



Clinical trial results:

A phase IIIB, open, long term extension study to evaluate the persistence of immune responses and the safety of GSK Biologicals' Herpes Zoster subunit (HZ/su) vaccine 1437173A, at Months 108 and 120 post-vaccination and the assessment of re-vaccination with two additional doses administered at 10 years after the initial vaccination in study ZOSTER-003 in healthy subjects aged 60 years of age and older

Summary

| | |
|--------------------------|-----------------|
| EudraCT number | 2015-004400-30 |
| Trial protocol | SE DE CZ |
| Global end of trial date | 08 October 2018 |

Results information

| | |
|--------------------------------|-----------------|
| Result version number | v2 (current) |
| This version publication date | 03 May 2020 |
| First version publication date | 24 October 2019 |
| Version creation reason | |

Trial information

Trial identification

| | |
|-----------------------|--------|
| Sponsor protocol code | 204926 |
|-----------------------|--------|

Additional study identifiers

| | |
|------------------------------------|-------------|
| ISRCTN number | - |
| ClinicalTrials.gov id (NCT number) | NCT02735915 |
| WHO universal trial number (UTN) | - |

Notes:

Sponsors

| | |
|------------------------------|---|
| Sponsor organisation name | GlaxoSmithKline |
| Sponsor organisation address | Rue de l'Institut 89, Rixensart, Belgium, B-1330 |
| Public contact | GSK Response Center, GlaxoSmithKline, 044 2089-904466, GSKClinicalSupportHD@gsk.com |
| Scientific contact | GSK Response Center, GlaxoSmithKline, 044 2089-904466, GSKClinicalSupportHD@gsk.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 | 27 March 2019 |
| Is this the analysis of the primary completion data? | Yes |
| Primary completion date | 27 August 2017 |
| Global end of trial reached? | Yes |
| Global end of trial date | 08 October 2018 |
| Was the trial ended prematurely? | No |

Notes:

General information about the trial

Main objective of the trial:

To evaluate persistence of humoral and cell mediated immune responses overall at Months 108 and 120 post first dose of initial vaccination course in study ZOSTER-003.

Protection of trial subjects:

The subjects were observed closely for at least 30 minutes following the administration of vaccine(s), with appropriate medical treatment readily available in case of a rare anaphylactic reaction.

Background therapy: -

Evidence for comparator: -

| | |
|---|---------------|
| Actual start date of recruitment | 11 April 2016 |
| 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 | Czech Republic: 15 |
| Country: Number of subjects enrolled | Germany: 34 |
| Country: Number of subjects enrolled | Sweden: 21 |
| Worldwide total number of subjects | 70 |
| EEA total number of subjects | 70 |

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) | 11 |
| From 65 to 84 years | 59 |
| 85 years and over | 0 |

Subject disposition

Recruitment

Recruitment details:

Subjects who participated in the parent study Zoster-003 (NCT00434577), in GSK1437173A _MD Group and received a complete vaccination course (2 doses of 50 µg GSK1437173A) were offered participation in this Long Term Follow-Up study. A total of 70 subjects met the eligibility criteria & consented to participate in Germany, Sweden and Czech Republic

Pre-assignment

Screening details:

Out of 70 subjects originally enrolled (Total enrolled cohort for persistence phase) into the study, 8 subjects were eliminated as subject number was allocated without vaccine administration. Only 62 subjects were vaccinated with at least one dose, forming the Total vaccinated cohort (TVc) for re-vaccination phase.

Period 1

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

Arms

| | |
|-----------|---------------------------|
| Arm title | GSK1437173A vaccine Group |
|-----------|---------------------------|

Arm description:

Subjects who completed vaccination course of 2 doses of HZ/su vaccine (group 50 µg gE/AS01B) in the study Zoster-003 (NCT00434577) were included in this study. 62 of these subjects further received 1 or 2 additional doses of HZ/su vaccine in the revaccination phase of this study

| | |
|--|-----------------------------------|
| Arm type | Experimental |
| Investigational medicinal product name | Herpes Zoster Vaccine GSK1437173A |
| Investigational medicinal product code | |
| Other name | |
| Pharmaceutical forms | Suspension for injection |
| Routes of administration | Intramuscular use |

Dosage and administration details:

1 or 2 doses of the vaccine administered intramuscularly

| Number of subjects in period 1 | GSK1437173A vaccine Group |
|--|---------------------------|
| Started | 70 |
| Vaccinated | 62 |
| Completed | 59 |
| Not completed | 11 |
| Consent withdrawn by subject | 1 |
| Withdrawal following SAE | 2 |
| Not vaccinated but subject ID assigned | 8 |

Baseline characteristics

Reporting groups

| | |
|---|---------------------------|
| Reporting group title | GSK1437173A vaccine Group |
| Reporting group description: | |
| Subjects who completed vaccination course of 2 doses of HZ/su vaccine (group 50 µg gE/AS01B) in the study Zoster-003 (NCT00434577) were included in this study. 62 of these subjects further received 1 or 2 additional doses of HZ/su vaccine in the revaccination phase of this study | |

| Reporting group values | GSK1437173A vaccine Group | Total | |
|---|---------------------------|-------|--|
| Number of subjects | 70 | 70 | |
| Age categorical Units: Subjects | | | |
| Adults (18-64 years) | 13 | 13 | |
| From 65-84 years | 57 | 57 | |
| Age Continuous Units: Years | | | |
| arithmetic mean | 72.3 | | |
| standard deviation | ± 4.3 | - | |
| Sex: Female, Male Units: Participants | | | |
| Female | 43 | 43 | |
| Male | 27 | 27 | |
| Race/Ethnicity, Customized Units: Subjects | | | |
| White-Caucasian/European Heritage | 70 | 70 | |

Subject analysis sets

| | |
|--|---|
| Subject analysis set title | GSK1437173A vaccine 60-69 YOA Sub-group |
| Subject analysis set type | Sub-group analysis |
| Subject analysis set description: | |
| Subjects of 60-69 YOA at the time of initial vaccination, who completed vaccination course of 2 doses of HZ/su vaccine (50 µg) in Zoster-003 (NCT00434577) study. | |
| Subject analysis set title | GSK1437173A vaccine ≥ 70 YOA Sub-group |
| Subject analysis set type | Sub-group analysis |
| Subject analysis set description: | |
| Subjects aged 70 or more than 70 YOA at the time of initial vaccination, who completed vaccination course of 2 doses of HZ/su vaccine (50 µg) in Zoster-003 (NCT00434577) study. | |

| Reporting group values | GSK1437173A vaccine 60-69 YOA Sub-group | GSK1437173A vaccine ≥ 70 YOA Sub-group | |
|------------------------------------|---|--|--|
| Number of subjects | 13 | 57 | |
| Age categorical Units: Subjects | | | |
| Adults (18-64 years) | | | |
| From 65-84 years | | | |

| | | | |
|---|---------------|---------------|--|
| Age Continuous Units: Years arithmetic mean standard deviation | 65.5 ± 2.5 | 73.9 ± 2.9 | |
| Sex: Female, Male Units: Participants | | | |
| Female | 8 | 35 | |
| Male | 5 | 22 | |
| Race/Ethnicity, Customized Units: Subjects | | | |
| White-Caucasian/European Heritage | 13 | 57 | |

End points

End points reporting groups

| | |
|---|---|
| Reporting group title | GSK1437173A vaccine Group |
| Reporting group description: Subjects who completed vaccination course of 2 doses of HZ/su vaccine (group 50 µg gE/AS01B) in the study Zoster-003 (NCT00434577) were included in this study. 62 of these subjects further received 1 or 2 additional doses of HZ/su vaccine in the revaccination phase of this study | |
| Subject analysis set title | GSK1437173A vaccine 60-69 YOA Sub-group |
| Subject analysis set type | Sub-group analysis |
| Subject analysis set description: Subjects of 60-69 YOA at the time of initial vaccination, who completed vaccination course of 2 doses of HZ/su vaccine (50 µg) in Zoster-003 (NCT00434577) study. | |
| Subject analysis set title | GSK1437173A vaccine ≥ 70 YOA Sub-group |
| Subject analysis set type | Sub-group analysis |
| Subject analysis set description: Subjects aged 70 or more than 70 YOA at the time of initial vaccination, who completed vaccination course of 2 doses of HZ/su vaccine (50 µg) in Zoster-003 (NCT00434577) study. | |

Primary: Anti-glycoprotein (gE) specific Antibody (Ab) concentrations at month 108

| | |
|---|--|
| End point title | Anti-glycoprotein (gE) specific Antibody (Ab) concentrations at month 108 ^[1] |
| End point description: Anti-glycoprotein E (gE) Ab concentrations were determined by Enzyme-Linked Immunosorbent Assay (ELISA), presented as geometric mean concentrations (GMCs) and expressed in micro international units per milliliter (mIU/mL). The analysis for persistence at month 108 was performed on the According-to-protocol (ATP) cohort analysis of immunogenicity at Year 9, which included subjects who complied with the protocol criteria and had immunogenicity results available up to the timepoint considered. | |
| End point type | Primary |
| End point timeframe: At Month 108 post first dose of initial vaccination course in study Zoster-003 (NCT00434577). | |

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: The scope of this endpoint was descriptive analysis. No statistical analyses were performed for this endpoint.

| | | | | |
|---|----------------------------|--|--|--|
| End point values | GSK1437173A vaccine Group | | | |
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 68 | | | |
| Units: mIU/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Anti-glycoprotein Ab concentration at month 108 | 9122.9 (7775.2 to 10704.1) | | | |

Statistical analyses

No statistical analyses for this end point

Primary: Anti-glycoprotein (gE) specific Antibody (Ab) concentrations at month 120

| | |
|-----------------|--|
| End point title | Anti-glycoprotein (gE) specific Antibody (Ab) concentrations at month 120 ^[2] |
|-----------------|--|

End point description:

Anti-gE Ab concentrations were determined by ELISA, presented as GMCs and expressed in mIU/mL. The analysis for persistence at month 120 was performed on the ATP cohort analysis of immunogenicity at Year 10, which included subjects who complied with the protocol criteria and had immunogenicity results available up to the timepoint considered.

| | |
|----------------|---------|
| End point type | Primary |
|----------------|---------|

End point timeframe:

At Month 120 post first dose of initial vaccination course in study Zoster-003 (NCT00434577).

Notes:

[2] - 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: The scope of this endpoint was descriptive analysis. No statistical analyses were performed for this endpoint.

| | | | | |
|---|---------------------------|--|--|--|
| End point values | GSK1437173A vaccine Group | | | |
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 61 | | | |
| Units: mIU/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Anti-glycoprotein Ab concentration at month 120 | 7384.0 (6202.8 to 8790.1) | | | |

Statistical analyses

No statistical analyses for this end point

Primary: Frequencies of gE (glycoprotein)-specific cluster of differentiation (CD4) (2+) T-cells at month 108

| | |
|-----------------|---|
| End point title | Frequencies of gE (glycoprotein)-specific cluster of differentiation (CD4) (2+) T-cells at month 108 ^[3] |
|-----------------|---|

End point description:

gE specific CD4 (2+) T-cells expressing at least 2 activation markers among IFN- γ , IL-2, TNF- α and CD40L, were determined by means of Intracellular Cytokine Staining (ICS) and expressed in T-cells/million cells. The analysis for persistence at month 108 was performed on the ATP cohort analysis of immunogenicity at Year 9, which included subjects who complied with the protocol criteria and had immunogenicity results available up to the timepoint considered.

| | |
|----------------|---------|
| End point type | Primary |
|----------------|---------|

End point timeframe:

At Month 108 post first dose of initial vaccination course in study Zoster-003 (NCT00434577).

Notes:

[3] - 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: The scope of this endpoint was descriptive analysis. No statistical analyses were performed for this endpoint.

| | | | | |
|---|---------------------------|--|--|--|
| End point values | GSK1437173A vaccine Group | | | |
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 66 | | | |
| Units: CD4 T-cells/million cells | | | | |
| median (inter-quartile range (Q1-Q3)) | | | | |
| Frequency of gE specific CD4 (2+) T-cells-M 108 | 414.0 (220.9 to 796.5) | | | |

Statistical analyses

No statistical analyses for this end point

Primary: Frequencies of gE (glycoprotein)-specific cluster of differentiation (CD4) (2+) T-cells at month 120

| | |
|-----------------|---|
| End point title | Frequencies of gE (glycoprotein)-specific cluster of differentiation (CD4) (2+) T-cells at month 120 ^[4] |
|-----------------|---|

End point description:

gE specific CD4 (2+)T-cells expressing at least 2 activation markers among IFN- γ , IL-2, TNF- α and CD40L were determined by means of ICS and expressed in T-cells/million cells. The analysis for persistence at month 120 was performed on the ATP cohort analysis of immunogenicity at Year 10, which included subjects who complied with the protocol criteria and had immunogenicity results available up to the timepoint considered.

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|----------------|---------|
| End point type | Primary |
|----------------|---------|

End point timeframe:

At Month 120 post first dose of initial vaccination course in study Zoster-003 (NCT00434577).

Notes:

[4] - 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: The scope of this endpoint was descriptive analysis. No statistical analyses were performed for this endpoint.

| | | | | |
|---|---------------------------|--|--|--|
| End point values | GSK1437173A vaccine Group | | | |
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 57 | | | |
| Units: CD4 T-cells/million cells | | | | |
| median (inter-quartile range (Q1-Q3)) | | | | |
| Frequency of gE specific CD4 (2+) T-cells-M 120 | 401.9 (298.1 to 901.9) | | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-glycoprotein (gE) specific Antibody (Ab) concentrations by each age category

| | |
|-----------------|---|
| End point title | Anti-glycoprotein (gE) specific Antibody (Ab) concentrations by each age category |
|-----------------|---|

End point description:

Anti-gE Ab concentrations as determined by ELISA by each age category (60-69 years of age [YOA] and

≥70 YOA at the time of initial vaccination). Antibody concentrations were presented as GMCs and expressed in mIU/mL. The analysis for persistence at month 108 and 120 were performed on the ATP cohort analysis of immunogenicity at Years 9 and 10, which included subjects who complied with the protocol criteria and had immunogenicity results available at the time points considered.

| | |
|--|-----------|
| End point type | Secondary |
| End point timeframe: | |
| At Months 108 and 120 post first dose of initial vaccination course in study Zoster-003 (NCT00434577). | |

| End point values | GSK1437173A vaccine 60-69 YOA Sub-group | GSK1437173A vaccine ≥ 70 YOA Sub-group | | |
|--|---|--|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 13 | 55 | | |
| Units: mIU/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Anti-gE, Month 108 (N-13,55) | 8566.4 (5697.1 to 12880.9) | 9259.6 (7741.6 to 11075.2) | | |
| Anti-gE, Month 120 (N-13,50) | 7401.4 (4894.2 to 11193.1) | 7380.2 (6048.9 to 9004.4) | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Frequencies of antigen-specific CD4 (2+) T-cells by each age category

| | |
|-----------------|---|
| End point title | Frequencies of antigen-specific CD4 (2+) T-cells by each age category |
|-----------------|---|

End point description:

Antigen specific CD4 (2+) T-cells as determined by means of ICS and expressed in T-cells/million cells, by each age category (60-69 YOA and ≥ 70 YOA at the time of initial vaccination). The analysis for persistence at month 108 and 120 were performed on the ATP cohort analysis of immunogenicity at Years 9 and 10, which included subjects who complied with the protocol criteria and had immunogenicity results available at the time points considered.

| | |
|--|-----------|
| End point type | Secondary |
| End point timeframe: | |
| At Months 108 and 120 post first dose of initial vaccination course in study Zoster-003 (NCT00434577). | |

| End point values | GSK1437173A vaccine 60-69 YOA Sub-group | GSK1437173A vaccine ≥ 70 YOA Sub-group | | |
|---------------------------------------|---|--|--|--|
| Subject group type | Subject analysis set | Subject analysis set | | |
| Number of subjects analysed | 13 | 53 | | |
| Units: CD4 T-cells/million cells | | | | |
| median (inter-quartile range (Q1-Q3)) | | | | |
| CD4(2+), Month 108 (N-13, 53) | 453.8 (233.2 to 577.6) | 398.9 (220.9 to 811.3) | | |

| | | | | |
|-------------------------------|------------------------|------------------------|--|--|
| CD4(2+), Month 120 (N-11, 46) | 359.2 (254.9 to 885.0) | 429.4 (298.1 to 940.1) | | |
|-------------------------------|------------------------|------------------------|--|--|

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any serious adverse events (SAEs) related to study participation or to a concurrent GSK medication/vaccine (including GSK1437173A administered during the Zoster-003 [NCT00434577] study).

| | |
|-----------------|--|
| End point title | Number of subjects with any serious adverse events (SAEs) related to study participation or to a concurrent GSK medication/vaccine (including GSK1437173A administered during the Zoster-003 [NCT00434577] study). |
|-----------------|--|

End point description:

SAEs assessed include medical occurrences that result in death, are life threatening, require hospitalization or prolongation of hospitalization or result in disability/incapacity. The analysis was performed on the Total enrolled cohort which included all subjects enrolled into the current study [ZOSTER-060 (NCT02735915)].

| | |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Between Months 108 and 120 post first dose of initial vaccination course in study Zoster-003 (NCT00434577).

| | | | | |
|--|---------------------------|--|--|--|
| End point values | GSK1437173A vaccine Group | | | |
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 70 | | | |
| Units: Participants | | | | |
| Any SAEs between month 108 and month 120 | 0 | | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Anti-gE specific Antibody (Ab) concentrations at months 121, 123 and 134

| | |
|-----------------|--|
| End point title | Anti-gE specific Antibody (Ab) concentrations at months 121, 123 and 134 |
|-----------------|--|

End point description:

Anti-gE antibody concentrations were determined by ELISA in all subjects, presented as GMCs and expressed in mIU/mL. The analysis was performed on the ATP cohort analysis of immunogenicity after re-vaccination, which included subjects who complied with the protocol criteria, have received at least one dose from the re-vaccination schedule and had immunogenicity results available at the timepoints considered.

| | |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

At 1 month post each re-vaccination dose (i.e. Month 121 and Month 123) and at 1 year post last re-vaccination dose (i.e., Month 134).

| | | | | |
|--|-----------------------------------|--|--|--|
| End point values | GSK1437173A vaccine Group | | | |
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 54 | | | |
| Units: mIU/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Anti-gE, Month 121 | 108199.6 (87154.2 to 134326.8) | | | |
| Anti-gE, Month 123 | 90003.6 (76754.3 to 105539.9) | | | |
| Anti-gE, Month 134 (N-52) | 30066.2 (25810.3 to 35023.8) | | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Frequencies of antigen-specific CD4 (2+) T-cells, post re-vaccination course.

| | |
|-----------------|---|
| End point title | Frequencies of antigen-specific CD4 (2+) T-cells, post re-vaccination course. |
|-----------------|---|

End point description:

Antigen specific CD4 (2+)T cells were determined by means of ICS and expressed in T-cells/million cells. The analysis was performed on the ATP cohort analysis of immunogenicity after re-vaccination, which included subjects who complied with the protocol criteria, have received at least one dose from the re-vaccination schedule and had immunogenicity results available at the timepoints considered.

| | |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

At 1 month post each re-vaccination dose (i.e. Month 121 and Month 123) and at 1 year post last re-vaccination dose (i.e., Month 134).

| | | | | |
|---------------------------------------|---------------------------|--|--|--|
| End point values | GSK1437173A vaccine Group | | | |
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 50 | | | |
| Units: CD4 T-cells/million cells | | | | |
| median (inter-quartile range (Q1-Q3)) | | | | |
| CD4(2+), Month 121 (N-48) | 2563.9 (1219.9 to 4127.4) | | | |

| | | | | |
|---------------------------|---------------------------|--|--|--|
| CD4(2+), Month 123 | 1775.5 (1181.4 to 3077.8) | | | |
| CD4(2+), Month 134 (N-48) | 1196.3 (680.8 to 1850.8) | | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any and Grade 3 solicited local symptoms.

| | |
|-----------------|---|
| End point title | Number of subjects with any and Grade 3 solicited local symptoms. |
|-----------------|---|

End point description:

Assessed solicited local symptoms included: pain, redness and swelling at injection site. Any = occurrence of the symptom regardless of intensity grade. Grade 3 pain = significant pain at rest, prevented normal every day activities. Grade 3 redness/swelling = symptoms spreading beyond a surface of (>) 100 millimeters (mm). The analysis was performed on the Total vaccinated cohort for re-vaccination course, which included all subjects with at least one dose of GSK1437173A vaccine in the current ZOSTER-060 (NCT02735915) study, who had their symptom sheets filled in.

| | |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Within 7 days (Days 0-6) after each vaccination and across doses, in the current study.

| End point values | GSK1437173A vaccine Group | | | |
|---------------------------------|---------------------------|--|--|--|
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 62 | | | |
| Units: Participants | | | | |
| Any Pain, Dose 1 | 41 | | | |
| Grade 3 Pain, Dose 1 | 1 | | | |
| Any Redness, Dose 1 | 19 | | | |
| >100 mm Redness, Dose 1 | 0 | | | |
| Any Swelling, Dose 1 | 11 | | | |
| >100 mm Swelling, Dose 1 | 0 | | | |
| Any Pain, Dose 2 (N-56) | 26 | | | |
| Grade 3 Pain, Dose 2 (N-56) | 2 | | | |
| Any Redness, Dose 2 (N-56) | 17 | | | |
| >100 mm Redness, Dose 2 (N-56) | 0 | | | |
| Any Swelling, Dose 2 (N-56) | 7 | | | |
| >100 mm Swelling, Dose 2 (N-56) | 0 | | | |
| Any Pain, Across doses | 46 | | | |
| Grade 3 Pain, Across doses | 2 | | | |
| Any Redness, Across doses | 27 | | | |
| >100 mm Redness, Across doses | 0 | | | |
| Any Swelling, Across doses | 16 | | | |
| > 100 mm Swelling, Across doses | 0 | | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any, Grade 3 and related solicited general symptoms.

| | |
|--|--|
| End point title | Number of subjects with any, Grade 3 and related solicited general symptoms. |
| End point description: | |
| Assessed solicited general symptoms included: fatigue, gastrointestinal symptoms [nausea, vomiting, diarrhoea and/or abdominal pain], headache, myalgia, shivering and temperature [higher than or equal to (\geq) 37.5 degrees Celsius ($^{\circ}\text{C}$) for axillary, oral or tympanic route] and $\geq 38.0^{\circ}\text{C}$ for rectal route. Grade 3 fatigue, gastrointestinal symptoms, headache, myalgia, shivering = symptoms that prevented normal activity. Grade 3 temperature = defined as fever higher than ($>$) 39.0°C , regardless of the route used. The analysis was performed on the Total vaccinated cohort for re-vaccination course, which included all subjects with at least one dose of GSK1437173A vaccine in the current ZOSTER-060 (NCT02735915) study, who had their symptom sheets filled in. | |
| End point type | Secondary |
| End point timeframe: | |
| Within 7 days (Days 0-6) after each vaccination and across doses, in the current study. | |

| End point values | GSK1437173A vaccine Group | | | |
|---|---------------------------|--|--|--|
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 62 | | | |
| Units: Participants | | | | |
| Any Fatigue, Dose 1 | 25 | | | |
| Grade 3 Fatigue, Dose 1 | 3 | | | |
| Related Fatigue, Dose 1 | 25 | | | |
| Any Gastrointestinal symptoms, Dose 1 | 7 | | | |
| Grade 3 Gastrointestinal symptoms, Dose 1 | 0 | | | |
| Related Gastrointestinal symptoms, Dose 1 | 7 | | | |
| Any Headache, Dose 1 | 12 | | | |
| Grade 3 Headache, Dose 1 | 3 | | | |
| Related Headache, Dose 1 | 12 | | | |
| Any Myalgia, Dose 1 | 20 | | | |
| Grade 3 Myalgia, Dose 1 | 1 | | | |
| Related Myalgia, Dose 1 | 19 | | | |
| Any Shivering, Dose 1 | 12 | | | |
| Grade 3 Shivering, Dose 1 | 2 | | | |
| Related Shivering, Dose 1 | 12 | | | |
| Any Temperature, Dose 1 | 9 | | | |
| $>39.0^{\circ}\text{C}$ Temperature, Dose 1 | 0 | | | |
| Related Temperature, Dose 1 | 8 | | | |

| | | | | |
|--|----|--|--|--|
| Any Fatigue, Dose 2 (N-56) | 15 | | | |
| Grade 3 Fatigue, Dose 2 (N-56) | 1 | | | |
| Related Fatigue, Dose 2 (N-56) | 14 | | | |
| Any Gastrointestinal symptoms, Dose 2 (N-56) | 7 | | | |
| Grade 3 Gastrointestinal symptoms, Dose 2 (N-56) | 0 | | | |
| Related Gastrointestinal symptoms, Dose 2 (N-56) | 5 | | | |
| Any Headache, Dose 2 (N-56) | 12 | | | |
| Grade 3 Headache, Dose 2 (N-56) | 1 | | | |
| Related Headache, Dose 2 (N-56) | 12 | | | |
| Any Myalgia, Dose 2 (N-56) | 15 | | | |
| Grade 3 Myalgia, Dose 2 (N-56) | 2 | | | |
| Related Myalgia, Dose 2 (N-56) | 14 | | | |
| Any Shivering, Dose 2 (N-56) | 8 | | | |
| Grade 3 Shivering, Dose 2 (N-56) | 2 | | | |
| Related Shivering, Dose 2 (N-56) | 8 | | | |
| Any Temperature, Dose 2 (N-56) | 8 | | | |
| >39.0°C Temperature, Dose 2 (N-56) | 0 | | | |
| Related Temperature, Dose 2 (N-56) | 7 | | | |
| Any Fatigue, Across doses | 31 | | | |
| Grade 3 Fatigue, Across doses | 3 | | | |
| Related Fatigue, Across doses | 31 | | | |
| Any Gastrointestinal symptoms, Across doses | 11 | | | |
| Grade 3 Gastrointestinal symptoms, Across doses | 0 | | | |
| Related Gastrointestinal symptoms, Across doses | 10 | | | |
| Any Headache, Across doses | 18 | | | |
| Grade 3 Headache, Across doses | 4 | | | |
| Related Headache, Across doses | 18 | | | |
| Any Myalgia, Across doses | 29 | | | |
| Grade 3 Myalgia, Across doses | 3 | | | |
| Related Myalgia, Across doses | 27 | | | |
| Any Shivering, Across doses | 16 | | | |
| Grade 3 Shivering, Across doses | 4 | | | |
| Related Shivering, Across doses | 16 | | | |
| Any Temperature, Across doses | 15 | | | |
| >39.0°C Temperature, Across doses | 0 | | | |
| Related Temperature, Across doses | 13 | | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any, Grade 3 and related unsolicited adverse events (AEs) according to the Medical Dictionary for Regulatory Activities (MedDRA) classification in all subjects.

| | |
|-----------------|---|
| End point title | Number of subjects with any, Grade 3 and related unsolicited adverse events (AEs) according to the Medical Dictionary for |
|-----------------|---|

End point description:

An unsolicited AE covers any untoward medical occurrence in a clinical investigation subject temporally associated with the use of a medicinal product, whether or not considered related to the medicinal product and reported in addition to those solicited during the clinical study and any solicited symptom with onset outside the specified period of follow-up for solicited symptoms. Any is defined as the occurrence of any unsolicited AE regardless of intensity grade or relation to vaccination. Grade 3 AE = an AE which prevented normal, everyday activities. Related = AE assessed by the investigator as related to the vaccination. The analysis was performed on the Total vaccinated cohort for re-vaccination course, which included all subjects with at least one dose of GSK1437173A vaccine in the current ZOSTER-060 (NCT02735915) study.

| | |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

Within 30 days (Days 0-29) after each vaccination in the current study.

| End point values | GSK1437173A vaccine Group | | | |
|-----------------------------|---------------------------|--|--|--|
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 62 | | | |
| Units: Participants | | | | |
| Any AEs | 14 | | | |
| Any Grade 3 AEs | 1 | | | |
| Any Related AEs | 5 | | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any, related and fatal SAEs.

| | |
|-----------------|--|
| End point title | Number of subjects with any, related and fatal SAEs. |
|-----------------|--|

End point description:

SAEs assessed include medical occurrences that resulted in death, were life threatening, required hospitalization or prolongation of hospitalization or resulted in disability/incapacity. The analysis was performed on the Total vaccinated cohort for re-vaccination course, which included all subjects with at least one dose of GSK1437173A vaccine in the current ZOSTER-060 (NCT02735915) study.

| | |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

From Dose 1 of re-vaccination (Month 120) until study end (Month 134).

| End point values | GSK1437173A vaccine Group | | | |
|-----------------------------|---------------------------|--|--|--|
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 62 | | | |
| Units: Participants | | | | |
| Any SAEs | 7 | | | |
| Related SAEs | 0 | | | |
| Any Fatal SAEs | 0 | | | |

Statistical analyses

No statistical analyses for this end point

Secondary: Number of subjects with any and related potential immune-mediated diseases (pIMDs).

| | |
|-----------------|---|
| End point title | Number of subjects with any and related potential immune-mediated diseases (pIMDs). |
|-----------------|---|

End point description:

pIMDs assessed includes AEs that were autoimmune diseases and other inflammatory and/or neurologic disorders of interest which may or may not have an autoimmune aetiology. Related pIMDs= pIMDs assessed by the investigator as related to the vaccination. The analysis was performed on the Total vaccinated cohort for re-vaccination course, which included all subjects with at least one dose of GSK1437173A vaccine in the current ZOSTER-060 (NCT02735915) study.

| | |
|----------------|-----------|
| End point type | Secondary |
|----------------|-----------|

End point timeframe:

From Dose 1 of re-vaccination (Month 120) until study end (Month 134).

| | | | | |
|-----------------------------|---------------------------|--|--|--|
| End point values | GSK1437173A vaccine Group | | | |
| Subject group type | Reporting group | | | |
| Number of subjects analysed | 62 | | | |
| Units: Participants | | | | |
| Any pIMDs | 0 | | | |
| Related pIMDs | 0 | | | |

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Solicited symptoms: During the 7 day (Day 0-6) post vaccination. Unsolicited symptoms: during the 30-day (Days 0-29) post-vaccination period; SAEs: From study start (Month 108) up to study end (Month 134).

Adverse event reporting additional description:

Reported adverse events data correspond to the Total Vaccinated cohort for re-vaccination phase

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

Dictionary used

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

| | |
|--------------------|------|
| Dictionary version | 21.0 |
|--------------------|------|

Reporting groups

| | |
|-----------------------|---------------------------|
| Reporting group title | GSK1437173A vaccine Group |
|-----------------------|---------------------------|

Reporting group description:

Subjects who completed vaccination course of 2 doses of HZ/su vaccine (group 50 µg gE/AS01B) in the study Zoster-003 (NCT00434577) were included in this study. 62 of these subjects further received 1 or 2 additional doses of HZ/su vaccine in the revaccination phase of this study

| Serious adverse events | GSK1437173A vaccine Group | | |
|---|---------------------------|--|--|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 7 / 62 (11.29%) | | |
| number of deaths (all causes) | 0 | | |
| number of deaths resulting from adverse events | 0 | | |
| Cardiac disorders | | | |
| Acute myocardial infarction | | | |
| subjects affected / exposed | 1 / 62 (1.61%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Atrial fibrillation | | | |
| subjects affected / exposed | 1 / 62 (1.61%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Atrial flutter | | | |
| subjects affected / exposed | 1 / 62 (1.61%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Atrial tachycardia | | | |

| | | | |
|---|----------------|--|--|
| subjects affected / exposed | 1 / 62 (1.61%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Nervous system disorders | | | |
| Cerebrovascular accident | | | |
| subjects affected / exposed | 1 / 62 (1.61%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Reproductive system and breast disorders | | | |
| Benign prostatic hyperplasia | | | |
| subjects affected / exposed | 1 / 62 (1.61%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Gastrointestinal disorders | | | |
| Retroperitoneal haematoma | | | |
| subjects affected / exposed | 1 / 62 (1.61%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Hepatobiliary disorders | | | |
| Cholecystitis acute | | | |
| subjects affected / exposed | 1 / 62 (1.61%) | | |
| occurrences causally related to treatment / all | 0 / 2 | | |
| deaths causally related to treatment / all | 0 / 0 | | |
| Infections and infestations | | | |
| Septic shock | | | |
| subjects affected / exposed | 1 / 62 (1.61%) | | |
| occurrences causally related to treatment / all | 0 / 1 | | |
| deaths causally related to treatment / all | 0 / 0 | | |

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

| | | | |
|---|---------------------------|--|--|
| Non-serious adverse events | GSK1437173A vaccine Group | | |
| Total subjects affected by non-serious adverse events | | | |
| subjects affected / exposed | 53 / 62 (85.48%) | | |

| | | | |
|--|--|--|--|
| Injury, poisoning and procedural complications Fall subjects affected / exposed occurrences (all) | 1 / 62 (1.61%) 1 | | |
| Nervous system disorders Headache subjects affected / exposed occurrences (all) | 18 / 62 (29.03%) 24 | | |
| General disorders and administration site conditions Chills subjects affected / exposed occurrences (all) Fatigue subjects affected / exposed occurrences (all) Injection site pruritus subjects affected / exposed occurrences (all) Pain subjects affected / exposed occurrences (all) Peripheral swelling subjects affected / exposed occurrences (all) Pyrexia subjects affected / exposed occurrences (all) Swelling subjects affected / exposed occurrences (all) | 16 / 62 (25.81%) 20 31 / 62 (50.00%) 40 1 / 62 (1.61%) 1 46 / 62 (74.19%) 67 1 / 62 (1.61%) 1 15 / 62 (24.19%) 17 16 / 62 (25.81%) 18 | | |
| Gastrointestinal disorders Gastrointestinal disorder subjects affected / exposed occurrences (all) Nausea | 11 / 62 (17.74%) 14 | | |

| | | | |
|---|--|--|--|
| subjects affected / exposed occurrences (all) | 1 / 62 (1.61%) 1 | | |
| Skin and subcutaneous tissue disorders Erythema subjects affected / exposed occurrences (all) Rash subjects affected / exposed occurrences (all) Rash pruritic subjects affected / exposed occurrences (all) | 27 / 62 (43.55%) 36 1 / 62 (1.61%) 1 1 / 62 (1.61%) 1 | | |
| Musculoskeletal and connective tissue disorders Myalgia subjects affected / exposed occurrences (all) | 29 / 62 (46.77%) 35 | | |
| Infections and infestations Cystitis subjects affected / exposed occurrences (all) Oral herpes subjects affected / exposed occurrences (all) Urinary tract infection subjects affected / exposed occurrences (all) | 1 / 62 (1.61%) 1 1 / 62 (1.61%) 1 1 / 62 (1.61%) 2 | | |
| Metabolism and nutrition disorders Decreased appetite subjects affected / exposed occurrences (all) | 1 / 62 (1.61%) 1 | | |

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

| Date | Amendment |
|----------------|---|
| 18 August 2017 | The protocol was amended to clarify that: All SAEs will be collected and recorded from the time of the first receipt of study vaccine at Visit 2 until the subject is discharged from the study or until the end of the study; All AEs/SAEs leading to withdrawal from the study will be collected and recorded from Visit 1 up to the last study visit at the end of the study |

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported