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Trial record **1 of 1** for: CSTI571BDE40

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Study of Imatinib Mesylate in Combination With Hydroxyurea Versus Hydroxyurea Alone as an Oral Therapy in Patients With Temozolomide Resistant Progressive Glioblastoma

This study has been completed.

Sponsor:
Novartis Pharmaceuticals

Information provided by:
Novartis

ClinicalTrials.gov Identifier:
NCT00154375

First received: September 9, 2005
Last updated: April 19, 2011
Last verified: April 2011
History of Changes

Full Text View | Tabular View | Study Results | Disclaimer | How to Read a Study Record

Results First Received: January 13, 2011

Study Type:	Interventional
Study Design:	Allocation: Randomized; Endpoint Classification: Efficacy Study; Intervention Model: Parallel Assignment; Masking: Open Label; Primary Purpose: Treatment
Conditions:	Glioblastoma Multiforme Astrocytoma
Interventions:	Drug: Imatinib mesylate Drug: Hydroxyurea

Participant Flow

Hide Participant Flow

Recruitment Details

Key information relevant to the recruitment process for the overall study, such as dates of the recruitment period and locations
No text entered.

Pre-Assignment Details

Significant events and approaches for the overall study following participant enrollment, but prior to group assignment
No text entered.

Reporting Groups

	Description
Imatinib Mesylate + Hydroxyurea (HU)	Imatinib was supplied as 100 mg and 400 mg tablets. Patients in the combination arm were instructed to take a daily oral imatinib dose of 600 mg (600 mg at lunch time) and a daily oral hydroxyurea (HU) dose of 1000 mg (500 mg twice daily; in the morning and at bed time). Every 6 weeks after randomization based on assessment of therapeutic response, either patients continued with above mentioned dosing regimen or switched to receive a daily dose of 800 mg imatinib with 1000 mg HU. Patients were instructed to split the intake, taking 400 mg imatinib with 500 mg HU in the morning, then the same in the evening.
Hydroxyurea Alone	1500 mg/day of HU given as 500 mg 3 times daily. Every 6 weeks after randomization and based on assessment of therapeutic response, the patients were either switched to combination arm or continued in monotherapy arm of hydroxyurea.

Participant Flow: Overall Study

	Imatinib Mesylate + Hydroxyurea (HU)	Hydroxyurea Alone
STARTED	**120**	**120**
Discontinued Study Treatment	**111**	**104**

Not Exposed to Study Treatment	**2** [1]	**2**
COMPLETED	**7**	**14**
NOT COMPLETED	**113**	**106**
Unsatisfactory therapeutic effect	**25**	**26**
Adverse Event	**18**	**20**
Withdrawal by Subject	**14**	**10**
Death	**5**	**13**
Study drug no longer required	**5**	**3**
Lost to Follow-up	**2**	**1**
Abnormal laboratory value(s)	**0**	**2**
Protocol Violation	**0**	**1**
Suspected progression of disease	**44**	**30**

[1] 4 randomized patients didn't receive study treatment were excluded from the safety analyses.

Baseline Characteristics

Hide Baseline Characteristics

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
No text entered.

Reporting Groups

	Description
Imatinib Mesylate + Hydroxyurea (HU)	Imatinib was supplied as 100 mg and 400 mg tablets. Patients in the combination arm were instructed

	to take a daily oral imatinib dose of 600 mg (600 mg at lunch time) and a daily oral hydroxyurea (HU) dose of 1000 mg (500 mg twice daily; in the morning and at bed time). Every 6 weeks after randomization based on assessment of therapeutic response, either patients continued with above mentioned dosing regimen or switched to receive a daily dose of 800 mg imatinib with 1000 mg HU. Patients were instructed to split the intake, taking 400 mg imatinib with 500 mg HU in the morning, then the same in the evening.
Hydroxyurea Alone	1500 mg/day of HU given as 500 mg 3 times daily. Every 6 weeks after randomization and based on assessment of therapeutic response, the patients were either switched to combination arm or continued in monotherapy arm of hydroxyurea.
Total	Total of all reporting groups

Baseline Measures

	Imatinib Mesylate + Hydroxyurea (HU)	Hydroxyurea Alone	Total
Number of Participants [units: participants]	**120**	**120**	**240**
Age [units: years] Mean (Standard Deviation)	**52.1 (11.3)**	**50.2 (11.4)**	**51.2 (11.4)**
Gender [units: participants]			
Female	**50**	**38**	**88**
Male	**70**	**82**	**152**

Outcome Measures

Hide All Outcome Measures

1. Primary: Percentage of Participants With Progression Free Survival (PFS) During the Study Duration [Time Frame: 6 months -1 year]

Measure Type	Primary

Measure Title	Percentage of Participants With Progression Free Survival (PFS) During the Study Duration
Measure Description	PFS was defined as the time from the date of randomization to the date of the first documented progression according to the MacDonald criteria, or death due to any cause. MacDonald criteria are standard criteria in neurooncology. Tumor assessment was made according to the adapted MacDonald criteria based on the combined evaluation of 1) assessment of the MRI scan for measurable, evaluable, and new lesions (made by the independent external expert too), 2) overall assessment of neurological performance (made by the investigator), 3) concomitant steroid use (as reported by the investigator).
Time Frame	6 months -1 year
Safety Issue	No

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
The ITT population consists of all randomized patients, analyzed according to their randomized treatment.

Reporting Groups

	Description
Imatinib Mesylate + Hydroxyurea (HU)	Imatinib was supplied as 100 mg and 400 mg tablets. Patients in the combination arm were instructed to take a daily oral imatinib dose of 600 mg (600 mg at lunch time) and a daily oral hydroxyurea (HU) dose of 1000 mg (500 mg twice daily; in the morning and at bed time). Every 6 weeks after randomization based on assessment of therapeutic response, either patients continued with above mentioned dosing regimen or switched to receive a daily dose of 800 mg imatinib with 1000 mg HU. Patients were instructed to split the intake, taking 400 mg imatinib with 500 mg HU in the morning, then the same in the evening.
Hydroxyurea Alone	1500 mg/day of HU given as 500 mg 3 times daily. Every 6 weeks after randomization and based on assessment of therapeutic response, the patients were either switched to combination arm or continued in monotherapy arm of hydroxyurea.

Measured Values

	Imatinib Mesylate + Hydroxyurea	**Hydroxyurea**

	(HU)	Alone
Number of Participants Analyzed [units: participants]	**120**	**120**
Percentage of Participants With Progression Free Survival (PFS) During the Study Duration [units: Percentage of Participants] Number (95% Confidence Interval)		
6 months	**5.3 (1.0 to 9.7)**	**6.6 (2.1 to 11.1)**
12 months	**2.1 (0.0 to 5.0)**	**2.1 (0.0 to 5.5)**

No statistical analysis provided for Percentage of Participants With Progression Free Survival (PFS) During the Study Duration

2. Secondary: Number of Participants With Death, Other Serious or Clinically Significant Adverse Events (AEs) or Related Discontinuations [Time Frame: 6 months - 1 year]

Measure Type	Secondary
Measure Title	Number of Participants With Death, Other Serious or Clinically Significant Adverse Events (AEs) or Related Discontinuations
Measure Description	National Cancer Institute (NCI)/ National Institute of Health (NIH) provides a grading (severity) scale for each AE term. Grade 3 refers to severe AE and Grade 4 refers to life-threatening or disabling AE. According to FDA 21CFR 314.80, a serious adverse event (SAE) is described as any adverse event that leads to death, is life threatening (NIH criteria Grade 4), causes or prolongs hospitalization, results in a congenital anomaly, or any other important medical event not described above.
Time Frame	6 months - 1 year
Safety Issue	Yes

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.
The safety population consisted of randomized patients with at least one dose of randomized medication.

Reporting Groups

	Description
Imatinib Mesylate + Hydroxyurea (HU)	Imatinib was supplied as 100 mg and 400 mg tablets. Patients in the combination arm were instructed to take a daily oral imatinib dose of 600 mg (600 mg at lunch time) and a daily oral hydroxyurea (HU) dose of 1000 mg (500 mg twice daily; in the morning and at bed time). Every 6 weeks after randomization based on assessment of therapeutic response, either patients continued with above mentioned dosing regimen or switched to receive a daily dose of 800 mg imatinib with 1000 mg HU. Patients were instructed to split the intake, taking 400 mg imatinib with 500 mg HU in the morning, then the same in the evening.
Hydroxyurea Alone	1500 mg/day of HU given as 500 mg 3 times daily. Every 6 weeks after randomization and based on assessment of therapeutic response, the patients were either switched to combination arm or continued in monotherapy arm of hydroxyurea.

Measured Values

	Imatinib Mesylate + Hydroxyurea (HU)	**Hydroxyurea Alone**
Number of Participants Analyzed [units: participants]	**118**	**118**
Number of Participants With Death, Other Serious or Clinically Significant Adverse Events (AEs) or Related Discontinuations [units: Participants]		
Deaths	**84**	**91**
Death due to disease progression	**76**	**77**
Serious Adverse Events (SAEs)	**64**	**79**

NCI/NIH Grade 3 (severe) or 4 (life threatening)	**54**	**64**
Suspected to be drug-related	**12**	**12**
Leading to dose adjustment or interruption	**6**	**16**
Leading to permanent discontinuation	**9**	**13**

No statistical analysis provided for Number of Participants With Death, Other Serious or Clinically Significant Adverse Events (AEs) or Related Discontinuations

Serious Adverse Events

Hide Serious Adverse Events

Time Frame	No text entered.
Additional Description	Safety population = patients who were randomized to either Imatinib + Hydroxyurea (combination)[n=118] or to Hydroxyurea alone [n=118]. Every 6 wks, patients on Hydroxyurea alone switched to combination arm depending on response. So, for the safety analysis Hydroxyurea arm is divided into Hydroxyurea alone [n=118] or switch to combination [n=85].

Reporting Groups

	Description
Imatinib Mesylate + Hydroxyurea (HU)	Imatinib was supplied as 100 mg and 400 mg tablets. Patients in the combination arm were instructed to take a daily oral imatinib dose of 600 mg (600 mg at lunch time) and a daily oral hydroxyurea (HU) dose of 1000 mg (500 mg twice daily; in the morning and at bed time). Patients receiving a daily dose of 800 mg imatinib with 1000 mg HU were instructed to split the intake, taking 400 mg imatinib with 500 mg HU in the morning, then the same in the evening.
Period With Hydroxyurea Alone	1500 mg/day of HU given as 500 mg 3 times daily.
Period After Switch to Combination	After every 6 weeks from randomization, depending on the assessment of therapeutic effect, patients were switched from Hydroxyurea (1500 mg/day p.o) to combination arm where patients were instructed to take a daily oral imatinib dose of 600 mg (600 mg at lunch time) and a daily oral

	hydroxyurea (HU) dose of 1000 mg (500 mg twice daily; in the morning and at bed time).

Serious Adverse Events

	Imatinib Mesylate + Hydroxyurea (HU)	Period With Hydroxyurea Alone	Period After Switch to Combination
Total, serious adverse events			
# participants affected / at risk	**64/118 (54.24%)**	**46/118 (38.98%)**	**49/85 (57.65%)**
Blood and lymphatic system disorders			
ANAEMIA † [1]			
# participants affected / at risk	**2/118 (1.69%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
LEUKOPENIA † [1]			
# participants affected / at risk	**1/118 (0.85%)**	**2/118 (1.69%)**	**5/85 (5.88%)**
NEUTROPENIA † [1]			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
THROMBOCYTOPENIA † [1]			
# participants affected / at risk	**3/118 (2.54%)**	**0/118 (0.00%)**	**2/85 (2.35%)**
Cardiac disorders			
CARDIAC FAILURE † [1]			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
Eye disorders			
VISUAL ACUITY REDUCED † [1]			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
VISUAL DISTURBANCE † [1]			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
Gastrointestinal disorders			

ABDOMINAL PAIN † 1			
# participants affected / at risk	**2/118 (1.69%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
DYSPHAGIA † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
NAUSEA † 1			
# participants affected / at risk	**0/118 (0.00%)**	**1/118 (0.85%)**	**0/85 (0.00%)**
STOMATITIS † 1			
# participants affected / at risk	**2/118 (1.69%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
VOMITING † 1			
# participants affected / at risk	**1/118 (0.85%)**	**2/118 (1.69%)**	**0/85 (0.00%)**
General disorders			
APLASIA † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
ASTHENIA † 1			
# participants affected / at risk	**0/118 (0.00%)**	**1/118 (0.85%)**	**1/85 (1.18%)**
CHEST PAIN † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
DEATH † 1			
# participants affected / at risk	**1/118 (0.85%)**	**1/118 (0.85%)**	**2/85 (2.35%)**
FATIGUE † 1			
# participants affected / at risk	**0/118 (0.00%)**	**1/118 (0.85%)**	**0/85 (0.00%)**
GENERAL PHYSICAL HEALTH DETERIORATION † 1			
# participants affected / at risk	**7/118 (5.93%)**	**6/118 (5.08%)**	**2/85 (2.35%)**
NECROSIS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**

OEDEMA PERIPHERAL † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
PAIN † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
PERFORMANCE STATUS DECREASED † 1			
# participants affected / at risk	**1/118 (0.85%)**	**1/118 (0.85%)**	**0/85 (0.00%)**
PYREXIA † 1			
# participants affected / at risk	**1/118 (0.85%)**	**1/118 (0.85%)**	**1/85 (1.18%)**
SUDDEN DEATH † 1			
# participants affected / at risk	**0/118 (0.00%)**	**1/118 (0.85%)**	**0/85 (0.00%)**
Infections and infestations			
ASPERGILLOSIS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**1/118 (0.85%)**	**0/85 (0.00%)**
BRONCHITIS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
GASTROENTERITIS † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
HERPES ZOSTER † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
INJECTION SITE ABSCESS † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
LOWER RESPIRATORY TRACT INFECTION † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
PNEUMONIA † 1			
# participants affected / at risk	**9/118 (7.63%)**	**4/118 (3.39%)**	**5/85 (5.88%)**

PNEUMONIA PRIMARY ATYPICAL † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
PULMONARY SEPSIS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
SEPSIS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**2/85 (2.35%)**
SINUSITIS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
STAPHYLOCOCCAL BACTERAEMIA † 1			
# participants affected / at risk	**0/118 (0.00%)**	**1/118 (0.85%)**	**0/85 (0.00%)**
SUBCUTANEOUS ABSCESS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
URINARY TRACT INFECTION † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
VULVITIS † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
Injury, poisoning and procedural complications			
BRAIN CONTUSION † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
FALL † 1			
# participants affected / at risk	**3/118 (2.54%)**	**1/118 (0.85%)**	**3/85 (3.53%)**
HEAD INJURY † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
RADIUS FRACTURE † 1			
# participants affected / at risk	**0/118 (0.00%)**	**1/118 (0.85%)**	**0/85 (0.00%)**

SUBDURAL HAEMATOMA † [1]			
# participants affected / at risk	0/118 (0.00%)	0/118 (0.00%)	1/85 (1.18%)
SUBDURAL HAEMORRHAGE † [1]			
# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	0/85 (0.00%)
THORACIC VERTEBRAL FRACTURE † [1]			
# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	0/85 (0.00%)
Investigations			
ALANINE AMINOTRANSFERASE INCREASED † [1]			
# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	0/85 (0.00%)
BLOOD LACTATE DEHYDROGENASE INCREASED † [1]			
# participants affected / at risk	0/118 (0.00%)	0/118 (0.00%)	1/85 (1.18%)
GENERAL PHYSICAL CONDITION ABNORMAL † [1]			
# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	0/85 (0.00%)
HEPATIC ENZYME INCREASED † [1]			
# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	0/85 (0.00%)
Metabolism and nutrition disorders			
DEHYDRATION † [1]			
# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	0/85 (0.00%)
HYPERGLYCAEMIA † [1]			
# participants affected / at risk	2/118 (1.69%)	2/118 (1.69%)	0/85 (0.00%)
HYPOKALAEMIA † [1]			
# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	1/85 (1.18%)
HYPONATRAEMIA † [1]			
# participants affected / at risk	0/118 (0.00%)	0/118 (0.00%)	1/85 (1.18%)
Musculoskeletal and connective tissue disorders			

ARTHRALGIA † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
BACK PAIN † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
BURSITIS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
MUSCLE SPASMS † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
MUSCULAR WEAKNESS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**2/85 (2.35%)**
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
INTRACRANIAL TUMOUR HAEMORRHAGE † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
NEOPLASM PROGRESSION † 1			
# participants affected / at risk	**4/118 (3.39%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
Nervous system disorders			
ALTERED STATE OF CONSCIOUSNESS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**2/85 (2.35%)**
APHASIA † 1			
# participants affected / at risk	**4/118 (3.39%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
APRAXIA † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
BALANCE DISORDER † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**2/85 (2.35%)**

BRAIN OEDEMA † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
CEREBRAL HAEMORRHAGE † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
CONVULSION † 1			
# participants affected / at risk	**3/118 (2.54%)**	**4/118 (3.39%)**	**4/85 (4.71%)**
COORDINATION ABNORMAL † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**2/85 (2.35%)**
DEMENTIA † 1			
# participants affected / at risk	**0/118 (0.00%)**	**1/118 (0.85%)**	**0/85 (0.00%)**
DEPRESSED LEVEL OF CONSCIOUSNESS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**1/118 (0.85%)**	**0/85 (0.00%)**
DISTURBANCE IN ATTENTION † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
DIZZINESS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
DYSPHASIA † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
EPILEPSY † 1			
# participants affected / at risk	**5/118 (4.24%)**	**9/118 (7.63%)**	**9/85 (10.59%)**
HEADACHE † 1			
# participants affected / at risk	**2/118 (1.69%)**	**5/118 (4.24%)**	**3/85 (3.53%)**
HEMIPARESIS † 1			
# participants affected / at risk	**8/118 (6.78%)**	**5/118 (4.24%)**	**2/85 (2.35%)**
HEMIPLEGIA † 1			
# participants affected / at risk	**1/118 (0.85%)**	**2/118 (1.69%)**	**0/85 (0.00%)**

INTRACRANIAL PRESSURE INCREASED † 1			
# participants affected / at risk	**3/118 (2.54%)**	**3/118 (2.54%)**	**4/85 (4.71%)**
LOSS OF CONSCIOUSNESS † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
NERVOUS SYSTEM DISORDER † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
PARESIS † 1			
# participants affected / at risk	**1/118 (0.85%)**	**1/118 (0.85%)**	**1/85 (1.18%)**
PARTIAL SEIZURES † 1			
# participants affected / at risk	**1/118 (0.85%)**	**2/118 (1.69%)**	**4/85 (4.71%)**
PSYCHOMOTOR SKILLS IMPAIRED † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
SOMNOLENCE † 1			
# participants affected / at risk	**2/118 (1.69%)**	**1/118 (0.85%)**	**0/85 (0.00%)**
SPEECH DISORDER † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
Psychiatric disorders			
ABNORMAL BEHAVIOUR † 1			
# participants affected / at risk	**0/118 (0.00%)**	**1/118 (0.85%)**	**0/85 (0.00%)**
AGITATION † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
ANXIETY † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
CONFUSIONAL STATE † 1			
# participants affected / at risk	**4/118 (3.39%)**	**0/118 (0.00%)**	**1/85 (1.18%)**

HALLUCINATION † 1			
# participants affected / at risk	**0/118 (0.00%)**	**1/118 (0.85%)**	**0/85 (0.00%)**
MENTAL DISORDER † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
PERSONALITY DISORDER † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
Renal and urinary disorders			
INCONTINENCE † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**2/85 (2.35%)**
OLIGURIA † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
RENAL COLIC † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
Respiratory, thoracic and mediastinal disorders			
DYSPNOEA † 1			
# participants affected / at risk	**3/118 (2.54%)**	**3/118 (2.54%)**	**2/85 (2.35%)**
EPISTAXIS † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
PLEURAL EFFUSION † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
PNEUMONIA ASPIRATION † 1			
# participants affected / at risk	**1/118 (0.85%)**	**0/118 (0.00%)**	**0/85 (0.00%)**
PNEUMONITIS † 1			
# participants affected / at risk	**0/118 (0.00%)**	**0/118 (0.00%)**	**1/85 (1.18%)**
PULMONARY EMBOLISM † 1			

# participants affected / at risk	1/118 (0.85%)	1/118 (0.85%)	2/85 (2.35%)
RESPIRATORY FAILURE † 1			
# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	0/85 (0.00%)
Skin and subcutaneous tissue disorders			
DECUBITUS ULCER † 1			
# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	0/85 (0.00%)
Surgical and medical procedures			
BRAIN LOBECTOMY † 1			
# participants affected / at risk	0/118 (0.00%)	1/118 (0.85%)	0/85 (0.00%)
CYSTOSTOMY † 1			
# participants affected / at risk	0/118 (0.00%)	1/118 (0.85%)	0/85 (0.00%)
TUMOUR EXCISION † 1			
# participants affected / at risk	3/118 (2.54%)	0/118 (0.00%)	0/85 (0.00%)
Vascular disorders			
CIRCULATORY COLLAPSE † 1			
# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	0/85 (0.00%)
DEEP VEIN THROMBOSIS † 1			
# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	0/85 (0.00%)
HYPERTENSION † 1			
# participants affected / at risk	0/118 (0.00%)	1/118 (0.85%)	0/85 (0.00%)
THROMBOSIS † 1			
# participants affected / at risk	0/118 (0.00%)	1/118 (0.85%)	1/85 (1.18%)
VENOUS THROMBOSIS † 1			
# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	1/85 (1.18%)

† Events were collected by systematic assessment
1 Term from vocabulary, MedDRA

Other Adverse Events

Hide Other Adverse Events

Time Frame	No text entered.
Additional Description	Safety population = patients who were randomized to either Imatinib + Hydroxyurea (combination)[n=118] or to Hydroxyurea alone [n=118]. Every 6 wks, patients on Hydroxyurea alone switched to combination arm depending on response. So, for the safety analysis Hydroxyurea arm is divided into Hydroxyurea alone [n=118] or switch to combination [n=85].

Frequency Threshold

Threshold above which other adverse events are reported	5%

Reporting Groups

	Description
Imatinib Mesylate + Hydroxyurea (HU)	Imatinib was supplied as 100 mg and 400 mg tablets. Patients in the combination arm were instructed to take a daily oral imatinib dose of 600 mg (600 mg at lunch time) and a daily oral hydroxyurea (HU) dose of 1000 mg (500 mg twice daily; in the morning and at bed time). Patients receiving a daily dose of 800 mg imatinib with 1000 mg HU were instructed to split the intake, taking 400 mg imatinib with 500 mg HU in the morning, then the same in the evening.
Period With Hydroxyurea Alone	1500 mg/day of HU given as 500 mg 3 times daily.
Period After Switch to Combination	After every 6 weeks from randomization, depending on the assessment of therapeutic effect, patients were switched from Hydroxyurea (1500 mg/day p.o) to combination arm where patients were instructed to take a daily oral imatinib dose of 600 mg (600 mg at lunch time) and a daily oral hydroxyurea (HU) dose of 1000 mg (500 mg twice daily; in the morning and at bed time).

Other Adverse Events

	Imatinib Mesylate + Hydroxyurea (HU)	**Period With Hydroxyurea Alone**	**Period After Switch to Combination**

Total, other (not including serious) adverse events			
# participants affected / at risk	**104/118 (88.14%)**	**80/118 (67.80%)**	**65/85 (76.47%)**
Blood and lymphatic system disorders			
ANAEMIA † [1]			
# participants affected / at risk	**13/118 (11.02%)**	**8/118 (6.78%)**	**13/85 (15.29%)**
LEUKOPENIA † [1]			
# participants affected / at risk	**16/118 (13.56%)**	**14/118 (11.86%)**	**14/85 (16.47%)**
THROMBOCYTOPENIA † [1]			
# participants affected / at risk	**24/118 (20.34%)**	**15/118 (12.71%)**	**17/85 (20.00%)**
Endocrine disorders			
CUSHINGOID † [1]			
# participants affected / at risk	**6/118 (5.08%)**	**1/118 (0.85%)**	**5/85 (5.88%)**
Gastrointestinal disorders			
ABDOMINAL PAIN † [1]			
# participants affected / at risk	**6/118 (5.08%)**	**3/118 (2.54%)**	**2/85 (2.35%)**
ABDOMINAL PAIN UPPER † [1]			
# participants affected / at risk	**7/118 (5.93%)**	**1/118 (0.85%)**	**0/85 (0.00%)**
CONSTIPATION † [1]			
# participants affected / at risk	**11/118 (9.32%)**	**4/118 (3.39%)**	**5/85 (5.88%)**
DIARRHOEA † [1]			
# participants affected / at risk	**11/118 (9.32%)**	**4/118 (3.39%)**	**4/85 (4.71%)**
DYSPEPSIA † [1]			
# participants affected / at risk	**2/118 (1.69%)**	**6/118 (5.08%)**	**2/85 (2.35%)**
NAUSEA † [1]			

# participants affected / at risk	28/118 (23.73%)	17/118 (14.41%)	10/85 (11.76%)
VOMITING † 1			
# participants affected / at risk	21/118 (17.80%)	13/118 (11.02%)	6/85 (7.06%)
General disorders			
ASTHENIA † 1			
# participants affected / at risk	11/118 (9.32%)	6/118 (5.08%)	9/85 (10.59%)
FATIGUE † 1			
# participants affected / at risk	34/118 (28.81%)	16/118 (13.56%)	18/85 (21.18%)
GENERAL PHYSICAL HEALTH DETERIORATION † 1			
# participants affected / at risk	10/118 (8.47%)	8/118 (6.78%)	4/85 (4.71%)
OEDEMA PERIPHERAL † 1			
# participants affected / at risk	29/118 (24.58%)	12/118 (10.17%)	14/85 (16.47%)
PYREXIA † 1			
# participants affected / at risk	6/118 (5.08%)	1/118 (0.85%)	2/85 (2.35%)
Injury, poisoning and procedural complications			
FALL † 1			
# participants affected / at risk	4/118 (3.39%)	3/118 (2.54%)	5/85 (5.88%)
Investigations			
BLOOD LACTATE DEHYDROGENASE INCREASED † 1			
# participants affected / at risk	6/118 (5.08%)	6/118 (5.08%)	1/85 (1.18%)
Metabolism and nutrition disorders			
ANOREXIA † 1			
# participants affected / at risk	6/118 (5.08%)	2/118 (1.69%)	1/85 (1.18%)

HYPOKALAEMIA † 1			
# participants affected / at risk	**14/118 (11.86%)**	**2/118 (1.69%)**	**6/85 (7.06%)**
Musculoskeletal and connective tissue disorders			
ARTHRALGIA † 1			
# participants affected / at risk	**6/118 (5.08%)**	**3/118 (2.54%)**	**4/85 (4.71%)**
BACK PAIN † 1			
# participants affected / at risk	**4/118 (3.39%)**	**2/118 (1.69%)**	**6/85 (7.06%)**
MUSCULAR WEAKNESS † 1			
# participants affected / at risk	**13/118 (11.02%)**	**5/118 (4.24%)**	**3/85 (3.53%)**
PAIN IN EXTREMITY † 1			
# participants affected / at risk	**6/118 (5.08%)**	**4/118 (3.39%)**	**2/85 (2.35%)**
Nervous system disorders			
AMNESIA † 1			
# participants affected / at risk	**8/118 (6.78%)**	**2/118 (1.69%)**	**4/85 (4.71%)**
APHASIA † 1			
# participants affected / at risk	**9/118 (7.63%)**	**4/118 (3.39%)**	**5/85 (5.88%)**
CONVULSION † 1			
# participants affected / at risk	**6/118 (5.08%)**	**2/118 (1.69%)**	**6/85 (7.06%)**
COORDINATION ABNORMAL † 1			
# participants affected / at risk	**9/118 (7.63%)**	**9/118 (7.63%)**	**6/85 (7.06%)**
DIZZINESS † 1			
# participants affected / at risk	**16/118 (13.56%)**	**3/118 (2.54%)**	**7/85 (8.24%)**
EPILEPSY † 1			
# participants affected / at risk	**13/118 (11.02%)**	**3/118 (2.54%)**	**3/85 (3.53%)**
HEADACHE † 1			

# participants affected / at risk	26/118 (22.03%)	24/118 (20.34%)	16/85 (18.82%)
HEMIPARESIS † 1			
# participants affected / at risk	10/118 (8.47%)	7/118 (5.93%)	7/85 (8.24%)
LETHARGY † 1			
# participants affected / at risk	6/118 (5.08%)	5/118 (4.24%)	1/85 (1.18%)
SOMNOLENCE † 1			
# participants affected / at risk	7/118 (5.93%)	2/118 (1.69%)	1/85 (1.18%)
Psychiatric disorders			
CONFUSIONAL STATE † 1			
# participants affected / at risk	9/118 (7.63%)	4/118 (3.39%)	3/85 (3.53%)
DEPRESSION † 1			
# participants affected / at risk	3/118 (2.54%)	2/118 (1.69%)	6/85 (7.06%)
INSOMNIA † 1			
# participants affected / at risk	4/118 (3.39%)	1/118 (0.85%)	5/85 (5.88%)
SLEEP DISORDER † 1			
# participants affected / at risk	6/118 (5.08%)	4/118 (3.39%)	2/85 (2.35%)
Respiratory, thoracic and mediastinal disorders			
DYSPNOEA † 1			
# participants affected / at risk	7/118 (5.93%)	3/118 (2.54%)	4/85 (4.71%)
Skin and subcutaneous tissue disorders			
RASH † 1			
# participants affected / at risk	8/118 (6.78%)	2/118 (1.69%)	0/85 (0.00%)
Vascular disorders			
THROMBOSIS † 1			

# participants affected / at risk	1/118 (0.85%)	0/118 (0.00%)	5/85 (5.88%)

† Events were collected by systematic assessment
1 Term from vocabulary, MedDRA

Limitations and Caveats

Hide Limitations and Caveats

Limitations of the study, such as early termination leading to small numbers of participants analyzed and technical problems with measurement leading to unreliable or uninterpretable data
No text entered.

More Information

Hide More Information

Certain Agreements:

Principal Investigators are **NOT** employed by the organization sponsoring the study.
There **IS** an agreement between Principal Investigators and the Sponsor (or its agents) that restricts the PI's rights to discuss or publish trial results after the trial is completed.
The agreement is: ☐ The only disclosure restriction on the PI is that the sponsor can review results communications prior to public release and can embargo communications regarding trial results for a period that is **less than or equal to 60 days**. The sponsor cannot require changes to the communication and cannot extend the embargo. ☐ The only disclosure restriction on the PI is that the sponsor can review results communications prior to public release and can embargo communications regarding trial results for a period that is **more than 60 days but less than or equal to 180 days**. The sponsor cannot require changes to the communication and cannot extend the embargo. Other disclosure agreement that restricts the right of the PI to discuss or publish trial results after the trial is completed. ☑ **Restriction Description:** The terms and conditions of Novartis' agreements with its investigators may vary. However, Novartis does not prohibit any investigator from publishing. Any publications from a single-site are postponed until the publication of the pooled data (i.e.,

data from all sites) in the clinical trial.

Results Point of Contact:

Name/Title: Study Director
Organization: Novartis Pharmaceuticals
phone: 862-778-8300

No publications provided

Responsible Party:	External Affairs, Novartis Pharmaceuticals
ClinicalTrials.gov Identifier:	NCT00154375 History of Changes
Other Study ID Numbers:	**CSTI571BDE40**
Study First Received:	September 9, 2005
Results First Received:	January 13, 2011
Last Updated:	April 19, 2011
Health Authority:	European Union: European Medicines Agency Germany: Federal Institute for Drugs and Medical Devices Australia: Therapeutic Goods Administration Sweden: Medical Projects Agency Denmark: Danish Medicines Agency Norway: Norwegian Medicines Agency Finland: Finnish Medicines Agency