



## STATISTICAL ANALYSIS PLAN


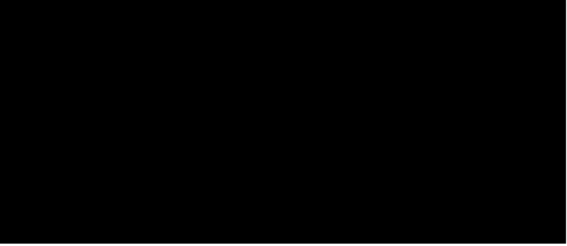
**Study Protocol Number:** BGB-DXP604-101

**Study Protocol Title:** A Phase 1, Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Safety, Tolerability, Pharmacokinetics, and Immunogenicity of BGB-DXP604 Alone and in Combination With BGB-DXP593 in Healthy Subjects


**Date:** 26 May 2021


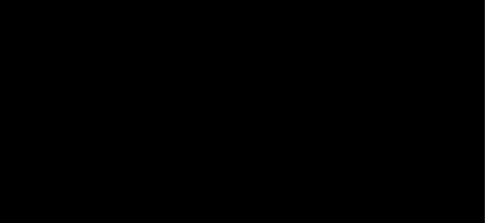
**Version:** 1.0

## SIGNATURE PAGE

<p><b>Author:</b>    <b>Senior Statistician, Statistics and Data Science</b></p> <p>_____ Signature</p> <p>_____ Date: _</p>	<p>DocuSigned by:  </p>
---	---

### Approval

<p>  <b>VP, Global Statistics and Data Science</b></p> <p>_____ Signature</p> <p>_____ Date: _</p>	<p>DocuSigned by:  </p>
---	---

<p>  <b>Senior Director, Clinical Development</b></p> <p>_____ Signature</p> <p>_____ Date: _</p>	<p>DocuSigned by:  </p>
--	---

**TABLE OF CONTENTS**

LIST OF ABBREVIATIONS AND DEFINITIONS OF TERMS.....	5
1. .... INTRODUCTION .....	6
2. .... STUDY OVERVIEW .....	6
3. .... STUDY OBJECTIVES .....	7
3.1. .... Primary Objective .....	7
3.2. .... Secondary Objective .....	7
4. .... STUDY ENDPOINTS.....	7
4.1. .... Primary Endpoint(s).....	7
4.2. .... Secondary Endpoints .....	8
5. .... SAMPLE SIZE CONSIDERATIONS .....	8
6. .... STATISTICAL METHODS.....	8
6.1. .... Analysis Sets.....	8
6.2. .... Data Analysis General Considerations .....	8
6.2.1. .... Definitions and Computations .....	8
6.2.2. .... Conventions .....	9
6.2.3. .... Handling of Missing Data.....	9
6.2.4. .... Multiplicity Adjustment.....	9
6.2.5. .... Data Integrity .....	10
6.3. .... Subject Characteristics.....	10
6.3.1. .... Subject Disposition.....	10
6.3.2. .... Protocol Deviations .....	10
6.3.3. .... Demographic and Other Baseline Characteristics .....	10
6.3.4. .... Prior and Concomitant Medications .....	10
6.3.5. .... Medical History .....	11
6.4. .... Efficacy Analysis.....	11
6.5. .... Safety Analyses .....	11
6.5.1. .... Extent of Exposure .....	11
6.5.2. .... Adverse Events .....	11
6.5.3. .... Laboratory Values .....	12
6.5.4. .... Vital Signs .....	12
6.5.5. .... Electrocardiograms (ECG) .....	12

6.6..... Pharmacokinetic Analyses.....13

6.6.1..... Calculation of Serum Pharmacokinetic Parameters .....13

6.6.2..... Reporting of Pharmacokinetic Concentrations for Descriptive Statistics .....14

6.6.3..... Plots of Pharmacokinetic concentrations.....14

6.6.4..... Reporting of PK Parameters for Descriptive Statistics.....14

6.6.5..... Software.....15

6.7..... Immunogenicity Analyses .....15

7..... INTERIM ANALYSIS .....16

8..... CHANGES IN THE PLANNED ANALYSIS .....16

9..... REFERENCES .....17

APPENDIX A. IMPUTATION OF MISSING OR PARTIALLY MISSING DATES.....18

**LIST OF TABLES**

Table 1: ..... Planned Cohorts and Number of Subjects in Each Cohort.....7

Table 2: ..... Statistical analysis plan change .....16

**LIST OF ABBREVIATIONS AND DEFINITIONS OF TERMS**

<b>Abbreviation</b>	<b>Definition</b>
ADA	antidrug antibody
AE	adverse event
ATC	anatomical therapeutic chemical
AUC	area under the concentration-time curve
BGB-DXP593	code name for monoclonal antibody BGB-DXP593, also named DXP593, BD-368-2, and WBP2281
BGB-DXP604	code name for monoclonal antibody BGB-DXP604, also named DXP-604, BD-604, and WBP2316
BLQ	below the assay quantification limit
BMI	body mass index
CL	clearance
C <sub>max</sub>	maximum observed concentration
CV	coefficient of variance
ECG	electrocardiogram
eCRF	electronic case report form
LLOQ	lower limit of quantitation
MedDRA <sup>®</sup>	Medical Dictionary for Regulatory Activities
NAb	Neutralizing antibody
NCI-CTCAE	National Cancer Institute Common Terminology Criteria for Adverse Events
PK	pharmacokinetic
PT	preferred term
SAE	serious adverse event
SAP	statistical analysis plan
SMC	Safety Monitoring Committee
SOC	system organ class
SD	standard deviation
TEAE	treatment-emergent adverse event
t <sub>1/2</sub>	terminal half-life
t <sub>max</sub>	time to maximum observed concentration
V <sub>Z</sub>	volume of distribution
WHO DD	world health organization drug dictionary

## 1. INTRODUCTION

The purpose of this statistical analysis plan (SAP) is to describe the procedures and the statistical methods that will be used to analyze and report results for BGB-DXP604-101, A Phase 1, Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Safety, Tolerability, Pharmacokinetics, and Immunogenicity of BGB-DXP604 Alone and in Combination With BGB-DXP593 in Healthy Subjects. The focus of this SAP is for the planned final analysis specified in the study protocol.

Reference materials for this statistical plan include the BGB-DXP604-101 Original Protocol dated on 23 November 2020.

## 2. STUDY OVERVIEW

This is a phase 1, randomized, double-blind, placebo-controlled study to investigate the safety, tolerability, pharmacokinetics, and immunogenicity of BGB-DXP604 alone and in combination with BGB-DXP593 in healthy subjects.

After providing written informed consent, subjects will complete all screening assessments. After being confirmed as eligible, subjects will be sequentially enrolled for 2 cohorts of different dose levels (referred to as Part 1). Two dose levels are planned for eligible subjects to receive a single intravenous dose of study drug (ie, BGB-DXP604 or placebo) at 10 mg/kg or 30 mg/kg, respectively.

Enrollment will begin at the 10 mg/kg dose level. Each dose level of study drug evaluated may be referred to as a cohort or dose level.

In Part 2, the combination of BGB-DXP604 and BGB-DXP593 will be tested in eligible subjects. Subjects enrolled in Cohort 2A will either receive the combination of BGB-DXP604 and BGB-DXP593 or placebo (ie, the normal saline with volume equal to BGB-DXP604 or BGB-DXP593 via separate intravenous infusions). The doses of BGB-DXP604 and BGB-DXP593 will be recommended by SMC and not exceed 30 mg/kg for each study drug.

In this study, after the last subject in the current cohort has received the study drug and has been followed up for  $\geq 5$  days, the Safety Monitoring Committee (SMC) will review the available safety and laboratory data. The next cohort will be initiated after the SMC review. The dose level of BGB-DXP604 in Cohort 1B and Cohort 2A may be adjusted based on SMC recommendation.

In each cohort, eligible subjects will be randomized at a 3:1 ratio (6 active: 2 control) to the active arm for receiving the study drug(s) (ie, BGB-DXP604 alone or the combination of BGB-DXP604 and BGB-DXP593) or to the control arm for receiving placebo, respectively. For safety reasons, the sentinel dosing will be adopted for each cohort. In other words, 2 eligible subjects will be randomized at a 1:1 ratio (1 active: 1 control) to receive the study drug(s) or placebo on Day 1; the remaining subjects will be randomized at a 5:1 ratio (5 active: 1 control) to receive the study drug(s) or placebo  $\geq 48$  hours later, provided that satisfactory safety and tolerability has been demonstrated for the first 2 subjects randomized and dosed in the current cohort.

The planned cohorts and number of subjects in each cohort are provided in [Table 1](#). Up to 30 subjects (including possible replacement) will be enrolled in the study.

Subjects are expected to be available for follow-up visits until Day 113 of the study. Subjects will be replaced if they cannot complete the infusion or they do not receive any study drug after randomization. Subjects may be replaced if they discontinue from the study before Day 29.

**Table 1: Planned Cohorts and Number of Subjects in Each Cohort**

Part	Cohort	Number of Subjects	
		Active Arm	Control Arm (Normal Saline)
1: BGB-DXP604 alone	1A: 10 mg/kg	6	2
	1B: 30 mg/kg <sup>a</sup>	6	2
2: BGB-DXP604 + BGB-DXP593	2A: 30 mg/kg <sup>b</sup> BGB-DXP604 + 30 mg/kg <sup>b</sup> BGB-DXP593	6	2

Abbreviation: SMC, Safety Monitoring Committee.

<sup>a</sup> The dose level of BGB-DXP604 in Cohort 1B may be adjusted based on SMC recommendation.

<sup>b</sup> The doses of BGB-DXP604 and BGB-DXP593 in Cohort 2A will be recommended by SMC and not exceed 30 mg/kg for each study drug.

Subjects will be monitored for safety, tolerability, PK and immunogenicity of BGB-DXP604 and BGB-DXP593 throughout the study.

### 3. STUDY OBJECTIVES

#### 3.1. Primary Objective

- To investigate the safety and tolerability of BGB-DXP604 alone and in combination with BGB-DXP593 in healthy subjects

#### 3.2. Secondary Objective

- To characterize the PK profile of BGB-DXP604 when given alone in healthy subjects
- To characterize the PK profiles of BGB-DXP604 and BGB-DXP593 when given in combination in healthy subjects
- To evaluate the potential immunogenicity of BGB-DXP604 when given alone in healthy subjects
- To evaluate the potential immunogenicity of BGB-DXP604 and BGB-DXP593 when given in combination in healthy subjects

### 4. STUDY ENDPOINTS

#### 4.1. Primary Endpoint(s)

- Incidence and severity of treatment-emergent adverse events (TEAEs) and treatment-emergent serious adverse events (SAEs)

## 4.2. Secondary Endpoints

- Changes in vital signs and 12-lead electrocardiogram (ECG) parameters from baseline
- Incidence and magnitude of clinical laboratory abnormalities
- Characterize PK concentration-time profile and PK parameters for BGB-DXP604 and BGB-DXP593:  $C_{max}$ ,  $AUC_t$ ,  $AUC_{inf}$ ,  $AUC_{0-29}$ ,  $t_{max}$ ,  $t_{1/2}$ , CL, and  $V_z$  as appropriate
- Clinical immunogenicity of BGB-DXP604 and BGB-DXP593 evaluated through the detection of ADA over time

## 5. SAMPLE SIZE CONSIDERATIONS

A sample size of 8 subjects at each cohort (6 active and 2 control) totaling up to 30 subjects (including possible replacement) is not based on any statistical considerations. The sample size is based on the clinical consideration to provide safety and tolerability information and pharmacological considerations with the need to minimize exposure to healthy subjects in each cohort. No formal inferential statistics will be applied to the safety or PK data.

## 6. STATISTICAL METHODS

### 6.1. Analysis Sets

The Safety Analysis Set will include all the subjects who received either study drug. The Safety Analysis Set is used for all safety analyses.

The PK Analysis Set will include all the subjects who received either study drug and had any measurable concentration of study drug(s). The PK Analysis Set will be used for PK analyses.

The ADA Analysis Set include all the subjects who received either study drug and for whom both baseline ADA and at least 1 postbaseline ADA results are available. The ADA Analysis Set is used for immunogenicity analyses.

### 6.2. Data Analysis General Considerations

#### 6.2.1. Definitions and Computations

Study Day: study day will be calculated in reference to the date of the first dose of study drug. For assessments conducted on or after the date of the dose of study drug, study day will be calculated as (assessment date – the date of the dose of study drug + 1). For assessments conducted before the date of the dose of study drug, study day will be calculated as (assessment date – the date of the dose of study drug). There is no study day 0.

In the situation where the event date is partial or missing, the date will appear partial or missing in the listings. Study day and any corresponding durations will be presented based on the imputations specified in [Appendix A](#).



**Baseline:** baseline is defined as the last non-missing value collected before the first dose of study drug.

All subjects who received placebo from different cohorts will be pooled together into the placebo arm.

### 6.2.2. Conventions

Unless otherwise specified, the following conventions will be applied to all analyses:

- 1 year = 365.25 days. Number of years is calculated as (days/365.25) rounded up to 1 significant digit.
- 1 month = 30.4375 days. Number of months is calculated as (days/30.4375) rounded up to 1 significant digit.
- P-values will be rounded to 4 decimal places. P-values that round to 0.0000 will be presented as '< 0.0001' and p-values that round to 1.000 will be presented as '> 0.9999'.
- For laboratory results collected as  $\geq x$ , the value of the laboratory results will be set as x. For laboratory results collected as  $< x$ , the value of the laboratory results will be set as x divided by 2.
- For by-visit observed data analyses, percentages will be calculated based on the number of subjects with non-missing data as the denominator, unless otherwise specified.
- Unscheduled measurements and retested measurements will not be included in by-visit table summaries and graphs but will contribute to the best/worst case value where required (e.g. shift table). Listings will include scheduled, unscheduled and retest data.
- For continuous endpoints, summary statistics will include n, mean, standard deviation, median, Q1, Q3 and range (minimum and maximum).
- For discrete endpoints, summary statistics will include frequencies and percentages.

### 6.2.3. Handling of Missing Data

Missing data will not be imputed unless otherwise specified. Missing dates or partially missing dates will be imputed conservatively for adverse events and prior/concomitant medications/procedures. Specific rules for the handling of missing or partially missing dates for adverse events and prior/concomitant medications/procedures are provided in [Appendix A](#).

By-visit endpoints will be analyzed using observed data unless otherwise specified. For observed data analyses, missing data will not be imputed, and only the observed records will be included.

### 6.2.4. Multiplicity Adjustment

No multiplicity adjustments will be made in this study.

### **6.2.5. Data Integrity**

Before pre-specified final analysis begins, the integrity of the data should be reviewed to assure fit-for-purpose. The data set for analysis should be an accurate and complete representation of the subjects' relevant outcomes from the clinical database. All data should be complete and reviewed up to a pre-specified cutoff date. Consistency checks and appropriate source data verification should be completed.

## **6.3. Subject Characteristics**

### **6.3.1. Subject Disposition**

The number (percentage) of subjects randomized, treated, discontinued from the study drug and/or study will be counted by treatment group. The primary reason for subjects randomized but not treated and study drug and/or study discontinuation will be summarized according to the categories in the eCRF. A listing of subject disposition will be provided.

### **6.3.2. Protocol Deviations**

Important protocol deviation criteria will be established, and subjects with important protocol deviations will be identified and documented before the database lock.

Important protocol deviations will be summarized and listed by category for all subjects in the Safety Analysis Set. Deviation categories are not mutually exclusive. Multiple deviations within the same category are counted once per subject.

### **6.3.3. Demographic and Other Baseline Characteristics**

Demographics and other baseline characteristics will be summarized by treatment group using descriptive statistics in the Safety Analysis Set. Summary statistics will be presented for continuous variables, and the number (percentage) of subjects in each category will be presented for categorical variables. Continuous variables include but are not limited to age, height, weight, and BMI. Categorical variables include but are not limited to sex, race, and ethnicity. A listing of demographics and other baseline characteristics will be provided.

### **6.3.4. Prior and Concomitant Medications**

Prior medications will be defined as medications that started and stopped before the dose of study drug. Concomitant medications will be defined as medications that (1) started before the dose of study drug and were continuing at the time of the dose of study drug, or (2) started on or after the date of the dose of study drug up to 30 days after the dose of study drug.

Prior and concomitant medications will be coded using the version of World Health Organization Drug Dictionary (WHO DD) drug codes currently in effect at BeiGene at the time of database lock. They will be further coded to the appropriate Anatomical Therapeutic Chemical (ATC) code indicating therapeutic classification.

The number (percentage) of subjects reporting prior and concomitant medications will be summarized by ATC medication class and WHO DD preferred name in the Safety Analysis Set. A listing of prior and concomitant medications will be provided.

### 6.3.5. Medical History

Medical History will be coded using Medical Dictionary for Regulatory Activities (MedDRA) version currently in effect at BeiGene at the time of database lock. The number (percentage) of subjects reporting a history of any medical condition, as recorded on the CRF, will be summarized by system organ class (SOC) and preferred term (PT) in the Safety Analysis Set. A listing of medical history will be provided.

## 6.4. Efficacy Analysis

There is no efficacy analysis planned for this study.

## 6.5. Safety Analyses

All safety analyses will be performed based on the Safety Analysis Set. Descriptive statistics will be used to analyze all safety data.

### 6.5.1. Extent of Exposure

The extent of each study drug exposure will be summarized descriptively for the study drug(s) administered by treatment group. The number (percentage) of subjects with dose interruption and infusion rate decreased will be summarized with the respective reasons by treatment group for each drug.

Subject data listings will be provided for all dosing records.

### 6.5.2. Adverse Events

The AE verbatim descriptions (investigator terms from the eCRF) will be classified into standardized medical terminology using MedDRA. Adverse events will be coded to the MedDRA lowest level term closest to the verbatim term, along with the linked MedDRA PT and primary SOC.

A TEAE is defined as an AE that had an onset date or a worsening in severity from baseline on or after the administration of study drug and up to 30 days after the dose of study drug. Summary tables will generally focus on those AEs that were treatment-emergent. All AEs, treatment-emergent or otherwise, will be presented in subject data listings.

If any of the following TEAEs occurs, the administration of the study drug and the enrollment of new subjects will pause for the current cohort:

- One or more  $\geq$  Grade 4 TEAEs or treatment-emergent SAEs related to study drug(s) as assessed by the investigator in any subject or
- One or more Grade 3 TEAEs related to study drug(s) as assessed by the investigator in 2 or more subjects at the same cohort.

An AE overview table, including the number of subjects with TEAEs, TEAEs with grade 3, TEAEs with grade 4 or higher, treatment-emergent serious adverse events (SAEs), TEAEs that led to death, TEAEs that led to treatment discontinuation, TEAEs that led to treatment modification for study drug, and treatment-related TEAEs, will be provided by treatment group. Treatment-related AEs include those events considered by the investigator to be related to study drug or with a missing assessment of the causal relationship.

The incidence of TEAEs will be reported as the number (percentage) of subjects with TEAEs by SOC, PT and the worst grade. A subject will be counted only once by the highest severity grade according to [NCI-CTCAE version 5.0](#) within a SOC and PT, even if the subject experienced more than one TEAE within a specific SOC and PT. The number (percentage) of subjects with TEAEs will be summarized by SOC and PT.

### 6.5.3. Laboratory Values

Clinical laboratory values will be evaluated for each laboratory parameter as appropriate.

Descriptive summary statistics (n, mean, standard deviation, median, Q1, Q3, minimum, and maximum for continuous variables; n [%] for categorical variables) for laboratory parameters and their changes from baseline will be summarized by visit and treatment group. Change from baseline will only be summarized for subjects with both baseline and postbaseline measurements. The percentage of abnormal values for laboratory parameters will be summarized by visit and treatment group.

Laboratory parameters that are graded in [NCI-CTCAE v5.0](#) will be summarized by shifts from baseline NCI-CTCAE grades to maximum postbaseline grades. In the summary of laboratory parameters by NCI-CTCAE grade, parameters with NCI-CTCAE grading in both high and low directions will be summarized separately.

Subject data listings of each parameter will be provided. Abnormal laboratory values will be flagged and identified as those outside (above or below) the normal range. Reference (normal) ranges for laboratory parameters will be provided.

### 6.5.4. Vital Signs

Descriptive statistics for vital sign parameters (systolic and diastolic blood pressure, pulse rate, respiratory rate, and body temperature), changes from baseline and the percentage of abnormal values will be summarized by visit and treatment group.

Subject data listings of each parameter will be provided. Abnormal values will be flagged and identified as those outside (above or below) the normal range. Reference (normal) ranges for vital signs parameters are defined as following:

- Respiratory rate: 10-22 bpm
- Temperature: 35.5-37.5 °C
- Systolic blood pressure: 90-140 mmHg
- Diastolic blood pressure: 40-90 mmHg
- Pulse rate: 60-100 bpm

### 6.5.5. Electrocardiograms (ECG)

Descriptive statistics for ECG parameters (heart rate and QTcF interval), changes from baseline and the percentage of abnormal values will be summarized by visit and treatment group.

ECG will be listed by treatment group, subject and visit. Abnormal values will be flagged and identified as those outside (above or below) the normal range. Reference (normal) ranges for ECG parameters are defined as following:

- Heart rate: 60-100 bpm
- QTcF interval:  $\leq 450$  msec

## 6.6. Pharmacokinetic Analyses

The following analysis plan provides the framework for the summarization of the PK data from study BGB-DXP604-101. The objective is to assess BGB-DXP604 and BGB-DXP593 PK and characterize PK parameters following a single IV dose. The PK analyses will include only subjects randomized to receive either BGB-DXP604 alone or in combination with BGB-DXP593 and with enough data to enable estimation of key parameters. Additional PK analyses (such as modeling and simulation using nonlinear mixed effects modelling) may be conducted if deemed necessary and will be described in a separate analysis plan.

### 6.6.1. Calculation of Serum Pharmacokinetic Parameters

Actual dose and blood draw times will be used to calculate the PK parameters. Parameters will be listed individually and summarized by treatment group using descriptive statistics.

The following serum PK parameters will be calculated for BGB-DXP604 and BGB-DXP593, as appropriate for the data collected. Other PK parameters may be calculated if supported by the data.

Calculation and presentation of PK parameters will be based on the [Work Instruction: Best Practice Guidance: Non-Compartmental Pharmacokinetic Data Analysis for Clinical Studies. Version 1.0, Document Number VV-QDOC-13140](#).

Parameter (Units)	Definition	Method of Determination
AUC <sub>0-29</sub> (µg·day/mL)	Area under the serum concentration versus time curve from 0 to Day 29	Calculated using the linear up/log down variant of the trapezoidal rule
AUC <sub>0-8</sub> (µg·day/mL)	Area under the serum concentration versus time curve from Day 1 to Day 8	Calculated using the linear up/log down variant of the trapezoidal rule
AUC <sub>0-15</sub> (µg·day/mL)	Area under the serum concentration versus time curve from Day 1 to Day 15	Calculated using the linear up/log down variant of the trapezoidal rule
AUC <sub>last</sub> (µg·day/mL)	AUC from time zero to time of last quantifiable concentration	Calculated using the linear up/log down variant of the trapezoidal rule
AUC <sub>inf</sub> (µg·day/mL)	AUC from zero to infinite time with extrapolation of the terminal phase	Calculated using the linear up/log down variant of the trapezoidal rule
C <sub>max</sub> (µg/mL)	Maximum observed drug concentration during a dosing interval	Reported value
t <sub>max</sub> (h)	Time to reach C <sub>max</sub>	Actual elapsed time for observed C <sub>max</sub>

$t_{1/2}$ (days)	half-life	$\ln(2)/\lambda_z$ , where $\lambda_z$ is the first-order rate constant of drug associated with the terminal portion of the curve
CL (L/h)	clearance	Calculated as Dose/AUC <sub>inf</sub>
V <sub>z</sub> (L)	volume of distribution during the terminal phase	Calculated as CL/ $\lambda_z$ , where $\lambda_z$ is the first-order rate constant of drug associated with the terminal portion of the curve

### 6.6.2. Reporting of Pharmacokinetic Concentrations for Descriptive Statistics

The PK analyst will appropriately flag and annotate treatment of any anomalous concentrations, exclusions and any special treatment for descriptive statistics and plots. The concentration and time data of BGB-DXP604 and BGB-DXP593 will be listed individually and summarized by treatment group using descriptive statistics.

The following conventions will be used for reporting descriptive statistics for concentration data.

- PK concentrations should be reported in listings at the same level of precision as that in the source data.
- If a concentration at a given time point is below the assay quantification limit (BLQ), the concentration shall be reported as the term “BLQ” with the lower limit of quantitation (LLOQ) defined in the footnotes. BLQ values shall be treated as zero for computation of descriptive statistics.
- If a concentration at a given time point is missing it shall be reported as a missing value. Missing values may be defined in a bioanalytical source as “NS” (no sample), “NR” (no result), “IS” (insufficient sample), etc. If missing data are not identified in the bioanalytical source (i.e., the record is missing), the reporting convention of “NS” shall be utilized.
- If the calculated mean concentration is BLQ, the mean value shall be reported in outputs (such as tables) as BLQ and SD and geometric CV% shall be reported as ND (not determined). Minimum, median, and maximum may be reported.

### 6.6.3. Plots of Pharmacokinetic concentrations

For BGB-DXP604 and BGB-DXP593, concentration versus time data will be plotted individually and summarized graphically using arithmetic mean ( $\pm$ SD) plots by treatment group, respectively. Arithmetic mean concentrations that are BLQ shall be set to zero for plotting on both linear scale and log-linear scale.

### 6.6.4. Reporting of PK Parameters for Descriptive Statistics

The PK analyst will appropriately flag and annotate treatment of any anomalous PK parameters, exclusions and any special treatment for descriptive statistics.

- All the PK parameters should have at least the following summary statistics: sample size (n), mean, standard deviation (SD), coefficient of variance (CV%), median, minimum, maximum, geometric mean, geometric CV%.

- For in-text tables, Geometric mean (geometric CV%) will be the default method of reporting PK parameters.  $t_{\max}$  should be presented as median, range (minimum, maximum), when presenting the summary statistics.  $t_{1/2}$  should be presented as arithmetic mean, range (minimum, maximum).
- For any parameters that  $n \leq 2$ , SD should not be presented.
- The units for all PK parameters will be provided.
- It is recognized that the number of decimals in reported concentrations, for example: “9632.94401 ng/mL” or “9.963294401 ug/mL” are highly improbable and will be queried (since bioanalytical assays generally do not have this level of precision). Usually the first-in-human dose escalation trial will provide the numerical range of PK parameters e.g. AUC range from 10 to 10,000 ng.hr/mL and  $C_{\max}$  range from 1 to 1000 ng/mL.

In this scenario, for reporting PK parameters such as AUC and  $C_{\max}$ , the following guidance is provided for rounding:

- If the numerical value is below 100 then one decimal place may be used e.g. 0.1 or 99.9.
- For values ranging from >100, whole numbers should be used e.g. 100 or 9999.
- If > 10,000 the clinical pharmacologist may decide on changing units e.g. from  $\mu\text{g/ml}$  to mg/ml.
- For reporting times e.g. for  $t_{\max}$  or  $t_{1/2}$ , if <1 hr use 2 decimals; time up to 24 hr should be reported to one decimal place e.g. 23.5 hr, time >24 hr should be rounded to nearest whole number e.g. 105 hr.

#### 6.6.5. Software

For the calculations of PK parameters Phoenix® WinNonlin® Version 7.0 or higher (Certara, NJ, USA) will be used.

### 6.7. Immunogenicity Analyses

The scope of anti-drug antibodies (ADA) calculations used for characterizing clinical immunogenicity depend on the incidence and kinetics of detected (ADA). Therefore, not all parameters described below may be derived.

The immunogenicity results will be summarized using descriptive statistics by the number and percentage of subjects who develop detectable ADAs. The incidence of positive and neutralizing ADAs will be reported for ADA-evaluable subjects according to the following definitions:

- ADA-evaluable subject: Number of subjects with reportable non-missing baseline result and at least one reportable sample taken after drug administration during the treatment or follow-up observation period with reportable result (used for computing treatment-induced ADA incidence).
- Treatment-emergent ADA: The sum of both treatment-boosted and treatment-induced ADA-positive subjects. Synonymous with “ADA Incidence”.

- Treatment-induced ADA: ADA-evaluable subjects that were ADA-negative at baseline and ADA-positive following administration of biologic product.
- Treatment-boosted ADA: Baseline-positive ADA-evaluable subject with significant increases (4-fold or higher) in ADA titer after biologic drug administration. Baseline-positive ADA-evaluable subject is an ADA-evaluable subject with positive ADA result.
- Persistent ADA: Treatment-induced ADA detected at two or more sampling time points during the treatment (including follow-up period if any), where the first and last ADA-positive samples (irrespective of any negative samples in between) are separated by a period of 16 weeks or longer.
- Transient ADA: Treatment-induced ADA detected only at one sampling time point during the treatment or follow-up observation period, or two or more time points during the treatment, where the first and last ADA-positive samples are separated by a period of less than 16 weeks, and the subject last sampling time point is ADA-negative.
- Neutralizing ADA: patients with positive NAb.

The immunogenicity results will also be listed.

Additional ADA analyses (such as the effect of immunogenicity on PK, and safety) may be conducted if deemed necessary and will be described in a separate analysis plan.

## 7. INTERIM ANALYSIS

There is no formal interim analysis planned for this study.

## 8. CHANGES IN THE PLANNED ANALYSIS

Table 2 summarizes the major change in the planned analyses from the statistical section of the study protocol, including the timing, rationale and descriptions of the changes. The change is made before database lock and not based on any comparative data.

**Table 2: Statistical analysis plan change**

SAP version	Approval date	Change made from	Rationale of the change	Description of the change
1.0	<i>This Version</i>	<i>Protocol V0.0</i>	To avoid prior medications overlap with concomitant medications.	The definition of Prior medication was changed from “started before the dose of study drug” to “started and stopped before the dose of study drug”.



## 9. REFERENCES

Common Terminology Criteria for Adverse Events (CTCAE). Version 5.0. United States Department of Health and Human Services, National Institutes of Health, National Cancer Institute, Washington, DC, USA, November 27, 2017.

Work Instruction: Best Practice Guidance: Non-Compartmental Pharmacokinetic Data Analysis for Clinical Studies. Version 1.0, Document Number VV-QDOC-13140.

## APPENDIX A. IMPUTATION OF MISSING OR PARTIALLY MISSING DATES

In general, missing or partial dates will not be imputed at the data level. The following rules will apply for the specific analysis and summary purposes mentioned below only.

### 1. Adverse Events

If AE start (onset) date or end date is missing or partial missing, the following imputation rules apply.

If end date of an adverse event is partially missing, impute as follows:

- If both month and day are missing, then set to December 31
- If only day is missing, then set to last day of the month
- If the imputed end date > death date, then set to death date

If year of the end date is missing or end date is completely missing, do not impute.

If start date of an adverse event is partially missing, impute as follows:

- If both month and day are missing and year = year of treatment start date, then set to treatment start date
- If both month and day are missing and year  $\neq$  year of treatment start date, then set to January 01
- If day is missing and month and year = month and year of treatment start date, then set to treatment start date
- If day is missing and month and year  $\neq$  month and year of treatment start date, then set to first day of the month
- If the imputed start date > death date, then set to death date

If year of the start date is missing or start date is completely missing, do not impute.

If the imputed start date > the end date (or the imputed end date), set the imputed start date = end date (or the imputed end date).

### 2. Prior/Concomitant Medications/Procedures

When the start date or end date of a medication/procedure is partially missing, the date will be imputed to determine whether the medication/procedure is prior or concomitant. The following rules will be applied to impute partial dates for medication/procedure:

If start date of a medication/procedure is partially missing, impute as follows:

- If both month and day are missing, then set to January 01
- If only day is missing, then set to the first day of the month
- If the imputed start date > death date, then set to death date

If end date of a medication/procedure is partially missing, impute as follows:

- If both month and day are missing, then set to December 31

- If only day is missing, then set to last day of the month
- If the imputed end date > death date, then set to death date

If the year of start date or year of end date of a medication/procedure is missing, or the start date or end date is completely missing, do not impute.