



Clinical trial results:

A Multi-Centre, Randomised, Double Blind, Placebo Controlled, Parallel Group Study of TA 8995 in Patients with Mild Dyslipidaemia, Alone and In Combination with Statin Therapy

Summary

| | |
|--------------------------|----------------|
| EudraCT number | 2012-005643-24 |
| Trial protocol | NL DK |
| Global end of trial date | 14 July 2014 |

Results information

| | |
|--------------------------------|---------------|
| Result version number | v1 (current) |
| This version publication date | 21 March 2016 |
| First version publication date | 30 July 2015 |

Trial information

Trial identification

| | |
|-----------------------|------------|
| Sponsor protocol code | TA-8995-03 |
|-----------------------|------------|

Additional study identifiers

| | |
|------------------------------------|-------------|
| ISRCTN number | - |
| ClinicalTrials.gov id (NCT number) | NCT01970215 |
| WHO universal trial number (UTN) | - |

Notes:

Sponsors

| | |
|------------------------------|---|
| Sponsor organisation name | Xention Ltd |
| Sponsor organisation address | Iconix Park, London Road, Pampisford, Cambridge, United Kingdom, CB22 3EG |
| Public contact | Development, Xention Ltd, +44 1223 493900, info@xention.com |
| Scientific contact | Development, Xention Ltd, +44 1223 493900, info@xention.com |

Notes:

Paediatric regulatory details

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

Notes:

Results analysis stage

| | |
|--|--------------|
| Analysis stage | Final |
| Date of interim/final analysis | 14 July 2014 |
| Is this the analysis of the primary completion data? | Yes |
| Primary completion date | 14 July 2014 |
| Global end of trial reached? | Yes |
| Global end of trial date | 14 July 2014 |
| Was the trial ended prematurely? | No |

Notes:

General information about the trial

Main objective of the trial:

The primary objective of this trial is to evaluate the efficacy of TA 8995, alone and in combination with statin therapy, on the elevation of HDL C and reduction of LDL C following 12 weeks of treatment.

Protection of trial subjects:

No specific measures other than DSMB

Background therapy: -

Evidence for comparator: -

| | |
|---|----------------|
| Actual start date of recruitment | 15 August 2013 |
| Long term follow-up planned | No |
| Independent data monitoring committee (IDMC) involvement? | Yes |

Notes:

Population of trial subjects

Subjects enrolled per country

| | |
|--------------------------------------|------------------|
| Country: Number of subjects enrolled | Denmark: 33 |
| Country: Number of subjects enrolled | Netherlands: 331 |
| Worldwide total number of subjects | 364 |
| EEA total number of subjects | 364 |

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) | 158 |
| From 65 to 84 years | 206 |
| 85 years and over | 0 |

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

Screening Period - Day -56 or -48 (depending on washout period required)

Run-in/Washout Period - Days -49 to -45

Period 1

| | |
|------------------------------|--|
| Period 1 title | Overall Trial (overall period) |
| Is this the baseline period? | Yes |
| Allocation method | Randomised - controlled |
| Blinding used | Double blind |
| Roles blinded | Subject, Investigator, Monitor, Data analyst |

Arms

| | |
|------------------------------|-----|
| Are arms mutually exclusive? | Yes |
|------------------------------|-----|

| | |
|------------------|---------|
| Arm title | Group 1 |
|------------------|---------|

Arm description:

0mg TA-8995 & Placebo Statin

| | |
|--|-------------|
| Arm type | Placebo |
| Investigational medicinal product name | TA-8995 0mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |

Dosage and administration details:

0mg TA-8995 (placebo)
1 capsule daily with food

| | |
|--|----------------|
| Investigational medicinal product name | Placebo Statin |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |

Dosage and administration details:

0mg Statin Placebo
1 capsule daily with food

| | |
|------------------|---------|
| Arm title | Group 2 |
|------------------|---------|

Arm description:

1mg TA-8995 & Placebo Statin

| | |
|--|--------------|
| Arm type | Experimental |
| Investigational medicinal product name | TA-8995 1mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |

Dosage and administration details:

1mg TA-8995
1 capsule daily with food

| | |
|---|----------------|
| Investigational medicinal product name | Placebo Statin |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |
| Dosage and administration details: 0mg Statin Placebo 1 capsule daily with food | |
| Arm title | Group 3 |
| Arm description: 2.5mg TA-8995 & Placebo Statin | |
| Arm type | Experimental |
| Investigational medicinal product name | TA-8995 2.5mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |
| Dosage and administration details: 2.5mg TA-8995 1 capsule daily with food | |
| Investigational medicinal product name | Placebo Statin |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |
| Dosage and administration details: 0mg Statin Placebo 1 capsule daily with food | |
| Arm title | Group 4 |
| Arm description: 5mg TA-8995 & Placebo Statin | |
| Arm type | Experimental |
| Investigational medicinal product name | Placebo Statin |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |
| Dosage and administration details: 0mg Statin Placebo 1 capsule daily with food | |
| Investigational medicinal product name | TA-8995 5mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |
| Dosage and administration details: 5mg TA-8995 1 capsule daily with food | |
| Arm title | Group 5 |
| Arm description: 10mg TA-8995 & Placebo Statin | |
| Arm type | Experimental |

| | |
|--|-------------------|
| Investigational medicinal product name | Placebo Statin |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |
| Dosage and administration details: 0mg Statin Placebo 1 capsule daily with food | |
| Investigational medicinal product name | TA-8995 10mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |
| Dosage and administration details: 10mg TA-8995 1 capsule daily with food | |
| Arm title | Group 6 |
| Arm description: 0mg TA-8995 & 20mg Atorvastatin | |
| Arm type | Active comparator |
| Investigational medicinal product name | TA-8995 0mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |
| Dosage and administration details: 0mg TA-8995 (placebo) 1 capsule daily with food | |
| Investigational medicinal product name | Atorvastatin 20mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |
| Dosage and administration details: 20mg Atorvastatin 1 capsule daily with food | |
| Arm title | Group 7 |
| Arm description: 10mg TA-8995 & 20mg Atorvastatin | |
| Arm type | Experimental |
| Investigational medicinal product name | TA-8995 10mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |
| Dosage and administration details: 10mg TA-8995 1 capsule daily with food | |
| Investigational medicinal product name | Atorvastatin 20mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |

Dosage and administration details:

20mg Atorvastatin
1 capsule daily with food

| | |
|------------------|---------|
| Arm title | Group 8 |
|------------------|---------|

Arm description:

0mg TA-8995 & 10mg Rosuvastatin

| | |
|--|-------------------|
| Arm type | Active comparator |
| Investigational medicinal product name | TA-8995 0mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |

Dosage and administration details:

0mg TA-8995 (placebo)
1 capsule daily with food

| | |
|--|-------------------|
| Investigational medicinal product name | Rosuvastatin 10mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |

Dosage and administration details:

10mg Rosuvastatin
1 capsule daily with food

| | |
|------------------|---------|
| Arm title | Group 9 |
|------------------|---------|

Arm description:

10mg TA-8995 & 10mg Rosuvastatin

| | |
|--|--------------|
| Arm type | Experimental |
| Investigational medicinal product name | TA-8995 10mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |

Dosage and administration details:

10mg TA-8995
1 capsule daily with food

| | |
|--|-------------------|
| Investigational medicinal product name | Rosuvastatin 10mg |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Capsule |
| Routes of administration | Oral use |

Dosage and administration details:

10mg Rosuvastatin
1 capsule daily with food

| Number of subjects in period 1 | Group 1 | Group 2 | Group 3 |
|---------------------------------------|---------|---------|---------|
| Started | 40 | 41 | 41 |
| Completed | 37 | 37 | 38 |
| Not completed | 3 | 4 | 3 |
| Consent withdrawn by subject | - | - | 1 |
| Physician decision | - | - | - |
| Adverse event, non-fatal | 3 | 3 | 2 |
| Not known | - | 1 | - |
| Protocol deviation | - | - | - |

| Number of subjects in period 1 | Group 4 | Group 5 | Group 6 |
|---------------------------------------|---------|---------|---------|
| Started | 40 | 40 | 40 |
| Completed | 39 | 35 | 36 |
| Not completed | 1 | 5 | 4 |
| Consent withdrawn by subject | - | - | - |
| Physician decision | - | - | 1 |
| Adverse event, non-fatal | 1 | 4 | 3 |
| Not known | - | 1 | - |
| Protocol deviation | - | - | - |

| Number of subjects in period 1 | Group 7 | Group 8 | Group 9 |
|---------------------------------------|---------|---------|---------|
| Started | 40 | 41 | 41 |
| Completed | 38 | 38 | 39 |
| Not completed | 2 | 3 | 2 |
| Consent withdrawn by subject | - | - | - |
| Physician decision | - | - | - |
| Adverse event, non-fatal | 1 | 2 | - |
| Not known | - | 1 | 2 |
| Protocol deviation | 1 | - | - |

Baseline characteristics

Reporting groups

| | |
|-----------------------|---------------|
| Reporting group title | Overall Trial |
|-----------------------|---------------|

Reporting group description: -

| Reporting group values | Overall Trial | Total | |
|---|---------------|-------|--|
| Number of subjects | 364 | 364 | |
| Age categorical | | | |
| Units: Subjects | | | |
| In utero | 0 | 0 | |
| Preterm newborn infants (gestational age < 37 wks) | 0 | 0 | |
| Newborns (0-27 days) | 0 | 0 | |
| Infants and toddlers (28 days-23 months) | 0 | 0 | |
| Children (2-11 years) | 0 | 0 | |
| Adolescents (12-17 years) | 0 | 0 | |
| Adults (18-64 years) | 158 | 158 | |
| From 65-84 years | 206 | 206 | |
| 85 years and over | 0 | 0 | |
| Gender categorical | | | |
| Units: Subjects | | | |
| Female | 67 | 67 | |
| Male | 297 | 297 | |

End points

End points reporting groups

| | |
|--|---------|
| Reporting group title | Group 1 |
| Reporting group description: 0mg TA-8995 & Placebo Statin | |
| Reporting group title | Group 2 |
| Reporting group description: 1mg TA-8995 & Placebo Statin | |
| Reporting group title | Group 3 |
| Reporting group description: 2.5mg TA-8995 & Placebo Statin | |
| Reporting group title | Group 4 |
| Reporting group description: 5mg TA-8995 & Placebo Statin | |
| Reporting group title | Group 5 |
| Reporting group description: 10mg TA-8995 & Placebo Statin | |
| Reporting group title | Group 6 |
| Reporting group description: 0mg TA-8995 & 20mg Atorvastatin | |
| Reporting group title | Group 7 |
| Reporting group description: 10mg TA-8995 & 20mg Atorvastatin | |
| Reporting group title | Group 8 |
| Reporting group description: 0mg TA-8995 & 10mg Rosuvastatin | |
| Reporting group title | Group 9 |
| Reporting group description: 10mg TA-8995 & 10mg Rosuvastatin | |

Primary: % change in HDL-C levels from baseline to week 12

| | |
|---|---|
| End point title | % change in HDL-C levels from baseline to week 12 |
| End point description: | |
| End point type | Primary |
| End point timeframe: Baseline to week 12 | |

| End point values | Group 1 | Group 2 | Group 3 | Group 4 |
|--------------------------------------|-----------------|-----------------|-------------------|------------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 37 | 37 | 38 | 39 |
| Units: Percentage | | | | |
| arithmetic mean (standard deviation) | 1.8 (± 10.974) | 76.04 (± 26.35) | 122.28 (± 41.391) | 160.9 (± 42.269) |

| End point values | Group 5 | Group 6 | Group 7 | Group 8 |
|--------------------------------------|-------------------|-----------------|-------------------|-----------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 35 | 37 | 38 | 38 |
| Units: Percentage | | | | |
| arithmetic mean (standard deviation) | 180.64 (± 42.111) | 1.27 (± 10.941) | 154.19 (± 48.988) | 6.16 (± 12.87) |

| End point values | Group 9 | | | |
|--------------------------------------|-------------------|--|--|--|
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 38 | | | |
| Units: Percentage | | | | |
| arithmetic mean (standard deviation) | 159.86 (± 48.097) | | | |

Statistical analyses

| Statistical analysis title | Mixed Model for Repeated Measures (MMRM) |
|---|---|
| Statistical analysis description: | |
| A restricted maximum likelihood mixed model for repeated measures (MMRM) approach was used. Analysis included fixed categorical effects of treatment, visit, and treatment-by-visit interaction, as well as a continuous fixed covariate for baseline HDL-C or LDL-C score. | |
| Comparison groups | Group 1 v Group 2 v Group 3 v Group 4 v Group 5 v Group 6 v Group 7 v Group 8 v Group 9 |
| Number of subjects included in analysis | 337 |
| Analysis specification | Pre-specified |
| Analysis type | superiority |
| P-value | ≤ 0.05 |
| Method | Mixed models analysis |

Primary: % change in LDL-C levels from baseline to week 12

| End point title | % change in LDL-C levels from baseline to week 12 |
|------------------------|---|
| End point description: | |
| End point type | Primary |
| End point timeframe: | |
| Baseline to week 12 | |

| End point values | Group 1 | Group 2 | Group 3 | Group 4 |
|--------------------------------------|------------------|-------------------|-------------------|-------------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 36 | 36 | 38 | 39 |
| Units: percentage | | | | |
| arithmetic mean (standard deviation) | -0.76 (± 11.858) | -26.96 (± 13.542) | -32.35 (± 16.259) | -45.08 (± 14.779) |

| End point values | Group 5 | Group 6 | Group 7 | Group 8 |
|--------------------------------------|-------------------|-------------------|------------------|-------------------|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 35 | 37 | 38 | 38 |
| Units: percentage | | | | |
| arithmetic mean (standard deviation) | -45.01 (± 15.602) | -46.36 (± 12.068) | -67.8 (± 11.505) | -45.86 (± 10.202) |

| End point values | Group 9 | | | |
|--------------------------------------|------------------|--|--|--|
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 37 | | | |
| Units: percentage | | | | |
| arithmetic mean (standard deviation) | -63.68 (± 9.901) | | | |

Statistical analyses

| Statistical analysis title | Mixed Model for Repeated Measures (MMRM) |
|---|---|
| Statistical analysis description: | |
| A restricted maximum likelihood mixed model for repeated measures (MMRM) approach was used. Analysis included fixed categorical effects of treatment, visit, and treatment-by-visit interaction, as well as a continuous fixed covariate for baseline HDL-C or LDL-C score. | |
| Comparison groups | Group 1 v Group 2 v Group 3 v Group 4 v Group 5 v Group 6 v Group 7 v Group 8 v Group 9 |
| Number of subjects included in analysis | 334 |
| Analysis specification | Pre-specified |
| Analysis type | superiority |
| P-value | ≤ 0.05 |
| Method | Mixed models analysis |

Adverse events

Adverse events information

Timeframe for reporting adverse events:

From informed consent to patients last visit.

| | |
|-----------------|------------|
| Assessment type | Systematic |
|-----------------|------------|

Dictionary used

| | |
|-----------------|--------|
| Dictionary name | MedDRA |
|-----------------|--------|

| | |
|--------------------|------|
| Dictionary version | 16.0 |
|--------------------|------|

Reporting groups

| | |
|-----------------------|---------|
| Reporting group title | Group 1 |
|-----------------------|---------|

Reporting group description:

0mg TA-8995 & Placebo Statin

| | |
|-----------------------|---------|
| Reporting group title | Group 2 |
|-----------------------|---------|

Reporting group description:

1mg TA-8995 & Placebo Statin

| | |
|-----------------------|---------|
| Reporting group title | Group 3 |
|-----------------------|---------|

Reporting group description:

2.5mg TA-8995 & Placebo Statin

| | |
|-----------------------|---------|
| Reporting group title | Group 4 |
|-----------------------|---------|

Reporting group description:

5mg TA-8995 & Placebo Statin

| | |
|-----------------------|---------|
| Reporting group title | Group 5 |
|-----------------------|---------|

Reporting group description:

10mg TA-8995 & Placebo Statin

| | |
|-----------------------|---------|
| Reporting group title | Group 6 |
|-----------------------|---------|

Reporting group description:

0mg TA-8995 & 20mg Atorvastatin

| | |
|-----------------------|---------|
| Reporting group title | Group 7 |
|-----------------------|---------|

Reporting group description:

10mg TA-8995 & 20mg Atorvastatin

| | |
|-----------------------|---------|
| Reporting group title | Group 8 |
|-----------------------|---------|

Reporting group description:

0mg TA-8995 & 10mg Rosuvastatin

| | |
|-----------------------|---------|
| Reporting group title | Group 9 |
|-----------------------|---------|

Reporting group description:

10mg TA-8995 & 10mg Rosuvastatin

| Serious adverse events | Group 1 | Group 2 | Group 3 |
|---|----------------|----------------|----------------|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 2 / 41 (4.88%) |
| number of deaths (all causes) | 0 | 0 | 0 |
| number of deaths resulting from adverse events | | | |
| Neoplasms benign, malignant and unspecified (incl cysts and polyps) | | | |

| | | | |
|---|----------------|----------------|----------------|
| Renal neoplasm | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 1 / 41 (2.44%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 1 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Basal cell carcinoma | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Cholangiocarcinoma | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Ovarian cyst | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Chronic lymphocytic leukaemia | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Cardiac disorders | | | |
| Acute myocardial infarction | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Nervous system disorders | | | |
| Transient ischaemic attack | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Gastrointestinal disorders | | | |
| Femoral hernia | | | |

| | | | |
|---|----------------|----------------|----------------|
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 1 / 41 (2.44%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 1 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |

| Serious adverse events | Group 4 | Group 5 | Group 6 |
|---|----------------|----------------|----------------|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 2 / 40 (5.00%) | 1 / 40 (2.50%) |
| number of deaths (all causes) | 0 | 0 | 0 |
| number of deaths resulting from adverse events | | | |
| Neoplasms benign, malignant and unspecified (incl cysts and polyps) | | | |
| Renal neoplasm | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 40 (0.00%) | 0 / 40 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Basal cell carcinoma | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 1 / 40 (2.50%) | 0 / 40 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 1 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Cholangiocarcinoma | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 1 / 40 (2.50%) | 0 / 40 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 1 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Ovarian cyst | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 40 (0.00%) | 1 / 40 (2.50%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 1 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Chronic lymphocytic leukaemia | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 40 (0.00%) | 0 / 40 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Cardiac disorders | | | |
| Acute myocardial infarction | | | |

| | | | |
|---|----------------|----------------|----------------|
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 40 (0.00%) | 0 / 40 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Nervous system disorders | | | |
| Transient ischaemic attack | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 40 (0.00%) | 0 / 40 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Gastrointestinal disorders | | | |
| Femoral hernia | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 40 (0.00%) | 0 / 40 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |

| Serious adverse events | Group 7 | Group 8 | Group 9 |
|--|----------------|----------------|----------------|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 1 / 41 (2.44%) | 1 / 41 (2.44%) |
| number of deaths (all causes) | 0 | 0 | 0 |
| number of deaths resulting from adverse events | | | |
| Neoplasms benign, malignant and unspecified (incl cysts and polyps) | | | |
| Renal neoplasm | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Basal cell carcinoma | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Cholangiocarcinoma | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Ovarian cyst | | | |

| | | | |
|---|----------------|----------------|----------------|
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Chronic lymphocytic leukaemia | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 1 / 41 (2.44%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 1 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Cardiac disorders | | | |
| Acute myocardial infarction | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 1 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Nervous system disorders | | | |
| Transient ischaemic attack | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 1 / 41 (2.44%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 1 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| Gastrointestinal disorders | | | |
| Femoral hernia | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |
| deaths causally related to treatment / all | 0 / 0 | 0 / 0 | 0 / 0 |

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

| Non-serious adverse events | Group 1 | Group 2 | Group 3 |
|---|------------------|------------------|------------------|
| Total subjects affected by non-serious adverse events | | | |
| subjects affected / exposed | 32 / 40 (80.00%) | 32 / 41 (78.05%) | 30 / 41 (73.17%) |
| Nervous system disorders | | | |
| Dizziness | | | |
| subjects affected / exposed | 2 / 40 (5.00%) | 3 / 41 (7.32%) | 2 / 41 (4.88%) |
| occurrences (all) | 2 | 3 | 2 |
| Headache | | | |
| subjects affected / exposed | 7 / 40 (17.50%) | 3 / 41 (7.32%) | 8 / 41 (19.51%) |
| occurrences (all) | 7 | 3 | 8 |

| | | | |
|--|----------------|----------------|----------------|
| General disorders and administration site conditions | | | |
| Fatigue | | | |
| subjects affected / exposed | 3 / 40 (7.50%) | 0 / 41 (0.00%) | 2 / 41 (4.88%) |
| occurrences (all) | 3 | 0 | 2 |
| Influenza like illness | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 2 / 41 (4.88%) | 3 / 41 (7.32%) |
| occurrences (all) | 1 | 2 | 3 |
| Gastrointestinal disorders | | | |
| Abdominal pain upper | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 3 / 41 (7.32%) | 0 / 41 (0.00%) |
| occurrences (all) | 0 | 3 | 0 |
| Diarrhoea | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 3 / 41 (7.32%) | 1 / 41 (2.44%) |
| occurrences (all) | 1 | 3 | 1 |
| Toothache | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 3 / 41 (7.32%) |
| occurrences (all) | 0 | 0 | 3 |
| Respiratory, thoracic and mediastinal disorders | | | |
| Cough | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 1 / 41 (2.44%) | 3 / 41 (7.32%) |
| occurrences (all) | 1 | 1 | 3 |
| Skin and subcutaneous tissue disorders | | | |
| Pruritus | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 1 / 41 (2.44%) | 3 / 41 (7.32%) |
| occurrences (all) | 0 | 1 | 3 |
| Musculoskeletal and connective tissue disorders | | | |
| Arthralgia | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 0 / 41 (0.00%) | 1 / 41 (2.44%) |
| occurrences (all) | 1 | 0 | 1 |
| Back pain | | | |
| subjects affected / exposed | 3 / 40 (7.50%) | 1 / 41 (2.44%) | 2 / 41 (4.88%) |
| occurrences (all) | 3 | 1 | 2 |
| Myalgia | | | |
| subjects affected / exposed | 2 / 40 (5.00%) | 2 / 41 (4.88%) | 2 / 41 (4.88%) |
| occurrences (all) | 2 | 2 | 2 |
| Osteoarthritis | | | |

| | | | |
|--|---------------------|---------------------|---------------------|
| subjects affected / exposed occurrences (all) | 0 / 40 (0.00%) 0 | 0 / 41 (0.00%) 0 | 0 / 41 (0.00%) 0 |
| Infections and infestations | | | |
| Influenza | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 2 / 41 (4.88%) | 2 / 41 (4.88%) |
| occurrences (all) | 1 | 2 | 2 |
| Nasopharyngitis | | | |
| subjects affected / exposed | 7 / 40 (17.50%) | 9 / 41 (21.95%) | 9 / 41 (21.95%) |
| occurrences (all) | 7 | 9 | 9 |
| Urinary tract infection | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 1 / 41 (2.44%) | 1 / 41 (2.44%) |
| occurrences (all) | 0 | 1 | 1 |

| Non-serious adverse events | Group 4 | Group 5 | Group 6 |
|--|------------------|------------------|------------------|
| Total subjects affected by non-serious adverse events | | | |
| subjects affected / exposed | 32 / 40 (80.00%) | 33 / 40 (82.50%) | 30 / 40 (75.00%) |
| Nervous system disorders | | | |
| Dizziness | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 1 / 40 (2.50%) | 2 / 40 (5.00%) |
| occurrences (all) | 1 | 1 | 2 |
| Headache | | | |
| subjects affected / exposed | 2 / 40 (5.00%) | 8 / 40 (20.00%) | 5 / 40 (12.50%) |
| occurrences (all) | 2 | 8 | 5 |
| General disorders and administration site conditions | | | |
| Fatigue | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 2 / 40 (5.00%) | 1 / 40 (2.50%) |
| occurrences (all) | 1 | 2 | 1 |
| Influenza like illness | | | |
| subjects affected / exposed | 2 / 40 (5.00%) | 0 / 40 (0.00%) | 2 / 40 (5.00%) |
| occurrences (all) | 2 | 0 | 2 |
| Gastrointestinal disorders | | | |
| Abdominal pain upper | | | |
| subjects affected / exposed | 4 / 40 (10.00%) | 2 / 40 (5.00%) | 0 / 40 (0.00%) |
| occurrences (all) | 4 | 2 | 0 |
| Diarrhoea | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 2 / 40 (5.00%) | 1 / 40 (2.50%) |
| occurrences (all) | 1 | 2 | 1 |

| | | | |
|---|---|--|--|
| Toothache subjects affected / exposed occurrences (all) | 1 / 40 (2.50%) 1 | 0 / 40 (0.00%) 0 | 0 / 40 (0.00%) 0 |
| Respiratory, thoracic and mediastinal disorders Cough subjects affected / exposed occurrences (all) | 2 / 40 (5.00%) 2 | 0 / 40 (0.00%) 0 | 1 / 40 (2.50%) 1 |
| Skin and subcutaneous tissue disorders Pruritus subjects affected / exposed occurrences (all) | 1 / 40 (2.50%) 1 | 0 / 40 (0.00%) 0 | 0 / 40 (0.00%) 0 |
| Musculoskeletal and connective tissue disorders Arthralgia subjects affected / exposed occurrences (all) Back pain subjects affected / exposed occurrences (all) Myalgia subjects affected / exposed occurrences (all) Osteoarthritis subjects affected / exposed occurrences (all) | 1 / 40 (2.50%) 1 2 / 40 (5.00%) 2 4 / 40 (10.00%) 4 0 / 40 (0.00%) 0 | 3 / 40 (7.50%) 3 2 / 40 (5.00%) 2 1 / 40 (2.50%) 1 0 / 40 (0.00%) 0 | 2 / 40 (5.00%) 2 2 / 40 (5.00%) 2 0 / 40 (0.00%) 0 1 / 40 (2.50%) 1 |
| Infections and infestations Influenza subjects affected / exposed occurrences (all) Nasopharyngitis subjects affected / exposed occurrences (all) Urinary tract infection subjects affected / exposed occurrences (all) | 0 / 40 (0.00%) 0 13 / 40 (32.50%) 13 0 / 40 (0.00%) 0 | 4 / 40 (10.00%) 4 8 / 40 (20.00%) 8 1 / 40 (2.50%) 1 | 1 / 40 (2.50%) 1 10 / 40 (25.00%) 10 0 / 40 (0.00%) 0 |

| Non-serious adverse events | Group 7 | Group 8 | Group 9 |
|--|---------|---------|---------|
| Total subjects affected by non-serious | | | |

| adverse events | | | |
|---|------------------|------------------|------------------|
| subjects affected / exposed | 28 / 40 (70.00%) | 33 / 41 (80.49%) | 34 / 41 (82.93%) |
| Nervous system disorders | | | |
| Dizziness | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 1 / 41 (2.44%) |
| occurrences (all) | 0 | 0 | 1 |
| Headache | | | |
| subjects affected / exposed | 4 / 40 (10.00%) | 5 / 41 (12.20%) | 6 / 41 (14.63%) |
| occurrences (all) | 4 | 5 | 6 |
| General disorders and administration site conditions | | | |
| Fatigue | | | |
| subjects affected / exposed | 2 / 40 (5.00%) | 1 / 41 (2.44%) | 1 / 41 (2.44%) |
| occurrences (all) | 2 | 1 | 1 |
| Influenza like illness | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 1 / 41 (2.44%) | 1 / 41 (2.44%) |
| occurrences (all) | 1 | 1 | 1 |
| Gastrointestinal disorders | | | |
| Abdominal pain upper | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Diarrhoea | | | |
| subjects affected / exposed | 4 / 40 (10.00%) | 1 / 41 (2.44%) | 2 / 41 (4.88%) |
| occurrences (all) | 4 | 1 | 2 |
| Toothache | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 0 / 41 (0.00%) | 0 / 41 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Respiratory, thoracic and mediastinal disorders | | | |
| Cough | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 1 / 41 (2.44%) | 1 / 41 (2.44%) |
| occurrences (all) | 0 | 1 | 1 |
| Skin and subcutaneous tissue disorders | | | |
| Pruritus | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 2 / 41 (4.88%) | 0 / 41 (0.00%) |
| occurrences (all) | 1 | 2 | 0 |
| Musculoskeletal and connective tissue disorders | | | |

| | | | |
|-----------------------------|------------------|-----------------|-----------------|
| Arthralgia | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 1 / 41 (2.44%) | 3 / 41 (7.32%) |
| occurrences (all) | 1 | 1 | 3 |
| Back pain | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 1 / 41 (2.44%) | 5 / 41 (12.20%) |
| occurrences (all) | 1 | 1 | 5 |
| Myalgia | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 1 / 41 (2.44%) | 2 / 41 (4.88%) |
| occurrences (all) | 0 | 1 | 2 |
| Osteoarthritis | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 3 / 41 (7.32%) | 0 / 41 (0.00%) |
| occurrences (all) | 0 | 3 | 0 |
| Infections and infestations | | | |
| Influenza | | | |
| subjects affected / exposed | 0 / 40 (0.00%) | 2 / 41 (4.88%) | 3 / 41 (7.32%) |
| occurrences (all) | 0 | 2 | 3 |
| Nasopharyngitis | | | |
| subjects affected / exposed | 14 / 40 (35.00%) | 7 / 41 (17.07%) | 3 / 41 (7.32%) |
| occurrences (all) | 14 | 7 | 3 |
| Urinary tract infection | | | |
| subjects affected / exposed | 1 / 40 (2.50%) | 4 / 41 (9.76%) | 0 / 41 (0.00%) |
| occurrences (all) | 1 | 4 | 0 |

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

| Date | Amendment |
|-------------------|---|
| 02 August 2013 | Changes clarified the screening criteria, improved efficiency of the run-in/washout period, and made the safety procedures more robust |
| 17 September 2013 | Changes were made to improve the screening criteria and add the PCSK9 assay as an exploratory efficacy assessment. Changes were made to allow enrollment of women of childbearing potential, including a urine pregnancy test at screening. |

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported

Online references

<http://www.ncbi.nlm.nih.gov/pubmed/26047975>