Statistical Analysis Plan: I6T-MC-AMBZ

A Multicenter, Phase 3b, Open-Label, Single-Arm Study to Investigate Bowel Urgency and its Relationship with Other Outcome Measures in Adults with Moderately to Severely Active Ulcerative Colitis Treated with Mirikizumab

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Statistical Analysis Plan

Protocol Title:

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Protocol Number: I6T-MC-AMBZ

Compound Number: Mirikizumab (LY3074828)

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Statistical Analysis Plan Signature Page

Statistical Analysis Plan V3.0 (Dated 21NOV2024) for Protocol I6T-MC-AMBZ.

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Upon review of this document, the undersigned approves this version of the Statistical Analysis Plan, authorizing that the content is acceptable for the reporting of this study.

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Table of Contents

Statist	ical Analysis Plan	1
Statist	ical Analysis Plan Signature Page	2
Table (of Contents	3
Abbre	viations and Definitions	5
Versio	n history	9
1.	Introduction	11
1.1.	Objectives, Endpoints, and Estimands	11
1.2.	Study Design	
2.	Statistical Hypotheses	19
2.1.	Multiplicity Adjustment	19
3.	Analysis Sets	20
4.	Statistical Analyses	
4.1.	General Considerations	
4.1.1.	Analysis Methods	
4.1.2.	Definition of Baseline	
4.1.3.	Definition of Study Period Time Interval	
4.1.4.	Missing Data Imputation	
4.1.5.	Protocol Deviations	
4.2.	Participant Dispositions, Baseline Characteristics and Medical History	
4.2.1.	Demographics and Baseline Characteristics	
4.2.2.	Non-UC Medical History	
4.3.	Primary Endpoint Analysis	
4.3.1.	Definition of Endpoint(s)	
4.3.2.	Main Analytical Approach	
4.4.	Secondary Endpoints Analysis	
4.4.1.	Definition of Endpoint(s)	
4.4.2. 4.5.	Main Analytical Approach	
CCI	Exploratory Endpoints Analysis	20
4.6.	Safety Analyses	27
4.6.1.	Extent of Exposure	27
4.6.2.	Adverse Events	27
4.6.3.	Clinical Laboratory Evaluations	31
4.6.4.	Vital Signs and Other Physical Findings	32
4.6.5.	Electrocardiograms	32
4.6.6.	Immunogenicity	
4.6.7.	Concomitant Therapy/ Procedure	
4.6.8.	Substance Use	
4.6.9.	Extraintestinal Manifestations of Inflammatory Bowel Disease	
4.7.	Other Analyses	
4.7.1.	Other variables and parameters	
4.7.2.	Subgroup analyses	33
4.8 Int	erim Analyses	33

4.9 Cr	nanges to Protocol-Planned Analyses	33
5. San	nple Size Determination	34
6.	Supporting Documentation	35
6.1.	Appendix 1: Description and Derivation of Efficacy and Health	
	Outcome Endpoints	35
6.2.	Appendix 2: Description of Analyses	48
6.3.	Appendix 3: Demographic and Baseline Characteristics	
6.4.	Appendix 4: Treatment Compliance	56
6.5.	Appendix 5: Clinical Trial Registry Analyses	
6.6.	Appendix 6: Study Visit or Week Definition for Daily Diary	
7.	References	60

Abbreviations and Definitions

Term	Definition	
5-ASA	5-aminosalicylic acid	
ADA	anti-drug antibody	
AE	adverse event	
AESI	adverse event of special interest	
ALP	alkaline phosphatase	
ALT	alanine aminotransferase	
ANCOVA	analysis of covariance	
AP	abdominal pain	
APU	absorbent product use	
AST	aspartate aminotransferase	
ATC	anatomical therapeutic chemical	
AZA	azathioprine	
BMI	body mass index	
BOCF	baseline observation carried forward	
CCI		
CAP	continued access period	
CFB	change from baseline	
CI	confidence intervals	
CMI	clinically meaningful improvement	
CCI		
CSR	Clinical Study Report	
ECG	electrocardiogram	
eCRF	Electronic case report form; an electronic document designed to record all the protocol-required information to be reported to the sponsor for each trial participant	
EIM	extraintestinal manifestation	
ES	endoscopic subscore	
FAS	Full Analysis Set	

Term	Definition	
CCI		
HLT	High Level Terms	
IBD	Inflammatory Bowel Disease	
CCI		
ICH	International Council for Harmonisation	
informed consent	A process by which a participant voluntarily confirms their willingness to participate in a particular study, after having been informed of all aspects of the study that are relevant to the participant's decision to participate. Informed consent is documented by means of a written, signed, and dated informed consent form	
interim analysis	An interim analysis is an analysis of clinical study data, separated into treatment groups, that is conducted before the final reporting database is created or locked	
investigational product	A pharmaceutical form of an active ingredient or placebo being tested or used as a reference in a clinical trial, including products already on the market when used or assembled (formulated or packaged) in a way different from the authorized form, or marketed products used for an unauthorized indication, or marketed products used to gain further information about the authorized form.	
ISR	Infusion/Injection Site Reactions	
IV	intravenous	
JAK	Janus Kinase	
LLT	Lowest Level Term	
MACE	major adverse cardiovascular events	
MedDRA	Medical Dictionary for Regulatory Activities	
MI	multiple imputation	
MMS	Modified Mayo Score	
MMX	multi matrix colonic delivery technology	
NAb	neutralizing anti-drug	
NRI	nonresponder imputation	
NRS	numeric rating scale	
OI	opportunistic infections	

Term	Definition	
OR	odds ratio	
Participant	Equivalent to CDISC term "subject": an individual who participates in a clinical trial, either as recipient of an investigational medicinal product or as a control	
PD	Pharmacodynamics	
PGA	Physician's Global Assessment	
CCI		
	у	
PK	pharmacokinetics	
PT	preferred term	
Q4W	once every 4 weeks	
CCI		
QoL	quality of life	
RB	rectal bleeding	
CCI		
S1P	Sphingosine-1-phosphate	
CCI		
SAE	serious adverse event	
SAP	statistical analysis plan	
SC	subcutaneous	
Screen	The act of determining if an individual meets minimum requirements to become part of a pool of potential candidates for participation in a clinical study	
CCI		
SF	stool frequency	
SMD	standardized mean difference	
SMQ	standardized MedDRA query	
SoA	Schedule of Activities	
SOC	system organ class	
ТВ	tuberculosis	

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Term	Definition
TBL	total bilirubin level
TEAE	Treatment-emergent adverse event: An untoward medical occurrence that emerges during a defined treatment period, having been absent pretreatment, or worsens relative to the pretreatment state, and does not necessarily have to have a causal relationship with this treatment
TNF	tumor necrosis factor
UC	ulcerative colitis
ULN	upper limit of normal
UNRS	urgency numeric rating scale
CCI	

Version history

This Statistical Analysis Plan (SAP) for study I6T-MC-AMBZ is based on the protocol dated 16FEB2023.

 Table AMBZ.1.0.
 SAP Version History Summary

SAP Version	Approval Date	Change	Rationale
1.0	05APR2023	Not Applicable	Original version
2.0	24APR2024	No Changes	Version updated to reflect yearly review
3.0	21NOV2024	Section 1.2	Added details about the continued access period and continued access follow-up period start and stop details
		Table AMBZ.4.1.	Updated language for period definition to accommodate Continued Access Period.
		Section 4.3.2 Main analytical approach	Added explanation for odds ratio, Youden's index and standardized mean difference methods.
		Table AMBZ4.2	Switched binary and continuous variables in the ANCOVA analysis
		Table AMBZ4.3	Added footnotes to describe confidence interval analysis
		Table AMBZ.4.3 Table AMBZ.6.2.	Updated APU for bowel urgency from bowel urgency measures to QoL measures, adjusted table for APU correlation analysis accordingly.
		4.6.2 Adverse Events	Added additional explanation for TEAE definition. Updated language that some safety analysis listings may be provided as appropriate.
		4.6.7 Concomitant Therapy/ Procedure	Updated procedures from 'will be summarized' to 'may be summarized.'
		Section 4.5.1	Added CCI to analysis.
		Table AMBZ.6.1.	Updated language for description and definition of
		Table AMBZ.6.3	Removed CCI from options on the prior therapy eCRF for biologic agents in footnote.

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		Updated definition of location of disease
		Added a footnote for definition of S1P.
		Added prior advanced therapy exposure and prior advanced and biologic therapy failure.
		Updated prior therapy exposure and failure
	Table AMBZ.6.4.	Updated language for daily diary time window calculation.

1.

Introduction

This document describes the rules and conventions to be used in presenting and analyzing the efficacy and safety data for the AMBZ study. It describes the data and details statistical analyses that will be performed.

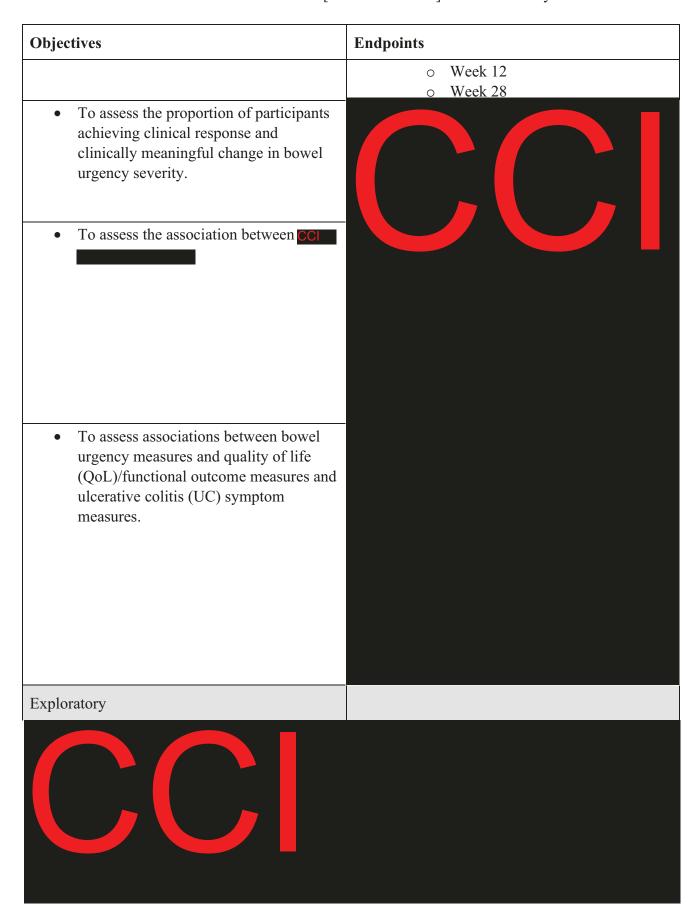
There are no changes to the analyses described in the protocol.

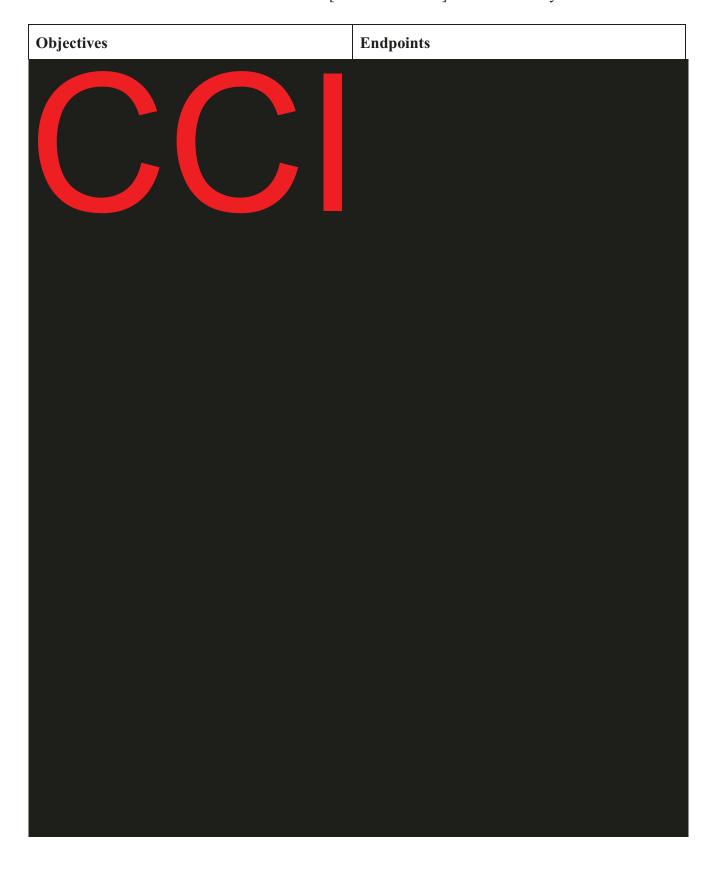
1.1. Objectives, Endpoints, and Estimands

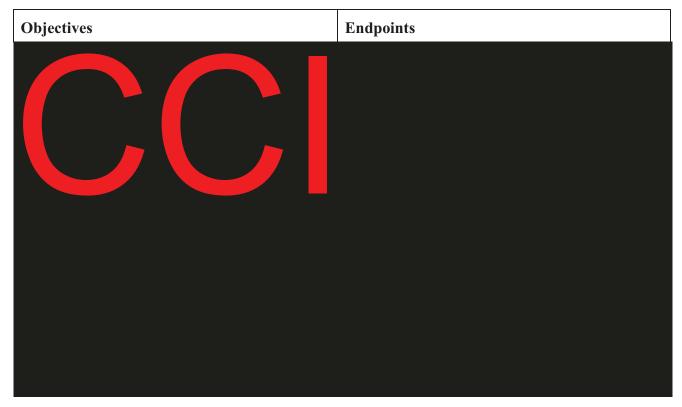
Table <u>AMBZ.1.1</u> shows the protocol-defined primary, secondary and exploratory objectives and endpoints of the study. The estimands (ICH E9R1 2017) associated with primary and secondary endpoint/analysis are also described in this section.

Table AMBZ.1.1. Study objectives and endpoints

Objectives	Endpoints
Primary	
• To assess the improvement in bowel urgency severity at Week 12.	Change from baseline in bowel urgency severity (UNRS) score at Week 12.
Secondary	
 To assess the improvement in bowel urgency severity at Week . To assess the improvement in . 	
• To assess the improvement in CCI	
• To assess the proportion of participants achieving clinical remission and a UNRS score	







Abbreviations: QoL = quality of life; UC = ulcerative colitis; UNRS = urgency numeric rating scale.







1.2. Study Design

This is a multicenter, open-label, single-arm Phase 3b study to investigate bowel urgency and its relationship with other outcome measures in participants with moderately to severely active UC treated with mirikizumab over a colored week period.

Design

The study will have 4 study periods:

Period I (days)

Participants must complete all Visit 1 screening activities within days prior to Visit 2. The screening endoscopy must occur within days prior to Visit 2.

Period II (weeks)
Participants will receive CCI mg mirikizumab CCI
Period III (weeks)
Participants will receive CCI mg mirikizumab CCI

Note: Participants planning to participate in continued access must complete self-administration training during at least 2 visits between Visits 6 and 9 (see Section 6.1.1 of protocol). Upon completion of all Visit 10 activities, eligible participants may enter the Continued Access Period.

Period IV

Participants who meet the following criteria should enter posttreatment follow-up, including completion of Visit 801:



Continued Access Period (CAP)

Participants who successfully completed Visit 10 and are eligible to enter the CAP. Participants will enter the CAP on the same day that they complete Visit 10 and remain until they discontinue from treatment in the CAP portion of the study. The CAP period will begin at dose of Visit 501 minus 1 minute and end at treatment discontinuation visit.

Continued Access Follow-up Period

Participants who entered the CAP and then discontinued treatment will enter the CAP follow-up period. They exit the CAP follow-up period when they complete Visit 901.

See <u>Figure AMBZ.1</u> in this SAP for schema. The Schedule of Activities (SoA) is described in Section 1.3 of protocol.



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^a Participants who are eligible for continued access should move directly from Visit 10 to Visit 501, on the same day, if possible. Visit 801 should not be performed.

b Optional Continued Access Period is described in Section 10.12 of the protocol.

2. Statistical Hypotheses

The primary objective is to assess the improvement from baseline in UNRS in participants treated with mirikizumab at Week. No formal hypothesis testing will be performed on the primary endpoint.

2.1. Multiplicity Adjustment

Multiplicity control is not applicable for this study.

3. Analysis Sets

Analysis sets are defined in <u>Table AMBZ.3.1</u> along with the planned analysis for each set. For both analysis sets, participants will be analyzed according to their assigned treatment unless otherwise specified.

Table AMBZ.3.1. Analysis sets

Population	Description		
Full Analysis	Definition: All participants who are assigned to treatment and receive at least 1		
Set (FAS)	(partial or complete) dose of study treatment (regardless of whether the participant		
	does not receive the correct treatment, or otherwise does not follow the protocol).		
	Purpose: Used for efficacy and health outcomes analysis		
Safety Analysis	Definition: All participants who are assigned to treatment and receive at least 1		
Set	(partial or complete) dose of study treatment (regardless of whether the participant		
	does not receive the correct treatment, or otherwise does not follow the protocol).		
	Purpose: Used for safety-related analysis		

4. Statistical Analyses

4.1. General Considerations

Statistical analysis of this study will be the responsibility of Eli Lilly and Company (hereafter Lilly) or its designee. The statistical analyses will be performed using SAS® Version 9.4 or higher. The version of the Medical Dictionary for Regulatory Activities (MedDRA®) will be 24.0 or higher.

Any change to the data analysis methods in the protocol will require an amendment only if it changes a principal feature of the protocol. Additional exploratory analyses of the data will be conducted as deemed appropriate. Not all displays and analyses described in this SAP will necessarily be included in the clinical study report (CSR). Not all displays will necessarily be created as a "static" display. Some displays may be incorporated as interactive display tools instead of or in addition to a static display.

4.1.1. Analysis Methods

When reported, descriptive statistics will include the number of participants; mean, standard deviation, median, minimum, first and third quartile, and maximum for continuous measures; frequency counts and percentages for categorical measures; and estimate and 95% confidence intervals (CI) for correlation coefficients.

4.1.2. Definition of Baseline

For efficacy and health outcomes analysis, baseline refers to the values or observations collected prior to or on the day of the initiation of study treatment in Study AMBZ, unless otherwise specified.

The baseline for variables collected as part of the daily diary (including the patient-reported outcomes components of the Modified Mayo Score, stool frequency (SF) and rectal bleeding (RB) subscores) will be calculated from valid daily diary entries obtained prior to baseline endoscopy preparation (see Appendix 6). The baseline endoscopy component of the Mayo Score will use the endoscopic appearance of the mucosa at the AMBZ screening endoscopy. For other efficacy and health outcome assessments, baseline is defined as the last non-missing assessment recorded on or prior to the date of the first study drug administration at Visit 2 (Week 0) in Study AMBZ.

Baseline for safety analysis is described in the Section 4.6.2 and Section 4.6.3.

Change from baseline will be calculated as the visit value of interest minus the baseline value. If a baseline value or the value at the visit is missing for a particular variable, then the change from baseline is defined as missing.

4.1.3. Definition of Study Period Time Interval

<u>Table AMBZ.4.1</u> displays a list of study periods along with the definition of which participants will be considered to have entered the study period and when the individuals start and end the study period (refer to <u>Appendix 6</u> for additional details on study visits and study weeks). See Section 10.12 of protocol for more details about Continued Access Period (CAP).

To calculate the length of any time interval or time period in this study the following formula will be used:

 $Length\ of\ interval\ (days) = End\ Date\ -\ Interval\ Start\ Date\ +\ 1$

To convert any time length from days to years, the following formula will be used:

Length of interval (years) = Length of interval (days)/365.25

To convert any time length from days to weeks, the following formula will be used:

Length of interval (weeks) = Length of interval (days) /7

Only for the purpose of calculating the length of study period time intervals, the words "prior to" in <u>Table AMBZ.4.1</u> should be understood to mean "the day/time before" while the words "after" should be understood to mean "the day/time after." For the purpose of determining whether a date/time lies within an interval, these words are intended to convey whether the start or end of the period is inclusive of the specified date.

Table AMBZ.4.1. Definition of Main Study Period Time Intervals (excluding Continued Access Period)

Main Study Period	Interval Start Definition	Interval End Definition	
Period I (Screening):	Informed consent date	Prior to the start of study	
All participants who sign		treatment.	
informed consent are considered			
as entering the Screening Period.			
Period II (CCI mg mirikizumab	At the date/time of first	Prior to first administration of	
<u>cci</u>):	administration of CCI mg	cci mg mirikizumab cci, or	
All participants who received any	mirikizumab 🚾	discontinuation of study	
amount of mirikizumab are		treatment, whichever is earlier	
considered as entering Period II			
and the treatment period.			
Period III (CCI mg	At the date/time of first	Week Visit, or	
mirikizumab <mark>COI</mark>):	administration of CCI mg	discontinuation of study	
All participants who received any	mirikizumab CCI	treatment, whichever is earlier	
amount of mirikizumab on are			
considered as entering Period III.			
Period IV (Follow up)	After last date of any study	The maximum of the last	
All participants who discontinued	treatment period for patients	study visit and study	
mirikizumab treatment prior to	who did not enter CAP.	disposition date for patients	
Visit 10, or completed Visit 10		who did not enter CAP.	
and who did not enter CAP are			
considered to have entered the			
follow-up period.			

Abbreviations: CCI CAP = continued access period.

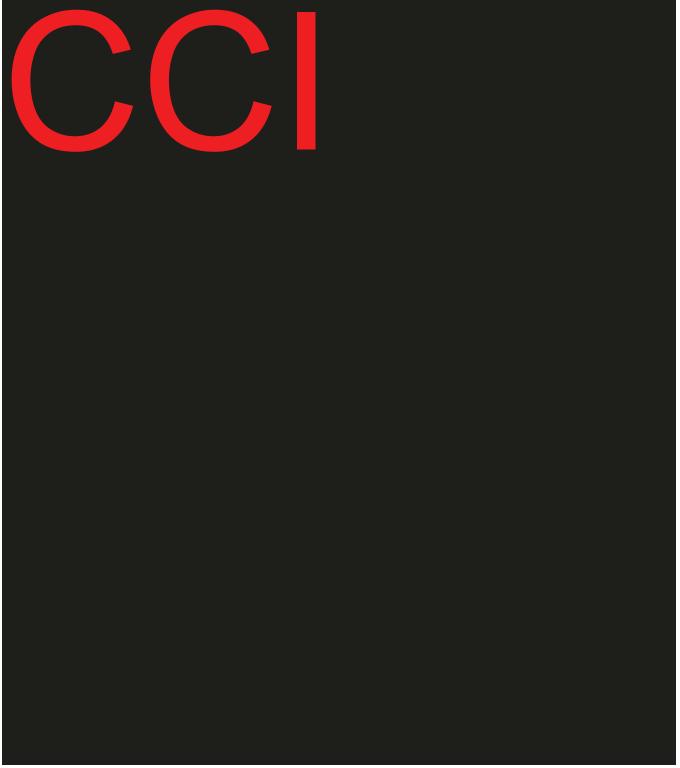
The CCI

The coweek analysis will include analysis through Week (Period III) but will not include analysis during the CAP. All safety and efficacy data will be included unless otherwise specified.

The CAP analysis will include a basic safety analysis, including disposition, analysis of AEs, vital signs, and lab data. Additional analysis during CAP will be performed as appropriate. All data from screening to end of CAP will be generally included.

4.1.4. Missing Data Imputation

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4.1.5. Protocol Deviations

Protocol deviations will be identified throughout the study. The protocol deviation categories will be described per Protocol Deviation Management Plan and Trial Issues Management Plan by clinical team. Important protocol deviations are defined in Protocol Deviation Management Plan as those deviations from the protocol that may significantly impact the completeness, accuracy and/or reliability of study data or that may significantly affect a subject's rights, safety or well-being.

4.2. Participant Dispositions, Baseline Characteristics and Medical History

The treatment disposition and study disposition will be summarized for the FAS population. The reason for discontinuation from treatment and from study will be included.

All FAS participants who discontinued from the study and/or study treatment during any period of the study will be listed with the reported study treatment discontinuation and study discontinuation times. If known, a reason for their discontinuation will be given.

4.2.1. Demographics and Baseline Characteristics

Summaries and listings of the demographic and baseline characteristics detailed in <u>Appendix 3</u> will be presented.

4.2.2. Non-UC Medical History

Non-UC medical history will be collected on the Pre-Existing Conditions and Medical History case report form (CRF) and coded using MedDRA version 24.0 or higher. The version used to code medical history will be displayed in the outputs. All medical history will be summarized for the Safety Set by system organ class and preferred term. Prespecified medical history of liver and concurrent disease, hypersensitivity event, and associated person medical history of liver disease collected on the respective CRFs will also be summarized.

4.3. Primary Endpoint Analysis

4.3.1. **Definition of Endpoint(s)**

The primary endpoint is defined in <u>Table AMBZ.1.1</u>, description and derivation of endpoints are described in <u>Table AMBZ.6.1</u>.

4.3.2. Main Analytical Approach

Analysis of the primary endpoint is described in Table AMBZ.6.2.

continuous measure for each participant as the average daily diary score over a day period. The difference between the UNRS score at Week and at baseline will be calculated for each participan
and averaged. CCI
CCI

4.4. Secondary Endpoints Analysis

Section 4.1.4.

4.4.1. **Definition of Endpoint(s)**

The secondary endpoint is defined in <u>Table AMBZ.1.1</u> Derivation details are described in <u>Table AMBZ.6.1</u>.

4.4.2. Main Analytical Approach

The analysis of the secondary endpoints is described in <u>Table AMBZ.6.2</u>. Descriptive summaries and CI will be provided for continuous and binary secondary endpoints as indicated in Section 4.1.1.

Analysis of association between secondary endpoints is described in <u>Table AMBZ.4.2</u> and <u>Table AMBZ.4.3</u>. At Week or Week these analyses will be performed among participants with available data that do not discontinue prior to the time point of interest.

Table AMBZ.4.2. Type of Endpoints and Association Analyses

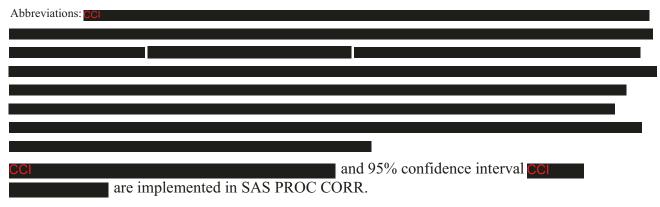
Dependent Outcome	Explanatory Outcome	Analysis
Continuous	Continuous	
Continuous	Binary	UUI
Binary	Binary	

Abbreviations: COl Youden's index (Youden 1950) (Kadel 2012); YI =

Table AMBZ.4.3. Type of Assessments and Endpoints for Association Analyses

Assessments	Endpoint Type	Endpoint	
Bowel Urgency	Continuous	UNRS, BUF, SDT, CCI	
Assessments			
	Binary	UNRS CMI, UNRS Remission	
QoL/Function Measures	Continuous	CCI	
	Binary	CCI	
Symptom/ Symptom Severity of UC	Continuous	CCI	
	Binary	CCI	
Histological Features	Continuous	(Analysis value, and CFB if applicable)	

Assessments	Endpoint Type	Endpoint
	Binary	
Additional Exploratory Measures	Continuous	



The odds ratio (OR) is calculated using logistic regression with 95% Wald confidence intervals, as implemented in SAS PROC LOGISTIC.

The Youden's Index (YI) and corresponding 95% confidence intervals are calculated using the equations presented in Youden, W.J. (1950).

The standardized mean difference (SMD) is calculated by mean difference divided by pooled standard deviation, where pooled standard deviation is obtained by taking the square root of the weighted average of the variances of each group in binary outcome, where the weights are the degrees of freedom of each group.

4.5. Exploratory Endpoints Analysis

Analysis of the exploratory endpoints other than gene expression endpoints are described in <u>Table AMBZ.6.2</u>. Analysis of associations between exploratory endpoints is described in <u>Table AMBZ.4.2</u> and AMBZ.4.3.





4.6. Safety Analyses

Safety will be assessed by describing the following: AEs, laboratory analytes, vital signs, and adverse events of special interest (AESIs). Additional analysis will be included if applicable.

4.6.1. Extent of Exposure

Duration of exposure to study treatment will be summarized for the safety population. For the study periods of interest, exposure will be calculated as the time period length in years (see Section 4.1.3) with start and end dates described in Table AMBZ.4.1.

Total participant-years of exposure will be reported by treatment. Descriptive statistics will be provided for participant-weeks of exposure and the frequency of participants falling into different exposure ranges will be summarized. Exposure ranges will generally be reported in weeks using the following as a guide:

- >0 to <4 weeks, ≥ 4 weeks to <8 weeks, ≥ 8 weeks to <12 weeks, ≥ 12 weeks to <16 weeks, ≥ 16 weeks to <20 weeks, ≥ 20 weeks to <24 weeks, ≥ 24 weeks to <28 weeks.
- $>0, \ge 4$ weeks, ≥ 8 weeks, ≥ 12 weeks, ≥ 16 weeks, ≥ 20 weeks, ≥ 24 weeks, ≥ 28 weeks.

Additional exposure ranges may be considered if necessary.

Treatment compliance will be summarized as described in <u>Appendix 4</u>. Interruption of study treatment and the reasons drug not administered will be summarized for injection and infusion separately.

4.6.2. Adverse Events

A treatment-emergent adverse event (TEAE) is defined as an event that first occurred or worsened in severity after baseline. Pre-existing events will be considered to determine TEAE. The MedDRA Lowest Level Term (LLT) will be used in the Treatment-emergent computation. The maximum severity for each LLT during the baseline period will be used as baseline. The treatment period will be included as postbaseline for the analysis. For events with a missing severity during the baseline period, it will be treated as 'mild' in severity for determining treatment-emergence. Events with a missing severity during the postbaseline period will be treated as 'severe' and treatment-emergence will be determined by comparing to baseline severity. For events occurring on the day of first taking study medication, the start times of the study treatment and AE will be used to determine whether the event was pre-versus posttreatment. If start time for the AE is missing, it will be assumed to have started in the postbaseline period.

In an overview table, the number and percentage of participants with at least 1 TEAE, serious adverse event (SAE), fatal SAE, or discontinuation from study treatment due to an AE will be summarized. TEAEs (all and by maximum severity), SAEs, including deaths, and AEs that lead to treatment discontinuation will be summarized and analyzed by MedDRA system organ class (SOC) and PT or by PT alone. Potential AESIs will be summarized, which include:



See <u>Section 4.6.2.1</u> for detailed description on AESI.

Summary tables as described in <u>Table AMBZ.4.4</u> will be presented. Summary tables will include the number and percentage of participants reporting an event. For events that are gender-specific (as defined by MedDRA), the number of participants at risk will include only participants from the given gender. Listing of AEs may be provided as deemed appropriate.

Table AMBZ.4.4. Summary Tables Related to Adverse Events

Analysis		
Overview of AEs		
Summary of TEAE PTs by decreasing frequency		
Summary of TEAE PTs occurring in >=1% of participants by decreasing frequency		
Summary of TEAE PTs by decreasing frequency within SOC		
Summary of TEAE PTs by maximum severity by decreasing frequency within SOC		
Summary of SAE PTs by decreasing frequency within SOC		
Summary of fatal SAE PTs by decreasing frequency within SOC		
Summary of AEs leading to study treatment discontinuation by decreasing frequency of PTs within SOC		
Listing of SAEs		

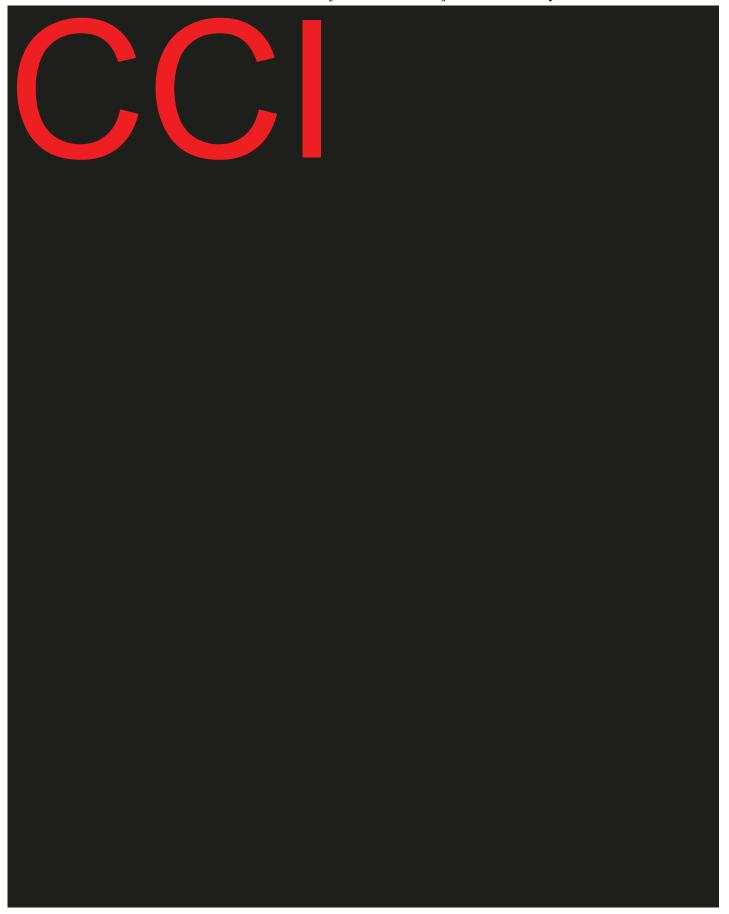
Abbreviations: AE = adverse event; AESI = adverse event of special interest; PT = preferred term; SAE = serious adverse event; SOC = system organ class; TEAE = treatment-emergent adverse event.

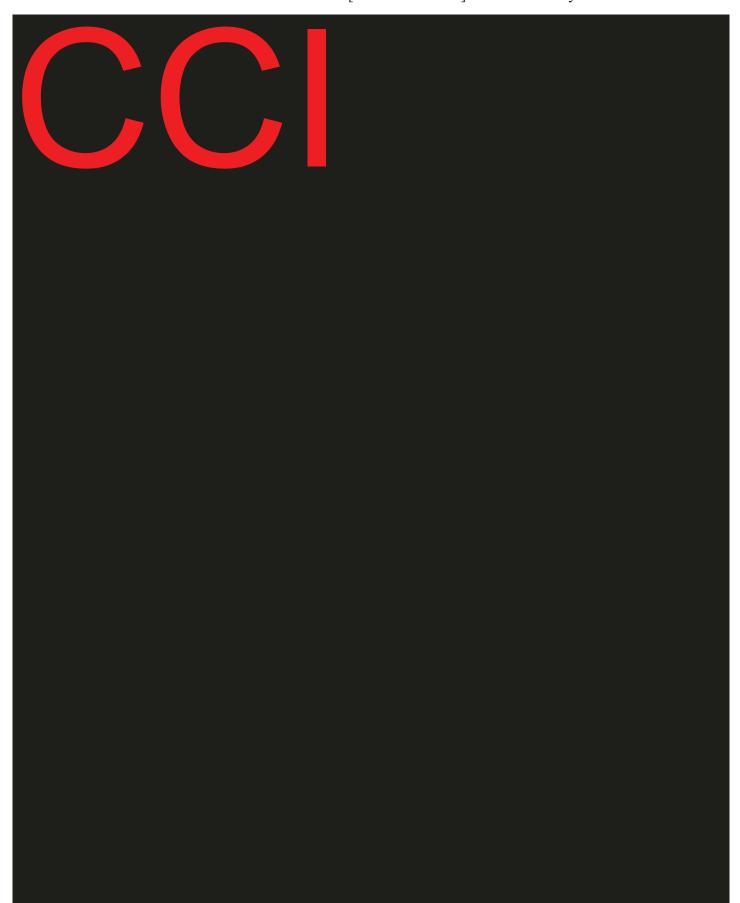
4.6.2.1. Special Safety Topics including Adverse Events of Special Interest

This section includes areas of interest whether due to observed safety findings, potential findings based on drug class, or safety topics anticipated to be requested by a regulatory agency for any reason. In general, potential AESIs relevant to these special safety topics will be identified by one or more standardized MedDRA query(ies) (SMQs), by a Lilly defined MedDRA PT listing based upon the review of the most current MedDRA Version, or by TE relevant laboratory changes, as described below. Additional special safety topics may be added as warranted.

Unless otherwise specified, the treatment-emergent AESIs will be summarized for the safety population.

Full details of the search terms and rules for deriving AESIs in each of the sections below are described in the compound level safety standards along with information about the types of summaries and listings to be provided.







4.6.3. Clinical Laboratory Evaluations

As described more fully in compound level safety standards and in the laboratory-related PhUSE white papers [PhUSE 2013; PhUSE 2015], the clinical laboratory evaluations will be summarized with the following displays described in <u>Table AMBZ.4.5</u>:

Table AMBZ.4.5. Summaries/Displays/Analysis for Clinical Laboratory Evaluations

Analysis

Box plots of observed values (and change from baseline values) by visit. Change from baseline to last observation will be summarized within the box plot of changes (rightmost column), and descriptive summary statistics will be included in a table below the box plot.

Treatment-emergent abnormal high lab values (i.e., participants shifting from a normal/low maximum baseline value to a high maximum postbaseline.

Scatter plot of maximum (minimum) postbaseline value vs. maximum (minimum) baseline value if appropriate.

Shift tables showing the number of participants who shift from each category of maximum (minimum) baseline observation to each category of maximum (minimum) postbaseline observation. Here categories may be low, normal or high with cutoffs defined in the compound level safety standards.

For these displays, the postbaseline periods will be identical to those described in <u>Table AMBZ.4.1</u>. Postbaseline measurement for continuous analysis (e.g., boxplots) will include *only*

scheduled measurements, while postbaseline categorical analysis (e.g., shifts) will include *both* scheduled and unscheduled measurements.

For any lab performed on the day of first taking study medication at the start of the postbaseline period, the start time of the study treatment will be used to determine whether the lab was preversus postbaseline. If time for the lab is missing, it will be assumed to be in the baseline period (i.e., we assume the protocol-defined order of procedures was followed). Following the compound level safety standards, for some labs a safety concern may exist for only high (or only low) values. For these labs, displays with only maximum (or minimum) values will be used, and shift tables will be presented accordingly.

Hepatic serology, hematology, chemistry and coagulation tests will be done by local laboratory. Descriptive statistics of the test results will be summarized in a table. Summary will be done using standardized units (SI).

Screening assessment of Tuberculosis (TB) and evaluation of TB during the study will be listed, as appropriate.

4.6.4. Vital Signs and Other Physical Findings

As described more fully in compound level safety standards and in the vital signs-related PhUSE white papers [PhUSE 2013; PhUSE 2015], vital signs will be summarized similarly to the clinical laboratory evaluation (see Section 4.6.3). For vital signs, the low and high limits are based on a combination of a specified value and a change or percentage change. In this case, the PhUSE white paper recommends providing scatter plots and shifts to low/high. Boxplots will also be presented.

4.6.5. Electrocardiograms

Complete electrocardiogram (ECG) data will not be part of the clinical database for this study. Any clinically significant findings from ECGs that result in a diagnosis and that occur after the participant receives the first dose of the investigational treatment will be reported to Lilly or its designee as an AE via eCRF. Aside from standard AE summary tables no additional analysis of ECG data will be performed.

4.6.6. Immunogenicity



Compound level safety standards will be followed in the analyses of immunogenicity. Listings of immunogenicity assessments may be provided along with the summary of specified TEAEs by TE ADA status. The summary of TE ADA and NAb status may be produced as appropriate. Additional assessments of the relationship between immunogenicity and efficacy will be performed as deemed appropriate.

4.6.7. Concomitant Therapy/ Procedure

Medications will be classified into anatomical therapeutic chemical (ATC) drug classes using the latest version of the World Health Organization (WHO) drug dictionary. Medication start and stop

dates will be compared to the date of first dose of treatment to allow medications to be classified as Concomitant for treatment period.

Prior medications are those medications that start and stop prior to the date of first dose of study treatment. Concomitant medications are those medications that start before, on or after the first dose of study treatment and end on or after the date of first dose of study treatment or are ongoing at the end of the study. If it cannot be determined whether a medication is concomitant or not due to a partial or missing date, the medication will be treated as concomitant.

Concomitant medications may be summarized by ATC and preferred term for the Safety Set and sorted by descending frequency. Prespecified concomitant therapy of acetaminophen/paracetamol may also be summarized.

Concomitant UC-related surgeries will be summarized by procedure type for the Safety Set, as needed. The other procedures including hepatic monitoring procedures and endoscopic procedures will be listed.

Prior and concomitant use of vaccines may be listed as appropriate.

4.6.8. Substance Use

Substance use of alcohol, caffeine, tobacco, nicotine, and recreational drug at screening and change in substance use by visit may be listed, as appropriate.

4.6.9. Extraintestinal Manifestations of Inflammatory Bowel Disease

Extraintestinal manifestations (EIM) of inflammatory bowel disease will be reported in the Inflammatory Bowel Disease (IBD) EIM eCRF by visit and will be summarized by prespecified term.

4.7. Other Analyses

Reference the analyses described in Appendix 5 in this section.

4.7.1. Other variables and parameters

The pharmacokinetic/pharmacodynamics (PK/PD) analyses will be conducted by the PK/PD and Pharmacometrics group at Eli Lilly.

4.7.2. Subgroup analyses

Subgroup analyses may be conducted for all primary and secondary endpoints in the FAS population. The subgroups to be analyzed are listed in <u>Table AMBZ.6.3</u>.

4.8 Interim Analyses

CCI

4.9 Changes to Protocol-Planned Analyses

There are no changes to the analyses described in the protocol.

5. Sample Size Determination

Approximately 160 participants will be assigned to study intervention. The sample size was determined by considering the precision of the estimated correlation between endpoints. Simulations were performed for both binary and continuous measures where the true correlation varied between CCI . The average half width of the 95% CI for the correlations at Week varied between under considered assumptions for an overall sample size of 160. The average half width of the 95% CI varied between for endpoints during the maintenance period under the assumption that CCI of participants could discontinue early from the study.

Additionally, the proposed sample size of 160 participants is considered sufficient to have power to detect a significant (non-zero) change from baseline in UNRS at Week (primary endpoint).

6. Supporting Documentation

6.1. Appendix 1: Description and Derivation of Efficacy and Health Outcome Endpoints

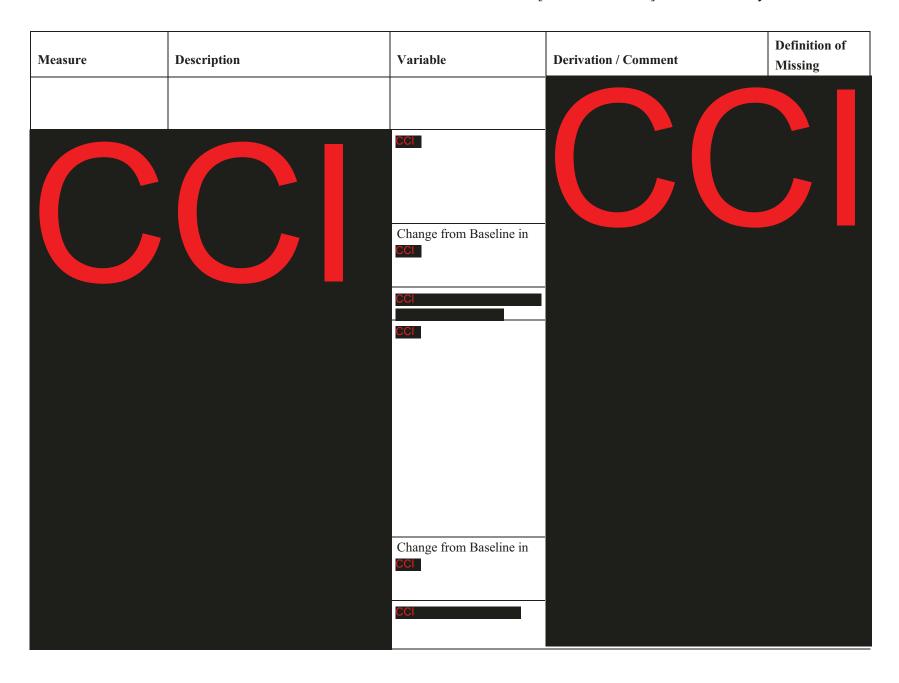
All binary endpoints will be coded as Yes/No, unless otherwise specified.

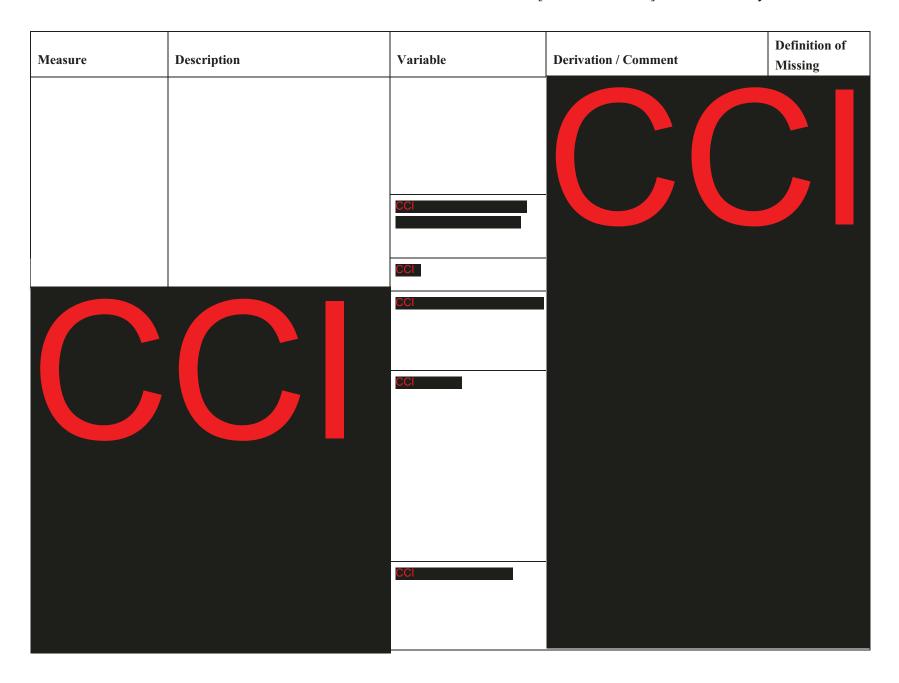
Table AMBZ.6.1. Description and Derivation of Efficacy, Safety and Health Outcomes Measures and Endpoints

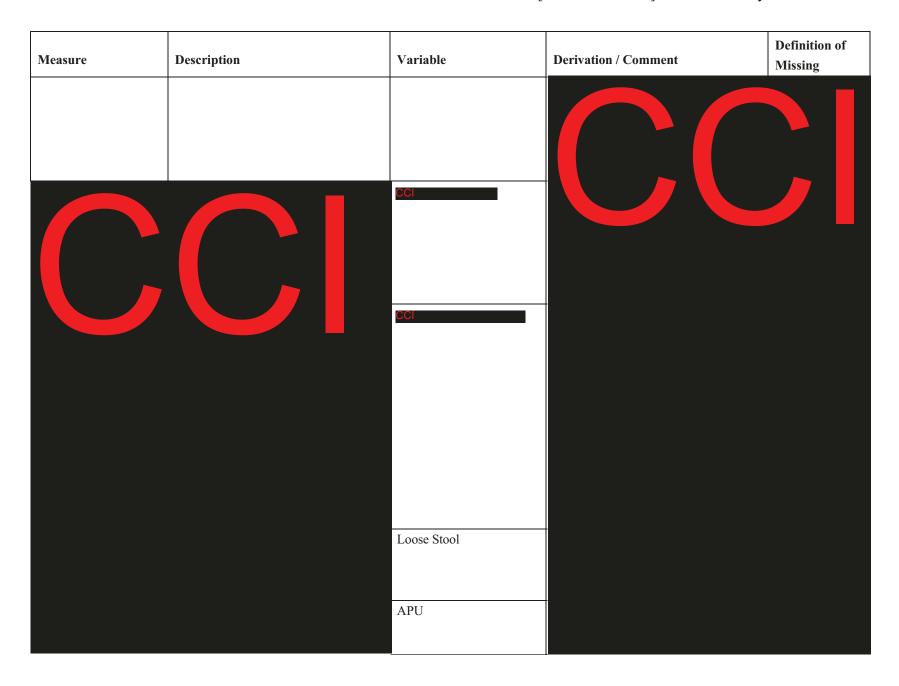
Measure	Description	Variable	Derivation / Comment	Definition of Missing
Mayo Score and components	The Mayo score is a composite instrument to measure Ulcerative Colitis disease activity. It is comprised of the following 4 subscores:	SF subscore		
		RB subscore		
		ES subscore		

Measure	Description	Variable	Derivation / Comment	Definition of Missing
	CCI	PGA subscore		
		Clinical Remission		
		Alternate Clinical Remission		
		Modified Mayo Score	_	
		(MMS)		
		Clinical Response		
		Symptomatic Remission	_	
		Symptomatic Remission		
		SF component of	_	
		clinical remission RB component of	_	
		clinical remission		

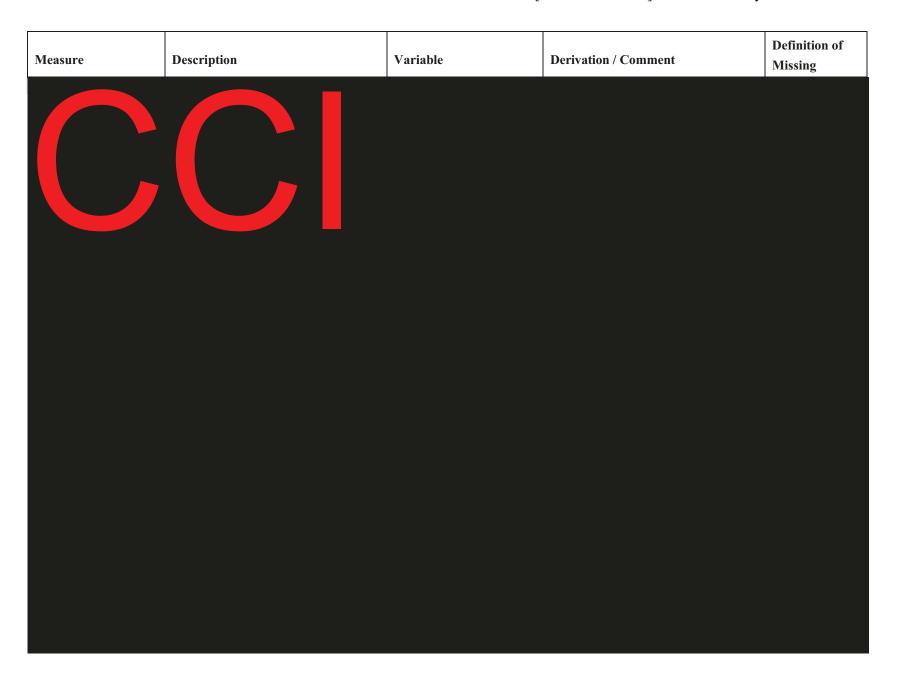
Measure	Description	Variable	Derivation / Comment	Definition of Missing
		Endoscopic Normalization Absolute SF		
		Endoscopic Remission		
Urgency NRS	The Urgency numeric rating scale (NRS) is a single item that measures the severity for the urgency (sudden or immediate need) to have a bowel movement in the past 24 hours using	Urgency NRS		
	an 11-point NRS ranging from 0 ("no urgency") to 10 ("worst possible urgency").	Change from Baseline Urgency NRS		
		Urgency NRS CMI (>=3 Point Improvement)		
		Alternate Urgency NRS Remission		
		Urgency NRS Remission		

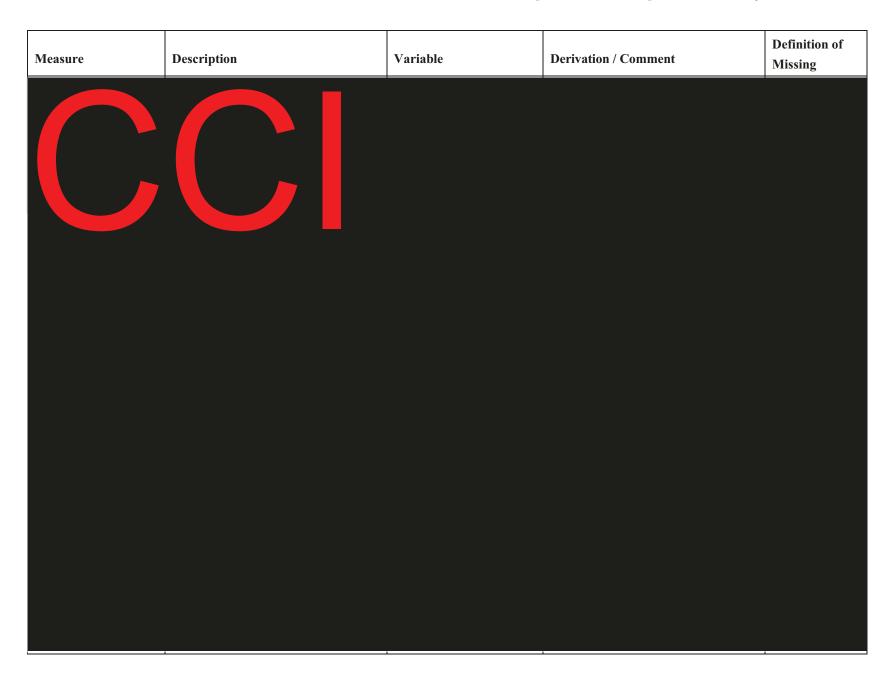


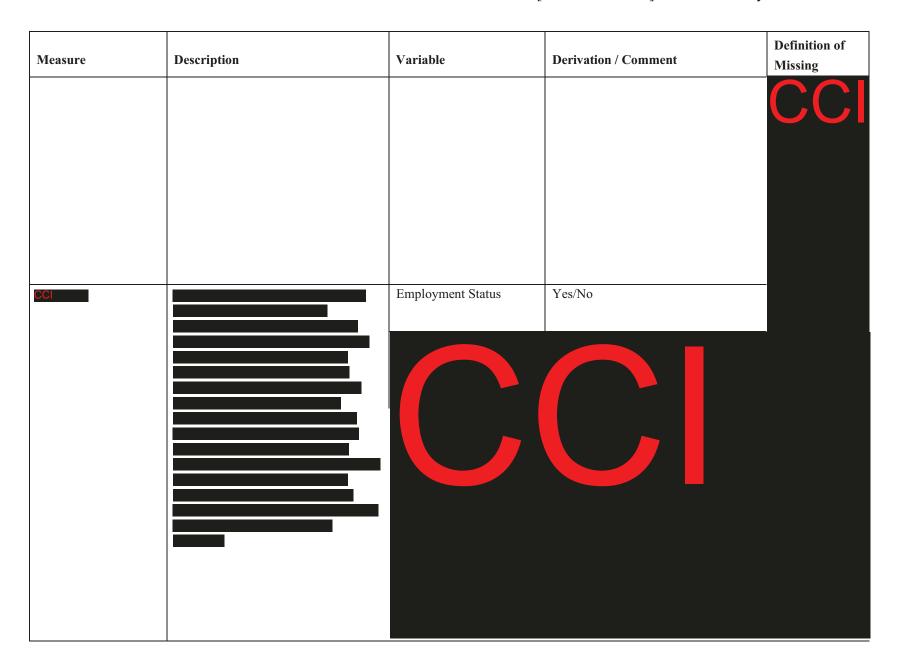


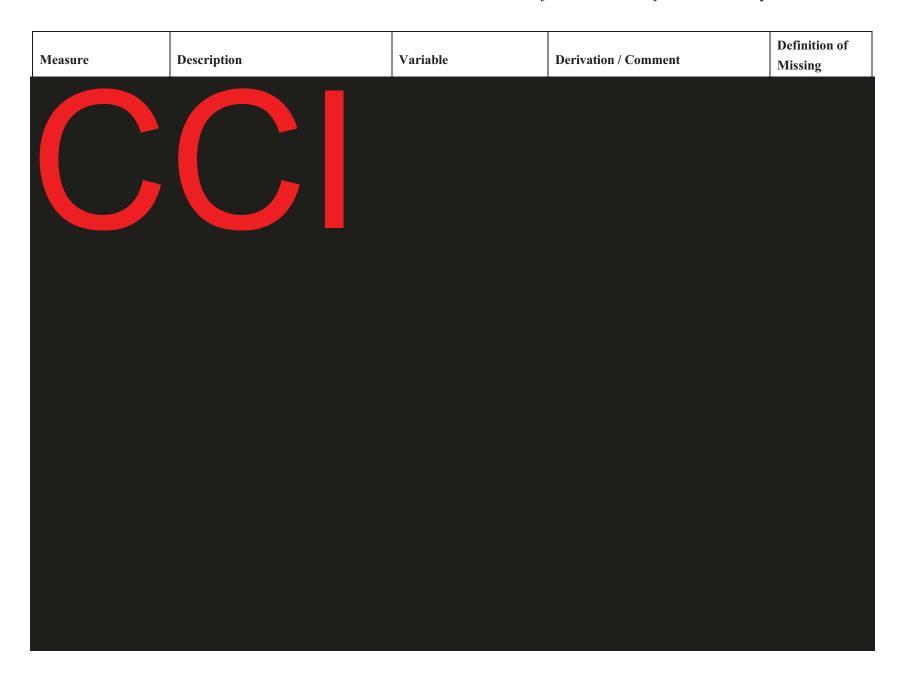


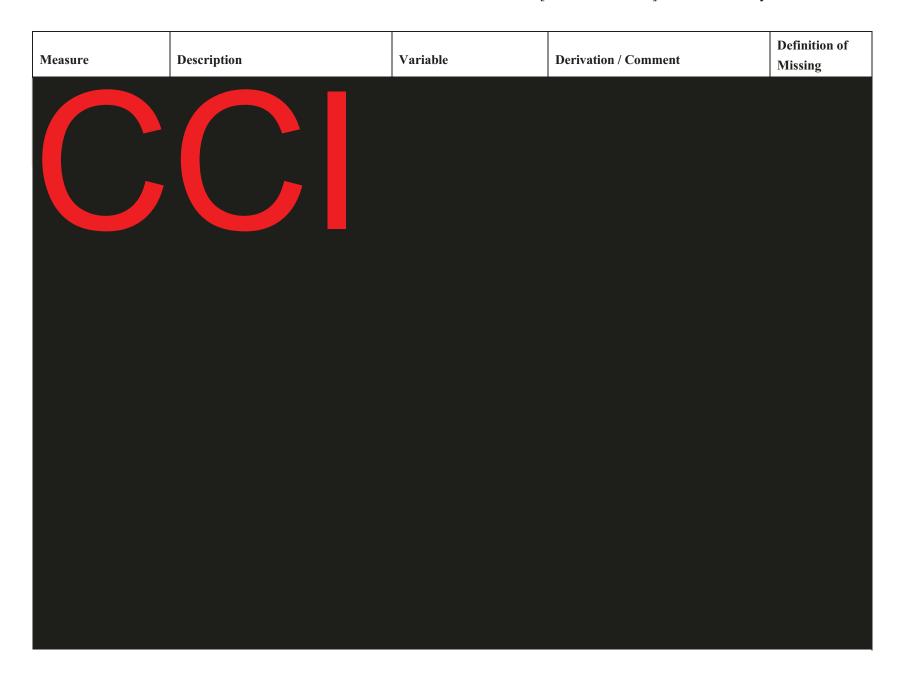
Measure	Description	Variable	Derivation / Comment	Definition of Missing
		Normal Number of Stools	Use the single item collected	CCI
		CCI	Use the single item collected	-
		CCI	CCI	
		CCI	CCI	

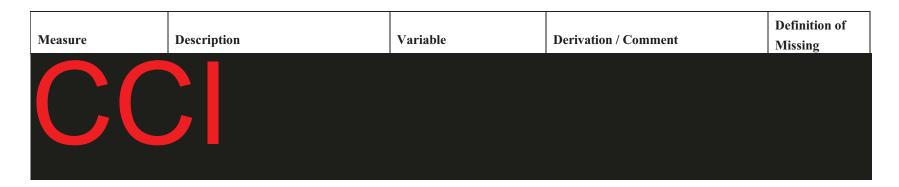












6.2. Appendix 2: Description of Analyses

 Table AMBZ.6.2.
 Description of Efficacy/Health Outcomes Analyses

Measure	Variable	Analysis Method	Population	Time Point(s)
Urgency NRS	CFB in Urgency NRS Score (Primary Endpoint)	Descriptive summaries, including 95% CI	FAS	Baseline (if applicable), CCI
	UNRS CMI	Descriptive summaries, including 95% CI		
	UNRS Remission	Descriptive summaries, including 95% CI		
	Alternate UNRS Remission	Descriptive summaries, including 95% CI		
CCI	CCI	Descriptive summaries, including 95% CI		
	CCI	Descriptive summaries, including 95% CI		
CCI	CCI	Descriptive summaries, including 95% CI		
	CCI	Descriptive summaries, including 95% CI		
CCI	CCI	Descriptive summaries, including 95% CI		
	CCI	Descriptive summaries, including 95% CI		
Mayo Score and Urgency NRS	Clinical Remission and Urgency NRS	Descriptive summaries, including 95% CI		
	Clinical Response and Urgency NRS COI point Improvement	Descriptive summaries, including 95% CI		
Bowel Urgency			•	
Urgency NRS	UNRS	coefficient with CCI	FAS	Baseline (if applicable), CCI
	CFB UNRS	coefficient with CFB		
	UNRS CMI, UNRS Remission	ANCOVA with CCI and CFB CCI		
CCI	CCI	coefficient with CCI		
	CCI	coefficient with CFB CCI		
QoL Analysis				
CCI	CCI	Descriptive summaries, including 95% CI	FAS	Baseline (if applicable), ccl
	CCI	Descriptive summaries,		

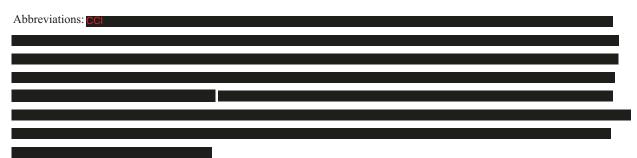
Measure	Variable	Analysis Method	Population	Time Point(s)	
		including 95% CI			
		Descriptive summaries, including 95% CI	FAS	Baseline (if applicable), CCI	
		Descriptive summaries,		applicable), cel	
		including 95% CI			
		Descriptive summaries,			
		including 95% CI			
		Descriptive summaries, including 95% CI			
		Descriptive summaries,			
		including 95% CI			
Bowel	UNRS, CCI	CCI			
Urgency Analysis		Score and component subscores			
Allalysis		CCI			
		component scores			
		ccl			
		Pearson + Spearman correlation			
		coefficient with APU			
	CFB UNRS, CFB	CCI			
	CFB	coefficient with CFB CCI and			
	CCI	component scores			
		coefficient with CFB CCI			
		component scores			
		Pearson + Spearman correlation			
		coefficient with CFB CCI			
		coefficient with CFB APU			
		ANCOVA with CC			
		ANCOVA with CC			
Bowel	UNRS CMI, UNRS Remission	ANCOVA with CFB CCI and			
Urgency Analysis	Remission	ANCOVA with Column and			
		components score			
		ANCOVA with CC			
		components score			
		ANCOVA with CFB ccl components score			
		ANCOVA with CFB CC			
		ANCOVA with CC			
		ANCOVA with CFB CC			
		ANCOVA with CO			
		OR, YI with CCI remission OR, YI with CCI response			
IIC Compton /C	symptom Severity Analy				
oc symptom/S	symptom Severity Analy	7515			
CCI	CCI	Descriptive summaries,	FAS	Baseline (if	
		including 95% CI		applicable), CCI	
CCI	CCI	Descriptive summaries,			

Measure	Variable	Analysis Method	Population	Time Point(s)
		including 95% CI		
Absolute SF	Absolute SF Score	Descriptive summaries,		
2.5	~~ .	including 95% CI		
Mayo	SF subscore	Descriptive summaries,		
	RB subscore	including 95% CI Descriptive summaries,	-	
	KD subscore	including 95% CI		
	MMS	Descriptive summaries,		
		including 95% CI		
	Symptomatic	Descriptive summaries,		
	Remission	including 95% CI		
	Clinical Remission	Descriptive summaries,		
	City is all Decreases	including 95% CI	-	
	Clinical Response	Descriptive summaries, including 95% CI		
	Alternate Clinical	Descriptive summaries,	-	
	Remission	including 95% CI		
Mayo	Endoscopic	Descriptive summaries,	FAS	Baseline (if
	Normalization	including 95% CI		applicable), CCI
	Endoscopic	Descriptive summaries,		
E C NDC	Remission	including 95% CI		
Fatigue NRS	Fatigue NRS Score	Descriptive summaries, including 95% CI		
Abdominal	Abdominal Pain	Descriptive summaries,	-	
Pain NRS	NRS Score	including 95% CI		
Nocturnal stool		Descriptive summaries,		
	Score	including 95% CI		
CCI	CCI	Descriptive summaries,		
		including 95% CI		
	CCI	Descriptive summaries,		
		including 95% CI		
Bowel	UNRS, CCI	CCI		
Urgency Analysis		coefficient with CCI		
Allalysis		coefficient with CCI		
		CCI	1	
		coefficient with Mayo SF		
		CCI		
		coefficient with Absolute SF		
		CCI		
		coefficient with Mayo RB	-	
		coefficient with AP NRS		
		CCI	1	
		coefficient with Fatigue NRS		
		Pearson + Spearman correlation		
		coefficient with Nocturnal Stool		
		ANCOVA with clinical response		
		ANCOVA with endoscopic remission	-	
		ANCOVA with endoscopic remission ANCOVA with endoscopic	-	
		normalization		
		ANCOVA with symptomatic	1	

Measure	Variable	Analysis Method	Population	Time Point(s)
		remission		
	CED IDIDG CED	ANCOVA with CC		
	CFB UNRS, CFB	coefficient with CFB CCI		
		CCI		
		coefficient with CFB Mayo SF		
		coefficient with CFB Absolute SF		
		coefficient with CFB Mayo RB		
		coefficient with CFB AP NRS		
		CCI		
		coefficient with CFB Fatigue NRS		
		coefficient with CFB Nocturnal Stool		
		ANCOVA with clinical response		
		ANCOVA with clinical remission		
		ANCOVA with endoscopic remission ANCOVA with endoscopic		
		normalization		
		ANCOVA with symptomatic		
		remission		
Bowel	CFB UNRS, CFB	ANCOVA with CC	FAS	Baseline (if
Urgency	cci , CFB <mark>cci</mark>			applicable), CCI
Analysis				
	UNRS CMI, UNRS	ANCOVA with CFB CC		
	Remission	ANCOVA with CFB Mayo SF		
		ANCOVA with CFB Absolute SF		
		ANCOVA with CFB Mayo RB		
		ANCOVA with CFB AP NRS		
		ANCOVA with CFB Fatigue NRS		
		ANCOVA with CFB Nocturnal Stool		
		OR, YI with clinical response		
		OR, YI with clinical remission		
		OR, YI with endoscopic remission		
		OR, YI with endoscopic normalization		
		OR, YI with symptomatic remission		
		OR, YI with Bristol Loose Stool		
Exploratory Ana	alyses	1 - ,		l .
		Descriptive summaries, including 95%CI	FAS	Baseline (if applicable), CCI
		Descriptive summaries, including 95% CI		11 77
		Descriptive summaries, including 95% CI		
		Descriptive summaries, including 95% CI		
		Descriptive summaries, including		
		95% CI Descriptive summaries, including		
		Descriptive summaries, including		!

Measure	Variable	Analysis Method	Population	Time Point(s)
		95% CI		(-)
		Descriptive summaries, including 95% CI		
		Descriptive summaries, including 95% CI		
		Descriptive summaries, including 95% CI		
		Descriptive summaries, including 95% CI		
		Descriptive summaries, including 95% CI		
		Descriptive summaries, including 95% CI		
		Descriptive summaries, including 95% CI		
Bowel Urgency	UNRS, CCI	coefficient with CCI		
Analysis		coefficient with CCI		
		coefficient with WIS	_	
		coefficient with SAA		
		ANCOVA with CCI		
Bowel	UNRS, CCI	ANCOVA with CCI	FAS	Baseline (if
Urgency Analysis		ANCOVA with CCI		applicable), CCI
		ANCOVA with CCI		
		ANCOVA with CCI		
		AIVEOVA WILLI		
		ANCOVA with CCI		
		coefficient with CCI		
		coefficient with CCI		
	CFB UNRS, CFB	coefficient with CFB CCI		
		coefficient with CFB CCI		
		CCI coefficient with CCI		
		coefficient with CCI CFB		
	UNRS CMI, UNRS Remission	OR, YI with CCI		
	Kemission	OR, YI with CC	_	
		OR, YI with CCI	_	
		, 11 mm		

Measure	Variable	Analysis Method	Population	Time Point(s)
		OR, YI with CCI		
		OR, YI with CCI		
		OR, YI with CCI		
	UNRS CMI, UNRS	ANCOVACCI		
	Remission,	ANCOVA with CC CFB		
		ANCOVA with CC		
		ANCOVA with CCI CFB		



Additional exploratory analysis will be performed as appropriate.

6.3. Appendix 3: Demographic and Baseline Characteristics

Participant demographic variables and baseline characteristics will be summarized for the FAS. The baseline characteristics of participants entering additional study periods may also be summarized if necessary. The continuous variables will be summarized using descriptive statistics and the categorical variables will be summarized using frequency counts and percentages. No inferential analysis for the comparability of baseline covariates across treatment groups will be performed. By-participant listings of basic demographic characteristics (i.e., gender, age, body weight, race, ethnicity, geographic region, prior biologic/ Janus Kinase (JAK)/ Sphingosine-1-phosphate (S1P) use and/or failure, corticosteroid use at baseline, duration of disease, and disease location) for the FAS will be provided as deemed appropriate.

<u>Table AMBZ.6.3</u> describes the specific variables and how they will be summarized. The final column specifies variables used for the efficacy subgroup analysis.

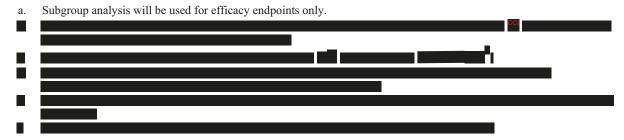
Table AMBZ.6.3. Participant Characteristics (and Variables for Subgroup Analysis)

Variable	Continuous Summary	Categorical Summary	Subgroup Analysis ^a
Demographic Characteristics			
Age ^b	Yes	<65 years, ≥65 years	
Age	res	<40 years, ≥40 years	
Sex	No	Male, Female	
		Male <40 years, Male ≥40 years, Female	
Age within Sex	No	<40 years, Female ≥40 years	
Ethnicity	No	Hispanic/Latino, Non-Hispanic/Non-Latino	
		American Indian/Alaska Native, Asian,	
Race	No	Black/African American, Native Hawaiian	
		or other Pacific Islander, White, or Multiple	

Variable	Continuous Summary	Categorical Summary	Subgroup Analysis ^a
	No	North America, Europe	-
Geographic Region	No	North America, East Europe, West Europe	X
II: 1//	No	By Country (listed in other documents)	
Height (cm)	Yes	None	
Weight (kg)	Yes	<80 kg, ≥80 kg <100 kg, ≥100 kg	
BMI ^c	Yes	Underweight ($<18.5 \text{ kg/m2}$), Normal ($\ge18.5 \text{ and } <25 \text{ kg/m2}$), Overweight ($\ge25 \text{ and } <30 \text{ kg/m2}$), Obese ($\ge30 \text{ and } <40 \text{ kg/m2}$), Extreme obese ($\ge40 \text{ kg/m2}$)	
Prior UC Therapies			
Prior corticosteroid ^d failure ^e	No	Failed, Not failed	
Prior immunomodulator failure	No	Failed, Not failed	
Prior JAK inhibitorh exposure	No	Ever, Never	
Prior JAK inhibitor ^h failure ^e	No	Failed, Not failed	
Prior biologic agents exposure	No	Ever, Never	
Prior biologic agents failure	No	Failed, Not failed	
Number of prior biologic agents ^g used	No	0, 1, 2, 3, >3	
Number of failed ^e biologic agents ^g	No	0, 1, 2, 3, >3	
Number of prior JAK inhibitor ^h used	No	0, 1, 2	
Number of failed ^e JAK inhibitor ^h	No	0, 1, 2	
Prior advanced ⁱ therapy exposure	No	Ever, Never	
Prior advanced ⁱ therapy failure	No	Failed, Not failed	X
Number of prior advanced i therapy used	No	0, 1, 2, 3, >3	
Number of failed advanced i therapy	No	0, 1, 2, 3, >3	
Prior S1P therapy ⁿ exposure ^e	No	Ever, Never	
Prior S1P therapy ⁿ failure ^e	No	Failed, Not Failed	
Baseline UC Therapies Baseline Corticosteroid use ^j	No	Yes, No	V
Baseline Prednisone equivalent	Yes	None Yes, No	X
dose Baseline Budesonide MMX ^k	No	Yes, No	
Baseline Beclomethasone	No	Yes, No	
dipropionate Baseline Oral Aminosalicylates ¹ dose	Yes	None	
Baseline immunomodulator use ^j	No	Yes, No	
Baseline Antidiarrheals/ Antispasmodics use	No	Yes, No	
Baseline Disease Characteristics			
Duration of UC ^m	Yes	<pre><1 year, ≥1 to <3 years, ≥3 year to <7 years, ≥7 years</pre>	
Age at Diagnosis of UCb	Yes	$<6, \ge 6 \text{ to } < 10 \text{ year}, \ge 10 \text{ to } < 17 \text{ years}, \ge 17$	

Variable	Continuous Summary	Categorical Summary	Subgroup Analysis ^a
		year to <40 years, ≥40 years	-
Baseline Disease Location ^o	No	Ulcerative Proctitis, Left-sided UC (distal UC), Extensive UC (pancolitis)	X
Baseline Fecal Calprotectin	Yes	≤250 μg/g, >250 μg/g	X
Baseline Modified Mayo Score	Yes	Mild (1-3), Moderate (4-6), Severe (7-9)	X
Baseline Total Mayo Score	Yes	Mild (3-5), Moderate (6-9), Severe (10-12)	
Baseline Endoscopic Mayo Subscore	No	Possible values of 4-point scale in <u>Table</u> AMBZ.6.1	X
Baseline Stool Frequency Mayo Subscore	Yes	Possible values of 4-point scale in <u>Table</u> AMBZ.6.1	
Baseline Absolute Value Stool Frequency Mayo Subscore	Yes	Possible values of 4-point scale in <u>Table</u> AMBZ.6.1	
Baseline Absolute Stool Frequency	Yes	None	
Baseline Rectal Bleeding (RB) Mayo Subscore	Yes	Possible values of 4-point scale in <u>Table</u> AMBZ.6.1	
Baseline IBDQ Total Score and Domain Scores	Yes	None	
Baseline Urgency NRS	Yes	None	
Baseline Abdominal Pain NRS	Yes	<4,≥4	
Baseline Patient's Global Rating of Severity (PGRS)	Yes	None	
Baseline Nocturnal Stool	Yes	Yes (≥1), No (0)	
Baseline Fatigue NRS	Yes	Yes (1-10), No (0)	
Baseline Bristol Stool Scale	Yes	Not Loose Stool $(1-5)$, Loose Stool $(6-7)$	
Baseline Stool Deferral Time	Yes	No	
Baseline Stool Deferral Time Category	Yes	0: ≥ 15 min 1: ≥ 5 to < 15 min 2: ≥ 2 to < 5 min 3: ≥ 1 to < 2 min 4: < 1 min	
Baseline Bowel Urgency Frequency	Yes	None	
Other Baseline Patient-Reported			
Alcohol Use	No	Never, Current, Former	
Caffeine Use	No	Never, Current, Former	
Tobacco Use	No	Never, Current, Former	
Nicotine Use	No	Never, Current, Former	
Recreational Drug Use	No	Never, Current, Former	

Abbreviation: 5-ASA = 5-aminosalicylic acid; 6-MP = 6-mercaptopurine; ATC= Anatomical Therapeutic Chemical; AZA = azathioprine; eCRF = electronic clinical report form; IBDQ = Inflammatory Bowel Disease Questionnaire; JAK = Janus Kinase; MMX = multi matrix colonic delivery technology; MTX = Methotrexate; NRS = numeric rating scale; PGA = Physician's Global Assessment; S1P = Sphingosine-1-phosphate; TB = tuberculosis; TNF = tumor necrosis factor; UC = ulcerative colitis.





6.4. Appendix 4: Treatment Compliance

Treatment compliance with IP will be summarized for participants who enter the treatment period. The treatment compliance of patents while being treated during other study periods may also be summarized if necessary. Treatment compliance for each participant will be calculated as:

 $Treatment\ compliance\ (\%)$ $=100\times\frac{{\it Total\ number\ of\ study\ drug\ administration\ visits}}{{\it Total\ number\ of\ study\ drug\ administration\ visits\ planned\ per\ protocol}}$

The "Total number of study drug administration visits planned per protocol" is based on the administration number of planned visits before the participant discontinued study drug. Each participant will be defined as having had a study drug administration visit on a given date if:

- For visits where the participant is to receive an IV infusion, they received the planned dose (i.e.., a partial dose does not count) as derived from the Exposure eCRF page
- For visits where the participant is to receive SC injections, they received the planned number of injection doses (i.e., 2 doses) as derived from the Exposure eCRF page

"Overall compliance" with therapy is defined as having at least 80% treatment compliance. Proportions of participants who satisfy the definition of overall compliance during the treatment period will be summarized for FAS population.

6.5. Appendix 5: Clinical Trial Registry Analyses

Additional analyses will be performed for the purpose of fulfilling the Clinical Trial Registry (CTR) requirements.

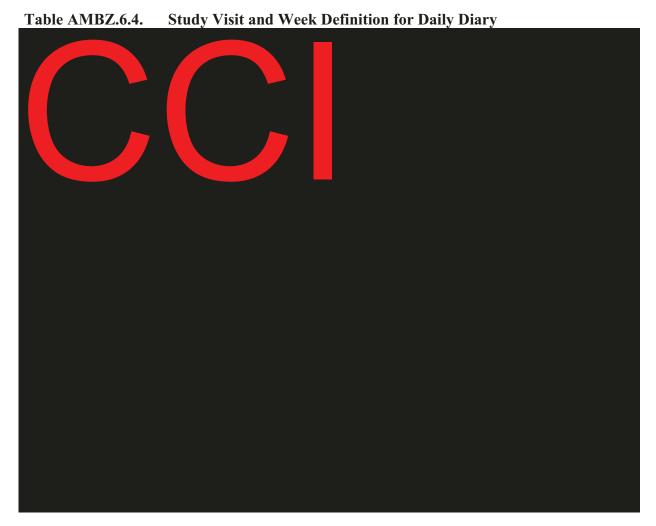
Analyses provided for the CTR requirements include the following:

• Summary of AEs, provided as a dataset which will be converted to an XML file. Both SAEs and 'Other' AEs are summarized: by MedDRA PT.

- An AE is considered 'Serious' whether or not it is a TEAE.
- An AE is considered in the 'Other' category if it is both a TEAE and is not serious. For each SAE and 'Other' AE, for each term, the following are provided:
 - o the number of participants at risk of an event
 - o the number of participants who experienced each event term
 - o the number of events experienced.
- Consistent with www.ClinicalTrials.gov requirements, 'Other' AEs that occur in fewer than 5% of participants/subjects may not be included if a 5% threshold is chosen (5% is the minimum threshold).
- AE reporting is consistent with other document disclosures, for example, the CSR, manuscripts, and so forth.

6.6. Appendix 6: Study Visit or Week Definition for Daily Diary

Weekly summary measures of daily diary data will be created for each participant. The 7-day period associated with each week will be defined using a visit centric approach. The table below displays the interval for each week.







7. References

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