of 200 HIV-positive participants during the blinded placebo-controlled follow-up period showed generally similar trends as the overall population (likewise attributed to reactogenicity reported in the BNT162b2 group). The numbers of HIV-positive participants who reported at least 1 AE and at least 1 related AE were higher in the BNT162b2 group (26.0% and 19.0%, respectively) as compared with the placebo group (13.0% and 3.0%, respectively). In this group, there was 1 severe AE and 1 AE leading to withdrawal (both were in the BNT162b2 group), and there were no SAEs or deaths.

2.7.4.2.4.2.1.2. Analysis of Adverse Events: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to 1 Month After Dose 2 (Phase 3, Study C4591001)

2.7.4.2.4.2.1.2.1. Adverse Events by System Organ Class and Preferred Term: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to 1 Month After Dose 2 (Phase 3, Study C4591001)

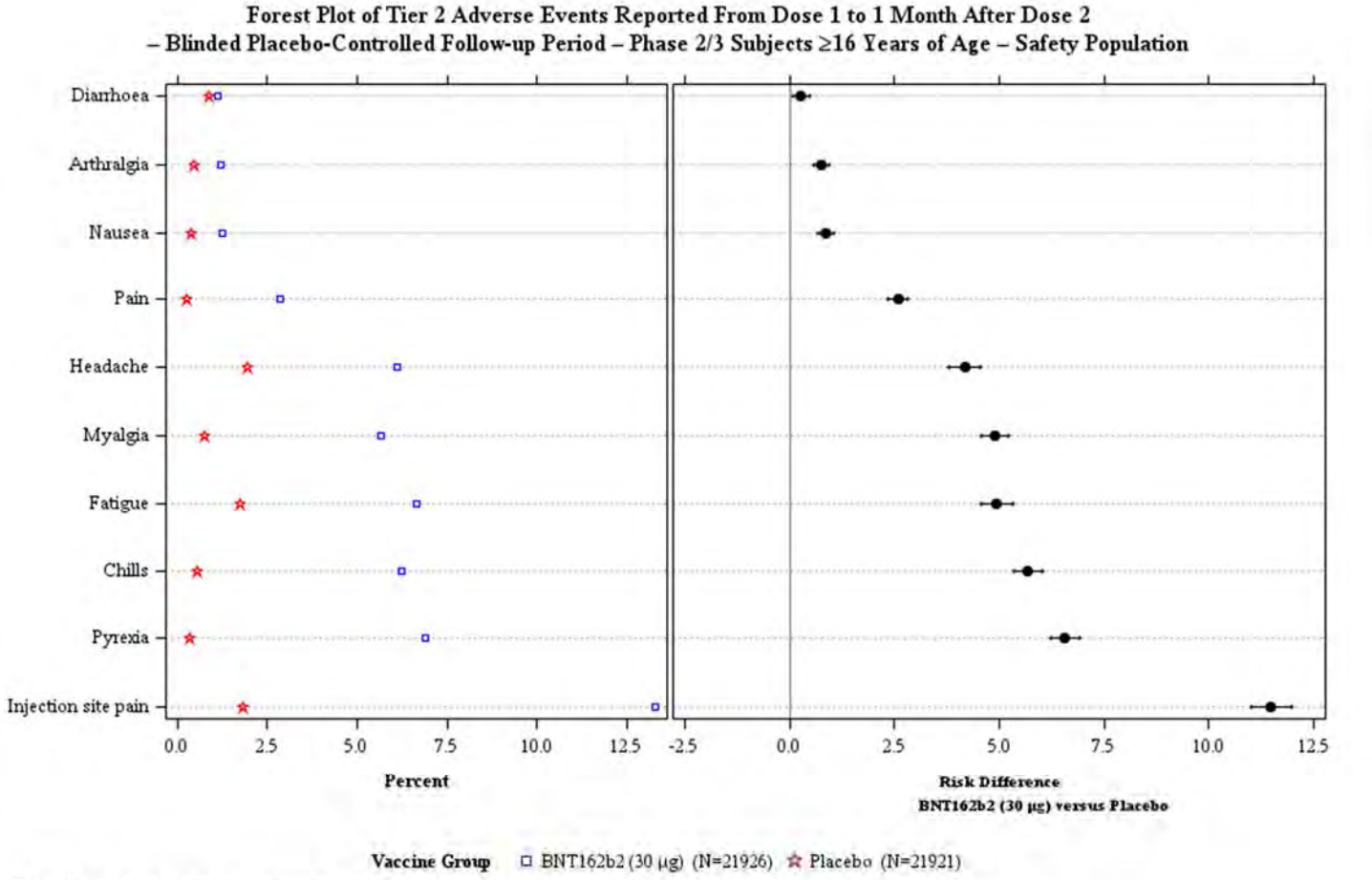
There are no Tier 1 AEs identified for this program.

Tier 2 AEs (defined as an event rate ≥1.0% in any vaccine group [PT level]) reported from Dose 1 to 1 month after Dose 2 are presented in Figure 8.

Most Tier 2 AEs were reactogenicity events and all were reported in 4 SOCs: general disorders and administration site conditions, musculoskeletal and connective tissue disorders, nervous system disorders, and gastrointestinal disorders. The proportions of participants reporting Tier 2 AEs were generally higher in the BNT162b2 group (N=21,926; ranging from 1.1% to 13.3%) than in the placebo group (N=21,921; ranging from 0.3% to 1.9%). Most of the PTs were in the SOC of general disorders and administration site conditions:

- injection site pain (2915 [13.3%] BNT162b2 vs 397 [1.8%] placebo)
- pyrexia (1517 [6.9%] BNT162b2 vs 77 [0.4%] placebo)
- fatigue (1463 [6.7%] BNT162b2 vs 379 [1.7%] placebo)
- chills (1365 [6.2%] BNT162b2 vs 120 [0.5%] placebo)
- pain (628 [2.9%] BNT162b2 vs 61 [0.3%] placebo).

Figure 8. Forest Plot of Tier 2 Adverse Events Reported From Dose 1 to 1 Month After Dose 2 – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ≥16 Years of Age – Safety Population



Note: MedDRA (v23.1) coding dictionary applied.
Note: A MedDRA preferred term is defined as a Tier 2 event if there are at least 1% subjects with the AE term in at least 1 vaccine group.
Note: 2-Sided CI based on the Miettinen and Nurminen method for the difference in proportions (BNT162b2 (30 µg) - placebo) expressed as a percentage. They are not adjusted for multiplicity and should be used for screening purposes only.
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(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: /nda2_unblinded/C4591001_BLA/adae_f001_t2_p3

From Dose 1 to 1 month after Dose 2 during the blinded placebo-controlled follow-up period, 6617 (30.2%) BNT162b2 participants and 3048 (13.9%) placebo participants reported at least 1 AE. Most reported AEs were in SOCs with reactogenicity events. (Table 6).

- general disorders and administration site conditions (4725 [21.5%] BNT162b2 vs 993 [4.5%] placebo)
- musculoskeletal and connective tissue disorders (1804 [8.2%] BNT162b2 vs 527 [2.4%] placebo)
- nervous system disorders (1565 [7.1%] BNT162b2 vs 600 [2.7%] placebo)
- gastrointestinal disorders (699 [3.2%] BNT162b2 vs 464 [2.1%] placebo).

The number of BNT162b2 participants who reported at least 1 AE from Dose 1 to 1 month after Dose 2 was 4233 (32.6%) and 2384 (26.7%) in the younger and older groups, respectively. In the younger versus older BNT162b2 age groups, AE frequencies in above SOCs were:

- general disorders and administration site conditions (3161 [24.3%] vs 1564 [17.5%])
- musculoskeletal and connective tissue disorders (1201 [9.2%] vs 603 [6.8%])
- nervous system disorders (1067 [8.2%] vs 498 [5.6%])
- gastrointestinal disorders (440 [3.4%] vs 259 [2.9%])

As shown in Table 6, the most frequently reported AEs in the BNT162b2 group by PT overall were injection site pain (2915 [13.3%]), pyrexia (1517 [6.9%]), fatigue (1463 [6.7%]), chills (1365 [6.2%]), headache (1339 [6.1%]), and myalgia (1239 [5.7%]). During this time period from Dose 1 to 1 month after Dose 2, most of these AEs were reported during the e-diary 7-day reporting period.

The frequency of AEs in the SOC of investigations was higher in the BNT162b2 group (0.8%) as compared with the placebo group (0.2%) mainly due to the higher frequency of the PT Body Temperature increased (120 in the BNT162b2 group and 12 in the placebo group).

In the skin and subcutaneous tissue disorders SOC, there were 17 participants who reported night sweats in the BNT162b2 group (compared to 3 in the placebo group), and all but 1 of these participants reported the AE within the first 7 days after Dose 1 or 2, respectively, and there were 31 participants who reported hyperhidrosis in the BNT162b2 group (compared to 9 in the placebo group), and all but 3 of these participants reported the AE within the first 7 days after Dose 1 or 2.

Nineteen study participants reported events in the Hepatobiliary Disorders SOC (14 BNT162b2 recipients and 5 placebo recipients) (Table 6). Of the 19 total participants, 3 participants had hepatic events:

- One participant in the placebo group reported hepatic cirrhosis
- One participant in the placebo group reported nonalcoholic fatty liver disease

- One participant in the BNT162b2 group reported alcoholic cirrhosis

The remaining 16 participants reported biliary events (cholecystitis/cholecystitis acute, biliary colic, bile duct stone, and biliary dyskinesia): 13 participants in the BNT162b2 group and 3 participants in the placebo group.

- In the BNT162b2 group, 8 participants reported cholelithiasis (1 reported an event each of cholelithiasis and cholecystitis), 1 participant reported cholecystitis acute, 2 participants reported biliary colic, and 1 participant each reported bile duct stone/biliary dyskinesia.

- In the placebo group, there were 3 participants who reported the following: 1 participant reported an event each of cholecystitis acute and cholelithiasis, 1 participant reported cholecystitis acute, and 1 participant reported cholelithiasis.

In the nervous systems disorder SOC, there were 3 participants who reported facial paralysis in the BNT162b2 group (compared to none in the placebo group). More details are presented in Section 2.7.4.2.4.3.4.1.2.

For lymphadenopathy the frequency in the BNT162b2 group was 0.4% compared to the frequency of 0.0% on the placebo group. Most AEs of lymphadenopathy in the BNT162b2 group were judged by the investigator as related to study intervention (further discussed in Section 2.7.4.2.4.3.4.1.3.

Other events of clinical interest that were identified by the sponsor are discussed in Section 2.7.4.2.4.3.4.

Post Hoc Analysis

Beyond the 9839 participants in the Phase 2/3 reactogenicity subset, events related to reactogenicity are no longer reported using an e-diary but are instead reported as AEs. As previously described in the final analysis interim CSR dated 03 December 2020, an analysis was conducted to evaluate if the imbalance in AEs observed from Dose 1 to 1 month after Dose 2 was attributed to reactogenicity events. The analysis examined the AEs reported within 7 days after each dose, which represented the reactogenicity reporting period. The time period was chosen because many AEs were reported in the SOCs of general disorders and administration site conditions, musculoskeletal and connective tissue disorders, and nervous system disorders, which includes AEs consistent with reactogenicity events, and could only be attributed to reactogenicity if they occurred during this time period as opposed to occurring up to 1 month from each dose.

PTs reported from Dose 1 to 7 days after Dose 1 and from Dose 2 to 7 days after Dose 2 in the SOCs of general disorders and administration site conditions (injection site pain, chills, fatigue, and pyrexia), musculoskeletal and connective tissue disorders (myalgia), and nervous system disorders (headache) represented the majority of PTs reported in those SOCs. AEs reported from Dose 1 to 7 days after Dose 1 and from Dose 2 to 7 days after Dose 2 were largely attributable to reactogenicity events. This observation provides a reasonable

explanation for the greater rates of AEs observed overall in the BNT162b2 group compared with the placebo group, consistent with results previously described in the final analysis interim CSR dated 03 December 2020.

In addition to analysis of AEs corresponding to e-diary terms that were reported within 7 days after Dose 1 or Dose 2 that are attributable to reactogenicity, additional consideration was given to AE terms that are reported at higher frequency in the BNT162b2 group compared to placebo. The following additional AEs were identified: pain in extremity, decreased appetite, lethargy, asthenia, malaise, night sweats, and hyperhidrosis. Careful examination of these terms after either dose of BNT162b2 shows that these events are clustered within the 7-day period when reactogenicity events are known to occur. Since the majority of the participants did not have an e-diary and reported reactogenicity as AEs, there is considerable leeway in how symptoms are described by participants from multiple countries, interpreted by investigators and reported as AEs. As these events are occurring when reactogenicity is being reported, these events are considered to be attributable to the experience of reactogenicity events and are plausibly associated with local reactions and systemic events.

These PTs were reported more frequently in the younger age group.

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Any event	6617 (30.2)	(29.6, 30.8)	3048 (13.9)	(13.4, 14.4)
BLOOD AND LYMPHATIC SYSTEM DISORDERS	105 (0.5)	(0.4, 0.6)	19 (0.1)	(0.1, 0.1)
Lymphadenopathy	83 (0.4)	(0.3, 0.5)	7 (0.0)	(0.0, 0.1)
Iron deficiency anaemia	8 (0.0)	(0.0, 0.1)	1 (0.0)	(0.0, 0.0)
Anaemia	4 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Lymph node pain	7 (0.0)	(0.0, 0.1)	1 (0.0)	(0.0, 0.0)
Blood loss anaemia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Leukocytosis	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Neutropenia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Thrombocytopenia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Thrombocytosis	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Hypochromic anaemia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Leukopenia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Lymphadenitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Lymphadenopathy mediastinal	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Lymphopenia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Splenomegaly	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
CARDIAC DISORDERS	56 (0.3)	(0.2, 0.3)	50 (0.2)	(0.2, 0.3)
Palpitations	6 (0.0)	(0.0, 0.1)	14 (0.1)	(0.0, 0.1)
Tachycardia	13 (0.1)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Atrial fibrillation	7 (0.0)	(0.0, 0.1)	9 (0.0)	(0.0, 0.1)
Coronary artery disease	3 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Acute myocardial infarction	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Acute coronary syndrome	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Cardiac failure congestive	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Myocardial infarction	0	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Angina unstable	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Bradycardia	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Left ventricular hypertrophy	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Mitral valve incompetence	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Angina pectoris	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Aortic valve incompetence	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Arrhythmia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Arteriospasm coronary	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Atrial flutter	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Cardiac arrest	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Mitral valve prolapse	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Myocardial ischaemia	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Sinus tachycardia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Supraventricular tachycardia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Tricuspid valve incompetence	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Ventricular extrasystoles	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Acute left ventricular failure	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Arrhythmia supraventricular	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Atrioventricular block complete	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Atrioventricular block first degree	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Bundle branch block left	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Bundle branch block right	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cardiac disorder	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cardiac failure acute	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Cardiovascular disorder	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Coronary artery dissection	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Coronary artery occlusion	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Junctional ectopic tachycardia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Left atrial enlargement	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Left ventricular dysfunction	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Myocarditis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pericardial effusion	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pericarditis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Tachyarrhythmia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Ventricular arrhythmia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Ventricular tachycardia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
CONGENITAL, FAMILIAL AND GENETIC DISORDERS	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Congenital bladder neck obstruction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Congenital cystic kidney disease	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Heart disease congenital	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Type V hyperlipidaemia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
EAR AND LABYRINTH DISORDERS	65 (0.3)	(0.2, 0.4)	43 (0.2)	(0.1, 0.3)
Vertigo	25 (0.1)	(0.1, 0.2)	20 (0.1)	(0.1, 0.1)
Ear pain	11 (0.1)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Tinnitus	9 (0.0)	(0.0, 0.1)	8 (0.0)	(0.0, 0.1)
Vertigo positional	8 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Deafness unilateral	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Ear discomfort	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cerumen impaction	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Ear disorder	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Meniere's disease	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Allergic otitis media	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Deafness	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Deafness neurosensory	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Ear pruritus	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Eustachian tube dysfunction	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hyperacusis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hypoacusis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Otorrhoea	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Sudden hearing loss	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Tympanic membrane perforation	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
ENDOCRINE DISORDERS	13 (0.1)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Hypothyroidism	6 (0.0)	(0.0, 0.1)	4 (0.0)	(0.0, 0.0)
Hypogonadism	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Thyroid mass	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Autoimmune thyroiditis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Goitre	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hyperprolactinaemia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Thyroid cyst	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
EYE DISORDERS	60 (0.3)	(0.2, 0.4)	50 (0.2)	(0.2, 0.3)
Cataract	6 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Eye pain	7 (0.0)	(0.0, 0.1)	4 (0.0)	(0.0, 0.0)
Eye irritation	6 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Vision blurred	7 (0.0)	(0.0, 0.1)	2 (0.0)	(0.0, 0.0)
Chalazion	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Vitreous detachment	4 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Blepharitis	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Conjunctival haemorrhage	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Conjunctivitis allergic	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dry eye	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Keratitis	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Ocular hyperaemia	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Glaucoma	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Lacrimation increased	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Photophobia	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Retinal detachment	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Vitreous floaters	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Asthenopia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Blepharospasm	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Diplopia	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Eye pruritus	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Amaurosis fugax	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Choroidal neovascularisation	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Conjunctival hyperaemia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Conjunctival oedema	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Corneal irritation	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Dacryostenosis acquired	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Diabetic retinopathy	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Episcleritis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Eye allergy	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Eye inflammation	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Eye swelling	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Eyelid haematoma	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Eyelid oedema	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Eyelid pain	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Eyelids pruritus	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Iritis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Ocular discomfort	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Retinal artery occlusion	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Scleral discolouration	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Swelling of eyelid	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Ulcerative keratitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Visual acuity reduced	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Visual impairment	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
GASTROINTESTINAL DISORDERS	699 (3.2)	(3.0, 3.4)	464 (2.1)	(1.9, 2.3)
Diarrhoea	248 (1.1)	(1.0, 1.3)	188 (0.9)	(0.7, 1.0)
Nausea	274 (1.2)	(1.1, 1.4)	87 (0.4)	(0.3, 0.5)
Vomiting	66 (0.3)	(0.2, 0.4)	32 (0.1)	(0.1, 0.2)
Toothache	24 (0.1)	(0.1, 0.2)	27 (0.1)	(0.1, 0.2)
Abdominal pain upper	25 (0.1)	(0.1, 0.2)	15 (0.1)	(0.0, 0.1)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Abdominal pain	19 (0.1)	(0.1, 0.1)	19 (0.1)	(0.1, 0.1)
Gastrooesophageal reflux disease	12 (0.1)	(0.0, 0.1)	16 (0.1)	(0.0, 0.1)
Dyspepsia	12 (0.1)	(0.0, 0.1)	11 (0.1)	(0.0, 0.1)
Odynophagia	13 (0.1)	(0.0, 0.1)	8 (0.0)	(0.0, 0.1)
Constipation	7 (0.0)	(0.0, 0.1)	11 (0.1)	(0.0, 0.1)
Dental caries	8 (0.0)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Gastritis	3 (0.0)	(0.0, 0.0)	10 (0.0)	(0.0, 0.1)
Haemorrhoids	3 (0.0)	(0.0, 0.0)	10 (0.0)	(0.0, 0.1)
Aphthous ulcer	8 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Abdominal discomfort	5 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Abdominal distension	6 (0.0)	(0.0, 0.1)	1 (0.0)	(0.0, 0.0)
Flatulence	4 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Irritable bowel syndrome	4 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Dry mouth	2 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Large intestine polyp	2 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Abdominal pain lower	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Dysphagia	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Inguinal hernia	1 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Stomatitis	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Diverticulum	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Gastrointestinal disorder	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hiatus hernia	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Paraesthesia oral	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Retching	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Small intestinal obstruction	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Cheilitis	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Faeces soft	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Food poisoning	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Gingival pain	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hypoaesthesia oral	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Lip swelling	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Rectal haemorrhage	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Swollen tongue	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Tooth impacted	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Umbilical hernia	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Colitis microscopic	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Diverticulum intestinal	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Eructation	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Gingival discomfort	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Glossodynia	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Haematochezia	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Mouth ulceration	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Noninfective gingivitis	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Oral pain	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pancreatitis	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pancreatitis acute	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Parotid duct obstruction	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Salivary gland calculus	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Abdominal adhesions	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Abdominal hernia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Abdominal rigidity	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Abnormal faeces	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Acute abdomen	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Anal pruritus	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Angular cheilitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Appendix disorder	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Chronic gastritis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Colitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Colitis ulcerative	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Diverticular perforation	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Diverticulum intestinal haemorrhagic	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Epiploic appendagitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Femoral hernia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Frequent bowel movements	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Gastric polyps	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Gastric ulcer	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Gastric ulcer haemorrhage	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Gastritis erosive	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Gastrointestinal haemorrhage	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Gastrointestinal mucosa hyperaemia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Gastrointestinal pain	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Gastrointestinal sounds abnormal	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Gingival bleeding	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Gingival swelling	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Glossitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Haemorrhoidal haemorrhage	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hypoaesthesia teeth	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Impaired gastric emptying	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Incarcerated inguinal hernia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Intestinal obstruction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Lip oedema	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Loose tooth	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Obstructive pancreatitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Oesophageal food impaction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Oesophageal spasm	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Oesophageal ulcer	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Oesophageal varices haemorrhage	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Oesophagitis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Oral discomfort	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Oral lichenoid reaction	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Oral mucosa haematoma	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Palatal disorder	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pancreatic failure	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Peptic ulcer	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Proctalgia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Salivary gland mucocoele	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Teething	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Tongue discolouration	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Tongue discomfort	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Tongue oedema	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Tongue pruritus	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Tongue ulceration	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Tooth disorder	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Varices oesophageal	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Volvulus	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	4725 (21.5)	(21.0, 22.1)	993 (4.5)	(4.3, 4.8)
Injection site pain	2915 (13.3)	(12.8, 13.8)	397 (1.8)	(1.6, 2.0)
Fatigue	1463 (6.7)	(6.3, 7.0)	379 (1.7)	(1.6, 1.9)
Pyrexia	1517 (6.9)	(6.6, 7.3)	77 (0.4)	(0.3, 0.4)
Chills	1365 (6.2)	(5.9, 6.6)	120 (0.5)	(0.5, 0.7)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Pain	628 (2.9)	(2.6, 3.1)	61 (0.3)	(0.2, 0.4)
Injection site erythema	185 (0.8)	(0.7, 1.0)	28 (0.1)	(0.1, 0.2)
Injection site swelling	140 (0.6)	(0.5, 0.8)	23 (0.1)	(0.1, 0.2)
Malaise	130 (0.6)	(0.5, 0.7)	22 (0.1)	(0.1, 0.2)
Asthenia	76 (0.3)	(0.3, 0.4)	25 (0.1)	(0.1, 0.2)
Injection site pruritus	38 (0.2)	(0.1, 0.2)	5 (0.0)	(0.0, 0.1)
Injection site bruising	13 (0.1)	(0.0, 0.1)	18 (0.1)	(0.0, 0.1)
Influenza like illness	23 (0.1)	(0.1, 0.2)	4 (0.0)	(0.0, 0.0)
Chest pain	12 (0.1)	(0.0, 0.1)	11 (0.1)	(0.0, 0.1)
Injection site warmth	14 (0.1)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Axillary pain	14 (0.1)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Injection site induration	10 (0.0)	(0.0, 0.1)	4 (0.0)	(0.0, 0.0)
Injection site oedema	12 (0.1)	(0.0, 0.1)	0	(0.0, 0.0)
Non-cardiac chest pain	5 (0.0)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Oedema peripheral	5 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Peripheral swelling	5 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Chest discomfort	5 (0.0)	(0.0, 0.1)	4 (0.0)	(0.0, 0.0)
Feeling hot	8 (0.0)	(0.0, 0.1)	1 (0.0)	(0.0, 0.0)
Injection site discomfort	6 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Swelling face	2 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Injection site haematoma	2 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Injection site haemorrhage	3 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Injection site reaction	5 (0.0)	(0.0, 0.1)	1 (0.0)	(0.0, 0.0)
Injection site mass	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Injection site paraesthesia	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Swelling	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Adverse drug reaction	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cyst	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Feeling abnormal	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Injection site discolouration	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Injection site nodule	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Injection site papule	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Injection site rash	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Sensation of foreign body	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Application site pain	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Face oedema	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Feeling cold	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Injury associated with device	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Medical device pain	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Nodule	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Sluggishness	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Thirst	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Vessel puncture site bruise	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Vessel puncture site haematoma	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Application site erythema	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Application site pruritus	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Application site rash	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Application site reaction	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Capsular contracture associated with breast implant	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Death	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Discomfort	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Drug withdrawal syndrome	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Effusion	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Exercise tolerance decreased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Facial pain	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Gait disturbance	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Illness	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Induration	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Inflammation	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Injection site dermatitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Injection site hyperaesthesia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Injection site injury	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Injection site irritation	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Injection site lymphadenopathy	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Injection site macule	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Injection site plaque	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Injection site urticaria	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Mass	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Medical device site granuloma	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Mucosal disorder	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Shoulder injury related to vaccine administration	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Temperature intolerance	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Therapeutic response unexpected	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Vaccination site induration	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Vaccination site pain	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Vaccination site swelling	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Vascular stent occlusion	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Vessel puncture site induration	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
HEPATOBILIARY DISORDERS	14 (0.1)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Cholelithiasis	8 (0.0)	(0.0, 0.1)	2 (0.0)	(0.0, 0.0)
Cholecystitis acute	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Biliary colic	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Bile duct stone	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Biliary dyskinesia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cholecystitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cirrhosis alcoholic	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hepatic cirrhosis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Nonalcoholic fatty liver disease	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
IMMUNE SYSTEM DISORDERS	22 (0.1)	(0.1, 0.2)	25 (0.1)	(0.1, 0.2)
Seasonal allergy	8 (0.0)	(0.0, 0.1)	13 (0.1)	(0.0, 0.1)
Drug hypersensitivity	7 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Food allergy	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Hypersensitivity	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Allergy to arthropod bite	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Allergy to arthropod sting	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Anaphylactic reaction	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Anaphylactic shock	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Milk allergy	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
INFECTIONS AND INFESTATIONS	337 (1.5)	(1.4, 1.7)	365 (1.7)	(1.5, 1.8)
Urinary tract infection	58 (0.3)	(0.2, 0.3)	52 (0.2)	(0.2, 0.3)
Tooth infection	24 (0.1)	(0.1, 0.2)	29 (0.1)	(0.1, 0.2)
Sinusitis	18 (0.1)	(0.0, 0.1)	27 (0.1)	(0.1, 0.2)
Cellulitis	12 (0.1)	(0.0, 0.1)	15 (0.1)	(0.0, 0.1)
Herpes zoster	12 (0.1)	(0.0, 0.1)	10 (0.0)	(0.0, 0.1)
Ear infection	9 (0.0)	(0.0, 0.1)	12 (0.1)	(0.0, 0.1)
Conjunctivitis	9 (0.0)	(0.0, 0.1)	11 (0.1)	(0.0, 0.1)
Hordeolum	8 (0.0)	(0.0, 0.1)	11 (0.1)	(0.0, 0.1)
Cystitis	6 (0.0)	(0.0, 0.1)	11 (0.1)	(0.0, 0.1)
Gastroenteritis	5 (0.0)	(0.0, 0.1)	10 (0.0)	(0.0, 0.1)
Rhinitis	5 (0.0)	(0.0, 0.1)	10 (0.0)	(0.0, 0.1)
Tooth abscess	9 (0.0)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Upper respiratory tract infection	9 (0.0)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Diverticulitis	8 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Otitis externa	6 (0.0)	(0.0, 0.1)	7 (0.0)	(0.0, 0.1)
Otitis media	7 (0.0)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Vulvovaginal mycotic infection	5 (0.0)	(0.0, 0.1)	8 (0.0)	(0.0, 0.1)
Appendicitis	7 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Gingivitis	5 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Oral herpes	4 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Acute sinusitis	1 (0.0)	(0.0, 0.0)	7 (0.0)	(0.0, 0.1)
Pneumonia	2 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Skin infection	3 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Vaginal infection	0	(0.0, 0.0)	7 (0.0)	(0.0, 0.1)
Vulvovaginal candidiasis	4 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Fungal skin infection	1 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Onychomycosis	3 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Periodontitis	3 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Pharyngitis streptococcal	4 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Pyelonephritis	5 (0.0)	(0.0, 0.1)	1 (0.0)	(0.0, 0.0)
Folliculitis	5 (0.0)	(0.0, 0.1)	0	(0.0, 0.0)
Furuncle	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Localised infection	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Nasopharyngitis	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Otitis media acute	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Paronychia	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Tonsillitis	0	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Genital herpes	0	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Herpes simplex	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Influenza	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pharyngitis	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Postoperative wound infection	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Tinea versicolour	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Bacterial vulvovaginitis	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Bronchitis	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Chronic sinusitis	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Eye infection	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Gingival abscess	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Impetigo	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Infected bite	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Parotitis	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Pustule	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Subcutaneous abscess	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Tinea infection	0	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Abscess	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Abscess limb	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Acarodermatitis	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Anal abscess	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Appendicitis perforated	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Bacterial vaginosis	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
COVID-19	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Conjunctivitis bacterial	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Erysipelas	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Escherichia urinary tract infection	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Gastroenteritis viral	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Kidney infection	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Labyrinthitis	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Laryngitis	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Ophthalmic herpes zoster	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Oral candidiasis	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Papilloma viral infection	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Peritonsillar abscess	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pharyngotonsillitis	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Rash pustular	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Sialoadenitis	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Sinusitis bacterial	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Trichomoniasis	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Vulvovaginitis	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Abdominal abscess	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Abscess intestinal	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Abscess jaw	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Abscess neck	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Anal fistula infection	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Bacterial blepharitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Bacterial infection	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Bacterial sepsis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Balanitis candida	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Bartholin's abscess	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Bartholinitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Blister infected	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Bone abscess	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Brain abscess	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Campylobacter infection	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Carbuncle	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cellulitis orbital	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Clostridium difficile infection	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Complicated appendicitis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Coxsackie viral infection	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dental fistula	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dermatitis infected	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Device related infection	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Empyema	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Eye infection bacterial	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Genital herpes simplex	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Gonorrhoea	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Groin abscess	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Helicobacter gastritis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Helicobacter infection	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hepatitis A	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hepatitis C	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Injection site abscess	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Lyme disease	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Meningitis bacterial	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Nail infection	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Oral fungal infection	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Oral infection	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Orchitis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Osteomyelitis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Otitis media bacterial	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Parasitic gastroenteritis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pelvic inflammatory disease	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Peritoneal abscess	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Peritonitis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Pharyngitis bacterial	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pilonidal cyst	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pulmonary tuberculosis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Puncture site infection	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pyelonephritis acute	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Respiratory tract infection viral	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Sepsis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Shigella sepsis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Skin bacterial infection	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Soft tissue infection	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Staphylococcal infection	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Subacute endocarditis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Suspected COVID-19	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Syphilis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Tinea cruris	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Tonsillitis bacterial	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Urosepsis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Varicella	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Viral infection	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Viral upper respiratory tract infection	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Wound infection	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	215 (1.0)	(0.9, 1.1)	269 (1.2)	(1.1, 1.4)
Fall	48 (0.2)	(0.2, 0.3)	51 (0.2)	(0.2, 0.3)
Ligament sprain	19 (0.1)	(0.1, 0.1)	22 (0.1)	(0.1, 0.2)
Skin laceration	14 (0.1)	(0.0, 0.1)	22 (0.1)	(0.1, 0.2)
Contusion	12 (0.1)	(0.0, 0.1)	19 (0.1)	(0.1, 0.1)
Exposure during pregnancy	10 (0.0)	(0.0, 0.1)	19 (0.1)	(0.1, 0.1)
Muscle strain	14 (0.1)	(0.0, 0.1)	15 (0.1)	(0.0, 0.1)
Road traffic accident	9 (0.0)	(0.0, 0.1)	15 (0.1)	(0.0, 0.1)
Skin abrasion	8 (0.0)	(0.0, 0.1)	13 (0.1)	(0.0, 0.1)
Arthropod bite	12 (0.1)	(0.0, 0.1)	7 (0.0)	(0.0, 0.1)
Limb injury	7 (0.0)	(0.0, 0.1)	11 (0.1)	(0.0, 0.1)
Foot fracture	5 (0.0)	(0.0, 0.1)	8 (0.0)	(0.0, 0.1)
Joint injury	5 (0.0)	(0.0, 0.1)	8 (0.0)	(0.0, 0.1)
Tooth fracture	7 (0.0)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Procedural pain	8 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Meniscus injury	4 (0.0)	(0.0, 0.0)	6 (0.0)	(0.0, 0.1)
Animal bite	2 (0.0)	(0.0, 0.0)	6 (0.0)	(0.0, 0.1)
Arthropod sting	3 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Facial bones fracture	4 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Joint dislocation	7 (0.0)	(0.0, 0.1)	1 (0.0)	(0.0, 0.0)
Rib fracture	3 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Ankle fracture	2 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Concussion	3 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Muscle rupture	1 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Wound	2 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Chest injury	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Corneal abrasion	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Ligament rupture	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Thermal burn	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Vaccination complication	5 (0.0)	(0.0, 0.1)	0	(0.0, 0.0)
Epicondylitis	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Fibula fracture	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Hand fracture	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Head injury	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Humerus fracture	0	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Overdose	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Radius fracture	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Tendon rupture	0	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Wrist fracture	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Bone contusion	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Craniocerebral injury	0	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Maternal exposure during pregnancy	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Muscle injury	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Spinal compression fracture	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Ulna fracture	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Administration related reaction	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Burns second degree	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cervical vertebral fracture	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Ligament injury	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Lower limb fracture	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Procedural dizziness	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Skin injury	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Stress fracture	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Tendon injury	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Upper limb fracture	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Alcohol poisoning	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Anaemia postoperative	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Brain contusion	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Burn oral cavity	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Burns first degree	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Clavicle fracture	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Colon injury	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dental restoration failure	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Ear canal abrasion	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Ear injury	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Exposure to communicable disease	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Eye contusion	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Femur fracture	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Flail chest	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Forearm fracture	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Foreign body	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Foreign body aspiration	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Foreign body in eye	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hip fracture	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Injury	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Limb fracture	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Limb traumatic amputation	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Lip injury	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Lumbar vertebral fracture	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Maternal exposure during breast feeding	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Mouth injury	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Multiple injuries	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Muscle contusion	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Patella fracture	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pelvic fracture	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Penis injury	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pharyngeal perforation	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Post concussion syndrome	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Post procedural discomfort	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Post procedural haemorrhage	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Post procedural swelling	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Postoperative ileus	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Procedural haemorrhage	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Procedural hypotension	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Respiratory fume inhalation disorder	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Scapula fracture	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Scar	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Soft tissue injury	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Spinal column injury	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Spinal cord injury cervical	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Spinal fracture	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Stab wound	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Stoma site rash	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Subdural haematoma	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Sunburn	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Tibia fracture	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Toxicity to various agents	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Traumatic haemothorax	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Traumatic intracranial haemorrhage	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Venom poisoning	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Vulvovaginal injury	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
INVESTIGATIONS	172 (0.8)	(0.7, 0.9)	37 (0.2)	(0.1, 0.2)
Body temperature increased	120 (0.5)	(0.5, 0.7)	12 (0.1)	(0.0, 0.1)
Blood pressure increased	6 (0.0)	(0.0, 0.1)	7 (0.0)	(0.0, 0.1)
Blood glucose increased	8 (0.0)	(0.0, 0.1)	1 (0.0)	(0.0, 0.0)
Heart rate increased	4 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Blood cholesterol increased	5 (0.0)	(0.0, 0.1)	0	(0.0, 0.0)
Low density lipoprotein increased	4 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Blood thyroid stimulating hormone increased	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Weight decreased	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Blood glucose abnormal	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hepatic enzyme increased	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
High density lipoprotein increased	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Mammogram abnormal	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Prostatic specific antigen increased	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Alanine aminotransferase increased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Blood chloride decreased	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Blood creatinine decreased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Blood creatinine increased	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Blood glucose fluctuation	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Blood potassium decreased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Blood pressure diastolic increased	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Blood pressure systolic increased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Blood sodium decreased	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Blood testosterone decreased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Blood testosterone increased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Blood triglycerides increased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Body temperature	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Body temperature decreased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
C-reactive protein	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cardiac stress test abnormal	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Electrocardiogram QT prolonged	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Fractional exhaled nitric oxide increased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Glomerular filtration rate decreased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Heart rate irregular	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hepatitis C antibody positive	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Herpes simplex test positive	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Intraocular pressure increased	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Mean cell volume decreased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Monocyte count increased	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Platelet count increased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Respiratory rate increased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
SARS-CoV-2 antibody test positive	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Thyroid function test abnormal	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Troponin increased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Urine ketone body present	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Weight increased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
White blood cell count increased	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
White blood cells urine positive	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
METABOLISM AND NUTRITION DISORDERS	100 (0.5)	(0.4, 0.6)	73 (0.3)	(0.3, 0.4)
Decreased appetite	39 (0.2)	(0.1, 0.2)	9 (0.0)	(0.0, 0.1)
Type 2 diabetes mellitus	8 (0.0)	(0.0, 0.1)	8 (0.0)	(0.0, 0.1)
Vitamin D deficiency	9 (0.0)	(0.0, 0.1)	7 (0.0)	(0.0, 0.1)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Hypercholesterolaemia	4 (0.0)	(0.0, 0.0)	9 (0.0)	(0.0, 0.1)
Hyperlipidaemia	6 (0.0)	(0.0, 0.1)	4 (0.0)	(0.0, 0.0)
Hypokalaemia	5 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Dyslipidaemia	4 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Gout	5 (0.0)	(0.0, 0.1)	2 (0.0)	(0.0, 0.0)
Dehydration	2 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Hyperglycaemia	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Glucose tolerance impaired	0	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Vitamin B12 deficiency	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Diabetes mellitus inadequate control	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Hypoglycaemia	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Insulin resistance	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hypertriglyceridaemia	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hypocalcaemia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hypocholesterolaemia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Obesity	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Polydipsia	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Diabetes mellitus	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Diabetic ketoacidosis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Fluid retention	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Folate deficiency	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Food intolerance	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hyperkalaemia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hypernatraemia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hyperuricaemia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hypomagnesaemia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hyponatraemia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hypovolaemia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Impaired fasting glucose	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Increased appetite	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Iron deficiency	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Lactic acidosis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	1804 (8.2)	(7.9, 8.6)	527 (2.4)	(2.2, 2.6)
Myalgia	1239 (5.7)	(5.3, 6.0)	168 (0.8)	(0.7, 0.9)
Arthralgia	268 (1.2)	(1.1, 1.4)	102 (0.5)	(0.4, 0.6)
Pain in extremity	185 (0.8)	(0.7, 1.0)	44 (0.2)	(0.1, 0.3)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Back pain	97 (0.4)	(0.4, 0.5)	85 (0.4)	(0.3, 0.5)
Neck pain	29 (0.1)	(0.1, 0.2)	33 (0.2)	(0.1, 0.2)
Muscle spasms	27 (0.1)	(0.1, 0.2)	15 (0.1)	(0.0, 0.1)
Osteoarthritis	11 (0.1)	(0.0, 0.1)	16 (0.1)	(0.0, 0.1)
Musculoskeletal stiffness	12 (0.1)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Tendonitis	10 (0.0)	(0.0, 0.1)	7 (0.0)	(0.0, 0.1)
Intervertebral disc protrusion	8 (0.0)	(0.0, 0.1)	8 (0.0)	(0.0, 0.1)
Bursitis	10 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Muscular weakness	10 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Musculoskeletal chest pain	10 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Muscle contracture	4 (0.0)	(0.0, 0.0)	6 (0.0)	(0.0, 0.1)
Rotator cuff syndrome	3 (0.0)	(0.0, 0.0)	7 (0.0)	(0.0, 0.1)
Plantar fasciitis	4 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Arthritis	3 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Exostosis	5 (0.0)	(0.0, 0.1)	2 (0.0)	(0.0, 0.0)
Flank pain	3 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Joint swelling	2 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Joint stiffness	5 (0.0)	(0.0, 0.1)	1 (0.0)	(0.0, 0.0)
Musculoskeletal discomfort	4 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Osteoporosis	0	(0.0, 0.0)	6 (0.0)	(0.0, 0.1)
Costochondritis	5 (0.0)	(0.0, 0.1)	0	(0.0, 0.0)
Joint range of motion decreased	5 (0.0)	(0.0, 0.1)	0	(0.0, 0.0)
Muscle fatigue	4 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Muscle twitching	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Musculoskeletal pain	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Spinal osteoarthritis	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Intervertebral disc degeneration	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Limb discomfort	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pain in jaw	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Synovial cyst	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Tenosynovitis stenosans	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Bone pain	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Temporomandibular joint syndrome	0	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Tendon disorder	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Torticollis	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Arthropathy	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Axillary mass	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Coccydynia	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Fibromyalgia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Groin pain	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Joint effusion	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Metatarsalgia	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Mobility decreased	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Osteitis	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Periarthritis	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Psoriatic arthropathy	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Spinal stenosis	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Spondylitis	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Synovitis	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Trigger finger	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Arthritis reactive	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Bone swelling	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dupuytren's contracture	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Intervertebral disc disorder	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Joint instability	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Muscle discomfort	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Muscle tightness	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Osteochondritis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Osteochondrosis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Osteopenia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Rhabdomyolysis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Rheumatoid arthritis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Scoliosis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Spinal disorder	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Systemic lupus erythematosus	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Tendon pain	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	32 (0.1)	(0.1, 0.2)	36 (0.2)	(0.1, 0.2)
Basal cell carcinoma	3 (0.0)	(0.0, 0.0)	8 (0.0)	(0.0, 0.1)
Lipoma	2 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Uterine leiomyoma	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Colon adenoma	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Malignant melanoma	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Breast cancer	0	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Prostate cancer	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Acrochordon	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Fibroadenoma of breast	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Squamous cell carcinoma of skin	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Adenocarcinoma gastric	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Adenocarcinoma pancreas	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Adenoma benign	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Adrenal gland cancer	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Benign breast neoplasm	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Benign pancreatic neoplasm	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Biliary cancer metastatic	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Chondroma	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Chronic myeloid leukaemia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Glomus tumour	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Infected naevus	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Intraductal proliferative breast lesion	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Invasive ductal breast carcinoma	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Leydig cell tumour of the testis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Lymphoproliferative disorder	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Malignant melanoma of eyelid	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Meningioma	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Metastases to central nervous system	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Metastases to liver	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Oropharyngeal squamous cell carcinoma	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Ovarian germ cell teratoma benign	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pancreatic carcinoma	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Penile neoplasm	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Penile squamous cell carcinoma	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Prostate cancer metastatic	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Seborrhoeic keratosis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Squamous cell carcinoma	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Thyroid cancer	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
NERVOUS SYSTEM DISORDERS	1565 (7.1)	(6.8, 7.5)	600 (2.7)	(2.5, 3.0)
Headache	1339 (6.1)	(5.8, 6.4)	424 (1.9)	(1.8, 2.1)
Dizziness	78 (0.4)	(0.3, 0.4)	60 (0.3)	(0.2, 0.4)
Paraesthesia	22 (0.1)	(0.1, 0.2)	23 (0.1)	(0.1, 0.2)
Migraine	24 (0.1)	(0.1, 0.2)	11 (0.1)	(0.0, 0.1)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Lethargy	25 (0.1)	(0.1, 0.2)	6 (0.0)	(0.0, 0.1)
Syncope	11 (0.1)	(0.0, 0.1)	11 (0.1)	(0.0, 0.1)
Sciatica	11 (0.1)	(0.0, 0.1)	10 (0.0)	(0.0, 0.1)
Dysgeusia	12 (0.1)	(0.0, 0.1)	8 (0.0)	(0.0, 0.1)
Somnolence	9 (0.0)	(0.0, 0.1)	11 (0.1)	(0.0, 0.1)
Tension headache	8 (0.0)	(0.0, 0.1)	9 (0.0)	(0.0, 0.1)
Presyncope	8 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Hypoaesthesia	5 (0.0)	(0.0, 0.1)	7 (0.0)	(0.0, 0.1)
Tremor	6 (0.0)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Burning sensation	3 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Parosmia	5 (0.0)	(0.0, 0.1)	1 (0.0)	(0.0, 0.0)
Subarachnoid haemorrhage	4 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Carpal tunnel syndrome	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Cervical radiculopathy	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Disturbance in attention	4 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hyperaesthesia	4 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Neuropathy peripheral	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Sinus headache	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Aphasia	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Cerebrovascular accident	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Dizziness postural	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Facial paralysis	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Migraine without aura	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Nerve compression	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Radiculopathy	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Amnesia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Head discomfort	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Ischaemic stroke	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Mental impairment	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Migraine with aura	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Post herpetic neuralgia	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Restless legs syndrome	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Taste disorder	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Transient ischaemic attack	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Trigeminal neuralgia	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Ageusia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Amyotrophic lateral sclerosis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Balance disorder	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cerebellar infarction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Cerebral atrophy	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Cerebral capillary telangiectasia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Cerebral infarction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Cervicogenic headache	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Depressed level of consciousness	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Diabetic neuropathy	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Drug withdrawal headache	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Dyskinesia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Dystonia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Facial paresis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Generalised tonic-clonic seizure	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Haemorrhagic stroke	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hemiplegic migraine	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hypersomnia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hypogeusia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hyposmia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Idiopathic intracranial hypertension	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Motor dysfunction	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Myoclonus	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Nystagmus	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Paraparesis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Parkinsonism	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Periodic limb movement disorder	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Peripheral sensory neuropathy	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Piriformis syndrome	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Sciatic nerve neuropathy	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Seizure	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Spinal cord compression	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Transient global amnesia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Uraemic encephalopathy	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
VIth nerve paralysis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
PREGNANCY, PUERPERIUM AND PERINATAL CONDITIONS	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Abortion spontaneous	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Abortion spontaneous incomplete	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
PRODUCT ISSUES	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Device breakage	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Device connection issue	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
PSYCHIATRIC DISORDERS	97 (0.4)	(0.4, 0.5)	75 (0.3)	(0.3, 0.4)
Anxiety	21 (0.1)	(0.1, 0.1)	24 (0.1)	(0.1, 0.2)
Insomnia	25 (0.1)	(0.1, 0.2)	8 (0.0)	(0.0, 0.1)
Depression	17 (0.1)	(0.0, 0.1)	15 (0.1)	(0.0, 0.1)
Attention deficit hyperactivity disorder	3 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Irritability	4 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Panic attack	2 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Anxiety disorder	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Disorientation	5 (0.0)	(0.0, 0.1)	0	(0.0, 0.0)
Sleep disorder	4 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Abnormal dreams	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Depressed mood	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Suicidal ideation	0	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Alcohol withdrawal syndrome	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Bipolar disorder	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Bruxism	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Mental disorder	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Mental status changes	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Nightmare	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Confusional state	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Depression suicidal	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dysphemia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Gastrointestinal somatic symptom disorder	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Generalised anxiety disorder	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Libido decreased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Libido increased	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Listless	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Mental fatigue	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Mood swings	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Panic disorder	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Panic reaction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Paranoia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Post-traumatic stress disorder	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Psychotic disorder	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Restlessness	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Schizophrenia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Stress	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Substance abuse	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Suicide attempt	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
RENAL AND URINARY DISORDERS	34 (0.2)	(0.1, 0.2)	34 (0.2)	(0.1, 0.2)
Nephrolithiasis	6 (0.0)	(0.0, 0.1)	8 (0.0)	(0.0, 0.1)
Dysuria	7 (0.0)	(0.0, 0.1)	4 (0.0)	(0.0, 0.0)
Haematuria	4 (0.0)	(0.0, 0.0)	7 (0.0)	(0.0, 0.1)
Acute kidney injury	3 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Pollakiuria	5 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Renal colic	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Urinary retention	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Bladder spasm	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Chronic kidney disease	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Costovertebral angle tenderness	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hydronephrosis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Micturition urgency	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Nocturia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Obstructive nephropathy	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Oedematous kidney	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Perinephric oedema	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Renal atrophy	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Renal cyst haemorrhage	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Subcapsular renal haematoma	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Urethral discharge	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Urinary bladder polyp	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Urinary tract obstruction	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Urine odour abnormal	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
REPRODUCTIVE SYSTEM AND BREAST DISORDERS	45 (0.2)	(0.1, 0.3)	39 (0.2)	(0.1, 0.2)
Dysmenorrhoea	4 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Erectile dysfunction	1 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Ovarian cyst	4 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pelvic pain	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Amenorrhoea	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Benign prostatic hyperplasia	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Breast pain	4 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Breast mass	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Menorrhagia	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Prostatitis	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Vaginal haemorrhage	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Breast cyst	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Genital erythema	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Haemorrhagic ovarian cyst	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Menstruation delayed	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Menstruation irregular	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Metrorrhagia	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pruritus genital	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Testicular pain	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Uterine haemorrhage	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Adenomyosis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Breast calcifications	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Breast hyperplasia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cervical dysplasia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cervical polyp	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Dysfunctional uterine bleeding	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Endometriosis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Haematospermia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Mammary duct ectasia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Menometrorrhagia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Nipple pain	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Ovarian mass	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Penile vein thrombosis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Polycystic ovaries	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Postmenopausal haemorrhage	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Premenstrual syndrome	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Prostatomegaly	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Scrotal pain	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Uterine inflammation	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Uterine prolapse	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Vaginal discharge	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Vulvovaginal pruritus	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	194 (0.9)	(0.8, 1.0)	168 (0.8)	(0.7, 0.9)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Oropharyngeal pain	36 (0.2)	(0.1, 0.2)	31 (0.1)	(0.1, 0.2)
Nasal congestion	25 (0.1)	(0.1, 0.2)	32 (0.1)	(0.1, 0.2)
Cough	23 (0.1)	(0.1, 0.2)	15 (0.1)	(0.0, 0.1)
Rhinorrhoea	20 (0.1)	(0.1, 0.1)	13 (0.1)	(0.0, 0.1)
Rhinitis allergic	12 (0.1)	(0.0, 0.1)	11 (0.1)	(0.0, 0.1)
Asthma	12 (0.1)	(0.0, 0.1)	8 (0.0)	(0.0, 0.1)
Dyspnoea	6 (0.0)	(0.0, 0.1)	10 (0.0)	(0.0, 0.1)
Throat irritation	6 (0.0)	(0.0, 0.1)	9 (0.0)	(0.0, 0.1)
Epistaxis	5 (0.0)	(0.0, 0.1)	8 (0.0)	(0.0, 0.1)
Upper-airway cough syndrome	6 (0.0)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Sinus congestion	6 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Paranasal sinus discomfort	4 (0.0)	(0.0, 0.0)	6 (0.0)	(0.0, 0.1)
Pulmonary embolism	3 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Sneezing	3 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Chronic obstructive pulmonary disease	4 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dysphonia	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Upper respiratory tract congestion	4 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Bronchospasm	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dyspnoea exertional	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Productive cough	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Respiratory tract congestion	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Sleep apnoea syndrome	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Wheezing	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Acute respiratory failure	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Asthma exercise induced	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Dry throat	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pharyngeal swelling	0	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Allergic sinusitis	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Asthmatic crisis	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Interstitial lung disease	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Oropharyngeal discomfort	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pneumonia aspiration	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Reflux laryngitis	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Snoring	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Allergic respiratory disease	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Atelectasis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Emphysema	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Haemoptysis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hiccups	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hypoxia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Lung infiltration	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Nasal discomfort	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Nasal obstruction	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Nasal polyps	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Nasal septum deviation	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Nasal turbinate hypertrophy	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Paranasal sinus hypersecretion	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pleurisy	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pleuritic pain	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pneumonitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pneumothorax	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pulmonary hypertension	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pulmonary mass	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pulmonary oedema	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pulmonary pain	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Respiratory arrest	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Rhinalgia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Rhinitis perennial	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Sinus disorder	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Tonsillar hypertrophy	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
SKIN AND SUBCUTANEOUS TISSUE DISORDERS	224 (1.0)	(0.9, 1.2)	158 (0.7)	(0.6, 0.8)
Rash	54 (0.2)	(0.2, 0.3)	41 (0.2)	(0.1, 0.3)
Pruritus	23 (0.1)	(0.1, 0.2)	18 (0.1)	(0.0, 0.1)
Hyperhidrosis	31 (0.1)	(0.1, 0.2)	9 (0.0)	(0.0, 0.1)
Dermatitis contact	14 (0.1)	(0.0, 0.1)	19 (0.1)	(0.1, 0.1)
Urticaria	15 (0.1)	(0.0, 0.1)	12 (0.1)	(0.0, 0.1)
Night sweats	17 (0.1)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Rash pruritic	7 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Erythema	9 (0.0)	(0.0, 0.1)	2 (0.0)	(0.0, 0.0)
Alopecia	5 (0.0)	(0.0, 0.1)	4 (0.0)	(0.0, 0.0)
Eczema	6 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Skin lesion	3 (0.0)	(0.0, 0.0)	6 (0.0)	(0.0, 0.1)
Rash maculo-papular	5 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Dermatitis	4 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Dermatitis allergic	3 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Angioedema	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Dermal cyst	4 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Rash erythematous	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Actinic keratosis	1 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Blister	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Ecchymosis	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Hand dermatitis	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Papule	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Psoriasis	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Rash papular	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Acne	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Alopecia areata	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Cold sweat	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Diabetic foot	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Drug eruption	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Macule	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pain of skin	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pityriasis rosea	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pruritus allergic	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Rosacea	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Seborrhoeic dermatitis	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Skin mass	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dermatitis acneiform	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Dermatitis bullous	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dermatitis exfoliative	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Dyshidrotic eczema	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Fixed eruption	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hangnail	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hidradenitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Ingrowing nail	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Livedo reticularis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Mechanical urticaria	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Onychomadesis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pityriasis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pseudofolliculitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Skin discolouration	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Skin induration	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Skin irritation	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Skin ulcer	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Stasis dermatitis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Urticaria contact	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Urticaria papular	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
SOCIAL CIRCUMSTANCES	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Menopause	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
High risk sexual behaviour	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
SURGICAL AND MEDICAL PROCEDURES	28 (0.1)	(0.1, 0.2)	19 (0.1)	(0.1, 0.1)
Tooth extraction	6 (0.0)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Dental implantation	5 (0.0)	(0.0, 0.1)	2 (0.0)	(0.0, 0.0)
Wisdom teeth removal	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Dental care	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Endodontic procedure	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Abortion induced	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Apicectomy	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Botulinum toxin injection	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cardiac pacemaker replacement	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Carpal tunnel decompression	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cataract operation	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Drug titration	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Facet joint block	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Gingival operation	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Inguinal hernia repair	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Lacrimal duct procedure	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Lens extraction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Medical device implantation	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Open reduction of fracture	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Postoperative care	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Rhinoplasty	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Sclerotherapy	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Skin neoplasm excision	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Toe operation	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Vasectomy	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Wound drainage	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
VASCULAR DISORDERS	83 (0.4)	(0.3, 0.5)	82 (0.4)	(0.3, 0.5)

Table 6. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Hypertension	42 (0.2)	(0.1, 0.3)	46 (0.2)	(0.2, 0.3)
Hot flush	7 (0.0)	(0.0, 0.1)	9 (0.0)	(0.0, 0.1)
Flushing	11 (0.1)	(0.0, 0.1)	2 (0.0)	(0.0, 0.0)
Deep vein thrombosis	5 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Haematoma	4 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Hypotension	4 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Orthostatic hypotension	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Varicose vein	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Aortic aneurysm	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Arteriosclerosis	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hypertensive crisis	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hypertensive urgency	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Accelerated hypertension	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Aortic dilatation	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Aortic stenosis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Diastolic hypertension	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Essential hypertension	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Intermittent claudication	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Lymphoedema	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Lymphorrhoea	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pallor	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Phlebolith	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Raynaud's phenomenon	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Subgaleal haematoma	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)

Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
c. Exact 2-sided CI based on the Clopper and Pearson method.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:09)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adae s130 all pd2 p3 saf

2.7.4.2.4.2.1.2.1.1. Participants with Confirmed Stable HIV Disease: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to 1 Month After Dose 2 (Phase 3, Study C4591001, Adverse Events by System Organ Class and Preferred Term)

From Dose 1 to 1 month after Dose 2, and similar to the overall population, most AEs reported for the subset of 200 HIV-positive participants from Dose 1 to 1 month after Dose 2 were in SOCs with reactogenicity events. There were few AEs reported: 26 (26%) in the BNT162b2 group and 13 (13%) in the placebo group.

- general disorders and administration site conditions (19.0% BNT162b2 vs 2.0% placebo)
- musculoskeletal and connective tissue disorders (6.0% BNT162b2 vs 3.0% placebo)
- nervous system disorders (5.0% BNT162b2 vs 0.0% placebo)
- gastrointestinal disorders (3.0% BNT162b2 vs 4.0% placebo)
- infections and infestations (2.0% BNT162b2 vs 2.0% placebo)

2.7.4.2.4.2.1.2.2. Related Adverse Events by System Organ Class and Preferred Term: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to 1 Month After Dose 2 (Phase 3, Study C4591001, Analysis of Adverse Events)

Details and outputs regarding related AEs for Phase 3 of Study C4591001 are in Module 5.3.5.1 C4591001 6-Month Update CSR Section 12.2.3.1.2.2.

From Dose 1 to 1 month after Dose 2, AEs assessed as related by the investigator during the blinded placebo-controlled follow-up period were reported by 23.9% of participants in the BNT162b2 group and 6.0% of participants in the placebo group (Table 5). Most related AEs were reactogenicity events and in the SOC of general disorders and administration site conditions, reported by 4650 (21.2%) BNT162b2 recipients and 883 (4.0%) placebo recipients. Among the BNT162b2 participants who had AEs of lymphadenopathy, 62 of 83 participants had events assessed by the investigator as related to study intervention; the majority of lymphadenopathy events occurred in the arm and neck region and were reported within 1 to 4 days after vaccination (Section 2.7.4.2.4.3.4.1.3).

2.7.4.2.4.2.1.2.3. Immediate Adverse Events: Blinded Placebo Controlled Follow-Up Period From Dose 1 to 1 Month After Dose 2 (Phase 3, Study C4591001, Analysis of Adverse Events)

Details and outputs regarding immediate AEs for Phase 3 of Study C4591001 are in Module 5.3.5.1 C4591001 6-Month Update CSR Section 12.2.3.1.2.3.

After Dose 1, participants with immediate AEs were low in frequency (≤0.5%). Most immediate AEs after Dose 1 were in the SOC of general disorders and administration site conditions, primarily injection site reactions in the BNT162b2 versus placebo groups, with injection site pain (0.3% vs 0.2%) most frequently reported.

After Dose 2, participants with immediate AEs were low in frequency (0.3%). Most immediate AEs after Dose 2 were in the SOC of general disorders and administration site conditions, primarily injection site reactions, in the BNT162b2 versus placebo groups with injection site pain (0.2% vs 0.1%) most frequently reported.

2.7.4.2.4.2.1.2.4. Severe or Life-Threatening Adverse Events: Blinded Placebo Controlled Follow-Up Period From Dose 1 to 1 Month After Dose 2 (Phase 3, Study C4591001, Analysis of Adverse Events)

Details and outputs regarding severe or life-threatening AEs for Phase 3 of Study C4591001 are in Module 5.3.5.1 C4591001 6-Month Update CSR Section 12.2.3.1.2.4.

From Dose 1 to 1 month after Dose 2, severe AEs reported during the blinded follow-up period were low in frequency, reported in 1.2% of BNT162b2 recipients and 0.7% of placebo recipients. Severe events were concentrated in the SOCs of general disorders and administration site conditions, generally reflecting terms consistent with reactogenicity, in the BNT162b2 versus placebo groups (0.4% vs 0.0%).

There were 21 participants (0.1%) in the BNT162b2 group and 26 participants (0.1%) in the placebo group who had at least 1 life-threatening AE from Dose 1 to 1 month after Dose 2. None of the life-threatening AEs were assessed by the investigator as related to study intervention.

No clinically meaningful differences were observed for severe or life-threatening AEs by age group.

2.7.4.2.4.2.2. Blinded Placebo-Controlled Follow-Up Period From Dose 1 to the Unblinding Date (Phase 3, Study C4591001)

2.7.4.2.4.2.2.1. Summary of Adverse Events: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to the Unblinding Date (Phase 3, Study C4591001)

An overview of AE incidence rates adjusted for exposure time from Dose 1 to the unblinding date for 43,847 participants during the blinded placebo-controlled follow-up (including those analyzed in Phase 2) is presented in Table 7. The IRs/100 PY for participants who reported at least 1 AE were 83.2 in the BNT162b2 group and 43.4 in the placebo group, and IRs for related AEs were 62.9 in the BNT162b2 group and 16.0 in the placebo group.

IRs of severe AEs, SAEs, and AEs leading to withdrawal were ≤4.3, ≤3.3, and ≤0.6 per 100 PY, respectively, in both groups. IRs for discontinuations because of related AEs were 0.2 per 100 PY in the BNT162b2 group and 0.1 per 100 PY in the placebo group.

From Dose 1 to the unblinding date, there were 15 (0.2 per 100 PY) deaths in the BNT162b2 group and 14 (0.2 per 100 PY) deaths in the placebo group.

In the younger age group, the IRs for of participants who reported at least 1 AE from Dose 1 to the unblinding date were 88.4 per 100 PY and 43.5 per 100 PY in the BNT162b2 and placebo groups, respectively. In the older age group, the IRs for participants who reported at least 1 AE from Dose 1 to the unblinding date were 75.7 per 100 PY and 43.3 per 100 PY in the BNT162b2 and placebo groups, respectively.

Table 7. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
Adverse Event	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Any event	6947	83.2	(81.3, 85.2)	3568	43.4	(42.0, 44.9)
Related[f]	5246	62.9	(61.2, 64.6)	1313	16.0	(15.1, 16.9)
Severe	356	4.3	(3.8, 4.7)	256	3.1	(2.7, 3.5)
Life-threatening	48	0.6	(0.4, 0.8)	54	0.7	(0.5, 0.9)
Any serious adverse event	268	3.2	(2.8, 3.6)	268	3.3	(2.9, 3.7)
Related[f]	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Severe	148	1.8	(1.5, 2.1)	156	1.9	(1.6, 2.2)
Life-threatening	48	0.6	(0.4, 0.8)	54	0.7	(0.5, 0.9)
Any adverse event leading to withdrawal	45	0.5	(0.4, 0.7)	51	0.6	(0.5, 0.8)
Related[f]	13	0.2	(0.1, 0.3)	12	0.1	(0.1, 0.3)
Severe	10	0.1	(0.1, 0.2)	12	0.1	(0.1, 0.3)
Life-threatening	15	0.2	(0.1, 0.3)	16	0.2	(0.1, 0.3)
Death	15	0.2	(0.1, 0.3)	14	0.2	(0.1, 0.3)

a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from Dose 1 to the end of blinded follow-up. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event category. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
f. Assessed by the investigator as related to investigational product.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:11)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
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Subgroup Analyses

In the BNT162b2 group, there were 674 baseline SARS-CoV-2 positive and 21102 baseline SARS-CoV-2 negative participants, and there were 705 baseline SARS-COV-2 positive and 21092 SARS-CoV-2 negative participants in the placebo group. Similar to what was observed in the overall AE analysis irrespective of baseline status (Table 7), IRs of at least 1 AE in the baseline SARS-CoV-2 positive subgroup were 70.7 per 100 PY in the BNT162b2 group and 31.9 per 100 PY in the placebo group, and IRs of at least 1 AE in the baseline SARS-CoV-2 negative subgroup were 83.6 per 100 PY in the BNT162b2 group and 43.8 per 100 PY in the placebo group. IRs of related AEs in the BNT162b2 group were 51.8 per 100 PY (baseline positive) and 63.2 per 100 PY (baseline negative). The IRs of SAEs,

related SAEs, severe SAEs, and life threatening SAEs were similar in the BNT162b2 and placebo groups, which support these events are not increased in baseline positive participants. Given the differences in exposure (2.5 vs 80.4) by baseline SARS-CoV-2 positive and negative status, respectively, direct comparisons should be interpreted with caution. See Section 2.7.4.2.4.2.2.2 for subgroup analyses of SOCs by baseline status, which supports that there is no evidence that individuals who are positive at baseline report AEs at a higher rate than those who are negative at baseline.

The IR of any AEs and related AEs were similar in those positive and negative at baseline, with the IR for any AE of 70.7 per 100 PY (95% CI: 60.7, 81.9) and 83.6 per 100 PY (95% CI: 81.7, 85.7) and for related AE of 51.8 per 100 PY (95% CI: 43.3, 61.4) and 63.2 per 100 PY (95% CI:61.5, 65.0), respectively. The IR for SAEs was 4.0 per 100 PY (95% CI: 1.9, 7.3) (baseline positive) and 3.2 per 100 PY (95% CI: 2.8, 3.6) (baseline negative), however none of the SAEs in the positive baseline group were related to BNT162b2, as assessed by the investigator. The death rate was also similar: 0.8 per 100 PY (95% CI: 0.1, 2.9) (baseline positive) and 0.2 per 100 PY (95 CI: 0.1, 0.3) (baseline negative).

IRs of at least 1 AE in the BNT162b2 group were 78.4 per 100 PY (95% CI: 74.9, 82.0; n=5684) in Hispanic/Latino and 85.4 per 100 PY (95% CI: 83.1, 87.8; n=16131) in Non-Hispanic/Non-Latino participants. The IRs of SAEs, AEs leading to withdrawal, and death were similar in the Hispanic/Latino and Non-Hispanic/Non-Latino groups. None of the SAEs were considered related to BNT162b2 in the Hispanic/Latino group.

IRs of at least 1 AE in the BNT162b2 group were lower in Black or African American participants (53.5 per 100 PY) compared with White (83.1 per 100 PY) or All Others (120.1 per 100 PY). Other IRs were similar in the groups.

IRs of at least 1 AE in the BNT162b2 group were greater in females (91.0 per 100 PY [95% CI: 88.1, 94.0] than males (76.0 per 100 PY [95% CI: 73.4, 78.6]); that cannot be accounted for by the rates in placebo for females (46.8 [95% CI: 44.7, 49.0]) and males (40.1 [95% CI: 38.2, 42.1]). IRs for related and severe AEs were also greater in females (68.6 per 100 PY [95% CI: 66.1, 71.2] and 4.9 per 100 PY [95% CI: 4.2, 5.6], respectively) than in males (57.5 per 100 PY [95% CI: 55.3, 59.8] and 3.7 per 100 PY [95% CI: 3.2, 4.3], respectively). However, life threatening AEs, SAEs, related SAEs, severe SAEs, life threatening SAEs and death IR were similar in males and females.

2.7.4.2.4.2.2.1.1. Participants with Confirmed Stable HIV Disease: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to the Unblinding Date (Phase 3, Study C4591001, Summary of Adverse Events)

The subset of 200 HIV-positive participants during the blinded placebo-controlled follow-up period showed generally similar trends as the overall population. The IRs for HIV-positive participants who reported at least 1 AE and at least 1 related AE were 95.8 per 100 PY and 62.8 per 100 PY, respectively, for the BNT162b2 group and 52.0 per 100 PY and 10.4 per 100 PY, respectively, for the placebo group. There were 2 SAEs in the BNT162b2 group (1 severe and 1 life-threatening) and 2 SAEs in the placebo group (1 life-threatening). There were 2 AEs leading to withdrawal in the BNT162b2 group (1 life-threatening) and 1 AE (life-threatening) leading to withdrawal in the placebo group. There were 2 deaths, 1 each in

the BNT162b2 and placebo groups; neither were assessed by the investigator as related to study intervention (see Section 2.7.4.2.4.3.1).

2.7.4.2.4.2.2.2. Analysis of Adverse Events: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to the Unblinding Date (Phase 3, Study C4591001)

2.7.4.2.4.2.2.2.1. Adverse Events by System Organ Class and Preferred Term: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to the Unblinding Date (Phase 3, Study C4591001, Analysis of Adverse Events)

Incidence rates of AEs from Dose 1 to the unblinding date during the blinded placebo-controlled follow-up period are presented in Table 7. Results were similar to the Dose 1 to 1 month after Dose 2 follow-up period.

From Dose 1 to the unblinding date, the most common AEs by IRs were reactogenicity events and were reported at higher IRs in the BNT162b2 group than in the placebo group:

- general disorders and administration site conditions (56.9 per 100 PY BNT162b2 vs 12.3 per 100 PY placebo)
- musculoskeletal and connective tissue disorders (22.3 per 100 PY BNT162b2 vs 7.6 per 100 PY placebo)
- nervous system disorders (19.2 per 100 PY BNT162b2 vs 7.7 per 100 PY placebo)
- gastrointestinal disorders (9.0 per 100 PY BNT162b2 vs 6.2 per 100 PY placebo)

In the younger versus older BNT162b2 age groups, AE IRs in these SOCs were:

- general disorders and administration site conditions (63.7 per 100 PY vs 46.9 per 100 PY)
- musculoskeletal and connective tissue disorders (24.6 per 100 PY vs 18.8 per 100 PY)
- nervous system disorders (21.8 per 100 PY vs 15.3 per 100 PY)
- gastrointestinal disorders (9.5 per 100 PY vs 8.2 per 100 PY)

The higher rates of AEs in these SOC is consistent with the reactogenicty analysis showing higher rates of reactogenicty in the younger age group. AEs with the highest IRs in the BNT162b2 group by PT overall were injection site pain (35.0 per 100 PY), pyrexia (18.2 per 100 PY), fatigue (17.6 per 100 PY), chills (16.4 per 100 PY), headache (16.2 per 100 PY), and myalgia (14.9 per 100 PY).

The IR of AEs in the SOC of investigations was higher in the BNT162b2 group (2.2 per 100 PY) than in the placebo group (0.6 per 100 PY) mainly due to the higher IR of body temperature increased in the BNT162b2 group (IR of 1.5 per 100 PY vs 0.2 per 100 PY for the placebo group).

Cases of night sweats and hyperhidrosis are discussed in Section 2.7.4.2.4.2.1.2.1 (most were reported within 7 days after Dose 1 or 2).

In the nervous systems disorder SOC, there were 4 participants who reported facial paralysis in the BNT162b2 group (compared to 1 in the placebo group). There was an additional case of facial paresis in the placebo group. Hence there were 4 cases of facial paralysis/paresis in the in the BNT162b2 group and 2 in the placebo group. See Section 2.7.4.2.4.3.4.1.2.

There was 1 case of COVID-19 pneumonia (reported in the BNT162b2 group) which led to death (Table 16). This participant was diagnosed based on a local COVID-19 test that was not protocol-approved and was not confirmed by a test result from the central laboratory. Therefore, this participant was not included in efficacy analyses.

Among the AEs of lymphadenopathy in the BNT162b2 group, the majority (62 of 87 participants; [0.7 per 100 PY]) were assessed by the investigator as related to study intervention. Most cases occurred in the arm and neck region and were reported within 1 to 4 days after vaccination (Section 2.7.4.2.4.3.4.1.3).

The IRs for hepatobiliary disorders was 0.3 per 100 PY and 0.2 per 100 PY in the BNT162b2 and placebo group, respectively. There were 24 participants in the BNT162b2 group who had AEs in the SOC of hepatobiliary disorders compared to 16 participants in the placebo group. Narratives for these cases are provided (see Section 2.7.4.2.4.4).

A total of 11 cases of reported PTs associated with deafness in the blinded placebo-controlled follow-up period through the unblinding date included: Deafness, Deafness unilateral, Deafness neurosensory, Hypoacusis, and Sudden hearing loss. Six participants were randomized to the BNT162b2 group (age range 43 to 65 years of age), and 5 participants were randomized to placebo (age range 36 to 74 years of age). For 1 participant in each group, onset was 19 days after Dose 1. Onset ranged from 1 to 55 days after Dose 2 for 5 participants in the BNT162b2 and ranged from 2 to 94 days after Dose 2 for 4 participants in the placebo group. The duration ranged from 9 to 155 days after AE onset with 4 events still ongoing at the time of data cutoff (13 March 2021). The toxicity grades were mostly mild (4 in the BNT162b2 group, and 2 in placebo) or moderate (1 in the BNT162b2 group, and 3 in placebo), with one being severe (BNT162b2 group). In the BNT162b2 group, 2 events were deemed related to study vaccine by the investigator. None of the reported events were SAEs.

Other events of clinical interest that were identified by the sponsor and/or from the CDC list of AESIs are discussed in Section 2.7.4.2.4.3.4.

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Any event	6947	83.2	(81.3, 85.2)	3568	43.4	(42.0, 44.9)
BLOOD AND LYMPHATIC SYSTEM DISORDERS	118	1.4	(1.2, 1.7)	32	0.4	(0.3, 0.5)
Anaemia	8	0.1	(0.0, 0.2)	10	0.1	(0.1, 0.2)
Blood loss anaemia	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Coagulopathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hypochromic anaemia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Iron deficiency anaemia	9	0.1	(0.0, 0.2)	5	0.1	(0.0, 0.1)
Leukocytosis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Leukopenia	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lymph node pain	7	0.1	(0.0, 0.2)	1	0.0	(0.0, 0.1)
Lymphadenitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lymphadenopathy	87	1.0	(0.8, 1.3)	8	0.1	(0.0, 0.2)
Lymphadenopathy mediastinal	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Lymphocytosis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lymphopenia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Microcytic anaemia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Monoclonal B-cell lymphocytosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Neutropenia	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Splenomegaly	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Thrombocytopenia	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Thrombocytosis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
CARDIAC DISORDERS	87	1.0	(0.8, 1.3)	78	0.9	(0.8, 1.2)
Acute coronary syndrome	1	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Acute left ventricular failure	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Acute myocardial infarction	6	0.1	(0.0, 0.2)	4	0.0	(0.0, 0.1)
Angina pectoris	5	0.1	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Angina unstable	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Aortic valve incompetence	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Arrhythmia	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Arrhythmia supraventricular	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Arteriosclerosis coronary artery	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Arteriospasm coronary	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Atrial fibrillation	13	0.2	(0.1, 0.3)	17	0.2	(0.1, 0.3)
Atrial flutter	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Atrioventricular block complete	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Atrioventricular block first degree	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Bradycardia	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Bundle branch block left	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Bundle branch block right	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cardiac arrest	6	0.1	(0.0, 0.2)	2	0.0	(0.0, 0.1)
Cardiac disorder	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cardiac failure acute	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cardiac failure congestive	5	0.1	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Cardio-respiratory arrest	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Cardiomegaly	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cardiovascular disorder	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Coronary artery disease	6	0.1	(0.0, 0.2)	6	0.1	(0.0, 0.2)
Coronary artery dissection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Coronary artery occlusion	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hypertensive heart disease	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Junctional ectopic tachycardia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Left atrial enlargement	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Left ventricular dysfunction	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Left ventricular hypertrophy	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Mitral valve incompetence	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Mitral valve prolapse	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Myocardial infarction	4	0.0	(0.0, 0.1)	8	0.1	(0.0, 0.2)
Myocardial ischaemia	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Myocarditis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Palpitations	7	0.1	(0.0, 0.2)	16	0.2	(0.1, 0.3)
Pericardial effusion	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pericarditis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Postural orthostatic tachycardia syndrome	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Sinus bradycardia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Sinus tachycardia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Supraventricular tachycardia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Tachyarrhythmia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Tachycardia	15	0.2	(0.1, 0.3)	7	0.1	(0.0, 0.2)
Tricuspid valve incompetence	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Ventricular arrhythmia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ventricular extrasystoles	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ventricular tachycardia	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
CONGENITAL, FAMILIAL AND GENETIC DISORDERS	4	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Arnold-Chiari malformation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Congenital bladder neck obstruction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Congenital cystic kidney disease	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Congenital ureteropelvic junction obstruction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Developmental hip dysplasia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Gastrointestinal arteriovenous malformation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Heart disease congenital	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Protein S deficiency	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Type V hyperlipidaemia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
EAR AND LABYRINTH DISORDERS	76	0.9	(0.7, 1.1)	61	0.7	(0.6, 1.0)
Allergic otitis media	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cerumen impaction	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Deafness	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Deafness neurosensory	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Deafness unilateral	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Ear discomfort	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Ear disorder	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Ear pain	13	0.2	(0.1, 0.3)	11	0.1	(0.1, 0.2)
Ear pruritus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Eustachian tube dysfunction	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hyperacusis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hypoacusis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Meniere's disease	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Otorrhoea	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Sudden hearing loss	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tinnitus	9	0.1	(0.0, 0.2)	11	0.1	(0.1, 0.2)
Tympanic membrane perforation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Vertigo	31	0.4	(0.3, 0.5)	26	0.3	(0.2, 0.5)
Vertigo positional	8	0.1	(0.0, 0.2)	4	0.0	(0.0, 0.1)
ENDOCRINE DISORDERS	17	0.2	(0.1, 0.3)	11	0.1	(0.1, 0.2)
Autoimmune thyroiditis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Goitre	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hyperprolactinaemia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hyperthyroidism	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hypogonadism	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hypothyroidism	8	0.1	(0.0, 0.2)	8	0.1	(0.0, 0.2)
Oestrogen deficiency	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Thyroid cyst	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Thyroid mass	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
EYE DISORDERS	70	0.8	(0.7, 1.1)	65	0.8	(0.6, 1.0)
Amaurosis fugax	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Angle closure glaucoma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Asthenopia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Astigmatism	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Blepharitis	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Blepharospasm	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Blindness unilateral	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cataract	7	0.1	(0.0, 0.2)	8	0.1	(0.0, 0.2)
Chalazion	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Choroidal neovascularisation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Conjunctival haemorrhage	1	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Conjunctival hyperaemia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Conjunctival oedema	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Conjunctivitis allergic	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Corneal irritation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dacryostenosis acquired	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Diabetic retinopathy	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Diplopia	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dry age-related macular degeneration	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dry eye	1	0.0	(0.0, 0.1)	6	0.1	(0.0, 0.2)
Episcleritis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Eye allergy	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Eye haemorrhage	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Eye inflammation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Eye irritation	6	0.1	(0.0, 0.2)	3	0.0	(0.0, 0.1)
Eye pain	7	0.1	(0.0, 0.2)	4	0.0	(0.0, 0.1)
Eye pruritus	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Eye swelling	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Eyelid haematoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Eyelid oedema	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Eyelid pain	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Eyelids pruritus	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Glaucoma	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Hypermetropia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Iritis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Keratitis	1	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Lacrimation increased	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Macular oedema	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ocular discomfort	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Ocular hyperaemia	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Ophthalmic vein thrombosis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Photophobia	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Retinal artery occlusion	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Retinal detachment	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Retinal tear	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Scleral discolouration	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Swelling of eyelid	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ulcerative keratitis	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Uveitis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Vision blurred	7	0.1	(0.0, 0.2)	2	0.0	(0.0, 0.1)
Visual acuity reduced	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Visual impairment	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Vitreous detachment	4	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Vitreous floaters	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
GASTROINTESTINAL DISORDERS	748	9.0	(8.3, 9.6)	511	6.2	(5.7, 6.8)
Abdominal adhesions	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Abdominal discomfort	6	0.1	(0.0, 0.2)	5	0.1	(0.0, 0.1)
Abdominal distension	7	0.1	(0.0, 0.2)	3	0.0	(0.0, 0.1)
Abdominal hernia	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Abdominal pain	23	0.3	(0.2, 0.4)	22	0.3	(0.2, 0.4)
Abdominal pain lower	3	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Abdominal pain upper	27	0.3	(0.2, 0.5)	15	0.2	(0.1, 0.3)
Abdominal rigidity	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Abnormal faeces	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Acute abdomen	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Anal pruritus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Angular cheilitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Aphthous ulcer	9	0.1	(0.0, 0.2)	3	0.0	(0.0, 0.1)
Appendix disorder	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cheilitis	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Chronic gastritis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Coeliac artery aneurysm	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Coeliac disease	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Colitis	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Colitis ischaemic	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Colitis microscopic	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Colitis ulcerative	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Constipation	10	0.1	(0.1, 0.2)	13	0.2	(0.1, 0.3)
Crohn's disease	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dental caries	10	0.1	(0.1, 0.2)	8	0.1	(0.0, 0.2)
Diarrhoea	255	3.1	(2.7, 3.5)	189	2.3	(2.0, 2.7)
Diverticular perforation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Diverticulum	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Diverticulum intestinal	1	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Diverticulum intestinal haemorrhagic	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dry mouth	2	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Duodenal obstruction	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Duodenal ulcer	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dyspepsia	15	0.2	(0.1, 0.3)	14	0.2	(0.1, 0.3)
Dysphagia	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Enterocolitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Epiploic appendagitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Eructation	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Faeces soft	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Femoral hernia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Flatulence	5	0.1	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Food poisoning	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Frequent bowel movements	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Gastric antral vascular ectasia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Gastric polyps	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Gastric ulcer	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Gastric ulcer haemorrhage	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Gastritis	5	0.1	(0.0, 0.1)	14	0.2	(0.1, 0.3)
Gastritis erosive	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Gastrointestinal disorder	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Gastrointestinal haemorrhage	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Gastrointestinal mucosa hyperaemia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Gastrointestinal pain	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Gastrointestinal sounds abnormal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Gastrooesophageal reflux disease	15	0.2	(0.1, 0.3)	23	0.3	(0.2, 0.4)
Gingival bleeding	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Gingival discomfort	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Gingival pain	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Gingival swelling	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Glossitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Glossodynia	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Haematemesis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Haematochezia	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Haemorrhoidal haemorrhage	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Haemorrhoids	5	0.1	(0.0, 0.1)	11	0.1	(0.1, 0.2)
Hiatus hernia	4	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Hypoaesthesia oral	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Hypoaesthesia teeth	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ileus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Impaired gastric emptying	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Incarcerated inguinal hernia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Inguinal hernia	1	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Internal hernia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Intestinal obstruction	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Intestinal perforation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Intestinal polyp	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Intestinal strangulation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Intra-abdominal fluid collection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Irritable bowel syndrome	5	0.1	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Large intestine perforation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Large intestine polyp	4	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Lip oedema	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lip swelling	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Loose tooth	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Mouth ulceration	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Nausea	277	3.3	(2.9, 3.7)	88	1.1	(0.9, 1.3)
Noninfective gingivitis	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Obstructive pancreatitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Odynophagia	13	0.2	(0.1, 0.3)	8	0.1	(0.0, 0.2)
Oesophageal food impaction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Oesophageal spasm	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Oesophageal ulcer	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Oesophageal varices haemorrhage	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Oesophagitis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Oral discomfort	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Oral lichenoid reaction	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Oral mucosa haematoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Oral pain	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Palatal disorder	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pancreatic cyst	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pancreatic failure	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pancreatitis	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Pancreatitis acute	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Paraesthesia oral	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Parotid duct obstruction	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Peptic ulcer	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Precancerous lesion of digestive tract	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Proctalgia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Rectal haemorrhage	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Rectal polyp	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Retching	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Retroperitoneal haematoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Salivary gland calculus	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Salivary gland mucocoele	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Small intestinal obstruction	4	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Stomatitis	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Swollen tongue	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Teething	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Tongue discolouration	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Tongue discomfort	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Tongue oedema	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tongue pruritus	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tongue ulceration	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tooth disorder	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Tooth impacted	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Toothache	26	0.3	(0.2, 0.5)	28	0.3	(0.2, 0.5)
Umbilical hernia	1	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Varices oesophageal	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Volvulus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Vomiting	68	0.8	(0.6, 1.0)	35	0.4	(0.3, 0.6)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	4748	56.9	(55.3, 58.5)	1010	12.3	(11.5, 13.1)
Adverse drug reaction	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Application site erythema	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Application site pain	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Application site pruritus	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Application site rash	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Application site reaction	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Asthenia	77	0.9	(0.7, 1.2)	25	0.3	(0.2, 0.4)
Axillary pain	14	0.2	(0.1, 0.3)	3	0.0	(0.0, 0.1)
Capsular contracture associated with breast implant	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Chest discomfort	5	0.1	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Chest pain	17	0.2	(0.1, 0.3)	16	0.2	(0.1, 0.3)
Chills	1368	16.4	(15.5, 17.3)	121	1.5	(1.2, 1.8)
Chronic fatigue syndrome	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cyst	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Death	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Discomfort	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Drug withdrawal syndrome	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Effusion	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Exercise tolerance decreased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Face oedema	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Facial pain	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Fatigue	1466	17.6	(16.7, 18.5)	379	4.6	(4.2, 5.1)
Feeling abnormal	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Feeling cold	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Feeling hot	8	0.1	(0.0, 0.2)	1	0.0	(0.0, 0.1)
Gait disturbance	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Illness	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Induration	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Inflammation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Influenza like illness	24	0.3	(0.2, 0.4)	4	0.0	(0.0, 0.1)
Injection site bruising	13	0.2	(0.1, 0.3)	18	0.2	(0.1, 0.3)
Injection site dermatitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Injection site discolouration	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Injection site discomfort	6	0.1	(0.0, 0.2)	3	0.0	(0.0, 0.1)
Injection site erythema	185	2.2	(1.9, 2.6)	29	0.4	(0.2, 0.5)
Injection site haematoma	2	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Injection site haemorrhage	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Injection site hyperaesthesia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Injection site induration	10	0.1	(0.1, 0.2)	4	0.0	(0.0, 0.1)
Injection site injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Injection site irritation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Injection site lymphadenopathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Injection site macule	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Injection site mass	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Injection site nodule	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Injection site oedema	12	0.1	(0.1, 0.3)	0	0.0	(0.0, 0.0)
Injection site pain	2917	35.0	(33.7, 36.2)	399	4.9	(4.4, 5.4)
Injection site papule	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Injection site paraesthesia	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Injection site plaque	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Injection site pruritus	38	0.5	(0.3, 0.6)	6	0.1	(0.0, 0.2)
Injection site rash	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Injection site reaction	5	0.1	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Injection site swelling	140	1.7	(1.4, 2.0)	23	0.3	(0.2, 0.4)
Injection site urticaria	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Injection site warmth	14	0.2	(0.1, 0.3)	5	0.1	(0.0, 0.1)
Injury associated with device	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Malaise	130	1.6	(1.3, 1.8)	22	0.3	(0.2, 0.4)
Mass	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Medical device pain	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Medical device site granuloma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Mucosal disorder	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Multiple organ dysfunction syndrome	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Nodule	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Non-cardiac chest pain	6	0.1	(0.0, 0.2)	6	0.1	(0.0, 0.2)
Oedema peripheral	8	0.1	(0.0, 0.2)	5	0.1	(0.0, 0.1)
Pain	628	7.5	(6.9, 8.1)	62	0.8	(0.6, 1.0)
Peripheral swelling	8	0.1	(0.0, 0.2)	6	0.1	(0.0, 0.2)
Pyrexia	1520	18.2	(17.3, 19.2)	78	0.9	(0.8, 1.2)
Sensation of foreign body	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Shoulder injury related to vaccine administration	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Sluggishness	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Sudden cardiac death	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Swelling	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Swelling face	2	0.0	(0.0, 0.1)	7	0.1	(0.0, 0.2)
Temperature intolerance	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Therapeutic response unexpected	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Thirst	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Vaccination site induration	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Vaccination site pain	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Vaccination site swelling	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Vascular stent occlusion	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Vessel puncture site bruise	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Vessel puncture site haematoma	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Vessel puncture site induration	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
HEPATOBILIARY DISORDERS	24	0.3	(0.2, 0.4)	16	0.2	(0.1, 0.3)
Bile duct stone	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Biliary colic	4	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Biliary dyskinesia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Cholecystitis	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Cholecystitis acute	4	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Cholecystitis chronic	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cholelithiasis	11	0.1	(0.1, 0.2)	5	0.1	(0.0, 0.1)
Cirrhosis alcoholic	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Gallbladder disorder	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hepatic cirrhosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hepatic cyst	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hepatic steatosis	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Hepatocellular injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Nonalcoholic fatty liver disease	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
IMMUNE SYSTEM DISORDERS	23	0.3	(0.2, 0.4)	34	0.4	(0.3, 0.6)
Allergy to animal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Allergy to arthropod bite	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Allergy to arthropod sting	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Anaphylactic reaction	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Anaphylactic shock	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Drug hypersensitivity	7	0.1	(0.0, 0.2)	7	0.1	(0.0, 0.2)
Food allergy	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Hypersensitivity	2	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Jarisch-Herxheimer reaction	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Milk allergy	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Seasonal allergy	8	0.1	(0.0, 0.2)	16	0.2	(0.1, 0.3)
INFECTIONS AND INFESTATIONS	417	5.0	(4.5, 5.5)	499	6.1	(5.6, 6.6)
Abdominal abscess	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Abscess	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Abscess intestinal	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Abscess jaw	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Abscess limb	0	0.0	(0.0, 0.0)	4	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Abscess neck	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Abscess oral	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Acarodermatitis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Acute sinusitis	1	0.0	(0.0, 0.1)	7	0.1	(0.0, 0.2)
Anal abscess	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Anal fistula infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Appendicitis	14	0.2	(0.1, 0.3)	9	0.1	(0.1, 0.2)
Appendicitis perforated	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Arthritis bacterial	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Bacterial blepharitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Bacterial infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Bacterial rhinitis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Bacterial sepsis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Bacterial vaginosis	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Bacterial vulvovaginitis	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Balanitis candida	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Bartholin's abscess	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Bartholinitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Blister infected	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Bone abscess	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Brain abscess	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Bronchitis	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
COVID-19	0	0.0	(0.0, 0.0)	13	0.2	(0.1, 0.3)
COVID-19 pneumonia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Campylobacter infection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Carbuncle	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Catheter site infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cellulitis	15	0.2	(0.1, 0.3)	20	0.2	(0.1, 0.4)
Cellulitis orbital	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Chlamydial infection	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Chronic sinusitis	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Clostridium difficile infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Complicated appendicitis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Conjunctivitis	12	0.1	(0.1, 0.3)	11	0.1	(0.1, 0.2)
Conjunctivitis bacterial	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Coxsackie viral infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cystitis	8	0.1	(0.0, 0.2)	12	0.1	(0.1, 0.3)
Dental fistula	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dermatitis infected	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Device related infection	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Diabetic foot infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Diverticulitis	10	0.1	(0.1, 0.2)	11	0.1	(0.1, 0.2)
Ear infection	11	0.1	(0.1, 0.2)	17	0.2	(0.1, 0.3)
Emphysematous cholecystitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Empyema	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Erysipelas	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Escherichia sepsis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Escherichia urinary tract infection	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Extradural abscess	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Eye infection	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Eye infection bacterial	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Folliculitis	7	0.1	(0.0, 0.2)	0	0.0	(0.0, 0.0)
Fungal infection	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Fungal skin infection	1	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Furuncle	3	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Gangrene	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Gastroenteritis	6	0.1	(0.0, 0.2)	12	0.1	(0.1, 0.3)
Gastroenteritis viral	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Gastrointestinal infection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Genital herpes	0	0.0	(0.0, 0.0)	5	0.1	(0.0, 0.1)
Genital herpes simplex	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Genitourinary chlamydia infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Gingival abscess	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Gingivitis	6	0.1	(0.0, 0.2)	5	0.1	(0.0, 0.1)
Gonorrhoea	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Groin abscess	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Helicobacter gastritis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Helicobacter infection	1	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Hepatitis A	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hepatitis C	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Herpes ophthalmic	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Herpes simplex	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Herpes virus infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Herpes zoster	18	0.2	(0.1, 0.3)	16	0.2	(0.1, 0.3)
Herpes zoster cutaneous disseminated	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Herpes zoster oticus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hordeolum	8	0.1	(0.0, 0.2)	11	0.1	(0.1, 0.2)
Impetigo	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Infected bite	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Infected dermal cyst	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Infectious mononucleosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Influenza	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Injection site abscess	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Kidney infection	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Labyrinthitis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Laryngitis	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Localised infection	2	0.0	(0.0, 0.1)	6	0.1	(0.0, 0.2)
Lyme disease	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Mastitis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Mastoiditis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Meningitis bacterial	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Nail infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Nasopharyngitis	4	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Onychomycosis	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Ophthalmic herpes zoster	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Oral candidiasis	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Oral fungal infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Oral herpes	7	0.1	(0.0, 0.2)	7	0.1	(0.0, 0.2)
Oral infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Orchitis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Osteomyelitis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Otitis externa	6	0.1	(0.0, 0.2)	7	0.1	(0.0, 0.2)
Otitis media	9	0.1	(0.0, 0.2)	8	0.1	(0.0, 0.2)
Otitis media acute	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Otitis media bacterial	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Papilloma viral infection	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Parasitic gastroenteritis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Paronychia	4	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Parotitis	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Pelvic inflammatory disease	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Penile infection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Periodontitis	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Peritoneal abscess	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Peritonitis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Peritonsillar abscess	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Pharyngitis	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Pharyngitis bacterial	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Pharyngitis streptococcal	4	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Pharyngotonsillitis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Pilonidal cyst	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pneumonia	4	0.0	(0.0, 0.1)	9	0.1	(0.1, 0.2)
Post procedural infection	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Postoperative wound infection	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Primary syphilis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pulmonary tuberculosis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Puncture site infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pustule	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pyelonephritis	6	0.1	(0.0, 0.2)	2	0.0	(0.0, 0.1)
Pyelonephritis acute	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Rash pustular	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Renal abscess	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Respiratory tract infection viral	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Rhinitis	6	0.1	(0.0, 0.2)	11	0.1	(0.1, 0.2)
Sepsis	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Septic shock	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Shigella sepsis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Sialoadenitis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Sinusitis	20	0.2	(0.1, 0.4)	31	0.4	(0.3, 0.5)
Sinusitis bacterial	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Skin bacterial infection	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Skin infection	3	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Soft tissue infection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Staphylococcal infection	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Staphylococcal sepsis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Subacute endocarditis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Subcutaneous abscess	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Suspected COVID-19	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Syphilis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Tinea cruris	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Tinea infection	0	0.0	(0.0, 0.0)	3	0.0	(0.0, 0.1)
Tinea versicolour	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Tonsillitis	0	0.0	(0.0, 0.0)	6	0.1	(0.0, 0.2)
Tonsillitis bacterial	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tooth abscess	12	0.1	(0.1, 0.3)	6	0.1	(0.0, 0.2)
Tooth infection	26	0.3	(0.2, 0.5)	33	0.4	(0.3, 0.6)
Trichomoniasis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Upper respiratory tract infection	10	0.1	(0.1, 0.2)	9	0.1	(0.1, 0.2)
Ureaplasma infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Urinary tract infection	74	0.9	(0.7, 1.1)	82	1.0	(0.8, 1.2)
Urosepsis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Vaginal infection	0	0.0	(0.0, 0.0)	7	0.1	(0.0, 0.2)
Varicella	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Viral infection	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Viral upper respiratory tract infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Vulval abscess	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Vulvovaginal candidiasis	4	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Vulvovaginal mycotic infection	6	0.1	(0.0, 0.2)	10	0.1	(0.1, 0.2)
Vulvovaginitis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Wound infection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	294	3.5	(3.1, 3.9)	378	4.6	(4.1, 5.1)
Administration related reaction	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Alcohol poisoning	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Anaemia postoperative	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Animal bite	3	0.0	(0.0, 0.1)	7	0.1	(0.0, 0.2)
Ankle fracture	6	0.1	(0.0, 0.2)	5	0.1	(0.0, 0.1)
Arthropod bite	12	0.1	(0.1, 0.3)	7	0.1	(0.0, 0.2)
Arthropod sting	3	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Back injury	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Bone contusion	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Bone fissure	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Brain contusion	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Burn oral cavity	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Burns first degree	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Burns second degree	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cartilage injury	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cervical vertebral fracture	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Chest injury	5	0.1	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Chillblains	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Clavicle fracture	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Colon injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Concussion	6	0.1	(0.0, 0.2)	5	0.1	(0.0, 0.1)
Contusion	14	0.2	(0.1, 0.3)	22	0.3	(0.2, 0.4)
Corneal abrasion	4	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Craniocerebral injury	2	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Delayed recovery from anaesthesia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dental restoration failure	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Ear canal abrasion	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Ear injury	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Epicondylitis	1	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Exposure during pregnancy	30	0.4	(0.2, 0.5)	42	0.5	(0.4, 0.7)
Exposure to communicable disease	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Eye contusion	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Eyelid injury	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Facial bones fracture	5	0.1	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Fall	62	0.7	(0.6, 1.0)	76	0.9	(0.7, 1.2)
Femur fracture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Fibula fracture	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Flail chest	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Foot fracture	7	0.1	(0.0, 0.2)	11	0.1	(0.1, 0.2)
Forearm fracture	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Foreign body	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Foreign body aspiration	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Foreign body in eye	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Fractured sacrum	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hand fracture	5	0.1	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Head injury	4	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Heat stroke	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hip fracture	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Humerus fracture	0	0.0	(0.0, 0.0)	5	0.1	(0.0, 0.1)
Injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Jaw fracture	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Joint dislocation	8	0.1	(0.0, 0.2)	5	0.1	(0.0, 0.1)
Joint injury	6	0.1	(0.0, 0.2)	11	0.1	(0.1, 0.2)
Ligament injury	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Ligament rupture	2	0.0	(0.0, 0.1)	10	0.1	(0.1, 0.2)
Ligament sprain	21	0.3	(0.2, 0.4)	27	0.3	(0.2, 0.5)
Limb fracture	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Limb injury	8	0.1	(0.0, 0.2)	16	0.2	(0.1, 0.3)
Limb traumatic amputation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lip injury	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lower limb fracture	0	0.0	(0.0, 0.0)	3	0.0	(0.0, 0.1)
Lumbar vertebral fracture	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Maternal exposure before pregnancy	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Maternal exposure during breast feeding	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Maternal exposure during pregnancy	4	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Meniscus injury	6	0.1	(0.0, 0.2)	10	0.1	(0.1, 0.2)
Mouth injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Multiple injuries	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Muscle contusion	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Muscle injury	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Muscle rupture	1	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Muscle strain	18	0.2	(0.1, 0.3)	17	0.2	(0.1, 0.3)
Overdose	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Patella fracture	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Pelvic fracture	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Penis injury	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pharyngeal perforation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Post concussion syndrome	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Post procedural discomfort	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Post procedural haematoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Post procedural haemorrhage	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Post procedural swelling	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Post-traumatic pain	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Postoperative ileus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Procedural dizziness	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Procedural haemorrhage	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Procedural hypotension	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Procedural pain	9	0.1	(0.0, 0.2)	5	0.1	(0.0, 0.1)
Radius fracture	2	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Respiratory fume inhalation disorder	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Rib fracture	3	0.0	(0.0, 0.1)	8	0.1	(0.0, 0.2)
Road traffic accident	16	0.2	(0.1, 0.3)	20	0.2	(0.1, 0.4)
Scapula fracture	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Scar	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Skin abrasion	8	0.1	(0.0, 0.2)	15	0.2	(0.1, 0.3)
Skin injury	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Skin laceration	18	0.2	(0.1, 0.3)	24	0.3	(0.2, 0.4)
Skull fracture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Soft tissue injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Spinal column injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Spinal compression fracture	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Spinal cord injury cervical	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Spinal fracture	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Stab wound	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Stoma site rash	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Stress fracture	1	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Subdural haematoma	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Sunburn	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tendon injury	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Tendon rupture	0	0.0	(0.0, 0.0)	6	0.1	(0.0, 0.2)
Thermal burn	3	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Tibia fracture	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Tooth fracture	10	0.1	(0.1, 0.2)	10	0.1	(0.1, 0.2)
Tooth injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Toxicity to various agents	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Traumatic haemothorax	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Traumatic intracranial haemorrhage	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ulna fracture	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Upper limb fracture	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Vaccination complication	5	0.1	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Venom poisoning	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Vulvovaginal injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Wound	2	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Wrist fracture	3	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
INVESTIGATIONS	183	2.2	(1.9, 2.5)	51	0.6	(0.5, 0.8)
Alanine aminotransferase increased	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Aspartate aminotransferase increased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Autoantibody positive	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Biopsy breast normal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Blood chloride decreased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Blood cholesterol increased	5	0.1	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Blood creatinine decreased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Blood creatinine increased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Blood glucose abnormal	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Blood glucose fluctuation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Blood glucose increased	8	0.1	(0.0, 0.2)	1	0.0	(0.0, 0.1)
Blood immunoglobulin E increased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Blood iron decreased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Blood potassium decreased	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Blood pressure abnormal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Blood pressure diastolic increased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Blood pressure increased	6	0.1	(0.0, 0.2)	10	0.1	(0.1, 0.2)
Blood pressure systolic increased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Blood sodium decreased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Blood testosterone decreased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Blood testosterone increased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Blood thyroid stimulating hormone increased	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Blood triglycerides increased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Blood urea increased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Body temperature	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Body temperature decreased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Body temperature increased	121	1.5	(1.2, 1.7)	13	0.2	(0.1, 0.3)
C-reactive protein	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cardiac stress test abnormal	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Electrocardiogram QT prolonged	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Fractional exhaled nitric oxide increased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Glomerular filtration rate decreased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Haemoglobin decreased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Heart rate increased	4	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Heart rate irregular	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hepatic enzyme increased	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Hepatitis C antibody positive	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Herpes simplex test positive	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
High density lipoprotein increased	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Intraocular pressure increased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Liver function test increased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Low density lipoprotein increased	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Lymphocyte count decreased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Mammogram abnormal	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Mean cell haemoglobin decreased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Mean cell volume decreased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Mean cell volume increased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Monocyte count increased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Platelet count decreased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Platelet count increased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Prostatic specific antigen increased	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Red blood cell morphology abnormal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Respiratory rate increased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
SARS-CoV-2 antibody test positive	4	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Serum ferritin decreased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Thyroid function test abnormal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Troponin increased	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Urine ketone body present	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Weight decreased	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Weight increased	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
White blood cell count increased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
White blood cells urine positive	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
METABOLISM AND NUTRITION DISORDERS	129	1.5	(1.3, 1.8)	117	1.4	(1.2, 1.7)
Decreased appetite	39	0.5	(0.3, 0.6)	9	0.1	(0.1, 0.2)
Dehydration	3	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Diabetes mellitus	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Diabetes mellitus inadequate control	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Diabetic ketoacidosis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Dyslipidaemia	7	0.1	(0.0, 0.2)	8	0.1	(0.0, 0.2)
Fluid retention	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Folate deficiency	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Food intolerance	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Glucose tolerance impaired	3	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Gout	5	0.1	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Hypercholesterolaemia	7	0.1	(0.0, 0.2)	21	0.3	(0.2, 0.4)
Hyperglycaemia	2	0.0	(0.0, 0.1)	6	0.1	(0.0, 0.2)
Hyperkalaemia	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hyperlipidaemia	9	0.1	(0.0, 0.2)	11	0.1	(0.1, 0.2)
Hypernatraemia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hypertriglyceridaemia	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hyperuricaemia	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hypocalcaemia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hypocholesterolaemia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hypoglycaemia	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Hypokalaemia	8	0.1	(0.0, 0.2)	8	0.1	(0.0, 0.2)
Hypomagnesaemia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hyponatraemia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hypovolaemia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Impaired fasting glucose	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Increased appetite	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Insulin resistance	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Iron deficiency	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Lactic acidosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Obesity	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Polydipsia	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Type 2 diabetes mellitus	14	0.2	(0.1, 0.3)	13	0.2	(0.1, 0.3)
Vitamin B12 deficiency	1	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Vitamin D deficiency	12	0.1	(0.1, 0.3)	10	0.1	(0.1, 0.2)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	1859	22.3	(21.3, 23.3)	622	7.6	(7.0, 8.2)
Arthralgia	281	3.4	(3.0, 3.8)	122	1.5	(1.2, 1.8)
Arthritis	6	0.1	(0.0, 0.2)	6	0.1	(0.0, 0.2)
Arthritis reactive	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Arthropathy	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Axillary mass	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Back pain	104	1.2	(1.0, 1.5)	99	1.2	(1.0, 1.5)
Bone disorder	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Bone pain	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Bone swelling	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Bursitis	11	0.1	(0.1, 0.2)	5	0.1	(0.0, 0.1)
Coccydynia	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Costochondritis	5	0.1	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dupuytren's contracture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Exostosis	5	0.1	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Fibromyalgia	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Flank pain	3	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Groin pain	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Intervertebral disc compression	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Intervertebral disc degeneration	4	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Intervertebral disc disorder	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Intervertebral disc protrusion	10	0.1	(0.1, 0.2)	11	0.1	(0.1, 0.2)
Joint effusion	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Joint instability	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Joint range of motion decreased	5	0.1	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Joint stiffness	5	0.1	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Joint swelling	2	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Limb discomfort	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Metatarsalgia	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Mobility decreased	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Muscle contracture	4	0.0	(0.0, 0.1)	8	0.1	(0.0, 0.2)
Muscle discomfort	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Muscle fatigue	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Muscle spasms	29	0.3	(0.2, 0.5)	16	0.2	(0.1, 0.3)
Muscle tightness	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Muscle twitching	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Muscular weakness	13	0.2	(0.1, 0.3)	3	0.0	(0.0, 0.1)
Musculoskeletal chest pain	11	0.1	(0.1, 0.2)	7	0.1	(0.0, 0.2)
Musculoskeletal discomfort	4	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Musculoskeletal pain	2	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Musculoskeletal stiffness	12	0.1	(0.1, 0.3)	6	0.1	(0.0, 0.2)
Myalgia	1245	14.9	(14.1, 15.8)	170	2.1	(1.8, 2.4)
Myalgia intercostal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Neck pain	34	0.4	(0.3, 0.6)	36	0.4	(0.3, 0.6)
Osteitis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Osteoarthritis	15	0.2	(0.1, 0.3)	23	0.3	(0.2, 0.4)
Osteochondritis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Osteochondrosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Osteopenia	1	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Osteoporosis	0	0.0	(0.0, 0.0)	6	0.1	(0.0, 0.2)
Pain in extremity	189	2.3	(2.0, 2.6)	52	0.6	(0.5, 0.8)
Pain in jaw	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Patellofemoral pain syndrome	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Periarthritis	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Plantar fasciitis	4	0.0	(0.0, 0.1)	8	0.1	(0.0, 0.2)
Polyarthritis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Psoriatic arthropathy	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Rhabdomyolysis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Rheumatoid arthritis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Rotator cuff syndrome	5	0.1	(0.0, 0.1)	13	0.2	(0.1, 0.3)
Scoliosis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Sinus tarsi syndrome	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Spinal disorder	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Spinal osteoarthritis	2	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Spinal stenosis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Spondylitis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Spondylolisthesis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Synovial cyst	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Synovitis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Systemic lupus erythematosus	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Temporomandibular joint syndrome	1	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Tendon disorder	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tendon pain	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tendonitis	12	0.1	(0.1, 0.3)	10	0.1	(0.1, 0.2)
Tenosynovitis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Tenosynovitis stenosans	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Torticollis	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Trigger finger	2	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	67	0.8	(0.6, 1.0)	69	0.8	(0.7, 1.1)
Acrochordon	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Acute myeloid leukaemia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Adenocarcinoma gastric	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Adenocarcinoma of colon	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Adenocarcinoma pancreas	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Adenoma benign	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Adrenal gland cancer	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
B-cell lymphoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Basal cell carcinoma	3	0.0	(0.0, 0.1)	11	0.1	(0.1, 0.2)
Benign breast neoplasm	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Benign hydatidiform mole	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Benign pancreatic neoplasm	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Benign uterine neoplasm	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Biliary cancer metastatic	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Bladder cancer	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Borderline serous tumour of ovary	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Breast cancer	2	0.0	(0.0, 0.1)	7	0.1	(0.0, 0.2)
Breast cancer in situ	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Breast cancer stage I	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Carcinoid tumour of the stomach	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Chondroma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Chronic myeloid leukaemia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Clear cell renal cell carcinoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Colon adenoma	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Fibroadenoma of breast	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Gallbladder cancer stage II	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Gastric cancer	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Glomus tumour	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Haemangioma of skin	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Infected naevus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Intraductal proliferative breast lesion	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Invasive ductal breast carcinoma	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Leydig cell tumour of the testis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lipoma	5	0.1	(0.0, 0.1)	7	0.1	(0.0, 0.2)
Lobular breast carcinoma in situ	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Lung adenocarcinoma	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Lung cancer metastatic	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lymphoma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lymphoproliferative disorder	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Malignant melanoma	3	0.0	(0.0, 0.1)	6	0.1	(0.0, 0.2)
Malignant melanoma of eyelid	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Meningioma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Meningioma benign	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Metastases to central nervous system	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Metastases to liver	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Metastases to lymph nodes	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Non-Hodgkin's lymphoma recurrent	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Non-small cell lung cancer stage IV	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Oropharyngeal cancer recurrent	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Oropharyngeal squamous cell carcinoma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ovarian germ cell teratoma benign	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pancreatic carcinoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Papillary serous endometrial carcinoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Papillary thyroid cancer	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Penile neoplasm	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Penile squamous cell carcinoma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Plasma cell myeloma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Polycythaemia vera	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Prostate cancer	5	0.1	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Prostate cancer metastatic	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Seborrhoeic keratosis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Skin cancer	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Skin papilloma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Squamous cell carcinoma	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Squamous cell carcinoma of head and neck	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Squamous cell carcinoma of skin	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Teratoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Thyroid cancer	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tonsil cancer	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Transitional cell carcinoma	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Uterine cancer	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Uterine leiomyoma	2	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
NERVOUS SYSTEM DISORDERS	1602	19.2	(18.3, 20.2)	635	7.7	(7.1, 8.4)
Ageusia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Amnesia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Amyotrophic lateral sclerosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Aphasia	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Balance disorder	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Burning sensation	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Carpal tunnel syndrome	2	0.0	(0.0, 0.1)	6	0.1	(0.0, 0.2)
Cerebellar infarction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cerebral atrophy	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cerebral capillary telangiectasia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cerebral infarction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cerebrovascular accident	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Cervical radiculopathy	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Cervicogenic headache	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dementia Alzheimer's type	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Depressed level of consciousness	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Diabetic neuropathy	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Disturbance in attention	4	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dizziness	81	1.0	(0.8, 1.2)	64	0.8	(0.6, 1.0)
Dizziness postural	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Drug withdrawal headache	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dysgeusia	12	0.1	(0.1, 0.3)	8	0.1	(0.0, 0.2)
Dyskinesia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dystonia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Facial paralysis	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Facial paresis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Generalised tonic-clonic seizure	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Guillain-Barre syndrome	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Haemorrhagic stroke	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Head discomfort	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Headache	1348	16.2	(15.3, 17.0)	429	5.2	(4.7, 5.7)
Hemiparaesthesia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hemiplegic migraine	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hyperaesthesia	4	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Hypersomnia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hypoaesthesia	5	0.1	(0.0, 0.1)	8	0.1	(0.0, 0.2)
Hypogeusia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hyposmia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Idiopathic intracranial hypertension	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Intraventricular haemorrhage	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Ischaemic stroke	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Lethargy	25	0.3	(0.2, 0.4)	6	0.1	(0.0, 0.2)
Mental impairment	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Migraine	26	0.3	(0.2, 0.5)	13	0.2	(0.1, 0.3)
Migraine with aura	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Migraine without aura	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Morton's neuralgia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Motor dysfunction	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Muscle spasticity	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Myoclonus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Nerve compression	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Neuralgia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Neuritis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Neuropathy peripheral	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Nystagmus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Optic neuritis	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Paraesthesia	23	0.3	(0.2, 0.4)	24	0.3	(0.2, 0.4)
Paraparesis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Parkinsonism	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Parosmia	5	0.1	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Periodic limb movement disorder	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Peripheral nerve lesion	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Peripheral sensory neuropathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Piriformis syndrome	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Post herpetic neuralgia	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Presyncope	8	0.1	(0.0, 0.2)	5	0.1	(0.0, 0.1)
Radiculopathy	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Restless legs syndrome	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Sciatic nerve neuropathy	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Sciatica	13	0.2	(0.1, 0.3)	11	0.1	(0.1, 0.2)
Seizure	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Sinus headache	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Somnolence	9	0.1	(0.0, 0.2)	11	0.1	(0.1, 0.2)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Spinal cord compression	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Subarachnoid haemorrhage	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Syncope	14	0.2	(0.1, 0.3)	13	0.2	(0.1, 0.3)
Taste disorder	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tension headache	11	0.1	(0.1, 0.2)	9	0.1	(0.1, 0.2)
Thoracic radiculopathy	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Toxic encephalopathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Transient global amnesia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Transient ischaemic attack	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Tremor	9	0.1	(0.0, 0.2)	6	0.1	(0.0, 0.2)
Trigeminal neuralgia	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Uraemic encephalopathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
VIth nerve paralysis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
PREGNANCY, PUERPERIUM AND PERINATAL CONDITIONS	2	0.0	(0.0, 0.1)	6	0.1	(0.0, 0.2)
Abortion incomplete	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Abortion spontaneous	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Abortion spontaneous incomplete	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Retained products of conception	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
PRODUCT ISSUES	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Device breakage	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Device connection issue	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
PSYCHIATRIC DISORDERS	112	1.3	(1.1, 1.6)	108	1.3	(1.1, 1.6)
Abnormal dreams	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Adjustment disorder with depressed mood	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Alcohol abuse	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Alcohol withdrawal syndrome	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Anxiety	27	0.3	(0.2, 0.5)	31	0.4	(0.3, 0.5)
Anxiety disorder	4	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Attention deficit hyperactivity disorder	5	0.1	(0.0, 0.1)	8	0.1	(0.0, 0.2)
Bipolar disorder	0	0.0	(0.0, 0.0)	3	0.0	(0.0, 0.1)
Bruxism	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Confusional state	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cyclothymic disorder	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Depressed mood	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Depression	23	0.3	(0.2, 0.4)	26	0.3	(0.2, 0.5)
Depression suicidal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Disorientation	5	0.1	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Dysphemia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Gastrointestinal somatic symptom disorder	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Generalised anxiety disorder	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Insomnia	25	0.3	(0.2, 0.4)	13	0.2	(0.1, 0.3)
Irritability	4	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Libido decreased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Libido increased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Listless	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Major depression	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Mental disorder	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Mental fatigue	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Mental status changes	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Mood swings	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Nightmare	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Panic attack	2	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Panic disorder	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Panic reaction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Paranoia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Post-traumatic stress disorder	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Psychotic disorder	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Restlessness	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Schizophrenia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Sleep disorder	4	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Stress	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Substance abuse	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Suicidal ideation	0	0.0	(0.0, 0.0)	3	0.0	(0.0, 0.1)
Suicide attempt	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
RENAL AND URINARY DISORDERS	52	0.6	(0.5, 0.8)	48	0.6	(0.4, 0.8)
Acute kidney injury	6	0.1	(0.0, 0.2)	5	0.1	(0.0, 0.1)
Bladder spasm	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Chronic kidney disease	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Costovertebral angle tenderness	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dysuria	8	0.1	(0.0, 0.2)	5	0.1	(0.0, 0.1)
Haematuria	5	0.1	(0.0, 0.1)	7	0.1	(0.0, 0.2)
Hydronephrosis	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Hypertonic bladder	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Micturition urgency	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Nephrolithiasis	14	0.2	(0.1, 0.3)	15	0.2	(0.1, 0.3)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Nocturia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Obstructive nephropathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Oedematous kidney	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Perinephric oedema	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pollakiuria	5	0.1	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Polyuria	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Renal atrophy	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Renal colic	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Renal cyst	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Renal cyst haemorrhage	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Renal failure	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Subcapsular renal haematoma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ureterolithiasis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Urethral discharge	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Urethral stenosis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Urinary bladder polyp	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Urinary retention	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Urinary tract obstruction	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Urine odour abnormal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Vesical fistula	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
REPRODUCTIVE SYSTEM AND BREAST DISORDERS	50	0.6	(0.4, 0.8)	58	0.7	(0.5, 0.9)
Adenomyosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Adnexal torsion	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Amenorrhoea	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Benign prostatic hyperplasia	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Breast calcifications	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Breast cyst	0	0.0	(0.0, 0.0)	3	0.0	(0.0, 0.1)
Breast hyperplasia	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Breast mass	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Breast pain	4	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cervical dysplasia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cervical polyp	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dysfunctional uterine bleeding	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dysmenorrhoea	4	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Ejaculation disorder	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Endometriosis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Erectile dysfunction	1	0.0	(0.0, 0.1)	6	0.1	(0.0, 0.2)
Genital erythema	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Haematospermia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Haemorrhagic ovarian cyst	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Mammary duct ectasia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Menometrorrhagia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Menorrhagia	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Menstruation delayed	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Menstruation irregular	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Metrorrhagia	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Nipple pain	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Ovarian cyst	5	0.1	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Ovarian mass	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pelvic pain	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Penile vein thrombosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Polycystic ovaries	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Postmenopausal haemorrhage	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Premenstrual syndrome	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Prostatitis	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Prostatomegaly	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Pruritus genital	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Rectocele	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Scrotal pain	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Testicular pain	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Testicular torsion	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Uterine haemorrhage	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Uterine inflammation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Uterine prolapse	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Vaginal discharge	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Vaginal haemorrhage	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Vaginal prolapse	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Vulvovaginal pruritus	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	224	2.7	(2.3, 3.1)	195	2.4	(2.1, 2.7)
Acute respiratory failure	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Allergic respiratory disease	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Allergic sinusitis	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Asthma	15	0.2	(0.1, 0.3)	9	0.1	(0.1, 0.2)
Asthma exercise induced	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Asthmatic crisis	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Atelectasis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Bronchospasm	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Chronic obstructive pulmonary disease	6	0.1	(0.0, 0.2)	1	0.0	(0.0, 0.1)
Cough	23	0.3	(0.2, 0.4)	15	0.2	(0.1, 0.3)
Dry throat	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dysphonia	2	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Dyspnoea	6	0.1	(0.0, 0.2)	11	0.1	(0.1, 0.2)
Dyspnoea exertional	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Emphysema	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Epistaxis	6	0.1	(0.0, 0.2)	9	0.1	(0.1, 0.2)
Haemoptysis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hiccups	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hypoxia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Interstitial lung disease	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Lung infiltration	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Nasal congestion	30	0.4	(0.2, 0.5)	33	0.4	(0.3, 0.6)
Nasal discomfort	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Nasal obstruction	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Nasal polyps	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Nasal septum deviation	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Nasal turbinate hypertrophy	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Nasal valve collapse	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Nasopharyngeal polyp	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Oropharyngeal discomfort	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Oropharyngeal pain	36	0.4	(0.3, 0.6)	31	0.4	(0.3, 0.5)
Paranasal sinus discomfort	4	0.0	(0.0, 0.1)	6	0.1	(0.0, 0.2)
Paranasal sinus hypersecretion	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pharyngeal lesion	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pharyngeal swelling	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Pleurisy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pleuritic pain	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pneumonia aspiration	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Pneumonitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pneumothorax	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Productive cough	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Pulmonary embolism	8	0.1	(0.0, 0.2)	8	0.1	(0.0, 0.2)
Pulmonary hypertension	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pulmonary mass	0	0.0	(0.0, 0.0)	3	0.0	(0.0, 0.1)
Pulmonary oedema	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pulmonary pain	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Reflux laryngitis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Respiratory arrest	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Respiratory failure	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Respiratory tract congestion	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Rhinalgia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Rhinitis allergic	13	0.2	(0.1, 0.3)	14	0.2	(0.1, 0.3)
Rhinitis perennial	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Rhinorrhoea	21	0.3	(0.2, 0.4)	13	0.2	(0.1, 0.3)
Sinus congestion	6	0.1	(0.0, 0.2)	7	0.1	(0.0, 0.2)
Sinus disorder	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Sleep apnoea syndrome	6	0.1	(0.0, 0.2)	2	0.0	(0.0, 0.1)
Sneezing	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Snoring	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Sputum discoloured	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Throat irritation	7	0.1	(0.0, 0.2)	9	0.1	(0.1, 0.2)
Tonsillar hypertrophy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Upper respiratory tract congestion	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Upper-airway cough syndrome	8	0.1	(0.0, 0.2)	6	0.1	(0.0, 0.2)
Wheezing	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
SKIN AND SUBCUTANEOUS TISSUE DISORDERS	254	3.0	(2.7, 3.4)	194	2.4	(2.0, 2.7)
Acne	4	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Acne cystic	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Actinic keratosis	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Alopecia	5	0.1	(0.0, 0.1)	6	0.1	(0.0, 0.2)
Alopecia areata	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Angioedema	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Blister	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Cold sweat	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dermal cyst	5	0.1	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Dermatitis	5	0.1	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Dermatitis acneiform	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dermatitis allergic	3	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Dermatitis atopic	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dermatitis bullous	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dermatitis contact	14	0.2	(0.1, 0.3)	21	0.3	(0.2, 0.4)
Dermatitis exfoliative	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Diabetic foot	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Drug eruption	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Dry skin	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dyshidrotic eczema	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Ecchymosis	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Eczema	7	0.1	(0.0, 0.2)	3	0.0	(0.0, 0.1)
Erythema	9	0.1	(0.0, 0.2)	2	0.0	(0.0, 0.1)
Erythema nodosum	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Fixed eruption	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hand dermatitis	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Hangnail	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hidradenitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hyperhidrosis	31	0.4	(0.3, 0.5)	9	0.1	(0.1, 0.2)
Ingrowing nail	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Intertrigo	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lipodystrophy acquired	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Livedo reticularis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Macule	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Mechanical urticaria	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Night sweats	17	0.2	(0.1, 0.3)	3	0.0	(0.0, 0.1)
Onycholysis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Onychomadesis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pain of skin	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Papule	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Peau d'orange	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Perioral dermatitis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pityriasis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pityriasis rosea	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Pruritus	24	0.3	(0.2, 0.4)	20	0.2	(0.1, 0.4)
Pruritus allergic	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Pseudofolliculitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Psoriasis	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Purpura	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Rash	62	0.7	(0.6, 1.0)	52	0.6	(0.5, 0.8)
Rash erythematous	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Rash maculo-papular	7	0.1	(0.0, 0.2)	4	0.0	(0.0, 0.1)
Rash papular	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Rash pruritic	8	0.1	(0.0, 0.2)	6	0.1	(0.0, 0.2)
Rosacea	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Seborrhoeic dermatitis	0	0.0	(0.0, 0.0)	3	0.0	(0.0, 0.1)
Skin discolouration	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Skin induration	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Skin irritation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Skin lesion	3	0.0	(0.0, 0.1)	8	0.1	(0.0, 0.2)
Skin mass	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Skin ulcer	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Stasis dermatitis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Transient acantholytic dermatosis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Urticaria	18	0.2	(0.1, 0.3)	15	0.2	(0.1, 0.3)
Urticaria contact	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Urticaria papular	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
SOCIAL CIRCUMSTANCES	5	0.1	(0.0, 0.1)	0	0.0	(0.0, 0.0)
High risk sexual behaviour	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Menopause	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Miscarriage of partner	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
SURGICAL AND MEDICAL PROCEDURES	33	0.4	(0.3, 0.6)	26	0.3	(0.2, 0.5)
Abortion induced	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Apicectomy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Botulinum toxin injection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cardiac pacemaker replacement	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cardioversion	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Carpal tunnel decompression	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cataract operation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Chondroplasty	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dental care	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Dental implantation	5	0.1	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Drug titration	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Endodontic procedure	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Facet joint block	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Finger amputation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Gingival operation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Inguinal hernia repair	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lacrimal duct procedure	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lens extraction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Mammoplasty	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Medical device implantation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Nasal polypectomy	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Open reduction of fracture	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Postoperative care	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Retinal operation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Rhinoplasty	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Rotator cuff repair	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Sclerotherapy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Skin neoplasm excision	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Toe amputation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Toe operation	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Tonsillectomy	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Tooth extraction	6	0.1	(0.0, 0.2)	6	0.1	(0.0, 0.2)
Vasectomy	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Wisdom teeth removal	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Wound drainage	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
VASCULAR DISORDERS	112	1.3	(1.1, 1.6)	118	1.4	(1.2, 1.7)
Accelerated hypertension	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Aortic aneurysm	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Aortic dilatation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Aortic rupture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Aortic stenosis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Arteriosclerosis	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Blood pressure inadequately controlled	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Deep vein thrombosis	7	0.1	(0.0, 0.2)	7	0.1	(0.0, 0.2)
Diastolic hypertension	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Essential hypertension	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Flushing	11	0.1	(0.1, 0.2)	2	0.0	(0.0, 0.1)
Haematoma	4	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Hot flush	7	0.1	(0.0, 0.2)	9	0.1	(0.1, 0.2)
Hypertension	61	0.7	(0.6, 0.9)	68	0.8	(0.6, 1.0)
Hypertensive crisis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hypertensive emergency	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hypertensive urgency	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hypotension	6	0.1	(0.0, 0.2)	3	0.0	(0.0, 0.1)
Intermittent claudication	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lymphoedema	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Lymphorrhoea	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Orthostatic hypotension	1	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Pallor	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Peripheral arterial occlusive disease	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Peripheral artery stenosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 8. Incidence Rates of at Least 1 Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Phlebitis superficial	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Phlebolith	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Raynaud's phenomenon	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Subgaleal haematoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Systolic hypertension	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Thrombophlebitis superficial	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Varicose vein	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Venous thrombosis limb	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from Dose 1 to the end of blinded follow-up. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:11)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adae s131 all exp p3 saf

Subgroup Analyses

In the baseline SARS-CoV-2 positive subgroup, differences in IRs in the BNT162b2 (70.7 per 100 PY) and placebo (31.9 per 100 PY) groups were due to reactogenicity events (chills, fatigue, injection site pain, pyrexia, myalgia, and headache).

In the baseline SARS-CoV-2 negative subgroup, differences in IRs in the BNT162b2 (83.6 per 100 PY) and placebo (43.8 per 100 PY) groups were due to reactogenicity events (diarrhea, vomiting, chill, fatigue, injection site reactions [pain, erythema, swelling], pyrexia, arthralgia, myalgia, and headache) as well as other AEs (lymphadenopathy, nausea, asthenia, malaise, pain, body temperature increase, and pain in extremity).

Given the differences in exposure (2.5 vs 80.4) by baseline SARS-CoV-2 positive and negative status, respectively, direct comparisons should be interpreted with caution. The overall rate of AEs is 70.7 per 100 PY (95% CI: 60.7, 81.9) (baseline positive) compared with 83.6 per 100 PY (95% CI: 81.7, 85.7) (baseline negative). For other SOCs, the IR were either numerically lower or similar for the baseline positive group compared to the baseline

negative group. Overall, there is no evidence that individuals who are positive at baseline report AEs at a higher frequency than those who are negative at baseline.

In the BNT162b2 group, overall IRs for participants reporting at least 1 AE were highest for participants of all other races (120.1 per 100 PY) compared to White participants (83.1 per 100 PY), with Black or African American participants having the lowest IR (53.5 per 100 PY). The IR for nausea in the BNT162b2 group was higher in participants of all other races (4.7 per 100 PY BNT162b2 vs 1.6 per 100 PY placebo) and White participants (3.4 per 100 PY BNT162b2 vs 1.0 per 100 PY placebo) than in Black or African American participants where the IR was similar in both vaccine groups (1.3 per 100 PY BNT162b2 vs 1.2 per 100 PY placebo).

In the BNT162b2 group, the IR for participants reporting at least 1 AE was higher in non-Hispanic/non-Latino participants (85.4 per 100 PY BNT162b2 and 41.6 per 100 PY placebo) and Hispanic/Latino participants (78.4 per 100 PY BNT162b2 and 47.9 per 100 PY placebo) and lowest in the group where ethnicity was not reported (49.4 per 100 PY BNT162b2 and 43.3 per 100 PY placebo). IRs were higher for mainly reactogenicity events (chills, fatigue, myalgia, diarrhea, injection site reactions [pain, erythema, and swelling], pain, pyrexia, and headache) as well as lymphadenopathy, nausea, influenza like illness, malaise, increased body temperature, and pain in extremity.

Overall, females reported a higher IR of AEs (91.0 per 100 PY BNT162b2, 46.8 per 100 PY placebo) than males (76.0 per 100 PY BNT162b2, 40.1 per 100 PY placebo), with a greater difference in the BNT162b2 groups than in the placebo groups . The higher IRs in females were due to reactogenicity AEs (vomiting, chills, fatigue, pyrexia, myalgia, and headache) as well as other AEs (lymphadenopathy, nausea, pain, increased body temperature, and pain in extremity). There were sex appropriate differences as well, such as higher IRs in the SOC of cardiac disorders in males (1.2 per 100 PY) versus females (0.9 per 100 PY) and lower IRs in the SOC of reproductive system and breast disorders in males (0.3 per 100 PY) versus females (0.9 per 100 PY).

2.7.4.2.4.2.2.2.1.1. Participants with Confirmed Stable HIV Disease: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to the Unblinding Date (Phase 3, Study C4591001, Analysis of Adverse Events, Adverse Events by System Organ Class and Preferred Term)

From Dose 1 to the unblinding date, and similar to the overall population, most AEs reported for the subset of 200 HIV-positive participants from Dose 1 to the unblinding date were in SOCs with reactogenicity events:

- general disorders and administration site conditions (66.1 per 100 PY BNT162b2 vs 6.9 per 100 PY placebo)
- musculoskeletal and connective tissue disorders (19.8 per 100 PY BNT162b2 vs 10.4 per 100 PY placebo)
- nervous system disorders (16.5 per 100 PY BNT162b2 vs 0.0 placebo per 100 PY)
- gastrointestinal disorders (9.9 per 100 PY BNT162b2 vs 13.9 placebo)

2.7.4.2.4.2.2.2.2. Related Adverse Events by System Organ Class and Preferred Term: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to the Unblinding Date (Phase 3, Study C4591001)

From Dose 1 to the unblinding date, IRs of AEs assessed as related by the investigator during the blinded follow-up period were 62.9 per 100 PY and 16.0 per 100 PY in the BNT162b2 group and in the placebo group, respectively (Table 7). The IRs of related AEs were highest for reactogenicity events and in the SOC of general disorders and administration site conditions, IRs were 55.7 per 100 PY and 10.8 per 100 PY for BNT162b2 and placebo recipients, respectively. Additional terms identified as either synonymous with or otherwise plausibly associated with reactogenicity events (ie, secondary to reactogenicity events) occurring within 7 days after each dose were also considered related (pain in extremity, decreased appetite, lethargy, asthenia, malaise, night sweats, and hyperhidrosis) (Section 2.7.4.2.4.2.1.2.1).

Lymphadenopathy is discussed in Section 2.7.4.2.4.3.4.1.3. IRs of related AEs in the younger and older age groups were 70.0 per 100 PY and 52.3 per 100 PY, respectively for the BNT162b2 group and 18.0 per 100 PY and 13.0 per 100 PY, respectively, for the placebo group.

2.7.4.2.4.2.2.2.3. Severe or Life-Threatening Adverse Events: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to the Unblinding Date (Phase 3, Study C4591001)

From Dose 1 to the unblinding date, severe AE IRs during the blinded follow-up period were 4.3 per 100 PY (95% CI: 3.8, 4.7) and 3.1 per 100 PY (95% CI: 2.7, 3.5) in BNT162b2 and placebo recipients, respectively. Severe events in the general disorders and administration site conditions were generally reflecting terms consistent with reactogenicity, in the BNT162b2 versus placebo groups (1.2 per 100 PY vs 0.1 per 100 PY) as well as the Musculoskeletal SOC (0.6 per 100 PY vs 0.3 per 100 PY). The IR in all other SOCs were similar in the BNT162b2 and placebo groups.

The IRs for participants who had at least 1 life-threatening AE from Dose 1 to the unblinding date were similar: 0.6 per 100 PY (95% CI: 0.4, 0.8) in the BNT162b2 group and 0.7 per 100 PY (95% CI: 0.5, 0.9) in the placebo group. All of the IRs for the SOCs were similar in the BNT162b2 and placebo groups.

2.7.4.2.4.2.3. Open-Label Follow-Up Period – Original BNT162b2 Participants (Phase 3, Study C4591001)

2.7.4.2.4.2.3.1. Summary of Adverse Events: Open-Label Follow-Up Period – Original BNT162b2 Participants (Phase 3, Study C4591001)

Per protocol AEs are reported through 1 month after the Dose 2 and within 48 hours after a blood draw. SAEs are reported to approximately 6 months after the last dose of study intervention. An overview of IRs of AEs from the unblinding date to the data cutoff date for participants originally randomized to BNT162b2 during the open-label follow-up is presented in Table 9. The IRs for any AE, at least 1 related AE, and severe AE were 8.8 per 100 PY, and 0.7 per 100 PY, and 1.6 per 100 PY, respectively, which is markedly reduced

relative to those from Dose 1 to the unblinding date (83.2, 62.9, 4.3 respectively [Table 7]). The IR of life-threatening AEs is 0.4 per 100 PY (95% CI: 0.2, 0.8), which is similar to the IR from Dose 1 to the unblinding date, 0.6 per 100 PY (95% CI: 0.4, 0.8).

The IR of SAEs during the open-label follow-up period (Table 9), 2.0 per 100 PY (95% CI: 1.5, 2.6) were lower than the IR from Dose 1 to the unblinding date, 3.2 per 100 PY (95% CI: 2.8, 3.6) (Table 7). There was a single related SAE (myocardial infarction) for an individual in the open label follow-up period (see Section 2.7.4.2.4.3.2.3). The IR of AEs leading to withdrawal also decreased (0.1 per 100 PY [95% CI: 0.0, 0.4]) in the open-label follow-up period compared with the blinded placebo-controlled period (0.5 per 100 PY [95% CI: 0.4, 0.7]) but the IR of deaths were similar (0.1 per 100 PY vs 0.2 per 100 PY in the open-label and blinded placebo-controlled follow-up periods, respectively).

Table 9. Incidence Rates of at Least 1 Adverse Event From Unblinding Date to Data Cutoff Date (13MAR2021) – Open-Label Follow-up Period – Subjects Who Originally Received BNT162b2 – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=20309, TE[b]=27.7)		
Adverse Event	n[c]	IR (/100 PY)[d]	(95% CI[e])
Any event	243	8.8	(7.7, 9.9)
Related[f]	20	0.7	(0.4, 1.1)
Severe	43	1.6	(1.1, 2.1)
Life-threatening	12	0.4	(0.2, 0.8)
Any serious adverse event	55	2.0	(1.5, 2.6)
Related[f]	1	0.0	(0.0, 0.2)
Severe	30	1.1	(0.7, 1.5)
Life-threatening	12	0.4	(0.2, 0.8)
Any adverse event leading to withdrawal	4	0.1	(0.0, 0.4)
Related[f]	0	0.0	(0.0, 0.1)
Severe	0	0.0	(0.0, 0.1)
Life-threatening	4	0.1	(0.0, 0.4)
Death	3	0.1	(0.0, 0.3)

a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from the unblinding date to data cutoff date. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event category. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
f. Assessed by the investigator as related to investigational product.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:16)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/adae_s092_unb_cut_p3_saf

2.7.4.2.4.2.3.2. Analysis of Adverse Events: Open-Label Follow-Up Period – Original BNT162b2 Participants ≥16 Years of Age (Phase 3, Study C4591001)

2.7.4.2.4.2.3.2.1. Adverse Events by System Organ Class and Preferred Term: Open-Label Follow-Up Period – Original BNT162b2 Participants ≥16 Years of Age (Phase 3, Study C4591001, Analysis of Adverse Events)

From the unblinding date to the data cutoff date for participants originally randomized to BNT162b2 during the open-label follow-up period, the IR for participants who reported at

least 1 AE was 8.8 per 100 PY compared to 83.2 per 100 PY from Dose 1 to the unblinding date (Table 7).

Overall, the rates in all SOCs after the unblinding date decreased or remained similar to those in the blinded placebo-controlled period.

The IR for the SOC of injury, poisoning and procedural complications was 1.4 per 100 PY, with the PT fall having the highest IR (0.4 per 100 PY). The IR for the SOC of vascular disorders was 0.8 per 100 PY, with the PT hypertension having the highest IR (0.6 per 100 PY).

Table 10. Incidence Rates of at Least 1 Adverse Event From Unblinding Date to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received BNT162b2 – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=20309, TE[b]=27.7)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Any event	243	8.8	(7.7, 9.9)
BLOOD AND LYMPHATIC SYSTEM DISORDERS	5	0.2	(0.1, 0.4)
Lymph node pain	1	0.0	(0.0, 0.2)
Lymphadenopathy	3	0.1	(0.0, 0.3)
Pancytopenia	1	0.0	(0.0, 0.2)
Splenic infarction	1	0.0	(0.0, 0.2)
Splenomegaly	1	0.0	(0.0, 0.2)
CARDIAC DISORDERS	14	0.5	(0.3, 0.8)
Atrial fibrillation	2	0.1	(0.0, 0.3)
Atrial flutter	1	0.0	(0.0, 0.2)
Cardiac failure congestive	1	0.0	(0.0, 0.2)
Cardiomegaly	1	0.0	(0.0, 0.2)
Coronary artery disease	3	0.1	(0.0, 0.3)
Coronary artery occlusion	1	0.0	(0.0, 0.2)
Myocardial infarction	4	0.1	(0.0, 0.4)
Tachycardia	1	0.0	(0.0, 0.2)
CONGENITAL, FAMILIAL AND GENETIC DISORDERS	1	0.0	(0.0, 0.2)
Benign familial pemphigus	1	0.0	(0.0, 0.2)
EAR AND LABYRINTH DISORDERS	2	0.1	(0.0, 0.3)
Vertigo	2	0.1	(0.0, 0.3)
ENDOCRINE DISORDERS	2	0.1	(0.0, 0.3)
Hyperthyroidism	1	0.0	(0.0, 0.2)
Pituitary cyst	1	0.0	(0.0, 0.2)
EYE DISORDERS	6	0.2	(0.1, 0.5)
Blepharitis	1	0.0	(0.0, 0.2)
Dry eye	1	0.0	(0.0, 0.2)
Glaucoma	2	0.1	(0.0, 0.3)
Macular oedema	1	0.0	(0.0, 0.2)
Retinal tear	1	0.0	(0.0, 0.2)
GASTROINTESTINAL DISORDERS	17	0.6	(0.4, 1.0)
Abdominal pain upper	1	0.0	(0.0, 0.2)
Diverticulum	1	0.0	(0.0, 0.2)
Dyspepsia	1	0.0	(0.0, 0.2)
Eosinophilic oesophagitis	1	0.0	(0.0, 0.2)

Table 10. Incidence Rates of at Least 1 Adverse Event From Unblinding Date to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received BNT162b2 – Phase 2/3 Subjects ≥16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=20309, TE[b]=27.7)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Gastritis	1	0.0	(0.0, 0.2)
Gastritis alcoholic	1	0.0	(0.0, 0.2)
Gastritis erosive	1	0.0	(0.0, 0.2)
Gastrointestinal haemorrhage	1	0.0	(0.0, 0.2)
Gastrooesophageal reflux disease	3	0.1	(0.0, 0.3)
Haematemesis	1	0.0	(0.0, 0.2)
Hiatus hernia	2	0.1	(0.0, 0.3)
Irritable bowel syndrome	2	0.1	(0.0, 0.3)
Pancreatic calcification	1	0.0	(0.0, 0.2)
Rectal haemorrhage	2	0.1	(0.0, 0.3)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	19	0.7	(0.4, 1.1)
Chest pain	2	0.1	(0.0, 0.3)
Chills	3	0.1	(0.0, 0.3)
Fatigue	7	0.3	(0.1, 0.5)
Impaired healing	1	0.0	(0.0, 0.2)
Injection site pain	7	0.3	(0.1, 0.5)
Injection site swelling	1	0.0	(0.0, 0.2)
Non-cardiac chest pain	1	0.0	(0.0, 0.2)
Oedema peripheral	2	0.1	(0.0, 0.3)
Pain	2	0.1	(0.0, 0.3)
Pyrexia	2	0.1	(0.0, 0.3)
HEPATOBILIARY DISORDERS	8	0.3	(0.1, 0.6)
Acute hepatic failure	1	0.0	(0.0, 0.2)
Cholecystitis	1	0.0	(0.0, 0.2)
Cholecystitis acute	2	0.1	(0.0, 0.3)
Cholelithiasis	1	0.0	(0.0, 0.2)
Cholelithiasis obstructive	1	0.0	(0.0, 0.2)
Jaundice	1	0.0	(0.0, 0.2)
Portosplenomesenteric venous thrombosis	1	0.0	(0.0, 0.2)
Steatohepatitis	1	0.0	(0.0, 0.2)
IMMUNE SYSTEM DISORDERS	1	0.0	(0.0, 0.2)
Seasonal allergy	1	0.0	(0.0, 0.2)
INFECTIONS AND INFESTATIONS	39	1.4	(1.0, 1.9)
Appendicitis	1	0.0	(0.0, 0.2)
Bacteraemia	1	0.0	(0.0, 0.2)
Bronchitis	1	0.0	(0.0, 0.2)
Clostridium difficile colitis	1	0.0	(0.0, 0.2)

Table 10. Incidence Rates of at Least 1 Adverse Event From Unblinding Date to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received BNT162b2 – Phase 2/3 Subjects ≥16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=20309, TE[b]=27.7)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Ear infection	1	0.0	(0.0, 0.2)
Endocarditis	1	0.0	(0.0, 0.2)
Endometritis	1	0.0	(0.0, 0.2)
Fungal skin infection	2	0.1	(0.0, 0.3)
Furuncle	1	0.0	(0.0, 0.2)
Gastritis viral	1	0.0	(0.0, 0.2)
Gastroenteritis	1	0.0	(0.0, 0.2)
Gonorrhoea	1	0.0	(0.0, 0.2)
Helicobacter gastritis	1	0.0	(0.0, 0.2)
Herpes zoster	1	0.0	(0.0, 0.2)
Herpes zoster oticus	1	0.0	(0.0, 0.2)
Meningitis bacterial	1	0.0	(0.0, 0.2)
Mumps	1	0.0	(0.0, 0.2)
Onychomycosis	1	0.0	(0.0, 0.2)
Pneumonia	1	0.0	(0.0, 0.2)
Post procedural infection	1	0.0	(0.0, 0.2)
Postoperative abscess	1	0.0	(0.0, 0.2)
Sepsis	1	0.0	(0.0, 0.2)
Sinusitis bacterial	1	0.0	(0.0, 0.2)
Subcutaneous abscess	1	0.0	(0.0, 0.2)
Tooth infection	3	0.1	(0.0, 0.3)
Urinary tract infection	10	0.4	(0.2, 0.7)
Viral infection	1	0.0	(0.0, 0.2)
Wound infection	1	0.0	(0.0, 0.2)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	40	1.4	(1.0, 2.0)
Animal bite	1	0.0	(0.0, 0.2)
Ankle fracture	2	0.1	(0.0, 0.3)
Bone contusion	1	0.0	(0.0, 0.2)
Burns second degree	1	0.0	(0.0, 0.2)
Burns third degree	1	0.0	(0.0, 0.2)
Chemical burns of eye	1	0.0	(0.0, 0.2)
Clavicle fracture	1	0.0	(0.0, 0.2)
Contusion	3	0.1	(0.0, 0.3)
Exposure during pregnancy	3	0.1	(0.0, 0.3)
Facial bones fracture	1	0.0	(0.0, 0.2)
Fall	10	0.4	(0.2, 0.7)
Foot fracture	1	0.0	(0.0, 0.2)

Table 10. Incidence Rates of at Least 1 Adverse Event From Unblinding Date to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received BNT162b2 – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=20309, TE[b]=27.7)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Hip fracture	1	0.0	(0.0, 0.2)
Humerus fracture	3	0.1	(0.0, 0.3)
Injury	1	0.0	(0.0, 0.2)
Ligament rupture	1	0.0	(0.0, 0.2)
Ligament sprain	1	0.0	(0.0, 0.2)
Limb injury	1	0.0	(0.0, 0.2)
Muscle strain	2	0.1	(0.0, 0.3)
Procedural dizziness	1	0.0	(0.0, 0.2)
Procedural pain	4	0.1	(0.0, 0.4)
Radius fracture	1	0.0	(0.0, 0.2)
Rectal injury	1	0.0	(0.0, 0.2)
Rib fracture	2	0.1	(0.0, 0.3)
Road traffic accident	2	0.1	(0.0, 0.3)
Skin laceration	4	0.1	(0.0, 0.4)
Thermal burn	1	0.0	(0.0, 0.2)
Upper limb fracture	1	0.0	(0.0, 0.2)
Wrist fracture	2	0.1	(0.0, 0.3)
INVESTIGATIONS	5	0.2	(0.1, 0.4)
Blood cholesterol increased	1	0.0	(0.0, 0.2)
Blood pressure increased	1	0.0	(0.0, 0.2)
Body temperature increased	1	0.0	(0.0, 0.2)
Intraocular pressure increased	1	0.0	(0.0, 0.2)
SARS-CoV-2 antibody test positive	1	0.0	(0.0, 0.2)
METABOLISM AND NUTRITION DISORDERS	13	0.5	(0.2, 0.8)
Diabetes mellitus	1	0.0	(0.0, 0.2)
Glucose tolerance impaired	1	0.0	(0.0, 0.2)
Hypercholesterolaemia	2	0.1	(0.0, 0.3)
Hyperglycaemia	1	0.0	(0.0, 0.2)
Hyperlipidaemia	3	0.1	(0.0, 0.3)
Hypertriglyceridaemia	1	0.0	(0.0, 0.2)
Metabolic syndrome	1	0.0	(0.0, 0.2)
Type 2 diabetes mellitus	1	0.0	(0.0, 0.2)
Vitamin D deficiency	2	0.1	(0.0, 0.3)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	27	1.0	(0.6, 1.4)
Arthralgia	4	0.1	(0.0, 0.4)
Back pain	3	0.1	(0.0, 0.3)
Flank pain	1	0.0	(0.0, 0.2)

Table 10. Incidence Rates of at Least 1 Adverse Event From Unblinding Date to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received BNT162b2 – Phase 2/3 Subjects ≥16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=20309, TE[b]=27.7)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Intervertebral disc protrusion	3	0.1	(0.0, 0.3)
Muscle contracture	1	0.0	(0.0, 0.2)
Muscle spasms	1	0.0	(0.0, 0.2)
Musculoskeletal stiffness	1	0.0	(0.0, 0.2)
Myalgia	5	0.2	(0.1, 0.4)
Neck pain	1	0.0	(0.0, 0.2)
Osteoarthritis	3	0.1	(0.0, 0.3)
Pain in extremity	4	0.1	(0.0, 0.4)
Periarthritis	1	0.0	(0.0, 0.2)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	14	0.5	(0.3, 0.8)
Adenocarcinoma pancreas	1	0.0	(0.0, 0.2)
Basal cell carcinoma	2	0.1	(0.0, 0.3)
Brain cancer metastatic	1	0.0	(0.0, 0.2)
Breast cancer	1	0.0	(0.0, 0.2)
Fibroma	1	0.0	(0.0, 0.2)
Haemangioma of skin	1	0.0	(0.0, 0.2)
Hormone receptor positive breast cancer	1	0.0	(0.0, 0.2)
Lipoma	1	0.0	(0.0, 0.2)
Malignant melanoma	1	0.0	(0.0, 0.2)
Metastases to lung	1	0.0	(0.0, 0.2)
Pancreatic carcinoma metastatic	1	0.0	(0.0, 0.2)
Prostate cancer	1	0.0	(0.0, 0.2)
Skin papilloma	1	0.0	(0.0, 0.2)
Uterine cancer	1	0.0	(0.0, 0.2)
NERVOUS SYSTEM DISORDERS	18	0.6	(0.4, 1.0)
Carpal tunnel syndrome	1	0.0	(0.0, 0.2)
Cervical radiculopathy	1	0.0	(0.0, 0.2)
Dizziness	3	0.1	(0.0, 0.3)
Dysgeusia	1	0.0	(0.0, 0.2)
Facial paralysis	1	0.0	(0.0, 0.2)
Headache	7	0.3	(0.1, 0.5)
Intracranial aneurysm	1	0.0	(0.0, 0.2)
Restless legs syndrome	1	0.0	(0.0, 0.2)
Sciatica	1	0.0	(0.0, 0.2)
Seizure	1	0.0	(0.0, 0.2)
Seizure like phenomena	1	0.0	(0.0, 0.2)

Table 10. Incidence Rates of at Least 1 Adverse Event From Unblinding Date to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received BNT162b2 – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=20309, TE[b]=27.7)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Tremor	1	0.0	(0.0, 0.2)
Vocal cord paralysis	1	0.0	(0.0, 0.2)
PREGNANCY, PUERPERIUM AND PERINATAL CONDITIONS	2	0.1	(0.0, 0.3)
Abortion spontaneous	1	0.0	(0.0, 0.2)
Exposure during pregnancy	1	0.0	(0.0, 0.2)
PSYCHIATRIC DISORDERS	4	0.1	(0.0, 0.4)
Adjustment disorder	1	0.0	(0.0, 0.2)
Anxiety disorder	1	0.0	(0.0, 0.2)
Bipolar I disorder	1	0.0	(0.0, 0.2)
Insomnia	1	0.0	(0.0, 0.2)
RENAL AND URINARY DISORDERS	5	0.2	(0.1, 0.4)
Bladder irritation	1	0.0	(0.0, 0.2)
Nephrolithiasis	3	0.1	(0.0, 0.3)
Renal haematoma	1	0.0	(0.0, 0.2)
REPRODUCTIVE SYSTEM AND BREAST DISORDERS	2	0.1	(0.0, 0.3)
Endometrial thickening	1	0.0	(0.0, 0.2)
Endometriosis	1	0.0	(0.0, 0.2)
Menorrhagia	1	0.0	(0.0, 0.2)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	11	0.4	(0.2, 0.7)
Asthma	1	0.0	(0.0, 0.2)
Chronic obstructive pulmonary disease	1	0.0	(0.0, 0.2)
Dyspnoea	1	0.0	(0.0, 0.2)
Dyspnoea exertional	1	0.0	(0.0, 0.2)
Epistaxis	1	0.0	(0.0, 0.2)
Pulmonary embolism	1	0.0	(0.0, 0.2)
Respiratory tract congestion	2	0.1	(0.0, 0.3)
Rhinorrhoea	2	0.1	(0.0, 0.3)
Sleep apnoea syndrome	1	0.0	(0.0, 0.2)
SKIN AND SUBCUTANEOUS TISSUE DISORDERS	14	0.5	(0.3, 0.8)
Alopecia	1	0.0	(0.0, 0.2)
Angioedema	1	0.0	(0.0, 0.2)
Decubitus ulcer	1	0.0	(0.0, 0.2)
Dermatitis	1	0.0	(0.0, 0.2)
Dermatitis contact	1	0.0	(0.0, 0.2)
Hand dermatitis	1	0.0	(0.0, 0.2)
Necrobiosis lipoidica diabeticorum	1	0.0	(0.0, 0.2)

Table 10. Incidence Rates of at Least 1 Adverse Event From Unblinding Date to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received BNT162b2 – Phase 2/3 Subjects ≥16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=20309, TE[b]=27.7)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Onycholysis	1	0.0	(0.0, 0.2)
Rash	1	0.0	(0.0, 0.2)
Rash maculo-papular	1	0.0	(0.0, 0.2)
Urticaria	4	0.1	(0.0, 0.4)
SOCIAL CIRCUMSTANCES	2	0.1	(0.0, 0.3)
Job dissatisfaction	1	0.0	(0.0, 0.2)
Stress at work	1	0.0	(0.0, 0.2)
SURGICAL AND MEDICAL PROCEDURES	5	0.2	(0.1, 0.4)
Incisional drainage	1	0.0	(0.0, 0.2)
Meniscus operation	1	0.0	(0.0, 0.2)
Metabolic surgery	1	0.0	(0.0, 0.2)
Radioactive iodine therapy	1	0.0	(0.0, 0.2)
Tooth extraction	1	0.0	(0.0, 0.2)
VASCULAR DISORDERS	23	0.8	(0.5, 1.2)
Aortic aneurysm	2	0.1	(0.0, 0.3)
Arterial occlusive disease	1	0.0	(0.0, 0.2)
Deep vein thrombosis	2	0.1	(0.0, 0.3)
Hot flush	1	0.0	(0.0, 0.2)
Hypertension	17	0.6	(0.4, 1.0)
Peripheral vascular disorder	1	0.0	(0.0, 0.2)

Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from the unblinding date to data cutoff date. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:16)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/adae_s131_all_ex_bnt_p3_saf

2.7.4.2.4.2.3.2.2. Related Adverse Events by System Organ Class and Preferred Term: Open-Label Follow-Up Period – Original BNT162b2 Participants (Phase 3, Study C4591001, Analysis of Adverse Events)

From the unblinding date to the data cutoff date for participants originally randomized to BNT162b2, the IR of AEs assessed as related by the investigator during the open-label follow-up period was 0.7 per 100 PY (Table 9). The IRs of related AEs were highest for reactogenicity events and in the SOC of general disorders and administration site conditions (0.5 per 100 PY) reflecting AEs from their initial vaccinations.

One younger participant had a life-threatening SAE of myocardial infarction 71 days after Dose 2 that was assessed by the investigator as related to study intervention, which lasted 1 day and resolved the same day (see Section 2.7.4.2.4.3.2.3).

2.7.4.2.4.2.4. Blinded Placebo-Controlled and Open-Label Follow-Up Periods From Dose 1 to 6 Months After Dose 2 – Original BNT162b2 Participants (Phase 3, Study C4591001)

2.7.4.2.4.2.4.1. Summary of Adverse Events: Blinded Placebo-Controlled and Open-Label Follow-Up Periods From Dose 1 to 6 Months After Dose 2 – Original BNT162b2 Participants (Phase 3, Study C4591001)

There were 12,006 participants who had at least 6 months of follow-up (Table 11). There were 3,454 (28.8%) participants who reported at least 1 AE, and 2,245 (18.7%) participants reported at least 1 related AE. Severe AEs and SAEs were reported by 2.1% and 1.6%, respectively. One participant was reported as discontinued because of an AE (not related); however, this participant remains in the study as the withdrawal was subsequently queried and corrected as described in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Errata. There were no deaths during the blinded and open-label follow-up periods in the group of original BNT162b2 participants with at least 6 months of follow-up after Dose 2.

When frequencies of AEs for participants with at least 6 months of follow-up time are examined by time since the second dose, the frequency of AEs and related AEs is 25.8% and 18.6% through 1 month after Dose 2 compared with 4.8% and 0.1% from 1 month after Dose 2 to 6 months after Dose 2 (Table 12). In the first month after vaccination 0.5% reported SAEs (1 related) and from 1 month to 6 months after Dose 2, the frequency of SAEs increased to 1.1% with 1 related SAE.

In the younger age group, the number of participants who reported at least 1 AE and 1 related AE from Dose 1 to 6 months after Dose 2 was 2,013 (30.2%) and 1,386 (20.8%), respectively. In the older age group, the number of participants who reported at least 1 AE and 1 related AE from Dose 1 to 6 months after Dose 2 was 1,441 (27.0%) and 859 (16.1%), respectively.

Table 11. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2 – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)
	BNT162b2 (30 µg) (N[a]=12006)
Adverse Event	n[b] (%)
Any event	3454 (28.8)
Related[c]	2245 (18.7)
Severe	248 (2.1)
Life-threatening	23 (0.2)
Any serious adverse event	190 (1.6)
Related[c]	2 (0.0)
Severe	116 (1.0)
Life-threatening	23 (0.2)
Any adverse event leading to withdrawal	1 (0.0)
Related[c]	0
Severe	0
Life-threatening	0
Death	0

a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects reporting at least 1 occurrence of the specified event category. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
c. Assessed by the investigator as related to investigational product.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (14:48)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adae s091 all pd2 p3 saf2

Table 12. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by Time Period – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	Dose 1 to 1 Month Post Dose 2 (N[a]=12006)	After 1 Month Post Dose 2 to 6 Months Post Dose 2 (N[a]=12006)
Adverse Event	**n[b] (%)**	**n[b] (%)**
Any event	3092 (25.8)	572 (4.8)
Related[c]	2239 (18.6)	12 (0.1)
Severe	143 (1.2)	110 (0.9)
Life-threatening	8 (0.1)	15 (0.1)
Any serious adverse event	58 (0.5)	133 (1.1)
Related[c]	1 (0.0)	1 (0.0)
Severe	34 (0.3)	82 (0.7)
Life-threatening	8 (0.1)	15 (0.1)
Any adverse event leading to withdrawal	0	1 (0.0)
Related[c]	0	0
Severe	0	0
Life-threatening	0	0
Death	0	0

a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects reporting at least 1 occurrence of the specified event category. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
c. Assessed by the investigator as related to investigational product.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 14APR2021 (08:45)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA RR/adae s091 all pd2 p3 tp saf2

2.7.4.2.4.2.4.2. Analysis of Adverse Events: Blinded Placebo-Controlled and Open-Label Follow-Up Periods From Dose 1 to 6 Months After Dose 2 – Original BNT162b2 Participants (Phase 3, Study C4591001)

2.7.4.2.4.2.4.2.1. Adverse Events by System Organ Class and Preferred Term: Blinded Placebo-Controlled and Open-Label Follow-Up Periods From Dose 1 to 6 Months After Dose 2 – Original BNT162b2 Participants (Phase 3, Study C4591001, Analysis of Adverse Events)

From Dose 1 to 6 Months After Dose 2 during the blinded and open-label follow-up period, 3454 (28.8%) original BNT162b2 participants reported at least 1 AE (Table 13). The most frequently reported AEs were reactogenicity events.

- general disorders and administration site conditions (2016 [16.8%])
- musculoskeletal and connective tissue disorders (905 [7.5%])
- nervous system disorders (726 [6.0%])
- gastrointestinal disorders (407 [3.4%])

The number of original BNT162b2 participants who reported at least 1 AE from Dose 1 to 6 months after Dose 2 was 2013 (30.2%) and 1441 (27.0%) in the younger and older groups, respectively.

In the younger versus older BNT162b2 age groups, AE frequencies in above SOCs were:

- general disorders and administration site conditions (1246 [18.7%] vs 770 [14.4%])
- musculoskeletal and connective tissue disorders (539 [8.1%] vs 366 [6.9%])
- nervous system disorders (449 [6.7%] vs 277 [5.2%])
- gastrointestinal disorders (231 [3.5%] vs 176 [3.3%])

As shown in Table 13, the most frequently reported AEs in the BNT162b2 group were injection site pain (1191 [9.9%]), pyrexia (633 [5.3%]), chills (606 [5.0%]), fatigue (598 [5.0%]), headache (572 [4.8%]), and myalgia (549 [4.6%]).

When AEs are compared from 1 month after Dose 2 and from 1 month after Dose 2 to 6 months after Dose 2, the frequencies of AEs by most SOCs have decreased or remain the same with the additional follow-up time. The overall frequency of any AE for participants from 1 month after Dose 2 to 6 months after Dose 2 (4.8%) was decreased from the frequency during 1 month follow up time after Dose 2 (25.8%).

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Any event	3454 (28.8)	(28.0, 29.6)
BLOOD AND LYMPHATIC SYSTEM DISORDERS	70 (0.6)	(0.5, 0.7)
Lymphadenopathy	50 (0.4)	(0.3, 0.5)
Anaemia	7 (0.1)	(0.0, 0.1)
Iron deficiency anaemia	5 (0.0)	(0.0, 0.1)
Lymph node pain	3 (0.0)	(0.0, 0.1)
Leukopenia	2 (0.0)	(0.0, 0.1)
Blood loss anaemia	1 (0.0)	(0.0, 0.0)
Coagulopathy	1 (0.0)	(0.0, 0.0)
Lymphadenopathy mediastinal	1 (0.0)	(0.0, 0.0)
Lymphocytosis	1 (0.0)	(0.0, 0.0)
Lymphopenia	1 (0.0)	(0.0, 0.0)
Neutropenia	1 (0.0)	(0.0, 0.0)
Pancytopenia	1 (0.0)	(0.0, 0.0)
Splenic infarction	1 (0.0)	(0.0, 0.0)
Splenomegaly	1 (0.0)	(0.0, 0.0)
CARDIAC DISORDERS	59 (0.5)	(0.4, 0.6)
Atrial fibrillation	9 (0.1)	(0.0, 0.1)
Tachycardia	9 (0.1)	(0.0, 0.1)
Palpitations	7 (0.1)	(0.0, 0.1)
Coronary artery disease	6 (0.0)	(0.0, 0.1)
Acute myocardial infarction	4 (0.0)	(0.0, 0.1)
Angina pectoris	4 (0.0)	(0.0, 0.1)
Myocardial infarction	4 (0.0)	(0.0, 0.1)
Cardiac failure congestive	3 (0.0)	(0.0, 0.1)
Angina unstable	2 (0.0)	(0.0, 0.1)
Acute coronary syndrome	1 (0.0)	(0.0, 0.0)
Arrhythmia	1 (0.0)	(0.0, 0.0)
Arrhythmia supraventricular	1 (0.0)	(0.0, 0.0)
Atrial flutter	1 (0.0)	(0.0, 0.0)
Atrioventricular block first degree	1 (0.0)	(0.0, 0.0)
Bradycardia	1 (0.0)	(0.0, 0.0)
Bundle branch block right	1 (0.0)	(0.0, 0.0)
Cardiac arrest	1 (0.0)	(0.0, 0.0)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Cardiac disorder	1 (0.0)	(0.0, 0.0)
Cardiomegaly	1 (0.0)	(0.0, 0.0)
Coronary artery occlusion	1 (0.0)	(0.0, 0.0)
Left ventricular dysfunction	1 (0.0)	(0.0, 0.0)
Mitral valve prolapse	1 (0.0)	(0.0, 0.0)
Pericarditis	1 (0.0)	(0.0, 0.0)
Sinus tachycardia	1 (0.0)	(0.0, 0.0)
Supraventricular tachycardia	1 (0.0)	(0.0, 0.0)
Ventricular tachycardia	1 (0.0)	(0.0, 0.0)
CONGENITAL, FAMILIAL AND GENETIC DISORDERS	3 (0.0)	(0.0, 0.1)
Congenital cystic kidney disease	1 (0.0)	(0.0, 0.0)
Gastrointestinal arteriovenous malformation	1 (0.0)	(0.0, 0.0)
Protein S deficiency	1 (0.0)	(0.0, 0.0)
EAR AND LABYRINTH DISORDERS	49 (0.4)	(0.3, 0.5)
Vertigo	21 (0.2)	(0.1, 0.3)
Ear pain	8 (0.1)	(0.0, 0.1)
Tinnitus	6 (0.0)	(0.0, 0.1)
Vertigo positional	4 (0.0)	(0.0, 0.1)
Cerumen impaction	3 (0.0)	(0.0, 0.1)
Deafness neurosensory	2 (0.0)	(0.0, 0.1)
Ear discomfort	2 (0.0)	(0.0, 0.1)
Deafness unilateral	1 (0.0)	(0.0, 0.0)
Hyperacusis	1 (0.0)	(0.0, 0.0)
Sudden hearing loss	1 (0.0)	(0.0, 0.0)
ENDOCRINE DISORDERS	15 (0.1)	(0.1, 0.2)
Hypothyroidism	6 (0.0)	(0.0, 0.1)
Hyperthyroidism	2 (0.0)	(0.0, 0.1)
Hypogonadism	2 (0.0)	(0.0, 0.1)
Thyroid mass	2 (0.0)	(0.0, 0.1)
Goitre	1 (0.0)	(0.0, 0.0)
Hyperprolactinaemia	1 (0.0)	(0.0, 0.0)
Oestrogen deficiency	1 (0.0)	(0.0, 0.0)
Pituitary cyst	1 (0.0)	(0.0, 0.0)
EYE DISORDERS	47 (0.4)	(0.3, 0.5)
Cataract	5 (0.0)	(0.0, 0.1)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Vision blurred	5 (0.0)	(0.0, 0.1)
Chalazion	3 (0.0)	(0.0, 0.1)
Eye irritation	3 (0.0)	(0.0, 0.1)
Eye pain	3 (0.0)	(0.0, 0.1)
Macular oedema	3 (0.0)	(0.0, 0.1)
Vitreous detachment	3 (0.0)	(0.0, 0.1)
Blepharitis	2 (0.0)	(0.0, 0.1)
Diplopia	2 (0.0)	(0.0, 0.1)
Dry eye	2 (0.0)	(0.0, 0.1)
Glaucoma	2 (0.0)	(0.0, 0.1)
Retinal tear	2 (0.0)	(0.0, 0.1)
Asthenopia	1 (0.0)	(0.0, 0.0)
Choroidal neovascularisation	1 (0.0)	(0.0, 0.0)
Conjunctival haemorrhage	1 (0.0)	(0.0, 0.0)
Corneal irritation	1 (0.0)	(0.0, 0.0)
Episcleritis	1 (0.0)	(0.0, 0.0)
Eye pruritus	1 (0.0)	(0.0, 0.0)
Eyelid oedema	1 (0.0)	(0.0, 0.0)
Eyelid pain	1 (0.0)	(0.0, 0.0)
Eyelids pruritus	1 (0.0)	(0.0, 0.0)
Keratitis	1 (0.0)	(0.0, 0.0)
Ophthalmic vein thrombosis	1 (0.0)	(0.0, 0.0)
Photophobia	1 (0.0)	(0.0, 0.0)
Retinal artery occlusion	1 (0.0)	(0.0, 0.0)
Scleral discolouration	1 (0.0)	(0.0, 0.0)
Vitreous floaters	1 (0.0)	(0.0, 0.0)
GASTROINTESTINAL DISORDERS	407 (3.4)	(3.1, 3.7)
Nausea	140 (1.2)	(1.0, 1.4)
Diarrhoea	123 (1.0)	(0.9, 1.2)
Vomiting	35 (0.3)	(0.2, 0.4)
Toothache	18 (0.1)	(0.1, 0.2)
Abdominal pain	15 (0.1)	(0.1, 0.2)
Gastrooesophageal reflux disease	14 (0.1)	(0.1, 0.2)
Dyspepsia	13 (0.1)	(0.1, 0.2)
Abdominal pain upper	10 (0.1)	(0.0, 0.2)
Odynophagia	10 (0.1)	(0.0, 0.2)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Constipation	7 (0.1)	(0.0, 0.1)
Dental caries	6 (0.0)	(0.0, 0.1)
Irritable bowel syndrome	5 (0.0)	(0.0, 0.1)
Abdominal distension	4 (0.0)	(0.0, 0.1)
Flatulence	4 (0.0)	(0.0, 0.1)
Gastritis	4 (0.0)	(0.0, 0.1)
Hiatus hernia	4 (0.0)	(0.0, 0.1)
Large intestine polyp	4 (0.0)	(0.0, 0.1)
Aphthous ulcer	3 (0.0)	(0.0, 0.1)
Diverticulum	3 (0.0)	(0.0, 0.1)
Food poisoning	3 (0.0)	(0.0, 0.1)
Haemorrhoids	3 (0.0)	(0.0, 0.1)
Colitis	2 (0.0)	(0.0, 0.1)
Gastritis erosive	2 (0.0)	(0.0, 0.1)
Gastrointestinal disorder	2 (0.0)	(0.0, 0.1)
Glossodynia	2 (0.0)	(0.0, 0.1)
Haematochezia	2 (0.0)	(0.0, 0.1)
Impaired gastric emptying	2 (0.0)	(0.0, 0.1)
Oral pain	2 (0.0)	(0.0, 0.1)
Small intestinal obstruction	2 (0.0)	(0.0, 0.1)
Abdominal discomfort	1 (0.0)	(0.0, 0.0)
Abdominal pain lower	1 (0.0)	(0.0, 0.0)
Abdominal rigidity	1 (0.0)	(0.0, 0.0)
Angular cheilitis	1 (0.0)	(0.0, 0.0)
Cheilitis	1 (0.0)	(0.0, 0.0)
Coeliac disease	1 (0.0)	(0.0, 0.0)
Colitis microscopic	1 (0.0)	(0.0, 0.0)
Colitis ulcerative	1 (0.0)	(0.0, 0.0)
Crohn's disease	1 (0.0)	(0.0, 0.0)
Diverticulum intestinal	1 (0.0)	(0.0, 0.0)
Dry mouth	1 (0.0)	(0.0, 0.0)
Dysphagia	1 (0.0)	(0.0, 0.0)
Epiploic appendagitis	1 (0.0)	(0.0, 0.0)
Eructation	1 (0.0)	(0.0, 0.0)
Faeces soft	1 (0.0)	(0.0, 0.0)
Femoral hernia	1 (0.0)	(0.0, 0.0)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Gastric antral vascular ectasia	1 (0.0)	(0.0, 0.0)
Gastric ulcer	1 (0.0)	(0.0, 0.0)
Gastric ulcer haemorrhage	1 (0.0)	(0.0, 0.0)
Gastrointestinal haemorrhage	1 (0.0)	(0.0, 0.0)
Gastrointestinal pain	1 (0.0)	(0.0, 0.0)
Gingival pain	1 (0.0)	(0.0, 0.0)
Glossitis	1 (0.0)	(0.0, 0.0)
Haematemesis	1 (0.0)	(0.0, 0.0)
Haemorrhoidal haemorrhage	1 (0.0)	(0.0, 0.0)
Hypoaesthesia oral	1 (0.0)	(0.0, 0.0)
Hypoaesthesia teeth	1 (0.0)	(0.0, 0.0)
Inguinal hernia	1 (0.0)	(0.0, 0.0)
Internal hernia	1 (0.0)	(0.0, 0.0)
Intestinal obstruction	1 (0.0)	(0.0, 0.0)
Intestinal polyp	1 (0.0)	(0.0, 0.0)
Intra-abdominal fluid collection	1 (0.0)	(0.0, 0.0)
Lip oedema	1 (0.0)	(0.0, 0.0)
Noninfective gingivitis	1 (0.0)	(0.0, 0.0)
Obstructive pancreatitis	1 (0.0)	(0.0, 0.0)
Oesophageal spasm	1 (0.0)	(0.0, 0.0)
Oral discomfort	1 (0.0)	(0.0, 0.0)
Oral lichenoid reaction	1 (0.0)	(0.0, 0.0)
Pancreatic calcification	1 (0.0)	(0.0, 0.0)
Pancreatitis	1 (0.0)	(0.0, 0.0)
Parotid duct obstruction	1 (0.0)	(0.0, 0.0)
Rectal haemorrhage	1 (0.0)	(0.0, 0.0)
Rectal polyp	1 (0.0)	(0.0, 0.0)
Retching	1 (0.0)	(0.0, 0.0)
Stomatitis	1 (0.0)	(0.0, 0.0)
Swollen tongue	1 (0.0)	(0.0, 0.0)
Tongue oedema	1 (0.0)	(0.0, 0.0)
Tongue pruritus	1 (0.0)	(0.0, 0.0)
Tongue ulceration	1 (0.0)	(0.0, 0.0)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	2016 (16.8)	(16.1, 17.5)
Injection site pain	1191 (9.9)	(9.4, 10.5)
Pyrexia	633 (5.3)	(4.9, 5.7)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Chills	606 (5.0)	(4.7, 5.5)
Fatigue	598 (5.0)	(4.6, 5.4)
Pain	277 (2.3)	(2.0, 2.6)
Injection site erythema	91 (0.8)	(0.6, 0.9)
Injection site swelling	60 (0.5)	(0.4, 0.6)
Malaise	46 (0.4)	(0.3, 0.5)
Asthenia	20 (0.2)	(0.1, 0.3)
Injection site pruritus	19 (0.2)	(0.1, 0.2)
Chest pain	14 (0.1)	(0.1, 0.2)
Influenza like illness	10 (0.1)	(0.0, 0.2)
Injection site bruising	8 (0.1)	(0.0, 0.1)
Axillary pain	6 (0.0)	(0.0, 0.1)
Injection site warmth	6 (0.0)	(0.0, 0.1)
Feeling hot	5 (0.0)	(0.0, 0.1)
Injection site induration	5 (0.0)	(0.0, 0.1)
Oedema peripheral	5 (0.0)	(0.0, 0.1)
Peripheral swelling	4 (0.0)	(0.0, 0.1)
Injection site oedema	3 (0.0)	(0.0, 0.1)
Non-cardiac chest pain	3 (0.0)	(0.0, 0.1)
Adverse drug reaction	2 (0.0)	(0.0, 0.1)
Cyst	2 (0.0)	(0.0, 0.1)
Face oedema	2 (0.0)	(0.0, 0.1)
Injection site discomfort	2 (0.0)	(0.0, 0.1)
Injection site haematoma	2 (0.0)	(0.0, 0.1)
Injection site nodule	2 (0.0)	(0.0, 0.1)
Injection site papule	2 (0.0)	(0.0, 0.1)
Swelling	2 (0.0)	(0.0, 0.1)
Application site erythema	1 (0.0)	(0.0, 0.0)
Application site pain	1 (0.0)	(0.0, 0.0)
Application site pruritus	1 (0.0)	(0.0, 0.0)
Application site reaction	1 (0.0)	(0.0, 0.0)
Chest discomfort	1 (0.0)	(0.0, 0.0)
Drug withdrawal syndrome	1 (0.0)	(0.0, 0.0)
Illness	1 (0.0)	(0.0, 0.0)
Induration	1 (0.0)	(0.0, 0.0)
Inflammation	1 (0.0)	(0.0, 0.0)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Injection site discolouration	1 (0.0)	(0.0, 0.0)
Injection site haemorrhage	1 (0.0)	(0.0, 0.0)
Injection site hyperaesthesia	1 (0.0)	(0.0, 0.0)
Injection site irritation	1 (0.0)	(0.0, 0.0)
Injection site lymphadenopathy	1 (0.0)	(0.0, 0.0)
Injection site mass	1 (0.0)	(0.0, 0.0)
Injection site paraesthesia	1 (0.0)	(0.0, 0.0)
Injection site rash	1 (0.0)	(0.0, 0.0)
Injection site reaction	1 (0.0)	(0.0, 0.0)
Medical device pain	1 (0.0)	(0.0, 0.0)
Sensation of foreign body	1 (0.0)	(0.0, 0.0)
Shoulder injury related to vaccine administration	1 (0.0)	(0.0, 0.0)
Sluggishness	1 (0.0)	(0.0, 0.0)
Temperature intolerance	1 (0.0)	(0.0, 0.0)
Thirst	1 (0.0)	(0.0, 0.0)
Vaccination site induration	1 (0.0)	(0.0, 0.0)
Vascular stent occlusion	1 (0.0)	(0.0, 0.0)
Vessel puncture site bruise	1 (0.0)	(0.0, 0.0)
Vessel puncture site haematoma	1 (0.0)	(0.0, 0.0)
HEPATOBILIARY DISORDERS	21 (0.2)	(0.1, 0.3)
Cholelithiasis	7 (0.1)	(0.0, 0.1)
Biliary colic	4 (0.0)	(0.0, 0.1)
Cholecystitis acute	3 (0.0)	(0.0, 0.1)
Bile duct stone	2 (0.0)	(0.0, 0.1)
Biliary dyskinesia	1 (0.0)	(0.0, 0.0)
Cholecystitis	1 (0.0)	(0.0, 0.0)
Cholelithiasis obstructive	1 (0.0)	(0.0, 0.0)
Gallbladder disorder	1 (0.0)	(0.0, 0.0)
Hepatic steatosis	1 (0.0)	(0.0, 0.0)
Jaundice	1 (0.0)	(0.0, 0.0)
Portosplenomesenteric venous thrombosis	1 (0.0)	(0.0, 0.0)
Steatohepatitis	1 (0.0)	(0.0, 0.0)
IMMUNE SYSTEM DISORDERS	15 (0.1)	(0.1, 0.2)
Seasonal allergy	6 (0.0)	(0.0, 0.1)
Drug hypersensitivity	2 (0.0)	(0.0, 0.1)
Hypersensitivity	2 (0.0)	(0.0, 0.1)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Allergy to arthropod bite	1 (0.0)	(0.0, 0.0)
Allergy to arthropod sting	1 (0.0)	(0.0, 0.0)
Anaphylactic reaction	1 (0.0)	(0.0, 0.0)
Food allergy	1 (0.0)	(0.0, 0.0)
Jarisch-Herxheimer reaction	1 (0.0)	(0.0, 0.0)
INFECTIONS AND INFESTATIONS	295 (2.5)	(2.2, 2.7)
Urinary tract infection	57 (0.5)	(0.4, 0.6)
Tooth infection	20 (0.2)	(0.1, 0.3)
Sinusitis	16 (0.1)	(0.1, 0.2)
Appendicitis	10 (0.1)	(0.0, 0.2)
Herpes zoster	10 (0.1)	(0.0, 0.2)
Cellulitis	9 (0.1)	(0.0, 0.1)
Conjunctivitis	8 (0.1)	(0.0, 0.1)
Cystitis	8 (0.1)	(0.0, 0.1)
Ear infection	8 (0.1)	(0.0, 0.1)
Diverticulitis	7 (0.1)	(0.0, 0.1)
Gastroenteritis	7 (0.1)	(0.0, 0.1)
Tooth abscess	7 (0.1)	(0.0, 0.1)
Hordeolum	6 (0.0)	(0.0, 0.1)
Upper respiratory tract infection	6 (0.0)	(0.0, 0.1)
Folliculitis	5 (0.0)	(0.0, 0.1)
Rhinitis	5 (0.0)	(0.0, 0.1)
Nasopharyngitis	4 (0.0)	(0.0, 0.1)
Oral herpes	4 (0.0)	(0.0, 0.1)
Otitis externa	4 (0.0)	(0.0, 0.1)
Vulvovaginal mycotic infection	4 (0.0)	(0.0, 0.1)
Fungal skin infection	3 (0.0)	(0.0, 0.1)
Gingivitis	3 (0.0)	(0.0, 0.1)
Onychomycosis	3 (0.0)	(0.0, 0.1)
Paronychia	3 (0.0)	(0.0, 0.1)
Pharyngitis streptococcal	3 (0.0)	(0.0, 0.1)
Pneumonia	3 (0.0)	(0.0, 0.1)
Pyelonephritis	3 (0.0)	(0.0, 0.1)
Vulvovaginal candidiasis	3 (0.0)	(0.0, 0.1)
Device related infection	2 (0.0)	(0.0, 0.1)
Herpes simplex	2 (0.0)	(0.0, 0.1)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Influenza	2 (0.0)	(0.0, 0.1)
Kidney infection	2 (0.0)	(0.0, 0.1)
Laryngitis	2 (0.0)	(0.0, 0.1)
Localised infection	2 (0.0)	(0.0, 0.1)
Oral candidiasis	2 (0.0)	(0.0, 0.1)
Otitis media	2 (0.0)	(0.0, 0.1)
Otitis media acute	2 (0.0)	(0.0, 0.1)
Periodontitis	2 (0.0)	(0.0, 0.1)
Pustule	2 (0.0)	(0.0, 0.1)
Rash pustular	2 (0.0)	(0.0, 0.1)
Sepsis	2 (0.0)	(0.0, 0.1)
Sinusitis bacterial	2 (0.0)	(0.0, 0.1)
Skin infection	2 (0.0)	(0.0, 0.1)
Viral infection	2 (0.0)	(0.0, 0.1)
Abscess	1 (0.0)	(0.0, 0.0)
Abscess neck	1 (0.0)	(0.0, 0.0)
Abscess oral	1 (0.0)	(0.0, 0.0)
Acute sinusitis	1 (0.0)	(0.0, 0.0)
Appendicitis perforated	1 (0.0)	(0.0, 0.0)
Arthritis bacterial	1 (0.0)	(0.0, 0.0)
Bacteraemia	1 (0.0)	(0.0, 0.0)
Bacterial blepharitis	1 (0.0)	(0.0, 0.0)
Bacterial sepsis	1 (0.0)	(0.0, 0.0)
Bacterial vaginosis	1 (0.0)	(0.0, 0.0)
Bacterial vulvovaginitis	1 (0.0)	(0.0, 0.0)
Bartholinitis	1 (0.0)	(0.0, 0.0)
Bone abscess	1 (0.0)	(0.0, 0.0)
Bronchitis	1 (0.0)	(0.0, 0.0)
Cellulitis orbital	1 (0.0)	(0.0, 0.0)
Chronic sinusitis	1 (0.0)	(0.0, 0.0)
Clostridium difficile colitis	1 (0.0)	(0.0, 0.0)
Empyema	1 (0.0)	(0.0, 0.0)
Endocarditis	1 (0.0)	(0.0, 0.0)
Escherichia urinary tract infection	1 (0.0)	(0.0, 0.0)
Eye infection	1 (0.0)	(0.0, 0.0)
Fungal infection	1 (0.0)	(0.0, 0.0)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Furuncle	1 (0.0)	(0.0, 0.0)
Gangrene	1 (0.0)	(0.0, 0.0)
Gastroenteritis viral	1 (0.0)	(0.0, 0.0)
Gastrointestinal infection	1 (0.0)	(0.0, 0.0)
Genital herpes simplex	1 (0.0)	(0.0, 0.0)
Helicobacter gastritis	1 (0.0)	(0.0, 0.0)
Helicobacter infection	1 (0.0)	(0.0, 0.0)
Herpes zoster oticus	1 (0.0)	(0.0, 0.0)
Impetigo	1 (0.0)	(0.0, 0.0)
Infected bite	1 (0.0)	(0.0, 0.0)
Injection site abscess	1 (0.0)	(0.0, 0.0)
Mastoiditis	1 (0.0)	(0.0, 0.0)
Meningitis bacterial	1 (0.0)	(0.0, 0.0)
Mumps	1 (0.0)	(0.0, 0.0)
Papilloma viral infection	1 (0.0)	(0.0, 0.0)
Parasitic gastroenteritis	1 (0.0)	(0.0, 0.0)
Penile infection	1 (0.0)	(0.0, 0.0)
Peritoneal abscess	1 (0.0)	(0.0, 0.0)
Peritonitis	1 (0.0)	(0.0, 0.0)
Peritonsillar abscess	1 (0.0)	(0.0, 0.0)
Pharyngitis	1 (0.0)	(0.0, 0.0)
Pharyngotonsillitis	1 (0.0)	(0.0, 0.0)
Pilonidal cyst	1 (0.0)	(0.0, 0.0)
Postoperative abscess	1 (0.0)	(0.0, 0.0)
Respiratory tract infection viral	1 (0.0)	(0.0, 0.0)
Sialoadenitis	1 (0.0)	(0.0, 0.0)
Staphylococcal infection	1 (0.0)	(0.0, 0.0)
Subcutaneous abscess	1 (0.0)	(0.0, 0.0)
Tinea versicolour	1 (0.0)	(0.0, 0.0)
Varicella	1 (0.0)	(0.0, 0.0)
Vulval abscess	1 (0.0)	(0.0, 0.0)
Vulvovaginitis	1 (0.0)	(0.0, 0.0)
Wound infection	1 (0.0)	(0.0, 0.0)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	207 (1.7)	(1.5, 2.0)
Fall	47 (0.4)	(0.3, 0.5)
Exposure during pregnancy	22 (0.2)	(0.1, 0.3)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Muscle strain	15 (0.1)	(0.1, 0.2)
Ligament sprain	13 (0.1)	(0.1, 0.2)
Contusion	12 (0.1)	(0.1, 0.2)
Procedural pain	11 (0.1)	(0.0, 0.2)
Road traffic accident	11 (0.1)	(0.0, 0.2)
Skin laceration	11 (0.1)	(0.0, 0.2)
Arthropod bite	7 (0.1)	(0.0, 0.1)
Limb injury	7 (0.1)	(0.0, 0.1)
Tooth fracture	6 (0.0)	(0.0, 0.1)
Ankle fracture	5 (0.0)	(0.0, 0.1)
Chest injury	5 (0.0)	(0.0, 0.1)
Foot fracture	5 (0.0)	(0.0, 0.1)
Hand fracture	5 (0.0)	(0.0, 0.1)
Joint dislocation	5 (0.0)	(0.0, 0.1)
Skin abrasion	5 (0.0)	(0.0, 0.1)
Joint injury	4 (0.0)	(0.0, 0.1)
Meniscus injury	4 (0.0)	(0.0, 0.1)
Wrist fracture	4 (0.0)	(0.0, 0.1)
Animal bite	3 (0.0)	(0.0, 0.1)
Arthropod sting	3 (0.0)	(0.0, 0.1)
Burns second degree	3 (0.0)	(0.0, 0.1)
Cervical vertebral fracture	3 (0.0)	(0.0, 0.1)
Facial bones fracture	3 (0.0)	(0.0, 0.1)
Humerus fracture	3 (0.0)	(0.0, 0.1)
Patella fracture	3 (0.0)	(0.0, 0.1)
Tibia fracture	3 (0.0)	(0.0, 0.1)
Upper limb fracture	3 (0.0)	(0.0, 0.1)
Vaccination complication	3 (0.0)	(0.0, 0.1)
Concussion	2 (0.0)	(0.0, 0.1)
Craniocerebral injury	2 (0.0)	(0.0, 0.1)
Ligament rupture	2 (0.0)	(0.0, 0.1)
Radius fracture	2 (0.0)	(0.0, 0.1)
Rib fracture	2 (0.0)	(0.0, 0.1)
Thermal burn	2 (0.0)	(0.0, 0.1)
Bone contusion	1 (0.0)	(0.0, 0.0)
Bone fissure	1 (0.0)	(0.0, 0.0)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Burn oral cavity	1 (0.0)	(0.0, 0.0)
Burns first degree	1 (0.0)	(0.0, 0.0)
Burns third degree	1 (0.0)	(0.0, 0.0)
Cartilage injury	1 (0.0)	(0.0, 0.0)
Chemical burns of eye	1 (0.0)	(0.0, 0.0)
Corneal abrasion	1 (0.0)	(0.0, 0.0)
Eyelid injury	1 (0.0)	(0.0, 0.0)
Fibula fracture	1 (0.0)	(0.0, 0.0)
Foreign body in eye	1 (0.0)	(0.0, 0.0)
Fractured sacrum	1 (0.0)	(0.0, 0.0)
Head injury	1 (0.0)	(0.0, 0.0)
Hip fracture	1 (0.0)	(0.0, 0.0)
Jaw fracture	1 (0.0)	(0.0, 0.0)
Limb fracture	1 (0.0)	(0.0, 0.0)
Limb traumatic amputation	1 (0.0)	(0.0, 0.0)
Maternal exposure before pregnancy	1 (0.0)	(0.0, 0.0)
Maternal exposure during pregnancy	1 (0.0)	(0.0, 0.0)
Muscle contusion	1 (0.0)	(0.0, 0.0)
Muscle rupture	1 (0.0)	(0.0, 0.0)
Overdose	1 (0.0)	(0.0, 0.0)
Pelvic fracture	1 (0.0)	(0.0, 0.0)
Penis injury	1 (0.0)	(0.0, 0.0)
Post concussion syndrome	1 (0.0)	(0.0, 0.0)
Post procedural discomfort	1 (0.0)	(0.0, 0.0)
Post procedural swelling	1 (0.0)	(0.0, 0.0)
Procedural dizziness	1 (0.0)	(0.0, 0.0)
Spinal compression fracture	1 (0.0)	(0.0, 0.0)
Spinal cord injury cervical	1 (0.0)	(0.0, 0.0)
Spinal fracture	1 (0.0)	(0.0, 0.0)
Stress fracture	1 (0.0)	(0.0, 0.0)
Subdural haematoma	1 (0.0)	(0.0, 0.0)
Sunburn	1 (0.0)	(0.0, 0.0)
Traumatic intracranial haemorrhage	1 (0.0)	(0.0, 0.0)
Ulna fracture	1 (0.0)	(0.0, 0.0)
INVESTIGATIONS	94 (0.8)	(0.6, 1.0)
Body temperature increased	50 (0.4)	(0.3, 0.5)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Blood glucose increased	8 (0.1)	(0.0, 0.1)
SARS-CoV-2 antibody test positive	5 (0.0)	(0.0, 0.1)
Blood pressure increased	4 (0.0)	(0.0, 0.1)
Blood cholesterol increased	3 (0.0)	(0.0, 0.1)
Alanine aminotransferase increased	2 (0.0)	(0.0, 0.1)
Blood thyroid stimulating hormone increased	2 (0.0)	(0.0, 0.1)
Weight increased	2 (0.0)	(0.0, 0.1)
Aspartate aminotransferase increased	1 (0.0)	(0.0, 0.0)
Blood creatinine decreased	1 (0.0)	(0.0, 0.0)
Blood glucose abnormal	1 (0.0)	(0.0, 0.0)
Blood immunoglobulin E increased	1 (0.0)	(0.0, 0.0)
Blood potassium decreased	1 (0.0)	(0.0, 0.0)
Blood triglycerides increased	1 (0.0)	(0.0, 0.0)
Body temperature decreased	1 (0.0)	(0.0, 0.0)
C-reactive protein	1 (0.0)	(0.0, 0.0)
Cardiac stress test abnormal	1 (0.0)	(0.0, 0.0)
Electrocardiogram QT prolonged	1 (0.0)	(0.0, 0.0)
Fractional exhaled nitric oxide increased	1 (0.0)	(0.0, 0.0)
Glomerular filtration rate decreased	1 (0.0)	(0.0, 0.0)
Haemoglobin decreased	1 (0.0)	(0.0, 0.0)
Heart rate increased	1 (0.0)	(0.0, 0.0)
Intraocular pressure increased	1 (0.0)	(0.0, 0.0)
Liver function test increased	1 (0.0)	(0.0, 0.0)
Lymphocyte count decreased	1 (0.0)	(0.0, 0.0)
Mean cell volume decreased	1 (0.0)	(0.0, 0.0)
Platelet count decreased	1 (0.0)	(0.0, 0.0)
Respiratory rate increased	1 (0.0)	(0.0, 0.0)
Troponin increased	1 (0.0)	(0.0, 0.0)
Weight decreased	1 (0.0)	(0.0, 0.0)
METABOLISM AND NUTRITION DISORDERS	81 (0.7)	(0.5, 0.8)
Decreased appetite	15 (0.1)	(0.1, 0.2)
Hyperlipidaemia	9 (0.1)	(0.0, 0.1)
Type 2 diabetes mellitus	9 (0.1)	(0.0, 0.1)
Vitamin D deficiency	8 (0.1)	(0.0, 0.1)
Hypercholesterolaemia	6 (0.0)	(0.0, 0.1)
Dyslipidaemia	5 (0.0)	(0.0, 0.1)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Glucose tolerance impaired	4 (0.0)	(0.0, 0.1)
Gout	3 (0.0)	(0.0, 0.1)
Hyperglycaemia	3 (0.0)	(0.0, 0.1)
Hypertriglyceridaemia	3 (0.0)	(0.0, 0.1)
Hypoglycaemia	3 (0.0)	(0.0, 0.1)
Hypokalaemia	3 (0.0)	(0.0, 0.1)
Dehydration	2 (0.0)	(0.0, 0.1)
Hyperkalaemia	2 (0.0)	(0.0, 0.1)
Hyperuricaemia	2 (0.0)	(0.0, 0.1)
Obesity	2 (0.0)	(0.0, 0.1)
Diabetes mellitus	1 (0.0)	(0.0, 0.0)
Diabetes mellitus inadequate control	1 (0.0)	(0.0, 0.0)
Diabetic ketoacidosis	1 (0.0)	(0.0, 0.0)
Hypocalcaemia	1 (0.0)	(0.0, 0.0)
Hypocholesterolaemia	1 (0.0)	(0.0, 0.0)
Insulin resistance	1 (0.0)	(0.0, 0.0)
Metabolic syndrome	1 (0.0)	(0.0, 0.0)
Polydipsia	1 (0.0)	(0.0, 0.0)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	905 (7.5)	(7.1, 8.0)
Myalgia	549 (4.6)	(4.2, 5.0)
Arthralgia	153 (1.3)	(1.1, 1.5)
Pain in extremity	93 (0.8)	(0.6, 0.9)
Back pain	62 (0.5)	(0.4, 0.7)
Neck pain	20 (0.2)	(0.1, 0.3)
Muscle spasms	19 (0.2)	(0.1, 0.2)
Osteoarthritis	14 (0.1)	(0.1, 0.2)
Tendonitis	9 (0.1)	(0.0, 0.1)
Musculoskeletal stiffness	8 (0.1)	(0.0, 0.1)
Intervertebral disc protrusion	6 (0.0)	(0.0, 0.1)
Arthritis	5 (0.0)	(0.0, 0.1)
Bursitis	5 (0.0)	(0.0, 0.1)
Muscular weakness	5 (0.0)	(0.0, 0.1)
Musculoskeletal chest pain	5 (0.0)	(0.0, 0.1)
Periarthritis	5 (0.0)	(0.0, 0.1)
Musculoskeletal discomfort	4 (0.0)	(0.0, 0.1)
Intervertebral disc degeneration	3 (0.0)	(0.0, 0.1)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Joint stiffness	3 (0.0)	(0.0, 0.1)
Muscle contracture	3 (0.0)	(0.0, 0.1)
Rotator cuff syndrome	3 (0.0)	(0.0, 0.1)
Arthropathy	2 (0.0)	(0.0, 0.1)
Coccydynia	2 (0.0)	(0.0, 0.1)
Costochondritis	2 (0.0)	(0.0, 0.1)
Flank pain	2 (0.0)	(0.0, 0.1)
Joint range of motion decreased	2 (0.0)	(0.0, 0.1)
Limb discomfort	2 (0.0)	(0.0, 0.1)
Muscle twitching	2 (0.0)	(0.0, 0.1)
Musculoskeletal pain	2 (0.0)	(0.0, 0.1)
Pain in jaw	2 (0.0)	(0.0, 0.1)
Plantar fasciitis	2 (0.0)	(0.0, 0.1)
Spinal osteoarthritis	2 (0.0)	(0.0, 0.1)
Tenosynovitis stenosans	2 (0.0)	(0.0, 0.1)
Bone disorder	1 (0.0)	(0.0, 0.0)
Bone pain	1 (0.0)	(0.0, 0.0)
Groin pain	1 (0.0)	(0.0, 0.0)
Intervertebral disc compression	1 (0.0)	(0.0, 0.0)
Joint effusion	1 (0.0)	(0.0, 0.0)
Joint instability	1 (0.0)	(0.0, 0.0)
Joint swelling	1 (0.0)	(0.0, 0.0)
Mobility decreased	1 (0.0)	(0.0, 0.0)
Muscle fatigue	1 (0.0)	(0.0, 0.0)
Muscle tightness	1 (0.0)	(0.0, 0.0)
Osteochondritis	1 (0.0)	(0.0, 0.0)
Osteopenia	1 (0.0)	(0.0, 0.0)
Psoriatic arthropathy	1 (0.0)	(0.0, 0.0)
Spinal stenosis	1 (0.0)	(0.0, 0.0)
Spondylitis	1 (0.0)	(0.0, 0.0)
Synovial cyst	1 (0.0)	(0.0, 0.0)
Temporomandibular joint syndrome	1 (0.0)	(0.0, 0.0)
Torticollis	1 (0.0)	(0.0, 0.0)
Trigger finger	1 (0.0)	(0.0, 0.0)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	53 (0.4)	(0.3, 0.6)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Prostate cancer	5 (0.0)	(0.0, 0.1)
Basal cell carcinoma	4 (0.0)	(0.0, 0.1)
Lipoma	4 (0.0)	(0.0, 0.1)
Malignant melanoma	4 (0.0)	(0.0, 0.1)
Breast cancer	3 (0.0)	(0.0, 0.1)
Invasive ductal breast carcinoma	2 (0.0)	(0.0, 0.1)
Skin papilloma	2 (0.0)	(0.0, 0.1)
Transitional cell carcinoma	2 (0.0)	(0.0, 0.1)
Acute myeloid leukaemia	1 (0.0)	(0.0, 0.0)
Adenocarcinoma pancreas	1 (0.0)	(0.0, 0.0)
Adenoma benign	1 (0.0)	(0.0, 0.0)
Adrenal gland cancer	1 (0.0)	(0.0, 0.0)
Benign breast neoplasm	1 (0.0)	(0.0, 0.0)
Benign hydatidiform mole	1 (0.0)	(0.0, 0.0)
Benign uterine neoplasm	1 (0.0)	(0.0, 0.0)
Bladder cancer	1 (0.0)	(0.0, 0.0)
Borderline serous tumour of ovary	1 (0.0)	(0.0, 0.0)
Brain cancer metastatic	1 (0.0)	(0.0, 0.0)
Breast cancer in situ	1 (0.0)	(0.0, 0.0)
Carcinoid tumour of the stomach	1 (0.0)	(0.0, 0.0)
Chondroma	1 (0.0)	(0.0, 0.0)
Colon adenoma	1 (0.0)	(0.0, 0.0)
Fibroma	1 (0.0)	(0.0, 0.0)
Gallbladder cancer stage II	1 (0.0)	(0.0, 0.0)
Gastric cancer	1 (0.0)	(0.0, 0.0)
Malignant melanoma of eyelid	1 (0.0)	(0.0, 0.0)
Meningioma benign	1 (0.0)	(0.0, 0.0)
Non-small cell lung cancer stage IV	1 (0.0)	(0.0, 0.0)
Seborrhoeic keratosis	1 (0.0)	(0.0, 0.0)
Skin cancer	1 (0.0)	(0.0, 0.0)
Squamous cell carcinoma	1 (0.0)	(0.0, 0.0)
Squamous cell carcinoma of skin	1 (0.0)	(0.0, 0.0)
Thyroid cancer	1 (0.0)	(0.0, 0.0)
Uterine cancer	1 (0.0)	(0.0, 0.0)
Uterine leiomyoma	1 (0.0)	(0.0, 0.0)
NERVOUS SYSTEM DISORDERS	726 (6.0)	(5.6, 6.5)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Headache	572 (4.8)	(4.4, 5.2)
Dizziness	43 (0.4)	(0.3, 0.5)
Paraesthesia	15 (0.1)	(0.1, 0.2)
Lethargy	14 (0.1)	(0.1, 0.2)
Migraine	14 (0.1)	(0.1, 0.2)
Sciatica	9 (0.1)	(0.0, 0.1)
Tension headache	9 (0.1)	(0.0, 0.1)
Syncope	8 (0.1)	(0.0, 0.1)
Presyncope	6 (0.0)	(0.0, 0.1)
Tremor	6 (0.0)	(0.0, 0.1)
Dysgeusia	5 (0.0)	(0.0, 0.1)
Somnolence	4 (0.0)	(0.0, 0.1)
Disturbance in attention	3 (0.0)	(0.0, 0.1)
Facial paralysis	3 (0.0)	(0.0, 0.1)
Hypoaesthesia	3 (0.0)	(0.0, 0.1)
Sinus headache	3 (0.0)	(0.0, 0.1)
Subarachnoid haemorrhage	3 (0.0)	(0.0, 0.1)
Burning sensation	2 (0.0)	(0.0, 0.1)
Cerebrovascular accident	2 (0.0)	(0.0, 0.1)
Cervical radiculopathy	2 (0.0)	(0.0, 0.1)
Dizziness postural	2 (0.0)	(0.0, 0.1)
Migraine without aura	2 (0.0)	(0.0, 0.1)
Nerve compression	2 (0.0)	(0.0, 0.1)
Optic neuritis	2 (0.0)	(0.0, 0.1)
Restless legs syndrome	2 (0.0)	(0.0, 0.1)
Seizure	2 (0.0)	(0.0, 0.1)
Transient ischaemic attack	2 (0.0)	(0.0, 0.1)
Aphasia	1 (0.0)	(0.0, 0.0)
Carpal tunnel syndrome	1 (0.0)	(0.0, 0.0)
Depressed level of consciousness	1 (0.0)	(0.0, 0.0)
Dyskinesia	1 (0.0)	(0.0, 0.0)
Hyperaesthesia	1 (0.0)	(0.0, 0.0)
Idiopathic intracranial hypertension	1 (0.0)	(0.0, 0.0)
Intracranial aneurysm	1 (0.0)	(0.0, 0.0)
Ischaemic stroke	1 (0.0)	(0.0, 0.0)
Neuralgia	1 (0.0)	(0.0, 0.0)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Parosmia	1 (0.0)	(0.0, 0.0)
Periodic limb movement disorder	1 (0.0)	(0.0, 0.0)
Peripheral nerve lesion	1 (0.0)	(0.0, 0.0)
Peripheral sensory neuropathy	1 (0.0)	(0.0, 0.0)
Post herpetic neuralgia	1 (0.0)	(0.0, 0.0)
Radiculopathy	1 (0.0)	(0.0, 0.0)
Seizure like phenomena	1 (0.0)	(0.0, 0.0)
Toxic encephalopathy	1 (0.0)	(0.0, 0.0)
Transient global amnesia	1 (0.0)	(0.0, 0.0)
Uraemic encephalopathy	1 (0.0)	(0.0, 0.0)
Vocal cord paralysis	1 (0.0)	(0.0, 0.0)
PREGNANCY, PUERPERIUM AND PERINATAL CONDITIONS	3 (0.0)	(0.0, 0.1)
Abortion spontaneous	2 (0.0)	(0.0, 0.1)
Exposure during pregnancy	1 (0.0)	(0.0, 0.0)
PRODUCT ISSUES	1 (0.0)	(0.0, 0.0)
Device connection issue	1 (0.0)	(0.0, 0.0)
PSYCHIATRIC DISORDERS	65 (0.5)	(0.4, 0.7)
Insomnia	17 (0.1)	(0.1, 0.2)
Anxiety	16 (0.1)	(0.1, 0.2)
Depression	11 (0.1)	(0.0, 0.2)
Anxiety disorder	4 (0.0)	(0.0, 0.1)
Abnormal dreams	3 (0.0)	(0.0, 0.1)
Attention deficit hyperactivity disorder	3 (0.0)	(0.0, 0.1)
Irritability	3 (0.0)	(0.0, 0.1)
Sleep disorder	3 (0.0)	(0.0, 0.1)
Disorientation	2 (0.0)	(0.0, 0.1)
Nightmare	2 (0.0)	(0.0, 0.1)
Generalised anxiety disorder	1 (0.0)	(0.0, 0.0)
Libido increased	1 (0.0)	(0.0, 0.0)
Panic attack	1 (0.0)	(0.0, 0.0)
Restlessness	1 (0.0)	(0.0, 0.0)
Suicide attempt	1 (0.0)	(0.0, 0.0)
RENAL AND URINARY DISORDERS	42 (0.3)	(0.3, 0.5)
Nephrolithiasis	11 (0.1)	(0.0, 0.2)
Dysuria	6 (0.0)	(0.0, 0.1)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Pollakiuria	5 (0.0)	(0.0, 0.1)
Haematuria	3 (0.0)	(0.0, 0.1)
Acute kidney injury	2 (0.0)	(0.0, 0.1)
Bladder spasm	2 (0.0)	(0.0, 0.1)
Renal colic	2 (0.0)	(0.0, 0.1)
Urinary retention	2 (0.0)	(0.0, 0.1)
Bladder irritation	1 (0.0)	(0.0, 0.0)
Chronic kidney disease	1 (0.0)	(0.0, 0.0)
Hypertonic bladder	1 (0.0)	(0.0, 0.0)
Micturition urgency	1 (0.0)	(0.0, 0.0)
Obstructive nephropathy	1 (0.0)	(0.0, 0.0)
Renal cyst	1 (0.0)	(0.0, 0.0)
Renal haematoma	1 (0.0)	(0.0, 0.0)
Subcapsular renal haematoma	1 (0.0)	(0.0, 0.0)
Urethral stenosis	1 (0.0)	(0.0, 0.0)
Urinary tract obstruction	1 (0.0)	(0.0, 0.0)
Vesical fistula	1 (0.0)	(0.0, 0.0)
REPRODUCTIVE SYSTEM AND BREAST DISORDERS	36 (0.3)	(0.2, 0.4)
Dysmenorrhoea	4 (0.0)	(0.0, 0.1)
Ovarian cyst	3 (0.0)	(0.0, 0.1)
Benign prostatic hyperplasia	2 (0.0)	(0.0, 0.1)
Breast pain	2 (0.0)	(0.0, 0.1)
Endometriosis	2 (0.0)	(0.0, 0.1)
Genital erythema	2 (0.0)	(0.0, 0.1)
Menorrhagia	2 (0.0)	(0.0, 0.1)
Menstruation irregular	2 (0.0)	(0.0, 0.1)
Amenorrhoea	1 (0.0)	(0.0, 0.0)
Breast hyperplasia	1 (0.0)	(0.0, 0.0)
Cervical dysplasia	1 (0.0)	(0.0, 0.0)
Dysfunctional uterine bleeding	1 (0.0)	(0.0, 0.0)
Endometrial thickening	1 (0.0)	(0.0, 0.0)
Haematospermia	1 (0.0)	(0.0, 0.0)
Mammary duct ectasia	1 (0.0)	(0.0, 0.0)
Menometrorrhagia	1 (0.0)	(0.0, 0.0)
Metrorrhagia	1 (0.0)	(0.0, 0.0)
Pelvic pain	1 (0.0)	(0.0, 0.0)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Polycystic ovaries	1 (0.0)	(0.0, 0.0)
Postmenopausal haemorrhage	1 (0.0)	(0.0, 0.0)
Prostatitis	1 (0.0)	(0.0, 0.0)
Prostatomegaly	1 (0.0)	(0.0, 0.0)
Pruritus genital	1 (0.0)	(0.0, 0.0)
Scrotal pain	1 (0.0)	(0.0, 0.0)
Testicular pain	1 (0.0)	(0.0, 0.0)
Testicular torsion	1 (0.0)	(0.0, 0.0)
Uterine prolapse	1 (0.0)	(0.0, 0.0)
Vaginal haemorrhage	1 (0.0)	(0.0, 0.0)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	145 (1.2)	(1.0, 1.4)
Oropharyngeal pain	24 (0.2)	(0.1, 0.3)
Nasal congestion	21 (0.2)	(0.1, 0.3)
Cough	17 (0.1)	(0.1, 0.2)
Rhinorrhoea	12 (0.1)	(0.1, 0.2)
Rhinitis allergic	9 (0.1)	(0.0, 0.1)
Asthma	8 (0.1)	(0.0, 0.1)
Dyspnoea	6 (0.0)	(0.0, 0.1)
Pulmonary embolism	6 (0.0)	(0.0, 0.1)
Sleep apnoea syndrome	5 (0.0)	(0.0, 0.1)
Throat irritation	5 (0.0)	(0.0, 0.1)
Upper-airway cough syndrome	5 (0.0)	(0.0, 0.1)
Paranasal sinus discomfort	4 (0.0)	(0.0, 0.1)
Chronic obstructive pulmonary disease	3 (0.0)	(0.0, 0.1)
Epistaxis	3 (0.0)	(0.0, 0.1)
Asthmatic crisis	2 (0.0)	(0.0, 0.1)
Bronchospasm	2 (0.0)	(0.0, 0.1)
Nasal polyps	2 (0.0)	(0.0, 0.1)
Productive cough	2 (0.0)	(0.0, 0.1)
Respiratory tract congestion	2 (0.0)	(0.0, 0.1)
Sinus congestion	2 (0.0)	(0.0, 0.1)
Upper respiratory tract congestion	2 (0.0)	(0.0, 0.1)
Wheezing	2 (0.0)	(0.0, 0.1)
Allergic sinusitis	1 (0.0)	(0.0, 0.0)
Atelectasis	1 (0.0)	(0.0, 0.0)
Dry throat	1 (0.0)	(0.0, 0.0)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Dyspnoea exertional	1 (0.0)	(0.0, 0.0)
Emphysema	1 (0.0)	(0.0, 0.0)
Haemoptysis	1 (0.0)	(0.0, 0.0)
Interstitial lung disease	1 (0.0)	(0.0, 0.0)
Nasal septum deviation	1 (0.0)	(0.0, 0.0)
Oropharyngeal discomfort	1 (0.0)	(0.0, 0.0)
Paranasal sinus hypersecretion	1 (0.0)	(0.0, 0.0)
Pleurisy	1 (0.0)	(0.0, 0.0)
Pneumonitis	1 (0.0)	(0.0, 0.0)
Pneumothorax	1 (0.0)	(0.0, 0.0)
Reflux laryngitis	1 (0.0)	(0.0, 0.0)
Respiratory failure	1 (0.0)	(0.0, 0.0)
Sneezing	1 (0.0)	(0.0, 0.0)
Snoring	1 (0.0)	(0.0, 0.0)
Tonsillar hypertrophy	1 (0.0)	(0.0, 0.0)
SKIN AND SUBCUTANEOUS TISSUE DISORDERS	153 (1.3)	(1.1, 1.5)
Rash	35 (0.3)	(0.2, 0.4)
Hyperhidrosis	16 (0.1)	(0.1, 0.2)
Pruritus	15 (0.1)	(0.1, 0.2)
Dermatitis contact	11 (0.1)	(0.0, 0.2)
Urticaria	11 (0.1)	(0.0, 0.2)
Night sweats	8 (0.1)	(0.0, 0.1)
Rash pruritic	6 (0.0)	(0.0, 0.1)
Erythema	5 (0.0)	(0.0, 0.1)
Dermal cyst	4 (0.0)	(0.0, 0.1)
Dermatitis	4 (0.0)	(0.0, 0.1)
Eczema	4 (0.0)	(0.0, 0.1)
Acne	3 (0.0)	(0.0, 0.1)
Actinic keratosis	3 (0.0)	(0.0, 0.1)
Dermatitis allergic	3 (0.0)	(0.0, 0.1)
Rash maculo-papular	3 (0.0)	(0.0, 0.1)
Alopecia	2 (0.0)	(0.0, 0.1)
Acne cystic	1 (0.0)	(0.0, 0.0)
Angioedema	1 (0.0)	(0.0, 0.0)
Cold sweat	1 (0.0)	(0.0, 0.0)
Dermatitis exfoliative	1 (0.0)	(0.0, 0.0)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Diabetic foot	1 (0.0)	(0.0, 0.0)
Dry skin	1 (0.0)	(0.0, 0.0)
Ecchymosis	1 (0.0)	(0.0, 0.0)
Erythema nodosum	1 (0.0)	(0.0, 0.0)
Hand dermatitis	1 (0.0)	(0.0, 0.0)
Hangnail	1 (0.0)	(0.0, 0.0)
Intertrigo	1 (0.0)	(0.0, 0.0)
Macule	1 (0.0)	(0.0, 0.0)
Onycholysis	1 (0.0)	(0.0, 0.0)
Onychomadesis	1 (0.0)	(0.0, 0.0)
Pain of skin	1 (0.0)	(0.0, 0.0)
Papule	1 (0.0)	(0.0, 0.0)
Pityriasis	1 (0.0)	(0.0, 0.0)
Pseudofolliculitis	1 (0.0)	(0.0, 0.0)
Psoriasis	1 (0.0)	(0.0, 0.0)
Purpura	1 (0.0)	(0.0, 0.0)
Rash erythematous	1 (0.0)	(0.0, 0.0)
Rash papular	1 (0.0)	(0.0, 0.0)
Rosacea	1 (0.0)	(0.0, 0.0)
Skin discolouration	1 (0.0)	(0.0, 0.0)
Skin irritation	1 (0.0)	(0.0, 0.0)
Skin ulcer	1 (0.0)	(0.0, 0.0)
Transient acantholytic dermatosis	1 (0.0)	(0.0, 0.0)
SOCIAL CIRCUMSTANCES	2 (0.0)	(0.0, 0.1)
High risk sexual behaviour	1 (0.0)	(0.0, 0.0)
Miscarriage of partner	1 (0.0)	(0.0, 0.0)
SURGICAL AND MEDICAL PROCEDURES	29 (0.2)	(0.2, 0.3)
Dental implantation	5 (0.0)	(0.0, 0.1)
Tooth extraction	3 (0.0)	(0.0, 0.1)
Wisdom teeth removal	2 (0.0)	(0.0, 0.1)
Botulinum toxin injection	1 (0.0)	(0.0, 0.0)
Cardioversion	1 (0.0)	(0.0, 0.0)
Carpal tunnel decompression	1 (0.0)	(0.0, 0.0)
Drug titration	1 (0.0)	(0.0, 0.0)
Endodontic procedure	1 (0.0)	(0.0, 0.0)
Facet joint block	1 (0.0)	(0.0, 0.0)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Finger amputation	1 (0.0)	(0.0, 0.0)
Gingival operation	1 (0.0)	(0.0, 0.0)
Inguinal hernia repair	1 (0.0)	(0.0, 0.0)
Lacrimal duct procedure	1 (0.0)	(0.0, 0.0)
Mammoplasty	1 (0.0)	(0.0, 0.0)
Meniscus operation	1 (0.0)	(0.0, 0.0)
Metabolic surgery	1 (0.0)	(0.0, 0.0)
Open reduction of fracture	1 (0.0)	(0.0, 0.0)
Postoperative care	1 (0.0)	(0.0, 0.0)
Radioactive iodine therapy	1 (0.0)	(0.0, 0.0)
Retinal operation	1 (0.0)	(0.0, 0.0)
Rotator cuff repair	1 (0.0)	(0.0, 0.0)
Sclerotherapy	1 (0.0)	(0.0, 0.0)
VASCULAR DISORDERS	78 (0.6)	(0.5, 0.8)
Hypertension	48 (0.4)	(0.3, 0.5)
Deep vein thrombosis	6 (0.0)	(0.0, 0.1)
Hot flush	6 (0.0)	(0.0, 0.1)
Aortic aneurysm	3 (0.0)	(0.0, 0.1)
Haematoma	3 (0.0)	(0.0, 0.1)
Flushing	2 (0.0)	(0.0, 0.1)
Hypotension	2 (0.0)	(0.0, 0.1)
Aortic dilatation	1 (0.0)	(0.0, 0.0)
Arterial occlusive disease	1 (0.0)	(0.0, 0.0)
Essential hypertension	1 (0.0)	(0.0, 0.0)
Intermittent claudication	1 (0.0)	(0.0, 0.0)
Lymphorrhoea	1 (0.0)	(0.0, 0.0)
Peripheral vascular disorder	1 (0.0)	(0.0, 0.0)
Systolic hypertension	1 (0.0)	(0.0, 0.0)
Thrombophlebitis superficial	1 (0.0)	(0.0, 0.0)
Varicose vein	1 (0.0)	(0.0, 0.0)

Table 13. Number (%) of Subjects Reporting at Least 1 Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])

Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
c. Exact 2-sided CI based on the Clopper and Pearson method.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:16)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adae s130 all bnt pd2 p3 saf

2.7.4.2.4.2.4.2.2. Related Adverse Events by System Organ Class and Preferred Term: Blinded Placebo-Controlled and Open-Label Follow-Up Periods From Dose 1 to 6 Months After Dose 2 – Original BNT162b2 Participants (Phase 3, Study C4591001, Analysis of Adverse Events)

From Dose 1 to 6 Months After Dose 2 during the blinded and open-label follow-up period, AEs assessed as related by the investigator during the blinded and open-label follow-up period were reported by 18.7% of participants in the BNT162b2 group (Table 11). Most related AEs were reactogenicity events and in the SOC of general disorders and administration site conditions (1944 [16.2%]).

The AE of lymphadenopathy in 29 (0.2%) participants was assessed by the investigator as related to study intervention.

Related AEs in the younger and older age groups were reported in 20.8% and 16.1% of original BNT162b2 participants.

2.7.4.2.4.2.5. Open-Label Follow-Up Period – Original Placebo Participants Who Then Received BNT162b2

2.7.4.2.4.2.5.1. Summary of Adverse Events: Open-Label Follow-Up Period – Original Placebo Participants Who Then Received BNT162b2 (Phase 3, Study C4591001)

Overall, there are 19,525 original placebo participants who then were unblinded and received BNT162b2. An overview of AEs after vaccination with BNT162b2 to the data cutoff date for placebo participants who received BNT162b2 during the open-label follow-up period is presented in Table 14. The IRs for any AE and at least 1 related AE were 205.4 per 100 PY

and 189.5 per 100 PY, respectively. IRs of severe AEs, SAEs, and AEs leading to withdrawal were 6.0 per 100 PY, 2.7 per 100 PY, and 0.8 per 100 PY. The IR for discontinuations because of related AEs was 0.5 per 100 PY, and 2 participants died (Section 2.7.4.2.4.3.1).

The IRs in Table 7 include all AEs reported for these participants including AEs reported while on placebo. Additionally, all of these placebo participants received open-label BNT162b2 and the exposure time is shorter for placebo participants who received BNT162b2 than those who originally were randomized to BNT162b2 (23.8 per 100 PY vs 83.4 per 100 PY, respectively [Table 14 and Table 7]). As expected, in comparison to participants randomized to BNT162b2 from Dose 1 to the unblinding date, the IR for any AE and at least 1 related AE and severe AE for participants who originally received placebo and then received BNT162b2 are greater (205.4 per 100 PY, 189.5 per 100 PY, 6.0 per 100 PY) than the IRs (83.2 per 100 PY, 62.9 per 100 PY, 4.3 per 100 PY) for participants who originally were randomized to BNT162b2, respectively (Table 14 and Table 7). However, the IRs for life-threatening AE, SAE, AEs leading to withdrawal and deaths were similar (0.5 per 100 PY, 2.7 per 100 PY, 0.8 per 100 PY, 0.1 per 100 PY vs 0.6 per 100 PY, 3.2 per 100 PY, 0.5 per 100 PY, 0.2 per 100 PY, respectively). There was 1 related SAE of anaphylactoid reaction for a placebo participant who was vaccinated with BNT162b2 (see Section 2.7.4.2.4.3.2.5).

The IRs of AEs for original placebo participants who then received BNT162b2 were observed by baseline SARS CoV-2 positive and negative status subgroups. Overall, the IRs for AEs were similar between the baseline positive (222.9 per 100 PY; 95% CI: 186.5, 264.3) compared to baseline negative (205 per 100 PY; 95% CI 199.6, 211.3). There were 2 SAEs (not related), 1 AE leading to withdrawal and no deaths in the baseline positive group.

Table 14. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021) – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
Adverse Event	n[c]	IR (/100 PY)[d]	(95% CI[e])
Any event	4885	205.4	(199.6, 211.2)
Related[f]	4508	189.5	(184.0, 195.1)
Severe	142	6.0	(5.0, 7.0)
Life-threatening	11	0.5	(0.2, 0.8)
Any serious adverse event	65	2.7	(2.1, 3.5)
Related[f]	1	0.0	(0.0, 0.2)
Severe	37	1.6	(1.1, 2.1)
Life-threatening	11	0.5	(0.2, 0.8)
Any adverse event leading to withdrawal	19	0.8	(0.5, 1.2)

Table 14. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021) – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
Adverse Event	n[c]	IR (/100 PY)[d]	(95% CI[e])
Related[f]	12	0.5	(0.3, 0.9)
Severe	2	0.1	(0.0, 0.3)
Life-threatening	4	0.2	(0.0, 0.4)
Death	2	0.1	(0.0, 0.3)

Note: Dose 3 = First dose of BNT162b2 (30 µg).
a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from Dose 3 to data cutoff date. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event category. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
f. Assessed by the investigator as related to investigational product.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:16)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/adae_s092_cr_cut_p3x_saf

2.7.4.2.4.2.5.2. Analysis of Adverse Events: Open-Label Follow-Up Period – Original Placebo Participants Who Then Received BNT162b2 (Phase 3, Study C4591001)

2.7.4.2.4.2.5.2.1. Adverse Events by System Organ Class and Preferred Term: Open-Label Follow-Up Period – Original Placebo Participants Who Then Received BNT162b2 (Phase 3, Study C4591001, Analysis of Adverse Events)

From vaccination with BNT162b2 for placebo participants to the data cutoff date during the open-label follow-up period, the IR for participants who reported at least 1 AE was 205.4 per 100 PY (Table 15).

Most AEs reported from Dose 3 (first dose of BNT162b2) to the data cutoff date were in SOCs with reactogenicity events.

- general disorders and administration site conditions (175.3 per 100 PY)
- musculoskeletal and connective tissue disorders (52.3 per 100 PY)
- nervous system disorders (50.5 per 100 PY)
- gastrointestinal disorders (14.3 per 100 PY)

As shown in Table 15, the most frequently reported AEs (IRs) overall were injection site pain (123.8 per 100 PY), fatigue (58.0 per 100 PY), headache (46.6 per 100 PY), chills (41.8 per 100 PY), myalgia (38.9 per 100 PY), and pyrexia (38.1 per 100 PY).

After participants who originally received placebo were unblinded and then received BNT162b2 after unblinding, events related to reactogenicity were not reported using an e-diary but were instead reported as AEs. An analysis was conducted to evaluate if the imbalance in AEs observed from Dose 3 to the unblinding date was attributed to reactogenicity events. The analysis examined the AEs reported within 7 days after each dose (Dose 3 and Dose 4), which represented the reactogenicity reporting period.

PTs reported from Dose 3 to 7 days after Dose 3 and from Dose 4 to 7 days after Dose 4 in the SOCs of general disorders and administration site conditions (injection site pain, chills, fatigue, and pyrexia), musculoskeletal and connective tissue disorders (myalgia), and nervous system disorders (headache) represented the majority of PTs reported in those SOCs.

Allergy to vaccine, anaphylactoid reaction, and deep vein thrombosis were reported in 1 participant each from Dose 3 to 7 days after Dose 3.

- One participant reported an AE of Grade 2 allergy to vaccine, which occurred on the day of Dose 3 vaccination, had a duration of 2 days, and resolved; this AE was assessed by the investigator as related to the study intervention.

- One participant with an ongoing medical history significant for drug hypersensitivity and food and seasonal allergies reported a life-threatening SAE of anaphylactoid reaction, which occurred 2 days after Dose 3 and was resolved that same day; this SAE was assessed by the investigator as related to the study intervention (Section 2.7.4.2.4.3.4.1.1).

- One participant with a past medical history significant for deep vein thrombosis, hypertension, pulmonary arterial hypertension, right ventricular enlargement, hypercholesteremia, artherosclerosis and bilateral peripheral neuropathy reported a Grade 2 SAE of deep vein thrombosis (lower right extremity) and Grade 1 SAE of pulmonary embolism, which both occurred 2 days after Dose 3, had both resolved with a duration of 3 days; both SAEs were assessed by the investigator as not related to the study intervention.

In addition to analysis of AEs corresponding to e-diary terms, consideration was given to additional AEs that were reported within 7 days after Dose 3 or Dose 4 such as pain in extremity, decreased appetite, lethargy, asthenia, malaise, night sweats, and hyperhidrosis. Similar to the analysis that examined these events 7 days within Dose 1 and Dose 2 of BNT162b2 in blinded follow-up (Section 2.7.4.2.4.2.1.2.1), these events reported in open-label follow-up are interpreted as attributable to the experience of local reactions and systemic events after vaccination with Dose 3 and Dose 4 (first and second dose of BNT162b2).

These results are consistent with the pattern seen during the blinded placebo-controlled follow-up period from Dose 1 to 1 month after Dose 2 (Section 2.7.4.2.4.2.1.2.1), which confirms that the greater rates of AEs observed overall in the BNT162b2 group compared with the placebo group were largely attributable to reactogenicity events for that time period.

No clinically meaningful differences in IRs of AEs for original placebo participants who then received BNT162b2 were observed by baseline SARS CoV-2 positive (222.9 per 100 PY) and negative (205.4 per 100 PY) status subgroups. The IR for original baseline positive placebo participants who then received BNT162b2 was 222.9 per 100 PY (95% CI: 186.5, 264.3) which was similar to baseline negative placebo participants who then received BNT162b2 is 205.4 per 100 PY (95% CI: 199.6, 211.3). The IR between other SOC were similar in the baseline positive and baseline negative groups except for the musculoskeletal SOC which was higher in the baseline positive group. However, it was driven by myalgia 64.2 per 100 PY (95% CI: 45.4, 88.1) in baseline positive participants compared to 38.3 per 100 PY (95% CI: 35.8, 40.9) in baseline negative participants.

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Any event	4885	205.4	(199.6, 211.2)
BLOOD AND LYMPHATIC SYSTEM DISORDERS	88	3.7	(3.0, 4.6)
Anaemia	2	0.1	(0.0, 0.3)
Coagulopathy	1	0.0	(0.0, 0.2)
Iron deficiency anaemia	2	0.1	(0.0, 0.3)
Lymph node pain	6	0.3	(0.1, 0.5)
Lymphadenitis	2	0.1	(0.0, 0.3)
Lymphadenopathy	76	3.2	(2.5, 4.0)
CARDIAC DISORDERS	17	0.7	(0.4, 1.1)
Acute myocardial infarction	1	0.0	(0.0, 0.2)
Angina pectoris	1	0.0	(0.0, 0.2)
Arrhythmia	1	0.0	(0.0, 0.2)
Arteriospasm coronary	1	0.0	(0.0, 0.2)
Atrial fibrillation	5	0.2	(0.1, 0.5)
Atrial flutter	1	0.0	(0.0, 0.2)
Cardiac failure congestive	1	0.0	(0.0, 0.2)
Cardio-respiratory arrest	1	0.0	(0.0, 0.2)
Cardiovascular disorder	1	0.0	(0.0, 0.2)
Coronary artery disease	1	0.0	(0.0, 0.2)
Ischaemic cardiomyopathy	1	0.0	(0.0, 0.2)
Myocardial infarction	1	0.0	(0.0, 0.2)
Palpitations	1	0.0	(0.0, 0.2)
Supraventricular tachycardia	1	0.0	(0.0, 0.2)
Tachycardia	2	0.1	(0.0, 0.3)
CONGENITAL, FAMILIAL AND GENETIC DISORDERS	4	0.2	(0.0, 0.4)
Atrial septal defect	1	0.0	(0.0, 0.2)
BRCA2 gene mutation	1	0.0	(0.0, 0.2)
Factor II mutation	1	0.0	(0.0, 0.2)
Hypertrophic cardiomyopathy	1	0.0	(0.0, 0.2)
EAR AND LABYRINTH DISORDERS	18	0.8	(0.4, 1.2)
Cerumen impaction	1	0.0	(0.0, 0.2)
Deafness neurosensory	1	0.0	(0.0, 0.2)
Deafness unilateral	1	0.0	(0.0, 0.2)
Ear discomfort	1	0.0	(0.0, 0.2)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Ear pain	4	0.2	(0.0, 0.4)
Eustachian tube dysfunction	2	0.1	(0.0, 0.3)
Hypoacusis	1	0.0	(0.0, 0.2)
Meniere's disease	1	0.0	(0.0, 0.2)
Sudden hearing loss	1	0.0	(0.0, 0.2)
Tinnitus	2	0.1	(0.0, 0.3)
Vertigo	6	0.3	(0.1, 0.5)
ENDOCRINE DISORDERS	4	0.2	(0.0, 0.4)
Hypothyroidism	2	0.1	(0.0, 0.3)
Thyroid disorder	1	0.0	(0.0, 0.2)
Thyroid mass	1	0.0	(0.0, 0.2)
EYE DISORDERS	26	1.1	(0.7, 1.6)
Blepharitis	1	0.0	(0.0, 0.2)
Cataract	4	0.2	(0.0, 0.4)
Conjunctival haemorrhage	1	0.0	(0.0, 0.2)
Dacryostenosis acquired	1	0.0	(0.0, 0.2)
Diplopia	1	0.0	(0.0, 0.2)
Dry eye	1	0.0	(0.0, 0.2)
Erythema of eyelid	1	0.0	(0.0, 0.2)
Eye irritation	1	0.0	(0.0, 0.2)
Eye pain	5	0.2	(0.1, 0.5)
Eye swelling	1	0.0	(0.0, 0.2)
Keratitis	2	0.1	(0.0, 0.3)
Lacrimation increased	3	0.1	(0.0, 0.4)
Meibomianitis	1	0.0	(0.0, 0.2)
Ocular discomfort	1	0.0	(0.0, 0.2)
Visual impairment	1	0.0	(0.0, 0.2)
Vitreous floaters	1	0.0	(0.0, 0.2)
GASTROINTESTINAL DISORDERS	339	14.3	(12.8, 15.9)
Abdominal discomfort	4	0.2	(0.0, 0.4)
Abdominal distension	1	0.0	(0.0, 0.2)
Abdominal pain	12	0.5	(0.3, 0.9)
Abdominal pain lower	2	0.1	(0.0, 0.3)
Abdominal pain upper	13	0.5	(0.3, 0.9)
Anal fistula	2	0.1	(0.0, 0.3)
Anal prolapse	1	0.0	(0.0, 0.2)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Chronic gastritis	1	0.0	(0.0, 0.2)
Constipation	4	0.2	(0.0, 0.4)
Dental caries	1	0.0	(0.0, 0.2)
Diarrhoea	91	3.8	(3.1, 4.7)
Dry mouth	3	0.1	(0.0, 0.4)
Duodenitis	1	0.0	(0.0, 0.2)
Dyspepsia	5	0.2	(0.1, 0.5)
Gastric ulcer	1	0.0	(0.0, 0.2)
Gastritis	5	0.2	(0.1, 0.5)
Gastrointestinal haemorrhage	1	0.0	(0.0, 0.2)
Gastrointestinal necrosis	1	0.0	(0.0, 0.2)
Gastrointestinal sounds abnormal	1	0.0	(0.0, 0.2)
Gastrooesophageal reflux disease	7	0.3	(0.1, 0.6)
Gingival bleeding	1	0.0	(0.0, 0.2)
Haemorrhoids	1	0.0	(0.0, 0.2)
Hiatus hernia	2	0.1	(0.0, 0.3)
Hyperaesthesia teeth	1	0.0	(0.0, 0.2)
Hypoaesthesia oral	1	0.0	(0.0, 0.2)
Intestinal obstruction	1	0.0	(0.0, 0.2)
Intestinal ulcer perforation	1	0.0	(0.0, 0.2)
Irritable bowel syndrome	2	0.1	(0.0, 0.3)
Large intestine polyp	1	0.0	(0.0, 0.2)
Nausea	160	6.7	(5.7, 7.9)
Oedema mouth	1	0.0	(0.0, 0.2)
Oral mucosal blistering	1	0.0	(0.0, 0.2)
Oral pain	1	0.0	(0.0, 0.2)
Oral pruritus	1	0.0	(0.0, 0.2)
Pancreatitis acute	2	0.1	(0.0, 0.3)
Retching	1	0.0	(0.0, 0.2)
Small intestinal obstruction	1	0.0	(0.0, 0.2)
Stomatitis	2	0.1	(0.0, 0.3)
Submaxillary gland enlargement	1	0.0	(0.0, 0.2)
Tongue disorder	1	0.0	(0.0, 0.2)
Tongue oedema	1	0.0	(0.0, 0.2)
Toothache	1	0.0	(0.0, 0.2)
Umbilical hernia	1	0.0	(0.0, 0.2)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Vomiting	48	2.0	(1.5, 2.7)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	4169	175.3	(170.0, 180.7)
Application site pain	2	0.1	(0.0, 0.3)
Asthenia	36	1.5	(1.1, 2.1)
Axillary pain	3	0.1	(0.0, 0.4)
Chest discomfort	2	0.1	(0.0, 0.3)
Chest pain	4	0.2	(0.0, 0.4)
Chills	994	41.8	(39.2, 44.5)
Crying	1	0.0	(0.0, 0.2)
Discomfort	2	0.1	(0.0, 0.3)
Drug withdrawal syndrome	1	0.0	(0.0, 0.2)
Facial pain	1	0.0	(0.0, 0.2)
Fatigue	1379	58.0	(55.0, 61.1)
Feeling abnormal	6	0.3	(0.1, 0.5)
Feeling cold	2	0.1	(0.0, 0.3)
Feeling hot	6	0.3	(0.1, 0.5)
Gait disturbance	1	0.0	(0.0, 0.2)
Implant site pain	1	0.0	(0.0, 0.2)
Inflammation	1	0.0	(0.0, 0.2)
Influenza like illness	1	0.0	(0.0, 0.2)
Injection site bruising	16	0.7	(0.4, 1.1)
Injection site discomfort	3	0.1	(0.0, 0.4)
Injection site erythema	66	2.8	(2.1, 3.5)
Injection site haematoma	2	0.1	(0.0, 0.3)
Injection site haemorrhage	1	0.0	(0.0, 0.2)
Injection site hypersensitivity	1	0.0	(0.0, 0.2)
Injection site hypoaesthesia	2	0.1	(0.0, 0.3)
Injection site induration	1	0.0	(0.0, 0.2)
Injection site irritation	1	0.0	(0.0, 0.2)
Injection site lymphadenopathy	1	0.0	(0.0, 0.2)
Injection site mass	1	0.0	(0.0, 0.2)
Injection site nodule	2	0.1	(0.0, 0.3)
Injection site oedema	2	0.1	(0.0, 0.3)
Injection site pain	2944	123.8	(119.3, 128.3)
Injection site pruritus	18	0.8	(0.4, 1.2)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Injection site rash	4	0.2	(0.0, 0.4)
Injection site reaction	2	0.1	(0.0, 0.3)
Injection site swelling	65	2.7	(2.1, 3.5)
Injection site urticaria	1	0.0	(0.0, 0.2)
Injection site warmth	3	0.1	(0.0, 0.4)
Malaise	83	3.5	(2.8, 4.3)
Non-cardiac chest pain	1	0.0	(0.0, 0.2)
Oedema peripheral	2	0.1	(0.0, 0.3)
Pain	394	16.6	(15.0, 18.3)
Pelvic mass	1	0.0	(0.0, 0.2)
Peripheral swelling	7	0.3	(0.1, 0.6)
Pyrexia	906	38.1	(35.6, 40.6)
Swelling	3	0.1	(0.0, 0.4)
Swelling face	4	0.2	(0.0, 0.4)
Vaccination site pain	3	0.1	(0.0, 0.4)
Vaccination site reaction	1	0.0	(0.0, 0.2)
Vessel puncture site haematoma	1	0.0	(0.0, 0.2)
HEPATOBILIARY DISORDERS	3	0.1	(0.0, 0.4)
Cholecystitis	1	0.0	(0.0, 0.2)
Cholelithiasis	1	0.0	(0.0, 0.2)
Hepatitis acute	1	0.0	(0.0, 0.2)
IMMUNE SYSTEM DISORDERS	7	0.3	(0.1, 0.6)
Allergy to vaccine	1	0.0	(0.0, 0.2)
Anaphylactoid reaction	1	0.0	(0.0, 0.2)
Hypersensitivity	1	0.0	(0.0, 0.2)
Seasonal allergy	4	0.2	(0.0, 0.4)
INFECTIONS AND INFESTATIONS	136	5.7	(4.8, 6.8)
Abscess	1	0.0	(0.0, 0.2)
Appendicitis perforated	1	0.0	(0.0, 0.2)
Asymptomatic bacteriuria	1	0.0	(0.0, 0.2)
COVID-19 pneumonia	1	0.0	(0.0, 0.2)
Candida infection	1	0.0	(0.0, 0.2)
Cellulitis	3	0.1	(0.0, 0.4)
Chlamydial infection	1	0.0	(0.0, 0.2)
Clostridium difficile infection	1	0.0	(0.0, 0.2)
Conjunctivitis	6	0.3	(0.1, 0.5)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Cystitis	1	0.0	(0.0, 0.2)
Demodicidosis	1	0.0	(0.0, 0.2)
Diverticulitis	2	0.1	(0.0, 0.3)
Ear infection	8	0.3	(0.1, 0.7)
Eye infection	1	0.0	(0.0, 0.2)
Focal peritonitis	1	0.0	(0.0, 0.2)
Folliculitis	1	0.0	(0.0, 0.2)
Fungal skin infection	3	0.1	(0.0, 0.4)
Genital herpes	1	0.0	(0.0, 0.2)
Genital herpes simplex	2	0.1	(0.0, 0.3)
Helicobacter gastritis	1	0.0	(0.0, 0.2)
Herpes simplex	2	0.1	(0.0, 0.3)
Herpes zoster	8	0.3	(0.1, 0.7)
Hordeolum	2	0.1	(0.0, 0.3)
Infected cyst	1	0.0	(0.0, 0.2)
Infection	1	0.0	(0.0, 0.2)
Labyrinthitis	1	0.0	(0.0, 0.2)
Localised infection	2	0.1	(0.0, 0.3)
Mastitis	1	0.0	(0.0, 0.2)
Onychomycosis	1	0.0	(0.0, 0.2)
Oral candidiasis	1	0.0	(0.0, 0.2)
Oral herpes	3	0.1	(0.0, 0.4)
Osteomyelitis	1	0.0	(0.0, 0.2)
Otitis externa	2	0.1	(0.0, 0.3)
Otitis media	2	0.1	(0.0, 0.3)
Pelvic abscess	1	0.0	(0.0, 0.2)
Pneumonia	2	0.1	(0.0, 0.3)
Postoperative wound infection	1	0.0	(0.0, 0.2)
Rhinitis	2	0.1	(0.0, 0.3)
Sinusitis	7	0.3	(0.1, 0.6)
Subcutaneous abscess	2	0.1	(0.0, 0.3)
Suspected COVID-19	1	0.0	(0.0, 0.2)
Taeniasis	1	0.0	(0.0, 0.2)
Tinea infection	1	0.0	(0.0, 0.2)
Tinea pedis	2	0.1	(0.0, 0.3)
Tonsillitis	2	0.1	(0.0, 0.3)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Tooth abscess	4	0.2	(0.0, 0.4)
Tooth infection	12	0.5	(0.3, 0.9)
Urinary tract infection	30	1.3	(0.9, 1.8)
Urosepsis	1	0.0	(0.0, 0.2)
Vulvitis	1	0.0	(0.0, 0.2)
Vulvovaginal candidiasis	3	0.1	(0.0, 0.4)
Vulvovaginal mycotic infection	1	0.0	(0.0, 0.2)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	90	3.8	(3.0, 4.7)
Animal bite	1	0.0	(0.0, 0.2)
Ankle fracture	2	0.1	(0.0, 0.3)
Arthropod bite	3	0.1	(0.0, 0.4)
Chest injury	1	0.0	(0.0, 0.2)
Contusion	9	0.4	(0.2, 0.7)
Corneal abrasion	1	0.0	(0.0, 0.2)
Exposure during pregnancy	5	0.2	(0.1, 0.5)
Eye contusion	1	0.0	(0.0, 0.2)
Facial bones fracture	1	0.0	(0.0, 0.2)
Fall	20	0.8	(0.5, 1.3)
Fibula fracture	2	0.1	(0.0, 0.3)
Foot fracture	4	0.2	(0.0, 0.4)
Frostbite	1	0.0	(0.0, 0.2)
Hand fracture	3	0.1	(0.0, 0.4)
Head injury	1	0.0	(0.0, 0.2)
Injection related reaction	1	0.0	(0.0, 0.2)
Joint dislocation	1	0.0	(0.0, 0.2)
Ligament injury	1	0.0	(0.0, 0.2)
Ligament sprain	6	0.3	(0.1, 0.5)
Limb injury	4	0.2	(0.0, 0.4)
Lip injury	1	0.0	(0.0, 0.2)
Lower limb fracture	1	0.0	(0.0, 0.2)
Maternal exposure during pregnancy	3	0.1	(0.0, 0.4)
Meniscus injury	1	0.0	(0.0, 0.2)
Muscle rupture	1	0.0	(0.0, 0.2)
Muscle strain	2	0.1	(0.0, 0.3)
Postoperative ileus	1	0.0	(0.0, 0.2)
Procedural pain	6	0.3	(0.1, 0.5)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Radius fracture	1	0.0	(0.0, 0.2)
Road traffic accident	2	0.1	(0.0, 0.3)
Scapula fracture	1	0.0	(0.0, 0.2)
Seroma	1	0.0	(0.0, 0.2)
Skin abrasion	2	0.1	(0.0, 0.3)
Skin laceration	10	0.4	(0.2, 0.8)
Spinal fracture	1	0.0	(0.0, 0.2)
Subdural haematoma	1	0.0	(0.0, 0.2)
Tendon injury	1	0.0	(0.0, 0.2)
Tendon rupture	1	0.0	(0.0, 0.2)
Thermal burn	2	0.1	(0.0, 0.3)
Tooth fracture	6	0.3	(0.1, 0.5)
Traumatic intracranial haemorrhage	1	0.0	(0.0, 0.2)
Upper limb fracture	2	0.1	(0.0, 0.3)
Wound	1	0.0	(0.0, 0.2)
Wrist fracture	1	0.0	(0.0, 0.2)
INVESTIGATIONS	107	4.5	(3.7, 5.4)
Alanine aminotransferase increased	2	0.1	(0.0, 0.3)
Antinuclear antibody positive	1	0.0	(0.0, 0.2)
Aspartate aminotransferase increased	2	0.1	(0.0, 0.3)
Blood cholesterol increased	3	0.1	(0.0, 0.4)
Blood pressure increased	6	0.3	(0.1, 0.5)
Blood testosterone decreased	2	0.1	(0.0, 0.3)
Body temperature increased	91	3.8	(3.1, 4.7)
C-reactive protein increased	1	0.0	(0.0, 0.2)
Heart rate increased	1	0.0	(0.0, 0.2)
SARS-CoV-2 antibody test positive	1	0.0	(0.0, 0.2)
Troponin increased	1	0.0	(0.0, 0.2)
METABOLISM AND NUTRITION DISORDERS	29	1.2	(0.8, 1.8)
Decreased appetite	14	0.6	(0.3, 1.0)
Diabetes mellitus	1	0.0	(0.0, 0.2)
Diabetes mellitus inadequate control	1	0.0	(0.0, 0.2)
Dyslipidaemia	2	0.1	(0.0, 0.3)
Glucose tolerance impaired	2	0.1	(0.0, 0.3)
Gout	1	0.0	(0.0, 0.2)
Hypercholesterolaemia	1	0.0	(0.0, 0.2)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Hyperglycaemia	2	0.1	(0.0, 0.3)
Insulin resistance	2	0.1	(0.0, 0.3)
Lactic acidosis	1	0.0	(0.0, 0.2)
Type 2 diabetes mellitus	2	0.1	(0.0, 0.3)
Vitamin D deficiency	1	0.0	(0.0, 0.2)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	1245	52.3	(49.5, 55.3)
Arthralgia	149	6.3	(5.3, 7.4)
Arthritis	3	0.1	(0.0, 0.4)
Back pain	32	1.3	(0.9, 1.9)
Bursitis	1	0.0	(0.0, 0.2)
Flank pain	2	0.1	(0.0, 0.3)
Foot deformity	1	0.0	(0.0, 0.2)
Groin pain	1	0.0	(0.0, 0.2)
Intervertebral disc protrusion	2	0.1	(0.0, 0.3)
Joint range of motion decreased	2	0.1	(0.0, 0.3)
Joint swelling	1	0.0	(0.0, 0.2)
Limb discomfort	1	0.0	(0.0, 0.2)
Mobility decreased	1	0.0	(0.0, 0.2)
Muscle fatigue	2	0.1	(0.0, 0.3)
Muscle spasms	1	0.0	(0.0, 0.2)
Muscular weakness	4	0.2	(0.0, 0.4)
Musculoskeletal chest pain	1	0.0	(0.0, 0.2)
Musculoskeletal pain	1	0.0	(0.0, 0.2)
Musculoskeletal stiffness	12	0.5	(0.3, 0.9)
Myalgia	925	38.9	(36.4, 41.5)
Neck pain	11	0.5	(0.2, 0.8)
Osteoarthritis	9	0.4	(0.2, 0.7)
Osteoporosis	1	0.0	(0.0, 0.2)
Pain in extremity	154	6.5	(5.5, 7.6)
Periarthritis	1	0.0	(0.0, 0.2)
Plantar fasciitis	3	0.1	(0.0, 0.4)
Rheumatoid arthritis	1	0.0	(0.0, 0.2)
Rotator cuff syndrome	2	0.1	(0.0, 0.3)
Sacroiliitis	1	0.0	(0.0, 0.2)
Sjogren's syndrome	1	0.0	(0.0, 0.2)
Synovial cyst	1	0.0	(0.0, 0.2)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Temporomandibular joint syndrome	1	0.0	(0.0, 0.2)
Tendonitis	1	0.0	(0.0, 0.2)
Trigger finger	1	0.0	(0.0, 0.2)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	13	0.5	(0.3, 0.9)
Bladder neoplasm	1	0.0	(0.0, 0.2)
Bowen's disease	1	0.0	(0.0, 0.2)
Brain neoplasm	1	0.0	(0.0, 0.2)
Breast cancer	1	0.0	(0.0, 0.2)
Breast cancer stage II	1	0.0	(0.0, 0.2)
Hepatic cancer	1	0.0	(0.0, 0.2)
Lipoma	1	0.0	(0.0, 0.2)
Meningioma	1	0.0	(0.0, 0.2)
Neoplasm	1	0.0	(0.0, 0.2)
Non-small cell lung cancer stage III	1	0.0	(0.0, 0.2)
Rectal cancer	1	0.0	(0.0, 0.2)
Seborrhoeic keratosis	1	0.0	(0.0, 0.2)
Skin papilloma	1	0.0	(0.0, 0.2)
Squamous cell carcinoma	1	0.0	(0.0, 0.2)
NERVOUS SYSTEM DISORDERS	1201	50.5	(47.7, 53.4)
Amnesia	1	0.0	(0.0, 0.2)
Arachnoid cyst	1	0.0	(0.0, 0.2)
Balance disorder	2	0.1	(0.0, 0.3)
Brachial plexopathy	1	0.0	(0.0, 0.2)
Carpal tunnel syndrome	1	0.0	(0.0, 0.2)
Cerebrovascular accident	4	0.2	(0.0, 0.4)
Cervical radiculopathy	1	0.0	(0.0, 0.2)
Cognitive disorder	1	0.0	(0.0, 0.2)
Disturbance in attention	4	0.2	(0.0, 0.4)
Dizziness	47	2.0	(1.5, 2.6)
Dysgeusia	2	0.1	(0.0, 0.3)
Encephalopathy	1	0.0	(0.0, 0.2)
Facial paralysis	3	0.1	(0.0, 0.4)
Head discomfort	1	0.0	(0.0, 0.2)
Headache	1108	46.6	(43.9, 49.4)
Hemiplegia	1	0.0	(0.0, 0.2)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Hyperaesthesia	2	0.1	(0.0, 0.3)
Hypoaesthesia	2	0.1	(0.0, 0.3)
Hypogeusia	1	0.0	(0.0, 0.2)
Lethargy	9	0.4	(0.2, 0.7)
Loss of consciousness	1	0.0	(0.0, 0.2)
Mental impairment	2	0.1	(0.0, 0.3)
Migraine	6	0.3	(0.1, 0.5)
Migraine with aura	1	0.0	(0.0, 0.2)
Nerve compression	1	0.0	(0.0, 0.2)
Paraesthesia	14	0.6	(0.3, 1.0)
Parosmia	1	0.0	(0.0, 0.2)
Piriformis syndrome	1	0.0	(0.0, 0.2)
Presyncope	1	0.0	(0.0, 0.2)
Radiculopathy	1	0.0	(0.0, 0.2)
Sciatica	1	0.0	(0.0, 0.2)
Seizure	1	0.0	(0.0, 0.2)
Somnolence	13	0.5	(0.3, 0.9)
Speech disorder	1	0.0	(0.0, 0.2)
Syncope	4	0.2	(0.0, 0.4)
Transient ischaemic attack	2	0.1	(0.0, 0.3)
Tremor	2	0.1	(0.0, 0.3)
Visual field defect	1	0.0	(0.0, 0.2)
PSYCHIATRIC DISORDERS	43	1.8	(1.3, 2.4)
Abnormal dreams	1	0.0	(0.0, 0.2)
Alcohol withdrawal syndrome	1	0.0	(0.0, 0.2)
Anxiety	9	0.4	(0.2, 0.7)
Attention deficit hyperactivity disorder	3	0.1	(0.0, 0.4)
Bipolar disorder	1	0.0	(0.0, 0.2)
Completed suicide	1	0.0	(0.0, 0.2)
Confusional state	2	0.1	(0.0, 0.3)
Depression	3	0.1	(0.0, 0.4)
Generalised anxiety disorder	1	0.0	(0.0, 0.2)
Insomnia	12	0.5	(0.3, 0.9)
Irritability	2	0.1	(0.0, 0.3)
Major depression	1	0.0	(0.0, 0.2)
Mental fatigue	1	0.0	(0.0, 0.2)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Mental status changes	1	0.0	(0.0, 0.2)
Restlessness	2	0.1	(0.0, 0.3)
Sleep disorder	2	0.1	(0.0, 0.3)
Suicidal ideation	1	0.0	(0.0, 0.2)
Suicide attempt	1	0.0	(0.0, 0.2)
Thinking abnormal	1	0.0	(0.0, 0.2)
RENAL AND URINARY DISORDERS	21	0.9	(0.5, 1.3)
Acute kidney injury	1	0.0	(0.0, 0.2)
Bladder neck obstruction	1	0.0	(0.0, 0.2)
Chronic kidney disease	1	0.0	(0.0, 0.2)
Dysuria	6	0.3	(0.1, 0.5)
Haematuria	1	0.0	(0.0, 0.2)
Hypertonic bladder	2	0.1	(0.0, 0.3)
Nephrolithiasis	4	0.2	(0.0, 0.4)
Pollakiuria	1	0.0	(0.0, 0.2)
Urinary bladder polyp	1	0.0	(0.0, 0.2)
Urinary hesitation	1	0.0	(0.0, 0.2)
Urinary retention	1	0.0	(0.0, 0.2)
Urinary tract obstruction	1	0.0	(0.0, 0.2)
REPRODUCTIVE SYSTEM AND BREAST DISORDERS	12	0.5	(0.3, 0.9)
Benign prostatic hyperplasia	3	0.1	(0.0, 0.4)
Breast cyst	1	0.0	(0.0, 0.2)
Breast discharge	1	0.0	(0.0, 0.2)
Endometriosis	1	0.0	(0.0, 0.2)
Metrorrhagia	2	0.1	(0.0, 0.3)
Ovarian cyst	1	0.0	(0.0, 0.2)
Pelvic pain	1	0.0	(0.0, 0.2)
Sexual dysfunction	1	0.0	(0.0, 0.2)
Testicular pain	1	0.0	(0.0, 0.2)
Uterine haemorrhage	1	0.0	(0.0, 0.2)
Vaginal lesion	1	0.0	(0.0, 0.2)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	37	1.6	(1.1, 2.1)
Acute respiratory failure	2	0.1	(0.0, 0.3)
Asthma	1	0.0	(0.0, 0.2)
Chronic obstructive pulmonary disease	1	0.0	(0.0, 0.2)
Cough	3	0.1	(0.0, 0.4)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Dyspnoea	2	0.1	(0.0, 0.3)
Epistaxis	3	0.1	(0.0, 0.4)
Immune-mediated pneumonitis	1	0.0	(0.0, 0.2)
Nasal congestion	5	0.2	(0.1, 0.5)
Nasal septum deviation	1	0.0	(0.0, 0.2)
Oropharyngeal pain	1	0.0	(0.0, 0.2)
Paranasal sinus discomfort	1	0.0	(0.0, 0.2)
Pleuritic pain	1	0.0	(0.0, 0.2)
Pulmonary embolism	4	0.2	(0.0, 0.4)
Rhinitis allergic	4	0.2	(0.0, 0.4)
Rhinorrhoea	6	0.3	(0.1, 0.5)
Sinus congestion	1	0.0	(0.0, 0.2)
Upper respiratory tract congestion	1	0.0	(0.0, 0.2)
SKIN AND SUBCUTANEOUS TISSUE DISORDERS	85	3.6	(2.9, 4.4)
Acne	1	0.0	(0.0, 0.2)
Actinic keratosis	3	0.1	(0.0, 0.4)
Alopecia	2	0.1	(0.0, 0.3)
Angioedema	1	0.0	(0.0, 0.2)
Cold sweat	1	0.0	(0.0, 0.2)
Dermatitis	2	0.1	(0.0, 0.3)
Dermatitis contact	6	0.3	(0.1, 0.5)
Dry skin	1	0.0	(0.0, 0.2)
Ecchymosis	3	0.1	(0.0, 0.4)
Erythema	2	0.1	(0.0, 0.3)
Erythema nodosum	1	0.0	(0.0, 0.2)
Hyperhidrosis	15	0.6	(0.4, 1.0)
Ingrowing nail	3	0.1	(0.0, 0.4)
Lichen sclerosus	1	0.0	(0.0, 0.2)
Night sweats	7	0.3	(0.1, 0.6)
Petechiae	1	0.0	(0.0, 0.2)
Pruritus	6	0.3	(0.1, 0.5)
Rash	16	0.7	(0.4, 1.1)
Rash erythematous	2	0.1	(0.0, 0.3)
Rash pruritic	1	0.0	(0.0, 0.2)
Rash vesicular	1	0.0	(0.0, 0.2)
Skin lesion	4	0.2	(0.0, 0.4)

Table 15. Incidence Rates of at Least 1 Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Skin ulcer	1	0.0	(0.0, 0.2)
Urticaria	7	0.3	(0.1, 0.6)
SURGICAL AND MEDICAL PROCEDURES	9	0.4	(0.2, 0.7)
Blepharoplasty	1	0.0	(0.0, 0.2)
Chondroplasty	1	0.0	(0.0, 0.2)
Finger repair operation	1	0.0	(0.0, 0.2)
Hysterectomy	2	0.1	(0.0, 0.3)
Injection	1	0.0	(0.0, 0.2)
Spinal fusion surgery	1	0.0	(0.0, 0.2)
Tooth extraction	2	0.1	(0.0, 0.3)
VASCULAR DISORDERS	45	1.9	(1.4, 2.5)
Aortic aneurysm	1	0.0	(0.0, 0.2)
Aortic arteriosclerosis	1	0.0	(0.0, 0.2)
Aortic stenosis	1	0.0	(0.0, 0.2)
Blood pressure fluctuation	1	0.0	(0.0, 0.2)
Deep vein thrombosis	3	0.1	(0.0, 0.4)
Flushing	5	0.2	(0.1, 0.5)
Haematoma	2	0.1	(0.0, 0.3)
Hot flush	2	0.1	(0.0, 0.3)
Hypertension	25	1.1	(0.7, 1.6)
Hypotension	1	0.0	(0.0, 0.2)
Peripheral coldness	1	0.0	(0.0, 0.2)
Thrombosis	1	0.0	(0.0, 0.2)
Venous thrombosis limb	1	0.0	(0.0, 0.2)

Note: Dose 3 = First dose of BNT162b2 (30 µg).
Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from Dose 3 to data cutoff date. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (17:36)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adae s131 exp age p3x saf

2.7.4.2.4.2.5.2.2. Related Adverse Events by System Organ Class and Preferred Term: Open-Label Follow-Up Period – Original Placebo Participants Who Then Received BNT162b2 (Phase 3, Study C4591001, Analysis of Adverse Events)

From vaccination with BNT162b2 to the data cutoff date for placebo participants, the IR of AEs assessed as related by the investigator during the open-label follow-up period was 189.5 per 100 PY (Table 14). The IRs of related AEs were highest for reactogenicity events and in the SOC of general disorders and administration site conditions (4147 [174.3 per 100 PY]) for the following PTs:

- injection site pain (2938 [123.5 per 100 PY])
- pyrexia (905 [38.0 per 100 PY])
- fatigue (1373 [57.7 per 100 PY])
- chills (993 [41.7 per 100 PY])

2.7.4.2.4.2.5.2.3. Immediate Adverse Events: Open-Label Follow-Up Period – Original Placebo Participants Who Then Received BNT162b2 (Phase 3, Study C4591001, Analysis of Adverse Events)

After vaccination with BNT162b2 (Dose 3/4), placebo participants who received BNT162b2 with immediate AEs were low in frequency (0.6%). Most immediate AEs after BNT162b2 doses were in the SOC of general disorders and administration site conditions, primarily injection site reactions, with injection site pain (0.4%) most frequently reported.

Other immediate AEs were reported in the following, and were assessed by the investigator as related to study intervention:

- One participant in the younger age group reported 2 immediate AEs of oedema mouth and tongue edema (both mild in severity) after Dose 4; both AEs were assessed by the investigator as related to study intervention. The AE of tongue oedema resolved the same day and the AE of oedema mouth resolved the following day.

- One participant in the younger age group reported an immediate AE of hypoaesthesia oral (mild) after Dose 3 and resolved the same day.

- One participant in the younger age group reported 3 immediate AEs of swelling face, allergy to vaccine, and flushing after Dose 3, which were all were moderate in severity. All 3 AEs resolved the following day. The participant also reported nausea and urticaria (hives abdomen) (both mild in severity) on the same day but were not immediate. The AE of nausea resolved the same day and the AE of urticaria resolved the following day. These 2 AEs were also assessed by the investigator as related to study intervention.

- One participant in the older age group reported an immediate AE of urticaria (hive on back of neck; moderate in severity) after Dose 4 and is ongoing at the time of the data cutoff date.

2.7.4.2.4.2.5.2.4. Severe or Life-Threatening Adverse Events: Open-Label Follow-Up Period – Original Placebo Participants Who Then Received BNT162b2 (Phase 3, Study C4591001, Analysis of Adverse Events)

Severe Adverse Events

From Dose 3 (first Dose of BNT162b2) to the data cutoff date, the severe AE IR was 6.0 per 100 PY in original placebo participants. Severe AEs included:

- One participant in the younger age group reported a severe AE of hypersensitivity on 13 days after Dose 3, which resolved the following day and was assessed by the investigator as not related to study intervention.

- One participant in the older age group reported a severe SAE of COVID-19 pneumonia 8 days after Dose 3, which resolved 4 days later and was assessed by the investigator as not related to study intervention.

- One participant in the older age group reported a severe SAE of cerebrovascular accident 16 days after Dose 4, which was assessed by the investigator as not related to study intervention and ongoing at the time of the data cutoff date.

- One participant in the younger age group reported a severe SAE of pulmonary embolism 5 days after Dose 4, which resolved the following day and was assessed by the investigator as not related to study intervention.

- One participant in the older age group reported 1 severe SAE each of pulmonary embolism and thrombosis (occlusive thrombus in the right calf) 2 days after Dose 3. Both events resolved the following day, and both were assessed by the investigator as not related to study intervention.

- One participant in the younger age group reported 2 AEs of urticaria (moderate and severe) at 3 and 4 days after Dose 3, respectively. The moderate AE of urticaria (intermittent generalized) resolved the same day. The severe AE of urticaria (left arm) resolved 8 days later. Both events were assessed by the investigator as related to study intervention.

Life-Threatening Adverse Events

The IR for original placebo participants who had at least 1 life-threatening AE from Dose 3 to the data cutoff date was 0.5 per 100 PY. The following life-threatening events were reported and with the exception of anaphylactoid reaction, all were considered unrelated to vaccine as assessed by the investigator.

- A Grade 4 life-threatening SAE of cardio-respiratory arrest was reported in one participant in the older age group. The event occurred 25 days after Dose 3 and the outcome was fatal.

- One participant in the younger age group had a Grade 4 life-threatening SAE of gastrointestinal necrosis 29 days after Dose 4. The outcome was not recovered/not resolved at the time of this report.

- One participant in the younger age group had a Grade 4 life-threatening SAE of pulmonary embolism and a Grade 4 life-threatening SAE of deep vein thrombosis. Both events of pulmonary embolism and deep vein thrombosis occurred 11 days after Dose 4 and the outcome for both events was recovering/resolving.

- A Grade 4 life-threatening SAE of anaphylactoid reaction was reported in one participant in the younger age group 2 days after Dose 3. The outcome was recovered/resolved and the event was considered related to vaccine. This participant is also discussed under Section 2.7.4.2.4.3.4.1.1.

2.7.4.2.4.2.6. Original Placebo Participants, had COVID-19 Occurrence After Dose 1, and Then Received BNT162b2: Open-Label Follow-Up Period (Phase 3, Study C4591001)

2.7.4.2.4.2.6.1. Summary of Adverse Events: Original Placebo Participants, had COVID-19 Occurrence After Dose 1, and Then Received BNT162b2: Open-Label Follow-Up Period (Phase 3, Study C4591001)

There were 853 original placebo participants who developed COVID-19 and subsequently were vaccinated with BNT162b2. For original placebo participants who had COVID-19 occurrence after Dose 1 and then received BNT162b2, IRs for any AE and at least 1 related AE from Dose 3 (first dose of BNT162b2 30 µg) were 256.8 per 100 PY and 240.9 per 100 PY, respectively. IRs of severe AEs, SAEs, and AEs leading to withdrawal were 4.6 per 100 PY, 3.4 per 100 PY, and 3.4 per 100 PY. The IR for discontinuations because of related AEs was 3.4 per 100 PY, and no participants died.

IRs for SAEs were similar for the placebo participants who developed COVID-19 and subsequently were vaccinated with BNT162b2 (3.4 per 100 PY; 95% CI: 0.7, 10.0) and participants originally randomized to BNT162b2 (3.2 per 100 PY; 95% CI: 2.8, 3.6) (Table 7), respectively. None of the SAEs in the original placebo participants who developed COVID-19 and subsequently were vaccinated with BNT162b2 were related to BNT162b2. There were 3 participants with AEs leading to withdrawal that were assessed as related to BNT162b2: 1 participant with an AE of allergy to vaccine, 1 participant with an AE of pain, and 1 participant with 5 AEs (chills, injection site pain, myalgia, headache, and diarrhea). No deaths were reported in placebo participants who developed COVID-19 and subsequently were vaccinated with BNT162b2.

While the exposure time between the placebo participants who developed COVID-19 and subsequently were vaccinated with BNT162b2 is small (0.9) compared to the exposure time for the blinded placebo controlled period (83.4) (Table 7), direct comparisons must be interpreted with caution, the rate of SAE were similar between the groups (3.4 per 100 PY vs 3.2 per 100 PY, respectively).

2.7.4.2.4.2.6.2. Analysis of Adverse Events: Original Placebo Participants, had COVID-19 Occurrence After Dose 1, and Then Received BNT162b2: Open-Label Follow-Up Period (Phase 3, Study C4591001)

For original placebo participants who had COVID-19 occurrence after Dose 1 and then received BNT162b2, the IR for at least 1 AE was 256.8 per 100 PY.

Most AEs reported from Dose 3 (the first dose of BNT162b2) to the data cutoff date were in SOCs with reactogenicity events.

- general disorders and administration site conditions (236.3 per 100 PY)
- musculoskeletal and connective tissue disorders (47.9 per 100 PY)
- nervous system disorders (66.2 per 100 PY)
- gastrointestinal disorders (17.1 per 100 PY).

2.7.4.2.4.3. Deaths, Serious Adverse Events, Safety-Related Participant Withdrawals, and Other Significant Adverse Events (Phase 3, Study C4591001)

Full details and outputs regarding deaths, SAEs, safety-related participant withdrawals, and other significant AEs for Phase 3 of Study C4591001 are in Module 5.3.5.1 C4591001 6-Month Update CSR Section 12.2.4.

2.7.4.2.4.3.1. Deaths (Phase 3, Study C4591001)

There were 15 deaths in the BNT162b2 group and 14 deaths in the placebo group from Dose 1 to the unblinding date during the blinded placebo-controlled follow-up period (Table 16). None of these deaths were assessed by the investigator as related to study intervention.

Table 16. Incidence Rates of Deaths From Dose 1 to Unblinding Date – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ≥16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Deaths	15	0.2	(0.1, 0.3)	14	0.2	(0.1, 0.3)
Cause of death[f]						
Acute respiratory failure	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Aortic rupture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Arteriosclerosis	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Biliary cancer metastatic	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
COVID-19	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
COVID-19 pneumonia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cardiac arrest	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Cardiac failure congestive	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cardio-respiratory arrest	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Chronic obstructive pulmonary disease	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Death	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dementia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Emphysematous cholecystitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Haemorrhagic stroke	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hypertensive heart disease	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lung cancer metastatic	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Metastases to liver	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Missing	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Multiple organ dysfunction syndrome	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Myocardial infarction	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Overdose	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pneumonia	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Sepsis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Septic shock	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Shigella sepsis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Unevaluable event	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 16. Incidence Rates of Deaths From Dose 1 to Unblinding Date – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ≥16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])

a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from Dose 1 to the end of blinded follow-up. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified cause of death.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
f. Multiple causes of death can be reported for each subject.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (19:20) Source Data: dd Table Generation: 27MAR2021 (02:16)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/addd s001 p3 saf

From the unblinding date to the data cutoff date of the open-label follow-up period, there were 3 deaths in original BNT162b2 participants (all in the older age group, one each due to road traffic accident, lung metastases, and myocardial infarction) and 2 deaths in original placebo participants who then received BNT162b2 (all in the older age group, one each due to cardiorespiratory arrest or completed suicide). None of these deaths were assessed by the investigator as related to study intervention.

Among participants with confirmed stable HIV disease, 2 deaths were reported as of the cutoff date, and none of these deaths were assessed by the investigator as related to study intervention:

- One female participant in the younger age group died due to COVID-19 pneumonia reported 75 days after receiving Dose 2 of placebo. This participant was diagnosed based on a local COVID-19 test that could not be confirmed as protocol-approved and was not confirmed by a test result from the central laboratory. Therefore, this participant was not included in efficacy analyses.

- One female participant in the older age group died due to a road traffic accident occurring 73 days after receiving Dose 2.

2.7.4.2.4.3.1.1. Death Narratives (Phase 3, Study C4591001)

Narratives for the participants who died through the data cutoff date (13 March 2021) are provided (see Section 2.7.4.2.4.4).

2.7.4.2.4.3.2. Serious Adverse Events (Phase 3, Study C4591001)

Details and outputs regarding serious adverse events for Phase 3 of Study C4591001 are in Module 5.3.5.1 C4591001 6-Month Update CSR Section 12.2.4.2.

2.7.4.2.4.3.2.1. Blinded Placebo-Controlled Follow-Up Period From Dose 1 to 1 Month After Dose 2 (Phase 3, Study C4591001, Serious Adverse Events)

From Dose 1 to 1 month after Dose 2 the proportions of participants who reported at least 1 SAE was similar in the BNT162b2 group (0.6%) and in the placebo group (0.5%) (Table 17). The numbers of participants who reported at least 1 SAE were lower in the younger age group (52 [0.4%] and 49 [0.4%] for the BNT162b2 and placebo groups, respectively) than in the older age groups was (75 [0.8%] and 67 [0.8%] for the BNT162b2 and placebo groups, respectively) similar.

Three of the SAEs in the BNT162b2 group and none in the placebo group were assessed by the investigator as related to study intervention (Table 5).

In the BNT162b2 group, there were 2 participants in the younger age group (previously reported in the final analysis interim C4591001 CSR dated 03 December 2020) and 1 participant in the older age group with an SAE each assessed by the investigator as related to study intervention:

- One participant in the younger age group had an SAE of lymphadenopathy (right axilla) 13 days after Dose 1 which lasted 66 days and resolved. The participant was a 48-year-old woman with a relevant medical history of eczema and topical crisaborole use who was administered BNT162b2 vaccine in the left deltoid and had right axillary pain and lymphadenopathy. She had no injuries to the right arm, no fever, and no history of a similar incident. Her WBC was normal with a normal lymphocyte count and a right axilla ultrasound showed 4 enlarged lymph nodes (largest 2.5 × 1.1 × 2.4 cm). A biopsy was performed and was reported to be normal and without markers for lymphoma or other cancer. A follow-up visit with oncology (and possible repeat ultrasound) was planned for 3 months' time.

- One participant in the younger age group had an SAE of shoulder injury related to vaccine administration (SIRVA, erroneously administered into or near the shoulder joint capsule) after Dose 2, which lasted 153 days and resolved.

- One participant in the older age group with a past medical history significant for AV block with pacemaker, sinus node dysfunction, atrial fibrillation, and supraventricular tachycardia had an SAE of ventricular arrhythmia that occurred 1 day after Dose 2 and lasted for 8 days and resolved.

Table 17. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Any event	127 (0.6)	(0.5, 0.7)	116 (0.5)	(0.4, 0.6)
BLOOD AND LYMPHATIC SYSTEM DISORDERS	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Lymphadenopathy	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Neutropenia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Thrombocytopenia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
CARDIAC DISORDERS	20 (0.1)	(0.1, 0.1)	21 (0.1)	(0.1, 0.1)
Atrial fibrillation	2 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Acute myocardial infarction	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Acute coronary syndrome	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Coronary artery disease	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Myocardial infarction	0	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Aortic valve incompetence	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Bradycardia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Cardiac arrest	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cardiac failure congestive	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Acute left ventricular failure	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Angina pectoris	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Angina unstable	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Arrhythmia supraventricular	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Arteriospasm coronary	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Cardiac failure acute	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Coronary artery dissection	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Coronary artery occlusion	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Junctional ectopic tachycardia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Myocardial ischaemia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pericarditis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Tachyarrhythmia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Tachycardia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Ventricular arrhythmia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
CONGENITAL, FAMILIAL AND GENETIC DISORDERS	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Congenital bladder neck obstruction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Heart disease congenital	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
EAR AND LABYRINTH DISORDERS	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Vertigo	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 17. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
EYE DISORDERS	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Choroidal neovascularisation	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Diplopia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Retinal artery occlusion	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Visual impairment	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
GASTROINTESTINAL DISORDERS	9 (0.0)	(0.0, 0.1)	12 (0.1)	(0.0, 0.1)
Small intestinal obstruction	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pancreatitis acute	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Abdominal adhesions	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Abdominal pain	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Abdominal pain upper	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Colitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Diarrhoea	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Diverticular perforation	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Gastrointestinal haemorrhage	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Gastrointestinal mucosa hyperaemia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Incarcerated inguinal hernia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Inguinal hernia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Intestinal obstruction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Obstructive pancreatitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Oesophageal food impaction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Oesophageal varices haemorrhage	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pancreatitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Salivary gland calculus	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Umbilical hernia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Volvulus	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	4 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Non-cardiac chest pain	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Chest pain	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Death	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Influenza like illness	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Shoulder injury related to vaccine administration	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Vascular stent occlusion	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
HEPATOBILIARY DISORDERS	6 (0.0)	(0.0, 0.1)	2 (0.0)	(0.0, 0.0)
Cholecystitis acute	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Cholelithiasis	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 17. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Bile duct stone	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cholecystitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
IMMUNE SYSTEM DISORDERS	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Anaphylactic reaction	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Anaphylactic shock	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Drug hypersensitivity	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
INFECTIONS AND INFESTATIONS	27 (0.1)	(0.1, 0.2)	21 (0.1)	(0.1, 0.1)
Appendicitis	7 (0.0)	(0.0, 0.1)	3 (0.0)	(0.0, 0.0)
Pneumonia	2 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Cellulitis	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Urinary tract infection	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Appendicitis perforated	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
COVID-19	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Diverticulitis	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Peritonsillar abscess	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Postoperative wound infection	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pyelonephritis	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Abdominal abscess	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Abscess	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Abscess intestinal	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Anal abscess	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Bacterial sepsis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Brain abscess	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Complicated appendicitis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Empyema	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Meningitis bacterial	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Osteomyelitis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Peritoneal abscess	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Peritonitis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pyelonephritis acute	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Shigella sepsis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Staphylococcal infection	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Subacute endocarditis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Subcutaneous abscess	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Suspected COVID-19	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Upper respiratory tract infection	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Urosepsis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)

Table 17. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	8 (0.0)	(0.0, 0.1)	15 (0.1)	(0.0, 0.1)
Overdose	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Facial bones fracture	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Road traffic accident	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Alcohol poisoning	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cervical vertebral fracture	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Colon injury	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Fall	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Femur fracture	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Flail chest	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Foot fracture	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Forearm fracture	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Head injury	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hip fracture	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Humerus fracture	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Lower limb fracture	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Multiple injuries	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Procedural haemorrhage	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Rib fracture	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Spinal column injury	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Spinal cord injury cervical	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Subdural haematoma	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Toxicity to various agents	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Traumatic haemothorax	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Traumatic intracranial haemorrhage	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Ulna fracture	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
INVESTIGATIONS	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Blood glucose abnormal	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Cardiac stress test abnormal	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hepatic enzyme increased	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
METABOLISM AND NUTRITION DISORDERS	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Diabetic ketoacidosis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Fluid retention	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hypoglycaemia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hypokalaemia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	7 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)

Table 17. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Intervertebral disc protrusion	3 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Osteoarthritis	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Arthralgia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Back pain	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Muscular weakness	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Osteochondritis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	13 (0.1)	(0.0, 0.1)	10 (0.0)	(0.0, 0.1)
Prostate cancer	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Malignant melanoma	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Uterine leiomyoma	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Adenocarcinoma gastric	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Adenocarcinoma pancreas	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Adrenal gland cancer	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Biliary cancer metastatic	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Breast cancer	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Chronic myeloid leukaemia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Intraductal proliferative breast lesion	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Invasive ductal breast carcinoma	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Leydig cell tumour of the testis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Meningioma	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Metastases to central nervous system	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Metastases to liver	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Oropharyngeal squamous cell carcinoma	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pancreatic carcinoma	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Penile neoplasm	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Prostate cancer metastatic	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Thyroid cancer	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
NERVOUS SYSTEM DISORDERS	14 (0.1)	(0.0, 0.1)	15 (0.1)	(0.0, 0.1)
Subarachnoid haemorrhage	4 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Syncope	1 (0.0)	(0.0, 0.0)	4 (0.0)	(0.0, 0.0)
Cerebrovascular accident	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Ischaemic stroke	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Transient ischaemic attack	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Amnesia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Amyotrophic lateral sclerosis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Cerebral infarction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)

Table 17. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Cervicogenic headache	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dizziness	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Haemorrhagic stroke	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Hemiplegic migraine	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Idiopathic intracranial hypertension	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Paraesthesia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Spinal cord compression	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Transient global amnesia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Uraemic encephalopathy	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
PREGNANCY, PUERPERIUM AND PERINATAL CONDITIONS	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Abortion spontaneous	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Abortion spontaneous incomplete	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
PSYCHIATRIC DISORDERS	3 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Suicidal ideation	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Bipolar disorder	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Depression suicidal	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Disorientation	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Mental disorder	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Psychotic disorder	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Suicide attempt	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
RENAL AND URINARY DISORDERS	5 (0.0)	(0.0, 0.1)	1 (0.0)	(0.0, 0.0)
Nephrolithiasis	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Acute kidney injury	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Renal colic	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Subcapsular renal haematoma	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Urinary bladder polyp	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
REPRODUCTIVE SYSTEM AND BREAST DISORDERS	2 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Breast hyperplasia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Ovarian cyst	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Ovarian mass	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Uterine prolapse	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	7 (0.0)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Pulmonary embolism	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Acute respiratory failure	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pneumonia aspiration	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Chronic obstructive pulmonary disease	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 17. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

System Organ Class Preferred Term	Vaccine Group (as Administered) BNT162b2 (30 µg) (N[a]=21926) n[b] (%)	 (95% CI[c])	 Placebo (N[a]=21921) n[b] (%)	 (95% CI[c])
Hypoxia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Interstitial lung disease	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pneumonitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pneumothorax	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pulmonary mass	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Respiratory arrest	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
VASCULAR DISORDERS	7 (0.0)	(0.0, 0.1)	5 (0.0)	(0.0, 0.1)
Deep vein thrombosis	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Hypertension	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Orthostatic hypotension	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Aortic stenosis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Arteriosclerosis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hypertensive crisis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Hypertensive urgency	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
c. Exact 2-sided CI based on the Clopper and Pearson method.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:10)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/adae_s130_ser_all_pd2_p3_saf

2.7.4.2.4.3.2.1.1. Participants with Confirmed Stable HIV Disease: Blinded Follow-Up Period From Dose 1 to 1 Month After Dose 2 (Phase 3, Study C4591001, Serious Adverse Events)

No participants with confirmed stable HIV disease reported an SAE from Dose 1 to 1 month after Dose 2.

2.7.4.2.4.3.2.2. Blinded Placebo-Controlled Follow-Up Period From Dose 1 to the Unblinding Date (Phase 3, Study C4591001, Serious Adverse Events)

From Dose 1 to the unblinding date, IRs of at least 1 SAE were similar in the BNT162b2 group (3.2 per 100 PY) and in the placebo group (3.3 per 100 PY) (Table 18). The IR was lower in the younger age groups (2.1 per 100 PY and 2.4 per 100 PY for the BNT162b2 and

placebo groups, respectively) than in the older age groups (4.9 per 100 PY and 4.6 per 100 PY for the BNT162b2 and placebo groups respectively).

Four of the SAEs in the BNT162b2 group and 1 in the placebo group were assessed by the investigator as related to study intervention. In addition to the 3 related SAEs in the BNT162b2 group described in Section 2.7.4.2.4.3.2.1, there were 2 related SAEs that occurred from Dose 1 to the unblinding date:

- One participant in the BNT162b2 younger age group with a medical history significant for occipital neuralgia, and migraines had an SAE of paraesthesia (right leg) 47 days after Dose 2 which was recovering/resolving at the data cutoff date.

- One participant in the placebo younger age group had an SAE of psoriatic arthropathy 38 days after Dose 2 which was continuing at the data cutoff date.

Table 18. Incidence Rates of at Least 1 Serious Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Any event	268	3.2	(2.8, 3.6)	268	3.3	(2.9, 3.7)
BLOOD AND LYMPHATIC SYSTEM DISORDERS	1	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Anaemia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Lymphadenopathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Microcytic anaemia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Neutropenia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Thrombocytopenia	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
CARDIAC DISORDERS	42	0.5	(0.4, 0.7)	39	0.5	(0.3, 0.6)
Acute coronary syndrome	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Acute left ventricular failure	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Acute myocardial infarction	6	0.1	(0.0, 0.2)	3	0.0	(0.0, 0.1)
Angina pectoris	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Angina unstable	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Aortic valve incompetence	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Arrhythmia supraventricular	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Arteriosclerosis coronary artery	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Arteriospasm coronary	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Atrial fibrillation	5	0.1	(0.0, 0.1)	9	0.1	(0.1, 0.2)
Atrioventricular block complete	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Bradycardia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)

Table 18. Incidence Rates of at Least 1 Serious Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Cardiac arrest	6	0.1	(0.0, 0.2)	2	0.0	(0.0, 0.1)
Cardiac failure acute	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cardiac failure congestive	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Cardio-respiratory arrest	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Coronary artery disease	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Coronary artery dissection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Coronary artery occlusion	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hypertensive heart disease	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Junctional ectopic tachycardia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Myocardial infarction	4	0.0	(0.0, 0.1)	7	0.1	(0.0, 0.2)
Myocardial ischaemia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pericarditis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tachyarrhythmia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Tachycardia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Ventricular arrhythmia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ventricular tachycardia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
CONGENITAL, FAMILIAL AND GENETIC DISORDERS	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Congenital bladder neck obstruction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Congenital ureteropelvic junction obstruction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Heart disease congenital	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
EAR AND LABYRINTH DISORDERS	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Vertigo	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
EYE DISORDERS	5	0.1	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Blindness unilateral	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Choroidal neovascularisation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Diplopia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Eye haemorrhage	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Ophthalmic vein thrombosis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Retinal artery occlusion	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Visual impairment	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
GASTROINTESTINAL DISORDERS	23	0.3	(0.2, 0.4)	21	0.3	(0.2, 0.4)
Abdominal adhesions	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Abdominal hernia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Abdominal pain	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Abdominal pain upper	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Colitis	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Colitis ischaemic	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 18. Incidence Rates of at Least 1 Serious Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Constipation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Diarrhoea	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Diverticular perforation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Diverticulum intestinal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Duodenal obstruction	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Enterocolitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Food poisoning	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Gastritis	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Gastrointestinal haemorrhage	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Gastrointestinal mucosa hyperaemia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Haemorrhoids	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hiatus hernia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Ileus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Impaired gastric emptying	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Incarcerated inguinal hernia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Inguinal hernia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Intestinal obstruction	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Intestinal perforation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Intestinal strangulation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Large intestine perforation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Obstructive pancreatitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Oesophageal food impaction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Oesophageal varices haemorrhage	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pancreatic cyst	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pancreatitis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Pancreatitis acute	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Retroperitoneal haematoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Salivary gland calculus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Small intestinal obstruction	4	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Umbilical hernia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Volvulus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	10	0.1	(0.1, 0.2)	4	0.0	(0.0, 0.1)
Asthenia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Chest pain	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Death	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Drug withdrawal syndrome	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Influenza like illness	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Multiple organ dysfunction syndrome	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 18. Incidence Rates of at Least 1 Serious Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Non-cardiac chest pain	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Shoulder injury related to vaccine administration	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Sudden cardiac death	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Vascular stent occlusion	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
HEPATOBILIARY DISORDERS	12	0.1	(0.1, 0.3)	7	0.1	(0.0, 0.2)
Bile duct stone	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Biliary colic	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cholecystitis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Cholecystitis acute	4	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Cholecystitis chronic	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cholelithiasis	5	0.1	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hepatocellular injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
IMMUNE SYSTEM DISORDERS	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Anaphylactic reaction	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Anaphylactic shock	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Drug hypersensitivity	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
INFECTIONS AND INFESTATIONS	50	0.6	(0.4, 0.8)	57	0.7	(0.5, 0.9)
Abdominal abscess	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Abscess	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Abscess intestinal	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Anal abscess	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Appendicitis	14	0.2	(0.1, 0.3)	9	0.1	(0.1, 0.2)
Appendicitis perforated	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Arthritis bacterial	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Bacterial sepsis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Brain abscess	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
COVID-19	0	0.0	(0.0, 0.0)	13	0.2	(0.1, 0.3)
COVID-19 pneumonia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Cellulitis	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Complicated appendicitis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Device related infection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Diabetic foot infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Diverticulitis	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Emphysematous cholecystitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Empyema	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Escherichia urinary tract infection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Extradural abscess	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Gangrene	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 18. Incidence Rates of at Least 1 Serious Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Gastroenteritis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Meningitis bacterial	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Osteomyelitis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Penile infection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Peritoneal abscess	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Peritonitis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Peritonsillar abscess	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Pneumonia	4	0.0	(0.0, 0.1)	8	0.1	(0.0, 0.2)
Post procedural infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Postoperative wound infection	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Pyelonephritis	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Pyelonephritis acute	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Renal abscess	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Respiratory tract infection viral	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Sepsis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Septic shock	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Shigella sepsis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Staphylococcal infection	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Staphylococcal sepsis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Subacute endocarditis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Subcutaneous abscess	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Suspected COVID-19	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tooth infection	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Upper respiratory tract infection	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Urinary tract infection	3	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Urosepsis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	19	0.2	(0.1, 0.4)	26	0.3	(0.2, 0.5)
Alcohol poisoning	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ankle fracture	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Brain contusion	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cervical vertebral fracture	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Colon injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Concussion	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Craniocerebral injury	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Delayed recovery from anaesthesia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Facial bones fracture	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Fall	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Femur fracture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 18. Incidence Rates of at Least 1 Serious Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Flail chest	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Foot fracture	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Forearm fracture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Head injury	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hip fracture	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Humerus fracture	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Ligament rupture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Lower limb fracture	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Lumbar vertebral fracture	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Meniscus injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Multiple injuries	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Overdose	3	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Patella fracture	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pelvic fracture	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Post procedural haematoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Post-traumatic pain	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Procedural haemorrhage	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Radius fracture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Rib fracture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Road traffic accident	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Spinal column injury	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Spinal cord injury cervical	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Subdural haematoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Tibia fracture	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Toxicity to various agents	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Traumatic haemothorax	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Traumatic intracranial haemorrhage	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ulna fracture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Upper limb fracture	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Wrist fracture	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
INVESTIGATIONS	1	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Blood glucose abnormal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Blood pressure increased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cardiac stress test abnormal	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hepatic enzyme increased	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Red blood cell morphology abnormal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
METABOLISM AND NUTRITION DISORDERS	4	0.0	(0.0, 0.1)	10	0.1	(0.1, 0.2)
Diabetes mellitus inadequate control	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 18. Incidence Rates of at Least 1 Serious Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Diabetic ketoacidosis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Fluid retention	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hyperglycaemia	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Hypoglycaemia	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Hypokalaemia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Hyponatraemia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Type 2 diabetes mellitus	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	13	0.2	(0.1, 0.3)	11	0.1	(0.1, 0.2)
Arthralgia	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Arthritis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Back pain	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Intervertebral disc compression	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Intervertebral disc degeneration	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Intervertebral disc protrusion	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Muscular weakness	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Osteoarthritis	4	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Osteochondritis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Psoriatic arthropathy	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Spondylolisthesis	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	39	0.5	(0.3, 0.6)	35	0.4	(0.3, 0.6)
Acute myeloid leukaemia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Adenocarcinoma gastric	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Adenocarcinoma of colon	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Adenocarcinoma pancreas	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Adrenal gland cancer	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
B-cell lymphoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Benign hydatidiform mole	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Biliary cancer metastatic	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Bladder cancer	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Borderline serous tumour of ovary	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Breast cancer	2	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Breast cancer in situ	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Breast cancer stage I	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Carcinoid tumour of the stomach	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Chronic myeloid leukaemia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Clear cell renal cell carcinoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Colon adenoma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 18. Incidence Rates of at Least 1 Serious Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Gallbladder cancer stage II	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Gastric cancer	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Intraductal proliferative breast lesion	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Invasive ductal breast carcinoma	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Leydig cell tumour of the testis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lipoma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lobular breast carcinoma in situ	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Lung adenocarcinoma	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Lung cancer metastatic	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lymphoma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Malignant melanoma	1	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Meningioma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Metastases to central nervous system	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Metastases to liver	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Metastases to lymph nodes	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Non-Hodgkin's lymphoma recurrent	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Non-small cell lung cancer stage IV	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Oropharyngeal cancer recurrent	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Oropharyngeal squamous cell carcinoma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pancreatic carcinoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Papillary serous endometrial carcinoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Papillary thyroid cancer	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Penile neoplasm	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Plasma cell myeloma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Polycythaemia vera	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Prostate cancer	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Prostate cancer metastatic	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Skin cancer	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Squamous cell carcinoma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Squamous cell carcinoma of head and neck	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Teratoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Thyroid cancer	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Tonsil cancer	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Transitional cell carcinoma	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Uterine cancer	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Uterine leiomyoma	0	0.0	(0.0, 0.0)	3	0.0	(0.0, 0.1)
NERVOUS SYSTEM DISORDERS	25	0.3	(0.2, 0.4)	23	0.3	(0.2, 0.4)
Amnesia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 18. Incidence Rates of at Least 1 Serious Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Amyotrophic lateral sclerosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Carpal tunnel syndrome	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Cerebral infarction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cerebrovascular accident	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Cervicogenic headache	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dementia Alzheimer's type	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dizziness	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Guillain-Barre syndrome	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Haemorrhagic stroke	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hemiplegic migraine	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Idiopathic intracranial hypertension	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Intraventricular haemorrhage	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Ischaemic stroke	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Optic neuritis	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Paraesthesia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Peripheral nerve lesion	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Spinal cord compression	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Subarachnoid haemorrhage	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Syncope	2	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)
Toxic encephalopathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Transient global amnesia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Transient ischaemic attack	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Uraemic encephalopathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
PREGNANCY, PUERPERIUM AND PERINATAL CONDITIONS	2	0.0	(0.0, 0.1)	6	0.1	(0.0, 0.2)
Abortion incomplete	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Abortion spontaneous	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Abortion spontaneous incomplete	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Retained products of conception	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
PSYCHIATRIC DISORDERS	5	0.1	(0.0, 0.1)	9	0.1	(0.1, 0.2)
Alcohol abuse	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Bipolar disorder	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Depression	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Depression suicidal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Disorientation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Major depression	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Mental disorder	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Panic attack	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 18. Incidence Rates of at Least 1 Serious Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Psychotic disorder	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Suicidal ideation	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Suicide attempt	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
RENAL AND URINARY DISORDERS	11	0.1	(0.1, 0.2)	8	0.1	(0.0, 0.2)
Acute kidney injury	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hydronephrosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Nephrolithiasis	6	0.1	(0.0, 0.2)	6	0.1	(0.0, 0.2)
Renal colic	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Subcapsular renal haematoma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ureterolithiasis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Urinary bladder polyp	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
REPRODUCTIVE SYSTEM AND BREAST DISORDERS	2	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Adnexal torsion	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Breast hyperplasia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Endometriosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Ovarian cyst	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Ovarian mass	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Rectocele	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Uterine prolapse	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Vaginal prolapse	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	14	0.2	(0.1, 0.3)	14	0.2	(0.1, 0.3)
Acute respiratory failure	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Asthma	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Asthmatic crisis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Chronic obstructive pulmonary disease	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Dyspnoea	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hypoxia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Interstitial lung disease	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Nasal septum deviation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pneumonia aspiration	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Pneumonitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pneumothorax	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pulmonary embolism	5	0.1	(0.0, 0.1)	6	0.1	(0.0, 0.2)
Pulmonary mass	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Respiratory arrest	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Respiratory failure	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 18. Incidence Rates of at Least 1 Serious Adverse Event From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
SOCIAL CIRCUMSTANCES	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Miscarriage of partner	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
SURGICAL AND MEDICAL PROCEDURES	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Finger amputation	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
VASCULAR DISORDERS	12	0.1	(0.1, 0.3)	13	0.2	(0.1, 0.3)
Accelerated hypertension	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Aortic aneurysm	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Aortic rupture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Aortic stenosis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Arteriosclerosis	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Deep vein thrombosis	3	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)
Hypertension	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hypertensive crisis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hypertensive emergency	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hypertensive urgency	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Orthostatic hypotension	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Peripheral artery stenosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from Dose 1 to the end of blinded follow-up. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:09)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adae s131 sae exp p3 saf

Subgroup Analyses

Overall, no clinically meaningful differences in IRs of SAEs were observed by baseline SARS-CoV-2 status, ethnicity, race, or sex subgroups.

IRs of SAEs were similar by baseline SARS-CoV-2 status in the BNT162b2 and placebo groups for baseline positive (4.0 per 100 PY [95% CI: 1.9, 7.3] and 1.9 per 100 PY [95% CI: 0.6, 4.4]) and baseline negative (3.2 per 100 PY [95% CI: 2.8, 3.6] and 3.3 per 100 PY [95%

CI: 2.9, 3.7]) participants. IRs of SAEs in the baseline positive BNT162b2 group were similar (4.0 per 100 PY [95% CI: 1.9, 7.3]) to those in the baseline negative BNT162b2 group (3.2 per 100 PY [95% CI: 2.8, 3.6]), and similar to what was observed in the overall SAE analysis irrespective of baseline status (Table 7).

While there are differences in exposure (2.5 vs 80.4) by baseline SARS-CoV-2 positive and negative status, respectively, IRs were numerically low or similar by baseline SARS-CoV-2 status, so there is no evidence that individuals who are positive at baseline report AEs at a higher frequency than those who are negative at baseline.

IRs of SAEs were similar in the BNT162b2 and placebo groups for Hispanic/Latino (3.5 per 100 PY [95% CI: 2.8, 4.3] and 3.6 per 100 PY [95% CI: 2.9, 4.5]), Non-Hispanic/Non-Latino (3.1 per 100 PY [95% CI: 2.7, 3.6] for each), and Not Reported (2.4 per 100 PY [95% CI: 0.1, 13.1] and 2.3 per 100 PY [95% CI: 0.1, 12.7]) participants.

IRs of SAEs were similar in the BNT162b2 and placebo groups for White (3.3 per 100 PY [95%CI: 2.9, 3.8]and 3.5 per 100 PY [95% CI: 3.1, 4.0]), Black or African American (2.5 per 100 PY [95% CI: 1.6, 3.9] and 2.6 per 100 PY [95% CI: 1.6, 4.0]), and greater in the BNT162b2 group for All Others compared to placebo (2.7 per 100 PY [95% CI: 1.6, 4.3] and 1.4 per 100 PY [95% CI: 0.6, 2.7]).

IRs of SAEs were similar by sex in the BNT162b2 and placebo groups for males (3.5 per 100 PY[95% CI: 3.0, 4.1] and 3.4 per 100 PY [95% CI: 2.8, 4.0]) and females (2.9 per 100 PY [95% CI: 2.4, 3.5] and 3.2 per 100 PY [95% CI: 2.6, 3.7]).

2.7.4.2.4.3.2.2.1. Participants with Confirmed Stable HIV Disease: Blinded Placebo-Controlled Follow-Up Period From Dose 1 to the Unblinding Date (Phase 3, Study C4591001, Serious Adverse Events)

From Dose 1 to the unblinding date, IRs of at least 1 SAE in participants with stable HIV disease were similar in the BNT162b2 group (6.6 per 100 PY [95% CI:0.8, 23.9]) and the placebo group (6.9 per 100 PY [95% CI: 0.8, 25.1]) with 2 participants reporting at least 1 SAE in each group. None of the SAEs were assessed by the investigator as related to study intervention.

- One older participant in the BNT162b2 group had an SAE of pneumonia 86 days after Dose 2 which lasted 8 days and resolved.
- One older participant in the BNT162b2 group had a fatal SAE of road traffic accident 73 days after Dose 2.
- One younger participant in the placebo group had an SAE of breast cancer 71 days after Dose 2 that was continuing at the data cutoff date.
- One younger participant in the placebo group had an SAE of diabetes mellitus 68 days after Dose 2, and COVID-19 pneumonia 72 days after Dose 2 which lasted 4 days and resulted in death (Section 2.7.4.2.4.3.1). The participant had a history of asthma, HIV, hypertension, and obesity and then was diagnosed with diabetes

mellitus 68 days after Dose 2. Four days after the diagnosis, the participant presented in the ER with an elevated blood glucose level and was admitted. Laboratory tests on the following day included a SARS-CoV-2 PCR test, which was positive. Two days later, a second test confirmed the COVID-19 positive diagnosis. The following day, 75 days after Dose 2, the participant died due to disease progression and COVID-19 pneumonia. The investigator concluded that the diabetes mellitus and COVID-19 pneumonia were not related to study intervention. This participant was diagnosed based on a local COVID-19 test that could not be confirmed as protocol-approved and was not confirmed by a test result from the central laboratory, therefore, this participant was not included in efficacy analyses.

2.7.4.2.4.3.2.3. Open-Label Follow-Up Period – Original BNT162b2 Participants (Phase 3, Study C4591001, Serious Adverse Events)

From unblinding date to the data cutoff date, the IR of at least 1 SAE was 2.0 per 100 PY (95% CI: 1.5, 2.6) in original BNT162b2 participants (Table 19).

One younger participant with no past medical history had a life-threatening SAE of myocardial infarction 71 days after Dose 2 that was assessed by the investigator as related to study intervention, which lasted 1 day and resolved the same day.

Table 19. Incidence Rates of at Least 1 Serious Adverse Event From Unblinding Date to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received BNT162b2 – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=20309, TE[b]=27.7)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Any event	55	2.0	(1.5, 2.6)
BLOOD AND LYMPHATIC SYSTEM DISORDERS	1	0.0	(0.0, 0.2)
Pancytopenia	1	0.0	(0.0, 0.2)
CARDIAC DISORDERS	8	0.3	(0.1, 0.6)
Atrial fibrillation	1	0.0	(0.0, 0.2)
Atrial flutter	1	0.0	(0.0, 0.2)
Cardiac failure congestive	1	0.0	(0.0, 0.2)
Coronary artery occlusion	1	0.0	(0.0, 0.2)
Myocardial infarction	4	0.1	(0.0, 0.4)
EYE DISORDERS	1	0.0	(0.0, 0.2)
Retinal tear	1	0.0	(0.0, 0.2)
GASTROINTESTINAL DISORDERS	3	0.1	(0.0, 0.3)
Abdominal pain upper	1	0.0	(0.0, 0.2)
Haematemesis	1	0.0	(0.0, 0.2)
Rectal haemorrhage	1	0.0	(0.0, 0.2)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	1	0.0	(0.0, 0.2)
Impaired healing	1	0.0	(0.0, 0.2)
HEPATOBILIARY DISORDERS	6	0.2	(0.1, 0.5)
Acute hepatic failure	1	0.0	(0.0, 0.2)
Cholecystitis	1	0.0	(0.0, 0.2)
Cholecystitis acute	2	0.1	(0.0, 0.3)
Cholelithiasis obstructive	1	0.0	(0.0, 0.2)
Portosplenomesenteric venous thrombosis	1	0.0	(0.0, 0.2)
INFECTIONS AND INFESTATIONS	10	0.4	(0.2, 0.7)
Appendicitis	1	0.0	(0.0, 0.2)
Bacteraemia	1	0.0	(0.0, 0.2)
Clostridium difficile colitis	1	0.0	(0.0, 0.2)
Endocarditis	1	0.0	(0.0, 0.2)
Herpes zoster oticus	1	0.0	(0.0, 0.2)
Meningitis bacterial	1	0.0	(0.0, 0.2)
Pneumonia	1	0.0	(0.0, 0.2)
Post procedural infection	1	0.0	(0.0, 0.2)
Postoperative abscess	1	0.0	(0.0, 0.2)

Table 19. Incidence Rates of at Least 1 Serious Adverse Event From Unblinding Date to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received BNT162b2 – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=20309, TE[b]=27.7)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Sepsis	1	0.0	(0.0, 0.2)
Subcutaneous abscess	1	0.0	(0.0, 0.2)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	8	0.3	(0.1, 0.6)
Ankle fracture	1	0.0	(0.0, 0.2)
Burns second degree	1	0.0	(0.0, 0.2)
Burns third degree	1	0.0	(0.0, 0.2)
Clavicle fracture	1	0.0	(0.0, 0.2)
Fall	1	0.0	(0.0, 0.2)
Humerus fracture	1	0.0	(0.0, 0.2)
Injury	1	0.0	(0.0, 0.2)
Procedural dizziness	1	0.0	(0.0, 0.2)
Procedural pain	1	0.0	(0.0, 0.2)
Rib fracture	1	0.0	(0.0, 0.2)
Road traffic accident	2	0.1	(0.0, 0.3)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	1	0.0	(0.0, 0.2)
Osteoarthritis	1	0.0	(0.0, 0.2)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	5	0.2	(0.1, 0.4)
Adenocarcinoma pancreas	1	0.0	(0.0, 0.2)
Brain cancer metastatic	1	0.0	(0.0, 0.2)
Hormone receptor positive breast cancer	1	0.0	(0.0, 0.2)
Metastases to lung	1	0.0	(0.0, 0.2)
Pancreatic carcinoma metastatic	1	0.0	(0.0, 0.2)
Uterine cancer	1	0.0	(0.0, 0.2)
NERVOUS SYSTEM DISORDERS	3	0.1	(0.0, 0.3)
Dizziness	1	0.0	(0.0, 0.2)
Intracranial aneurysm	1	0.0	(0.0, 0.2)
Seizure	1	0.0	(0.0, 0.2)
PREGNANCY, PUERPERIUM AND PERINATAL CONDITIONS	1	0.0	(0.0, 0.2)
Abortion spontaneous	1	0.0	(0.0, 0.2)
PSYCHIATRIC DISORDERS	1	0.0	(0.0, 0.2)
Bipolar I disorder	1	0.0	(0.0, 0.2)
RENAL AND URINARY DISORDERS	2	0.1	(0.0, 0.3)
Nephrolithiasis	2	0.1	(0.0, 0.3)
REPRODUCTIVE SYSTEM AND BREAST DISORDERS	1	0.0	(0.0, 0.2)

Table 19. Incidence Rates of at Least 1 Serious Adverse Event From Unblinding Date to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received BNT162b2 – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=20309, TE[b]=27.7)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Endometrial thickening	1	0.0	(0.0, 0.2)
Endometriosis	1	0.0	(0.0, 0.2)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	5	0.2	(0.1, 0.4)
Asthma	1	0.0	(0.0, 0.2)
Chronic obstructive pulmonary disease	1	0.0	(0.0, 0.2)
Dyspnoea	1	0.0	(0.0, 0.2)
Dyspnoea exertional	1	0.0	(0.0, 0.2)
Pulmonary embolism	1	0.0	(0.0, 0.2)
VASCULAR DISORDERS	3	0.1	(0.0, 0.3)
Aortic aneurysm	2	0.1	(0.0, 0.3)
Arterial occlusive disease	1	0.0	(0.0, 0.2)
Deep vein thrombosis	1	0.0	(0.0, 0.2)

Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from the unblinding date to data cutoff date. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:16)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adae s131 sae ex bnt p3 saf

2.7.4.2.4.3.2.4. Blinded Placebo-Controlled and Open-Label Follow-Up Periods to 6 Months After Dose 2 – Original BNT162b2 Participants (Phase 3, Study C4591001, Serious Adverse Events)

From Dose 1 to 6 months after Dose 2, during the blinded and open-label follow-up periods, 190 (1.6%) participants in the BNT162b2 group reported at least 1 SAE (Table 20).

Two of the SAEs in the BNT162b2 group (SIRVA and paraesthesia, see Section 2.7.4.2.4.3.2.1 and Section 2.7.4.2.4.3.2.2) were assessed by the investigator as related to study intervention (Table 11)

The number of participants who reported at least 1 SAE was 73 (1.1%) and 117 (2.2%) in the younger and older age groups, respectively.

Comparison of SAEs reported from Dose 1 to 1 month after Dose 2 to SAEs reported from 1 month after Dose 2 to 6 months Dose 2 shows that the frequency of SAEs increased from 0.5% to 1.1%, respectively. The following SOCs had the largest increase in SAEs (Dose 1 to 1 month after Dose 2 vs 1 month after Dose 2 to 6 months after Dose 2):

- Neoplasms, benign, malignant, and unspecified (including cysts and polyps): 4 (0.0%) vs 21 (0.2%)
- Injury, poisoning, and procedural complications: 2 (0.0%) vs 14 (0.1%)
- Infections and infestations: 14 (0.1%) vs 22 (0.2%)
- Gastrointestinal disorders: 4 (0.0%) vs 10 (0.1%)
- Respiratory, thoracic, and mediastinal disorders: 2 (0.0%) vs 8 (0.1%)
- Hepatobiliary disorders: 3 (0.0%) vs 8 (0.1%)

Table 20. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Any event	190 (1.6)	(1.4, 1.8)
BLOOD AND LYMPHATIC SYSTEM DISORDERS	1 (0.0)	(0.0, 0.0)
Pancytopenia	1 (0.0)	(0.0, 0.0)
CARDIAC DISORDERS	27 (0.2)	(0.1, 0.3)
Acute myocardial infarction	4 (0.0)	(0.0, 0.1)
Atrial fibrillation	4 (0.0)	(0.0, 0.1)
Myocardial infarction	4 (0.0)	(0.0, 0.1)
Angina pectoris	3 (0.0)	(0.0, 0.1)
Angina unstable	2 (0.0)	(0.0, 0.1)
Cardiac failure congestive	2 (0.0)	(0.0, 0.1)
Acute coronary syndrome	1 (0.0)	(0.0, 0.0)
Arrhythmia supraventricular	1 (0.0)	(0.0, 0.0)
Atrial flutter	1 (0.0)	(0.0, 0.0)
Bradycardia	1 (0.0)	(0.0, 0.0)
Cardiac arrest	1 (0.0)	(0.0, 0.0)
Coronary artery disease	1 (0.0)	(0.0, 0.0)
Coronary artery occlusion	1 (0.0)	(0.0, 0.0)
Pericarditis	1 (0.0)	(0.0, 0.0)
Ventricular tachycardia	1 (0.0)	(0.0, 0.0)
EAR AND LABYRINTH DISORDERS	1 (0.0)	(0.0, 0.0)
Vertigo	1 (0.0)	(0.0, 0.0)
EYE DISORDERS	4 (0.0)	(0.0, 0.1)
Choroidal neovascularisation	1 (0.0)	(0.0, 0.0)
Diplopia	1 (0.0)	(0.0, 0.0)
Ophthalmic vein thrombosis	1 (0.0)	(0.0, 0.0)
Retinal tear	1 (0.0)	(0.0, 0.0)
GASTROINTESTINAL DISORDERS	14 (0.1)	(0.1, 0.2)
Colitis	2 (0.0)	(0.0, 0.1)
Gastritis	2 (0.0)	(0.0, 0.1)
Small intestinal obstruction	2 (0.0)	(0.0, 0.1)
Abdominal pain upper	1 (0.0)	(0.0, 0.0)
Food poisoning	1 (0.0)	(0.0, 0.0)
Gastrointestinal haemorrhage	1 (0.0)	(0.0, 0.0)

Table 20. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Haematemesis	1 (0.0)	(0.0, 0.0)
Haemorrhoids	1 (0.0)	(0.0, 0.0)
Impaired gastric emptying	1 (0.0)	(0.0, 0.0)
Intestinal obstruction	1 (0.0)	(0.0, 0.0)
Obstructive pancreatitis	1 (0.0)	(0.0, 0.0)
Pancreatitis	1 (0.0)	(0.0, 0.0)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	7 (0.1)	(0.0, 0.1)
Chest pain	2 (0.0)	(0.0, 0.1)
Non-cardiac chest pain	2 (0.0)	(0.0, 0.1)
Asthenia	1 (0.0)	(0.0, 0.0)
Shoulder injury related to vaccine administration	1 (0.0)	(0.0, 0.0)
Vascular stent occlusion	1 (0.0)	(0.0, 0.0)
HEPATOBILIARY DISORDERS	11 (0.1)	(0.0, 0.2)
Cholecystitis acute	3 (0.0)	(0.0, 0.1)
Cholelithiasis	3 (0.0)	(0.0, 0.1)
Bile duct stone	2 (0.0)	(0.0, 0.1)
Biliary colic	2 (0.0)	(0.0, 0.1)
Cholecystitis	1 (0.0)	(0.0, 0.0)
Cholelithiasis obstructive	1 (0.0)	(0.0, 0.0)
Portosplenomesenteric venous thrombosis	1 (0.0)	(0.0, 0.0)
IMMUNE SYSTEM DISORDERS	2 (0.0)	(0.0, 0.1)
Anaphylactic reaction	1 (0.0)	(0.0, 0.0)
Drug hypersensitivity	1 (0.0)	(0.0, 0.0)
INFECTIONS AND INFESTATIONS	36 (0.3)	(0.2, 0.4)
Appendicitis	10 (0.1)	(0.0, 0.2)
Diverticulitis	3 (0.0)	(0.0, 0.1)
Pneumonia	3 (0.0)	(0.0, 0.1)
Cellulitis	2 (0.0)	(0.0, 0.1)
Pyelonephritis	2 (0.0)	(0.0, 0.1)
Abscess	1 (0.0)	(0.0, 0.0)
Appendicitis perforated	1 (0.0)	(0.0, 0.0)
Arthritis bacterial	1 (0.0)	(0.0, 0.0)
Bacteraemia	1 (0.0)	(0.0, 0.0)
Bacterial sepsis	1 (0.0)	(0.0, 0.0)
Clostridium difficile colitis	1 (0.0)	(0.0, 0.0)

Table 20. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Device related infection	1 (0.0)	(0.0, 0.0)
Empyema	1 (0.0)	(0.0, 0.0)
Endocarditis	1 (0.0)	(0.0, 0.0)
Escherichia urinary tract infection	1 (0.0)	(0.0, 0.0)
Gangrene	1 (0.0)	(0.0, 0.0)
Gastroenteritis	1 (0.0)	(0.0, 0.0)
Herpes zoster oticus	1 (0.0)	(0.0, 0.0)
Meningitis bacterial	1 (0.0)	(0.0, 0.0)
Penile infection	1 (0.0)	(0.0, 0.0)
Peritoneal abscess	1 (0.0)	(0.0, 0.0)
Peritonitis	1 (0.0)	(0.0, 0.0)
Peritonsillar abscess	1 (0.0)	(0.0, 0.0)
Postoperative abscess	1 (0.0)	(0.0, 0.0)
Sepsis	1 (0.0)	(0.0, 0.0)
Subcutaneous abscess	1 (0.0)	(0.0, 0.0)
Urinary tract infection	1 (0.0)	(0.0, 0.0)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	16 (0.1)	(0.1, 0.2)
Ankle fracture	2 (0.0)	(0.0, 0.1)
Road traffic accident	2 (0.0)	(0.0, 0.1)
Wrist fracture	2 (0.0)	(0.0, 0.1)
Burns second degree	1 (0.0)	(0.0, 0.0)
Burns third degree	1 (0.0)	(0.0, 0.0)
Cervical vertebral fracture	1 (0.0)	(0.0, 0.0)
Craniocerebral injury	1 (0.0)	(0.0, 0.0)
Facial bones fracture	1 (0.0)	(0.0, 0.0)
Fall	1 (0.0)	(0.0, 0.0)
Head injury	1 (0.0)	(0.0, 0.0)
Humerus fracture	1 (0.0)	(0.0, 0.0)
Patella fracture	1 (0.0)	(0.0, 0.0)
Pelvic fracture	1 (0.0)	(0.0, 0.0)
Procedural dizziness	1 (0.0)	(0.0, 0.0)
Spinal cord injury cervical	1 (0.0)	(0.0, 0.0)
Tibia fracture	1 (0.0)	(0.0, 0.0)
Traumatic intracranial haemorrhage	1 (0.0)	(0.0, 0.0)
Upper limb fracture	1 (0.0)	(0.0, 0.0)

Table 20. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
INVESTIGATIONS	1 (0.0)	(0.0, 0.0)
Cardiac stress test abnormal	1 (0.0)	(0.0, 0.0)
METABOLISM AND NUTRITION DISORDERS	3 (0.0)	(0.0, 0.1)
Diabetic ketoacidosis	1 (0.0)	(0.0, 0.0)
Hypoglycaemia	1 (0.0)	(0.0, 0.0)
Hypokalaemia	1 (0.0)	(0.0, 0.0)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	9 (0.1)	(0.0, 0.1)
Osteoarthritis	4 (0.0)	(0.0, 0.1)
Arthritis	1 (0.0)	(0.0, 0.0)
Intervertebral disc compression	1 (0.0)	(0.0, 0.0)
Intervertebral disc degeneration	1 (0.0)	(0.0, 0.0)
Intervertebral disc protrusion	1 (0.0)	(0.0, 0.0)
Osteochondritis	1 (0.0)	(0.0, 0.0)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	25 (0.2)	(0.1, 0.3)
Breast cancer	2 (0.0)	(0.0, 0.1)
Invasive ductal breast carcinoma	2 (0.0)	(0.0, 0.1)
Prostate cancer	2 (0.0)	(0.0, 0.1)
Acute myeloid leukaemia	1 (0.0)	(0.0, 0.0)
Adenocarcinoma pancreas	1 (0.0)	(0.0, 0.0)
Adrenal gland cancer	1 (0.0)	(0.0, 0.0)
Benign hydatidiform mole	1 (0.0)	(0.0, 0.0)
Bladder cancer	1 (0.0)	(0.0, 0.0)
Borderline serous tumour of ovary	1 (0.0)	(0.0, 0.0)
Brain cancer metastatic	1 (0.0)	(0.0, 0.0)
Breast cancer in situ	1 (0.0)	(0.0, 0.0)
Carcinoid tumour of the stomach	1 (0.0)	(0.0, 0.0)
Colon adenoma	1 (0.0)	(0.0, 0.0)
Gallbladder cancer stage II	1 (0.0)	(0.0, 0.0)
Gastric cancer	1 (0.0)	(0.0, 0.0)
Malignant melanoma	1 (0.0)	(0.0, 0.0)
Non-small cell lung cancer stage IV	1 (0.0)	(0.0, 0.0)
Skin cancer	1 (0.0)	(0.0, 0.0)
Squamous cell carcinoma	1 (0.0)	(0.0, 0.0)
Thyroid cancer	1 (0.0)	(0.0, 0.0)

Table 20. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Transitional cell carcinoma	1 (0.0)	(0.0, 0.0)
Uterine cancer	1 (0.0)	(0.0, 0.0)
NERVOUS SYSTEM DISORDERS	23 (0.2)	(0.1, 0.3)
Subarachnoid haemorrhage	3 (0.0)	(0.0, 0.1)
Cerebrovascular accident	2 (0.0)	(0.0, 0.1)
Dizziness	2 (0.0)	(0.0, 0.1)
Optic neuritis	2 (0.0)	(0.0, 0.1)
Syncope	2 (0.0)	(0.0, 0.1)
Transient ischaemic attack	2 (0.0)	(0.0, 0.1)
Carpal tunnel syndrome	1 (0.0)	(0.0, 0.0)
Idiopathic intracranial hypertension	1 (0.0)	(0.0, 0.0)
Intracranial aneurysm	1 (0.0)	(0.0, 0.0)
Ischaemic stroke	1 (0.0)	(0.0, 0.0)
Paraesthesia	1 (0.0)	(0.0, 0.0)
Peripheral nerve lesion	1 (0.0)	(0.0, 0.0)
Seizure	1 (0.0)	(0.0, 0.0)
Toxic encephalopathy	1 (0.0)	(0.0, 0.0)
Transient global amnesia	1 (0.0)	(0.0, 0.0)
Uraemic encephalopathy	1 (0.0)	(0.0, 0.0)
PREGNANCY, PUERPERIUM AND PERINATAL CONDITIONS	2 (0.0)	(0.0, 0.1)
Abortion spontaneous	2 (0.0)	(0.0, 0.1)
PSYCHIATRIC DISORDERS	1 (0.0)	(0.0, 0.0)
Suicide attempt	1 (0.0)	(0.0, 0.0)
RENAL AND URINARY DISORDERS	9 (0.1)	(0.0, 0.1)
Nephrolithiasis	5 (0.0)	(0.0, 0.1)
Acute kidney injury	2 (0.0)	(0.0, 0.1)
Renal colic	1 (0.0)	(0.0, 0.0)
Subcapsular renal haematoma	1 (0.0)	(0.0, 0.0)
REPRODUCTIVE SYSTEM AND BREAST DISORDERS	3 (0.0)	(0.0, 0.1)
Breast hyperplasia	1 (0.0)	(0.0, 0.0)
Endometrial thickening	1 (0.0)	(0.0, 0.0)
Endometriosis	1 (0.0)	(0.0, 0.0)
Ovarian cyst	1 (0.0)	(0.0, 0.0)
Uterine prolapse	1 (0.0)	(0.0, 0.0)

Table 20. Number (%) of Subjects Reporting at Least 1 Serious Adverse Event From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	10 (0.1)	(0.0, 0.2)
Pulmonary embolism	4 (0.0)	(0.0, 0.1)
Chronic obstructive pulmonary disease	2 (0.0)	(0.0, 0.1)
Dyspnoea	1 (0.0)	(0.0, 0.0)
Dyspnoea exertional	1 (0.0)	(0.0, 0.0)
Interstitial lung disease	1 (0.0)	(0.0, 0.0)
Pneumonitis	1 (0.0)	(0.0, 0.0)
SOCIAL CIRCUMSTANCES	1 (0.0)	(0.0, 0.0)
Miscarriage of partner	1 (0.0)	(0.0, 0.0)
SURGICAL AND MEDICAL PROCEDURES	1 (0.0)	(0.0, 0.0)
Finger amputation	1 (0.0)	(0.0, 0.0)
VASCULAR DISORDERS	6 (0.0)	(0.0, 0.1)
Aortic aneurysm	3 (0.0)	(0.0, 0.1)
Deep vein thrombosis	2 (0.0)	(0.0, 0.1)
Arterial occlusive disease	1 (0.0)	(0.0, 0.0)
Hypertension	1 (0.0)	(0.0, 0.0)

Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
c. Exact 2-sided CI based on the Clopper and Pearson method.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:16)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adae s130 pd2 ser p3 saf

2.7.4.2.4.3.2.5. Open-Label Follow-Up Period – Original Placebo Participants Who Then Received BNT162b2 (Phase 3, Study C4591001, Serious Adverse Events)

From Dose 3 (first dose of BNT162b2) to the data cutoff date, the IR of at least 1 SAE in original placebo participants who then received BNT162b2 was 2.7 per 100 PY (95% CI: 2.1, 3.5) (Table 21). One SAE was assessed by the investigator as related to study intervention (Table 14).

- One participant in the younger age group with a history of food and seasonal allergies and drug hypersensitivity), who was originally randomized to the placebo group and unblinded to receive BNT162b2, had an anaphylactoid reaction 2 days post Dose 3 (first dose of BNT162b2), with an event duration of 1 day; the event was reported as an SAE, reported as resolved, and the participant withdrew from the study.

There were 2 participants who reported SAEs for baseline positive original placebo participants who then received BNT162b2. A meaningful comparison with baseline negative participants is not possible.

Table 21. Incidence Rates of at Least 1 Serious Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Any event	65	2.7	(2.1, 3.5)
CARDIAC DISORDERS	8	0.3	(0.1, 0.7)
Acute myocardial infarction	1	0.0	(0.0, 0.2)
Arrhythmia	1	0.0	(0.0, 0.2)
Arteriospasm coronary	1	0.0	(0.0, 0.2)
Atrial fibrillation	2	0.1	(0.0, 0.3)
Cardiac failure congestive	1	0.0	(0.0, 0.2)
Cardio-respiratory arrest	1	0.0	(0.0, 0.2)
Cardiovascular disorder	1	0.0	(0.0, 0.2)
Ischaemic cardiomyopathy	1	0.0	(0.0, 0.2)
Myocardial infarction	1	0.0	(0.0, 0.2)
CONGENITAL, FAMILIAL AND GENETIC DISORDERS	1	0.0	(0.0, 0.2)
Hypertrophic cardiomyopathy	1	0.0	(0.0, 0.2)
EAR AND LABYRINTH DISORDERS	1	0.0	(0.0, 0.2)
Vertigo	1	0.0	(0.0, 0.2)
EYE DISORDERS	1	0.0	(0.0, 0.2)
Diplopia	1	0.0	(0.0, 0.2)
GASTROINTESTINAL DISORDERS	8	0.3	(0.1, 0.7)
Anal prolapse	1	0.0	(0.0, 0.2)
Gastrointestinal haemorrhage	1	0.0	(0.0, 0.2)
Gastrointestinal necrosis	1	0.0	(0.0, 0.2)
Gastrooesophageal reflux disease	1	0.0	(0.0, 0.2)
Intestinal obstruction	1	0.0	(0.0, 0.2)
Intestinal ulcer perforation	1	0.0	(0.0, 0.2)
Pancreatitis acute	2	0.1	(0.0, 0.3)
Small intestinal obstruction	1	0.0	(0.0, 0.2)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	3	0.1	(0.0, 0.4)
Drug withdrawal syndrome	1	0.0	(0.0, 0.2)
Fatigue	1	0.0	(0.0, 0.2)
Pelvic mass	1	0.0	(0.0, 0.2)
HEPATOBILIARY DISORDERS	2	0.1	(0.0, 0.3)
Cholecystitis	1	0.0	(0.0, 0.2)
Hepatitis acute	1	0.0	(0.0, 0.2)

Table 21. Incidence Rates of at Least 1 Serious Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
IMMUNE SYSTEM DISORDERS	1	0.0	(0.0, 0.2)
Anaphylactoid reaction	1	0.0	(0.0, 0.2)
INFECTIONS AND INFESTATIONS	4	0.2	(0.0, 0.4)
Appendicitis perforated	1	0.0	(0.0, 0.2)
COVID-19 pneumonia	1	0.0	(0.0, 0.2)
Clostridium difficile infection	1	0.0	(0.0, 0.2)
Focal peritonitis	1	0.0	(0.0, 0.2)
Pelvic abscess	1	0.0	(0.0, 0.2)
Pneumonia	1	0.0	(0.0, 0.2)
Urosepsis	1	0.0	(0.0, 0.2)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	6	0.3	(0.1, 0.5)
Ankle fracture	1	0.0	(0.0, 0.2)
Fall	1	0.0	(0.0, 0.2)
Lower limb fracture	1	0.0	(0.0, 0.2)
Postoperative ileus	1	0.0	(0.0, 0.2)
Scapula fracture	1	0.0	(0.0, 0.2)
Spinal fracture	1	0.0	(0.0, 0.2)
Traumatic intracranial haemorrhage	1	0.0	(0.0, 0.2)
METABOLISM AND NUTRITION DISORDERS	1	0.0	(0.0, 0.2)
Diabetes mellitus inadequate control	1	0.0	(0.0, 0.2)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	4	0.2	(0.0, 0.4)
Myalgia	1	0.0	(0.0, 0.2)
Osteoarthritis	3	0.1	(0.0, 0.4)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	5	0.2	(0.1, 0.5)
Brain neoplasm	1	0.0	(0.0, 0.2)
Breast cancer	1	0.0	(0.0, 0.2)
Breast cancer stage II	1	0.0	(0.0, 0.2)
Hepatic cancer	1	0.0	(0.0, 0.2)
Non-small cell lung cancer stage III	1	0.0	(0.0, 0.2)
NERVOUS SYSTEM DISORDERS	9	0.4	(0.2, 0.7)
Brachial plexopathy	1	0.0	(0.0, 0.2)
Cerebrovascular accident	4	0.2	(0.0, 0.4)
Seizure	1	0.0	(0.0, 0.2)
Syncope	1	0.0	(0.0, 0.2)

Table 21. Incidence Rates of at Least 1 Serious Adverse Event From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾ 16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Transient ischaemic attack	2	0.1	(0.0, 0.3)
PSYCHIATRIC DISORDERS	5	0.2	(0.1, 0.5)
Alcohol withdrawal syndrome	1	0.0	(0.0, 0.2)
Anxiety	1	0.0	(0.0, 0.2)
Bipolar disorder	1	0.0	(0.0, 0.2)
Completed suicide	1	0.0	(0.0, 0.2)
Depression	1	0.0	(0.0, 0.2)
Major depression	1	0.0	(0.0, 0.2)
Suicide attempt	1	0.0	(0.0, 0.2)
RENAL AND URINARY DISORDERS	2	0.1	(0.0, 0.3)
Nephrolithiasis	1	0.0	(0.0, 0.2)
Urinary tract obstruction	1	0.0	(0.0, 0.2)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	8	0.3	(0.1, 0.7)
Acute respiratory failure	2	0.1	(0.0, 0.3)
Chronic obstructive pulmonary disease	1	0.0	(0.0, 0.2)
Dyspnoea	1	0.0	(0.0, 0.2)
Pulmonary embolism	4	0.2	(0.0, 0.4)
VASCULAR DISORDERS	5	0.2	(0.1, 0.5)
Aortic stenosis	1	0.0	(0.0, 0.2)
Deep vein thrombosis	2	0.1	(0.0, 0.3)
Hypertension	1	0.0	(0.0, 0.2)
Thrombosis	1	0.0	(0.0, 0.2)

Note: Dose 3 = First dose of BNT162b2 (30 µg).
Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from Dose 3 to data cutoff date. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:16)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adae s131 sae exp p3x saf

2.7.4.2.4.3.2.5.1. Original Placebo Participants, had COVID-19 Occurrence After Dose 1, and Then Received BNT162b2 (Phase 3, Study C4591001, Serious Adverse Events)

For original placebo participants who had COVID-19 occurrence after Dose 1 and then received BNT162b2, the IR for at least 1 SAE was 3.4 per 100 PY (95% CI: 0.7, 10.0). These SAEs occurred in 3 participants.

- One participant with a significant past history of a deep vein thrombosis and COVID-19 in the placebo-controlled follow-up period, had a Grade 3 SAE of pulmonary embolism, 6 days post Dose 4, which lasted 2 days and resolved with sequelae. The SAE was assessed as not related to the study intervention by the investigator.

- One participant with a past medical history of hypertension, hypercholesterolemia, coronary artery disease, and a coronary artery bypass in 2006, had a Grade 3 SAE of myocardial infarction, 16 days post Dose 3, which lasted 4 days and resolved with sequelae. The SAE was assessed and not related to the study intervention by the investigator.

- One participant in the older age group had 4 SAEs:

    - 2 Grade 3 SAEs, urosepsis and acute hypoxic respiratory failure, both occurred 7 days post Dose 3, lasted 5 days, and resolved. These SAEs were assessed as not related to the study intervention by the investigator.

    - Grade 3 SAE of non-small cell lung cancer (stage III), occurred 31 days post Dose 4 and was continuing at the data cutoff date. This SAE was assessed as not related to the study intervention by the investigator.

    - Grade 2 SAE of Clostridium difficile infection occurred 47 days post Dose 4 and was continuing at the data cutoff date. This SAE was assessed as not related to the study intervention by the investigator.

2.7.4.2.4.3.2.6. Serious Adverse Event Narratives (Phase 3, Study C4591001)

Narratives for the Phase 3 participants who reported SAEs assessed as related to study intervention by the investigator who completed their visit at 1 month after Dose 2 and through the data cutoff date (13 March 2021) are provided (see Section 2.7.4.2.4.4).

2.7.4.2.4.3.3. Safety-Related Participant Withdrawals (Phase 3, Study C4591001)

Details and outputs regarding safety-related participant withdrawals for Phase 3 of Study C4591001 are in Module 5.3.5.1 C4591001 6-Month Update CSR Section 12.2.4.3.

In this ongoing study, tables summarizing participant withdrawals may include some participants who were reported as withdrawn but remain in the study and are continuing to be evaluated. These participants are documented in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Errata.

2.7.4.2.4.3.3.1. Blinded Placebo-Controlled Follow-Up Period From Dose 1 to 1 Month After Dose 2 (Phase 3, Study C4591001, Safety-Related Participant Withdrawals)

From Dose 1 to 1 month after Dose 2, few participants in the BNT162b2 group (0.1%) and in the placebo group (0.2%) were withdrawn because of AEs (Table 22).

There were 32 participants in the BNT162b2 group and 36 participants in the placebo group had an AE leading to withdrawal, which included:

- 6 participants in the BNT162b2 group and 2 participants in the placebo group who withdrew from the study due to AEs in the SOC of General Disorders and Administration Site Conditions (BNT162b2 group: injection site pain [2 participants] and chills, facial pain, injection site dermatitis, injection site swelling, pyrexia, and swelling face [1 participant each]; placebo group: death and fatigue [1 participant each]).

- 5 participants in the BNT162b2 group and 6 participants in the placebo group withdrew from the study due to AEs in the SOC of Injury, Poisoning and Procedural Complications (BNT162b2 group: exposure during pregnancy, maternal exposure during pregnancy [2 participants each] and alcohol poisoning [1 participant]; placebo group: exposure during pregnancy [5 participants] and overdose [1 participant].

- 3 participants in the BNT162b2 group and 5 participants in the placebo group withdrew from the study due to AEs in the SOC Cardiac Disorders (BNT162b2 group: cardiac arrest, coronary artery disease and tachycardia [1 participant each]; placebo group: atrial fibrillation [2 participants], cardiac failure congestive, coronary artery occlusion, and myocardial infarction [1 participant each]).

- 3 participants in the BNT162b2 group and 6 participants in the placebo group withdrew from the study due to AEs in the SOC of Nervous System Disorders (BNT162b2 group: headache [3 participants]; placebo group: dizziness [2 participants], amnesia, cerebral infarction, hemorrhagic stroke, paraparesis, and Parkinsonism [1 participant each]).

- 3 participants in the BNT162b2 group and 6 participants in the placebo group withdrew from the study due to AEs in the SOC of Gastrointestinal Disorders (BNT162b2 group: abdominal pain upper, gastrointestinal haemorrhage, and paraesthesia oral [1 participant each]; placebo group: diarrhoea [2 participants], diverticular perforation, dry mouth, dysphagia, and nausea [1 participant each]).

- 3 participants in the BNT162b2 group and 1 participant in the placebo group withdrew from the study due to AEs in the SOC of Neoplasms Benign, Malignant and Unspecified (incl Cysts and Polyps) (BNT162b2 group:adenocarcinoma gastric, lymphoproliferative disorder, and metastases to central nervous system [1 participant each]; placebo group: biliary cancer metastatic and metastases to liver [1 participant each]).

- 1 participant each in the BNT162b2 group and the placebo group withdrew from the study due to AEs in the SOC of Ear and Labyrinth Disorders (BNT162b2 group: deafness unilateral [1 participant]; placebo group: vertigo [1 participant]).

- 1 participant each in the BNT162b2 group and the placebo group withdrew from the study due to AEs in the SOC of Musculoskeletal and Connective Tissue Disorders (myalgia [1 participant in each group]).

- No participant in the BNT162b2 group and 2 participants in the placebo group withdrew from the study due to AEs in the SOC of Immune System Disorders (placebo group: drug hypersensitivity [2 participants]).

- 1 participant in the BNT162b2 group and no participants in the placebo group withdrew from the study due to an AE in the SOC of Blood and Lymphatic System Disorders (BNT162b2 group: lymphadenopathy [1 participant]).

- 1 participant each in the BNT162b2 group and the placebo group withdrew from the study due to AEs in the SOC of Eye Disorders (BNT162b2 group: eye pain [1 participant]; placebo group: visual impairment [1 participant]).

- 1 participant in the BNT162b2 group and no participants in the placebo group withdrew from the study due to an AE in the SOC of Infections and Infestations (BNT162b2 group: Shigella sepsis [1 participant]).

- No participants in the BNT162b2 group and 1 participant in the placebo group withdrew from the study due to an AE in the SOC of Investigations (placebo group: irregular heart rate [1 participant]).

No clinically meaningful differences in AEs leading to withdrawal were observed by age subgroups.

Table 22. Number (%) of Subjects Withdrawn Because of Adverse Events From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Any event	32 (0.1)	(0.1, 0.2)	36 (0.2)	(0.1, 0.2)
BLOOD AND LYMPHATIC SYSTEM DISORDERS	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Lymphadenopathy	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
CARDIAC DISORDERS	3 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Atrial fibrillation	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Cardiac arrest	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Cardiac failure congestive	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Coronary artery disease	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Coronary artery occlusion	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Myocardial infarction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Tachycardia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
EAR AND LABYRINTH DISORDERS	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Deafness unilateral	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Vertigo	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
EYE DISORDERS	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Eye pain	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Visual impairment	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
GASTROINTESTINAL DISORDERS	3 (0.0)	(0.0, 0.0)	6 (0.0)	(0.0, 0.1)
Diarrhoea	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Abdominal pain upper	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Diverticular perforation	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dry mouth	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Dysphagia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Gastrointestinal haemorrhage	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Nausea	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Paraesthesia oral	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	6 (0.0)	(0.0, 0.1)	2 (0.0)	(0.0, 0.0)
Injection site pain	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Chills	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Death	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Facial pain	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Fatigue	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Injection site dermatitis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 22. Number (%) of Subjects Withdrawn Because of Adverse Events From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Injection site swelling	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Pyrexia	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Swelling face	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
IMMUNE SYSTEM DISORDERS	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Drug hypersensitivity	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
INFECTIONS AND INFESTATIONS	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Shigella sepsis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	5 (0.0)	(0.0, 0.1)	6 (0.0)	(0.0, 0.1)
Exposure during pregnancy	2 (0.0)	(0.0, 0.0)	5 (0.0)	(0.0, 0.1)
Maternal exposure during pregnancy	2 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Alcohol poisoning	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Overdose	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
INVESTIGATIONS	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Heart rate irregular	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Myalgia	1 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	3 (0.0)	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Adenocarcinoma gastric	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Biliary cancer metastatic	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Lymphoproliferative disorder	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Metastases to central nervous system	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Metastases to liver	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
NERVOUS SYSTEM DISORDERS	3 (0.0)	(0.0, 0.0)	6 (0.0)	(0.0, 0.1)
Headache	3 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Dizziness	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Amnesia	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Cerebral infarction	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Haemorrhagic stroke	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Paraparesis	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Parkinsonism	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
PSYCHIATRIC DISORDERS	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Depression	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Depression suicidal	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Panic attack	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Table 22. Number (%) of Subjects Withdrawn Because of Adverse Events From Dose 1 to 1 Month After Dose 2, by System Organ Class and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)			
	BNT162b2 (30 µg) (N[a]=21926)		Placebo (N[a]=21921)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])	n[b] (%)	(95% CI[c])
Suicide attempt	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	0	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Pulmonary embolism	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Respiratory arrest	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
SKIN AND SUBCUTANEOUS TISSUE DISORDERS	2 (0.0)	(0.0, 0.0)	3 (0.0)	(0.0, 0.0)
Urticaria	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Diabetic foot	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)
Eczema	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Pruritus	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
Rash maculo-papular	0	(0.0, 0.0)	1 (0.0)	(0.0, 0.0)
VASCULAR DISORDERS	2 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Hypertension	1 (0.0)	(0.0, 0.0)	2 (0.0)	(0.0, 0.0)
Arteriosclerosis	1 (0.0)	(0.0, 0.0)	0	(0.0, 0.0)

Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
c. Exact 2-sided CI based on the Clopper and Pearson method.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:10)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/adae_s130_1md2_wd_p3_saf

2.7.4.2.4.3.3.2. Blinded Placebo-Controlled Follow-Up Period From Dose 1 to the Unblinding Date (Phase 3, Study C4591001, Safety-Related Participant Withdrawals)

From Dose 1 to the unblinding date, the IRs of participants withdrawn because of AEs were 0.5 per 100 PY in the BNT162b2 group and 0.6 per 100 PY in the placebo group (Table 23).

There were 45 participants in the BNT162b2 group and 51 participants in the placebo group had an AE leading to withdrawal, which included:

- 9 participants in the BNT162b2 group and 8 participants in the placebo group withdrew from the study due to AEs in the SOC Cardiac Disorders (BNT162b2 group: cardiac arrest [4 participants]; cardiac failure congestive, cardio-respiratory arrest, coronary artery disease, hypertensive heart disease and tachycardia [1 participant each]; placebo group: atrial fibrillation and myocardial infarction [2

participants each]; cardiac arrest, cardiac failure congestive, cardio respiratory arrest, and coronary artery occlusion [1 participant each]).

- 3 participants in the BNT162b2 group and 6 participants in the placebo group withdrew from the study due to AEs in the SOC of Gastrointestinal Disorders (BNT162b2 group: abdominal pain upper, gastrointestinal haemorrhage, and paraesthesia oral [1 participant each]; placebo group: diarrhoea [2 participants], diverticular perforation, dry mouth, dysphagia, and nausea [1 participant each]).

- 7 participants in the BNT162b2 group and 2 participants in the placebo group withdrew from the study due to AEs in the SOC of General Disorders and Administration Site Conditions (BNT162b2 group: injection site pain [2 participants], chills, facial pain, injection site dermatitis, injection site swelling, pyrexia, sudden cardiac death and swelling face [1 participant each]; placebo group: death and fatigue [1 participant each]).

- 4 participants in the BNT162b2 group and 3 participants in the placebo group withdrew from study due to AEs in the SOC Infections and Infestations (BNT162b2 group: COVID-19 pneumonia, emphysematous cholecystitis, sepsis, septic shock and Shigella sepsis [1 participant each]; placebo group: COVID-19, pneumonia, and septic shock [1 participant each]).

No clinically meaningful differences in IRs of AEs leading to withdrawal were observed in the younger and older age groups.

Table 23. Incidence Rates of Subjects Withdrawn Because of Adverse Events From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Any event	45	0.5	(0.4, 0.7)	51	0.6	(0.5, 0.8)
BLOOD AND LYMPHATIC SYSTEM DISORDERS	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lymphadenopathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
CARDIAC DISORDERS	9	0.1	(0.0, 0.2)	8	0.1	(0.0, 0.2)
Atrial fibrillation	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Cardiac arrest	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Cardiac failure congestive	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Cardio-respiratory arrest	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Coronary artery disease	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Coronary artery occlusion	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Hypertensive heart disease	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Myocardial infarction	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Tachycardia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
EAR AND LABYRINTH DISORDERS	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Deafness unilateral	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Vertigo	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
EYE DISORDERS	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Eye pain	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Visual impairment	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
GASTROINTESTINAL DISORDERS	3	0.0	(0.0, 0.1)	6	0.1	(0.0, 0.2)
Abdominal pain upper	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Diarrhoea	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Diverticular perforation	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dry mouth	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dysphagia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Gastrointestinal haemorrhage	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Nausea	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Paraesthesia oral	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	7	0.1	(0.0, 0.2)	2	0.0	(0.0, 0.1)
Chills	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Death	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Facial pain	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Fatigue	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Injection site dermatitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Injection site pain	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)

Table 23. Incidence Rates of Subjects Withdrawn Because of Adverse Events From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Injection site swelling	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pyrexia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Sudden cardiac death	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Swelling face	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
IMMUNE SYSTEM DISORDERS	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Drug hypersensitivity	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
INFECTIONS AND INFESTATIONS	4	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
COVID-19	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
COVID-19 pneumonia	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Emphysematous cholecystitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pneumonia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Sepsis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Septic shock	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Shigella sepsis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	5	0.1	(0.0, 0.1)	10	0.1	(0.1, 0.2)
Alcohol poisoning	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Exposure during pregnancy	2	0.0	(0.0, 0.1)	8	0.1	(0.0, 0.2)
Maternal exposure during pregnancy	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Overdose	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
INVESTIGATIONS	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Heart rate irregular	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
Myalgia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	4	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Adenocarcinoma gastric	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Biliary cancer metastatic	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Breast cancer	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Lung cancer metastatic	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Lymphoproliferative disorder	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Malignant melanoma	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Metastases to central nervous system	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Metastases to liver	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
NERVOUS SYSTEM DISORDERS	3	0.0	(0.0, 0.1)	7	0.1	(0.0, 0.2)
Amnesia	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Cerebral infarction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)

Table 23. Incidence Rates of Subjects Withdrawn Because of Adverse Events From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])
Dementia Alzheimer's type	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Dizziness	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)
Haemorrhagic stroke	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Headache	3	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Paraparesis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Parkinsonism	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
PSYCHIATRIC DISORDERS	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
Depression	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Depression suicidal	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Panic attack	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Suicide attempt	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	1	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Acute respiratory failure	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Chronic obstructive pulmonary disease	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Pulmonary embolism	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Respiratory arrest	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
SKIN AND SUBCUTANEOUS TISSUE DISORDERS	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Dermatitis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Diabetic foot	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Eczema	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Pruritus	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Rash maculo-papular	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Urticaria	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)
VASCULAR DISORDERS	3	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)
Aortic rupture	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)
Arteriosclerosis	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)
Hypertension	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)

Table 23. Incidence Rates of Subjects Withdrawn Because of Adverse Events From Dose 1 to Unblinding Date, by System Organ Class and Preferred Term – Phase 2/3 Subjects ≥16 Years of Age – Safety Population

	Vaccine Group (as Administered)					
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])

Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from Dose 1 to the end of blinded follow-up. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:09)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adae s131 wd exp p3 saf

2.7.4.2.4.3.3.3. Open-Label Follow-Up Period – Original BNT162b2 Participants (Phase 3, Study C4591001, Safety-Related Participant Withdrawals)

From the unblinding date to the data cutoff date, IRs of original BNT162b2 participants withdrawn because of AEs were 0.1 per 100 PY (Table 24).

Table 24. Incidence Rates of Subjects Withdrawn Because of Adverse Events From Unblinding Date to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received BNT162b2 – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=20309, TE[b]=27.7)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Any event	4	0.1	(0.0, 0.4)
CARDIAC DISORDERS	1	0.0	(0.0, 0.2)
Myocardial infarction	1	0.0	(0.0, 0.2)
HEPATOBILIARY DISORDERS	1	0.0	(0.0, 0.2)
Acute hepatic failure	1	0.0	(0.0, 0.2)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	1	0.0	(0.0, 0.2)
Injury	1	0.0	(0.0, 0.2)
Road traffic accident	1	0.0	(0.0, 0.2)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	1	0.0	(0.0, 0.2)
Metastases to lung	1	0.0	(0.0, 0.2)

Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from the unblinding date to data cutoff date. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
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(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/adae_s131_wd_exp_bnt_p3_saf

2.7.4.2.4.3.3.4. Blinded Placebo-Controlled and Open-Label Follow-Up Periods to 6 Months After Dose 2 – Original BNT162b2 Participants (Phase 3, Study C4591001, Safety-Related Participant Withdrawals)

From Dose 1 to 6 months after Dose 2 during the blinded and open-label follow-up period, 1 participant in the older BNT162b2 group was reported as withdrawn because of AEs (dermatitis) (Table 25). However, this participant remains in the study as the withdrawal was

subsequently queried and corrected, as described in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Errata.

Table 25. Number (%) of Subjects Withdrawn Because of Adverse Events From Dose 1 to 6 Months After Dose 2, by System Organ Class and Preferred Term – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)	
	BNT162b2 (30 µg) (N[a]=12006)	
System Organ Class Preferred Term	n[b] (%)	(95% CI[c])
Any event	1 (0.0)	(0.0, 0.0)
SKIN AND SUBCUTANEOUS TISSUE DISORDERS	1 (0.0)	(0.0, 0.0)
Dermatitis	1 (0.0)	(0.0, 0.0)

Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
c. Exact 2-sided CI based on the Clopper and Pearson method.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 27MAR2021 (02:16)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/adae_s130_pd2_wd_p3_saf

2.7.4.2.4.3.3.5. Open-Label Follow-Up Period – Original Placebo Participants Who Then Received BNT162b2 (Phase 3, Study C4591001, Safety-Related Participant Withdrawals)

From Dose 3 data to the data cutoff date, IR of original placebo participants withdrawn because of AEs was 0.8 per 100 PY (Table 26).

Table 26. Incidence Rates of Subjects Withdrawn Because of Adverse Events From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding - Phase 2/3 Subjects ⩾16 Years of Age - Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])
Any event	19	0.8	(0.5, 1.2)
CARDIAC DISORDERS	2	0.1	(0.0, 0.3)
Angina pectoris	1	0.0	(0.0, 0.2)
Cardio-respiratory arrest	1	0.0	(0.0, 0.2)
GASTROINTESTINAL DISORDERS	2	0.1	(0.0, 0.3)
Diarrhoea	1	0.0	(0.0, 0.2)
Gastrointestinal haemorrhage	1	0.0	(0.0, 0.2)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS	7	0.3	(0.1, 0.6)
Chills	2	0.1	(0.0, 0.3)
Fatigue	2	0.1	(0.0, 0.3)
Injection site pain	3	0.1	(0.0, 0.4)
Pain	1	0.0	(0.0, 0.2)
IMMUNE SYSTEM DISORDERS	2	0.1	(0.0, 0.3)
Allergy to vaccine	1	0.0	(0.0, 0.2)
Anaphylactoid reaction	1	0.0	(0.0, 0.2)
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	3	0.1	(0.0, 0.4)
Maternal exposure during pregnancy	3	0.1	(0.0, 0.4)
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	1	0.0	(0.0, 0.2)
Myalgia	1	0.0	(0.0, 0.2)
NEOPLASMS BENIGN, MALIGNANT AND UNSPECIFIED (INCL CYSTS AND POLYPS)	1	0.0	(0.0, 0.2)
Hepatic cancer	1	0.0	(0.0, 0.2)
NERVOUS SYSTEM DISORDERS	2	0.1	(0.0, 0.3)
Headache	2	0.1	(0.0, 0.3)
PSYCHIATRIC DISORDERS	1	0.0	(0.0, 0.2)
Completed suicide	1	0.0	(0.0, 0.2)
SKIN AND SUBCUTANEOUS TISSUE DISORDERS	1	0.0	(0.0, 0.2)
Angioedema	1	0.0	(0.0, 0.2)
Urticaria	1	0.0	(0.0, 0.2)

Table 26. Incidence Rates of Subjects Withdrawn Because of Adverse Events From Dose 3 to Data Cutoff Date (13MAR2021), by System Organ Class and Preferred Term – Open-Label Follow-up Period – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding - Phase 2/3 Subjects ≥16 Years of Age - Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=19525, TE[b]=23.8)		
System Organ Class Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])

Note: Dose 3 = First dose of BNT162b2 (30 µg).
Note: MedDRA (v23.1) coding dictionary applied.
a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from Dose 3 to data cutoff date. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event. For "any event," n = number of subjects reporting at least 1 occurrence of any event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 31MAR2021 (18:33)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
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2.7.4.2.4.3.3.6. Narratives of Safety-Related Participant Withdrawals (Phase 3, Study C4591001)

Narratives for the Phase 2/3 participants with any AEs leading to withdrawal from the study through the data cutoff date (13 March 2021) are provided (see Section 2.7.4.2.4.4).

2.7.4.2.4.3.4. Other Significant Adverse Events (Phase 3, Study C4591001)

AEs of clinical interest were evaluated based on regulatory agency feedback and sponsor medical review. Terms requested for analysis by the FDA were summarize and detailed for any such cases reported. Other terms of clinical interest, such as the CDC's list of AESIs for COVID-19 vaccines, which both include terms potentially indicative of severe COVID-19 or serious autoimmune and neuroinflammatory disorders, were considered in the review of reported events. Numerical imbalances for AESIs were based on the evaluation of AEs in the blinded placebo-controlled period. These safety evaluations are summarized below.

2.7.4.2.4.3.4.1. FDA-Requested Adverse Events of Clinical Interest

Safety evaluations were conducted for AEs of clinical interest: anaphylaxis, Bell's Palsy, lymphadenopathy, and appendicitis based on feedback from the FDA. These are summarized by term below.

2.7.4.2.4.3.4.1.1. Hypersensitivity/Anaphylaxis

During the blinded placebo-controlled follow-up period of Study C4591001 in participants ≥16 years of age, there were 3 allergic reactions reported as SAEs (previously reported at 14 November cutoff date):

- Anaphylactic reaction following a bee sting in a BNT162b2 recipient (8 days after Dose 2)
- Drug hypersensitivity to an antibiotic in a BNT162b2 recipient (9 days after Dose 2)
- Anaphylactic shock due to an ant bite in a placebo recipient (18 days after Dose 2).

All 3 cases of allergic reaction above were considered by the investigator as not related to study treatment.

During the open-label observational follow-up period of this study in participants ≥16 years of age, 1 participant who received BNT162b2 at Dose 3 (after originally being randomized to placebo) experienced an SAE of anaphylactoid reaction, which was assessed as related to study intervention. This participant (Subject C4591001 1129 11291260) was a female adolescent with a medical history significant for multiple allergies since infancy. Two days after Dose 3, the participant experienced hives on the left arm (deltoid) and self-administered an epinephrine pen 24 minutes later (given the history of anaphylaxis to multiple allergens). Six minutes after injection, the participant experienced shortness of breath. Hives and shortness of breath resolved within 10 and 30 minutes, respectively, of epinephrine treatment. The participant did not seek additional medical attention. As a result of the anaphylactoid reaction, the participant was permanently withdrawn from the study.

Narratives for the events of anaphylactic reaction and anaphylactic shock are provided in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 14 Anaphylaxis (see Subject C4591001 1261 12611006 for the participant with the SAE of drug hypersensitivity).

Hypersensitivity is also assessed as a CDC-defined AESI in Section 2.7.4.2.4.3.4.2.

2.7.4.2.4.3.4.1.2. Bell's Palsy/Facial Paralysis

During the blinded placebo-controlled follow-up period in participants ≥16 years of age, there were 6 adults who developed one-sided facial paralysis (Bell's palsy, including facial paresis): 4 were randomized to BNT162b2 (all male) and 2 were randomized to placebo (1 male; 1 female). Regarding the 4 vaccinated participants (previously reported at 14 November 2020 cutoff date), their ages ranged from 40 to 70 (71 to 73 years of age in placebo participants). Events began from 3 to 48 days after their last dose, were mild to moderate in severity (moderate in the placebo participants), and duration ranged from 3 to 68 days (15 days in 1 placebo participant and ongoing in the other). Of the 4 cases in participants randomized to BNT162b2, 2 were considered by the investigator to be related to study intervention. The remaining 4 cases (2 in participants originally randomized to BNT162b2 and 2 in participants originally randomized to placebo) were assessed as not related to study intervention.

During the open-label observational follow-up period in participants ≥16 years of age, 3 participants who received BNT162b2 at Dose 3 or Dose 4 (were originally randomized to placebo) experienced facial paralysis (Subjects 12471244, 10071441, and 12181015). All were female and their ages ranged from 19 to 34 years. Events began 3 to 8 days after Dose 3 and were mild to severe in severity. One case had a duration of 12 days while the other 2 were ongoing as of the data cutoff date. All these events of facial paralysis were considered by the investigator as related to study intervention.

During the open-label follow-up period for participants originally randomized to BNT162b2, a 51 year old male developed Bell's palsy 154 days after receiving Dose 2.

Narratives for these events are provided in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 14 Bell's Palsy.

Bell's palsy is also assessed as an AESI in Section 2.7.4.2.4.3.4.3.

2.7.4.2.4.3.4.1.3. Lymphadenopathy

During the blinded placebo-controlled follow-up period in participants ≥16 years of age, lymphadenopathy was reported in 87 (1.0 per 100 PY) participants in the BNT162b2 group compared to 8 (0.1 per 100 PY) participants in the placebo group. The majority of events were mild to moderate; only 3 severe events of lymphadenopathy were reported (all in the BNT162b2 group). The median onset of lymphadenopathy after Dose 1 and before Dose 2 was 5.5 days in the BNT162b2 group and 5.0 days in the placebo group; median onset after Dose 2 was shorter in the BNT162b2 group versus the placebo group (2.0 days vs 7.0 days). The median duration of lymphadenopathy was 5.5 days in the BNT162b2 group and 4.0 days in the placebo group. As previously reported in the final analysis interim C4591001 CSR dated 03 December 2020, 1 was a related SAE.

Narratives for these events (including those reported during the open-label follow-up period) are located in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 14 Lymphadenopathy (see Subject C4591001 1178 11781107 for the narrative of the participant with the related SAE).

2.7.4.2.4.3.4.1.4. Appendicitis

Cases of appendicitis were examined in the placebo-controlled period of the study (including PTs of appendicitis perforated and complicated appendicitis). There were 14 cases of appendicitis and 1 case of appendicitis perforated in the BNT162b2 group, and 9 cases of appendicitis, 2 cases of complicated appendicitis, and 1 appendicitis perforated in the placebo group. Appendicitis cases were all reported as SAEs, and none of the cases were considered related to study intervention.

Narratives for these events are in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 14 Appendicitis.

2.7.4.2.4.3.4.2. CDC Adverse Events of Special Interest – Select Standard MedDRA Queries for COVID-19

CDC-defined AESIs associated with COVID-19 vaccination were evaluated in the blinded placebo-controlled period of the study, where reported in the Phase 2/3 safety population.

After a review of AEs using the CDC's AESI list, the following terms were not found reported in the study: acute disseminated encephalomyelitis, transverse myelitis, multiple sclerosis, chronic inflammatory demyelinating polyneuropathy, encephalitis, myelitis, encephalomyelitis, meningoencephalitis, ataxia, narcolepsy, cataplexy, immune thrombocytopenia, thrombotic thrombocytopenic purpura, disseminated intravascular coagulation, Kawasaki disease, multisystem inflammatory syndrome in children (MIS-C) and in adults (MIS-A), and acute respiratory distress syndrome.

There were 2 cases of bacterial meningitis reported but they were not analyzed further as there is an immediate and self-evident cause to their illness.

Terms that were present in the safety population are summarized below. For a given SMQ, if there was no imbalance between the BNT162b2 group versus placebo, the PTs within the SMQ were not further examined. In the case of an imbalance, the PTs responsible for the imbalance are further described and the nature of the events characterized with regard to plausible associated with vaccination.

Overall, the number and percentage of participants with any unsolicited AEs within the selected SMQs was similar in the BNT162b2 (224 [1.02%]) and placebo (217 [0.99%]) groups from Dose 1 to the unblinding date (Table 27).

From analysis of terms corresponding to AESIs from the CDC's list, individual SMQs are discussed below.

Table 27. Selected Standard MedDRA Queries From Dose 1 to Unblinding Date – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

		Vaccine Group (as Administered)	
		BNT162b2 (30 µg) (N[a]=21926)	Placebo (N[a]=21921)
SMQ	Overall SMQ System Organ Class Preferred Term	n[b] (%)	n[b] (%)
	Subjects with any unsolicited adverse events within SMQ	224 (1.02)	217 (0.99)
Angioedema (SMQ)	Any unsolicited adverse events within Angioedema (SMQ)	30 (0.14)	29 (0.13)
	Eye disorders	2 (0.01)	2 (0.01)
	Conjunctival oedema	0	1 (0.00)
	Eye swelling	0	1 (0.00)
	Eyelid oedema	1 (0.00)	0
	Swelling of eyelid	1 (0.00)	0
	Gastrointestinal disorders	6 (0.03)	3 (0.01)
	Gingival swelling	0	1 (0.00)
	Lip oedema	1 (0.00)	0
	Lip swelling	2 (0.01)	1 (0.00)
	Swollen tongue	2 (0.01)	1 (0.00)
	Tongue oedema	1 (0.00)	0
	General disorders and administration site conditions	4 (0.02)	7 (0.03)
	Face oedema	2 (0.01)	0
	Swelling face	2 (0.01)	7 (0.03)
	Respiratory, thoracic and mediastinal disorders	1 (0.00)	3 (0.01)
	Pharyngeal swelling	1 (0.00)	3 (0.01)
	Skin and subcutaneous tissue disorders	21 (0.10)	18 (0.08)
	Angioedema	3 (0.01)	2 (0.01)
	Urticaria	18 (0.08)	15 (0.07)
	Urticaria papular	0	1 (0.00)
Arthritis (SMQ)	Any unsolicited adverse events within Arthritis (SMQ)	35 (0.16)	48 (0.22)
	Infections and infestations	1 (0.00)	0
	Arthritis bacterial	1 (0.00)	0
	Metabolism and nutrition disorders	5 (0.02)	3 (0.01)
	Gout	5 (0.02)	3 (0.01)
	Musculoskeletal and connective tissue disorders	29 (0.13)	45 (0.21)
	Arthritis	6 (0.03)	6 (0.03)
	Arthritis reactive	1 (0.00)	0

Table 27. Selected Standard MedDRA Queries From Dose 1 to Unblinding Date – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

		Vaccine Group (as Administered)	
		BNT162b2 (30 µg) (N[a]=21926)	Placebo (N[a]=21921)
SMQ	Overall SMQ System Organ Class Preferred Term	n[b] (%)	n[b] (%)
	Osteoarthritis	15 (0.07)	23 (0.10)
	Patellofemoral pain syndrome	0	1 (0.00)
	Periarthritis	4 (0.02)	1 (0.00)
	Polyarthritis	0	1 (0.00)
	Rheumatoid arthritis	0	2 (0.01)
	Spinal osteoarthritis	2 (0.01)	4 (0.02)
	Spondylitis	1 (0.00)	1 (0.00)
	Synovitis	0	2 (0.01)
	Temporomandibular joint syndrome	1 (0.00)	4 (0.02)
Convulsions (SMQ)	Any unsolicited adverse events within Convulsions (SMQ)	2 (0.01)	2 (0.01)
	Nervous system disorders	2 (0.01)	2 (0.01)
	Generalised tonic-clonic seizure	0	1 (0.00)
	Seizure	2 (0.01)	1 (0.00)
Demyelination (SMQ)	Any unsolicited adverse events within Demyelination (SMQ)	2 (0.01)	1 (0.00)
	Nervous system disorders	2 (0.01)	1 (0.00)
	Guillain-Barre syndrome	0	1 (0.00)
	Optic neuritis	2 (0.01)	0
Hypersensitivity (SMQ)	Any unsolicited adverse events within Hypersensitivity (SMQ)	182 (0.83)	161 (0.73)
	Ear and labyrinth disorders	0	1 (0.00)
	Allergic otitis media	0	1 (0.00)
	Eye disorders	5 (0.02)	5 (0.02)
	Conjunctival oedema	0	1 (0.00)
	Conjunctivitis allergic	3 (0.01)	2 (0.01)
	Eye allergy	0	1 (0.00)
	Eye swelling	0	1 (0.00)
	Eyelid oedema	1 (0.00)	0
	Swelling of eyelid	1 (0.00)	0
	Gastrointestinal disorders	6 (0.03)	3 (0.01)
	Gingival swelling	0	1 (0.00)
	Lip oedema	1 (0.00)	0
	Lip swelling	2 (0.01)	1 (0.00)

Table 27. Selected Standard MedDRA Queries From Dose 1 to Unblinding Date – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

		Vaccine Group (as Administered)	
		BNT162b2 (30 µg) (N[a]=21926)	Placebo (N[a]=21921)
SMQ	Overall SMQ System Organ Class Preferred Term	n[b] (%)	n[b] (%)
	Swollen tongue	2 (0.01)	1 (0.00)
	Tongue oedema	1 (0.00)	0
	General disorders and administration site conditions	8 (0.04)	9 (0.04)
	Application site rash	0	1 (0.00)
	Face oedema	2 (0.01)	0
	Injection site dermatitis	1 (0.00)	0
	Injection site rash	2 (0.01)	1 (0.00)
	Injection site urticaria	1 (0.00)	0
	Swelling face	2 (0.01)	7 (0.03)
	Immune system disorders	10 (0.05)	13 (0.06)
	Anaphylactic reaction	1 (0.00)	0
	Anaphylactic shock	0	1 (0.00)
	Drug hypersensitivity	7 (0.03)	7 (0.03)
	Hypersensitivity	2 (0.01)	5 (0.02)
	Infections and infestations	5 (0.02)	1 (0.00)
	Dermatitis infected	0	1 (0.00)
	Pustule	3 (0.01)	0
	Rash pustular	2 (0.01)	0
	Injury, poisoning and procedural complications	3 (0.01)	0
	Administration related reaction	2 (0.01)	0
	Stoma site rash	1 (0.00)	0
	Investigations	1 (0.00)	0
	Blood immunoglobulin E increased	1 (0.00)	0
	Respiratory, thoracic and mediastinal disorders	19 (0.09)	21 (0.10)
	Allergic respiratory disease	0	1 (0.00)
	Allergic sinusitis	2 (0.01)	0
	Bronchospasm	3 (0.01)	3 (0.01)
	Pharyngeal swelling	1 (0.00)	3 (0.01)
	Rhinitis allergic	13 (0.06)	14 (0.06)
	Skin and subcutaneous tissue disorders	134 (0.61)	119 (0.54)
	Angioedema	3 (0.01)	2 (0.01)
	Dermatitis	5 (0.02)	4 (0.02)
	Dermatitis acneiform	1 (0.00)	0

Table 27. Selected Standard MedDRA Queries From Dose 1 to Unblinding Date – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

		Vaccine Group (as Administered)	
		BNT162b2 (30 µg) (N^a=21926)	Placebo (N^a=21921)
SMQ	Overall SMQ System Organ Class Preferred Term	n^b (%)	n^b (%)
	Dermatitis allergic	3 (0.01)	5 (0.02)
	Dermatitis atopic	0	1 (0.00)
	Dermatitis bullous	0	1 (0.00)
	Dermatitis contact	14 (0.06)	21 (0.10)
	Dermatitis exfoliative	1 (0.00)	0
	Drug eruption	0	2 (0.01)
	Eczema	7 (0.03)	3 (0.01)
	Erythema nodosum	1 (0.00)	0
	Fixed eruption	1 (0.00)	0
	Hand dermatitis	2 (0.01)	2 (0.01)
	Perioral dermatitis	0	1 (0.00)
	Pruritus allergic	0	2 (0.01)
	Rash	62 (0.28)	52 (0.24)
	Rash erythematous	2 (0.01)	3 (0.01)
	Rash maculo-papular	7 (0.03)	4 (0.02)
	Rash papular	1 (0.00)	0
	Rash pruritic	8 (0.04)	6 (0.03)
	Urticaria	18 (0.08)	15 (0.07)
	Urticaria contact	0	1 (0.00)
	Urticaria papular	0	1 (0.00)
Peripheral neuropathy (SMQ)	Any unsolicited adverse events within Peripheral neuropathy (SMQ)	3 (0.01)	6 (0.03)
	Nervous system disorders	3 (0.01)	6 (0.03)
	Guillain-Barre syndrome	0	1 (0.00)
	Neuralgia	1 (0.00)	1 (0.00)
	Neuritis	0	1 (0.00)
	Neuropathy peripheral	1 (0.00)	3 (0.01)
	Peripheral sensory neuropathy	1 (0.00)	0

Table 27. Selected Standard MedDRA Queries From Dose 1 to Unblinding Date – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

		Vaccine Group (as Administered)	
		BNT162b2 (30 µg) (N[a]=21926)	Placebo (N[a]=21921)
SMQ	Overall SMQ System Organ Class Preferred Term	n[b] (%)	n[b] (%)

a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects reporting at least 1 occurrence of the specified event category. For "any event," n = the number of subjects reporting at least 1 occurrence of any event.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 14APR2021 (10:22)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA_RR/adae_smq_nzud_16_saf

2.7.4.2.4.3.4.2.1. Angioedema

Overall, the number and percentage of participants with any unsolicited AE within the SMQ of angioedema were low and similar in the BNT162b2 group (30 [0.14%]) and placebo group (29 [0.13%]) (Table 27). AEs were most frequently reported in the SOC of skin and subcutaneous tissue disorders (21 [0.10%] BNT162b2 vs 18 [0.08%] placebo) with urticaria the most frequently reported PT.

In the SOC of gastrointestinal disorders within the SMQ of angioedema, lip edema, or lip swelling was observed in 3 participants in the BNT162b2 group versus 1 participant in the placebo group. Swollen tongue or tongue edema was observed in 3 participants in the BNT162b2 group versus 1 participant in the placebo group. Lip swelling in 1 participant in the BNT162b2 group and swollen tongue in 1 participant in the placebo group were considered as related to the study intervention:

- In the BNT162b2 group, 1 participant experienced mild upper and lower lip swelling 14 and 19 days after Dose 1 which lasted 2 days before resolving and was considered as related to the study intervention. This same participant also experienced upper lip swelling and drug hypersensitivity 2 days after Dose 2, which were recovering/resolving as of the data cutoff date and were considered related to study intervention by the investigator.

- In the placebo group, 1 participant experienced moderate swollen tongue as well as moderate pharyngeal swelling 21 days after Dose 2; both resolved after 9 days; this participant also experienced moderate drug hypersensitivity and mild rash (on chin, elbows, knees, neck and back) 2 days after Dose 2 which lasted for 28 days and 30

days, respectively, and resolved. Swollen tongue as well as these other AEs were all considered related to the study intervention by the investigator.

Narratives for related angioedema SMQ events are provided (see Section 2.7.4.2.4.4). Refer to the following participants:

Subject C4591001 1044 10441139
Subject C4591001 1111 11111099
Subject C4591001 1246 12461025
Subject C4591001 1005 10051214
Subject C4591001 1111 11111092
Subject C4591001 1027 10271105
Subject C4591001 1068 10681066
Subject C4591001 1090 10901507
Subject C4591001 1117 11171121
Subject C4591001 1091 10911274
Subject C4591001 1092 10921123
Subject C4591001 1140 11401035

Angioedema events in the other SMQs were all reported at low percentages in the BNT162b2 (≤0.02) and placebo groups (≤0.03%) (Table 27).

2.7.4.2.4.3.4.2.2. Arthritis

Overall, the number and percentage of participants with any unsolicited AE within the SMQ of arthritis was lower in the BNT162b2 group (35 [0.16%]) than in placebo group (48 [0.22%]) (Table 27). AEs were most frequently reported within the SOC musculoskeletal and connective tissue disorders (0.13% BNT162b2 vs 0.21% placebo) with osteoarthritis the most frequently reported PT.

2.7.4.2.4.3.4.2.3. Convulsions

Overall, the number and percentage of participants with any unsolicited AE within the SMQ of convulsions was low and equal in the BNT162b2 group and placebo group (2 participants [0.01%] in each group) (Table 27). All events were in the SOC of nervous system disorders: seizure (2 participants in the BNT162b2 group) and generalized tonic-clonic seizure (1 participant in the placebo group).

2.7.4.2.4.3.4.2.4. Demyelination

Overall, the number and percentage of participants with any unsolicited AE within the SMQ of demyelination was low: 2 (0.01%) participants in the BNT162b2 group and 1 (0.00%) participant in the placebo group. All events were in the SOC of nervous system disorders.

Optic neuritis was observed in 2 participants in the BNT162b2 group and none in the placebo group; 1 case occurring in a male participant and 1 case occurring in a female participant. Both participants were in the younger age group. These events occurred 79 and 81 days after their last vaccination of BNT162b2. Both were considered not related to BNT162b2. Both events were reported as SAEs. Narratives for optic neuritis cases (Subject C4591001 1008 10081152 and Subject C4591001 1231 12313028) are provided (see Section 2.7.4.2.4.4).

Guillain-Barre syndrome was reported as an SAE in 1 participant (Subject C4591001 1135 11351368) in the placebo group (see Section 2.7.4.2.4.4 regarding narrative).

These events of optic neuritis and Guillain-Barre syndrome are also included in safety analyses by medical category (SMQ and SOC) in Section 2.7.4.2.4.3.4.3.

2.7.4.2.4.3.4.2.5. Hypersensitivity

Overall, the number and percentage of participants with any unsolicited AE within the SMQ of hypersensitivity was higher in the BNT162b2 group (182 [0.83%]) than in the placebo group (161 [0.73%]) (Table 27).

The difference was mainly due to:

Skin and subcutaneous tissue disorders (134 [0.61%] BNT162b2 vs 119 [0.54%] placebo):

- rash (62 [0.28%] BNT162b2 vs 52 [0.24%] placebo)
- rash maculo-papular (7 [0.03%] BNT162b2 vs 4 [0.02%] placebo)
- rash papular (1 [0.00%] BNT162b2 vs 0 placebo)

Rash was assessed as related to study intervention at a higher IR in the BNT162b2 group (0.3) than in the placebo group (0.1).

In the SMQ of hypersensitivity in the SOC of infections and infestations: pustule and rash pustular were reported only in the BNT162b2 group by 3 (0.01%) and 2 (0.01%) participants, respectively. In the SOC of injury, poisoning and procedural complications, administration related reaction (2 participants) and stoma site rash (1 participant) were reported only in the BNT162b2 group.

Additionally, in the SMQ of hypersensitivity in the SOC of gastrointestinal disorders, lip edema, lip swelling, swollen tongue, and tongue edema were observed more frequently in the BNT162b2 group versus the placebo group. Refer to the Angioedema section (Section 2.7.4.2.4.3.4.2.1) for details.

Anaphylactic reaction was observed in 1 participant in the BNT162b2 group (refer to Section 2.7.4.2.4.3.4.1.1 for more detail).

In the SMQ of hypersensitivity in the SOC of investigations, increased blood IgE was observed in 1 participant in the BNT162b2 group.

2.7.4.2.4.3.4.2.6. Peripheral Neuropathy

Overall, the number and percentage of participants with any unsolicited AE within the SMQ of peripheral neuropathy was lower in the BNT162b2 group (3 [0.01%]) than in the placebo group (6 [0.03%]). All PTs were in the SOC of nervous system disorders (Table 27).

2.7.4.2.4.3.4.3. Other Non-CDC Adverse Events of Special Interest – Select Standard MedDRA Queries for COVID-19

Additional terms beyond those designated by the CDC as AESIs were evaluated to assess potential imbalances between the BNT162b2 and placebo groups, and further characterized such an imbalance. PTs associated with these AE categories and by SOC/PT were identified during the blinded placebo-controlled follow-up period (Table 28). These events are summarized below.

Table 28. Incidence Rates of at Least 1 Adverse Event Category of Special Interest From Dose 1 to Unblinding Date, by Adverse Event Category and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)							
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)			Difference	
Adverse Event Category Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])	IRD (/100 PY)[f]	(95% CI[g])
ACUTE MYOCARDIAL INFARCTION								
Acute coronary syndrome	1	0.0	(0.0, 0.1)	4	0.0	(0.0, 0.1)	-0.04	(-0.09, 0.02)
Acute myocardial infarction	6	0.1	(0.0, 0.2)	4	0.0	(0.0, 0.1)	0.02	(-0.05, 0.10)
Coronary artery occlusion	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
Myocardial infarction	4	0.0	(0.0, 0.1)	8	0.1	(0.0, 0.2)	-0.05	(-0.13, 0.03)
ANAPHYLAXIS								
Anaphylactic reaction	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)	0.01	(-0.01, 0.04)
Anaphylactic shock	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
APPENDICITIS								
Appendicitis	14	0.2	(0.1, 0.3)	9	0.1	(0.1, 0.2)	0.06	(-0.06, 0.17)
Appendicitis perforated	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)	-0.00	(-0.03, 0.03)
Complicated appendicitis	0	0.0	(0.0, 0.0)	2	0.0	(0.0, 0.1)	-0.02	(-0.06, 0.01)
ARTHRITIS/ARTHRALGIA								
Arthralgia	281	3.4	(3.0, 3.8)	122	1.5	(1.2, 1.8)	1.88	(1.41, 2.36)
Arthritis	6	0.1	(0.0, 0.2)	6	0.1	(0.0, 0.2)	-0.00	(-0.08, 0.08)
Arthritis reactive	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)	0.01	(-0.01, 0.04)
BELL'S PALSY								
Facial paralysis	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)	0.04	(-0.02, 0.09)
Facial paresis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
COVID-19 DISEASE								
COVID-19	0	0.0	(0.0, 0.0)	13	0.2	(0.1, 0.3)	-0.16	(-0.24, -0.07)
COVID-19 pneumonia	1	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)	-0.00	(-0.03, 0.03)
DEATH								
Death	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
ENCEPHALOPATHY								
Toxic encephalopathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)	0.01	(-0.01, 0.04)
Uraemic encephalopathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)	0.01	(-0.01, 0.04)
GUILLAIN-BARRE SYNDROME								
Guillain-Barre syndrome	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)

Table 28. Incidence Rates of at Least 1 Adverse Event Category of Special Interest From Dose 1 to Unblinding Date, by Adverse Event Category and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)							
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)			Difference	
Adverse Event Category Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])	IRD (/100 PY)[f]	(95% CI[g])
MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN (MIS-C) AND IN ADULTS (MIS-A)								
Multiple organ dysfunction syndrome	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
MYOCARDITIS								
Myocarditis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
NON-ANAPHYLACTIC ALLERGIC REACTIONS								
Angioedema	3	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)	0.01	(-0.04, 0.06)
Hypersensitivity	2	0.0	(0.0, 0.1)	5	0.1	(0.0, 0.1)	-0.04	(-0.10, 0.03)
Lip swelling	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)	0.01	(-0.03, 0.05)
Pruritus	24	0.3	(0.2, 0.4)	20	0.2	(0.1, 0.4)	0.04	(-0.11, 0.20)
Rash	62	0.7	(0.6, 1.0)	52	0.6	(0.5, 0.8)	0.11	(-0.14, 0.36)
Rash pruritic	8	0.1	(0.0, 0.2)	6	0.1	(0.0, 0.2)	0.02	(-0.07, 0.11)
Swelling face	2	0.0	(0.0, 0.1)	7	0.1	(0.0, 0.2)	-0.06	(-0.13, 0.01)
Swollen tongue	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)	0.01	(-0.03, 0.05)
Urticaria	18	0.2	(0.1, 0.3)	15	0.2	(0.1, 0.3)	0.03	(-0.10, 0.17)
OPTIC NEURITIS								
Optic neuritis	2	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)	0.02	(-0.01, 0.06)
PERICARDITIS								
Pericarditis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)	0.01	(-0.01, 0.04)
PULMONARY EMBOLISM								
Pulmonary embolism	8	0.1	(0.0, 0.2)	8	0.1	(0.0, 0.2)	-0.00	(-0.10, 0.09)
SEIZURE/CONVULSION								
Generalised tonic-clonic seizure	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
Seizure	2	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)	0.01	(-0.03, 0.05)
STROKE, HEMORRHAGIC								
Haemorrhagic stroke	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
Intraventricular haemorrhage	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
Subarachnoid haemorrhage	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)	0.04	(-0.02, 0.09)
STROKE, ISCHEMIC								

Table 28. Incidence Rates of at Least 1 Adverse Event Category of Special Interest From Dose 1 to Unblinding Date, by Adverse Event Category and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)							
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)			Difference	
Adverse Event Category Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])	IRD (/100 PY)[f]	(95% CI[g])
Cerebellar infarction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
Cerebral infarction	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
Cerebrovascular accident	4	0.0	(0.0, 0.1)	1	0.0	(0.0, 0.1)	0.04	(-0.02, 0.09)
Ischaemic stroke	2	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)	-0.00	(-0.05, 0.05)
Transient ischaemic attack	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)	-0.01	(-0.07, 0.04)
THROMBOCYTOPENIA								
Platelet count decreased	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)	0.01	(-0.01, 0.04)
Thrombocytopenia	1	0.0	(0.0, 0.1)	2	0.0	(0.0, 0.1)	-0.01	(-0.05, 0.03)
VACCINATION DURING PREGNANCY AND ADVERSE PREGNANCY OUTCOMES								
Abortion incomplete	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
Abortion spontaneous	2	0.0	(0.0, 0.1)	3	0.0	(0.0, 0.1)	-0.01	(-0.07, 0.04)
Abortion spontaneous incomplete	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
Exposure during pregnancy	30	0.4	(0.2, 0.5)	42	0.5	(0.4, 0.7)	-0.15	(-0.35, 0.05)
Retained products of conception	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
VENOUS THROMBOEMBOLISM								
Coagulopathy	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)	0.01	(-0.01, 0.04)
Deep vein thrombosis	7	0.1	(0.0, 0.2)	7	0.1	(0.0, 0.2)	-0.00	(-0.09, 0.09)
Ophthalmic vein thrombosis	1	0.0	(0.0, 0.1)	0	0.0	(0.0, 0.0)	0.01	(-0.01, 0.04)
Penile vein thrombosis	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)
Venous thrombosis limb	0	0.0	(0.0, 0.0)	1	0.0	(0.0, 0.1)	-0.01	(-0.04, 0.01)

Table 28. Incidence Rates of at Least 1 Adverse Event Category of Special Interest From Dose 1 to Unblinding Date, by Adverse Event Category and Preferred Term – Blinded Placebo-Controlled Follow-up Period – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)							
	BNT162b2 (30 µg) (N[a]=21926, TE[b]=83.4)			Placebo (N[a]=21921, TE[b]=82.2)			Difference	
Adverse Event Category Preferred Term	n[c]	IR (/100 PY)[d]	(95% CI[e])	n[c]	IR (/100 PY)[d]	(95% CI[e])	IRD (/100 PY)[f]	(95% CI[g])

Note: MedDRA (v23.1) coding dictionary applied.
Note: The 95% confidence interval quantifies the precision of the incidence rate difference estimate. Confidence intervals are not adjusted for multiplicity. They should only be used to identify potentially important adverse events.
a. N = number of subjects in the specified group.
b. TE = total exposure time in 100 person-years across all subjects in the specified group. Exposure time for a subject is the time from Dose 1 to the end of blinded follow-up. This value is the denominator for the incidence rate calculation.
c. n = Number of subjects reporting at least 1 occurrence of the specified event.
d. Incidence rate (IR) is calculated as number of subjects reporting the event/total exposure time in 100 person-years (PY) across all subjects in the specified group.
e. 2-sided CI based on Poisson distribution.
f. Difference in incidence rate (BNT162b2 [30 µg] - placebo).
g. 2-sided Wald CI for the incidence rate difference.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (20:15) Source Data: adae Table Generation: 16APR2021 (13:49)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA1/adae s131 aesi cat p3 saf

Acute Myocardial Infarction

Acute myocardial infarctions were searched with the PTs of acute myocardial infarction, acute coronary syndrome, coronary artery occlusion, and myocardial infarction. A total of 6 acute myocardial infarctions, 4 myocardial infarctions and 1 acute coronary syndrome (total of 11 events) were identified in the BNT162b2 group, and 4 acute myocardial infarctions, 8 myocardial infarctions, 4 acute coronary syndrome, and 1 coronary artery occlusion in the placebo group (total of 17 events), respectively. Slightly more than half of these events had onset distant to (ie, >30 days following) receipt of vaccine or placebo . None of these events were assessed by the investigator as related to study intervention . Outcome was resolved in all participants in the BNT162b2 group; outcome in the placebo group was fatal in 2 and resolved in the other participants.

Anaphylaxis

Overall, the category of anaphylaxis included 1 participant with anaphylactic reaction in the BNT162b2 group and 1 participant with anaphylactic shock in the placebo group. These events are further described in Section 2.7.4.2.4.3.4.1.1.

Appendicitis

Overall, the category of appendicitis (including appendicitis perforated and complicated appendicitis) included 15 participants in the BNT162b2 group and 12 participants in the placebo group. These events are further described in Section 2.7.4.2.4.3.4.1.4.

Arthritis/Arthralgia

Arthralgia not associated with reactogenicity was evaluated starting from Day 8 after either dose of BNT162b2. The IR of arthralgia assessed from Day 8 (ie, beyond the 7-day reactogenicity period in which arthralgia is recorded in e-dairies for the reactogenicity subset) after each dose was lower in the BNT162b2 group (0.6) than in the placebo group (0.8).

Autoimmune Disease

There are no search term SMQ that would reliably capture all potential autoimmune diseases. Hence a comprehensive manual medical review of all reported AEs in the blinded placebo-controlled period was undertaken to identify PTs potentially indicative of autoimmune disease. These PTs are summarized by vaccine group.

In the BNT162b2 group there were 10 autoimmune disease cases identified. There were 1 case each in the BNT162b2 group: autoimmune thyroiditis, ulcerative colitis, Crohn's disease, reactive arthritis, fibromyalgia, systemic lupus erythematosus, alopecia areata, psoriasis, and 2 cases of psoriatic arthropathy.

In the placebo group there were 15 autoimmune cases identified. There were 1 case each in the placebo group: autoimmune thyroiditis, celiac disease, alopecia areata, psoriasis, Raynaud's phenomenon, and 2 cases of psoriatic arthropathy, 2 cases of psoriasis, 2 cases of ulcerative colitis, 2 cases of rheumatoid arthritis, 3 cases of fibromyalgia.

Bell's Palsy/Facial Paralysis

Overall, the category of Bell's Palsy (facial paralysis and facial paresis) included 4 participants in the BNT162b2 group and 2 participants in the placebo group. These events are further described in Section 2.7.4.2.4.3.4.1.2.

Multiple Cases of COVID-19

There were 5 participants, all randomized to placebo, who developed 2 separate and clinically symptomatic instances of COVID-19 confirmed by NAAT at the central laboratory. All of the second confirmed COVID-19 cases occurred during the period before their first dose of BNT162b2 except for 1 participant (Subject 12211002) who developed his second COVID-19 diagnosis 4 days after his second dose of BNT162b2. All participants were N binding antibody negative prior to their first instance of COVID-19. The time interval between the first and second COVID-19 episode varied from 1 to 5 months. Narratives for these cases are provided in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 14 COVID-19 Case (Severe and/or Multiple).

Death

One death in the placebo group was captured as a potential AESI as there was no reported primary cause of death at the time of the data cutoff. A narrative is provided (see Section 2.7.4.2.4.4 [Subject C4591001 1152 11521085]). This death is also captured in Table 16 in the analysis of deaths reported from Dose 1 to the unblinding date (Section 2.7.4.2.4.3.1).

Encephalopathy

Overall, the category of encephalopathy included 2 participants in the BNT162b2 group and none in the placebo group. One participant reported an SAE of toxic encephalopathy 64 days after Dose 2 in the setting of diverticulosis and a urinary tract infection, which resolved 8 days later, and the other participant reported an SAE of uraemic encephalopathy 36 days after Dose 2, which resolved 3 days later. Both events were assessed by the investigator as not related to study intervention.

Guillain-Barre Syndrome

One participant in the placebo group reported an SAE of Guillain-Barre syndrome. This case was also captured as a CDC AESI in Section 2.7.4.2.4.3.4.2.

Multisystem Inflammatory Syndrome

One participant in the placebo group reported an SAE of multiple organ dysfunction syndrome.

Myocarditis

One case in the placebo group was reported.

Non-Anaphylactic Allergic Reactions

Overall, there was no imbalance in each of the PTs in non-anaphylactic allergic reactions (123 in the BNT162b2 group and 109 in the placebo group) (Table 28). Selected events are also captured as CDC AESIs under SMQ of Angioedema and Hypersensitivity in Section 2.7.4.2.4.3.4.2.

Optic Neuritis

Two participants in the BNT162b2 group reported an SAE each of optic neuritis. This case was also captured as a CDC AESI in Section 2.7.4.2.4.3.4.2.

Pericarditis

There was 1 participant in the older BNT162b2 age group with pericarditis. The event had an onset of 28 days after Dose 2, was ongoing at the data cutoff date, and was assessed by the

investigator as not related to the study intervention. A narrative for this event is provided (see Section 2.7.4.2.4.4 [Subject C4591001 1231 12315632]).

Pulmonary Embolism

PTs associated with pulmonary embolism were searched in the blinded placebo-controlled period: Pulmonary embolism, Pulmonary thrombosis, Pulmonary venous thrombosis, and Pulmonary artery thrombosis. There were 8 cases of pulmonary embolism in the BNT162b2 group and 8 cases in the placebo group.

Stroke, Hemorrhagic

PTs associated with hemorrhagic stroke were searched in the blinded placebo-controlled follow-up period: Haemorrhagic stroke, Cerebral haemorrhage, Haemorrhagic cerebral infarction, Basal ganglia haemorrhage, Brain stem haemorrhage, Cerebellar haemorrhage, subarachnoid hemorrrhage, and Intraventricular hemorrhage.

Overall, there were 4 hemorraghic strokes in the BNT162b2 and 3 in the placebo group. In the BNt162b2 group there were 4 subarachnoid haemorrhages and in the placebo group there was 1 subarachnoid haemorrhage, 1 intraventricular haemorrhage, and 1 haemorrhagic stroke (Table 28). Narratives for these events are provided (see Section 2.7.4.2.4.4). Refer to the following participants:

Subject C4591001 1111 11111130
Subject C4591001 1226 12261571
Subject C4591001 1042 10421166
Subject C4591001 1054 10541173
Subject C4591001 1156 11561001
Subject C4591001 1090 10901175
Subject C4591001 1231 12313972

Stroke, Ischemic

PTs associated with ischemic stroke were searched in the blinded placebo-controlled follow-up period: Ischaemic stroke, Ischaemic cerebral infarction, Cerebral infarction, Lacunar infarction, Cerebral ischaemia, Cerebellar stroke, Brain stem stroke, Vertebrobasilar stroke, Embolic stroke, Thrombotic stroke, Thrombotic and cerebral infarction, Cerebral vascular accident, transient ischemic attack, and Cerebellelar infarction.

There are a total of 8 of these PTs in the BNt162b2 group and 8 in the placebo group. There were 2 ischemic strokes, 4 cerebral vascular accidents, 2 transient ischemic attacks identified in the BNT162b2 group. In the placebo group there are 2 ischemic strokes, 3 transient ischemic attacks, 1 cerebral vascular accident, 1 cerebral infarction and 1 cerebellar infarction.

Thrombocytopenia

PTs associated with thrombocytopenia were searched in the blinded placebo-controlled period and included Thrombocytopenia and platelet count decreased. The BNT162b2 group

had 1 case of thrombocytopenia and 1 case of platelet count decreased, and the placebo group had 2 cases of thrombocytopenia.

Vaccination During Pregancy and Pregnancy Outcomes

There was no imbalance between the BNT162b2 group versus the placebo group with regard to pregnancy and maternal exposure. Pregnancy and maternal exposure reported during the study is discussed in Section 2.7.4.2.4.3.6.2. Narratives for these events are provided (see Section 2.7.4.2.4.4).

Venous Thromboembolism

PTs associated with venous thromboembolism were searched in the blinded placebo-controlled period: Cerebral venous sinus thrombosis, Cerebral venous thrombosis, Cerebral thrombosis, Superior sagittal sinus thrombosis, Deep vein thrombosis, Venous thrombosis limb, Retinal vein thrombosis, Retinal vein occlusion, Mesenteric vein thrombosis, Thrombosis mesenteric vessel, Splenic thrombosis, Splenic vein thrombosis, Splenic embolism, Visceral venous thrombosis, Hepatic vein thrombosis, Hepatic vein embolism, Vena cava thrombosis, Vena cava embolism, Renal vein thrombosis, Renal vein embolism, Venous thrombosis, Thrombosis, Embolism, and Thrombotic microangiopathy.

Overall, there were 9 thrombotic events in the BNT162b2 group and 9 in the placebo group. In the BNT162b2 group included 7 deep vein thromboses, 1 coagulopathy, and 1 ophthalmic vein thrombosis and in the placebo group included 7 deep vein thromboses, 1 penile vein thrombosis, and 1 venous thrombosis limb (Table 28) . None of the venous events were associated with thrombocytopenia.

2.7.4.2.4.3.4.4. Narratives of Other Significant Adverse Events (Phase 3, Study C4591001)

Narratives of other significant AEs for Phase 3 participants through the data cutoff date (13 March 2021) are provided (see Section 2.7.4.2.4.4).

2.7.4.2.4.3.5. Analysis of Adverse Events by Organ System or Syndrome (Phase 3, Study C4591001)

Safety data from Phase 3 of Study C4591001 were reviewed and Adverse Reactions (ADRs) – adverse events for which there is reason to conclude that the vaccine caused the event - were identified. The review included AE data, as well as local reactions and systemic events collected systematically by e-diaries. The CIOMS frequency categories for adverse reactions are as follows:

- Very common: ≥10%
- Common: ≥1% and <10%
- Uncommon: ≥0.1% and <1%
- Rare: ≥0.01% and <0.1%
- Very rare: <0.01%

Reactogenicity ADRs that occurred with a very common frequency, based on any dose in the BNT162b2 group, from the reactogenicity subset of data as of 13 March 2021, are:

- Injection site pain: 4153/4924 (84.3%)
- Fatigue: 3185/4924 (64.7%)
- Headache: 2814/4924 (57.1%)
- Muscle pain: 1980/4924 (40.2%)
- Chills: 1707/4924 (34.7%)
- Joint pain: 1232/4924 (25.0%)
- Fever: 749/4924 (15.2%)
- Injection site swelling: 546/4924 (11.1%)

A reactogenicity ADR that occurred with a common frequency, based on any dose in the BNT162b2 group from the reactogenicity subset of data as of 13 March 2021, was injection site redness:

- Injection site redness: 486/4924 (9.9%)

ADRs considered as common (nausea) and uncommon (lymphadenopathy and malaise) in the BNT162b2 group were identified from AE data in the safety population as of 13 March 2021, compared to placebo for reference:

- Nausea: 274/21,926 (1.2%) in the BNT162b2 group vs 87/21,921 (0.4%) in the placebo group

- Lymphadenopathy: 83/21,926 (0.4%) in the BNT162b2 group vs 7/21,921 (0.0%) in the placebo group

- Malaise: 130/21,926 (0.6%) in the BNT162b2 group vs 22/21,921 (0.1%) in the placebo group

The following additional ADRs were identified in the post-authorization setting. Frequencies for these ADRs were obtained from clinical trial data (Study C4591001) when possible, as per labeling guidance.

- Diarrhea (very common)
- Vomiting (common)
- Pain in Extremity (uncommon)
- Rash (uncommon)
- Pruritus (uncommon)
- Urticaria (uncommon)
- Angioedema (rare)
- Anaphylaxis (unknown)

It should be noted that at the time of conditional approval of BNT162b2 by EMA, the sponsor was asked to include the following as ADRs in the SmPC even though they were not

considered ADRs in the Core Data Sheet (CDS). The frequencies in the initial EMA-approved SmPC reflected data from the initial conditional approval submission (data cutoff date: 14 November 2020):

- Acute peripheral facial paralysis 3/18801 = 0.02% (rare)
- Injection site pruritus 27/18801 = 0.1% (uncommon)
- Insomnia 23/18801 = 0.1% (uncommon)

The following ADRs have been identified from the clinical study data and are supported by reports in the post-authorization setting. The CIOMS frequency category for these reactions is uncommon (based on clinical trial data [Study C4591001]): lethargy, asthenia, decreased appetite, hyperhidrosis, and night sweats. These ADRs will be added to the CDS and subsequently proposed for all BNT162b2 labels. The additional ADRs further characterize the safety profile of BNT162b2 but do not impact its favorable risk:benefit profile.

2.7.4.2.4.3.6. Other Safety Assessments (Phase 3, Study C4591001)

2.7.4.2.4.3.6.1. Severe COVID-19 Illness (Phase 3, Study C4591001)

The protocol had prespecified stopping rules that included monitoring of severe COVID-19 cases, and these stopping criteria were not met. The confinement of the majority of severe cases to the placebo groups suggests no evidence for vaccine-associated enhanced disease (VAED) including vaccine-associated enhanced respiratory disease (VAERD).

A description of severe COVID-19 cases evaluated for efficacy in Phase 2/3 is presented in Sections 11.1.1.3 and 11.1.2.3.2 of the final analysis interim CSR (Module 5.3.5.1 C4591001 Efficacy Final Analysis Interim CSR). A description of severe COVID-19 cases in the updated analysis of efficacy in Phase 2/3 is presented in Section 11.1.2.2.1 of the 6-Month Update CSR (Module 5.3.5.1 C4591001 6-Month Update CSR).

2.7.4.2.4.3.6.2. Pregnancy (Phase 3, Study C4591001)

At the time of the data cutoff date (13 March 2021), a total of 50 participants who had received BNT162b2 had reported pregnancies, including 42 participants originally randomized to the BNT162b2 group and 8 participants originally randomized to the placebo group who then received BNT162b2. In total, 12 participants (n=6 each in the randomized BNT162b2 and placebo groups) withdrew from the blinded placebo-controlled vaccination period of the study due to pregnancy, and 4 participants originally randomized to placebo who then received BNT162b2 withdrew from the open-label vaccination period due to pregnancy (Table 31). These participants continue to be followed for pregnancy outcomes.

Narratives for participants who reported a pregnancy during the study, including any reported outcomes, are provided (see Section 2.7.4.2.4.4).

2.7.4.2.4.4. Narratives (Phase 3, Study C4591001)

Narratives for Phase 3 participants (including for deaths, SAEs, AEs leading to withdrawal, other significant AEs, COVID-19 cases, and pregnancies) are provided in Module 5.3.5.1 C4591001 6-Month Update Interim CSR Section 14.

2.7.4.2.4.5. Conclusions (Phase 3, Study C4591001)

Based on Phase 2/3 data from approximately 44,000 participants ≥16 years of age with up to at least 6 months of follow-up after Dose 2 in Study C4591001, BNT162b2 at 30 µg was safe and well-tolerated across age groups. Reactogenicity AEs were generally milder and less frequent in participants in the older group (>55 years of age) compared with the younger group (≤55 years of age). Reactogenicity was mostly mild to moderate and short-lived after dosing for both younger and older age groups (ie, median onset between 1 to 3 days after dosing and resolution within 1 to 2 days after onset). The incidence of SAEs and deaths were low in the context of the number of participants enrolled and comparable between BNT162b2 and placebo. The incidence of discontinuations due to AEs was also generally low and similar between BNT162b2 and placebo groups.

Cumulative safety follow-up to at least 6 months after Dose 2 for approximately 12,000 Phase 2/3 participants originally randomized to BNT162b2, comprising the combined blinded and open-label periods, showed no new safety signals or suggested any new safety concerns arising from longer-term follow-up.

Similarly, open-label follow-up of participants originally randomized to placebo from the time of unblinding to receive BNT162b2 until the data cutoff date showed no new safety signals or concerns.

Safety analysis results for subgroups based on demographics (age, race, ethnicity) and by baseline SARS-CoV-2 positive versus negative status have not shown any clinically important differences in the BNT162b2 safety profile. Analysis of the subset of individuals with stable HIV did not suggest any safety concerns in this population. Analysis of participants originally randomized to placebo who then received BNT162b2 (Dose 3) by demographic subgroups and based on prior evidence of SARS-CoV-2 infection or prior COVID-19 did not suggest any safety concerns.

Phase 2/3 safety data were generally concordant with safety data in Phase 1 of the study, both overall and with regard to younger and older participants.

2.7.4.2.5. Discussion

Safety data in the Phase 1 BNT162b2 30 µg groups of younger and older adults, evaluated up to approximately 6 months after Dose 2, continue to support the safety and tolerability profile of BNT162b2.

In the Phase 2/3 portion of the study, safety data in participants ≥16 years of age are available for ~44,000 participants, of which ~12,000 had a total exposure time of ≥6 months after Dose 2 of BNT162b2 at the time of the data cutoff date (13 March 2021). The prompted local and systemic reactogenicity profile was consistent with results previously reported in the final analysis interim C4591001 CSR dated 03 December 2020. Increases in systemic reactogenicity were observed after Dose 2 compared with after Dose 1. Older adults generally reported milder and lower frequencies of local and systemic reactogenicity events compared with younger adults. Most prompted local and systemic reactogenicity events were short-lived, and only 1 Grade 4 event of fever lasting 1 day was reported. Median onset

day for most local and systemic reactions occurred within the first 3 days following vaccination and resolved with median durations within 3 days without sequela. This pattern of reactogenicity is also observed in participants with stable HIV infection.

The Phase 2/3 AE profile of BNT162b2 at 30 µg was also consistent with results previously reported in the final analysis interim C4591001 CSR dated 03 December 2020. During the blinded placebo-controlled follow-up period, AEs from Dose 1 to 1 month after Dose 2 and from Dose 1 to the unblinding date of AEs were mostly mild or moderate with higher frequencies/IRs in the BNT162b2 group than in the placebo group. Since many AEs were in SOCs that contain AEs consistent with reactogenicity events, an analysis of AEs within 7 days after each dose showed that the AEs during this time period in the BNT162b2 group were largely attributed to reactogenicity events. For participants who did not have an e-diary, they reported their experience as AEs. As such they were not prompted to report specific terms within 7 days after either dose. The analysis of AEs reported in the placebo-controlled period of the study identified several terms that are reported more frequently in the vaccine group than placebo. These include pain in the extremity, decreased appetite, lethargy, asthenia, malaise, night sweats and hyperhidrosis. The majority of the events started soon after vaccination and for most of these events the rates were higher after Dose 2 than Dose 1. This suggest that these terms describe the participants' unprompted experience of reactogenicity within 7 days after each dose.

Cumulative safety data for 12,006 Phase 2/3 participants with at least 6 months follow-up after Dose 2 for participants originally randomized to BNT162b2, comprising the combined blinded and open-label periods, showed no new safety signals arising from longer-term follow-up. Importantly, the additional follow-up time allowed for more opportunity to collect SAEs. However, related SAEs did not increase during this time period and it remained very low.

Similarly, open-label observational follow-up of original BNT162b2 participants after unblinding and original placebo participants who then received BNT162b2 after unblinding showed no new safety signals or concerns.

CDC-defined AESIs were evaluated in the blinded placebo-controlled follow-up period. MedDRA search terms were used to identify AE that fit the medical concept and then the resultant events were evaluated for numerical imbalances where the events were higher in the vaccine group than placebo and then narratives were provide only for those AESIs with the numerical imbalance.

The analysis showed that most AESI are reported in higher numbers in the placebo group or were equal between vaccine and placebo. The allergic reactions evaluation did not identify anaphylactic reactions associated with the vaccine. Note, there was an anaphylactoid reaction reported 2 days after receiving open-label BNT162b2 (Dose 3) in an originally placebo-randomized participant who was unblinded to receive BNT162b2, and who had a significant ongoing medical history of drug hypersensitivity and other allergies. For angioedema the frequencies were low and very similar in the BNT162b2 (0.14%) and placebo (0.13%) groups. For hypersensitivity reactions most of the reactions were due to rash, rash maculo-papular, and rash papular and were not reported within 7 days after either dose. Overall, the

evaluation of cases reporting allergic reactions supports standard precautions for allergic reactions should be taken in the clinic when vaccinating.

There were 2 cases of optic neuritis reported in the vaccine group that occurred 79 and 81 days after vaccination with BNT162b2. Both were considered not related to vaccine. Given the few number of events, non-proximity to vaccination and investigators judgment, there is not enough information to assess causality at this time.

AESI evaluations were performed for blinded placebo-controlled follow-up. There were 4 cases of Bell's palsy reported in the BNT162b2 group (previously reported in the final analysis interim C4591001 CSR dated 03 December 2020). Since then there have been 2 additional cases in the placebo group during blinded placebo-controlled follow-up, and there have been 4 additional cases of Bell's palsy identified during the open-label follow up period that are included for completeness: 3 cases in placebo participants who became unblinded and were then vaccinated with BNT162b2, and 1 participant who was originally randomized to BNT162b2, was unblinded, and developed Bell's palsy 154 days after the second dose of BNT162b2.

There were 2 cases of encephalopathy in the vaccine group and none in the placebo. Both cases had clear etiologic causes (uremia and toxic encephalopathy after a fall with hypotension, diverticulum, and a urinary tract infection) and hence are not associated with the vaccine.

SAEs assessed by the investigator as related to study intervention were:

- 5 SAEs total during blinded placebo-controlled follow-up: 3 SAEs (lymphadenopathy, shoulder injury related to vaccine administration [SIRVA], and ventricular arrhythmia) in the BNT162b2 group from Dose 1 to 1 month after Dose 2, and 2 SAEs (paraesthesia [BNT162b2 group] and psoriatic arthropathy [placebo]) to the unblinding date.

- 2 SAEs total during open-label follow-up: 1 SAE of myocardial infarction in 1 original BNT162b2 participant and 1 SAE of anaphylactoid reaction in 1 original placebo participant who then received BNT162b2.

During blinded placebo-controlled follow-up, there were a total of 15 deaths in the BNT162b2 group and 14 deaths in the placebo group, with 3 and 5 deaths occurring from Dose 1 to 1 month after Dose 2 in the BNT162b2 and placebo groups, respectively. Of these, there were 2 deaths in participants (1 BNT162b2 and 1 placebo) with confirmed stable HIV disease.

During the open-label follow-up period, there were 3 deaths in original BNT162b2 participants and 2 deaths in original placebo participants who then received BNT162b2.

None of the deaths were assessed by the investigator as related to study intervention.

Subgroup analyses by baseline SARS-CoV-2 status, ethnicity, race, and sex did not reveal any clinically meaningful differences in safety results. Analysis of participants originally

randomized to placebo who then received BNT162b2 (Dose 3) by demographic subgroups and based on prior evidence of SARS-CoV-2 infection or prior COVID-19 did not suggest any safety concerns. Importantly, there were 5 cases of individuals randomized to placebo who developed COVID-19 twice (ie, a new clinical episode with different symptoms and separated by at least a month apart confirmed by NAAT by the central laboratory). Each of these participants received BNT162b2 after unblinding without reported safety events. Taken together individuals who had evidence of infection with SARS-CoV-2 at baseline or developed COVID-19 once or twice before receiving BNT162b2 tolerated the vaccine well.

Overall, the available evidence up to 6 months of follow-up from the Phase 2/3 pivotal study continues to support the safety and tolerability of BNT162b2 at 30 µg administered as a 2-dose regimen (21 days apart) to individuals ≥16 years of age for the prevention of COVID-19.

2.7.4.3. Safety in Special Groups and Situations

2.7.4.3.1. Intrinsic Factors

2.7.4.3.1.1. Geriatric Use

Clinical studies of BNT162b2 (30 µg) include participants 65 years of age and older and their data contributes to the overall assessment of safety and efficacy.

The ongoing pivotal Study C4591001 has enrolled participant groups >65 years of age as an older 65-85 years of age cohort during the Phase 1 dose-finding portion of the study and in the >55 years of age stratum in the larger Phase 2/3 portion of the study. Safety data analyses have described the clinical outcomes for these older adults in the Phase 1 portion of the study (Section 2.7.4.2.2), which was subsequently confirmed in the Phase 2 portion of the study (Section 2.7.4.2.3), joined by pivotal safety data including older adults in Phase 3 (Section 2.7.4.2.4).

Descriptive differences between older and younger adults have been observed in all phases; namely, that older adults tend to have milder and less frequent reactogenicity events, which are generally known to be commonly age-related. Overall, available clinical data demonstrate a predominantly mild reactogenicity profile in older adults.

At the time of this application, vaccine safety in elderly individuals is evident from the totality of clinical safety data.

2.7.4.3.1.2. Pediatric Use

Further study of pediatric use of the vaccine and/or immunobridging study will be undertaken to characterize the vaccine response in children.

2.7.4.3.1.3. Use in Immunocompromised Individuals

Individuals who are immunocompromised or taking immunosuppressive therapy at the time of vaccine administration may have diminished response to immunization. Pivotal Study C4591001 included enrollment of individuals with medical history of immunocompromised

medical condition or immunosuppressive therapy (Section 2.7.4.1.1.2.3). There are limited data on the safety of the vaccine in this patient population at the time of this application.

2.7.4.3.2. Extrinsic Factors

Not applicable.

2.7.4.3.3. Drug Interactions

Refer to Module 5.3.5.1 C4591001 Protocol Section 6.5 for details regarding prior and concomitant vaccines, medications and procedures that were allowed or prohibited.

2.7.4.3.4. Use in Pregnancy and Lactation

Study BNT162-01

There were no pregnancies reported through the data cutoff date of 13 August 2020.

Study C4591001

Women who were pregnant or breastfeeding were not eligible to participate in Study C4591001 (Section 2.7.4.1.1.2.3). At the time of the most recent data cutoff in Study C4591001 (13 March 2021), a total of 50 participants had reported pregnancies in the safety database. Further details are provided in Section 2.7.4.2.4.3.6.2. These participants continue to be followed for pregnancy outcomes.

All pregnancies have a risk of birth defect, loss, or other adverse outcomes. Available data on BNT162b2 administered to pregnant women are insufficient to inform vaccine-associated risks in pregnancy. In a DART study, no vaccine-related adverse effects on female fertility, fetal development, or postnatal development were reported.

The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for vaccination with BNT162b2 and any potential adverse effects on the breastfed child from BNT162b2 or from the underlying maternal condition. For preventive vaccines, the underlying maternal condition is susceptibility to disease prevented by the vaccine.

Narratives for pregnancy are provided (Section 2.7.4.2.4.3.6).

2.7.4.3.5. Overdose

In Study C4591001, any dose of study intervention greater than 30 µg within a 24-hour time period was considered an overdose (refer to Module 5.3.5.1 C4591001 Protocol Section 8.4 for more information). An error in dilution during the study resulted in 52 participants receiving a higher than intended dose of BNT162b2; instead of receiving 30 µg of BNT162b2, 58 µg of BNT162b2 was administered. The participants did not report an increase in reactogenicity or adverse events.

2.7.4.3.6. Drug Abuse

Not applicable.

2.7.4.3.7. Withdrawal and Rebound

Not applicable.

2.7.4.3.8. Effects on Ability to Drive or Operate Machinery or Impairment of Mental Ability

BNT162b2 has no or negligible influence on the ability to drive and use machines.

2.7.4.4. Post-Authorization Data

Post-authorization safety data are continually monitored by Pfizer and BioNTech for pharmacovigilance and risk management purposes. Pfizer's safety database contains cases of AEs reported spontaneously to Pfizer, cases reported by the health authorities, cases published in the medical literature, cases from Pfizer-sponsored marketing programs, non-interventional studies, and cases of serious AEs reported from clinical studies regardless of causality assessment. Through 28 February 2021, there were a total of 42,086 case reports (25,379 medically confirmed and 16,707 non-medically confirmed) containing 158,893 events. Cases were received from 63 countries.

Consistent with what was seen in Phase 2/3 of Study C4591001, most reported AEs were in SOCs with reactogenicity events: general disorders and administration site conditions (51,335), nervous system disorders (25,957), musculoskeletal and connective tissue disorders (17,283), and gastrointestinal disorders (14,096). Post-authorization data have also informed the addition of ADRs related to the experience of reactogenicity to the product labeling (see Section 2.7.4.2.4.3.5 for additional information regarding ADRs).

Aside from addition of anaphylaxis and hypersensitivity, the analyses of cumulative post-authorization safety data, including a review of AESIs, are consistent with the analysis of this pivotal clinical trial. Review of post-authorization data has not revealed any novel safety concerns, except for anaphylaxis, and has confirmed the favorable benefit-risk profile of the vaccine.

Further details regarding the cumulative analysis of post-authorization safety data are presented in Module 5.3.6.

2.7.4.5. Overall Conclusions

Phase 1 data from Study BNT162-01 and Study C4591001 showed that BNT162b1 and BNT162b2 were well tolerated and both vaccines had a satisfactory reactogenicity profile in both younger and older adults. However, BNT162b2 has a more favorable reactogenicity profile than BNT162b1. Additionally, BNT162b2 showed less frequent systemic events in the older compared to the younger population. BNT162b2 at 30 µg was selected for further development in the Phase 2/3 part of the study.

In Phase 2/3, data analyzed in Study C4591001 were from blinded placebo-controlled and open-label follow-up periods, comprised of approximately 44,000 participants ≥16 years of age. The results were concordant with what was seen in Phase 1 and continue to show that BNT162b2 at 30 µg, administered as 2-dose schedule (21 days apart), has an acceptable tolerability and safety profile in individuals ≥16 years of age.

From December 2020 until April 2021, >100 million doses of BNT162b2 have been administered to individuals ≥16 years of age in the US under EUA.[3,4] It is reassuring that the most commonly reported AEs in the post-authorization review (which includes global safety reporting) reflect the same profile observed in the blinded placebo-controlled follow-up period of the pivotal clinical study, primarily reflecting short-lived and resolving reactogenicity events. Further, the same pattern was observed for pivotal study participants originally randomized to the placebo group who were unblinded (per protocol) to receive BNT162b2: these participants, in the open-label setting, also reported mostly reactogenicity events similar to those in the blinded follow-up. AEs of clinical interest were not reported frequently in the controlled clinical study and continue to be evaluated in the post-authorization setting.

Overall, the risk-benefit of BNT162b2 30 µg remains favorable.

2.7.4.6. APPENDICES

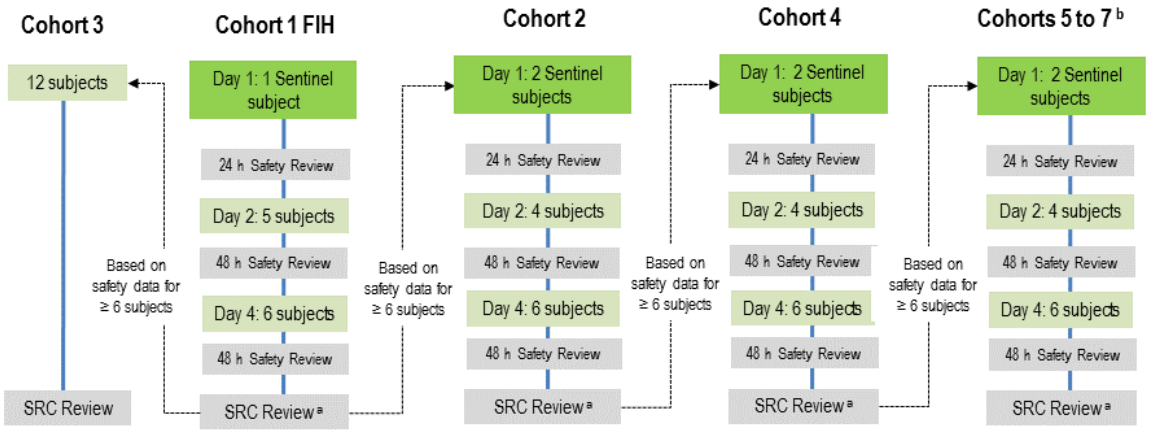
2.7.4.6.1. Appendix A: Study BNT162-01 Safety Evaluation Plan

The BNT162-01 protocol is included in Module 5.3.5.1 BNT162-01 Protocol.

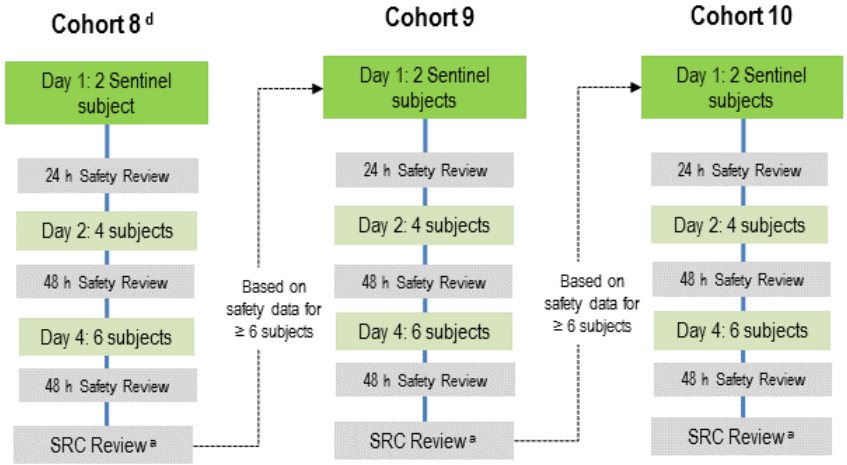
2.7.4.6.1.1. Study BNT162-01 Part A Study Schema

Dose cohort schema for BNT162b1 and BNT162b2 (P/B)[c]

Cohorts with younger adults



Cohorts with older adults



a) The data assessed by the SRC for progressing comprises 48 h data for 6 subjects.

b) If these cohorts use doses lower than already tested, 12 subjects may be dosed on one day in these cohorts and the cohorts may be conducted in parallel to each other / to any dose escalation cohorts. If they use doses higher than already tested, subjects will be dosed using a sentinel dosing/subject (2-4-6) staggering process.

c) For the dose regimens, see Section 2.7.4.1.1.1.2

d) Administration of the planned 10 µg dose in Cohort 8 requires that at least a 10 µg dose has shown acceptable tolerability in younger adults.

2.7.4.6.1.2. Schedule of Activities (Study BNT162-01)

Procedure / Assessment	Visit 0	Visit 1 Pre-dose	Visit 1 Dosing & Post-dose	Visit 2 at 24±2h	Phone call at 48±2h	Visit 3	Visit 4 Pre-dose	Visit 4 Dosing & Post-dose	Phone call at 48±2h	Visit 5 ~7 d from Visit 4	Visit 6 ~21 d from Visit 4	Visit 7 ~28 d from Visit 4 (EoS Visit)	Visit 8 ~63 d from Visit 4 (FU Visit)	Visit 9 ~162 d from Visit 4 (FU Visit)
Day [h]	**-30 to 0**	**1**	**1**	**2**		**8**	**22**	**22**		**29**	**43**	**50**	**85**	**184**
Informed consent	X													
Inclusion/exclusion criteria	X	X (review)												
Medical history	X	X (update)												
Physical examination incl. height	X	X [a]		X [a]		X [a]	X [a]			X [a]	X [a]	X [a]		
Vital signs, body weight [c]	X	X	X [b]	X		X	X	X [b]		X	X	X	X	X
12-lead ECG	X	X												
Urine pregnancy test for WOCBP	X	X					X							
Urine drugs of abuse screen [d]	X	X												
Alcohol breath test	X	X												
Urine collection for clinical laboratory [e]	X	X		X		X				X		X		
Blood draw for clinical laboratory [f]	X (15 mL)	X (15 mL)		X (15 mL)		X (15 mL)				X (15 mL)		X (15 mL)		
Blood draw for viral screening [g]	X (5 mL)													
Blood draw for SARS-CoV-2 testing [k]	X (2.6 mL)													
Oral swipe for SARS-CoV-2 testing		X [m]												

Procedure / Assessment	Visit 0	Visit 1 Pre-dose	Visit 1 Dosing & Post-dose	Visit 2 at 24±2h	Phone call at 48±2h	Visit 3	Visit 4 Pre-dose	Visit 4 Dosing & Post-dose	Phone call at 48±2h	Visit 5 ~7 d from Visit 4	Visit 6 ~21 d from Visit 4	Visit 7 ~28 d from Visit 4 (EoS Visit)	Visit 8 ~63 d from Visit 4 (FU Visit)	Visit 9 ~162 d from Visit 4 (FU Visit)
Day [h]	-30 to 0	1	1	2		8	22	22		29	43	50	85	184
Allocation to IMP		X												
Dosing [l]			X					X						
Blood draw for immunogenicity [n]		X (10 mL)				X (10 mL)	X (10 mL)			X (10 mL)	X (10 mL)	X (10 mL)	X (10 mL)	X (10 mL)
Blood draw for HLA		X (4 mL EDTA-blood) [p]												
Blood draw for CMI (100 mL) [n, o]		X								X				
Blood draw for research		← Up to 5 blood draws for explorative biomarker/immunogenicity research purposes. Blood draw volumes may vary. The total blood volume drawn will not exceed 200 mL per participant over the complete study, i.e., over approximately 7 months. →												
Participant hotline availability	Start	=>	=>	=>		=>	=>	=>		=>	=>	=>	=>	End
Issue participant diaries		X		X		X	X			X	X	X		
Collect participant diaries				X	X [i]	X	X			X	X	X	X	
Record AEs since last visit		X		X		X	X			X	X	X	X [j]	X [j]
Local reaction assessment/ systemic events			X [b]	X		X	X	X [b]		X	X	X		
Concomitant medication	X	X		X		X	X			X	X	X		
Participant wellbeing questioning					X [i]				X [i]					

[a] Brief (symptom-directed) physical examination; no height measurement

[b] At 1, 3, and 6 h (±15 min) after dosing.

[c] Vital signs: systolic/diastolic blood pressure, pulse rate, respiratory rate, and body temperature; body weight only at Visit 0.

[d] Urine screening for drugs of abuse (amphetamines, benzodiazepines, barbiturates, cocaine, cannabinoids, opiates, methadone, methamphetamines, phencyclidine, tricyclic antidepressants).

[e] Dipstick urine analysis: glucose, bilirubin, ketone, specific gravity, blood, pH, protein, urobilinogen, nitrite, and leukocytes. Microscopic urinalysis: if warranted by dipstick results, urine sediment was microscopically examined for the presence of red blood cells, white blood cells, casts, crystals, epithelial cells, and bacteria.

[f] Clinical laboratory tests: (Chemistry) alkaline phosphatase, creatinine, ferritin, C-reactive protein, albumin, alanine aminotransferase, amylase, aspartate aminotransferase, gamma glutamyl transpeptidase, total bilirubin, blood urea nitrogen, glucose, lipase, sodium, potassium, calcium; (Hematology) hemoglobin, hematocrit, red blood cell count, white blood cell count and differential (neutrophils, lymphocytes, monocytes, eosinophils, basophils), platelet count. Only in women who are not WOCBP: follicle stimulating hormone (FSH) at Visit 0.

[g] Viral screening for Human Immunodeficiency Virus (HIV) 1 or 2, Hepatitis B, Hepatitis C.

[h] Flexibility for visit days: Visit 3 Day 8±1 d; Visit 4 Day 22±2 d; Visit 5 Day 29±3 d; Visit 6 Day 43±4 d; Visit 7 Day 50±4 d; Visit 8 Day 85±7 d; Visit 9 Day 184±9d.

[i] Only for the first 6 participants per dose group. Questioning on and documentation of AEs as well as systemic and local reactions, the latter in case of upcoming dose decision meetings.

[j] Only IMP-related AEs.

[k] Blood draw for anti-SARS-CoV-2 antibodies (samples will be stored until a test is commercially available).

[l] For dose groups 1 and 8, dosing with at least 1 h intervals between participants for the first 6 participants and then with of at least 30 min intervals for the remaining 6 participants. For all other dose groups, dosing with at least 30 min intervals between participants.

[m] Oral swipe for SARS-CoV-2 testing either on Day -1 or at the Visit 1 on Day 1.

[n] The listed blood draw days may be adapted if justified by the collected data. Leftover blood after completion of the immunogenicity assessments may be used for additional analyses as described in Protocol Section 8.7 (Genetics) and/or Protocol Section 8.8 (Biomarkers).

[o] For participants who have given consent, one aliquot of the blood sample drawn for analysis of CMI may be used for HLA typing to allow additional analysis of T-cell receptor repertoire and / or phenotypic characterization of T-cells specific to vaccine-encoded antigens.

[p] If HLA typing using the blood sample collected with Lithium Heparin is not conclusive, EDTA-blood was drawn for HLA testing.

Abbreviations: AE = adverse event; CMI = cell-mediated immune testing; D or d = day; ECG = electrocardiogram; EDTA = ethylenediamine tetraacetic acid; EoS = end of study (Visit); FU = follow-up (visit); h = hour(s); HLA = human leukocyte antigen; Day 0 = 1 d before Day 1; IMP = investigational medicinal product; min = minute(s); SARS-CoV-2 = the virus leading to COVID-19; WOCBP = women of childbearing potential.

2.7.4.6.1.3. Study BNT162-01: Safety Assessments

2.7.4.6.1.3.1. Physical Examinations, Vital Signs, and Electrocardiograms (Study BNT162-01)

Complete physical examinations were performed at screening. Brief physical examinations were performed at later time points including prior boost immunizations.

- A complete physical examination included, at a minimum, assessments of the cardiovascular, respiratory, gastrointestinal and neurological systems. Height (in cm) was also recorded during complete physical examinations.

- A brief (symptom directed) physical examination included an overall health judgement. In-depth physical examinations were required if obvious pathological signs were visible or in the case the subject states any signs or symptoms.

Vital signs included body temperature, pulse rate, respiratory rate, and blood pressure. Normal ranges of the vital sign parameters are presented in Module 5.3.5.1 BNT162-01 Statistical Analysis Plan Table 4. Body weight will also be recorded.

Standard 12-lead ECGs were recorded and judged by the investigator to be clinically significant or not.

2.7.4.6.1.3.2. Subject Diaries (Study BNT162-01)

Subjects were given subject diaries at Visit 1 and were asked to record any reactions between visits, solicited local reactions at the injection site (pain, tenderness, erythema/redness, induration/swelling) and solicited systemic reactions (nausea, vomiting, diarrhea, headache, fatigue, myalgia, arthralgia, chills, loss of appetite, malaise, and fever [ie, ≥38°C]). Subject diaries were collected at the visits as described in the SoA (Section 2.7.4.6.1.2).

2.7.4.6.1.3.2.1. Local Reactions (Study BNT162-01)

Assessment of local reactions after IM immunization was used to validate the solicited assessment of local reactions in the patient diary and potentially support AE reporting.

Local reactions (both investigator assessed and solicited in the subject diaries) weree graded using criteria based on the guidance given in US FDA Guidance for Industry “Toxicity Grading Scale for Healthy Adult and Adolescent Volunteers Enrolled in Preventive Vaccine Clinical Trials” for “Local Reaction to Injectable Products”. The grades are Grade 0 (Absent), Grade 1 (Mild), Grade 2 (Moderate), Grade 3 (Severe) and Grade 4 (Potentially life threatening).

The solicited local reactions were evaluated for the following time intervals:

- Prime immunization up to day 7 (inclusive) after initial immunization

- Boost immunization up to day 7 (inclusive) after boost immunization

- Both intervals combined

The intervals started with the date and time of the immunization.

2.7.4.6.1.3.2.2. Systemic Reactions (Study BNT162-01)

Systemic reactions after IM immunization were assessed via daily solicited reports in the subject diaries and at the times given in the SoA (Section 2.7.4.6.1.2).

Systemic reactions were graded using criteria based on the guidance given in US FDA Guidance for Industry "Toxicity Grading Scale for Healthy Adult and Adolescent Volunteers Enrolled in Preventive Vaccine Clinical Trials" for "Systemic reaction grading scale". The grades are Grade 0 (Absent), Grade 1 (Mild), Grade 2 (Moderate), Grade 3 (Severe) and Grade 4 (Potentially life threatening). Fever was graded as Mild (38.0-38.4°C), Moderate (38.5-38.9°C), Severe (39.0-40.0°C and Potentially life threatening (>40.0°C).

The solicited systemic reactions were evaluated for the following time intervals:

Prime immunization up to day 7 (inclusive) after initial immunization

Boost immunization up to day 7 (inclusive) after boost immunization

Both intervals combined

The intervals started with the date and time of the immunization. Further details regarding the analysis of local reactions are provided in the SAP (Module 5.3.5.1 BNT162-01 Statistical Analysis Plan Section 6.4.2).

2.7.4.6.1.3.3. Adverse Events and Serious Adverse Events (Study BNT162-01)

Adverse Events

An AE is any untoward medical occurrence in a patient or clinical study participant, temporally associated with the use of study intervention, whether or not considered related to the study intervention.

NOTE: An AE can therefore be any unfavorable and unintended sign (including an abnormal laboratory finding that is clinically significant), symptom, or disease (new or exacerbated) temporally associated with the use of study intervention.

Events after signing ICD and before study intervention administration were handled as AEs.

AEs were coded using the Updated Version MedDRA® 23.0 including specific terms for COVID-19 to get a SOC and PT for each AE.

A TEAE is defined as any AE with an onset date on or after the first administration of study intervention (if the AE was absent before the first administration of study intervention) or worsened after the first administration of IMP (if the AE was present before the first administration of study intervention). AEs with an onset date more than 28 d after the last administration of study intervention will be considered as treatment emergent only if assessed as related to study intervention by the investigator.

For more details regarding how adverse events were defined, refer to Module 5.3.5.1 BNT162-01 Protocol Section 10.3.1.1 and Section 10.3.1.2.

Suspected Adverse Reactions

A Suspected Adverse Reaction was defined as all untoward and unintended responses to a study intervention related to any dose administered.

- The definition also covers medication errors and uses outside what is foreseen in the protocol, including misuse and abuse of the study intervention.
- The definition implies a reasonable possibility of a causal relationship between the event and the study intervention. This means that there are facts (evidence) or arguments to suggest a causal relationship.

Serious Adverse Events

If an event was not an AE per the definition above, then it could not be an SAE even if serious conditions were met (eg, hospitalization for signs/symptoms of the disease under trial, death due to progression of disease).

An SAE was defined as any untoward medical occurrence that, at any dose:

- Results in death
- Is life-threatening

  The term "life-threatening" in the definition of "serious" refers to an event in which the trial subject was at risk of death at the time of the event. It does not refer to an event which hypothetically might have caused death if it were more severe.
- Requires trial subject hospitalization or prolongation of existing hospitalization
  - In general, hospitalization signifies that the trial subject has been detained (usually involving at least an overnight stay) at the hospital or emergency ward for observation and/or treatment that would not have been appropriate in the physician's office or out trial subject setting. Complications that occur during hospitalization are AEs. If a complication prolongs hospitalization or fulfills any other serious criteria, the event is serious. When in doubt as to whether "hospitalization" occurred or was necessary, the AE should be considered serious.
- Results in persistent disability/incapacity
- Is a congenital anomaly or a birth defect.

AEs of Proven COVID-19 Disease of Moderate or Severe Intensity

Any case of proven COVID-19 disease occurring during the observation period was reported as an SAE, where the intensity of the respective AE is rated as "moderate" or "severe" (according to the criteria provided in Module 5.3.5.1 BNT162-01 Protocol Section 10.3.1.7). If none of the other SAE definitions were deemed suitable, then the SAE criterion of being a

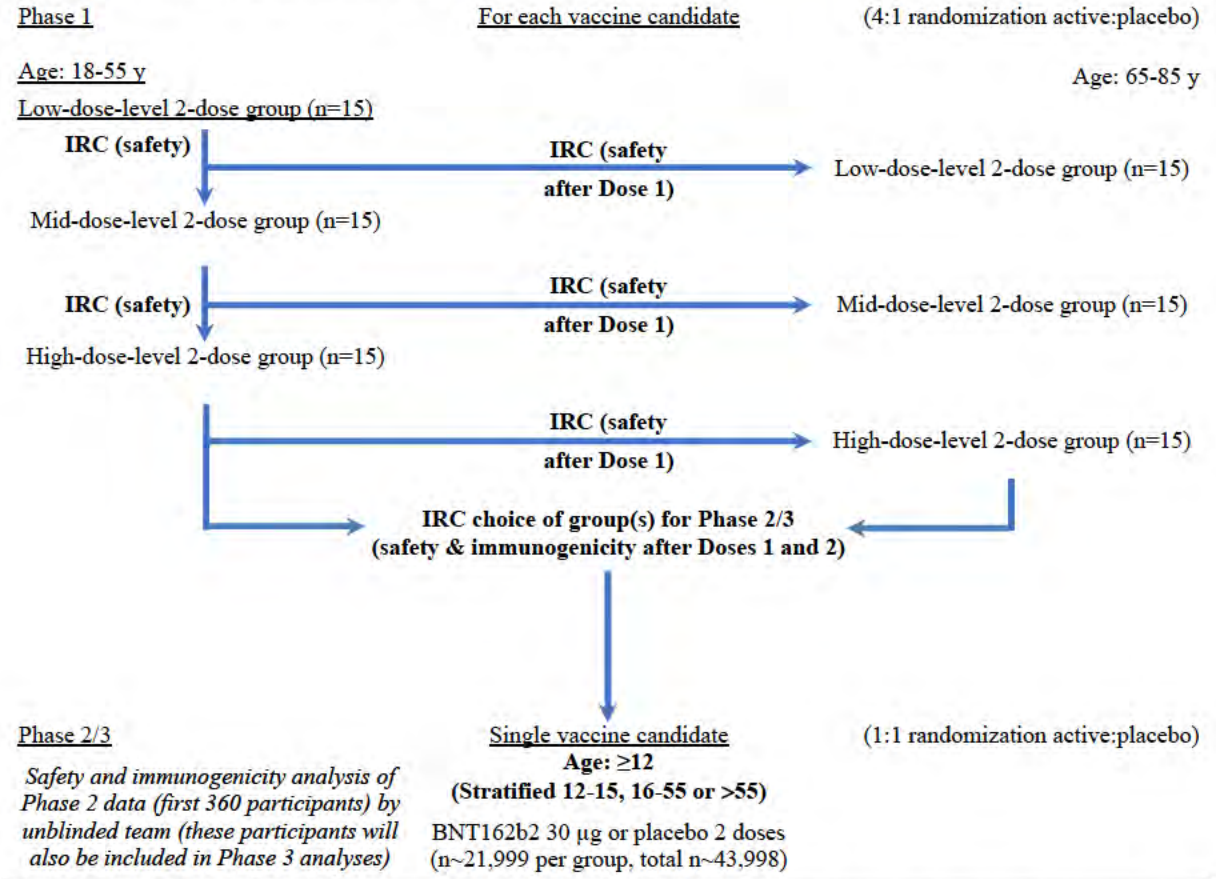
"medically important event" was applied (according to the definitions provided in Module 5.3.5.1 BNT162-01 Protocol Section 10.3.1.4).

For more details regarding serious adverse events, refer to Module 5.3.5.1 BNT162-01 Protocol Section 10.3.

2.7.4.6.2. Appendix B: Study C4591001 Safety Evaluation Plan

The C4591001 protocol is included in Module 5.3.5.1 C4591001 Protocol.

2.7.4.6.2.1. Study C4591001 Study Schema



Note: Participants ≥16 years of age who originally received placebo were offered the opportunity to receive BNT162b2 at defined points as part of the study.

2.7.4.6.2.2. Schedule of Activities (Study C4591001)

2.7.4.6.2.2.1. Study C4591001 Phase 1 SoA

An unplanned potential COVID-19 illness visit and unplanned potential COVID-19 convalescent visit are required at any time between Visit 1 (Vaccination 1) and Visit 10 (24-month follow-up visit) that COVID-19 is suspected.

Administration of BNT162b2 to Those Originally Assigned to Placebo: If a participant became eligible for receipt of BNT162b2 or another COVID-19 vaccine according to recommendations detailed separately, and available in the electronic study reference portal, the participant was advised to contact the site to determine whether he or she could receive BNT162b2 in a phased manner as part of the study. When contacted, the site conducted a phone visit to confirm eligibility and, if eligible and wanting to receive BNT162b2 if the participant originally received placebo, unblinded study intervention allocation to determine whether the participant received BNT162b1, BNT162b2, or placebo. If he or she originally received placebo and wanted to receive BNT162b2, the participant moved to the SoA in Section 2.7.4.6.2.2.3 for his or her remaining visits. Participants who received BNT162b1 or BNT162b2 (at any dose level) continued in the study as originally planned.

All other participants were advised to contact the site to determine whether they can receive BNT162b2 as part of the study no later than at the approximate time participants in Phase 2/3 reach Visit 4. When contacted, the site unblinded study intervention allocation to determine whether the participant received BNT162b1, BNT162b2, or placebo. If he or she originally received placebo and wanted to receive BNT162b2, the participant moved to the SoA in Section 2.7.4.6.2.2.3 for his or her remaining visits.

Visit Number	Screening	1	2	3	4	5	6	7	*Study procedures for Visit 8 onwards continue on the next table*	Unplanned	Unplanned
Visit Description	**Screening**	**Vax 1**	**Next-Day Follow-up Visit (Vax 1)**	**1-Week Follow-up Visit (Vax 1)**	**Vax 2**	**1-Week Follow-up Visit (Vax 2)**	**2-Week Follow-up Visit (Vax 2)**	**1-Month Follow-up Visit**		**Potential COVID-19 Illness Visit[a]**	**Potential COVID-19 Convalescent Visit**
Visit Window (Days)	**0 to 28 Days Before Visit 1**	**Day 1**	**1 to 3 Days After Visit 1**	**6 to 8 Days After Visit 1**	**19 to 23 Days After Visit 1**	**6 to 8 Days After Visit 4**	**12 to 16 Days After Visit 4**	**28 to 35 Days After Visit 4**		**Optimally Within 3 Days After Potential COVID-19 Illness Onset**	**28 to 35 Days After Potential COVID-19 Illness Visit**
Obtain informed consent	X								*Continued on table below*		
Assign participant number	X										
Obtain demography and medical history data	X										
Obtain details of medications currently taken	X										
Perform physical examination	X	X	X	X	X	X	X				
Measure vital signs (including body temperature)	X	X	X	X	X	X	X				
Collect blood sample for hematology and chemistry laboratory tests[b]	~10 mL		~10 mL	~10 mL	~10 mL	~10 mL					
Collect screening blood sample for HIV, HBsAg, HBc Ab, and HCV Ab tests	~10 mL										
Serological test for prior COVID-19 infection	~20 mL										
Perform urine pregnancy test (if appropriate)	X	X			X						
Obtain nasal (midturbinate) swab(s)[c]		X			X					X	
Collect nonstudy vaccine information	X	X	X	X	X	X	X	X			
Confirm eligibility	X	X			X						
Collect prohibited medication use			X	X	X	X	X	X		X	X

Visit Number	Screening	1	2	3	4	5	6	7		Unplanned	Unplanned
Visit Description	**Screening**	**Vax 1**	**Next-Day Follow-up Visit (Vax 1)**	**1-Week Follow-up Visit (Vax 1)**	**Vax 2**	**1-Week Follow-up Visit (Vax 2)**	**2-Week Follow-up Visit (Vax 2)**	**1-Month Follow-up Visit**	***Study procedures for Visit 8 onwards continue on the next table***	**Potential COVID-19 Illness Visit[a]**	**Potential COVID-19 Convalescent Visit**
Visit Window (Days)	**0 to 28 Days Before Visit 1**	**Day 1**	**1 to 3 Days After Visit 1**	**6 to 8 Days After Visit 1**	**19 to 23 Days After Visit 1**	**6 to 8 Days After Visit 4**	**12 to 16 Days After Visit 4**	**28 to 35 Days After Visit 4**		**Optimally Within 3 Days After Potential COVID-19 Illness Onset**	**28 to 35 Days After Potential COVID-19 Illness Visit**
Review hematology and chemistry results		X		X	X	X	X		*Continued on table below*		
Review temporary delay criteria		X			X						
Confirm use of contraceptives (if appropriate)	X	X	X	X	X	X	X	X			
Obtain randomization number and study intervention allocation		X									
Collect blood sample for immunogenicity assessment		~50 mL		~50 mL	~50 mL	~50 mL + optional[e] ~170 mL	~50 mL + optional[e] ~170 mL	~50 mL + optional[e] ~170 mL			~20 mL
Administer study intervention		X			X						
Assess acute reactions for at least 30 minutes after study intervention administration[d]		X			X						
Explain participant communication methods (including for e-diary completion), assist the participant with downloading the app, or issue provisioned device, if required		X									
Provide thermometer and measuring device		X			X						
Review reactogenicity e-diary data (daily review is optimal during the active diary period)		◄	———	►		◄	———	►			

Visit Number	Screening	1	2	3	4	5	6	7		Unplanned	Unplanned
Visit Description	**Screening**	**Vax 1**	**Next-Day Follow-up Visit (Vax 1)**	**1-Week Follow-up Visit (Vax 1)**	**Vax 2**	**1-Week Follow-up Visit (Vax 2)**	**2-Week Follow-up Visit (Vax 2)**	**1-Month Follow-up Visit**	***Study procedures for Visit 8 onwards continue on the next table***	**Potential COVID-19 Illness Visit[a]**	**Potential COVID-19 Convalescent Visit**
Visit Window (Days)	**0 to 28 Days Before Visit 1**	**Day 1**	**1 to 3 Days After Visit 1**	**6 to 8 Days After Visit 1**	**19 to 23 Days After Visit 1**	**6 to 8 Days After Visit 4**	**12 to 16 Days After Visit 4**	**28 to 35 Days After Visit 4**		**Optimally Within 3 Days After Potential COVID-19 Illness Onset**	**28 to 35 Days After Potential COVID-19 Illness Visit**
Review ongoing reactogenicity e-diary symptoms and obtain stop dates					X		X		*Continued on table below*		
Collect AEs and SAEs as appropriate	X	X	X	X	X	X	X	X		X	X
Collect e-diary or assist the participant to delete application											
Collection of COVID-19–related clinical and laboratory information (including local diagnosis)										X	X

Abbreviations: e-diary = electronic diary; HBc Ab = hepatitis B core antibody; HBsAg = hepatitis B surface antigen; HCV Ab = hepatitis C virus antibody; HIV = human immunodeficiency virus; NAAT = nucleic acid amplification test; vax = vaccination.

a. The COVID-19 illness visit may be conducted as an in-person or telehealth visit.
b. Hematology: hemoglobin, complete blood count with differential, and platelets. Blood chemistry: alanine aminotransferase (ALT), aspartate aminotransferase (AST), alkaline phosphatase, total bilirubin, blood urea nitrogen (BUN), and creatinine.
c. Two swabs will be taken at Visits 1 and 4. One will be tested (if possible at the site, otherwise at the central laboratory) within 24 hours and vaccination will only proceed if it is NAAT-negative for SARS-CoV-2 genomes. The second will be sent to the central laboratory for potential later testing.
d. The first 5 participants in in each group will be observed at the site for at least 4 hours after study intervention administration. Further vaccination will commence no sooner than 24 hours after the fifth participant received his or her vaccination.
e. An optional blood draw of ~170 mL will be taken at 1 of the visits (from selected participants who consent) for exploratory COVID-19 research.

Continuation of table above

Visit Number	8	8a	8b	8c	9	10	Unplanned	Unplanned
Visit Description	**6-Month Follow-up Visit**	**Vax 3**	**1-Week Follow-up Visit (After Vax 3)**	**1-Month Follow-up Visit (After Vax 3)**	**12-Month Follow-up Visit**	**24-Month Follow-up Visit**	**Potential COVID-19 Illness Visit[a]**	**Potential COVID-19 Convalescent Visit**
Visit Window (Days)	**175 to 189 Days After Visit 4**	**175 to 315 Days After Visit 4**	**6 to 8 Days After Visit 8a**	**28 to 35 Days After Visit 8a**	**350 to 378 Days After Visit 4**	**714 to 742 Days After Visit 4**	**Optimally Within 3 Days After Potential COVID-19 Illness Onset**	**28 to 35 Days After Potential COVID-19 Illness Visit**
		ONLY FOR THOSE PARTICIPANTS ORIGINALLY ASSIGNED TO BNT162 at 10 µg, 20 µg, or 30 µg **Those participants who decline to receive a third dose of BNT162 move directly from Visit 8 to Visit 9**			**ONLY FOR THOSE PARTICIPANTS ORIGINALLY ASSIGNED TO BNT162 OR PLACEBO RECIPIENTS WHO DECLINE BNT162b2 (ie, those participants who do not transition from placebo to BNT162b2)**			
Obtain informed consent		X						
Confirm participant originally received 10 to 30 µg of BNT162b1 or BNT162b2		X						
Perform urine pregnancy test (if appropriate)		X						
Confirm use of contraceptives (if appropriate)		X	X	X				
Collect prohibited medication use	X	X	X	X	X	X	X	X
Collect nonstudy vaccine information	X	X	X	X				
Measure body temperature		X						
Confirm eligibility		X						
Review temporary delay criteria		X						
Collect blood sample for immunogenicity assessment	~20 mL	~20 mL	~20 mL	~20 mL	~20 mL	~20 mL		~20 mL

Continuation of table above

Visit Number	8	8a	8b	8c	9	10	Unplanned	Unplanned
Visit Description	**6-Month Follow-up Visit**	**Vax 3**	**1-Week Follow-up Visit (After Vax 3)**	**1-Month Follow-up Visit (After Vax 3)**	**12-Month Follow-up Visit**	**24-Month Follow-up Visit**	**Potential COVID-19 Illness Visit[a]**	**Potential COVID-19 Convalescent Visit**
Visit Window (Days)	**175 to 189 Days After Visit 4**	**175 to 315 Days After Visit 4**	**6 to 8 Days After Visit 8a**	**28 to 35 Days After Visit 8a**	**350 to 378 Days After Visit 4**	**714 to 742 Days After Visit 4**	**Optimally Within 3 Days After Potential COVID-19 Illness Onset**	**28 to 35 Days After Potential COVID-19 Illness Visit**
		ONLY FOR THOSE PARTICIPANTS ORIGINALLY ASSIGNED TO BNT162 at 10 µg, 20 µg, or 30 µg **Those participants who decline to receive a third dose of BNT162 move directly from Visit 8 to Visit 9**			**ONLY FOR THOSE PARTICIPANTS ORIGINALLY ASSIGNED TO BNT162 OR PLACEBO RECIPIENTS WHO DECLINE BNT162b2 (ie, those participants who do not transition from placebo to BNT162b2)**			
Obtain nasal (midturbinate) swab(s)		X					X	
Obtain the participant's vaccine vial allocation using the IRT system		X						
Administer 30-µg dose of BNT162b2		X						
Assess acute reactions for at least 30 minutes after study intervention administration		X						
Provide thermometer and measuring device		X						
Remind participant of e-diary technologies		X						
Review reactogenicity e-diary data (daily review is optimal during the active diary period)		←	→					

Continuation of table above

Visit Number	8	8a	8b	8c	9	10	Unplanned	Unplanned
Visit Description	**6-Month Follow-up Visit**	**Vax 3**	**1-Week Follow-up Visit (After Vax 3)**	**1-Month Follow-up Visit (After Vax 3)**	**12-Month Follow-up Visit**	**24-Month Follow-up Visit**	**Potential COVID-19 Illness Visit[a]**	**Potential COVID-19 Convalescent Visit**
Visit Window (Days)	**175 to 189 Days After Visit 4**	**175 to 315 Days After Visit 4**	**6 to 8 Days After Visit 8a**	**28 to 35 Days After Visit 8a**	**350 to 378 Days After Visit 4**	**714 to 742 Days After Visit 4**	**Optimally Within 3 Days After Potential COVID-19 Illness Onset**	**28 to 35 Days After Potential COVID-19 Illness Visit**
		ONLY FOR THOSE PARTICIPANTS ORIGINALLY ASSIGNED TO BNT162 at 10 µg, 20 µg, or 30 µg **Those participants who decline to receive a third dose of BNT162 move directly from Visit 8 to Visit 9**			**ONLY FOR THOSE PARTICIPANTS ORIGINALLY ASSIGNED TO BNT162 OR PLACEBO RECIPIENTS WHO DECLINE BNT162b2 (ie, those participants who do not transition from placebo to BNT162b2)**			
Review ongoing reactogenicity e-diary symptoms and obtain stop dates				X				
Collect AEs and SAEs as appropriate	X	X	X	X	X[b]	X[b]	X	X
Collect e-diary or assist the participant to delete application						X		
Collection of COVID-19–related clinical and laboratory information (including local diagnosis)							X	X

Abbreviations: IRT = interactive response technology; vax = vaccination.

a. The COVID-19 illness visit may be conducted as an in-person or telehealth visit.

b. Any AEs occurring up to 48 hours after the blood draw must be recorded (see Module 5.3.5.1 C4591001 Protocol Section 8.3.1)

2.7.4.6.2.2.2. Study C4591001 Phase 2/3 SoA

An unplanned potential COVID-19 illness visit and unplanned potential COVID-19 convalescent visit are required at any time between Visit 1 (Vaccination 1) and Visit 6 (24-month follow-up visit) that potential COVID-19 symptoms are reported, including MIS-C.

Administration of BNT162b2 to Those Originally Assigned to Placebo: If a participant ≥16 years of age became eligible for receipt of BNT162b2 or another COVID-19 vaccine according to recommendations detailed separately, and available in the electronic study reference portal, the participant was advised to contact the site to determine whether he or she could receive BNT162b2 in a phased manner as part of the study. When contacted, the site conducted a phone visit to confirm eligibility and, if eligible and wanting to receive BNT162b2 if the participant originally received placebo, unblinded study intervention allocation to determine whether the participant received BNT162b2 or placebo. If he or she originally received placebo and wanted to receive BNT162b2, the participant moved to the SoA in Section 2.7.4.6.2.2.3 for his or her remaining visits. Participants who received BNT162b2 continued in the study as originally planned.

All other participants ≥16 years of age who had not been offered the opportunity to receive BNT162b2 were given this opportunity no later than 6 months after Vaccination 2 (at the time of the originally planned Visit 4). If they wanted to receive BNT162b2, they were unblinded and those who did originally receive placebo moved to the SoA in Section 2.7.4.6.2.2.3 for their remaining visits.

Visit Number	1	2	3	4	5	6	Unplanned	Unplanned
Visit Description	**Vaccination 1**	**Vaccination 2**	**1-Month Follow-up Visit**	**6-Month Follow-up Visit**	**12-Month Follow-up Visit**	**24-Month Follow-up Visit**	**Potential COVID-19 Illness Visit[a]**	**Potential COVID-19 Convalescent Visit**
Visit Window (Days)	**Day 1[b]**	**19 to 23 Days After Visit 1**	**28 to 35 Days After Visit 2**	**175 to 189 Days After Visit 2**	**350 to 378 Days After Visit 2**	**714 to 742 Days After Visit 2**	**Optimally Within 3 Days After Potential COVID-19 Illness Onset**	**28 to 35 Days After Potential COVID-19 Illness Visit**
					ONLY FOR THOSE PARTICIPANTS ORIGINALLY ASSIGNED TO BNT162b2 OR PLACEBO RECIPIENTS WHO DECLINE BNT162b2			
Obtain informed consent	X							
Assign participant number	X							
Obtain demography and medical history data	X							
Perform clinical assessment[c]	X							
For participants who are HIV-positive, record latest CD4 count and HIV viral load	X		X	X	X	X		
Measure height and weight	X							
Measure temperature (body)	X	X						
Perform urine pregnancy test (if appropriate)	X	X						
Confirm use of contraceptives (if appropriate)	X	X	X					
Collect nonstudy vaccine information	X	X	X	X				
Collect prohibited medication use		X	X	X	X	X	X	X
Confirm eligibility	X	X						
Review temporary delay criteria	X	X						
Collect blood sample for immunogenicity assessment[d]	~20 mL/ ~10 mL		~20 mL/ ~10 mL	~20 mL/ ~10 mL	~20 mL/ ~10 mL	~20 mL/ ~10 mL		~20 mL/ ~10 mL
Obtain nasal (midturbinate) swab	X	X					X	
Obtain randomization number and study intervention allocation	X							
Administer study intervention	X	X						

Visit Number	1	2	3	4	5	6	Unplanned	Unplanned
Visit Description	**Vaccination 1**	**Vaccination 2**	**1-Month Follow-up Visit**	**6-Month Follow-up Visit**	**12-Month Follow-up Visit**	**24-Month Follow-up Visit**	**Potential COVID-19 Illness Visit[a]**	**Potential COVID-19 Convalescent Visit**
Visit Window (Days)	**Day 1[b]**	**19 to 23 Days After Visit 1**	**28 to 35 Days After Visit 2**	**175 to 189 Days After Visit 2**	**350 to 378 Days After Visit 2**	**714 to 742 Days After Visit 2**	**Optimally Within 3 Days After Potential COVID-19 Illness Onset**	**28 to 35 Days After Potential COVID-19 Illness Visit**
					ONLY FOR THOSE PARTICIPANTS ORIGINALLY ASSIGNED TO BNT162b2 OR PLACEBO RECIPIENTS WHO DECLINE BNT162b2			
Assess acute reactions for at least 30 minutes after study intervention administration	X	X						
Explain participant communication methods (including for e-diary completion), assist the participant with downloading the app, or issue provisioned device, if required	X							
Provide/ensure the participant has a thermometer (all participants) and measuring device (reactogenicity subset participants only)	X	X						
Review reactogenicity e-diary data (daily review is optimal during the active diary period)[e]	← →	← →						
Review ongoing reactogenicity e-diary symptoms and obtain stop dates[e]		X	X					
Collect AEs and SAEs as appropriate	X	X	X	X[f]	X[f]	X[f]	X	X[f]
According to eligibility, ascertain willingness to receive BNT162b2 if originally received placebo; if willing, unblind the participant's study intervention assignment (if not already done), and move placebo recipients to the SoA in Section 2.7.4.6.2.2.3			X ← →	X				
Collect e-diary or assist the participant to delete application						X		

Visit Number	1	2	3	4	5	6	Unplanned	Unplanned
Visit Description	**Vaccination 1**	**Vaccination 2**	**1-Month Follow-up Visit**	**6-Month Follow-up Visit**	**12-Month Follow-up Visit**	**24-Month Follow-up Visit**	**Potential COVID-19 Illness Visit[a]**	**Potential COVID-19 Convalescent Visit**
Visit Window (Days)	**Day 1[b]**	**19 to 23 Days After Visit 1**	**28 to 35 Days After Visit 2**	**175 to 189 Days After Visit 2**	**350 to 378 Days After Visit 2**	**714 to 742 Days After Visit 2**	**Optimally Within 3 Days After Potential COVID-19 Illness Onset**	**28 to 35 Days After Potential COVID-19 Illness Visit**
					ONLY FOR THOSE PARTICIPANTS ORIGINALLY ASSIGNED TO BNT162b2 OR PLACEBO RECIPIENTS WHO DECLINE BNT162b2			
Collection of COVID-19–related clinical and laboratory information (including local diagnosis)							X	X

Abbreviations: HIV = human immunodeficiency virus; e-diary = electronic diary.

a. The COVID-19 illness visit may be conducted as an in-person or telehealth visit.
b. The visit may be conducted across 2 consecutive days; if so, all steps from assessing the inclusion and exclusion criteria onwards must be conducted on the same day.
c. Including, if indicated, a physical examination.
d. 20 mL is to be collected from participants ≥16 years of age; 10 mL is to be collected from participants 12 to 15 years of age.
e. Reactogenicity subset participants only.
f. Any AEs occurring up to 48 hours after the blood draw must be recorded (see Module 5.3.5.1 C4591001 Protocol Section 8.3.1).

2.7.4.6.2.2.3. Administration of BNT162b2 to Those Originally Assigned to Placebo

Participants ≥16 years of age who originally received placebo and became eligible for receipt of BNT162b2 according to recommendations detailed separately, and available in the electronic study reference portal, had the opportunity to receive BNT162b2 in a phased manner as part of the study. Any placebo recipient ≥16 years of age who had not already been offered the opportunity to receive BNT162b2 was given this opportunity no later than 6 months after Vaccination 2.

Visit Number	101	102	103	104	105	Unplanned	Unplanned
Visit Description	**Vaccination 3**	**Vaccination 4**	**1-Month Telephone Contact**	**6-Month Telephone Contact**	**18-Month Telephone Contact**	**Potential COVID-19 Illness Visit**	**Potential COVID-19 Convalescent Visit**
Visit Window (Days)	**From Recommendation[a] or At Least 175 Days After Vaccination 2[b]**	**19 to 23 Days After Visit 101**	**28 to 35 Days After Visit 102**	**175 to 189 Days After Visit 102**	**532 to 560 Days After Visit 102**	**Optimally Within 3 Days After Potential COVID-19 Illness Onset**	**28 to 35 Days After Potential COVID-19 Illness Visit**
Confirm participant meets local/national recommending criteria or is at least 175 days after Vaccination 2 (Visit 4/Visit 2)	X						
Obtain informed consent	X						
Confirm participant originally received placebo	X						
Perform urine pregnancy test (if appropriate)	X	X					
Confirm use of contraceptives (if appropriate)	X	X					
Collect prohibited medication use	X	X	X	X	X	X	X
For participants who are HIV-positive, record latest CD4 count and HIV viral load	X		X	X	X		
Review and consider eligibility	X	X					
Review temporary delay criteria	X	X					
Collect blood sample for immunogenicity assessment[c]	~20 mL						~20 mL
Obtain nasal (midturbinate) swab	X	X				X	
Obtain vaccine vial allocation via IRT	X	X					
Administer BNT162b2	X	X					
Assess acute reactions for at least 30 minutes after study intervention administration	X	X					
Collect AEs and SAEs as appropriate	X	X	X	X		X[d]	X[d]
Contact the participant by telephone			X	X	X		
Request the participant return the e-diary or assist the participant to delete the application					X		
Collection of COVID-19–related clinical and laboratory information (including local diagnosis)						X	X

Visit Number	101	102	103	104	105	Unplanned	Unplanned
Visit Description	Vaccination 3	Vaccination 4	1-Month Telephone Contact	6-Month Telephone Contact	18-Month Telephone Contact	Potential COVID-19 Illness Visit	Potential COVID-19 Convalescent Visit
Visit Window (Days)	From Recommendation[a] or At Least 175 Days After Vaccination 2[b]	19 to 23 Days After Visit 101	28 to 35 Days After Visit 102	175 to 189 Days After Visit 102	532 to 560 Days After Visit 102	Optimally Within 3 Days After Potential COVID-19 Illness Onset	28 to 35 Days After Potential COVID-19 Illness Visit

Abbreviations: HIV = human immunodeficiency virus; IRT = interactive response technology.

a. For participants who become eligible according to recommendations detailed separately and available in the electronic study reference portal.
b. For any remaining Phase 2/3 placebo recipients who wish to receive BNT162b2; may be combined with Visit 4 for Phase 2/3 participants.
c. Only if the participant has no blood sample collected in the previous 7 days.
d. AEs need only be recorded if the participant remains in the AE reporting period (see Module 5.3.5.1 C4591001 Protocol Section 8.3.1).

2.7.4.6.2.3. Study C4591001: Safety Assessments

Safety Assessments are described in Module 5.3.5.1 C4591001 Protocol Section 8.2 and Appendix 3.

2.7.4.6.2.3.1. Electronic Diary (Study C4591001)

Certain participants were required to complete a reactogenicity e-diary (see Module 5.3.5.1 C4591001 Protocol Section 8.2.2). All participants in Phase 1, and a subset of at least the first 6000 participants randomized in Phase 2/3, were asked to monitor and record local reactions, systemic events, and antipyretic medication usage for 7 days following administration of the study intervention. Any participants in Phase 3 who are HIV-positive or 12 to 15 years of age may also have been included in this subset (will be reported at a later time). In addition, participants 16 through 17 years of age enrolled under Protocol Amendment 9 and onwards will be included in the reactogenicity subset. All other participants, including those who originally received placebo and then received BNT162b2 under protocol amendment 10 and onwards, will not complete a reactogenicity e-diary but will have their local reactions and systemic events detected and reported as AEs in accordance with Module 5.3.5.1 C4591001 Protocol Section 8.3.2.

2.7.4.6.2.3.1.1. Local Reactions (Study C4591001)

During the reactogenicity e-diary reporting period, participants were asked to assess redness, swelling, and pain at the injection site (from Day 1 through Day 7 after each dose, where Day 1 is the day of each dose) and to record the symptoms in the reactogenicity e-diary. If a local reaction persisted beyond the end of the reactogenicity e-diary period following vaccination, the participant was requested to report that information.

Redness and swelling was measured and recorded in measuring device units (range: 1 to 21) and then categorized during analysis as absent, mild, moderate, or severe based on the grading scale in Table 29. Pain at the injection site was assessed by the participant as absent, mild, moderate, or severe according the grading scale in Table 29.

If a Grade 3 local reaction was reported in the reactogenicity e-diary, a telephone contact occurred to ascertain further details and determine whether a site visit was clinically indicated. Only an investigator or medically qualified person was able to classify a participant's local reaction as Grade 4. If a participant experienced a confirmed Grade 4 local reaction, the investigator was to immediately notify the sponsor and, if it was determined to be related to the administration of the study intervention, further vaccinations were to be discontinued in that participant.

Table 29. Local Reaction Grading Scale (Study C4591001)

	Mild (Grade 1)	Moderate (Grade 2)	Severe (Grade 3)	Potentially Life Threatening (Grade 4)
Pain at the injection site	Does not interfere with activity	Interferes with activity	Prevents daily activity	Emergency room visit or hospitalization for severe pain
Redness	>2.0 cm to 5.0 cm (5 to 10 measuring device units)	>5.0 cm to 10.0 cm (11 to 20 measuring device units)	>10 cm (≥21 measuring device units)	Necrosis or exfoliative dermatitis
Swelling	>2.0 cm to 5.0 cm (5 to 10 measuring device units)	>5.0 cm to 10.0 cm (11 to 20 measuring device units)	>10 cm (≥21 measuring device units)	Necrosis

2.7.4.6.2.3.1.2. Systemic Events (Study C4591001)

During the reactogenicity e-diary reporting period, participants were asked to assess vomiting, diarrhea, headache, fatigue, chills, new or worsened muscle pain, and new or worsened joint pain (from Day 1 through Day 7 after each dose, where Day 1 is the day of each dose) and to record the symptoms in the reactogenicity e-diary. The symptoms were assessed by the participant as absent, mild, moderate, or severe according to the grading scale in Table 30.

If a Grade 3 systemic event was reported in the reactogenicity e-diary, a telephone contact occurred to ascertain further details and determine whether a site visit was clinically indicated. Only an investigator or medically qualified person is able to classify a participant's systemic event as Grade 4. If a participant experienced a confirmed Grade 4 systemic event, the investigator was to immediately notify the sponsor and, if it was determined to be related to the administration of the study intervention, further vaccinations were to be discontinued in that participant.

Table 30. Systemic Event Grading Scale (Study C4591001)

	Mild (Grade 1)	Moderate (Grade 2)	Severe (Grade 3)	Potentially Life Threatening (Grade 4)
Vomiting	1-2 times in 24 hours	>2 times in 24 hours	Requires IV hydration	Emergency room visit or hospitalization for hypotensive shock
Diarrhea	2 to 3 loose stools in 24 hours	4 to 5 loose stools in 24 hours	6 or more loose stools in 24 hours	Emergency room visit or hospitalization for severe diarrhea
Headache	Does not interfere with activity	Some interference with activity	Prevents daily routine activity	Emergency room visit or hospitalization for severe headache
Fatigue/ tiredness	Does not interfere with activity	Some interference with activity	Prevents daily routine activity	Emergency room visit or hospitalization for severe fatigue
Chills	Does not interfere with activity	Some interference with activity	Prevents daily routine activity	Emergency room visit or hospitalization for severe chills
New or worsened muscle pain	Does not interfere with activity	Some interference with activity	Prevents daily routine activity	Emergency room visit or hospitalization for severe new or worsened muscle pain
New or worsened joint pain	Does not interfere with activity	Some interference with activity	Prevents daily routine activity	Emergency room visit or hospitalization for severe new or worsened joint pain

2.7.4.6.2.3.1.3. Fever (Study C4591001)

Temperature was collected in the reactogenicity e-diary in the evening daily during the reactogenicity e-diary reporting period. It was also collected at any time during the reactogenicity e-diary data collection periods when fever was suspected. Fever was defined as an oral temperature of ≥38.0°C (100.4°F). The highest temperature for each day was to be recorded in the reactogenicity e-diary. Temperature was to be measured and recorded to 1 decimal place and then categorized during analysis according to the scale shown in Module 5.3.5.1 C4591001 Protocol Table 3.

If a fever of ≥39.0°C (102.1°F) was reported in the reactogenicity e-diary, a telephone contact was to occur to ascertain further details and determine whether a site visit was clinically indicated. Only an investigator or medically qualified person is able to confirm a participant's fever as >40.0°C (>104.0°F). If a participant experienced a confirmed fever >40.0°C (>104.0°F), the investigator was to immediately notify the sponsor and, if it was determined to be related to the administration of the study intervention, further vaccinations was to be discontinued in that participant.

2.7.4.6.2.3.2. Adverse Events and Serious Adverse Events (Study C4591001)

Definition of AE

An AE is defined as any untoward medical occurrence in a patient or clinical study participant, temporally associated with the use of study intervention, whether or not considered related to the study intervention.

NOTE: An AE can therefore be any unfavorable and unintended sign (including an abnormal laboratory finding), symptom, or disease (new or exacerbated) temporally associated with the use of study intervention.

Additional details regarding events that meet the AE definition and events that do not meet the AE definition are provided in Module 5.3.5.1 C4591001 Protocol Section 10.3.1.

Definition of SAE

If an event is not an AE per the definition above, then it cannot be an SAE even if serious conditions are met (eg, hospitalization for signs/symptoms of the disease under study, death due to progression of disease). An SAE is defined as any untoward medical occurrence that, at any dose:

- Results in death
- Is life-threatening
- Requires inpatient hospitalization or prolongation of existing hospitalization
- Results in persistent disability/incapacity

Is a congenital anomaly/birth defect

- Other situations (as described in the protocol)

Additional details regarding SAEs are presented in Module 5.3.5.1 C4591001 Protocol Section 10.3.2.

AEs will be reported by the participant (or, when appropriate, by a caregiver, surrogate, or the participant's legal guardian).

Time Period and Frequency for Collecting AE and SAE Information

The time period for actively eliciting and collecting AEs and SAEs (“active collection period”) for each participant begins from the time the participant/parent(s)/legal guardian provides informed consent, which is obtained before the participant’s participation in the study (ie, before undergoing any study-related procedure and/or receiving study intervention), through and including Visit 7 for Phase 1 participants, and Visit 3 for Phase 2/3 participants. In addition, any AEs occurring up to 48 hours after each subsequent blood draw must be recorded on the CRF.

SAEs will be collected from the time the participant/parent(s)/legal guardian provides informed consent to approximately 6 months after the last dose of study intervention (Visit 8 for Phase 1 participants, and Visit 4 for Phase 2/3 participants).

Additionally, for those participants who originally received placebo but went on to receive BNT162b2 at Vaccinations 3 and 4, AEs were collected from the time the participant provided informed consent (for receipt of Vaccinations 3 and 4) through and including Visit 103. SAEs were collected from the time the participant provides informed consent (for receipt of Vaccinations 3 and 4) to approximately 6 months after the second dose of BNT162b2 (Visit 104).

AEs and SAEs reported during the open-label follow-up period will be summarized separately for participants who were unblinded at the time of being eligible for receipt of BNT162b2 according to recommendations detailed separately, and available in the electronic study reference portal, or no later than at approximately Visit 4.

For Phase 1 participants who went on to receive a third dose of BNT162, AEs and SAEs were collected from the time the participant provided informed consent (for receipt of Vaccination 3) through and including Visit 8c (1 month after the third dose).

Follow-up by the investigator continues throughout and after the active collection period and until the AE or SAE or its sequelae resolve or stabilize at a level acceptable to the investigator and Pfizer concurs with that assessment.

For additional details regarding data collection for adverse events, refer to Module 5.3.5.1 C4591001 Protocol Section 8.3 and Module 5.3.5.1 C4591001 Statistical Analysis Plan Section 3.1.1.4.

Intensity for each AE and SAE reported during the study was assessed as mild (Grade 1), moderate (Grade 2), severe (Grade 3), or life-threatening (Grade 4) and assessed for causality as described in Module 5.3.5.1 Protocol Section 10.3.3.

For information regarding recording/reporting and follow-up of AEs and/or SAEs, refer to Module 5.3.5.1 Protocol Section 10.3.3 and 10.3.4.

2.7.4.6.2.3.2.1. Disease-Related Events and/or Disease-Related Outcomes Not Qualifying as AEs or SAEs

Potential COVID-19 illnesses and their sequelae that are consistent with the clinical endpoint definition should not be recorded as AEs. These data will be captured as efficacy assessment data only on the relevant pages of the CRF, as these are expected endpoints.

Potential COVID-19 illnesses and their sequelae will not be reported according to the standard process for expedited reporting of SAEs, even though the event may meet the definition of an SAE. These events will be recorded on the COVID-19 illness pages in the participant's CRF within 1 day.

NOTE: However, if either of the following conditions applies, then the event must be recorded and reported as an SAE (instead of a disease-related event):

> The event is, in the investigator's opinion, of greater intensity, frequency, or duration than expected for the individual participant.
>
> OR
>
> The investigator considers that there is a reasonable possibility that the event was related to study intervention.

Potential COVID-19 illness events and their sequelae will be reviewed by a group of internal blinded case reviewers. Any SAE that is determined by the internal case reviewers NOT to meet endpoint criteria is reported back to the investigator site of incidence. The investigator must report the SAE to Pfizer Safety within 24 hours of being made aware that the SAE did not meet endpoint criteria. The investigator's SAE awareness date is the date on which the investigator site of incidence receives the SAE back from the internal case reviewers.

2.7.4.6.2.3.3. Phase 1 Stopping Rules (Study C4591001)

Stopping rules were in place for all Phase 1 participants, based on review of AE data and e-diary reactogenicity data, until the start of Phase 2/3 or 30 days after the administration of the second dose of study intervention in Phase 1, whichever was later.

Refer to Module 5.3.5.1 C4591001 Protocol Section 8.2.3 for additional details on Phase 1 stopping rules.

2.7.4.6.2.3.4. Surveillance of Events That Could Represent Enhanced COVID-19 and Phase 2/3 Stopping Rule (Study C4591001)

As this was a sponsor open-label study during Phase 1, the sponsor conducted unblinded reviews of the data during the course of the study, including for the purpose of safety assessment. Any NAAT-confirmed COVID-19 cases in Phase 1 were to be reviewed contemporaneously by the IRC and the DMC.

In Phase 2/3, the unblinded team supporting the DMC, including an unblinded medical monitor, will review cases of severe COVID-19 as they are received and will review AEs at least weekly for additional potential cases of severe COVID-19. At any point, the unblinded team may discuss with the DMC chair whether the DMC should review cases for an adverse imbalance of cases of COVID-19 and/or severe COVID-19 between the vaccine and placebo groups.

Stopping and alert rules were to be applied (see Module 5.3.5.1 C4591001 Protocol Section 8.2.4). Participants were instructed when to contact the site due to potential COVID-19 illness (see Module 5.3.5.1 C4591001 Protocol Section 8.13). Reporting and review of potential COVID-19 illness is further detailed in Module 5.3.5.1 C4591001 Protocol Section 8.3.7.

2.7.4.6.2.3.5. Exposure During Pregnancy or Breastfeeding, and Occupational Exposure

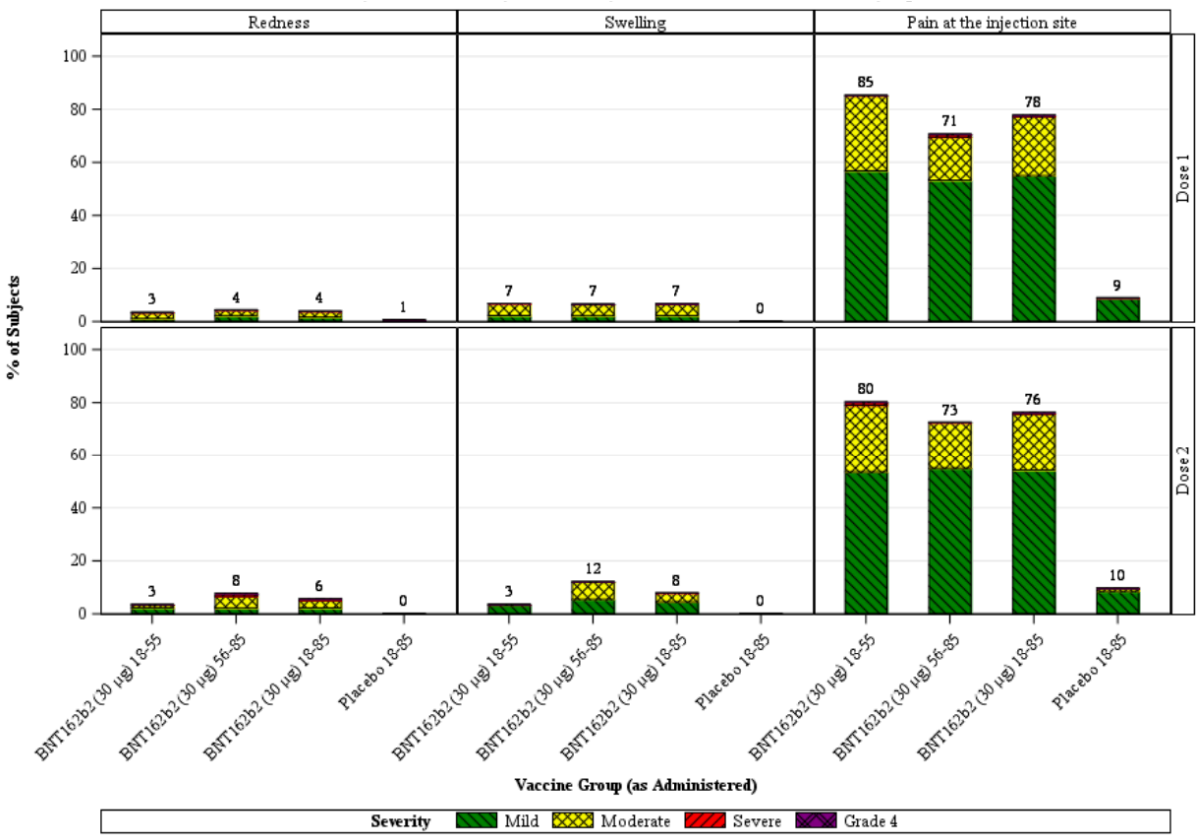
Details regarding exposure during pregnancy or breastfeeding and occupational exposure are presented in Module 5.3.5.1 C4591001 Protocol Section 8.3.5.

2.7.4.6.3. Appendix C: Phase 2 Study C4591001 Post-text Tables

2.7.4.6.3.1. Reactogenicity (Phase 2, Study C4591001, Post-text Tables and Figures)

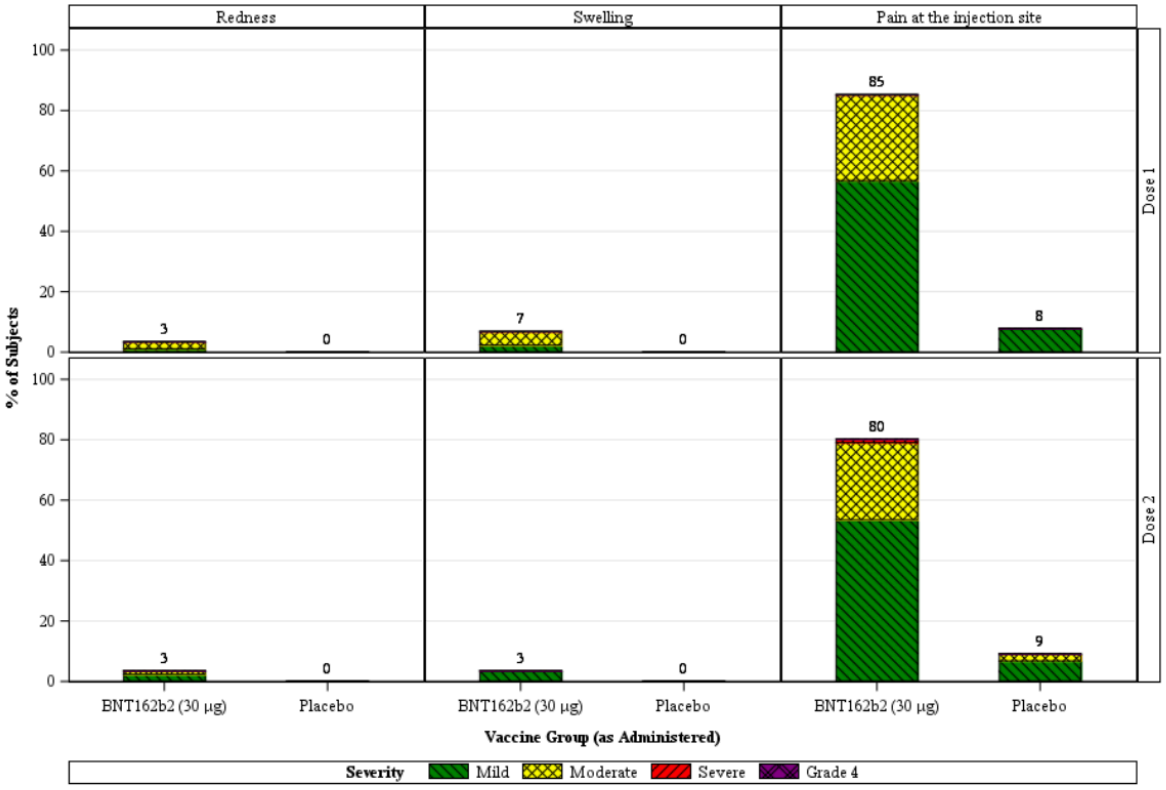
2.7.4.6.3.1.1. Local Reactions (Phase 2, Study C4591001, Post-text Tables and Figures)

Figure 9. Subjects Reporting Local Reactions, by Maximum Severity, Within 7 Days After Each Dose – Phase 2 – Safety Population



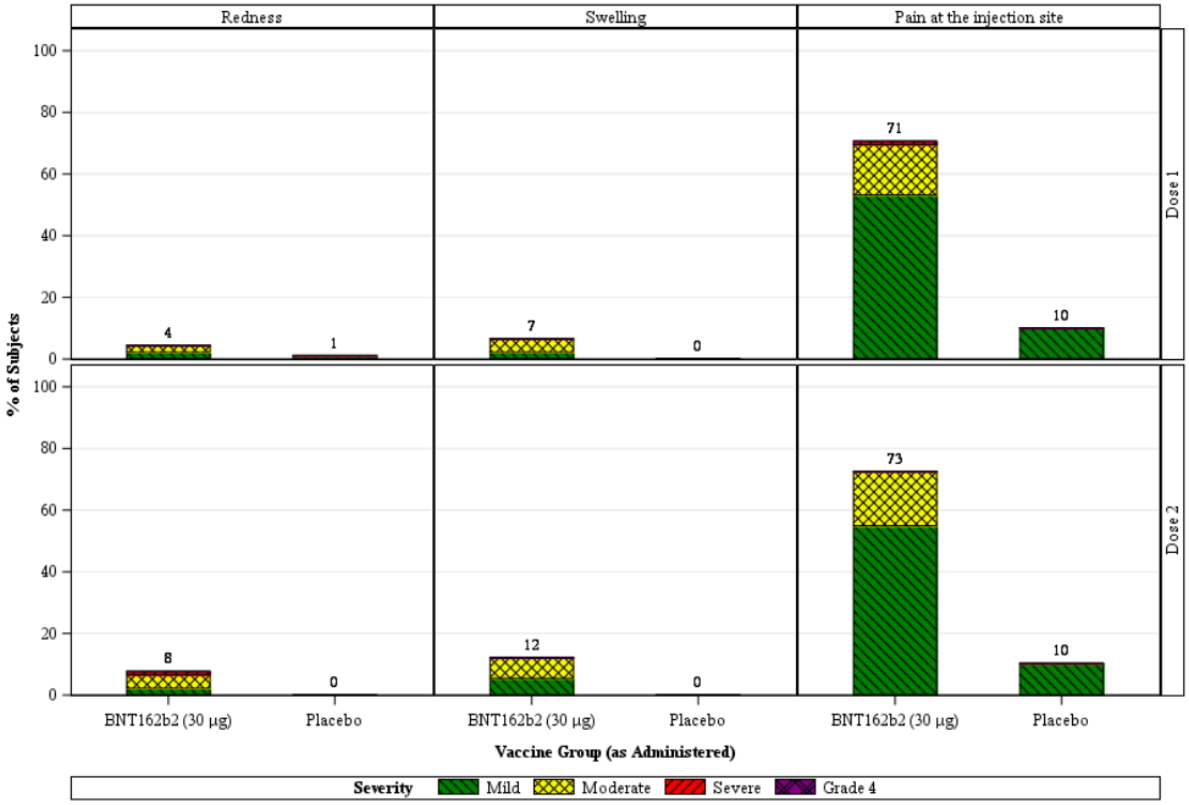
Note: Number above each bar denotes percentage of participants reporting the reaction with any severity.
PFIZER CONFIDENTIAL SDTM Creation: 05SEP2020 (13:09) Source Data: adfacevd Table Generation: 11SEP2020 (17:39)
(Cutoff Date: 02SEP2020, Snapshot Date: 04SEP2020) Output File: /nda2_unblinded/C4591001_IA_P2/adce_f001_lr_maxsev_p2

Figure 10. Subjects Reporting Local Reactions, by Maximum Severity, Within 7 Days After Each Dose, Phase 2 - Age Group: 18-55 Years – Safety Population



Note: Number above each bar denotes percentage of participants reporting the reaction with any severity.
PFIZER CONFIDENTIAL SDTM Creation: 05SEP2020 (13:09) Source Data: adfacevd Table Generation: 09OCT2020 (04:30)
(Cutoff Date: 02SEP2020, Snapshot Date: 04SEP2020) Output File: /nda2_unblinded/C4591001_IA_P2_2/adce_f001_lr_max_age_p2

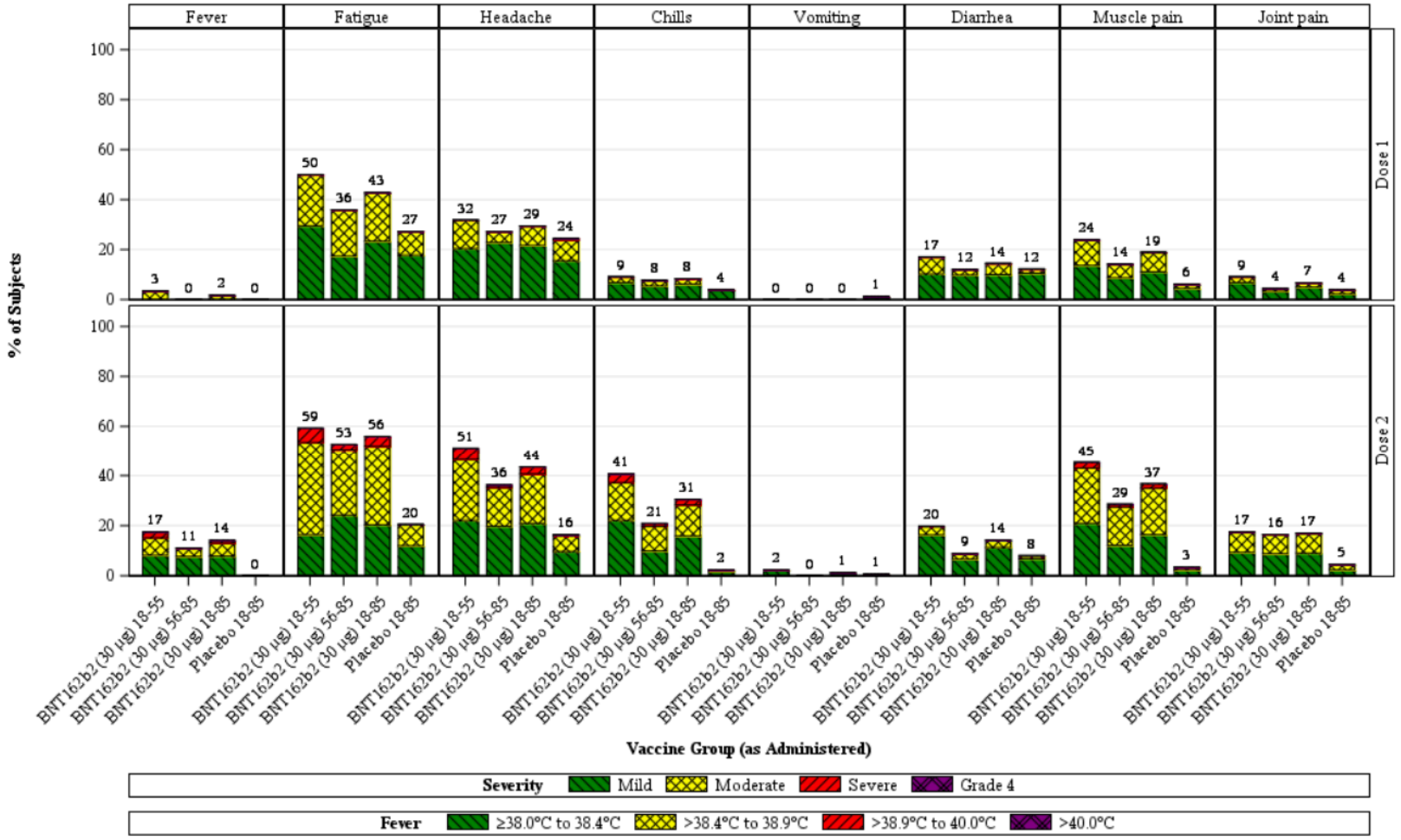
Figure 11. Subjects Reporting Local Reactions, by Maximum Severity, Within 7 Days After Each Dose, Phase 2 – Age Group: 56-85 Years – Safety Population



Note: Number above each bar denotes percentage of participants reporting the reaction with any severity.
PFIZER CONFIDENTIAL SDTM Creation: 05SEP2020 (13:09) Source Data: adfacevd Table Generation: 09OCT2020 (04:30)
(Cutoff Date: 02SEP2020, Snapshot Date: 04SEP2020) Output File: ./nda2_unblinded/C4591001_IA_P2_2/adce_f001_lr_max_age_p2

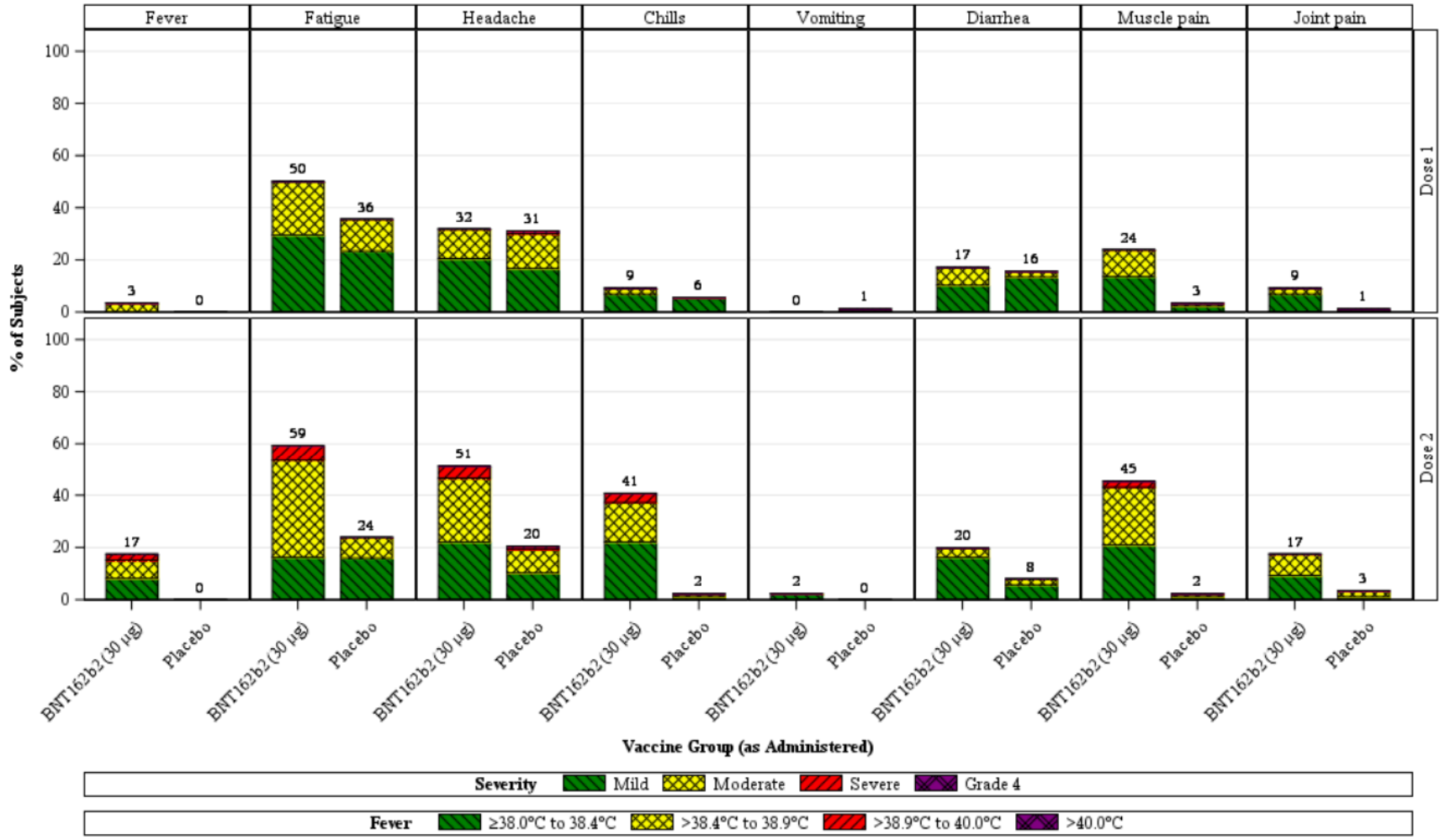
2.7.4.6.3.1.2. Systemic Events (Phase 2, Study C4591001, Post-text Tables and Figures)

Figure 12. Subjects Reporting Systemic Events, by Maximum Severity, Within 7 Days After Each Dose – Phase 2 – Safety Population



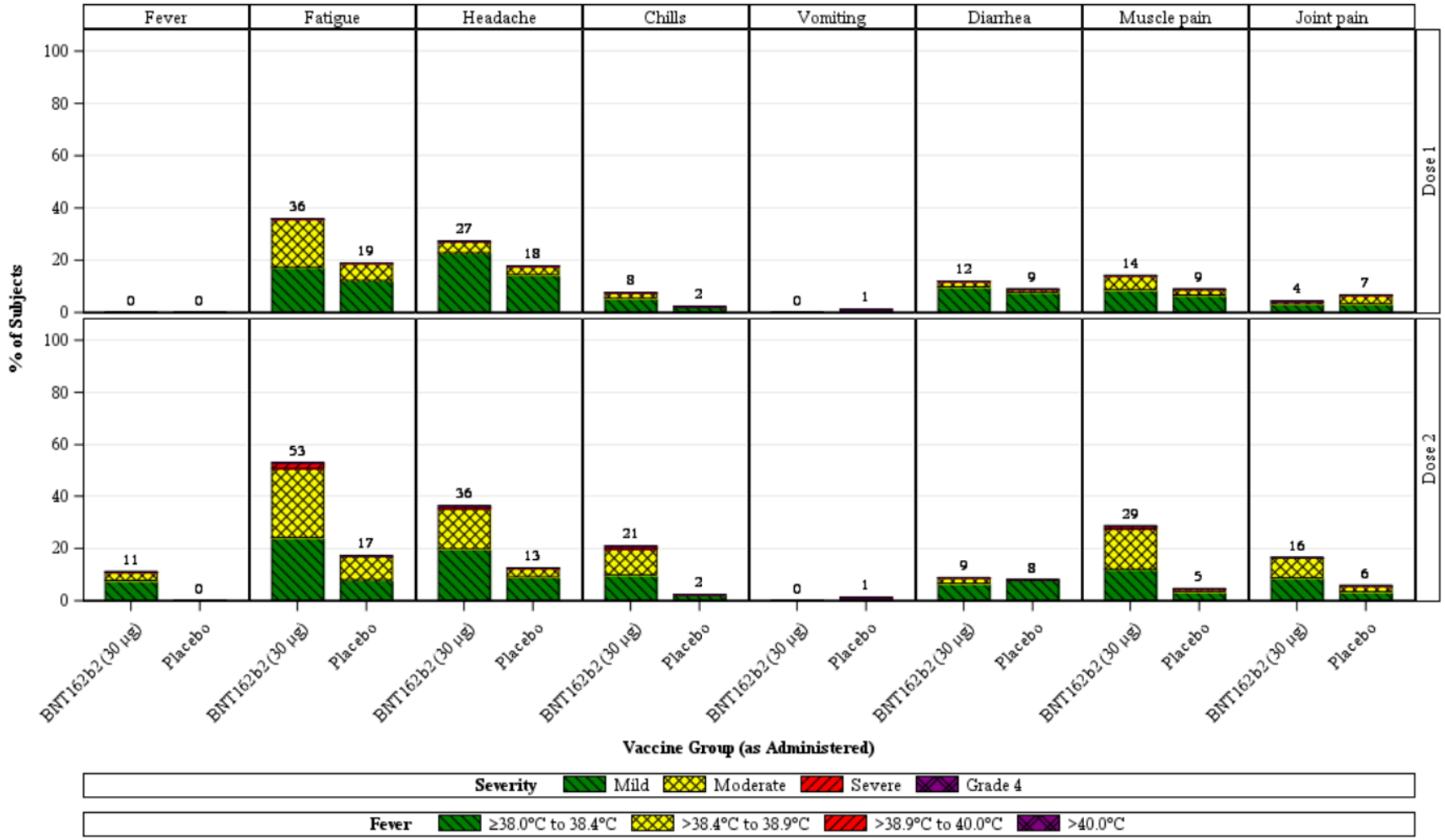
Note: Number above each bar denotes percentage of participants reporting the event with any severity.
PFIZER CONFIDENTIAL SDTM Creation: 05SEP2020 (13:09) Source Data: adfacevd Table Generation: 11SEP2020 (17:39)
(Cutoff Date: 02SEP2020, Snapshot Date: 04SEP2020) Output File: ./nda2_unblinded/C4591001_IA_P2/adce_f001_se_maxsev_p2

Figure 13. Subjects Reporting Systemic Events, by Maximum Severity, Within 7 Days After Each Dose, Phase 2 – Age Group: 18-55 Years – Safety Population



Note: Number above each bar denotes percentage of participants reporting the event with any severity.
PFIZER CONFIDENTIAL SDTM Creation: 05SEP2020 (13:09) Source Data: adfacevd Table Generation: 09OCT2020 (04:30)
(Cutoff Date: 02SEP2020, Snapshot Date: 04SEP2020) Output File: ./nda2_unblinded/C4591001_IA_P2_2/adce_f001_se_max_age_p2

Figure 14. Subjects Reporting Systemic Events, by Maximum Severity, Within 7 Days After Each Dose, Phase 2 – Age Group: 56-85 Years – Phase 2 – Safety Population



Note: Number above each bar denotes percentage of participants reporting the event with any severity.
PFIZER CONFIDENTIAL SDTM Creation: 05SEP2020 (13:09) Source Data: adfacevd Table Generation: 09OCT2020 (04:30)
(Cutoff Date: 02SEP2020, Snapshot Date: 04SEP2020) Output File: ./nda2_unblinded/C4591001_IA_P2_2/adce_f001_se_max_age_p2

2.7.4.6.4. Appendix D: Phase 3 Study C4591001 Post-text Tables

2.7.4.6.4.1. Exposure, Disposition, and Study Population Characteristics (Phase 3, Study C4591001, Post-text Tables)

Table 31. Disposition of All Randomized Subjects – Phase 2/3 Subjects ⩾16 Years of Age

	Vaccine Group (as Randomized)		
	BNT162b2 (30 µg) (N[a]=22085) n[b] (%)	Placebo (N[a]=22080) n[b] (%)	Total (N[a]=44165) n[b] (%)
Randomized	22085 (100.0)	22080 (100.0)	44165 (100.0)
Not vaccinated	55 (0.2)	50 (0.2)	105 (0.2)
Original blinded placebo-controlled follow-up period			
Vaccinated	22030 (99.8)	22030 (99.8)	44060 (99.8)
Dose 1	22030 (99.8)	22030 (99.8)	44060 (99.8)
Dose 2	21675 (98.1)	21650 (98.1)	43325 (98.1)
Discontinued from original blinded placebo-controlled vaccination period[c]	352 (1.6)	528 (2.4)	880 (2.0)
Reason for discontinuation			
Lost to follow-up	151 (0.7)	153 (0.7)	304 (0.7)
Withdrawal by subject	109 (0.5)	181 (0.8)	290 (0.7)
No longer meets eligibility criteria	26 (0.1)	120 (0.5)	146 (0.3)
Adverse event	27 (0.1)	26 (0.1)	53 (0.1)
Physician decision	5 (0.0)	8 (0.0)	13 (0.0)
Pregnancy	6 (0.0)	6 (0.0)	12 (0.0)
Protocol deviation	3 (0.0)	8 (0.0)	11 (0.0)
Death	3 (0.0)	4 (0.0)	7 (0.0)
Medication error without associated adverse event	3 (0.0)	2 (0.0)	5 (0.0)
Withdrawal by parent/guardian	1 (0.0)	0	1 (0.0)
Other	18 (0.1)	20 (0.1)	38 (0.1)
Unblinded before 1-month post–Dose 2 visit	253 (1.1)	240 (1.1)	493 (1.1)
Completed 1-month post–Dose 2 visit	21382 (96.8)	21293 (96.4)	42675 (96.6)
Withdrawn from the study	343 (1.6)	484 (2.2)	827 (1.9)
Withdrawn after Dose 1 and before Dose 2	176 (0.8)	211 (1.0)	387 (0.9)
Withdrawn after Dose 2 and before 1-month post–Dose 2 visit	100 (0.5)	139 (0.6)	239 (0.5)
Withdrawn after 1-month post–Dose 2 visit	67 (0.3)	134 (0.6)	201 (0.5)
Reason for withdrawal from the study			
Lost to follow-up	174 (0.8)	191 (0.9)	365 (0.8)
Withdrawal by subject	122 (0.6)	226 (1.0)	348 (0.8)
Protocol deviation	11 (0.0)	24 (0.1)	35 (0.1)
Death	16 (0.1)	15 (0.1)	31 (0.1)
Adverse event	9 (0.0)	8 (0.0)	17 (0.0)
Physician decision	3 (0.0)	6 (0.0)	9 (0.0)

Table 31. Disposition of All Randomized Subjects – Phase 2/3 Subjects ⩾16 Years of Age

	Vaccine Group (as Randomized)		
	BNT162b2 (30 µg) (N[a]=22085) n[b] (%)	Placebo (N[a]=22080) n[b] (%)	Total (N[a]=44165) n[b] (%)
No longer meets eligibility criteria	1 (0.0)	4 (0.0)	5 (0.0)
Pregnancy	0	1 (0.0)	1 (0.0)
Medication error without associated adverse event	1 (0.0)	0	1 (0.0)
Withdrawal by parent/guardian	1 (0.0)	0	1 (0.0)
Other	5 (0.0)	9 (0.0)	14 (0.0)
Open-label follow-up period			
Originally randomized to BNT162b2	20404 (92.4)		
Received Dose 2/unplanned dose	87 (0.4)		
Completed 1-month post–Dose 2 visit	210 (1.0)		
Completed 6-month post–Dose 2 visit	6414 (29.0)		
Withdrawn from the study	105 (0.5)		
Withdrawn before 6-month post–Dose 2 visit	103 (0.5)		
Withdrawn after 6-month post–Dose 2 visit	2 (0.0)		
Reason for withdrawal from the study			
Withdrawal by subject	56 (0.3)		
Protocol deviation	35 (0.2)		
Lost to follow-up	4 (0.0)		
Death	3 (0.0)		
Physician decision	2 (0.0)		
Adverse event	1 (0.0)		
No longer meets eligibility criteria	1 (0.0)		
Other	3 (0.0)		
Originally randomized to placebo		20948 (94.9)	
Withdrawn from the study after unblinding and before Dose 3		497 (2.3)	
Received Dose 3 (first dose of BNT162b2 [30 µg])		19612 (88.8)	
Received Dose 4 (second dose of BNT162b2 [30 µg])		15986 (72.4)	
Discontinued from open-label vaccination period[d]		24 (0.1)	
Reason for discontinuation from open-label vaccination period			
Protocol deviation		6 (0.0)	
Adverse event		5 (0.0)	
Withdrawal by subject		5 (0.0)	
Pregnancy		4 (0.0)	
Death		2 (0.0)	
Lost to follow-up		2 (0.0)	
Completed 1-month post–Dose 4 visit		7209 (32.6)	
Withdrawn from the study		14 (0.1)	
Withdrawn after Dose 3 and before Dose 4		11 (0.0)	

Table 31. Disposition of All Randomized Subjects – Phase 2/3 Subjects ⩾16 Years of Age

	Vaccine Group (as Randomized)		
	BNT162b2 (30 µg) (N[a]=22085) n[b] (%)	Placebo (N[a]=22080) n[b] (%)	Total (N[a]=44165) n[b] (%)
Withdrawn after Dose 4 and before 1-month post–Dose 4 visit		2 (0.0)	
Withdrawn after 1-month post–Dose 4 visit		1 (0.0)	
Reason for withdrawal from the study			
Withdrawal by subject		7 (0.0)	
Protocol deviation		3 (0.0)	
Death		2 (0.0)	
Adverse event		1 (0.0)	
Lost to follow-up		1 (0.0)	

Note: Human immunodeficiency virus (HIV)-positive subjects are included in this summary but analyzed and reported separately.
Note: Subjects randomized but did not sign informed consent or had a significant quality event due to lack of PI oversight are not included in any analysis population.
Note: Because of a dosing error, Subjects C4591001 1081 10811053, C4591001 1088 10881077, C4591001 1177 11771089 and C4591001 1231 12311057 received an additional dose of BNT162b2 (30 µg) at an unscheduled visit after receiving 1 dose of BNT162b2 (30 µg) and 1 dose of placebo.
a. N = number of randomized subjects in the specified group, or the total sample. This value is the denominator for the percentage calculations.
b. n = Number of subjects with the specified characteristic.
c. Original blinded placebo-controlled vaccination period is defined as the time period from Dose 1 to 1 month post–Dose 2.
d. Open-label vaccination period is defined as the time period from Dose 3 (first dose of BNT162b2 [30 µg]) to 1 month post–Dose 4 (second dose of BNT162b2 [30 µg]).
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (19:20) Source Data: adds Table Generation: 27MAR2021 (16:34)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adds s002 all p3 rand

Table 32. Vaccine as Administered by Vaccine Group – Phase 2/3 Subjects ⩾16 Years of Age – All Randomized Subjects

Vaccine (as Administered)	Vaccine Group (as Randomized)	
	BNT162b2 (30 µg) (N[a]=22085) n[b] (%)	Placebo (N[a]=22080) n[b] (%)
Vaccinated	22030 (99.8)	22030 (99.8)
Not vaccinated	55 (0.2)	50 (0.2)
Dose 1		
BNT162b2 (30 µg)	22026 (99.7)	4 (0.0)
Placebo	2 (0.0)	22025 (99.8)
Indeterminate vaccine[c]	2 (0.0)	1 (0.0)
Dose 2		
BNT162b2 (30 µg)	21756 (98.5)	5 (0.0)
Placebo	3 (0.0)	21645 (98.0)
Indeterminate vaccine[c]	0	0
Dose 3		
First dose BNT162b2 (30 µg)		19612 (88.8)
Indeterminate vaccine[c]		0
Dose 4		
Second dose BNT162b2 (30 µg)		15986 (72.4)
Indeterminate vaccine[c]		0

Note: Human immunodeficiency virus (HIV)-positive subjects are included in this summary but analyzed and reported separately.
a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects with the specified characteristic.
c. "Indeterminate vaccine" refers to subjects whose vaccine (as administered) could not be determined.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (23:24) Source Data: adsl Table Generation: 27MAR2021 (01:28)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/advx_s002_adm_p3_rand

Table 33. Vaccine Administration Timing – Phase 2/3 Subjects ⩾16 Years of Age – All Randomized Subjects

	Vaccine Group (as Randomized)	
	BNT162b2 (30 µg) (N[a]=22085) n[b] (%)	**Placebo (N[a]=22080) n[b] (%)**
Randomized	22085 (100.0)	22080 (100.0)
Not vaccinated	55 (0.2)	50 (0.2)
Dose 1	22030 (99.8)	22030 (99.8)
Dose 2[c]	21759 (98.5)	21650 (98.1)
<14 Days	0	2 (0.0)
14 to 20 Days	7374 (33.4)	7283 (33.0)
21 to 27 Days	13823 (62.6)	13850 (62.7)
28 to 34 Days	249 (1.1)	300 (1.4)
35 to 41 Days	96 (0.4)	90 (0.4)
42 to 48 Days	59 (0.3)	47 (0.2)
49 to 55 Days	43 (0.2)	38 (0.2)
>55 Days	115 (0.5)	40 (0.2)
Dose 3 (first dose of BNT162b2 [30 µg])		19612 (88.8)
Dose 4 (second dose of BNT162b2 [30 µg])[d]		15986 (72.4)
<14 Days		2 (0.0)
14 to 20 Days		4980 (22.6)
21 to 27 Days		10617 (48.1)
28 to 34 Days		247 (1.1)
35 to 41 Days		92 (0.4)
42 to 48 Days		34 (0.2)
49 to 55 Days		12 (0.1)
>55 Days		2 (0.0)

Note: Human immunodeficiency virus (HIV)-positive subjects are included in this summary but analyzed and reported separately.
a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects with the specified characteristic.
c. Days calculated since Dose 1.
d. Days calculated since Dose 3.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (23:24) Source Data: adsl Table Generation: 27MAR2021 (01:37)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/advx s002 time p3 rand

Table 34. Safety Population – Phase 2/3 Subjects ⩾16 Years of Age

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) n[a]	Placebo n[a]	Total n[a] (%)
Randomized[b]			44165
Vaccinated	22032	22025	44060 (99.8)
Safety population	22026	22021	44050 (99.7)
HIV-positive	100	100	200 (0.5)
Indeterminate vaccine[c]			3 (0.0)
Excluded from safety population			115 (0.3)
Reason for exclusion			
Subject did not receive study vaccine			105 (0.2)
Unreliable data due to lack of PI oversight			10 (0.0)

Note: Human immunodeficiency virus (HIV)-positive subjects are included in this summary but analyzed and reported separately.
a. n = Number of subjects with the specified characteristic, or the total sample.
b. This value is the denominator for the percentage calculations.
c. "Indeterminate vaccine" refers to subjects whose vaccine group (as administered) could not be determined. These subjects were not included in the safety analysis but their safety data is listed separately.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (23:24) Source Data: adsl Table Generation: 27MAR2021 (01:42)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adsl s003 pop all p3

Table 35. Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)		
	BNT162b2 (30 µg) (N[a]=22026) n[b] (%)	Placebo (N[a]=22021) n[b] (%)	Total (N[a]=44047) n[b] (%)
Subjects (%) with length of follow-up of:			
Original blinded placebo-controlled follow-up period			
<2 Months	1251 (5.7)	1331 (6.0)	2582 (5.9)
≥2 Months to <4 months	7744 (35.2)	8070 (36.6)	15814 (35.9)
≥4 Months to <6 months	11253 (51.1)	11316 (51.4)	22569 (51.2)
≥6 Months	1778 (8.1)	1304 (5.9)	3082 (7.0)
Total exposure from Dose 2 to cutoff date			
<2 Months	390 (1.8)		
≥2 Months to <4 months	679 (3.1)		
≥4 Months to <6 months	8951 (40.6)		
≥6 Months	12006 (54.5)		

Note: Human immunodeficiency virus (HIV)-positive subjects are included in this summary but analyzed and reported separately.
a. N = number of subjects in the specified group, or the total sample. This value is the denominator for the percentage calculations.
b. n = Number of subjects with the specified characteristic.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (23:24) Source Data: adsl Table Generation: 27MAR2021 (01:37)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/adsl_fu_d2_p3_saf

Table 36. Demographic Characteristics – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ≥16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)
	BNT162b2 (30 µg) (N[a]=12006) n[b] (%)
Sex	
Male	6040 (50.3)
Female	5966 (49.7)
Race	
White	10370 (86.4)
Black or African American	851 (7.1)
American Indian or Alaska Native	55 (0.5)
Asian	452 (3.8)
Native Hawaiian or other Pacific Islander	31 (0.3)
Multiracial	195 (1.6)
Not reported	52 (0.4)
Racial designation	
Japanese	44 (0.4)
Ethnicity	
Hispanic/Latino	3339 (27.8)
Non-Hispanic/non-Latino	8604 (71.7)
Not reported	63 (0.5)
Country	
Argentina	2118 (17.6)
Brazil	596 (5.0)
USA	9292 (77.4)
Age group (at vaccination)	
16-55 Years	6666 (55.5)
>55 Years	5340 (44.5)
Age at vaccination (years)	
Mean (SD)	51.4 (15.44)
Median	53.0
Min, max	(18, 85)
Baseline SARS-CoV-2 status	
Positive[c]	250 (2.1)
Negative[d]	11678 (97.3)
Missing	78 (0.6)
Body mass index (BMI)	
Underweight (<18.5 kg/m^2)	136 (1.1)
Normal weight (≥18.5 kg/m^2 - 24.9 kg/m^2)	3527 (29.4)
Overweight (≥25.0 kg/m^2 - 29.9 kg/m^2)	4232 (35.2)

Table 36. Demographic Characteristics – Subjects With at Least 6 Months of Follow-up Time After Dose 2 – Phase 2/3 Subjects ⩾16 Years of Age (Subjects Who Originally Received BNT162b2) – Safety Population

	Vaccine Group (as Administered)
	BNT162b2 (30 µg) (N[a]=12006) n[b] (%)
Obese (≥30.0 kg/m^2)	4107 (34.2)
Missing	4 (0.0)

Abbreviation: SARS-CoV-2 = severe acute respiratory syndrome coronavirus 2.
Note: Human immunodeficiency virus (HIV)-positive subjects are included in this summary but analyzed and reported separately.
a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects with the specified characteristic.
c. Positive N-binding antibody result at Visit 1, positive NAAT result at Visit 1, or medical history of COVID-19.
d. Negative N-binding antibody result at Visit 1, negative NAAT result at Visit 1, and no medical history of COVID-19.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (23:24) Source Data: adsl Table Generation: 27MAR2021 (15:19)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File: ./nda2_unblinded/C4591001_BLA/adsl_s005_demo_6m_p3_saf

Table 37. Demographic Characteristics – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)
	BNT162b2 (30 µg) (N[a]=19611) n[b] (%)
Sex	
Male	9841 (50.2)
Female	9770 (49.8)
Race	
White	16299 (83.1)
Black or African American	1636 (8.3)
American Indian or Alaska Native	189 (1.0)
Asian	849 (4.3)
Native Hawaiian or other Pacific Islander	28 (0.1)
Multiracial	509 (2.6)
Not reported	101 (0.5)
Racial designation	
Japanese	77 (0.4)
Ethnicity	
Hispanic/Latino	5002 (25.5)
Non-Hispanic/non-Latino	14499 (73.9)
Not reported	110 (0.6)
Country	
Argentina	2612 (13.3)
Brazil	1428 (7.3)
Germany	241 (1.2)
South Africa	362 (1.8)
Turkey	242 (1.2)
USA	14726 (75.1)
Age group (at vaccination)	
16-55 Years	11404 (58.2)
>55 Years	8207 (41.8)
Age at vaccination (years)	
Mean (SD)	50.1 (15.91)
Median	51.0
Min, max	(16, 91)
Baseline SARS-CoV-2 status	
Positive[c]	590 (3.0)
Negative[d]	18909 (96.4)
Missing	112 (0.6)
Body mass index (BMI)	

Table 37. Demographic Characteristics – Subjects Who Originally Received Placebo and Then Received BNT162b2 After Unblinding – Phase 2/3 Subjects ⩾16 Years of Age – Safety Population

	Vaccine Group (as Administered)
	BNT162b2 (30 µg) (N[a]=19611) n[b] (%)
Underweight (<18.5 kg/m^2)	258 (1.3)
Normal weight (≥18.5 kg/m^2 - 24.9 kg/m^2)	5805 (29.6)
Overweight (≥25.0 kg/m^2 - 29.9 kg/m^2)	6790 (34.6)
Obese (≥30.0 kg/m^2)	6753 (34.4)
Missing	5 (0.0)

Abbreviation: SARS-CoV-2 = severe acute respiratory syndrome coronavirus 2.
Note: Human immunodeficiency virus (HIV)-positive subjects are included in this summary but analyzed and reported separately.
a. N = number of subjects in the specified group. This value is the denominator for the percentage calculations.
b. n = Number of subjects with the specified characteristic.
c. Positive N-binding antibody result at Visit 1, positive NAAT result at Visit 1, or medical history of COVID-19.
d. Negative N-binding antibody result at Visit 1, negative NAAT result at Visit 1, and no medical history of COVID-19.
PFIZER CONFIDENTIAL SDTM Creation: 25MAR2021 (23:24) Source Data: adsl Table Generation: 27MAR2021 (15:20)
(Cutoff Date: 13MAR2021, Snapshot Date: 25MAR2021) Output File:
./nda2 unblinded/C4591001 BLA/adsl s005 demo cr p3 saf

2.7.4.7. REFERENCES

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