



## Clinical trial results:

**A phase III, randomised, open-label, multicentre, clinical trial to assess the safety and immunogenicity of GSK Biologicals' HZ/su vaccine when administered subcutaneously as compared to intramuscularly according to a 0,2-month schedule in adults aged 50 years and older.**

### Summary

EudraCT number	2012-005671-14
Trial protocol	GB
Global end of trial date	11 November 2014

### Results information

Result version number	v2
This version publication date	18 August 2016
First version publication date	04 February 2016
Version creation reason	<ul style="list-style-type: none"><li>• Correction of full data set</li></ul> As per CSR Amendment

### Trial information

#### Trial identification

Sponsor protocol code	116760
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#### Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT01777321
WHO universal trial number (UTN)	-

Notes:

### Sponsors

Sponsor organisation name	GlaxoSmithKline Biologicals
Sponsor organisation address	Rue de l'Institut 89, Rixensart, Belgium, B-1330
Public contact	Clinical Trials Call Center, GlaxoSmithKline Biologicals, 044 2089904466, GSKClinicalSupportHD@gsk.com
Scientific contact	Clinical Trials Call Center, GlaxoSmithKline Biologicals, 044 2089904466, 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:

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**Results analysis stage**

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Analysis stage	Final
Date of interim/final analysis	12 May 2015
Is this the analysis of the primary completion data?	Yes
Primary completion date	10 October 2013
Global end of trial reached?	Yes
Global end of trial date	11 November 2014
Was the trial ended prematurely?	No

Notes:

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**General information about the trial**

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Main objective of the trial:

To assess the vaccine response rate (VRR) to the HZV vaccine (based on humoral immune response) when administered by SC injection compared to IM injection to subjects  $\geq 50$  YOA at Month 3 in all subjects.

To assess the humoral immune response (Geometric Mean Concentration [GMC]) of the HZV vaccine when administered by SC compared to IM injection to subjects  $\geq 50$  YOA at Month 3 in all subjects.

To assess the safety of the HZV vaccine when administered by SC injection to subjects  $\geq 50$  YOA up to Month 3.

Protection of trial subjects:

All subjects were supervised after vaccination/product administration with appropriate medical treatment readily available. Vaccines were administered by qualified and trained personnel. Vaccines were administered only to eligible subjects that had no contraindications to any components of the vaccines.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	17 June 2013
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

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**Population of trial subjects**

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**Subjects enrolled per country**

Country: Number of subjects enrolled	Japan: 60
Worldwide total number of subjects	60
EEA total number of subjects	0

Notes:

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**Subjects enrolled per age group**

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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)	60
From 65 to 84 years	0
85 years and over	0

## Subject disposition

### Recruitment

Recruitment details: -

### Pre-assignment

Screening details:

During the screening the following steps occurred: check for inclusion/exclusion criteria, contraindications/precautions, medical history of the subjects and signing informed consent forms.

### Period 1

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

### Arms

Are arms mutually exclusive?	Yes
<b>Arm title</b>	SC HZ/su Group
Arm description: -	
Arm type	Experimental
Investigational medicinal product name	GSK1437173A
Investigational medicinal product code	
Other name	Herpes zoster vaccine GSK1437173A, HZ/su
Pharmaceutical forms	Injection
Routes of administration	Subcutaneous use

Dosage and administration details:

Two doses of 0,5 ml reconstituted vaccine was administered in the subcutaneous tissue of the upper, non –dominant arm at 0 and 2 months schedule.

<b>Arm title</b>	IM HZ/su Group
Arm description: -	
Arm type	Active comparator
Investigational medicinal product name	GSK1437173A
Investigational medicinal product code	
Other name	Herpes zoster vaccine GSK1437173A, HZ/su
Pharmaceutical forms	Injection
Routes of administration	Intramuscular use

Dosage and administration details:

Two doses of 0,5 ml reconstituted vaccine was administered intramuscularly in the deltoid region of the non –dominant arm at 0 and 2 months schedule.

<b>Number of subjects in period 1</b>	SC HZ/su Group	IM HZ/su Group
Started	30	30
Completed	30	29
Not completed	0	1
Consent withdrawal (not due to an adverse event)	-	1



## Baseline characteristics

### Reporting groups

Reporting group title	SC HZ/su Group
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Reporting group description: -
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Reporting group title	IM HZ/su Group
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Reporting group description: -
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Reporting group values	SC HZ/su Group	IM HZ/su Group	Total
Number of subjects	30	30	60
Age categorical			
Units: Subjects			
In utero			0
Preterm newborn infants (gestational age < 37 wks)			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)			0
From 65-84 years			0
85 years and over			0
Age continuous			
Units: years			
arithmetic mean	61.6	62.2	
standard deviation	± 7.59	± 7.83	-
Gender categorical			
Units: Subjects			
Female	15	15	30
Male	15	15	30

## End points

### End points reporting groups

Reporting group title	SC HZ/su Group
Reporting group description: -	
Reporting group title	IM HZ/su Group
Reporting group description: -	

### Primary: Number of subjects with anti Glicoprotein E (anti-E) antibody concentrations $\geq 18$ mIU/mL

End point title	Number of subjects with anti Glicoprotein E (anti-E) antibody concentrations $\geq 18$ mIU/mL <sup>[1]</sup>
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End point description:

End point type	Primary
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End point timeframe:

Before vaccination (PRE), two months after Dose 1 (M2) and three months after Dose 2 (M3).

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 primary endpoint was descriptive, no statistical analyses were conducted.

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	29	29		
Units: Subjects				
Anti-gE, PRE	29	29		
Anti-gE, M2	29	29		
Anti-gE, M3	29	29		

### Statistical analyses

No statistical analyses for this end point

### Primary: Anti-gE antibody concentrations

End point title	Anti-gE antibody concentrations <sup>[2]</sup>
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End point description:

End point type	Primary
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End point timeframe:

Before vaccination (PRE), two months after Dose 1 (M2) and three months after Dose 2 (M3).

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 primary endpoint was descriptive, no statistical analyses were conducted.

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	29	29		
Units: mIU/mL				
geometric mean (confidence interval 95%)				
Anti-gE, PRE	1424.3 (1042.6 to 1945.6)	1116.8 (774.5 to 1610.3)		
Anti-gE, M2	19902.5 (14846.9 to 26679.6)	12842 (8558.4 to 19269.7)		
Anti-gE, M3	44126.1 (36326.1 to 53601)	45521.5 (37549.5 to 55185.9)		

### Statistical analyses

No statistical analyses for this end point

### Primary: Number of subjects with vaccine response for anti-gE antibody concentrations

End point title	Number of subjects with vaccine response for anti-gE antibody concentrations <sup>[3]</sup>
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End point description:

End point type	Primary
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End point timeframe:

At two months after Dose 1 (M2) and three months after Dose 2 (M3).

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 primary endpoint was descriptive, no statistical analyses were conducted.

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	29	29		
Units: Subjects				
Anti-gE, M2	28	25		
Anti-gE, M3	29	29		

### Statistical analyses

No statistical analyses for this end point

### Primary: Anti-gE antibody concentrations

End point title	Anti-gE antibody concentrations <sup>[4]</sup>
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End point description:

End point type	Primary
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End point timeframe:

Before vaccination (PRE), at two months after dose 1 (M2) and three months after Dose 2 (M3).

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 primary endpoint was descriptive, no statistical analyses were conducted.

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	29	29		
Units: mIU/mL				
median (standard deviation)				
Anti-gE, PRE	1404.1 (± 1398.82)	946.3 (± 3231.78)		
Anti-gE, M2	19400.1 (± 24456.86)	14330.1 (± 14548.75)		
Anti-gE, M3	44182 (± 27990.99)	42444.8 (± 27555.21)		

## Statistical analyses

No statistical analyses for this end point

## Primary: Number of subjects with solicited local symptoms

End point title	Number of subjects with solicited local symptoms <sup>[5]</sup>
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End point description:

End point type	Primary
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End point timeframe:

During the 7 day (Days 0-6) post vaccination, after each dose and across doses

Notes:

[5] - 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 primary endpoint was descriptive, no statistical analyses were conducted.

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	30		
Units: Subjects				
Any Arm movement impairment, D1 [N=30;30]	10	7		
Any Arm movement impairment, D2 [N=30;29]	16	11		
Any Arm movement impairment, Across [N=30;30]	18	12		
Grade 3 Arm movement impairment, D1 [N=30;30]	1	0		

Grade 3 Arm movement impairment, D2 [N=30;29]	0	0		
Grade 3 Arm movement impairment, Across [N=30;30]	1	0		
Any Injection site pruritus, D1 [N=30;30]	19	6		
Any Injection site pruritus, D2 [N=30;29]	15	8		
Any Injection site pruritus, Across [N=30;30]	21	10		
Grade 3 Injection site pruritus, D1 [N=30;30]	0	0		
Grade 3 Injection site pruritus, D2 [N=30;29]	0	0		
Grade 3 Injection site pruritus, Across [N=30;30]	0	0		
Any Pain, D 1 [N=30;30]	28	26		
Any Pain, D 2 [N=30;29]	25	21		
Any Pain, Across [N=30;30]	28	27		
Grade 3 Pain, D1 [N=30;30]	2	0		
Grade 3 Pain, D2 [N=30;29]	1	0		
Grade 3 Pain, Across [N=30;30]	2	0		
Any Redness, D 1 [N=30;30]	23	11		
Any Redness, D 2 [N=30;29]	23	12		
Any Redness, Across [N=30;30]	26	15		
Grade 3 Redness, D1 [N=30;30]	12	1		
Grade 3 Redness, D2 [N=30;29]	12	1		
Grade 3 Redness, Across [N=30;30]	17	2		
Any Swelling, D 1 [N=30;30]	22	7		
Any Swelling, D 2 [N=30;29]	20	11		
Any Swelling, Across [N=30;30]	24	12		
Grade 3 Swelling, D1 [N=30;30]	8	1		
Grade 3 Swelling, D2 [N=30;29]	6	1		
Grade 3 Swelling, Across [N=30;30]	10	2		

## Statistical analyses

No statistical analyses for this end point

## Primary: Number of subjects with solicited general symptoms

End point title	Number of subjects with solicited general symptoms <sup>[6]</sup>
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End point description:

End point type	Primary
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End point timeframe:

During the 7 day (Days 0-6) post vaccination, after each dose and across doses

Notes:

[6] - 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 primary endpoint was descriptive, no statistical analyses were conducted.

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	30		
Units: Subjects				
Any Fatigue, D1 [N=30;30]	14	12		
Any Fatigue, D2 [N=30;29]	16	9		
Any Fatigue, Across [N=30;30]	21	16		
Grade 3 Fatigue, D1 [N=30;30]	0	0		
Grade 3 Fatigue, D2 [N=30;29]	0	1		
Grade 3 Fatigue, Across [N=30;30]	0	1		
Related Fatigues, D1 [N=30;30]	14	12		
Related Fatigue, D2 [N=30;29]	16	9		
Related Fatigues, Across [N=30;30]	21	16		
Any Fever/Axillary, D 1 [N=30;30]	3	2		
Any Fever/Axillary, D 2 [N=30;29]	5	6		
Any Fever/Axillary, Across [N=30;30]	6	7		
Grade 3 Fever/Axillary, D1 [N=30;30]	0	0		
Grade 3 Fever/Axillary, D2 [N=30;29]	0	0		
Grade 3 Fever/Axillary, Across [N=30;30]	0	0		
Related Fever/Axillary, D 1 [N=30;30]	3	2		
Related Fever/Axillary, D 2 [N=30;29]	5	6		
Related Fever/Axillary, Across [N=30;30]	6	7		
Any Gastrointestinal symptoms, D 1 [N=30;30]	2	4		
Any Gastrointestinal symptoms, D 2 [N=30;29]	5	3		
Any Gastrointestinal symptoms, Across [N=30;30]	7	5		
Grade 3 Gastrointestinal symptoms, D1 [N=30;30]	0	0		
Grade 3 Gastrointestinal symptoms, D2 [N=30;29]	0	1		
Grade 3 Gastrointestinal symptoms, Across [N=30;30]	0	1		
Related Gastrointestinal symptoms,D1 [N=30;30]	2	4		
Related Gastrointestinal symptoms, D2 [N=30;29]	5	3		
Related Gastrointestinal symptoms, Across [N=30;30]	7	5		
Any Headache, D1 [N=30;30]	11	8		
Any Headache, D2 [N=30;29]	11	10		
Any Headache, Across [N=30;30]	17	13		
Grade 3 Headache, D1 [N=30;30]	0	0		
Grade 3 Headache, D2 [N=30;29]	0	2		
Grade 3 Headache, Across [N=30;30]	0	2		
Related Headache, D1 [N=30;30]	11	8		
Related Headache, D2 [N=30;29]	11	10		
Related Headache, Across [N=30;30]	17	13		
Any Myalgia, D1 [N=30;30]	2	1		
Any Myalgia, D2 [N=30;29]	5	3		
Any Myalgia, Across [N=30;30]	7	4		
Grade 3 Myalgia, D1 [N=30;30]	1	0		

Grade 3 Myalgia, D2 [N=30;29]	0	1		
Grade 3 Myalgia, Across [N=30;30]	1	1		
Related Myalgia, D1 [N=30;30]	2	1		
Related Myalgia, D2 [N=30;29]	5	3		
Related Myalgia, Across [N=30;30]	7	4		
Any Shivering, D1 [N=30;30]	3	3		
Any Shivering, D2 [N=30;29]	6	6		
Any Shivering, Across [N=30;30]	8	7		
Grade 3 Shivering, D1 [N=30;30]	0	1		
Grade 3 Shivering, D2 [N=30;29]	0	0		
Grade 3 Shivering, Across [N=30;30]	0	1		
Related Shivering, D1 [N=30;30]	3	3		
Related Shivering, D2 [N=30;29]	6	6		
Related Shivering, Across [N=30;30]	8	7		

## Statistical analyses

No statistical analyses for this end point

### Primary: Number of days with local symptoms

End point title	Number of days with local symptoms <sup>[7]</sup>
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End point description:

End point type	Primary
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End point timeframe:

During the 7 day (Days 0-6) post vaccination, after each dose

Notes:

[7] - 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 primary endpoint was descriptive, no statistical analyses were conducted.

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	30		
Units: Days				
arithmetic mean (inter-quartile range (Q1-Q3))				
Days with arm movement, D1	3.9 (2 to 7)	3 (2 to 3)		
Days with pain, D1	3.3 (2 to 4)	2.7 (2 to 3)		
Days with injection site pruritus, D1	5.2 (2 to 7)	2.2 (1 to 3)		
Days with redness, D1	6.5 (4 to 8)	2.6 (2 to 3)		
Days with swelling, D1	5 (3 to 6)	3 (2 to 3)		
Days with arm movement, D2	2.9 (2 to 3)	2.2 (2 to 3)		
Days with pain, D2	3.4 (2 to 4)	2.3 (1 to 3)		
Days with injection site pruritus, D2	4.9 (3 to 5)	1.9 (1.5 to 2)		
Days with redness, D2	5.9 (3 to 6)	3.7 (3 to 4)		
Days with swelling, D2	4.3 (3 to 6)	2.8 (2 to 4)		

## Statistical analyses

No statistical analyses for this end point

### Primary: Number of days with general symptoms

End point title	Number of days with general symptoms <sup>[8]</sup>
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End point description:

End point type	Primary
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End point timeframe:

During the 7 day (Days 0-6) post vaccination

Notes:

[8] - 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 primary endpoint was descriptive, no statistical analyses were conducted.

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	30		
Units: Days				
arithmetic mean (inter-quartile range (Q1-Q3))				
Days with fatigue, D1	2.3 (1 to 3)	2 (1 to 2)		
Days with fever, D1	1.3 (1 to 2)	1 (1 to 1)		
Days with gastrointestinal symptoms, D1	2 (1 to 3)	2 (2 to 2)		
Days with headache, D1	1.8 (1 to 2)	1.4 (1 to 2)		
Days with myalgia, D1	6.5 (3 to 10)	2 (2 to 2)		
Days with Shivering, D1	1.3 (1 to 2)	1.3 (1 to 2)		
Days with fatigue, D2	2 (1 to 2)	1.3 (1 to 2)		
Days with fever, D2	1 (1 to 1)	1 (1 to 1)		
Days with gastrointestinal symptoms, D2	3.6 (2 to 5)	1.3 (1 to 2)		
Days with headache, D2	2 (1 to 2)	1.3 (1 to 2)		
Days with myalgia, D2	2 (1 to 2)	1.3 (1 to 2)		
Days with Shivering, D2	2.2 (1 to 2.2)	1 (1 to 1)		

## Statistical analyses

No statistical analyses for this end point

### Primary: Number of subjects with pIMDs

End point title	Number of subjects with pIMDs <sup>[9]</sup>
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End point description:

End point type	Primary
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End point timeframe:

Up to 30 days post vaccination period

Notes:

[9] - 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 primary endpoint was descriptive, no statistical analyses were conducted.

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	30		
Units: Subjects				
Any pIMDs	0	0		

## Statistical analyses

No statistical analyses for this end point

### Primary: Number of subjects with unsolicited adverse events (AEs)

End point title	Number of subjects with unsolicited adverse events (AEs) <sup>[10]</sup>
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End point description:

End point type	Primary
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End point timeframe:

Within 30 days (Days 0-29) post vaccination period

Notes:

[10] - 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 primary endpoint was descriptive, no statistical analyses were conducted.

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	30		
Units: Subjects				
Any AEs	9	6		
Grade 3 AEs	1	0		
Related AEs	1	1		

## Statistical analyses

No statistical analyses for this end point

### Primary: Number of subjects with serious adverse events (SAEs)

End point title	Number of subjects with serious adverse events (SAEs) <sup>[11]</sup>
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End point description:

End point type	Primary
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End point timeframe:

Up to 30 days post vaccination period

Notes:

[11] - 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 primary endpoint was descriptive, no statistical analyses were conducted.

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	30		
Units: Subjects				
Any SAEs	1	0		

## Statistical analyses

No statistical analyses for this end point

## Secondary: Number of subjects with anti Glicoprotein E (anti-E) antibody concentrations $\geq 97$ mIU/mL

End point title	Number of subjects with anti Glicoprotein E (anti-E) antibody concentrations $\geq 97$ mIU/mL
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End point description:

End point type	Secondary
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End point timeframe:

At Month 14

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	28		
Units: Subjects				
Anti-gE, M14	30	28		

## Statistical analyses

No statistical analyses for this end point

## Secondary: Anti-gE antibody concentrations

End point title	Anti-gE antibody concentrations
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End point description:

End point type	Secondary
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End point timeframe:

At Month 14

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	28		
Units: mIU/mL				
geometric mean (confidence interval 95%)				
Anti-gE, M14	15250.9 (12464 to 18660.9)	13870.2 (10184.2 to 18890.3)		

### Statistical analyses

No statistical analyses for this end point

### Secondary: Number of subjects with vaccine response for anti-gE antibody concentrations

End point title	Number of subjects with vaccine response for anti-gE antibody concentrations
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End point description:

End point type	Secondary
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End point timeframe:

Twelve Months after Dose 2 (M14).

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	28		
Units: Subjects				
Anti-gE, M14	25	25		

### Statistical analyses

No statistical analyses for this end point

### Secondary: Number of subjects with pIMDs



End point title	Number of subjects with pIMDs
End point description:	
End point type	Secondary
End point timeframe:	
Up to Month 14 post vaccination period	

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	30		
Units: Subjects				
Any pIMDS	0	0		

### Statistical analyses

No statistical analyses for this end point

### Secondary: Number of subjects with serious adverse events (SAEs)

End point title	Number of subjects with serious adverse events (SAEs)
End point description:	
End point type	Secondary
End point timeframe:	
Up to Month 14 post vaccination period	

End point values	SC HZ/su Group	IM HZ/su Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	30	30		
Units: Subjects				
Any SAEs	2	1		

### 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 post-vaccination period.

Unsolicited AEs during the 30-day post-vaccination period.

SAEs up to Month 14 post vaccination.

Adverse event reporting additional description:

No unsolicited AEs with a frequency over 5% were reported.

Assessment type	Non-systematic
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### Dictionary used

Dictionary name	MedDRA
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Dictionary version	18.0
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### Reporting groups

Reporting group title	SC HZ/su Group
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Reporting group description: -

Reporting group title	IM HZ/su Group
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Reporting group description: -

Serious adverse events	SC HZ/su Group	IM HZ/su Group	
Total subjects affected by serious adverse events			
subjects affected / exposed	2 / 30 (6.67%)	1 / 30 (3.33%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events			
Injury, poisoning and procedural complications			
Spinal compression fracture			
subjects affected / exposed	0 / 30 (0.00%)	1 / 30 (3.33%)	
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			
Chronic obstructive pulmonary disease			
subjects affected / exposed	1 / 30 (3.33%)	0 / 30 (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			
Mallet finger			

subjects affected / exposed	1 / 30 (3.33%)	0 / 30 (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 %

<b>Non-serious adverse events</b>	SC HZ/su Group	IM HZ/su Group	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	28 / 30 (93.33%)	27 / 30 (90.00%)	
General disorders and administration site conditions			
Arm movement			
subjects affected / exposed	18 / 30 (60.00%)	12 / 30 (40.00%)	
occurrences (all)	18	12	
Injection site pruritus			
alternative assessment type: Systematic			
subjects affected / exposed	21 / 30 (70.00%)	10 / 30 (33.33%)	
occurrences (all)	21	10	
Pain			
alternative assessment type: Systematic			
subjects affected / exposed	28 / 30 (93.33%)	27 / 30 (90.00%)	
occurrences (all)	28	27	
Redness			
alternative assessment type: Systematic			
subjects affected / exposed	26 / 30 (86.67%)	15 / 30 (50.00%)	
occurrences (all)	26	15	
Swelling			
alternative assessment type: Systematic			
subjects affected / exposed	24 / 30 (80.00%)	12 / 30 (40.00%)	
occurrences (all)	24	12	
Fatigue			
alternative assessment type: Systematic			
subjects affected / exposed	21 / 30 (70.00%)	16 / 30 (53.33%)	
occurrences (all)	21	16	
Fever/(Axillary)			
alternative assessment type:			

Systematic			
subjects affected / exposed	6 / 30 (20.00%)	7 / 30 (23.33%)	
occurrences (all)	6	7	
Gastrointestinal symptoms			
alternative assessment type: Systematic			
subjects affected / exposed	7 / 30 (23.33%)	5 / 30 (16.67%)	
occurrences (all)	7	5	
Headache			
alternative assessment type: Systematic			
subjects affected / exposed	17 / 30 (56.67%)	13 / 30 (43.33%)	
occurrences (all)	17	13	
Myalgia (muscle aches)			
alternative assessment type: Systematic			
subjects affected / exposed	7 / 30 (23.33%)	4 / 30 (13.33%)	
occurrences (all)	7	4	
Shivering			
alternative assessment type: Systematic			
subjects affected / exposed	8 / 30 (26.67%)	7 / 30 (23.33%)	
occurrences (all)	8	7	

## More information

### Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
19 June 2014	Prior to 18 May 2014, the anti-gE ELISA cut-off was 18 mIU/mL. Background signal has been measured with the anti-gE ELISA on samples from Varicella Zoster Virus (VZV) naïve paediatric subjects. This observation of background signal on VZV naïve samples was not part of the original validation of the assay and establishment of the assay cut-off. Background signal measured with the anti-gE ELISA has no impact on Zoster project clinical conclusions as the vast majority of the samples (at all timepoints) have high titers well above the unspecific response level measured on VZV naïve samples from Measles, Mumps, Rubella and Varicella (MMRV) studies and Zoster vaccine responses are very robust. However this finding triggered re-evaluation of the assay cut-off. Based on complementary validation experiments performed in line with Clinical and Laboratory Standards Institute (CLSI) guidelines and taking into account internal company guidelines the technical and seropositivity cut-off has recently been set at 97 mIU/mL. (Section 5.7.3, Table 7, and Appendix A).

Notes:

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### Interruptions (globally)

Were there any global interruptions to the trial? No

### Limitations and caveats

None reported