



## Clinical trial results:

### A Randomized, Multicenter, Open-label, Phase 3 Study of the Bruton's Tyrosine Kinase Inhibitor Ibrutinib in Combination with Obinutuzumab versus Chlorambucil in Combination with Obinutuzumab in Subjects with Treatment-naïve Chronic Lymphocytic Leukemia or Small Lymphocytic Lymphoma

#### Summary

EudraCT number	2014-002069-31
Trial protocol	SE IT CZ AT BE ES PL
Global end of trial date	

#### Results information

Result version number	v1
This version publication date	12 April 2019
First version publication date	12 April 2019

#### Trial information

##### Trial identification

Sponsor protocol code	PCYC-1130-CA
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##### Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT02264574
WHO universal trial number (UTN)	-

Notes:

#### Sponsors

Sponsor organisation name	Pharmacyclics LLC
Sponsor organisation address	995 East Arques Avenue, Sunnyvale, United States, 94085-4521
Public contact	Clinical Trial information, Pharmacyclics LLC, +1 4087740330, info@pcyc.com
Scientific contact	Clinical Trial information, Pharmacyclics LLC, +1 4087740330, info@pcyc.com

Notes:

#### Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

## Results analysis stage

Analysis stage	Interim
Date of interim/final analysis	26 March 2018
Is this the analysis of the primary completion data?	Yes
Primary completion date	26 March 2018
Global end of trial reached?	No

Notes:

## General information about the trial

Main objective of the trial:

To evaluate the efficacy of ibrutinib in combination with obinutuzumab compared to chlorambucil in combination with obinutuzumab based on the Independent Review Committee (IRC) assessment of progression-free survival (PFS) in subjects with treatment-naïve chronic lymphocytic leukemia (CLL) or small lymphocytic lymphoma (SLL)

Protection of trial subjects:

This study was conducted in accordance with the ethical principles that have their origins in the Declaration of Helsinki and that are consistent with Good Clinical Practices and applicable regulatory requirements.

Background therapy: -

Evidence for comparator:

The anti-CD20 antibody obinutuzumab was chosen as the appropriate anti-CD20 antibody partner to ibrutinib in Study 1130 based on results from the Phase 3 CLL11 study demonstrating superior efficacy. In the CLL11 study, obinutuzumab was used with chlorambucil (Clb+Ob; N = 333) in the first-line setting in patients with CLL with comorbidities in a comparison to either chlorambucil alone or to the combination of chlorambucil and rituximab.

Actual start date of recruitment	06 October 2014
Long term follow-up planned	Yes
Long term follow-up rationale	Safety, Efficacy
Long term follow-up duration	2 Years
Independent data monitoring committee (IDMC) involvement?	Yes

Notes:

## Population of trial subjects

### Subjects enrolled per country

Country: Number of subjects enrolled	Poland: 4
Country: Number of subjects enrolled	Spain: 26
Country: Number of subjects enrolled	Sweden: 11
Country: Number of subjects enrolled	United Kingdom: 4
Country: Number of subjects enrolled	Austria: 11
Country: Number of subjects enrolled	Belgium: 4
Country: Number of subjects enrolled	Czech Republic: 14
Country: Number of subjects enrolled	France: 8
Country: Number of subjects enrolled	Italy: 28
Country: Number of subjects enrolled	Canada: 8
Country: Number of subjects enrolled	United States: 24
Country: Number of subjects enrolled	Turkey: 28
Country: Number of subjects enrolled	Russian Federation: 20
Country: Number of subjects enrolled	Israel: 16
Country: Number of subjects enrolled	Australia: 14

Country: Number of subjects enrolled	New Zealand: 9
Worldwide total number of subjects	229
EEA total number of subjects	110

Notes:

<b>Subjects enrolled per age group</b>	
In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	46
From 65 to 84 years	177
85 years and over	6

## Subject disposition

### Recruitment

Recruitment details:

This study was conducted in 71 sites: 8 in the US, 36 in the EU, and 27 sites in 6 additional countries (Canada, Australia, New Zealand, Russia, Israel, Turkey). The first subject consented 06 Oct 2014 and the data base lock for the last visit of the last subjects was 26 Mar 2018.

### Pre-assignment

Screening details:

Eligible subjects required to have had a diagnosis of active CLL/SLL conformant to IWCLL 2008 criteria. All subjects were required to have measurable nodal disease. Key exclusion criteria included any previous CLL/SLL treatment; known lymphoma or leukemia of the central nervous system, history/current evidence of Richter's transformation.

### Period 1

Period 1 title	Overall trial (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Not blinded

### Arms

Are arms mutually exclusive?	Yes
<b>Arm title</b>	IBR + OB

Arm description:

Ibrutinib given orally at a dose of 420 mg/day until progressive disease or unacceptable toxicity. Intravenous obinutuzumab given on Days 1 and 2 (100 mg on Day 1 and 900 mg on Day 2), 1000 mg on Days 8 and 15 of Cycle 1 and 1000 mg on Day 1 of each cycle up to 6 cycles or until progressive disease or unacceptable toxicity.

Arm type	Experimental
Investigational medicinal product name	Ibrutinib
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Capsule, hard
Routes of administration	Oral use

Dosage and administration details:

Ibrutinib given orally at a dose of 420 mg/day (3 capsules of 140 mg each) until progressive disease or unacceptable toxicity.

Investigational medicinal product name	obinutuzumab
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for infusion
Routes of administration	Intravenous use

Dosage and administration details:

Intravenous obinutuzumab given on Days 1 and 2 (100 mg on Day 1 and 900 mg on Day 2), 1000 mg on Days 8 and 15 of Cycle 1 and 1000 mg on Day 1 of each cycle up to 6 cycles or until disease progression or unacceptable toxicity.

<b>Arm title</b>	CLB + OB
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Arm description:

Chlorambucil given orally at a dose of 0.5 mg/kg body weight up to a total of 6 cycles on Days 1 and 15 of each cycle or until disease progression or unacceptable toxicity.

Intravenous obinutuzumab given on Days 1 and 2 (100 mg on Day 1 and 900 mg on Day 2), 1000 mg on Days 8 and 15 of Cycle 1 and 1000 mg on Day 1 of each cycle up to 6 cycles or until disease progression or unacceptable toxicity.

Arm type	Active comparator
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Investigational medicinal product name	chlorambucil
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet and powder for oral solution
Routes of administration	Oral use

Dosage and administration details:

Chlorambucil given orally at a dose of 0.5 mg/kg body weight on Days 1 and 15 of each cycle plus intravenous obinutuzumab per instructions shown for Arm A up to a total of 6 cycles.

Investigational medicinal product name	obinutuzumab
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for infusion
Routes of administration	Intravenous use

Dosage and administration details:

Intravenous obinutuzumab given on Days 1 and 2 (100 mg on Day 1 and 900 mg on Day 2), 1000 mg on Days 8 and 15 of Cycle 1 and 1000 mg on Day 1 of each cycle up to 6 cycles or until disease progression or unacceptable toxicity.

<b>Number of subjects in period 1</b>	IBR + OB	CLB + OB
Started	113	116
Completed	107	108
Not completed	6	8
Consent withdrawn by subject	6	5
various other reasons	-	3

## Baseline characteristics

### Reporting groups

Reporting group title	IBR + OB
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Reporting group description:

Ibrutinib given orally at a dose of 420 mg/day until progressive disease or unacceptable toxicity.  
Intravenous obinutuzumab given on Days 1 and 2 (100 mg on Day 1 and 900 mg on Day 2), 1000 mg on Days 8 and 15 of Cycle 1 and 1000 mg on Day 1 of each cycle up to 6 cycles or until progressive disease or unacceptable toxicity.

Reporting group title	CLB + OB
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Reporting group description:

Chlorambucil given orally at a dose of 0.5 mg/kg body weight up to a total of 6 cycles on Days 1 and 15 of each cycle or until disease progression or unacceptable toxicity.  
Intravenous obinutuzumab given on Days 1 and 2 (100 mg on Day 1 and 900 mg on Day 2), 1000 mg on Days 8 and 15 of Cycle 1 and 1000 mg on Day 1 of each cycle up to 6 cycles or until disease progression or unacceptable toxicity.

Reporting group values	IBR + OB	CLB + OB	Total
Number of subjects	113	116	229
Age categorical			
Units: Subjects			
In utero	0	0	0
Preterm newborn infants (gestational age < 37 wks)	0	0	0
Newborns (0-27 days)	0	0	0
Infants and toddlers (28 days-23 months)	0	0	0
Children (2-11 years)	0	0	0
Adolescents (12-17 years)	0	0	0
Adults (18-64 years)	22	24	46
From 65-84 years	88	89	177
85 years and over	3	3	6
Age continuous			
Units: years			
median	70.0	72.0	
full range (min-max)	47 to 87	40 to 86	-
Gender categorical			
Units: Subjects			
Female	46	37	83
Male	67	79	146

## End points

### End points reporting groups

Reporting group title	IBR + OB
Reporting group description: Ibrutinib given orally at a dose of 420 mg/day until progressive disease or unacceptable toxicity. Intravenous obinutuzumab given on Days 1 and 2 (100 mg on Day 1 and 900 mg on Day 2), 1000 mg on Days 8 and 15 of Cycle 1 and 1000 mg on Day 1 of each cycle up to 6 cycles or until progressive disease or unacceptable toxicity.	
Reporting group title	CLB + OB
Reporting group description: Chlorambucil given orally at a dose of 0.5 mg/kg body weight up to a total of 6 cycles on Days 1 and 15 of each cycle or until disease progression or unacceptable toxicity. Intravenous obinutuzumab given on Days 1 and 2 (100 mg on Day 1 and 900 mg on Day 2), 1000 mg on Days 8 and 15 of Cycle 1 and 1000 mg on Day 1 of each cycle up to 6 cycles or until disease progression or unacceptable toxicity.	

### Primary: Progression Free Survival (PFS)

End point title	Progression Free Survival (PFS)
End point description: PFS is defined as time from the date of randomization to the date of first IRC-confirmed disease progression (PD) or date of death due to any cause, whichever occurs first, regardless of the use of subsequent antineoplastic therapy prior to documented PD or death. As the median PFS was not reached in the experimental (Ibr+Ob) arm at the time of the analysis, Kaplan Meier point estimates of the PFS rate at 30 months are presented.	
End point type	Primary
End point timeframe: The primary analysis was performed after observing 94 PFS events as pre-specified in the study protocol. The median follow-up time was 31.3 months at the time of the analysis.	

End point values	IBR + OB	CLB + OB		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	113	116		
Units: percent				
number (confidence interval 95%)	78.5 (69.9 to 85.2)	31.1 (22.5 to 40.0)		

### Statistical analyses

Statistical analysis title	Progression free survival (PFS)
Statistical analysis description: The treatment effect was tested with an unstratified log rank test. The hazard ratio and its 95% confidence interval were based on a Cox regression model with treatment as the only covariate.	
Comparison groups	IBR + OB v CLB + OB

Number of subjects included in analysis	229
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.0001
Method	Logrank
Parameter estimate	Hazard ratio (HR)
Point estimate	0.231
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.145
upper limit	0.367

## Secondary: PFS in high-risk subpopulation

End point title	PFS in high-risk subpopulation
End point description:	
PFS by IRC as defined in primary endpoint was analyzed within a high-risk subpopulation which defined as randomized subjects with del17p/TP53 mutation or del 11q at baseline per central lab results.	
As the median PFS was not reached in the experimental (Ibr+Ob) arm at time of analysis, Kaplan Meier point estimates of the PFS rate at 30 months was presented.	
End point type	Secondary
End point timeframe:	
Results at an overall median follow-up of 31.3 months.	

End point values	IBR + OB	CLB + OB		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	45		
Units: percent				
number (confidence interval 95%)	82.4 (62.7 to 92.3)	14.1 (5.3 to 26.9)		

## Statistical analyses

Statistical analysis title	PFS in high risk group
Statistical analysis description:	
The treatment effect was tested with an unstratified log rank test. The hazard ratio and its 95% confidence interval were based on an unstratified Cox regression model with treatment as the only covariate.	
Comparison groups	IBR + OB v CLB + OB



Number of subjects included in analysis	75
Analysis specification	Pre-specified
Analysis type	superiority
P-value	< 0.0001
Method	Logrank
Parameter estimate	Hazard ratio (HR)
Point estimate	0.119
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.046
upper limit	0.307

## Secondary: Rate of Sustained Hemoglobin Improvement

End point title	Rate of Sustained Hemoglobin Improvement
End point description: Proportion of subjects with hemoglobin increase $\geq 2$ g/dL over baseline continuously for $\geq 56$ days without blood transfusions or growth factors.	
End point type	Secondary
End point timeframe: Results at an overall median follow-up time of 31.3 months.	

End point values	IBR + OB	CLB + OB		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	113	116		
Units: percent				
number (not applicable)	39.8	44.0		

## Statistical analyses

Statistical analysis title	Proportion of Sustained Hemoglobin Improvement
Comparison groups	IBR + OB v CLB + OB
Number of subjects included in analysis	229
Analysis specification	Pre-specified
Analysis type	superiority
P-value	= 0.5253
Method	Chi-squared

## Adverse events

### Adverse events information

Timeframe for reporting adverse events:

From first dose of study drug up to 30 days after the last dose of study drug

Assessment type	Systematic
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### Dictionary used

Dictionary name	MedDRA
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Dictionary version	20.1
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### Reporting groups

Reporting group title	Arm IBR + OB
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Reporting group description: -

Reporting group title	Arm CLB +OB
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Reporting group description: -

Serious adverse events	Arm IBR + OB	Arm CLB +OB	
Total subjects affected by serious adverse events			
subjects affected / exposed	65 / 113 (57.52%)	40 / 115 (34.78%)	
number of deaths (all causes)	10	3	
number of deaths resulting from adverse events	10	1	
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Adenocarcinoma gastric			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 1	0 / 0	
Adenocarcinoma of colon			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Basal cell carcinoma			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Benign renal neoplasm			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

Colorectal cancer			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Colorectal cancer metastatic			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 1	0 / 0	
Invasive ductal breast carcinoma			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Malignant melanoma			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Myelodysplastic syndrome			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Non-small cell lung cancer			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Osteoma			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Squamous cell carcinoma			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Chronic lymphocytic leukaemia			

subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	2 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Essential thrombocythaemia			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Kaposi's sarcoma			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Keratoacanthoma			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Neuroendocrine carcinoma of the skin			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	1 / 1	
deaths causally related to treatment / all	0 / 0	1 / 1	
Prostate cancer			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Vascular disorders			
Peripheral ischaemia			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hypertension			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Venous thrombosis limb			

subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
General disorders and administration site conditions			
Pyrexia			
subjects affected / exposed	4 / 113 (3.54%)	4 / 115 (3.48%)	
occurrences causally related to treatment / all	2 / 4	2 / 4	
deaths causally related to treatment / all	0 / 0	0 / 0	
Catheter site haematoma			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Death			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 1	0 / 0	
Multi-organ disorder			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Sudden death			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	1 / 1	0 / 0	
Reproductive system and breast disorders			
Uterine prolapse			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory, thoracic and mediastinal disorders			
Respiratory failure			

subjects affected / exposed	1 / 113 (0.88%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 1	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Bronchitis chronic			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Haemoptysis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pleural effusion			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Productive cough			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Acute respiratory failure			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pulmonary embolism			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Psychiatric disorders			
Acute psychosis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Completed suicide			

subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 1	0 / 0	
Injury, poisoning and procedural complications			
Infusion related reaction			
subjects affected / exposed	2 / 113 (1.77%)	8 / 115 (6.96%)	
occurrences causally related to treatment / all	0 / 2	0 / 11	
deaths causally related to treatment / all	0 / 0	0 / 0	
Concussion			
subjects affected / exposed	1 / 113 (0.88%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hip fracture			
subjects affected / exposed	1 / 113 (0.88%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Femur fracture			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Incisional hernia			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Rib fracture			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Spinal compression fracture			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Thoracic vertebral fracture			

subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Traumatic haematoma			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Upper limb fracture			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Accidental overdose			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Craniocerebral injury			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cardiac disorders			
Atrial fibrillation			
subjects affected / exposed	5 / 113 (4.42%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	5 / 6	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Acute coronary syndrome			
subjects affected / exposed	3 / 113 (2.65%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 3	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Acute myocardial infarction			
subjects affected / exposed	2 / 113 (1.77%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 2	0 / 1	
deaths causally related to treatment / all	0 / 1	0 / 0	
Angina pectoris			



subjects affected / exposed	2 / 113 (1.77%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Atrial tachycardia			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	2 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cardiac arrest			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 1	0 / 0	
Cardiac failure			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cardiac failure congestive			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Myocardial infarction			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pericarditis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Myocardial ischaemia			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Nervous system disorders			
Cerebrovascular accident			

subjects affected / exposed	2 / 113 (1.77%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Transient ischaemic attack			
subjects affected / exposed	2 / 113 (1.77%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cerebral ischaemia			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Depressed level of consciousness			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Ischaemic stroke			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Syncope			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Headache			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Loss of consciousness			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Seizure			

subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
<b>Blood and lymphatic system disorders</b>			
Febrile neutropenia			
subjects affected / exposed	4 / 113 (3.54%)	7 / 115 (6.09%)	
occurrences causally related to treatment / all	4 / 4	7 / 7	
deaths causally related to treatment / all	0 / 0	0 / 0	
Thrombocytopenia			
subjects affected / exposed	3 / 113 (2.65%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	4 / 7	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Neutropenia			
subjects affected / exposed	2 / 113 (1.77%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	2 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Anaemia			
subjects affected / exposed	1 / 113 (0.88%)	2 / 115 (1.74%)	
occurrences causally related to treatment / all	2 / 2	1 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Aplastic anaemia			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 1	0 / 0	
Leukopenia			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
<b>Eye disorders</b>			
Cataract			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Retinal detachment			

subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastrointestinal disorders			
Abdominal pain			
subjects affected / exposed	2 / 113 (1.77%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Small intestinal obstruction			
subjects affected / exposed	1 / 113 (0.88%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 1	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Diarrhoea			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Dyspepsia			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastritis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Haemorrhoids			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Impaired gastric emptying			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Inguinal hernia			

subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Large intestine polyp			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Oesophageal rupture			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Proctitis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Nausea			
subjects affected / exposed	0 / 113 (0.00%)	2 / 115 (1.74%)	
occurrences causally related to treatment / all	0 / 0	1 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Constipation			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hepatobiliary disorders			
Cholelithiasis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cholecystitis			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Renal and urinary disorders			

Renal failure			
subjects affected / exposed	2 / 113 (1.77%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Acute kidney injury			
subjects affected / exposed	1 / 113 (0.88%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	1 / 1	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Urinary retention			
subjects affected / exposed	1 / 113 (0.88%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Nephrolithiasis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Endocrine disorders			
Goitre			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Musculoskeletal and connective tissue disorders			
Osteoarthritis			
subjects affected / exposed	2 / 113 (1.77%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Arthritis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Compartment syndrome			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

Inclusion body myositis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Osteolysis			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Osteonecrosis of jaw			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Pneumonia			
subjects affected / exposed	6 / 113 (5.31%)	5 / 115 (4.35%)	
occurrences causally related to treatment / all	6 / 10	2 / 5	
deaths causally related to treatment / all	0 / 0	0 / 1	
Gastroenteritis			
subjects affected / exposed	2 / 113 (1.77%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 2	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Urinary tract infection			
subjects affected / exposed	2 / 113 (1.77%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	1 / 2	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pharyngitis			
subjects affected / exposed	1 / 113 (0.88%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	1 / 1	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Abscess of salivary gland			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Bacterial sepsis			

subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 1	0 / 0	
Bronchitis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Bronchopulmonary aspergillosis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Bursitis infective staphylococcal			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cellulitis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Escherichia sepsis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 3	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Escherichia urinary tract infection			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Herpes zoster			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infective aneurysm			



subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Listeria sepsis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Lower respiratory tract infection			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumocystis jirovecii pneumonia			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonia bacterial			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonia klebsiella			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory tract infection			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Septic shock			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 1	0 / 0	
Soft tissue infection			

subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Streptococcal bacteraemia			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Upper respiratory tract infection			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Urosepsis			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Sepsis			
subjects affected / exposed	0 / 113 (0.00%)	2 / 115 (1.74%)	
occurrences causally related to treatment / all	0 / 0	1 / 2	
deaths causally related to treatment / all	0 / 0	0 / 1	
Device related infection			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Metabolism and nutrition disorders			
Diabetes mellitus inadequate control			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hypokalaemia			
subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hypomagnesaemia			

subjects affected / exposed	1 / 113 (0.88%)	0 / 115 (0.00%)	
occurrences causally related to treatment / all	1 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Tumour lysis syndrome			
subjects affected / exposed	0 / 113 (0.00%)	5 / 115 (4.35%)	
occurrences causally related to treatment / all	0 / 0	4 / 5	
deaths causally related to treatment / all	0 / 0	0 / 0	
Dehydration			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hyponatraemia			
subjects affected / exposed	0 / 113 (0.00%)	1 / 115 (0.87%)	
occurrences causally related to treatment / all	0 / 0	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Frequency threshold for reporting non-serious adverse events: 5 %

<b>Non-serious adverse events</b>	Arm IBR + OB	Arm CLB +OB	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	112 / 113 (99.12%)	111 / 115 (96.52%)	
Vascular disorders			
Hypertension			
subjects affected / exposed	19 / 113 (16.81%)	5 / 115 (4.35%)	
occurrences (all)	21	10	
Hypotension			
subjects affected / exposed	0 / 113 (0.00%)	6 / 115 (5.22%)	
occurrences (all)	0	6	
General disorders and administration site conditions			
Fatigue			
subjects affected / exposed	20 / 113 (17.70%)	19 / 115 (16.52%)	
occurrences (all)	23	24	
Pyrexia			

subjects affected / exposed	19 / 113 (16.81%)	28 / 115 (24.35%)	
occurrences (all)	29	37	
Oedema peripheral			
subjects affected / exposed	14 / 113 (12.39%)	8 / 115 (6.96%)	
occurrences (all)	18	9	
Asthenia			
subjects affected / exposed	11 / 113 (9.73%)	17 / 115 (14.78%)	
occurrences (all)	13	18	
Chills			
subjects affected / exposed	6 / 113 (5.31%)	10 / 115 (8.70%)	
occurrences (all)	6	11	
Peripheral swelling			
subjects affected / exposed	6 / 113 (5.31%)	2 / 115 (1.74%)	
occurrences (all)	7	2	
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	30 / 113 (26.55%)	14 / 115 (12.17%)	
occurrences (all)	45	19	
Dyspnoea			
subjects affected / exposed	11 / 113 (9.73%)	16 / 115 (13.91%)	
occurrences (all)	18	21	
Oropharyngeal pain			
subjects affected / exposed	8 / 113 (7.08%)	4 / 115 (3.48%)	
occurrences (all)	11	4	
Productive cough			
subjects affected / exposed	7 / 113 (6.19%)	2 / 115 (1.74%)	
occurrences (all)	8	2	
Epistaxis			
subjects affected / exposed	6 / 113 (5.31%)	9 / 115 (7.83%)	
occurrences (all)	9	12	
Psychiatric disorders			
Insomnia			
subjects affected / exposed	13 / 113 (11.50%)	5 / 115 (4.35%)	
occurrences (all)	14	5	
Anxiety			

subjects affected / exposed occurrences (all)	9 / 113 (7.96%) 10	8 / 115 (6.96%) 8	
Investigations			
Blood creatine increased subjects affected / exposed occurrences (all)	7 / 113 (6.19%) 11	1 / 115 (0.87%) 1	
Weight decreased subjects affected / exposed occurrences (all)	2 / 113 (1.77%) 2	6 / 115 (5.22%) 6	
Injury, poisoning and procedural complications			
Infusion related reaction subjects affected / exposed occurrences (all)	26 / 113 (23.01%) 30	61 / 115 (53.04%) 70	
Fall subjects affected / exposed occurrences (all)	7 / 113 (6.19%) 7	3 / 115 (2.61%) 4	
Cardiac disorders			
Atrial fibrillation subjects affected / exposed occurrences (all)	14 / 113 (12.39%) 17	0 / 115 (0.00%) 0	
Palpitations subjects affected / exposed occurrences (all)	7 / 113 (6.19%) 7	3 / 115 (2.61%) 3	
Nervous system disorders			
Dizziness subjects affected / exposed occurrences (all)	11 / 113 (9.73%) 14	7 / 115 (6.09%) 9	
Headache subjects affected / exposed occurrences (all)	9 / 113 (7.96%) 13	13 / 115 (11.30%) 17	
Tremor subjects affected / exposed occurrences (all)	4 / 113 (3.54%) 4	7 / 115 (6.09%) 7	
Blood and lymphatic system disorders			
Neutropenia			

subjects affected / exposed	49 / 113 (43.36%)	73 / 115 (63.48%)	
occurrences (all)	152	215	
Thrombocytopenia			
subjects affected / exposed	39 / 113 (34.51%)	29 / 115 (25.22%)	
occurrences (all)	94	58	
Anaemia			
subjects affected / exposed	19 / 113 (16.81%)	28 / 115 (24.35%)	
occurrences (all)	31	46	
Spontaneous haematoma			
subjects affected / exposed	10 / 113 (8.85%)	1 / 115 (0.87%)	
occurrences (all)	12	1	
Eye disorders			
Cataract			
subjects affected / exposed	9 / 113 (7.96%)	1 / 115 (0.87%)	
occurrences (all)	11	1	
Vision blurred			
subjects affected / exposed	8 / 113 (7.08%)	7 / 115 (6.09%)	
occurrences (all)	9	8	
Lacrimation increased			
subjects affected / exposed	6 / 113 (5.31%)	5 / 115 (4.35%)	
occurrences (all)	6	7	
Gastrointestinal disorders			
Diarrhoea			
subjects affected / exposed	38 / 113 (33.63%)	12 / 115 (10.43%)	
occurrences (all)	57	13	
Constipation			
subjects affected / exposed	18 / 113 (15.93%)	14 / 115 (12.17%)	
occurrences (all)	22	17	
Nausea			
subjects affected / exposed	14 / 113 (12.39%)	34 / 115 (29.57%)	
occurrences (all)	17	44	
Vomiting			
subjects affected / exposed	11 / 113 (9.73%)	14 / 115 (12.17%)	
occurrences (all)	17	17	
Dyspepsia			

subjects affected / exposed occurrences (all)	9 / 113 (7.96%) 10	2 / 115 (1.74%) 2	
Abdominal pain subjects affected / exposed occurrences (all)	8 / 113 (7.08%) 11	6 / 115 (5.22%) 8	
Gastrooesophageal reflux disease subjects affected / exposed occurrences (all)	6 / 113 (5.31%) 7	3 / 115 (2.61%) 3	
Skin and subcutaneous tissue disorders			
Rash maculo-papular subjects affected / exposed occurrences (all)	17 / 113 (15.04%) 27	2 / 115 (1.74%) 2	
Rash subjects affected / exposed occurrences (all)	10 / 113 (8.85%) 14	1 / 115 (0.87%) 1	
Pruritus subjects affected / exposed occurrences (all)	9 / 113 (7.96%) 11	4 / 115 (3.48%) 4	
Dry skin subjects affected / exposed occurrences (all)	7 / 113 (6.19%) 7	0 / 115 (0.00%) 0	
Ecchymosis subjects affected / exposed occurrences (all)	7 / 113 (6.19%) 8	0 / 115 (0.00%) 0	
Onychoclasia subjects affected / exposed occurrences (all)	6 / 113 (5.31%) 6	0 / 115 (0.00%) 0	
Musculoskeletal and connective tissue disorders			
Arthralgia subjects affected / exposed occurrences (all)	25 / 113 (22.12%) 30	12 / 115 (10.43%) 12	
Back pain subjects affected / exposed occurrences (all)	20 / 113 (17.70%) 25	12 / 115 (10.43%) 14	
Muscle spasms			

subjects affected / exposed	15 / 113 (13.27%)	7 / 115 (6.09%)	
occurrences (all)	19	8	
Pain in extremity			
subjects affected / exposed	11 / 113 (9.73%)	10 / 115 (8.70%)	
occurrences (all)	12	10	
Myalgia			
subjects affected / exposed	7 / 113 (6.19%)	4 / 115 (3.48%)	
occurrences (all)	10	4	
Musculoskeletal pain			
subjects affected / exposed	6 / 113 (5.31%)	3 / 115 (2.61%)	
occurrences (all)	7	3	
Infections and infestations			
Upper respiratory tract infection			
subjects affected / exposed	15 / 113 (13.27%)	7 / 115 (6.09%)	
occurrences (all)	17	7	
Nasopharyngitis			
subjects affected / exposed	13 / 113 (11.50%)	4 / 115 (3.48%)	
occurrences (all)	26	4	
Urinary tract infection			
subjects affected / exposed	12 / 113 (10.62%)	7 / 115 (6.09%)	
occurrences (all)	19	7	
Conjunctivitis			
subjects affected / exposed	12 / 113 (10.62%)	2 / 115 (1.74%)	
occurrences (all)	19	2	
Pneumonia			
subjects affected / exposed	10 / 113 (8.85%)	5 / 115 (4.35%)	
occurrences (all)	14	5	
Respiratory tract infection			
subjects affected / exposed	6 / 113 (5.31%)	1 / 115 (0.87%)	
occurrences (all)	8	1	
Oral herpes			
subjects affected / exposed	0 / 113 (0.00%)	6 / 115 (5.22%)	
occurrences (all)	0	6	
Bronchitis			
subjects affected / exposed	8 / 113 (7.08%)	2 / 115 (1.74%)	
occurrences (all)	9	2	



Metabolism and nutrition disorders			
Hyperuricaemia			
subjects affected / exposed	15 / 113 (13.27%)	0 / 115 (0.00%)	
occurrences (all)	22	0	
Decreased appetite			
subjects affected / exposed	7 / 113 (6.19%)	5 / 115 (4.35%)	
occurrences (all)	7	5	
Hypokalaemia			
subjects affected / exposed	7 / 113 (6.19%)	2 / 115 (1.74%)	
occurrences (all)	10	2	
Hyperglycaemia			
subjects affected / exposed	6 / 113 (5.31%)	7 / 115 (6.09%)	
occurrences (all)	9	9	
Iron deficiency			
subjects affected / exposed	6 / 113 (5.31%)	0 / 115 (0.00%)	
occurrences (all)	7	0	

## More information

### Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
18 August 2014	<p>Updated safety information for ibrutinib.</p> <ul style="list-style-type: none"><li>• Provided background and safety information for obinutuzumab including guidance for premedication for subjects at risk for tumor lysis syndrome, and dose modification upon development of thrombocytopenia.</li><li>• Included interim analysis to be conducted at approximately 66 PFS events.</li><li>• Clarified establishment of independent data monitoring committee to replace safety monitoring committee for monitoring of efficacy and safety data given the added interim efficacy analysis.</li><li>• Clarified that progressive disease could be assessed based on <math>\geq 50\%</math> increase from nadir rather than baseline count if the ALC is <math>\geq 30,000/\mu\text{L}</math> and lymphocyte doubling time is rapid</li></ul>
10 May 2016	<ul style="list-style-type: none"><li>• Aligned language with IB Version 9.0 and clarified certain aspects of the clinical study protocol</li><li>• To include obinutuzumab-related infusion reactions by treatment arm under secondary safety objectives</li><li>• Updated response evaluation schedule and number of subject visits.</li><li>• Updated study evaluations information to expand biomarker analysis and include a peripheral blood and bone marrow aspirate for MRD assessment.</li><li>• Removed the 36-month timepoint from interim analysis</li><li>• Aligned pregnancy language with relevant study drug labels</li></ul>
17 February 2017	<ul style="list-style-type: none"><li>• Removed the planned interim analysis and updated plans for primary analysis to ensure maturity of PFS outcome data per FDA feedback.</li><li>• Revised EQ-5D-5L endpoint in secondary efficacy analysis section to clarify that methods will be detailed in SAP.</li><li>• Revised study design to include potential roll-over to long-term extension study for subjects who choose to continue ibrutinib on a clinical protocol when access to commercial ibrutinib is not feasible.</li><li>• Updated safety language for alignment with latest version of ibrutinib IB.</li><li>• Updated MRD information to clarify that peripheral blood or bone marrow would be used for the evaluation of MRD in all responders if available.</li><li>• Updated criteria for CR to clarify that the confirmatory marrow aspirate and biopsy would be performed by local laboratory</li></ul>

Notes:

### Interruptions (globally)

Were there any global interruptions to the trial? No

### Limitations and caveats

None reported