Clinical trial results:
An Extension Study to Evaluate 24 Months of Standard-of-Care Osteoporosis Management Following Completion of 18 Months of BA058 or Placebo Treatment in Protocol BA058-05-003

Summary

EudraCT number	2012-002216-10
Trial protocol	EE DK CZ PL LT
Global end of trial date	03 October 2016

Results information

Result version number	v2 (current)
This version publication date	04 December 2020
First version publication date	16 October 2020
Version creation reason	• Correction of full data set Updated based on changes made to the ClinicalTrials.gov posting

Trial information

Trial identification

Sponsor protocol code	BA058-05-005

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT01657162
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Radius Health, Inc.
Sponsor organisation address	950 Winter Street, Waltham, United States, 02451
Public contact	Radius Head of Clinical Operations, Radius Health, Inc., +1 617-551-4700,
Scientific contact	VP, Osteoporosis Clinical Development, Radius Health, Inc., +1 617-444-1943,

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	
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	01 December 2016
Is this the analysis of the primary completion data?	Yes
Primary completion date	03 October 2016
Global end of trial reached?	Yes
Global end of trial date	03 October 2016
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The primary objective of this study was to collect clinical information following 6 months of treatment with alendronate, in participants who have previously received 18 months of blinded treatment with abaloparatide-subcutaneous or placebo in Study BA058-05-003 (EudraCT Number 2012-002216-10). Following the initial 6 months of oral alendronate treatment in the study, participants entered the long-term phase of the study during which participants continued to receive alendronate treatment for an additional 18 months (for a total of 24 months).

Protection of trial subjects:

The study was conducted in accordance with the ethical principles that have their origins in the Declaration of Helsinki in its revised edition (Tokyo, 2004), the guidelines for current Good Clinical Practice (GCP), International Conference on Harmonization (ICH) [Committee for Proprietary Medicinal Products (CPMP)/ICH/135/95], the US Food and Drug Administration (FDA) Code of Federal Regulations (CFR) (21 CFR Parts 50, 54, 56 and 312), Administración Nacional de Medicamentos, Alimentos y Tecnología Médica (ANMAT) regulations (Argentinean Investigators only), and all other applicable local regulatory and ethical requirements.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	20 November 2012
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	United States: 16
Country: Number of subjects enrolled	Argentina: 14
Country: Number of subjects enrolled	Brazil: 288
Country: Number of subjects enrolled	Czech Republic: 197
Country: Number of subjects enrolled	Denmark: 203
Country: Number of subjects enrolled	Estonia: 44
Country: Number of subjects enrolled	Hong Kong: 204
Country: Number of subjects enrolled	Lithuania: 33
Country: Number of subjects enrolled	Poland: 77
Country: Number of subjects enrolled	Romania: 63
Worldwide total number of subjects	1139
EEA total number of subjects	617

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)	220
From 65 to 84 years	916
85 years and over	3

Subject disposition

Recruitment

Recruitment details:

Eligible participants who received abaloparatide or placebo in the double-blind study (BA058-05-003 [Study 003]), were enrolled to this open-label extension study. Complete results for Study 003 are reported in the EudraCT Study Record 2010-022576-30.

Pre-assignment

Screening details:

The procedures performed for the Follow-up visit (Month 19) for Study 003 served as Baseline for Day 1 of Study BA058-05-005 (Study 005).

Period 1

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

Blinding implementation details:

Even though this is an open-label study, participants and Investigators who will be participating in this study (BA058-05-005) will remain blinded to the prior treatment assignment in Study BA058-05-003 (2010-022576-30) until all participants completed the first 6 months of BA058-05-005 for prespecified data analysis. Complete data analysis for Study BA058-05-003 are reported in the EudraCT Study Record 2010-022576-30.

Arms

Are arms mutually exclusive?	Yes
Arm title	Abaloparatide-SC/Alendronate

Arm description:

Participants received 70 milligrams (mg) of alendronate orally once per week beginning on Day 2 for up to 24 months after participating in Study BA058-05-003 during which participants received abaloparatide 80 micrograms (mcg) subcutaneous (SC) daily for 18 months.

Arm type	Experimental
Investigational medicinal product name	Alendronate
Investigational medicinal product code	
Other name	Fosamax, alendronate sodium
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

70 mg orally once per week

Arm title	Placebo/Alendronate

Arm description:

Participants received 70 mg of alendronate orally once per week beginning on Day 2 for up to 24 months after participating in Study BA058-05-003 during which participants received abaloparatide-matching placebo daily for 18 months.

Arm type	Experimental
Investigational medicinal product name	Alendronate
Investigational medicinal product code	
Other name	Fosamax, alendronate sodium
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

70 mg orally once per week

Number of subjects in period 1	Abaloparatide-SC/Alendronate	Placebo/Alendronate
Started	558	581
Study 005 ITT Population	558	581
Study 005 Safety Population	553	580
Study 005 mITT Population	544	568
Completed	499	506
Not completed	59	75
Adverse event, serious fatal	2	3
Consent withdrawn by subject	13	13
Adverse event, non-fatal	26	36
Other than Specified	-	2
Lost to follow-up	3	4
Hypersensitivity to Alendronate	-	1
Refusal of Treatment	4	6
Continuing Significant Deterioration	9	3
Inability to Complete Study Procedures	1	7
Protocol deviation	1	-

Baseline characteristics

Reporting groups	
Reporting group title	Abaloparatide-SC/Alendronate
Reporting group description:	
Participants received 70 milligrams (mg) of alendronate orally once per week beginning on Day 2 for up to 24 months after participating in Study BA058-05-003 during which participants received abaloparatide 80 micrograms (mcg) subcutaneous (SC) daily for 18 months.	
Reporting group title	Placebo/Alendronate
Reporting group description:	
Participants received 70 mg of alendronate orally once per week beginning on Day 2 for up to 24 months after participating in Study BA058-05-003 during which participants received abaloparatide-matching placebo daily for 18 months.	

Reporting group values	Abaloparatide-SC/Alendronate	Placebo/Alendronate	Total
Number of subjects	558	581	1139
Age Categorical Units:			
<65 years	106	114	220
65 to <74 years	351	370	721
≥75 years	101	97	198
Sex: Female, Male Units:			
Female	558	581	1139
Male	0	0	0
Lumbar Spine Bone Mineral Density (BMD) T-Score, n = 556, 581			
BMD measured by a DXA instrument. At Baseline, participants were required to have a BMD T-score ≤2.5 to >-5.0 at the lumbar spine (L1-L4) or if the pre-specified fracture criteria were not met then T-score could be ≤3.0 to >-5.0. Osteoporosis status was based on the WHO 2007 criteria of normal (T-score >-1.0), osteopenia (T-score >-2.5 to ≤-1.0), and osteoporosis (T-score ≤-2.5). Study 003 ITT participants who enrolled in Study 005 (Study 005 ITT Population) with an evaluable femoral neck BMD T-score. Study 003 ITT population included all participants who randomized into Study 003.			
Units: T-score			
arithmetic mean	-2.11	-2.87	
standard deviation	± 0.997	± 0.867	-
Femoral Neck BMD T-Score, n = 555, 581			
BMD measured by a DXA instrument. At Baseline, participants were required to have a BMD T-score ≤2.5 to >-5.0 at the lumbar spine (L1-L4) or if the pre-specified fracture criteria were not met then T-score could be ≤3.0 to >-5.0. Osteoporosis status was based on the WHO 2007 criteria of normal (T-score >-1.0), osteopenia (T-score >-2.5 to ≤-1.0), and osteoporosis (T-score ≤-2.5). Study 003 ITT participants who enrolled in Study 005 (Study 005 ITT Population) with an evaluable femoral neck BMD T-score. Study 003 ITT population included all participants who randomized into Study 003.			
Units: T-score			
arithmetic mean	-1.951	-2.196	
standard deviation	± 0.656	± 0.695	-
Total Hip BMD T-Score, n = 555, 581			
BMD measured by a DXA instrument. At Baseline, participants were required to have a BMD T-score ≤2.5 to >-5.0 at the lumbar spine (L1-L4) or if the pre-specified fracture criteria were not met then T-score could be ≤3.0 to >-5.0. Osteoporosis status was based on the WHO 2007 criteria of normal (T-score >-1.0), osteopenia (T-score >-2.5 to ≤-1.0), and osteoporosis (T-score ≤-2.5). Study 003 ITT participants who enrolled in Study 005 (Study 005 ITT Population) with an evaluable femoral neck BMD T-score. Study 003 ITT population included all participants who randomized into Study 003.			

Units: T-score			
arithmetic mean	-1.63	-1.93	
standard deviation	± 0.742	± 0.758	-

End points

End points reporting groups

Reporting group title	Abaloparatide-SC/Alendronate
Reporting group description:	
Participants received 70 milligrams (mg) of alendronate orally once per week beginning on Day 2 for up to 24 months after participating in Study BA058-05-003 during which participants received abaloparatide 80 micrograms (mcg) subcutaneous (SC) daily for 18 months.	
Reporting group title	Placebo/Alendronate
Reporting group description:	
Participants received 70 mg of alendronate orally once per week beginning on Day 2 for up to 24 months after participating in Study BA058-05-003 during which participants received abaloparatide-matching placebo daily for 18 months.	

Primary: Number of Participants With ≥1 New Vertebral Fracture Since Study BA058-05-003 Baseline

End point title	Number of Participants With ≥1 New Vertebral Fracture Since Study BA058-05-003 Baseline[1]
End point description:	
Vertebral fractures were determined clinically and via protocol directed radiograph evaluation. Study BA058-05-005 mITT Population: all Study BA058-05-003 mITT participants with a Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25) evaluable radiologic assessment (spine X-ray). Study BA058-05-003 mITT population included all ITT participants with a pretreatment and postbaseline evaluable radiologic assessment during Study BA058-05-003. Complete results for Study BA058-05-003 are reported in the EudraCT Study Record 2010-022576-30.	
End point type	Primary
End point timeframe:	
Study BA058-05-003 Baseline (Day 1) up to Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25)	

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: Statistical analyses is not applicable to this Endpoint.

End point values	Abaloparatide-SC/Alendronate	Placebo/Alendronate		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	544	568		
Units: participants	3	25		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With a Nonvertebral Fracture Since Study BA058-05-003 Baseline (Data from Studies BA058-05-005 and BA058-05-003 Combined)

End point title	Number of Participants With a Nonvertebral Fracture Since Study BA058-05-003 Baseline (Data from Studies BA058-05-005 and BA058-05-003 Combined)

End point description:

Nonvertebral fractures were defined as clinical fractures that included: 1) those of the hip, wrist, forearm, shoulder, collar bone, upper arm, ribs, upper leg (not hip), knee, lower leg (not knee or ankle), foot, ankle, hand, pelvis (not hip), tailbone, and other; and 2) those associated with low trauma, defined as a fall from standing height or less; a fall on stairs, steps or curbs; a minimal trauma other than a fall; or moderate trauma other than a fall. Study BA058-05-005 ITT Population: all Study BA058-05-003 ITT participants who enrolled in the BA058-05-005 study. Study BA058-05-003 ITT population included all participants who were randomized into the study. Complete results for Study BA058-05-003 are reported in the EudraCT Study Record 2010-022576-30.

End point type	Secondary

End point timeframe:

Study BA058-05-003 Baseline (Day 1) up to Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25)

End point values	Abaloparatide-SC/Alendronate	Placebo/Alendronate		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	558	581		
Units: participants	15	32		

Statistical analyses

No statistical analyses for this end point

Secondary: Percent Change From Study BA058-05-003 Baseline in Total Hip BMD at Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25)

End point title	Percent Change From Study BA058-05-003 Baseline in Total Hip BMD at Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25)

End point description:

Total hip BMD were measured via DXA. Study BA058-05-005 ITT Population: all Study BA058-05-003 ITT participants who enrolled in the BA058-05-005 study. Study BA058-05-003 ITT population included all participants who were randomized into Study BA058-05-003. Missing BMD data were imputed using last observation carried forward (LOCF). Complete results for Study BA058-05-003 are reported in the EudraCT Study Record 2010-022576-30.

End point type	Secondary

End point timeframe:

Study BA058-05-003 Baseline (Day 1), Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25)

End point values	Abaloparatide-SC/Alendronate	Placebo/Alendronate		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	558	581		
Units: percent change				
arithmetic mean (standard deviation)	5.4737 (± 3.9884)	1.3698 (± 2.9712)		

Statistical analyses

No statistical analyses for this end point

Secondary: Percent Change From Study BA058-05-003 Baseline in Femoral Neck BMD at Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25)

End point title	Percent Change From Study BA058-05-003 Baseline in Femoral Neck BMD at Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25)

End point description:

Femoral neck BMD were measured via DXA. Study BA058-05-005 ITT Population: all Study BA058-05-003 ITT participants who enrolled in the BA058-05-005 study. Study BA058-05-003 ITT population included all participants who were randomized into Study BA058-05-003. Missing BMD data were imputed using LOCF. Complete results for Study BA058-05-003 are reported in the EudraCT Study Record 2010-022576-30.

End point type	Secondary

End point timeframe:

Study BA058-05-003 Baseline (Day 1), Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25)

End point values	Abaloparatide-SC/Alendronate	Placebo/Alendronate		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	558	581		
Units: percent change				
arithmetic mean (standard deviation)	4.5113 (± 4.8042)	0.4649 (± 3.7913)		

Statistical analyses

No statistical analyses for this end point

Secondary: Percent Change From Study BA058-05-003 Baseline in Lumbar Spine BMD at Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25)

End point title	Percent Change From Study BA058-05-003 Baseline in Lumbar Spine BMD at Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25)

End point description:

Lumbar spine BMD were measured via DXA. Study BA058-05-005 ITT Population: all Study BA058-05-003 ITT participants who enrolled in the BA058-05-005 study. Study BA058-05-003 ITT population included all participants who were randomized into Study BA058-05-003. Missing BMD data were imputed using LOCF. Complete results for Study BA058-05-003 are reported in the EudraCT Study Record 2010-022576-30.

End point type	Secondary

End point timeframe:

Study BA058-05-003 Baseline (Day 1), Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25)

End point values	Abaloparatide-SC/Alendronate	Placebo/Alendronate		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	558	581		
Units: percent change				
arithmetic mean (standard deviation)	12.7921 (± 7.9790)	3.5133 (± 4.2765)		

Statistical analyses

No statistical analyses for this end point

Secondary: Kaplan-Meier Estimated Event Rate of the First Incident of Nonvertebral Fracture Since Study BA058-05-003 Baseline (Data From Studies BA058-05-005 and BA058-05-003 Combined)

End point title	Kaplan-Meier Estimated Event Rate of the First Incident of Nonvertebral Fracture Since Study BA058-05-003 Baseline (Data From Studies BA058-05-005 and BA058-05-003 Combined)

End point description:

Nonvertebral fractures were defined as clinical fractures that included: 1) those of the hip, wrist, forearm, shoulder, collar bone, upper arm, ribs, upper leg (not hip), knee, lower leg (not knee or ankle), foot, ankle, hand, pelvis (not hip), tailbone, and other; and 2) those associated with low trauma, defined as a fall from standing height or less; a fall on stairs, steps or curbs; a minimal trauma other than a fall; or moderate trauma other than a fall. Study BA058-05-005 ITT Population: all Study BA058-05-003 ITT participants who enrolled in the BA058-05-005 study. Study BA058-05-003 ITT population included all participants who were randomized into the study. Complete results for Study BA058-05-003 are reported in the EudraCT Study Record 2010-022576-30.

End point type	Secondary

End point timeframe:

Study BA058-05-003 Baseline (Day 1) up to Study BA058-05-005 Month 6 (Study BA058-05-003 Month 25)

End point values	Abaloparatide-SC/Alendronate	Placebo/Alendronate		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	558	581		
Units: percentage of events				
number (not applicable)	2.7	5.6		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With Treatment Emergent Adverse Events (TEAEs) (Data From Study BA058-05-005 Only)

End point title	Number of Participants With Treatment Emergent Adverse Events (TEAEs) (Data From Study BA058-05-005 Only)

End point description:

A TEAE is any untoward medical occurrence or undesirable event(s) experienced in a participant that begins or worsens following administration of study drug, whether or not considered related to study drug by Investigator. An SAE was an AE resulting in any of the following outcomes or deemed significant for any other reason, death, initial or prolonged inpatient hospitalization, life-threatening experience (immediate risk of dying), congenital anomaly/birth defect, or persistent or significant disability/incapacity. Intensity for each AE was defined as mild, moderate, or severe. AEs included both SAEs and non-serious AEs. AEs whose causal relation was characterized as Possible or Probable were considered as related to study drug. AEs were coded using MedDRA. A summary of serious and all other nonserious AEs, regardless of causality, is located in the Reported Adverse Events module. Study 005 Safety Population: all Study 005 ITT participants who received 1 or more doses of alendronate.

End point type	Secondary

End point timeframe:

Study BA058-05-005 Baseline (Day 1) up to Study BA058-05-005 Month 24

End point values	Abaloparatide-SC/Alendronate	Placebo/Alendronate		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	553	580		
Units: participants				
TEAEs	452	466		
TEAEs Related to Study Treatment	85	80		
Severe TEAEs	38	40		
Serious TEAEs	65	58		
TEAEs Leading to Death	0	2		
TEAEs Leading to Discontinuation	30	36		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With a Clinically Notable Serum Chemistry Laboratory Value (Data From Study BA058-05-005 Only)

End point title	Number of Participants With a Clinically Notable Serum Chemistry Laboratory Value (Data From Study BA058-05-005 Only)

End point description:

Serum Chemistry laboratory parameters that were evaluated via notable criteria (presented in parentheses) included: sodium (Low: ≤129; High: ≥148 milliequivalent per liter [mEq/L]), potassium (Low: ≤3.2; High: ≥5.5 mEq/L), albumin (<2.5 grams [g]/deciliter [dL]), total protein (<5 g/dL), glucose (Low: ≤54; High: >125 mg/dL [fasting] or >200 milligrams [mg]/dL [random]), creatinine (≥2.1 mg/dL), aspartate aminotransferase (AST) (≥5.1*upper limit of normal [ULN]), alanine aminotransferase (ALT) (≥5.1*ULN), alkaline phosphatase (AP) (≥3.1*ULN), total bilirubin (≥1.51*ULN

[with any increase in liver function tests] ≥2.0*ULN [with normal liver function tests]), creatine kinase (≥3.1*ULN), total cholesterol (>226 mg/dL), and total calcium (Low: ≤7.4; High: ≥11.6 mg/dL). Only the serum chemistry parameters with at least 1 participant with a notable laboratory value are presented. Study 005 Safety Population: all Study 005 ITT participants who received 1 or more doses of alendronate.

End point type	Secondary

End point timeframe:

Study BA058-05-005 Baseline (Day 1) up to Study BA058-05-005 Month 24

End point values	Abaloparatide-SC/Alendronate	Placebo/Alendronate		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	553	580		
Units: participants				
Alkaline Phosphatase, n = 545, 580	1	0		
Cholesterol Total, n = 342, 358	75	73		
Creatine Kinase, n = 545, 568	2	1		
Glucose (Fasting; High), n = 515, 543	22	18		
Glucose (Random), n = 515, 543	1	2		
Potassium (Low), n = 541, 565	1	3		
Potassium (High), n = 541, 565	4	3		
Sodium (Low), n = 542, 570	1	1		
Sodium (High), n = 542, 580	6	2		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With a Clinically Notable Hematology Laboratory Value (Data From Study BA058-05-005 Only)

End point title	Number of Participants With a Clinically Notable Hematology Laboratory Value (Data From Study BA058-05-005 Only)

End point description:

Hematology laboratory parameters that were evaluated via notable criteria (presented in parentheses) included: Absolute Eosinophils (>5000 cells/mm^3), Absolute Lymphocytes (≤499 cells/mm^3), Absolute Neutrophils (≤999 cells/mm^3), % Eosinophils (>50%), % Lymphocytes (≤5%), % Neutrophils (≤10%), Hemoglobin (Low: ≤9.4 g/dL; High: change from baseline ≥2.1 g/dL), Platelets (≤99000 cells/mm^3), and White Blood Cells (Low: ≤1499 cells/mm^3; High: ≥20001 cells/mm^3). Only the hematology parameters with at least 1 participant with a notable laboratory value are presented. Study 005 Safety Population: all Study 005 ITT participants who received 1 or more doses of alendronate.

End point type	Secondary

End point timeframe:

Study BA058-05-005 Baseline (Day 1) up to Study BA058-05-005 Month 24

End point values	Abaloparatide-SC/Alendronate	Placebo/Alendronate		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	553	580		
Units: participants				
Absolute Lymphocytes, n = 380, 392	15	11		
Lymphocytes (Absolute Count or %), n = 521, 540	15	11		
Absolute Neutrophils, n = 392, 410	0	2		
Neutrophils (Absolute Count or %), n = 533, 558	0	2		
Hemoglobin (Low), n = 544, 580	7	2		
Hemoglobin (High), n = 544, 580	19	17		
Platelets, n = 545, 565	1	0		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With a Clinically Notable Coagulation Laboratory Value (Data From Study BA058-05-005 Only)

End point title	Number of Participants With a Clinically Notable Coagulation Laboratory Value (Data From Study BA058-05-005 Only)

End point description:

Coagulation laboratory parameters that were evaluated via notable criteria (presented in parentheses) included: Activated Partial Thromboplastin Time (≥1.41*ULN), Prothrombin Time (≥1.21*ULN). Because the Activated Partial Thromboplastin Time was the only coagulation laboratory parameter with at least 1 participant with a notable laboratory value, this is the only parameter presented below. Study 005 Safety Population: all Study 005 ITT participants who received 1 or more doses of alendronate.

End point type	Secondary

End point timeframe:

Study BA058-05-005 Baseline (Day 1) up to Study BA058-05-005 Month 24

End point values	Abaloparatide-SC/Alendronate	Placebo/Alendronate		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	553	580		
Units: participants	9	4		

Statistical analyses

No statistical analyses for this end point

Secondary: Number of Participants With a Clinically Notable Urine Laboratory Value (Data From Study BA058-05-005 Only)

End point title	Number of Participants With a Clinically Notable Urine Laboratory Value (Data From Study BA058-05-005 Only)

End point description:

Urine laboratory parameters that were evaluated via notable criteria (presented in parentheses) included: Glucose (2+), Protein (2+), Blood (>50 red blood cells per high-power field [rbc/hpf]). Study 005 Safety Population: all Study 005 ITT participants who received 1 or more doses of alendronate.

End point type	Secondary

End point timeframe:

Study BA058-05-005 Baseline (Day 1) up to Study BA058-05-005 Month 24

End point values	Abaloparatide-SC/Alendronate	Placebo/Alendronate		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	553	580		
Units: participants				
Glucose, n = 553, 580	4	3		
Protein, n = 543, 567	6	6		
Blood, n = 482, 496	77	50		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Study BA058-05-005 Baseline (Day 1) up to Study BA058-05-005 Month 24

Adverse event reporting additional description:

Study 005 Safety Population: all Study 005 ITT participants who received 1 or more doses of alendronate. Serious and Non-Serious TEAEs are presented. The "Total # of Deaths Resulting From Adverse Events" is reporting the number of deaths resulting from TEAEs. AEs for Study 003 are reported in the EudraCT Study Record 2010-022576-30.

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	17.1

Reporting groups

Reporting group title	Abaloparatide-SC/Alendronate

Reporting group description:

Participants received 70 mg of alendronate orally once per week beginning on Day 2 for up to 24 months after participating in Study BA058-05-003 during which participants received abaloparatide 80 mcg SC daily for 18 months.

Reporting group title	Placebo/Alendronate

Reporting group description:

Participants received 70 mg of alendronate orally once per week beginning on Day 2 for up to 24 months after participating in Study BA058-05-003 during which participants received abaloparatide-matching placebo daily for 18 months.

Serious adverse events	Abaloparatide-SC/Alendronate	Placebo/Alendronate	
Total subjects affected by serious adverse events			
subjects affected / exposed	65 / 553 (11.75%)	58 / 580 (10.00%)	
number of deaths (all causes)	2	3	
number of deaths resulting from adverse events	0	2	
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Basal cell carcinoma			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Brain neoplasm			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cholangiocarcinoma			

subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Colon cancer			
subjects affected / exposed	2 / 553 (0.36%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Colorectal adenocarcinoma			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Leiomyosarcoma			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Lung neoplasm malignant			
subjects affected / exposed	1 / 553 (0.18%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Ovarian adenoma			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Ovarian epithelial cancer			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Peritoneal neoplasm			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Rectal cancer			

subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Renal cancer			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Vulval cancer			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Vascular disorders			
Deep vein thrombosis			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Essential hypertension			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Peripheral arterial occlusive disease			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Peripheral artery stenosis			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Temporal arteritis			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Varicose vein			

subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Surgical and medical procedures			
Medical device removal			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Nasal septal operation			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Removal of internal fixation			
subjects affected / exposed	1 / 553 (0.18%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Tooth extraction			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
General disorders and administration site conditions			
Chest pain			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Non-cardiac chest pain			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Oedema peripheral			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

Pyrexia			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Reproductive system and breast disorders			
Ovarian cyst			
subjects affected / exposed	1 / 553 (0.18%)	2 / 580 (0.34%)	
occurrences causally related to treatment / all	0 / 1	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Uterine polyp			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Uterine prolapse			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory, thoracic and mediastinal disorders			
Asthma			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 3	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Asthmatic crisis			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Chronic obstructive pulmonary disease			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cough			

subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Psychiatric disorders			
Depression			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Major depression			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Psychotic disorder			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Injury, poisoning and procedural complications			
Cervical vertebral fracture			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Clavicle fracture			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Concussion			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Femoral neck fracture			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Femur fracture			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Head injury			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hip fracture			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Lower limb fracture			
subjects affected / exposed	1 / 553 (0.18%)	3 / 580 (0.52%)	
occurrences causally related to treatment / all	0 / 1	0 / 4	
deaths causally related to treatment / all	0 / 0	0 / 0	
Meniscus injury			
subjects affected / exposed	1 / 553 (0.18%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Procedural pain			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Spinal compression fracture			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Thoracic vertebral fracture			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Upper limb fracture			

subjects affected / exposed	1 / 553 (0.18%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Wrist fracture			
subjects affected / exposed	2 / 553 (0.36%)	2 / 580 (0.34%)	
occurrences causally related to treatment / all	0 / 2	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cardiac disorders			
Acute coronary syndrome			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Acute myocardial infarction			
subjects affected / exposed	1 / 553 (0.18%)	3 / 580 (0.52%)	
occurrences causally related to treatment / all	0 / 1	0 / 4	
deaths causally related to treatment / all	0 / 0	0 / 1	
Angina pectoris			
subjects affected / exposed	2 / 553 (0.36%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 2	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Atrial fibrillation			
subjects affected / exposed	2 / 553 (0.36%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 2	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Atrioventricular block complete			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cardiac failure chronic			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cardiac failure congestive			

subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Coronary artery disease			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Coronary artery stenosis			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Left ventricular failure			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Myocardial infarction			
subjects affected / exposed	0 / 553 (0.00%)	2 / 580 (0.34%)	
occurrences causally related to treatment / all	0 / 0	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 1	
Myocardial ischaemia			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Nervous system disorders			
Carpal tunnel syndrome			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cerebellar ischaemia			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cerebral thrombosis			

subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cerebrovascular accident			
subjects affected / exposed	0 / 553 (0.00%)	2 / 580 (0.34%)	
occurrences causally related to treatment / all	0 / 0	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Cervical radiculopathy			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Ischaemic stroke			
subjects affected / exposed	2 / 553 (0.36%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 2	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Presyncope			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Sciatica			
subjects affected / exposed	2 / 553 (0.36%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 3	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Transient global amnesia			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Transient ischaemic attack			
subjects affected / exposed	4 / 553 (0.72%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 4	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Blood and lymphatic system disorders			
Anaemia			

subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Ear and labyrinth disorders			
Vertigo			
subjects affected / exposed	4 / 553 (0.72%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 4	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Eye disorders			
Retinal detachment			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 2	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Visual impairment			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Vitreous haemorrhage			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastrointestinal disorders			
Abdominal pain			
subjects affected / exposed	1 / 553 (0.18%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastric polyps			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastritis			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

Haemorrhoids			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hiatus hernia			
subjects affected / exposed	0 / 553 (0.00%)	2 / 580 (0.34%)	
occurrences causally related to treatment / all	0 / 0	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Inguinal hernia			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Irritable bowel syndrome			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Proctalgia			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Small intestinal perforation			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hepatobiliary disorders			
Cholelithiasis			
subjects affected / exposed	1 / 553 (0.18%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Drug induced liver injury			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Renal and urinary disorders			

Renal failure acute			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Stress urinary incontinence			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Urinary incontinence			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Back pain			
subjects affected / exposed	2 / 553 (0.36%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 2	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Foot deformity			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Osteoarthritis			
subjects affected / exposed	5 / 553 (0.90%)	4 / 580 (0.69%)	
occurrences causally related to treatment / all	0 / 6	0 / 4	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Bronchopneumonia			
subjects affected / exposed	1 / 553 (0.18%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 1	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	

Campylobacter gastroenteritis			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Clostridium difficile colitis			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastroenteritis			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Otitis media chronic			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pericarditis infective			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonia			
subjects affected / exposed	1 / 553 (0.18%)	2 / 580 (0.34%)	
occurrences causally related to treatment / all	0 / 1	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pyelonephritis			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pyelonephritis chronic			
subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Respiratory tract infection			

subjects affected / exposed	0 / 553 (0.00%)	1 / 580 (0.17%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Viral myositis			
subjects affected / exposed	1 / 553 (0.18%)	0 / 580 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

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

Non-serious adverse events	Abaloparatide-SC/Alendronate	Placebo/Alendronate	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	145 / 553 (26.22%)	158 / 580 (27.24%)	
Vascular disorders			
Hypertension			
subjects affected / exposed	27 / 553 (4.88%)	33 / 580 (5.69%)	
occurrences (all)	29	33	
Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	54 / 553 (9.76%)	58 / 580 (10.00%)	
occurrences (all)	61	66	
Back pain			
subjects affected / exposed	36 / 553 (6.51%)	34 / 580 (5.86%)	
occurrences (all)	41	38	
Pain in extremity			
subjects affected / exposed	23 / 553 (4.16%)	31 / 580 (5.34%)	
occurrences (all)	23	35	
Infections and infestations			
Upper respiratory tract infection			
subjects affected / exposed	40 / 553 (7.23%)	51 / 580 (8.79%)	
occurrences (all)	58	83	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
13 February 2013	In addition to administrative changes and editorial corrections, the protocol was amended to: - extend the duration of the study from 6 months to a total of 24 months - to revise inclusion criteria to extend the visit window from 33 days to 40 days to accommodate participant scheduling - to reflect the elimination of the option of an alternative osteoporosis treatment and to stipulate that only alendronate treatment could be administered.
31 March 2014	In addition to administrative changes and editorial corrections, the following changes to the protocol were made: - Modified to specify that formal statistical analyses (rather than general descriptive descriptions) were to be performed, as appropriate - Modified to clarify the correct alendronate dosage - Modified to provide flexibility in alendronate sourcing - Deleted the need to discuss supplement modification with the study medical monitor - Modified to more accurately describe the sequence of procedures in the protocol - Modified to clarify how the data were to be grouped in the analyses - Modified to clarify the participant populations to be analyzed - Clarified that AEs and clinical laboratory abnormalities at 24 months, rather than 6 months, were to be followed until they were resolved, become chronic, or stable - Definitions of protocol violation and protocol deviation were added to align the protocol with Radius' Protocol Deviation/Violation Procedure Manual (Version 3.0, 1 October 12).
24 August 2015	The following changes were implemented: - The Medical Monitor was changed. - The length of time with positive antibodies to abaloparatide that participants were to be followed was extended, to be continued until the antibody titer is negative.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported