Clinical trial results:
A Phase 2, multicenter, open-label study of BGJ398 in patients with recurrent resectable or unresectable glioblastoma

Summary

EudraCT number	2013-002200-13
Trial protocol	IT NL ES BE DE
Global end of trial date	03 October 2018

Results information

Result version number	v1 (current)
This version publication date	17 October 2019
First version publication date	17 October 2019

Trial information

Trial identification

Sponsor protocol code	BGJ398X2201

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT01975701
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Novartis Pharmaceuticals
Sponsor organisation address	CH-4002, Basel, Switzerland,
Public contact	clinical disclosure office, Novartis Pharma, 41 613241111, novartis.email@novartis.com
Scientific contact	Study Director, Novartis Pharmaceuticals, 41 613241111, novartis.email@novartis.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	Final
Date of interim/final analysis	03 October 2018
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	03 October 2018
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

the main objective for this trial was to assess the anti-tumor activity of BGJ398 for patients with GBM and/or other glioma subtypes with FGFR1-TACC1, FGFR3-TACC3 fusion and/or activating mutation in FGFR1,2 or 3, based on progression-free survival rate at 6 month (PFS6)

Protection of trial subjects:

The study was in compliance with the ethical principles derived from the Declaration of Helsinki and the International Conference on Harmonization (ICH) Good Clinical Practice (GCP) guidelines. All the local regulatory requirements pertinent to safety of trial subjects were also followed during the conduct of the trial.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	09 December 2013
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Belgium: 1
Country: Number of subjects enrolled	Netherlands: 2
Country: Number of subjects enrolled	Spain: 4
Country: Number of subjects enrolled	Switzerland: 3
Country: Number of subjects enrolled	United States: 16
Worldwide total number of subjects	26
EEA total number of subjects	7

Notes:

Subjects enrolled per age group

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)	21
From 65 to 84 years	5
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

All 26 patients included were enrolled in the non Surgical arm.

Note : Australia participated in this trial, however no patients received treatment.

Pre-assignment

Screening details: -

Pre-assignment period milestones

Number of subjects started	26
Number of subjects completed	26

Period 1

Period 1 title	Overall Study (overall period)
Is this the baseline period?	Yes
Allocation method	Not applicable
Blinding used	Not blinded

Arms

Arm title	BGJ398 non surgical

Arm description:

125 mg BGJ398 non surgical

Arm type	experimental
Investigational medicinal product name	BGJ398
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Capsule, hard
Routes of administration	Oral use

Dosage and administration details:

BGJ398 25 mg
BGJ398 100 mg
hard gelatin capsules for oral use

Number of subjects in period 1	BGJ398 non surgical
Started	26
Completed	1
Not completed	25
Adverse event, serious fatal	23
Physician decision	1
Lost to follow-up	1

Baseline characteristics

Reporting groups	
Reporting group title	BGJ398 non surgical
Reporting group description:	
125 mg BGJ398 non surgical	

Reporting group values	BGJ398 non surgical	Total	
Number of subjects	26	26	
Age categorical Units: Subjects			
In utero	0	0	
Preterm newborn infants (gestational age < 37 wks)	0	0	
Newborns (0-27 days)	0	0	
Infants and toddlers (28 days-23 months)	0	0	
Children (2-11 years)	0	0	
Adolescents (12-17 years)	0	0	
Adults (18-64 years)	21	21	
From 65-84 years	5	5	
85 years and over	0	0	
Age Continuous Units: years			
arithmetic mean	53.7		
standard deviation	± 13.59	-	
Sex: Female, Male Units: Subjects			
Female	10	10	
Male	16	16	
Race/Ethnicity, Customized Units: Subjects			
caucasian	26	26	

End points

End points reporting groups

Reporting group title	BGJ398 non surgical
Reporting group description:	
125 mg BGJ398 non surgical	

Primary: progression free survival

End point title	progression free survival[1]
End point description:	
To assess the anti-tumor activity of BGJ398 for patients with GBM and/or other glioma subtypes that harbor FGFR1-TACC1, FGFR3-TACC3 fusion and/or activating mutation in FGFR1, 2 or 3 based on PFS6 (PFS rate at 6 months as defined by RANO criteria as assessed by the investigator)	
End point type	Primary
End point timeframe:	
6 months	

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: no Analysis was performed

End point values	BGJ398 non surgical			
Subject group type	Reporting group			
Number of subjects analysed	24			
Units: months				
median (confidence interval 95%)	1.7 (1.05 to 2.80)			

Statistical analyses

No statistical analyses for this end point

Secondary: Overall response rate

End point title	Overall response rate
End point description:	
To further assess the anti-tumor activity of BGJ398 for patients with GBM with an amplification, translocation, or activating mutation in FGFR1,2,3 or 4, based on Objective Response Rate (ORR - patients with measurable disease - as defined by RANO criteria as assessed by the investigator	
End point type	Secondary
End point timeframe:	
8 months after last patient last visit	

End point values	BGJ398 non surgical			
Subject group type	Reporting group			
Number of subjects analysed	26			
Units: participants				
partial response	2			
stable disease	7			
progressive disease	13			
unknown	3			
missing	1			

Statistical analyses

No statistical analyses for this end point

Secondary: Overall survival

End point title	Overall survival

End point description:

To further assess the anti-tumor activity of BGJ398 for patients with GBM and/or other glioma subtypes that harbor FGFR1-TACC1, FGFR3-TACC3 fusion and/or activating mutation in FGFR1, 2 and 3 based on Overall Survival

End point type	Secondary

End point timeframe:

8 months after LPLV

End point values	BGJ398 non surgical			
Subject group type	Reporting group			
Number of subjects analysed	26			
Units: months				
median (confidence interval 95%)	6.74 (4.17 to 11.73)			

Statistical analyses

No statistical analyses for this end point

Secondary: safety and tolerability

End point title	safety and tolerability

End point description:

Safety: type, frequency, and severity of AEs and SAEs; Tolerability: dose interruptions, reductions and dose intensity, and evaluations of laboratory values

End point type	Secondary

End point timeframe:

8 months after LPLV

End point values	BGJ398 non surgical			
Subject group type	Reporting group			
Number of subjects analysed	26			
Units: participants				
participants with dose interruptions	13			
participants with dose reductions	4			

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events: 5 years	
Assessment type	Systematic
Dictionary used	
Dictionary name	MedDRA
Dictionary version	20.1
Reporting groups	
Reporting group title	All@Patients
Reporting group description: All@Patients	
Reporting group title	Non Surg BGJ398@125 mg
Reporting group description: Non Surg BGJ398@125 mg	

Serious adverse events	All@Patients	Non Surg BGJ398@125 mg	
Total subjects affected by serious adverse events			
subjects affected / exposed	9 / 26 (34.62%)	9 / 26 (34.62%)	
number of deaths (all causes)	3	3	
number of deaths resulting from adverse events	0	0	
Investigations			
Decreased appetite			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Surgical and medical procedures			
Cataract operation			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Nervous system disorders			
Ataxia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Epilepsy			

subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hemiparesis			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hydrocephalus			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Neurological decompensation			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences causally related to treatment / all	0 / 2	0 / 2	
deaths causally related to treatment / all	0 / 2	0 / 2	
Neurological symptom			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Seizure			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
General disorders and administration site conditions			
General physical health deterioration			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Eye disorders			
Cataract			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Gastrointestinal disorders			
Vomiting			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Metabolism and nutrition disorders			
Dehydration			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hyperphosphataemia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences causally related to treatment / all	1 / 1	1 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Frequency threshold for reporting non-serious adverse events: 0 %

Non-serious adverse events	All@Patients	Non Surg BGJ398@125 mg	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	26 / 26 (100.00%)	26 / 26 (100.00%)	
General disorders and administration site conditions			
Asthenia			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	4	4	
Fatigue			
subjects affected / exposed	9 / 26 (34.62%)	9 / 26 (34.62%)	
occurrences (all)	9	9	
Gait disturbance			
subjects affected / exposed	3 / 26 (11.54%)	3 / 26 (11.54%)	
occurrences (all)	3	3	
Mucosal inflammation			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	5	5	
Oedema peripheral			

subjects affected / exposed	3 / 26 (11.54%)	3 / 26 (11.54%)	
occurrences (all)	3	3	
Cyst			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Pain			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Reproductive system and breast disorders			
Bartholin's cyst			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	2	2	
Vaginal haemorrhage			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Epistaxis			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	4	4	
Oropharyngeal pain			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	3	3	
Hiccups			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Nasal inflammation			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Sinus congestion			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Psychiatric disorders			

Anxiety			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Confusional state			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Depression			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Insomnia			
subjects affected / exposed	4 / 26 (15.38%)	4 / 26 (15.38%)	
occurrences (all)	4	4	
Agitation			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Investigations			
Thrombocytopenia			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Alanine aminotransferase increased			
subjects affected / exposed	3 / 26 (11.54%)	3 / 26 (11.54%)	
occurrences (all)	3	3	
Aspartate aminotransferase increased			
subjects affected / exposed	3 / 26 (11.54%)	3 / 26 (11.54%)	
occurrences (all)	4	4	
Blood alkaline phosphatase increased			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Leukopenia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	3	3	
Neutropenia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Amylase increased			

subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Blood bilirubin increased			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	2	2	
Weight decreased			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
White blood cell count decreased			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Injury, poisoning and procedural complications			
Fall			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	3	3	
Traumatic haematoma			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Cardiac disorders			
Palpitations			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Sinus bradycardia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Nervous system disorders			
Aphasia			
subjects affected / exposed	3 / 26 (11.54%)	3 / 26 (11.54%)	
occurrences (all)	3	3	
Dizziness			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Headache			
subjects affected / exposed	6 / 26 (23.08%)	6 / 26 (23.08%)	
occurrences (all)	6	6	
Hemiparesis			

subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Memory impairment			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Seizure			
subjects affected / exposed	4 / 26 (15.38%)	4 / 26 (15.38%)	
occurrences (all)	4	4	
Somnolence			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Tremor			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Anosmia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Ataxia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Cognitive disorder			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Dysaesthesia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Dysgeusia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Facial paresis			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Hemianopia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Horner's syndrome			

subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Paraesthesia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Blood and lymphatic system disorders			
Anaemia			
subjects affected / exposed	3 / 26 (11.54%)	3 / 26 (11.54%)	
occurrences (all)	3	3	
Eye disorders			
Dry eye			
subjects affected / exposed	3 / 26 (11.54%)	3 / 26 (11.54%)	
occurrences (all)	3	3	
Eyelid ptosis			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Cataract			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	2	2	
Conjunctival hyperaemia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Corneal infiltrates			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Eye irritation			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Keratopathy			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	2	2	
Ocular hyperaemia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Gastrointestinal disorders			

Constipation			
subjects affected / exposed	7 / 26 (26.92%)	7 / 26 (26.92%)	
occurrences (all)	8	8	
Diarrhoea			
subjects affected / exposed	8 / 26 (30.77%)	8 / 26 (30.77%)	
occurrences (all)	11	11	
Dyspepsia			
subjects affected / exposed	7 / 26 (26.92%)	7 / 26 (26.92%)	
occurrences (all)	7	7	
Stomatitis			
subjects affected / exposed	5 / 26 (19.23%)	5 / 26 (19.23%)	
occurrences (all)	10	10	
Aphthous ulcer			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Dry mouth			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Gastritis			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Gastrointestinal haemorrhage			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Glossodynia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Haematochezia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Haemorrhoids			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Lip dry			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	

Lip pain			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Nausea			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Odynophagia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Oral disorder			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Oral pain			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Vomiting			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Skin and subcutaneous tissue disorders			
Alopecia			
subjects affected / exposed	4 / 26 (15.38%)	4 / 26 (15.38%)	
occurrences (all)	4	4	
Dermatitis acneiform			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Dry skin			
subjects affected / exposed	4 / 26 (15.38%)	4 / 26 (15.38%)	
occurrences (all)	5	5	
Nail disorder			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Onycholysis			
subjects affected / exposed	3 / 26 (11.54%)	3 / 26 (11.54%)	
occurrences (all)	6	6	
Palmar-plantar erythrodysaesthesia syndrome			

subjects affected / exposed	3 / 26 (11.54%)	3 / 26 (11.54%)	
occurrences (all)	4	4	
Skin ulcer			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Blister			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Dermatitis bullous			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Erythema			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Hyperkeratosis			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	2	2	
Hypertrichosis			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Nail dystrophy			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Onychalgia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	2	2	
Rash maculo-papular			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Skin disorder			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Skin exfoliation			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Skin irritation			

subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Xeroderma			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Renal and urinary disorders			
Urinary incontinence			
subjects affected / exposed	4 / 26 (15.38%)	4 / 26 (15.38%)	
occurrences (all)	4	4	
Chromaturia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Endocrine disorders			
Hypothyroidism			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	4	4	
Muscular weakness			
subjects affected / exposed	4 / 26 (15.38%)	4 / 26 (15.38%)	
occurrences (all)	6	6	
Musculoskeletal pain			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Myalgia			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Pain in extremity			
subjects affected / exposed	3 / 26 (11.54%)	3 / 26 (11.54%)	
occurrences (all)	4	4	
Infections and infestations			
Conjunctivitis			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	

Oral candidiasis			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	2	2	
Folliculitis			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Fungal skin infection			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	2	2	
Herpes simplex			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Hordeolum			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Lip infection			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Nasopharyngitis			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Oral herpes			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Paronychia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Pharyngitis			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Rash pustular			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Rhinitis			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	

Vulvovaginal mycotic infection			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Wound infection			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Metabolism and nutrition disorders			
Decreased appetite			
subjects affected / exposed	4 / 26 (15.38%)	4 / 26 (15.38%)	
occurrences (all)	4	4	
Hyperglycaemia			
subjects affected / exposed	3 / 26 (11.54%)	3 / 26 (11.54%)	
occurrences (all)	5	5	
Hyperlipasaemia			
subjects affected / exposed	4 / 26 (15.38%)	4 / 26 (15.38%)	
occurrences (all)	5	5	
Hyperphosphataemia			
subjects affected / exposed	20 / 26 (76.92%)	20 / 26 (76.92%)	
occurrences (all)	43	43	
Hyponatraemia			
subjects affected / exposed	2 / 26 (7.69%)	2 / 26 (7.69%)	
occurrences (all)	4	4	
Hypophosphataemia			
subjects affected / exposed	4 / 26 (15.38%)	4 / 26 (15.38%)	
occurrences (all)	11	11	
Hypercalcaemia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Hypercreatininaemia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	2	2	
Hyperkalaemia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Hypernatraemia			

subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Hyperuricaemia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	
Hypoalbuminaemia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	3	3	
Hypokalaemia			
subjects affected / exposed	1 / 26 (3.85%)	1 / 26 (3.85%)	
occurrences (all)	1	1	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
01 August 2014	exclusion criteria were updated to exclude patients with current evidence of corneal/keratopathy or retinal disorder, ophthalmologic eye exam assessments were added, patients with clinically significant hypokalemia were excluded
01 April 2015	Inclusion/Exclusion criteria were modified to exclude patients with FGFR1, 2, 3, and 4 amplifications and to include GBM and/or other glioma subtype patients with FGFR1-TACC1, FGFR3-TACC3 fusion and/or activating mutations in FGFR1, 2 or 3 gene.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

Limitations of the trial such as small numbers of subjects analysed or technical problems leading to unreliable data.

decision was made not to pursue further development for this disease indication. BGJ398 was out licensed and the indication was no longer pursued. Remaining patient continued treatment in post-trial settings.

Notes: