

Official Title of Study:

A Study to Assess Safety and Tolerability of Single Oral Doses of BMS-986177 in Patients with ESRD treated with chronic hemodialysis

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**STATISTICAL ANALYSIS PLAN FOR**  
**A STUDY TO ASSESS SAFETY AND TOLERABILITY OF SINGLE ORAL DOSES OF**  
**BMS-986177 IN PATIENTS WITH ESRD TREATED WITH CHRONIC HEMODIALYSIS**

**VERSION # FINAL V1.0**



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**Research Hypothesis:**

The purpose of this study is to evaluate the safety profile, tolerability, and pharmacokinetics (PK) of single oral doses of BMS-986177 in ESRD patients undergoing chronic stable HD treatment. Although there is no primary research hypothesis to be formally tested, it is expected that administration of BMS-986177 will prolong the plasma activated partial thromboplastin time (aPTT), reduce plasma FXI clotting activity (FXIc), and have no effect on the prothrombin time and international normalized ratio.

It is expected that the administration of BMS-986177 will prevent clot formation in the extracorporeal HD circuit, hence clotting in the HD filter, lines, and drip chambers will be assessed, additional clotting-related pharmacodynamic (PD) endpoints will be also explored.

**Schedule of Analyses:**

Final analysis will be performed following database lock according to agreed-upon reporting milestone(s), typically after all patients have completed the study.

**2 STUDY DESCRIPTION**

**2.1 Study Design**

This study is a multicenter, cross-over, randomized, open-label trial with blinded endpoint assessment investigating safety and tolerability of single oral doses of BMS-986177 in patients with ESRD undergoing chronic stable HD three times per week. Secondary objectives are to assess BMS-986177 PK and HD success defined as completion of HD without premature interruption of the procedure due to complete clotting of the dialytic circuit and/or filter.

Study treatments will be administered on the first and last HD day of the week (either Monday and Friday, or Tuesday and Saturday, depending on the patients HD schedule), for a total of 4 treatment days (2 doses of BMS-986177, 1 dose of UFH, 1 dose of enoxaparin).

The 2nd HD day of the week is not a study treatment day; on that day, study patients will undergo dialysis with standard of care, as per their schedule, and no study activities will be performed on those days.

Screening for inclusion in the study will be performed up to 28 days before the first study visit. After screening and meeting eligibility as per inclusion and exclusion criteria, patients will be randomized to 1 of 4 sequences that will be conducted in parallel as shown in Table 2.1-1.

**Table 2.1-1 Randomization Scheme**

Sequence No.	Period			
	1	2	3	4
1	UFH	BMS dose 1 (BMS-986177 100 mg)	BMS dose 2 (BMS-986177 300 mg)	Enoxaparin
2	BMS dose 1 (BMS-986177 100 mg)	Enoxaparin	UFH	BMS dose 2 (BMS-986177 300 mg)
3	BMS dose 2 (BMS-986177 300 mg)	UFH	Enoxaparin	BMS dose 1 (BMS-986177 100 mg)
4	Enoxaparin	BMS dose 2 (BMS-986177 300 mg)	BMS dose 1 (BMS-986177 100 mg)	UFH

Study patients will be admitted to the study facility the same day of HD treatment day or the night before. Assessment of vital signs and clinical biochemistry will be performed prior to dosing.

The following study treatments will be administered:

- BMS-986177: 1 single oral dose 3 hours prior to beginning the HD session
- UFH: intravenous infusion to start within 10 minutes prior to beginning the HD session. The dosage and duration of UFH use are at the discretion of the physician and are per their institutional practice
- Enoxaparin: 1 single dose (40 mg) by subcutaneous injection 3 hours prior to beginning the HD session

The HD session will last approximately 4 hours. However, the duration could range from 3 to 4 hours but should be consistent on the days when study treatment is administered. After the HD, patients will remain in the study facility for at least:

- Approximately 3 hours post HD on UFH and enoxaparin treatment days
- Approximately 24 hours post dose on BMS-986177 days

Site staff members blinded to treatment will perform an assessment of clot formation according to criteria set forth in the Clot Formation Assessment Manual which will be provided to the site in a separate document.

Physical examinations (PEs), vital sign measurements, 12-lead electrocardiograms (ECG), and clinical laboratory evaluations will be performed at selected times throughout the dosing interval. Participants will be closely monitored for adverse events (AEs) throughout the study. Blood

samples will be collected for up to 72 hours after study treatment administration for PK analysis and PD analysis. Approximately 365 mL of blood will be drawn from each participant during the study.

The study design schematic is presented in Figure 2.1-1.

**Figure 2.1-1 Study Design Schematic**

		Week 1							Week 2						
Days	D-28 to D-1	D1*	D2	D3	D4	D5‡	D6	D7	D8*	D9	D10	D11	D12‡	D13 to D15	
HD days		1 <sup>st</sup> HD		2 <sup>nd</sup> HD		3 <sup>rd</sup> HD			1 <sup>st</sup> HD		2 <sup>nd</sup> HD		3 <sup>rd</sup> HD		
Study activity	S - E - R	Tx				Tx			Tx				Tx	D	

HD = Hemodialysis session. S= Screening. E = Enrollment. R = Randomization. Tx = Study treatment day (BMS-986177 dose 1 or dose 2, or unfractionated heparin, or enoxaparin). D = Study discharge.

\* D1 and D8 can be Monday or Tuesday depending on the patient's dialysis schedule.

‡ D5 and D12 can be Friday or Saturday depending on the patient's dialysis schedule.

## 2.2 Treatment Assignment

Study treatment will be dispensed at the study visits Days 1, 5, 8, and 12.

Enrolled participants, including those not dosed, will be assigned sequential participant numbers starting with 00001, (eg, 00001, 00002, 00003.... 00010). Sequential numbering may restart at 00001 for each participating site as the distinct patient identification number will ultimately be comprised of the site number and participant number, (eg, 0002 00001). Those enrolled participants meeting inclusion and exclusion criteria will be eligible to be randomized.

Eligible patients will be randomly assigned to 1 of the 4 sequences as listed in Table 2.1-1 in 1:1:1:1 ratio according to a computer-generated randomization scheme. Randomization numbers will be assigned prior to dosing.

Participants will not be replaced if they are discontinued from the study secondary to an AE unless the AE can be determined to be unrelated to treatment. If a participant is replaced after dosing, then the replacement participant will be assigned the original participant's number plus 100. The replacement participant will receive the same treatment as the participant being replaced but a new randomization number will be assigned to him or her. For example, participant 4 would be replaced by Participant 104.

## 2.3 Blinding and Unblinding

This is an open-label study.

## 2.4 Protocol Amendments

This analysis plan reflects Amendment #3 to the protocol, dated 06 September 2017.

### 3 OBJECTIVES

#### 3.1 Primary

The primary objective of this study is to assess safety and tolerability of single oral doses of BMS-986177 in patients with ESRD on chronic HD treatment.

#### 3.2 Secondary

The secondary objectives of this study are to characterize the PK profile of BMS-986177 in a HD population and determine the extent of BMS-986177 on dialytic removal.

[REDACTED]

### 4 ENDPOINTS

#### 4.1 Efficacy Endpoints

There are no planned efficacy endpoints.

#### 4.2 Safety Endpoints

Safety endpoints include incidence of AEs, serious AEs (SAEs), AEs leading to discontinuation, and death as well as marked abnormalities in clinical laboratory tests, ECGs, vital sign measurements, and PEs.

#### 4.3 Pharmacokinetic Endpoints

Pharmacokinetic parameters of BMS-986177 will be derived from the respective plasma concentration versus time data. Individual PK parameter values will be derived by non-compartmental methods by a validated PK analysis program using actual times.

The PK endpoints are C<sub>max</sub>, area under the concentration-time curve (AUC), and dialytic clearance.

The PK parameters to be assessed are shown in Table 4.3-1.

**Table 4.3-1: Pharmacokinetic Parameters, Naming Conventions and Definitions**

Parameter	Definition
C <sub>max</sub>	Maximum observed plasma concentration
T <sub>max</sub>	Time of maximum observed plasma concentration
AUC(0-48)	Area under the plasma concentration-time curve from time zero to 48 hours
AUC(0-T)	Area under the plasma concentration time curve from time zero to time of last

**Table 4.3-1: Pharmacokinetic Parameters, Naming Conventions and Definitions**

Parameter	Definition
	quantifiable concentration
AUC(INF)	Area under the plasma concentration time curve from time zero extrapolated to infinite time
T-HALF	Terminal plasma half-life
fu	Fraction of unbound drug
Cmaxfu	Maximum observed plasma concentration of free drug
AUC(0-T)fu	Area under the plasma concentration-time curve from time zero to time of last quantifiable concentration of free drug
AUC(INF)fu	Area under the plasma concentration-time curve from time zero extrapolated to infinite time of free drug
AUC(3-7)	Area under the plasma concentration-time curve from 3 to 7 hours. (i.e., during dialysis. Determined from blood samples entering and exiting the dialyzer)
%DR	Percent dose of BMS-986177 recovered in dialysate (%)
CLD	Dialysate clearance of drug from plasma. Cumulative amount in dialysate over 3 to 7 hours post dose divided by plasma AUC(3-7)

The PK parameters expressed in terms of unbound drug (free drug) concentrations will be derived. The unbound Cmaxfu, AUC(0-T)fu, and AUC(INF)fu for BMS-986177 will be calculated by multiplying the PK parameters of BMS-986177 by the fraction unbound (fu).

#### 4.4 Pharmacodynamic Endpoints

The PD endpoints include aPTT and FXIc for BMS-986177, aPTT and anti-Xa for heparin and enoxaparin.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

## 5 SAMPLE SIZE AND POWER

Although the number of patients is not based on statistical power considerations, administration of BMS-986177 to 32 patients with ESRD would provide over 80% probability of observing at



least one occurrence of any AE that would occur with incidence of 5% in the population from which the sample is drawn.

## **6 STUDY PERIODS, TREATMENT REGIMENS AND POPULATIONS FOR ANALYSES**

### **6.1 Study Periods**

- The pre-treatment period will be from the time the Inform Consent Form (ICF) is signed until the day just prior to dosing on Day 1 for all patients. The pre-treatment period should be no longer than 21 days and will include screening, Day -1 to -3, and randomization procedures.
- Period 1 will be from the day of dosing on Day 1 until the day prior to dosing on Day 5, or until study discharge due to premature discontinuation if the patient is not dosed on Day 5.
- Period 2 will be from the day of dosing on Day 5 until the day prior dosing on Day 8, or until study discharge due to premature discontinuation if the patient is not dosed on Day 8.
- Period 3 will be from the day of dosing on Day 8 until the day prior dosing on Day 12, or until study discharge due to premature discontinuation if the patient is not dosed on Day 12.
- Period 4 will be from the day of dosing on Day 12 until the day of study discharge between Day 13 and Day 15 based on last PK sample obtained between 24 to 72 hours post Day 12 dose, or until the day of study discharge due to premature discontinuation after dosing on Day 12.
- If a patient is not discharged between Day 13 and Day 15, any data collected after the day of study discharge will be assigned to the post treatment period.
- Periods 1, 2, 3, and 4 will be considered on-therapy for the purpose of safety analyses.

The definition of each period is included in [Table 6.1-1](#).

**Table 6.1-1 Definition of Period**

PERIOD SEQUENCE	PERIOD NAME	DATE TO BE USED	DEFINITION
1	PRE-TREAT	- CONSENT DATE - DOSE DATE ON DAY 1	Starting with consent date and ending by (<) dose date on Day 1
2	PERIOD 1	- DOSE DATE ON DAY 1 - DOSE DATE ON DAY 5	Starting with dose date on Day 1 and ending by (<) dose date on Day 5
3	PERIOD 2	- DOSE DATE ON DAY 5 - DOSE DATE ON DAY 8	Starting with dose date on Day 5 and ending by (<) dose date on Day 8
4	PERIOD 3	- DOSE DATE ON DAY 8 - DOSE DATE ON DAY 12	Starting with dose date on Day 8 and ending by (<) dose date on Day 12
5	PERIOD 4	- DOSE DATE ON DAY 12 - DISCHARGE DATE	Starting with dose date on Day 12 and ending by ( $\leq$ ) discharge date
6	POST-TREAT	- DISCHARGE DATE	Starting with discharge date + 1

## 6.2 Treatment Regimens

- Treatment A: UFH intravenous infusion.
- Treatment B: BMS-986177 100 mg.
- Treatment C: BMS-986177 300 mg.
- Treatment D: Enoxaparin 40 mg by subcutaneous injection.

## 6.3 Populations for Analyses

- All Enrolled Patients, defined as all patients who signed ICF;
- All Randomized Patients, defined as patients who were randomized to a sequence of treatments including the patients who replace the discontinuing randomized patients;
- Safety Population, defined as all randomized patients who took at least 1 dose of study treatment;
- Pharmacodynamic Population, defined as a subset of the Safety Population and includes all patients who received at least 1 dose of study treatment and had any available PD data;
- Biomarker Population, defined as a subset of the Safety Population and includes all patients who received at least 1 dose of study treatment and had any available post dose biomarker data;
- Pharmacokinetic Population, defined as all patients who received BMS-986177 from whom PK parameter data were obtained before and after HD.

- Evaluable PK Population, defined as a subset of the PK Population and includes all patients who had adequate PK profiles.

## 7 STATISTICAL ANALYSES

SAS® version 9.3 or higher, will be used for statistical analyses, tabulations, and graphical presentations.

### 7.1 General Methods

All data recorded on case report forms will be listed by patient. Descriptive summaries will be presented for continuous variables using number of patients, mean, standard deviation (SD), median, minimum, and maximum. Geometric mean and coefficient of variation (%CV) will also be presented for sample plasma PK parameters, as applicable. Descriptive summaries for categorical variables will utilize counts and percentages.

Where appropriate, baseline is defined as the last non-missing result with a collection date-time less than the date-time of the first dose of study treatment.

Adverse events and medical history will be coded according to the most recent Medical Dictionary for Regulatory Activities version. Previous and concomitant medications will be coded using the BMS Drug Dictionary.

### 7.2 Study Conduct

Deviations from the study protocol, protocol amendments, and administrative changes will be documented. Relevant protocol deviations will be listed.

### 7.3 Study Population

#### 7.3.1 Patient Disposition

Patient disposition will be listed. Summary tables reflecting the number of patients who are enrolled, who are randomized, who are not randomized, and reasons for not being randomized will be presented as overall.

The number of patients who complete the study, who do not complete the study, and reasons for not completing the study, will be summarized for the safety population, as overall and by treatment sequence.

#### 7.3.2 Demographic Characteristics

Demographic characteristics such as gender, age, race, and ethnicity will be listed for the safety population. Demographic characteristics will also be summarized for the safety population, as overall and by treatment sequence.

#### 7.3.3 Physical Measurements

Physical measurements such as body weight, height and body mass index will be listed for the safety population. Measurements will also be summarized by nominal visit and time point for the safety population, as overall and by treatment sequence.



#### **7.3.4 Medical History and Previous Medications**

Medical history and previous medications taken prior to dosing will be listed for the safety population.

#### **7.4 Extent of Exposure**

No analysis regarding extent of exposure is planned. Study treatment administration, randomization schedule, and batch numbers will be documented as per patient listings. Any non-study medications taken by patients, any conducted non-study medical treatment procedures, and any utilized non-study diagnostic procedures will also be listed. Concomitant medications taken during treatment period will be summarized by anatomic class, therapeutic class, generic name, treatment, and overall for the safety population.

#### **7.5 Efficacy**

There are no efficacy assessments in the study.

#### **7.6 Safety**

Analysis of all safety data will follow the BMS guideline of analysis of safety data<sup>11 12</sup>. The evaluation of safety is based on clinical AEs, vital signs, ECG results, abnormal PE findings, and clinical laboratory results reported during the study.

All data collected from the sampling outside the scheduled visits will only be included in the listing and will be excluded from the summary tables.

##### **7.6.1 Deaths**

All reported deaths after a patient is enrolled (ie, has signed the ICF) will be listed by patient.

##### **7.6.2 Serious Adverse Events**

All reported SAEs will be listed for all enrolled patients and will be summarized for the safety population.

##### **7.6.3 Adverse Events**

Adverse events which occur on or after the first dose of study treatment will be tabulated. Events will be assigned to the last study treatment administered at the time of onset. Events occurring after discharge will be assigned to the last study treatment received. The proportion of patients having an AE will be calculated as the number of patients having the event in the specific treatment interval, divided by the total number of patients receiving study treatment during that treatment interval.

All AE listings will indicate the unique patient identifier, age, gender, current treatment, date of onset, date of resolution, day of onset relative to the start of treatment, action taken, investigator's assessment of severity, and relationship to study treatment. Additional listings will be provided for AEs leading to discontinuation and AEs without recorded resolution.

All AEs will be summarized by system organ class (SOC), preferred term (PT), treatment, and overall for the safety population. Summaries of AEs will include AEs, AEs by intensity, AEs related to study treatment, and AEs leading to discontinuation.

#### AE Counting Rules<sup>11</sup>:

Where a patient has the same AE, based on PT, reported multiple times in a single analysis period, the patient will only be counted once at the PT level in AE frequency tables.

Where a patient has multiple AEs within the same SOC in a single analysis period, the patient will only be counted once at the SOC level in AE frequency tables.

When a patient has the same AE, based on PT, reported multiple times in a single analysis period, the following criteria, in order of precedence, will be used to select the event to be included in summary tables:

- Relationship to study treatment
- Intensity of event
- Onset date and time

When reporting AEs by intensity, in addition to providing a summary table based on the event selection criteria detailed above, summary tables will also be provided based on the most intense event during the analysis period - independent of relationship to study treatment. For these tables, the following criteria, in order of precedence, will be used to select the event to be included in summary tables:

- Intensity of event
- Onset date and time

Patients will only be counted once in the 'Total' at their maximum intensity, regardless of SOC or PT.

#### **7.6.4 Clinical Laboratory Evaluations**

The results of all protocol-specified clinical laboratory tests will be listed by patient for the safety population. Laboratory measurements and corresponding change from baseline values will be summarized by treatment and scheduled nominal visit for each laboratory test.

Laboratory evaluations will be reported both in conventional units and in SI units.

Laboratory results will be classified as markedly abnormal based on sponsor defined criteria.<sup>13,14</sup> The criteria used for classifying laboratory test results as markedly abnormal will be listed. Laboratory results for patients with any marked laboratory abnormality (scheduled and unscheduled) will be listed. This listing will include all observations for the specific laboratory test and patient, not only the marked laboratory abnormality measurements. The frequency of patients with any marked laboratory abnormality, based on pre-specified criteria, will be presented.

#### **7.6.5 Electrocardiograms**

All recorded ECGs will be listed for the safety population.

If QT corrected for heart rate (HR) using Fridericia formula (QTcF) is not available in the database, QTcF will be calculated using the reported uncorrected QT Interval and HR, and the following formula:

$$QTcF = \frac{QT}{60 \text{ HEART RATE}}^{1/3}$$

Summaries of ECG parameters (HR, QT, QTcF, PR, and QRS intervals) will be tabulated by study day and treatment. Summaries of ECG parameters will include change from baseline on Days 1, 5, 8, and 12.

Patients with ECG intervals outside of a pre-specified range and investigator identified ECG abnormalities will also be listed.

The following criteria will be used to determine ECG results that are outside of a pre-specified range:

PR (msec):	Value > 200
QRS (msec):	Value > 120
QT (msec):	Value > 500 or change from baseline > 30
QTcF (msec):	Value > 450 or change from baseline > 30

### 7.6.6 Vital Signs

Vital signs parameters (systolic blood pressure [BP], diastolic BP, HR, respiratory rate, and body temperature) will be listed. Summaries of vital sign parameters (HR and BPs) will be provided for each vital sign parameter at corresponding visits by treatment and respective changes from baseline. Baseline for HR and BPs is defined as the last non-missing result with a collection date-time less than the date-time of the active dose of study treatment within each treatment period.

Patients with vital signs outside of a pre-specified range will also be listed.

The following criteria will be used to determine vital sign results that are outside of a pre-specified range, where changes from baseline are based on matched postural positions and are calculated as parameter value - baseline parameter value:

Heart Rate (bpm)	Value > 100 and change from baseline > 30, or Value < 55 and change from baseline < -15
Systolic BP (mmHg)	Value > 140 and change from baseline > 20, or Value < 90 and change from baseline < -20
Diastolic BP (mmHg)	Value > 90 and change from baseline > 10, or Value < 55 and change from baseline < -10
Respiration (breaths/min)	Value > 16 or change from baseline > 10
Temperature (°C)	Value > 38.3°C or change from baseline > 1.6°C

### 7.6.7 *Physical Examination Findings*

All PE abnormal findings will be listed per patient and visit.

### 7.7 Pharmacokinetics

The PK population will be used for all listings. Evaluable PK population will be used for summary statistics and statistical analyses. Analysis will include all valid data in the PK dataset for BMS-986177.

Patient plasma concentration-time profiles will be listed and summarized by treatment and nominal collection time. Plot of individual plasma concentration profiles over time will be provided. Overlay of individual plasma concentration profiles over time will be provided by treatment. Plots of mean (+SD) plasma concentration profiles versus time will be presented, and all treatments will be superimposed on the same plot.

Dialysate recovery data will be listed. Cumulative amount and cumulative percent recovered per interval will be summarized.

All individual PK parameters will be listed including any exclusions and reasons for exclusion. Summary statistics will be tabulated for each PK parameter by treatment. Geometric means and %CV will be presented for C<sub>max</sub>, AUC(0-T), AUC(INF), AUC(0-48), C<sub>max</sub>fu, AUC(0-T)fu, AUC(INF)fu, AUC(3-7), and CLD. Medians and ranges will be presented for T<sub>max</sub>. Means and SDs will be presented for other PK parameters (ie, T-HALF, fu and %DR). Decimal place specifications for summary statistics are described in [Section 7.10](#).

### 7.8 Pharmacodynamics

The PD population will be used for all listings, summary statistics and figures. Summary statistics will be tabulated for aPTT, FXIc, and anti-Xa assessments and percent changes from baseline by treatment and time point. Plots of mean + standard error (SE) values and percent changes from baseline for aPTT will be provided. In addition, the relationship between aPTT and FXIc percent change from baseline and BMS-986177 plasma concentrations will be explored graphically via scatter plots by treatment.

The baseline for aPTT, FXIc and anti-Xa is defined as the predose value on day of dosing for each treatment.





### 7.10 Conventions

Analysis Data Model (ADaM) standards will be applied.

#### 7.10.1 *Decimal Places*

The number of decimal places displayed in all listings will be determined by the number of decimal places in the raw data.

Unless otherwise specified, minimum and maximum will be reported to the precision as the data collected, 1 more decimal place for the mean, median, and SD, and 2 more decimal places for the SE. The geometric mean ratio and the lower and upper limits of confidence interval will be displayed to 3 decimal places.

For percent change from baseline data, minimum and maximum will be reported with 0 decimal places, mean, median, and SD will be reported with 1 decimal place, and SE will be reported with 2 decimal places.

The incidence rate will be rounded to 1 decimal place. If the incidence rate is less than 0.1%, then “<0.1” will be displayed.

Three decimal places for ratio will be used for data presentation.

#### 7.10.2 *Pharmacokinetic Summaries*

##### In-text Tables

For in-text PK tables, %CV will be reported as integers. For other statistics except for SDs, values of 100 or higher will be presented as integers, values of 10 - <100 will be displayed to 1 decimal place, and values of 1 - < 10 will be displayed to 2 decimal places. Values less than 1 will be displayed to 3 decimal places. Ratios will also be displayed to 3 decimal places. Standard deviations will be reported to a precision of 1 decimal place more than the mean.



### Handling of Non-Quantifiable Concentrations<sup>18</sup>

For the summaries of plasma concentration-time data, concentrations that are less than the lower limit of quantification (LLOQ) should be displayed as “< LLOQ” in the listings and be treated as missing in summary tables and plots. For the purpose of calculating PK parameters, pre-dose concentrations that are less than LLOQ and concentrations prior to the first quantifiable concentration that are less than LLOQ will be set to 0, and all other concentrations less than LLOQ will be set to missing.

Summary statistics for analyses of PD/biomarker-concentrations will be calculated by imputing values less than LLOQ as  $\frac{1}{2} * \text{LLOQ}$ .

All available plasma concentration-time data and derived PK parameter values will be included in the PK data set and listed accordingly.

### Treatment of Outliers

Individual plasma concentrations, if deemed to be anomalous, may be excluded from the analysis following a review of available documentation (eg, bioanalytical report, clinical data). Any such exclusion will be clearly listed in the study report along with justification for exclusion.

Entire plasma concentration-time profiles for a patient may be excluded follow review of available documentation (eg, bioanalytical report, clinical data). However, results of analysis with and without the excluded profiles may be presented in the study report. Any such exclusion will be clearly listed in the study report along with justification for exclusion.

### Pharmacokinetic Exclusions

Pharmacokinetic Analysis, Reporting, and Exclusion criteria should following the BMS PK Harmonization document Version 2.0. Specific guideline for exclusionary criteria for half-life and how other PK parameters are affected for exclusion is under section 6.2 of the BMS PK Harmonization document.

Exclusion of 1 or more parameters or the entire dataset may be considered due to an incomplete profile such as AUC(INF) or when T-HALF cannot be reliably calculated, or there is no sample around the suspected C<sub>max</sub>. In addition, patients may be excluded from the analysis if they missed doses, had diarrhea, or vomited at or before a time equal to twice the median T<sub>max</sub> for immediate-release products, or vomited at any time during sampling after the administration of modified-release formulations.

## **8 CONTENT OF REPORTS**

Statistical components for the CSR will be based on the content of this statistical analysis plan. Details of the tables, listings, and figures to be prepared for the final CSR will be included in a study-specific Data Presentation Plan.

## 9 LIST OF ABBREVIATIONS

<b>Table 9-1: List of Abbreviations</b>	
AE	adverse event
AUC(0-48)	area under the plasma concentration-time curve from time zero to 48 hour
AUC(3-7)	area under the plasma concentration-time curve from 3 to 7 hours
AUC(0-T)	area under the plasma concentration time curve from time zero to time of last quantifiable concentration
AUC(0-T)fu	area under the plasma concentration-time curve from time zero to time of last quantifiable concentration of free drug
AUC(INF)	area under the plasma concentration time curve from time zero extrapolated to infinite time
AUC(INF)fu	area under the plasma concentration-time curve from time zero extrapolated to infinite time of free drug
aPTT	activated partial thromboplastin time
BP	blood pressure
CLD	Dialysate clearance of drug from plasma
Cmax	maximum observed plasma concentration
Cmaxfu	maximum observed plasma concentration of free drug
CSR	clinical study report
CV	coefficient of variation
%DR	percent dose of BMS-986177 recovered in dialysate (%)
ECG	12-lead electrocardiogram
ESRD	end-stage renal disease
F1.2	prothrombin fragment 1+2
fu	fraction of unbound drug
FXI	Factor XI
FXIa	Factor XIa
FXIc	Factor XI clotting activity
HD	hemodialysis
HR	heart rate
ICF	inform consent form
LLOQ	lower limit of quantification
PD	pharmacodynamic(s)
PE	physical examination
PK	pharmacokinetic(s)
PT	preferred term
QTcF	QT internal corrected for heart rate using Fridericia formula

<b>Table 9-1: List of Abbreviations</b>	
SAE	serious adverse event
SD	standard deviation
SE	standard error
SOC	system organ class
T-HALF	terminal plasma half-life
Tmax	time of maximum observed plasma concentration
UFH	unfractionated heparin



