ClinicalTrials.gov Protocol and Results Registration System (PRS) Receipt
Release Date: 06/19/2012

ClinicalTrials.gov ID: NCT01023516

Study Identification

Unique Protocol ID:	D0520C00020
Brief Title:	Efficacy and Safety of Twice Daily 60mg AZD9668 in COPD for 12 Weeks in Patients on Background Budesonide/Formoterol
Official Title:	A 12-Week, Randomised, Double-Blind, Placebo-Controlled, Parallel Group, Multinational, Phase IIb Study to Evaluate the Efficacy and Safety of 60mg AZD9668 Administered Orally Twice Daily to Subjects With Chronic Obstructive Pulmonary Disease (COPD) on Treatment With Budesonide/Formoterol
Secondary IDs:	

Study Status

Record Verification:	June 2012
Overall Status:	Completed
Study Start:	November 2009
Primary Completion:	August 2010 [Actual]
Study Completion:	August 2010 [Actual]

Sponsor/Collaborators

Sponsor:	AstraZeneca
Responsible Party:	Sponsor
Collaborators:	

Oversight

FDA Regulated?:	No

IND/IDE Protocol?:	No
Review Board:	Approval Status: Approved Approval Number: 11/11/09 Board Name: Etická komisia Trenčianskeho samosprávneho kraja Board Affiliation: Etická komisia Trenčianskeho samosprávneho kraja Phone: 00421 32 6555 156 Email:
Data Monitoring?:	Yes
Plan to Share Data?:	
Oversight Authorities:	Bulgaria: Bulgarian Drug Agency Czech Republic: State Institute for Drug Control Hungary: National Institute of Pharmacy Poland: Ministry of Health Romania: National Medicines Agency Slovakia: State Institute for Drug Control

Study Description

Brief Summary:	The primary objective is to evaluate the efficacy of AZD9668 compared with placebo in symptomatic COPD patients by assessing the effects on lung function and symptoms of COPD
Detailed Description:	

Conditions

Conditions:	Chronic Obstructive Pulmonary Disease (COPD)
Keywords:	Chronic obstructive pulmonary lung respiratory disease efficacy placebo-controlled COPD FEV1 St Georges Respiratory Questionnaire

Study Design

Study Type:	Interventional
Primary Purpose:	Treatment
Study Phase:	Phase 2
Intervention Model:	Parallel Assignment
Number of Arms:	2
Masking:	Double Blind (Subject, Caregiver, Investigator, Outcomes Assessor)
Allocation:	Randomized
Endpoint Classification:	Efficacy Study
Enrollment:	615 [Actual]

Arms and Interventions

Arms	Assigned Interventions
Experimental: 1	Drug: AZD9668 2 x 30 mg oral tablets bd for 12 weeks
Placebo Comparator: 2	Drug: Placebo 2 x matched placebo to oral tablet bd for 12 weeks

Outcome Measures

[See Results Section.]

Eligibility

Minimum Age:	40 Years
Maximum Age:	80 Years
Gender:	Both
Accepts Healthy Volunteers?:	No
Criteria:	Inclusion Criteria:

- Diagnosis of COPD with symptoms over 1 year
- FEV1/FVC < 70% and FEV1 >= 30 and < 80 % of predicted post-bronchodilator
- Symptomatic COPD for a total of 7 days in the two weeks prior to randomisation
- At least 1 COPD exacerbation from 4 weeks to 12 months before the screening visit

Exclusion Criteria:

- Past history or current evidence of clinically significant heart disease
- Current diagnosis of asthma
- Patients who require long term oxygen therapy
- Worsening of COPD requiring treatment with antibiotics, an increase in inhaled steroid dose and/or oral steroids within 4 weeks of study visit 1b

Contacts/Locations

Study Officials: Piotr Kuna, Professor
Study Principal Investigator
Samodzielny Publiczny ZOZ Uniwersytecki Szpital Kliniczny

Locations: Bulgaria
Research Site
Lovech, Bulgaria

Research Site
Pleven, Bulgaria

Research Site
Plovdiv, Bulgaria

Research Site
Russe, Bulgaria

Research Site
Sofia, Bulgaria

Research Site
Stara Zagora, Bulgaria

Research Site
Troyan, Bulgaria

Research Site
Varna, Bulgaria

Czech Republic
Research Site
Jihlava, Czech Republic

Research Site
Jindrichuv Hradec, Czech Republic

Research Site
Kladno, Czech Republic

Research Site
Krnov, Czech Republic

Research Site
Novy Jicin, Czech Republic

Research Site
Pardubice, Czech Republic

Research Site
Praha 10, Czech Republic

Research Site
Praha 5, Czech Republic

Research Site
Rokycany, Czech Republic

Research Site
Trebic, Czech Republic

Hungary
Research Site
Balassagyarmat, Hungary

Research Site
Budapest, Hungary

Research Site
Debrecen, Hungary

Research Site
Deszk, Hungary

Research Site
Gyor, Hungary

Research Site
Nyiregyhaza, Hungary

Research Site
Pecs, Hungary

Research Site
Szazhalombatta, Hungary

Research Site
Szombathely, Hungary

Research Site
Torokbalint, Hungary

Research Site
Vasarosnameny, Hungary

Poland
Research Site
Bialystok, Poland

Research Site
Gdynia, Poland

Research Site
Gorzow Wlkp, Poland

Research Site
Grodzisk Mazowiecki, Poland

Research Site
Jelenia Gora, Poland

Research Site
Katowice, Poland

Research Site
Kielce, Poland

Research Site
Krakow, Poland

Research Site
Lublin, Poland

Research Site
Lodz, Poland

Research Site
Pila, Poland

Research Site
Skierniewice, Poland

Research Site
Szczecin, Poland

Research Site
Tarnow, Poland

Research Site
Warszawa, Poland

Research Site
Wroclaw, Poland

Romania
Research Site
Constanta, Constanta, Romania

Research Site
Deva, Hunedoara, Romania

Research Site
Bucuresti, Romania, Romania

Research Site
Bucharest, Romania

Research Site
Iasi, Romania

Slovakia
Research Site
Bardejov, Slovakia

Research Site
Bojnice, Slovakia

Research Site
Bratislava, Slovakia

Research Site
Dunajska Streda, Slovakia

Research Site
Humenne, Slovakia

Research Site
Kosice, Slovakia

Research Site
Liptovsky Hradok, Slovakia

Research Site
Nove Mesto Nad Vahom, Slovakia

Research Site
Nove Zamky, Slovakia

Research Site
Poprad, Slovakia

Research Site
Povazska Bystrica, Slovakia

Research Site
Presov, Slovakia

Research Site
Revuca, Slovakia

Research Site
Spisska Nova Ves, Slovakia

Research Site
Trnava, Slovakia

Research Site
Trstena, Slovakia

Research Site
Zilina, Slovakia

References

Citations:

Links:

Study Data/Documents:

Study Results

Participant Flow

Recruitment Details	First patient enrolled 24 November 2009. Last patient completed 18 August 2010. Study conducted at 79 centres in 6 countries (Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia).
Pre-Assignment Details	3- or 4-week run-in period on budesonide/formoterol twice daily to stabilise patients on maintenance therapy before randomisation. Patients already on budesonide/formoterol required a 3-week run-in period and patients on ICS as monotherapy or in combination with any long-acting bronchodilator required a 4-week run-in period.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Overall Study

	60 mg AZD9668	Placebo
Started	313	302
Completed	289	284
Not Completed	24	18
Voluntary discontinuation	7	5
Adverse Event	9	6
Safety reason	0	3
Study-specific criteria	4	2
Incorrect enrolment	4	2

Baseline Characteristics

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Baseline Measures

	60 mg AZD9668	Placebo	Total
Number of Participants	313	302	615
Age, Continuous [units: Years] Median (Full Range)	62 (42 to 80)	61 (41 to 79)	61.5 (41 to 80)
Gender, Male/Female [units: Participants]			
Female	80	81	161
Male	233	221	454

Outcome Measures

1. Primary Outcome Measure:

Measure Title	Baseline Pre-bronchodilator FEV1 (L)
Measure Description	Forced expiratory volume in 1 second (FEV1) as a measure of lung function, measured before bronchodilator (salbutamol) use in the clinic.
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	309	301
Baseline Pre-bronchodilator FEV1 (L) [units: L] Mean (Standard Deviation)	1.49 (0.539)	1.44 (0.519)

2. Primary Outcome Measure:

Measure Title	End-value Pre-bronchodilator FEV1 (L)
Measure Description	End of treatment value - week 12 for completers, otherwise Last Observation Carried forward (LOCF)
Time Frame	up to week 12
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	309	301
End-value Pre-bronchodilator FEV1 (L) [units: L] Least Squares Mean (Standard Error)	1.45 (0.015)	1.43 (0.015)

3. Secondary Outcome Measure:

Measure Title	Post-bronchodilator FEV1 (L) - Baseline
Measure Description	Forced expiratory volume in 1 second (FEV1) as a measure of lung function, measured after bronchodilator (salbutamol) use in the clinic.
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	300
Post-bronchodilator FEV1 (L) - Baseline [units: L] Mean (Standard Deviation)	1.59 (0.530)	1.56 (0.518)

4. Secondary Outcome Measure:

Measure Title	Post-bronchodilator FEV1 (L) - End-value
Measure Description	End of treatment value - week 12 for completers, otherwise Last Observation Carried forward (LOCF)
Time Frame	up to week 12
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	300
Post-bronchodilator FEV1 (L) - End-value [units: L] Least Squares Mean (Standard Error)	1.56 (0.014)	1.54 (0.015)

5. Secondary Outcome Measure:

Measure Title	Pre-bronchodilator FVC (L) - Baseline
Measure Description	Forced vital capacity (FVC) as a measure of lung function, measured before bronchodilator (salbutamol) use in the clinic.
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	309	301
Pre-bronchodilator FVC (L) - Baseline [units: L] Mean (Standard Deviation)	2.98 (0.781)	2.94 (0.806)

6. Secondary Outcome Measure:

Measure Title	Pre-bronchodilator FVC (L) - End-value
Measure Description	End of treatment value - week 12 for completers, otherwise Last Observation Carried forward (LOCF)
Time Frame	up to week 12
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	309	301
Pre-bronchodilator FVC (L) - End-value [units: L] Least Squares Mean (Standard Error)	2.94 (0.022)	2.93 (0.022)

7. Secondary Outcome Measure:

Measure Title	Post-bronchodilator FVC (L) - Baseline
Measure Description	Forced vital capacity (FVC) as a measure of lung function, measured after bronchodilator (salbutamol) use in the clinic.
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	300
Post-bronchodilator FVC (L) - Baseline [units: L] Mean (Standard Deviation)	3.16 (0.787)	3.12 (0.822)

8. Secondary Outcome Measure:

Measure Title	Post-bronchodilator FVC (L) - End-value
Measure Description	End of treatment value - week 12 for completers, otherwise Last Observation Carried forward (LOCF)
Time Frame	up to week 12
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	300
Post-bronchodilator FVC (L) - End-value [units: L] Least Squares Mean (Standard Error)	3.11 (0.021)	3.11 (0.021)

9. Secondary Outcome Measure:

Measure Title	Baseline Pre-bronchodilator FEV6 (L)
Measure Description	Forced expiratory volume in 6 seconds (FEV6) as a measure of lung function, measured before bronchodilator (salbutamol) use in the clinic.
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	309	301
Baseline Pre-bronchodilator FEV6 (L) [units: L] Mean (Standard Deviation)	2.68 (0.729)	2.61 (0.714)

10. Secondary Outcome Measure:

Measure Title	End-value Pre-bronchodilator FEV6 (L)
Measure Description	End of treatment value - week 12 for completers, otherwise Last Observation Carried forward (LOCF)
Time Frame	up to week 12
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	309	301
End-value Pre-bronchodilator FEV6 (L) [units: L] Least Squares Mean (Standard Error)	2.61 (0.019)	2.61 (0.019)

11. Secondary Outcome Measure:

Measure Title	Baseline Post-bronchodilator FEV6 (L)
Measure Description	Forced expiratory volume in 6 seconds (FEV6) as a measure of lung function, measured post after bronchodilator (salbutamol) use in the clinic.
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	300
Baseline Post-bronchodilator FEV6 (L) [units: L] Mean (Standard Deviation)	2.85 (0.724)	2.79 (0.716)

12. Secondary Outcome Measure:

Measure Title	End-value Post-bronchodilator FEV6 (L)
Measure Description	End of treatment value - week 12 for completers, otherwise Last Observation Carried forward (LOCF)
Time Frame	up to week 12
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	300
End-value Post-bronchodilator FEV6 (L) [units: L] Least Squares Mean (Standard Error)	2.77 (0.017)	2.78 (0.018)

13. Secondary Outcome Measure:

Measure Title	Baseline Pre-bronchodilator FEF25-75% (L/Sec)

Measure Description	Forced expiratory flow between 25% to 75% of vital capacity (FEF25-75%) as a measure of lung function, measured before bronchodilator (salbutamol) use in the clinic.
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	307	301
Baseline Pre-bronchodilator FEF25-75% (L/Sec) [units: L/sec] Mean (Standard Deviation)	0.60 (0.380)	0.55 (0.324)

14. Secondary Outcome Measure:

Measure Title	End-value Pre-bronchodilator FEF25-75% (L/Sec)
Measure Description	End of treatment value - week 12 for completers, otherwise Last Observation Carried forward (LOCF)
Time Frame	up to week 12
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	307	301
End-value Pre-bronchodilator FEF25-75% (L/Sec) [units: L/sec] Least Squares Mean (Standard Error)	0.57 (0.016)	0.56 (0.016)

15. Secondary Outcome Measure:

Measure Title	Baseline Post-bronchodilator FEF25-75% (L/Sec)
Measure Description	Forced expiratory flow between 25% to 75% of vital capacity (FEF25-75%) as a measure of lung function, measured after bronchodilator (salbutamol) use in the clinic.
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	299
Baseline Post-bronchodilator FEF25-75% (L/Sec) [units: L/sec]	0.64 (0.367)	0.60 (0.333)

	60 mg AZD9668	Placebo
Mean (Standard Deviation)		

16. Secondary Outcome Measure:

Measure Title	End-value Post-bronchodilator FEF25-75% (L/Sec)
Measure Description	End of treatment value - week 12 for completers, otherwise Last Observation Carried forward (LOCF)
Time Frame	up to week 12
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	299
End-value Post-bronchodilator FEF25-75% (L/Sec) [units: L/sec] Least Squares Mean (Standard Error)	0.62 (0.016)	0.61 (0.016)

17. Secondary Outcome Measure:

Measure Title	Pre-bronchodilator IC (L) - Baseline
Measure Description	Inspiratory capacity (IC) as a measure of lung function, measured before bronchodilator (salbutamol) use in the clinic.
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	301
Pre-bronchodilator IC (L) - Baseline [units: L] Mean (Standard Deviation)	2.21 (0.661)	2.17 (0.661)

18. Secondary Outcome Measure:

Measure Title	Pre-bronchodilator IC (L) - End-value
Measure Description	End of treatment value - week 12 for completers, otherwise Last Observation Carried forward (LOCF)
Time Frame	up to week 12
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	301
Pre-bronchodilator IC (L) - End-value [units: L] Least Squares Mean (Standard Error)	2.13 (0.024)	2.14 (0.025)

19. Secondary Outcome Measure:

Measure Title	Post-bronchodilator IC (L) - Baseline
Measure Description	Inspiratory capacity (IC) as a measure of lung function, measured after bronchodilator (salbutamol) use in the clinic.
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	299
Post-bronchodilator IC (L) - Baseline [units: L] Mean (Standard Deviation)	2.33 (0.718)	2.30 (0.665)

20. Secondary Outcome Measure:

Measure Title	Post-bronchodilator IC (L) - End-value

Measure Description	End of treatment value - week 12 for completers, otherwise Last Observation Carried forward (LOCF)
Time Frame	up to week 12
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	299
Post-bronchodilator IC (L) - End-value [units: L] Least Squares Mean (Standard Error)	2.30 (0.023)	2.27 (0.023)

21. Secondary Outcome Measure:

Measure Title	PEF - Baseline Measured by Patient at Home (L/Min) in the Morning
Measure Description	Peak Expiratory Flow (L/min) as a measure of lung function, measured at home by the patient each morning. Baseline is the mean of last 10 days of data before start of treatment.
Time Frame	Baseline
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	312	301
PEF - Baseline Measured by Patient at Home (L/Min) in the Morning [units: L/min] Mean (Standard Deviation)	215.60 (98.406)	213.24 (96.803)

22. Secondary Outcome Measure:

Measure Title	PEF - End-value Measured by Patient at Home (L/Min) in the Morning
Measure Description	Peak expiratory flow (PEF)
Time Frame	Last 6 weeks on treatment
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	312	301
PEF - End-value Measured by Patient at Home (L/Min) in the Morning	208.68 (2.153)	211.93 (2.189)

	60 mg AZD9668	Placebo
[units: L/min] Least Squares Mean (Standard Error)		

23. Secondary Outcome Measure:

Measure Title	FEV1 - Baseline Measured by Patient at Home (L) in the Morning
Measure Description	Forced Expiratory Volume in 1 second (L) as a measure of lung function, measured at home by the patient each morning. Baseline is the mean of last 10 days of data before start of treatment.
Time Frame	Baseline
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	312	301
FEV1 - Baseline Measured by Patient at Home (L) in the Morning [units: L] Mean (Standard Deviation)	1.40 (0.546)	1.34 (0.516)

24. Secondary Outcome Measure:

Measure Title	FEV1 - End-value Measured by Patient at Home (L) in the Morning
Measure Description	Forced Expiratory Volume in 1 second (L)

Time Frame	Last 6 weeks on treatment
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	312	301
FEV1 - End-value Measured by Patient at Home (L) in the Morning [units: L] Least Squares Mean (Standard Error)	1.32 (0.012)	1.32 (0.012)

25. Secondary Outcome Measure:

Measure Title	EXACT - Baseline Total Score
Measure Description	EXAcerbations of Chronic pulmonary disease Tool, patient questionnaire as a measure of respiratory symptoms (reported as units on a 0 (best health status) to 100 (worst possible status) scale). Baseline is the mean of last 10 days of data before start of treatment.
Time Frame	Baseline
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	311	300
EXACT - Baseline Total Score [units: units on a scale] Mean (Standard Deviation)	45.47 (9.683)	46.01 (8.900)

26. Secondary Outcome Measure:

Measure Title	EXACT - End-value Total Score
Measure Description	EXAcerbations of Chronic pulmonary disease Tool, patient questionnaire as a measure of respiratory symptoms (reported as units on a 0 (best health status) to 100 (worst possible status) scale).
Time Frame	Last 6 weeks on treatment
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	311	300
EXACT - End-value Total Score [units: units on a scale]	42.78 (0.473)	43.07 (0.480)

	60 mg AZD9668	Placebo
Least Squares Mean (Standard Error)		

27. Secondary Outcome Measure:

Measure Title	BCSS - Baseline Total Score
Measure Description	Breathlessness, Cough and Sputum Scale, patient reported questionnaire as a measure of respiratory symptoms (reported on a 0 (best health status) to 12 (worst possible status) scale). Baseline is the mean of last 10 days of data before start of treatment.
Time Frame	Baseline
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	312	301
BCSS - Baseline Total Score [units: units on a scale] Mean (Standard Deviation)	5.26 (1.787)	5.44 (1.765)

28. Secondary Outcome Measure:

Measure Title	BCSS - End-value Total Score
Measure Description	Breathlessness, Cough and Sputum Scale, patient reported questionnaire as a measure of respiratory symptoms (reported on a 0 (best health status) to 12 (worst possible status) scale).

Time Frame	Last 6 weeks on treatment
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	312	301
BCSS - End-value Total Score [units: units on a scale] Least Squares Mean (Standard Error)	4.68 (0.085)	4.68 (0.086)

29. Secondary Outcome Measure:

Measure Title	Sputum Colour - Baseline
Measure Description	Sputum Colour as assessed by the Bronkotest scale, reported on a scale from 1 - clear (best health status) to 5 - dark green (worst possible health status).
Time Frame	Baseline
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks

	Description
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	300	298
Sputum Colour - Baseline [units: units on a scale] Mean (Standard Deviation)	1.87 (0.901)	1.88 (0.807)

30. Secondary Outcome Measure:

Measure Title	Sputum Colour - End Value
Measure Description	Sputum Colour as assessed by the Bronkotest scale, reported on a scale from 1 - clear (best health status) to 5 - dark green (worst possible health status). End of treatment week 12
Time Frame	End of treatment week 12
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	300	298
Sputum Colour - End Value [units: units on a scale] Least Squares Mean (Standard Error)	1.63 (0.042)	1.70 (0.042)

31. Secondary Outcome Measure:

Measure Title	Use of Reliever Medication
Measure Description	Daily average of number of inhalations of reliever medication
Time Frame	Last 6 weeks on treatment
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	310	299
Use of Reliever Medication [units: inhalations] Least Squares Mean (Standard Error)	3.40 (0.124)	3.37 (0.126)

32. Secondary Outcome Measure:

Measure Title	Incremental Shuttle Walk Test - Baseline
Measure Description	Endurance time (s)
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	312	301
Incremental Shuttle Walk Test - Baseline [units: seconds] Mean (Standard Deviation)	351 (119.5)	352 (108.3)

33. Secondary Outcome Measure:

Measure Title	Incremental Shuttle Walk Test - End Value
Measure Description	
Time Frame	Week 12 - visit 6
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	297	287
Incremental Shuttle Walk Test - End Value [units: seconds] Least Squares Mean (Standard Error)	363.6 (3.39)	363.7 (3.44)

34. Secondary Outcome Measure:

Measure Title	Endurance Shuttle Walk Test - Baseline
Measure Description	Endurance time (s)
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	312	301
Endurance Shuttle Walk Test - Baseline [units: seconds] Mean (Standard Deviation)	419 (269.4)	449 (292.9)

35. Secondary Outcome Measure:

Measure Title	Endurance Shuttle Walk Test - End Value

Measure Description	Assessed at vist 6 -(last on treatment clinic visit)
Time Frame	Week 12 - visit 6
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	299	286
Endurance Shuttle Walk Test - End Value [units: seconds] Least Squares Mean (Standard Error)	449.6 (10.49)	459.9 (10.68)

36. Secondary Outcome Measure:

Measure Title	St George's Respiratory Questionnaire (COPD) - Overall Score at Baseline
Measure Description	St George's Respiratory Questionnaire for Chronic Obstructive Pulmonary Disease, as a measure of Quality of Life (reported on a scale from 0 (best health status) to 100(worst possible status)).
Time Frame	Day 1
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	295	280
St George's Respiratory Questionnaire (COPD) - Overall Score at Baseline [units: Scores on a scale] Mean (Standard Deviation)	54.52 (16.863)	54.87 (17.575)

37. Secondary Outcome Measure:

Measure Title	St George's Respiratory Questionnaire (COPD) - End-value Overall Score
Measure Description	St George's Respiratory Questionnaire for Chronic Obstructive Pulmonary Disease, as a measure of Quality of Life (reported on a scale from 0 (best health status) to 100(worst possible status)).Questionaire assessed on vist 6 -(last on treatment clinic visit)
Time Frame	Measured Day 1 and 12 weeks
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	295	280

	60 mg AZD9668	Placebo
St George's Respiratory Questionnaire (COPD) - End-value Overall Score [units: Scores on a scale] Least Squares Mean (Standard Error)	49.89 (0.777)	50.66 (0.796)

38. Secondary Outcome Measure:

Measure Title	Exacerbations - Clinic Defined
Measure Description	Number of patients having a clinic defined disease exacerbation.
Time Frame	Duration of the the treatment period - 12 weeks
Safety Issue?	No

Analysis Population Description

The efficacy analysis set for each outcome measure includes those patients who received at least one dose of investigational product and for whom a baseline and at least one post-randomisation measurement is available for that outcome measure. Patients were analysed by to randomised treatment in accordance with the intention to treat principle.

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Measured Values

	60 mg AZD9668	Placebo
Number of Participants Analyzed	312	301
Exacerbations - Clinic Defined [units: Participants]	22	29

Reported Adverse Events

Time Frame	[Not specified]

Additional Description	[Not specified]

Reporting Groups

	Description
60 mg AZD9668	AZD9668 2x30 mg oral tablets twice daily (bid) for 12 weeks
Placebo	Matched Placebo Tablets

Serious Adverse Events

	60 mg AZD9668	Placebo
	Affected/At Risk (%)	Affected/At Risk (%)
Total	9/313 (2.88%)	14/302 (4.64%)
Cardiac disorders		
ACUTE MYOCARDIAL INFARCTION [A] †	0/313 (0%)	1/302 (0.33%)
ANGINA PECTORIS [A] †	0/313 (0%)	1/302 (0.33%)
BUNDLE BRANCH BLOCK RIGHT [A] †	1/313 (0.32%)	0/302 (0%)
CARDIAC FAILURE [A] †	0/313 (0%)	1/302 (0.33%)
MYOCARDIAL ISCHAEMIA [A] †	0/313 (0%)	2/302 (0.66%)
Infections and infestations		
PNEUMONIA [A] †	1/313 (0.32%)	3/302 (0.99%)
POST PROCEDURAL INFECTION [A] †	0/313 (0%)	1/302 (0.33%)
PYELONEPHRITIS ACUTE [A] †	1/313 (0.32%)	0/302 (0%)
Injury, poisoning and procedural complications		
RADIUS FRACTURE [A] †	1/313 (0.32%)	0/302 (0%)
TIBIA FRACTURE [A] †	0/313 (0%)	1/302 (0.33%)
Neoplasms benign, malignant and unspecified (incl cysts and polyps)		
LARYNGEAL CANCER [A] †	0/313 (0%)	1/302 (0.33%)
LUNG NEOPLASM MALIGNANT [A] †	1/313 (0.32%)	0/302 (0%)

	60 mg AZD9668	Placebo
	Affected/At Risk (%)	Affected/At Risk (%)
LUNG SQUAMOUS CELL CARCINOMA STAGE UNSPECIFIED [A] †	0/313 (0%)	1/302 (0.33%)
Nervous system disorders		
SYNCOPE [A] †	0/313 (0%)	0/302 (0%)
Renal and urinary disorders		
RENAL COLIC [A] †	0/313 (0%)	1/302 (0.33%)
Respiratory, thoracic and mediastinal disorders		
ACUTE PULMONARY OEDEMA [A] †	0/313 (0%)	1/302 (0.33%)
CHRONIC OBSTRUCTIVE PULMONARY DISEASE [A] †	4/313 (1.28%)	1/302 (0.33%)

† Indicates events were collected by systematic assessment.
A Term from vocabulary, MedDRA 13.0

Other Adverse Events

Frequency Threshold Above Which Other Adverse Events are Reported: 5%

	60 mg AZD9668	Placebo
	Affected/At Risk (%)	Affected/At Risk (%)
Total	0/313 (0%)	0/302 (0%)

Limitations and Caveats

[Not specified]

More Information

Certain Agreements:

Principal Investigators are NOT employed by the organization sponsoring the study.

There is NOT an agreement between the Principal Investigator and the Sponsor (or its agents) that restricts the PI's rights to discuss or publish trial results after the trial is completed.

Results Point of Contact:

Name/Official Title: Gerard Lynch

Organization: AstraZeneca

Phone:

Email: aztrial_results_posting@astrazeneca.com