# Clinical trial results:
# A Phase 2, Non-Randomized, controlled, Open-Label, Parallel-Group, Extension Study to Evaluate the Immunogenicity and Safety of the Second Dose of GBS Trivalent Vaccine in Healthy Non-pregnant Subjects.

## Summary

| | |
|---|---|
| EudraCT number | 2015-003094-15 |
| Trial protocol | BE |
| Global end of trial date | 02 November 2016 |

**Results information**

| | |
|---|---|
| Result version number | v2 |
| This version publication date | 10 October 2018 |
| First version publication date | 15 November 2017 |
| Version creation reason | • New data added to full data set<br>Serotypes Ib and III immuno results have been added. |

## Trial information

**Trial identification**

| | |
|---|---|
| Sponsor protocol code | 205421 |

**Additional study identifiers**

| | |
|---|---|
| ISRCTN number | - |
| ClinicalTrials.gov id (NCT number) | NCT02690181 |
| WHO universal trial number (UTN) | - |

Notes:

**Sponsors**

| | |
|---|---|
| Sponsor organisation name | GlaxoSmithKline Biologicals S.A |
| Sponsor organisation address | Rue de l'Institut 89, Rixensart, Belgium, B-1330 |
| Public contact | Clinical Trials Call Center, GlaxoSmithKline Biologicals, 044 2089-904466, GSKClinicalSupportHD@gsk.com |
| Scientific contact | Clinical Trials Call Center, GlaxoSmithKline Biologicals, 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 | 25 May 2018 |
| Is this the analysis of the primary completion data? | Yes |
| Primary completion date | 02 November 2016 |
| Global end of trial reached? | Yes |
| Global end of trial date | 02 November 2016 |
| Was the trial ended prematurely? | No |

Notes:

## General information about the trial

Main objective of the trial:

To evaluate the immunogenicity of a second dose of GBS Trivalent Vaccine (without adjuvant) administered approximately 4-6 years after the initial GBS vaccination, measured by ELISA.

To assess the safety and tolerability of a second dose of GBS Trivalent Vaccine (without adjuvant) administered approximately 4-6 years after the initial dose.

Protection of trial subjects:

This clinical study was designed, implemented and reported in accordance with the ICH Harmonized Tripartite Guidelines for Good Clinical Practice (GCP), with applicable local regulations, including the European Directive 2001/20/EC, the US CFR Title 21, and Japanese Ministry of Health, Labor, and Welfare, GSK codes on the protection of human rights, and with the ethical principles laid down in the Declaration of Helsinki (European Council 2001, US Code of Federal Regulations, ICH 1997).

Background therapy: -

Evidence for comparator: -

| | |
|---|---|
| Actual start date of recruitment | 29 March 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 | Belgium: 80 |
| Worldwide total number of subjects | 80 |
| EEA total number of subjects | 80 |

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) | 80 |

| | |
|---|---|
| From 65 to 84 years | 0 |
| 85 years and over | 0 |

## Subject disposition

### Recruitment

Recruitment details:

Subjects were recruited from 1 site in Belgium.

### Pre-assignment

Screening details:

All enrolled subjects completed the study.

### Period 1

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

### Arms

| | |
|---|---|
| Are arms mutually exclusive? | Yes |
| **Arm title** | GBS NoAdj/GBS NoAdj Group |

Arm description:

Subjects who had received unadjuvanted GBS Trivalent Vaccine in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181).

| | |
|---|---|
| Arm type | Experimental |
| Investigational medicinal product name | Group B Streptococcus Trivalent Glycoconjugate Vaccine |
| Investigational medicinal product code | |
| Other name | GBS Trivalent Vaccine |
| Pharmaceutical forms | Suspension for injection |
| Routes of administration | Intramuscular use |

Dosage and administration details:

0.5 mL delivered by the IM route, preferably the deltoid muscle in the non-dominant arm

| | |
|---|---|
| **Arm title** | GBS Alum/GBS NoAdj Group |

Arm description:

Subjects who had received GBS Trivalent Vaccine with alum adjuvant in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181).

| | |
|---|---|
| Arm type | Experimental |
| Investigational medicinal product name | Group B Streptococcus Trivalent Glycoconjugate Vaccine |
| Investigational medicinal product code | |
| Other name | GBS Trivalent Vaccine |
| Pharmaceutical forms | Suspension for injection |
| Routes of administration | Intramuscular use |

Dosage and administration details:

0.5 mL delivered by the IM route, preferably the deltoid muscle in the non-dominant arm

| | |
|---|---|
| **Arm title** | GBS MF59 Half/GBS NoAdj Group |

Arm description:

Subjects who had received GBS Trivalent Vaccine with half dose of MF59 in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181).

| | |
|---|---|
| Arm type | Experimental |

| | |
|---|---|
| Investigational medicinal product name | Group B Streptococcus Trivalent Glycoconjugate Vaccine |
| Investigational medicinal product code | |
| Other name | GBS Trivalent Vaccine |
| Pharmaceutical forms | Suspension for injection |
| Routes of administration | Intramuscular use |

Dosage and administration details:

0.5 mL delivered by the IM route, preferably the deltoid muscle in the non-dominant arm

| **Arm title** | GBS MF59 Full/GBS NoAdj Group |
|---|---|

Arm description:

Subjects who had received GBS Trivalent Vaccine with full dose of MF59 in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181).

| | |
|---|---|
| Arm type | Experimental |
| Investigational medicinal product name | Group B Streptococcus Trivalent Glycoconjugate Vaccine |
| Investigational medicinal product code | |
| Other name | GBS Trivalent Vaccine |
| Pharmaceutical forms | Suspension for injection |
| Routes of administration | Intramuscular use |

Dosage and administration details:

0.5 mL delivered by the IM route, preferably the deltoid muscle in the non-dominant arm

| **Arm title** | Placebo/GBS NoAdj Group |
|---|---|

Arm description:

Subjects who had received placebo in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181).

| | |
|---|---|
| Arm type | Experimental |
| Investigational medicinal product name | Group B Streptococcus Trivalent Glycoconjugate Vaccine |
| Investigational medicinal product code | |
| Other name | GBS Trivalent Vaccine |
| Pharmaceutical forms | Suspension for injection |
| Routes of administration | Intramuscular use |

Dosage and administration details:

0.5 mL delivered by the IM route, preferably the deltoid muscle in the non-dominant arm

| **Arm title** | Naive/GBS NoAdj Group |
|---|---|

Arm description:

Healthy non-pregnant female subjects aged 22 through 46 years inclusive on the day of informed consent who had not received any GBS vaccine in the past and who received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181).

| | |
|---|---|
| Arm type | Experimental |
| Investigational medicinal product name | Group B Streptococcus Trivalent Glycoconjugate Vaccine |
| Investigational medicinal product code | |
| Other name | GBS Trivalent Vaccine |
| Pharmaceutical forms | Suspension for injection |
| Routes of administration | Intramuscular use |

Dosage and administration details:

0.5 mL delivered by the IM route, preferably the deltoid muscle in the non-dominant arm

| **Number of subjects in period 1** | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group |
|---|---|---|---|
| Started | 14 | 14 | 15 |
| Completed | 14 | 14 | 15 |

| **Number of subjects in period 1** | GBS MF59 Full/GBS NoAdj Group | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group |
|---|---|---|---|
| Started | 10 | 6 | 21 |
| Completed | 10 | 6 | 21 |

## Baseline characteristics

| Reporting groups | |
|---|---|
| Reporting group title | GBS NoAdj/GBS NoAdj Group |
| Reporting group description: | |
| Subjects who had received unadjuvanted GBS Trivalent Vaccine in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181). | |
| Reporting group title | GBS Alum/GBS NoAdj Group |
| Reporting group description: | |
| Subjects who had received GBS Trivalent Vaccine with alum adjuvant in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181). | |
| Reporting group title | GBS MF59 Half/GBS NoAdj Group |
| Reporting group description: | |
| Subjects who had received GBS Trivalent Vaccine with half dose of MF59 in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181). | |
| Reporting group title | GBS MF59 Full/GBS NoAdj Group |
| Reporting group description: | |
| Subjects who had received GBS Trivalent Vaccine with full dose of MF59 in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181). | |
| Reporting group title | Placebo/GBS NoAdj Group |
| Reporting group description: | |
| Subjects who had received placebo in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181). | |
| Reporting group title | Naive/GBS NoAdj Group |
| Reporting group description: | |
| Healthy non-pregnant female subjects aged 22 through 46 years inclusive on the day of informed consent who had not received any GBS vaccine in the past and who received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181). | |

| Reporting group values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group |
|---|---|---|---|
| Number of subjects | 14 | 14 | 15 |
| Age categorical<br>Units: Subjects | | | |
| In utero | 0 | 0 | 0 |
| Preterm newborn infants (gestational age < 37 wks) | 0 | 0 | 0 |
| Newborns (0-27 days) | 0 | 0 | 0 |
| Infants and toddlers (28 days-23 months) | 0 | 0 | 0 |
| Children (2-11 years) | 0 | 0 | 0 |
| Adolescents (12-17 years) | 0 | 0 | 0 |
| Adults (18-64 years) | 14 | 14 | 15 |
| From 65-84 years | 0 | 0 | 0 |
| 85 years and over | 0 | 0 | 0 |
| Age continuous<br>Units: years | | | |
| arithmetic mean | 32.4 | 31.6 | 28.9 |
| standard deviation | ± 6.91 | ± 6.06 | ± 4.68 |

| | | | |
|---|---|---|---|
| Gender categorical<br><br>Units: Subjects | | | |
| Female | 14 | 14 | 15 |
| Male | 0 | 0 | 0 |
| Race/Ethnicity, Customized<br>Units: Subjects | | | |
| White | 14 | 14 | 15 |

| **Reporting group values** | GBS MF59 Full/GBS NoAdj Group | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group |
|---|---|---|---|
| Number of subjects | 10 | 6 | 21 |
| Age categorical<br>Units: Subjects | | | |
| In utero | 0 | 0 | 0 |
| Preterm newborn infants (gestational age < 37 wks) | 0 | 0 | 0 |
| Newborns (0-27 days) | 0 | 0 | 0 |
| Infants and toddlers (28 days-23 months) | 0 | 0 | 0 |
| Children (2-11 years) | 0 | 0 | 0 |
| Adolescents (12-17 years) | 0 | 0 | 0 |
| Adults (18-64 years) | 10 | 6 | 21 |
| From 65-84 years | 0 | 0 | 0 |
| 85 years and over | 0 | 0 | 0 |
| Age continuous<br>Units: years | | | |
| arithmetic mean | 29.7 | 28.3 | 29.2 |
| standard deviation | ± 6.22 | ± 5.39 | ± 6.96 |
| Gender categorical<br><br>Units: Subjects | | | |
| Female | 10 | 6 | 21 |
| Male | 0 | 0 | 0 |
| Race/Ethnicity, Customized<br>Units: Subjects | | | |
| White | 10 | 6 | 21 |

| **Reporting group values** | Total | | |
|---|---|---|---|
| Number of subjects | 80 | | |
| Age categorical<br>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) | 80 | | |
| From 65-84 years | 0 | | |
| 85 years and over | 0 | | |

| | | | |
|---|---|---|---|
| Age continuous<br>Units: years<br>arithmetic mean<br>standard deviation | -<br> | | |
| Gender categorical<br><br>Units: Subjects | | | |
| Female | 80 | | |
| Male | 0 | | |
| Race/Ethnicity, Customized<br>Units: Subjects | | | |
| White | 80 | | |

## End points

### End points reporting groups

| Reporting group title | GBS NoAdj/GBS NoAdj Group |
|---|---|
| Reporting group description: | |
| Subjects who had received unadjuvanted GBS Trivalent Vaccine in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181). | |
| Reporting group title | GBS Alum/GBS NoAdj Group |
| Reporting group description: | |
| Subjects who had received GBS Trivalent Vaccine with alum adjuvant in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181). | |
| Reporting group title | GBS MF59 Half/GBS NoAdj Group |
| Reporting group description: | |
| Subjects who had received GBS Trivalent Vaccine with half dose of MF59 in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181). | |
| Reporting group title | GBS MF59 Full/GBS NoAdj Group |
| Reporting group description: | |
| Subjects who had received GBS Trivalent Vaccine with full dose of MF59 in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181). | |
| Reporting group title | Placebo/GBS NoAdj Group |
| Reporting group description: | |
| Subjects who had received placebo in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181). | |
| Reporting group title | Naive/GBS NoAdj Group |
| Reporting group description: | |
| Healthy non-pregnant female subjects aged 22 through 46 years inclusive on the day of informed consent who had not received any GBS vaccine in the past and who received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181). | |

### Primary: Percentage of Subjects with ELISA Antibody Concentrations of GBS Serotype Ia above pre-specified thresholds - Day 61

| End point title | Percentage of Subjects with ELISA Antibody Concentrations of GBS Serotype Ia above pre-specified thresholds - Day 61[1] |
|---|---|
| End point description: | |
| Percentage of subjects who reach pre-defined sequential serotype-specific serum antibody levels for serotype Ia at Day 61 post-vaccination, as measured by Enzyme-linked immunosorbent Assay (ELISA). | |
| End point type | Primary |
| End point timeframe: | |
| At Day 61 | |

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 analysis of the primary endpoint was descriptive i.e. no statistical hypothesis test was performed.

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 13 | 14 | 15 | 10 |
| Units: Percentage of subjects | | | | |
| number (confidence interval 95%) | | | | |
| ≥ 0.1 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 0.2 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 0.5 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 1 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 2 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 3 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 93 (68.1 to 99.83) | 90 (55.5 to 99.75) |
| ≥ 5 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 93 (68.1 to 99.83) | 90 (55.5 to 99.75) |
| ≥ 8 µg/mL | 92 (64 to 99.81) | 100 (76.8 to 100) | 93 (68.1 to 99.83) | 90 (55.5 to 99.75) |

| End point values | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 5 | 20 | | |
| Units: Percentage of subjects | | | | |
| number (confidence interval 95%) | | | | |
| ≥ 0.1 µg/mL | 100 (47.8 to 100) | 100 (83.2 to 100) | | |
| ≥ 0.2 µg/mL | 100 (47.8 to 100) | 95 (75.1 to 99.87) | | |
| ≥ 0.5 µg/mL | 100 (47.8 to 100) | 90 (68.3 to 98.8) | | |
| ≥ 1 µg/mL | 80 (28.4 to 99.5) | 85 (62.1 to 96.8) | | |
| ≥ 2 µg/mL | 60 (14.7 to 94.7) | 65 (40.8 to 84.6) | | |
| ≥ 3 µg/mL | 60 (14.7 to 94.7) | 60 (36.1 to 80.9) | | |
| ≥ 5 µg/mL | 60 (14.7 to 94.7) | 60 (36.1 to 80.9) | | |
| ≥ 8 µg/mL | 60 (14.7 to 94.7) | 60 (36.1 to 80.9) | | |

### Statistical analyses

No statistical analyses for this end point

### Primary: Percentage of Subjects with Antibody Concentrations of GBS Serotype Ib above pre-specified thresholds - Day 61

| End point title | Percentage of Subjects with Antibody Concentrations of GBS Serotype Ib above pre-specified thresholds - Day 61[2] |
|---|---|

End point description:

Percentage of subjects who reach pre-defined sequential serotype-specific serum antibody levels for serotype Ib at day 61 post-vaccination. As the singleton ELISA was no longer in use at the time of serotypes Ib and III testing, results for both serotypes were tested using multiplex immunoassay.

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

End point timeframe:

At Day 61

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 analysis of the primary endpoint was descriptive i.e. no statistical hypothesis test was performed.

| **End point values** | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 13 | 14 | 15 | 10 |
| Units: Percentage of subjects | | | | |
| number (confidence interval 95%) | | | | |
| ≥ 0.1 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 0.2 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 0.5 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 1 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 2 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 3 µg/mL | 100 (75.3 to 100) | 93 (66.1 to 99.82) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 5 µg/mL | 85 (54.6 to 98.1) | 93 (66.1 to 99.82) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 8 µg/mL | 85 (54.6 to 98.1) | 93 (66.1 to 99.82) | 93 (68.1 to 99.83) | 100 (69.2 to 100) |

| **End point values** | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 5 | 20 | | |
| Units: Percentage of subjects | | | | |
| number (confidence interval 95%) | | | | |
| ≥ 0.1 µg/mL | 100 (47.8 to 100) | 85 (62.1 to 96.8) | | |
| ≥ 0.2 µg/mL | 100 (47.8 to 100) | 80 (56.3 to 94.3) | | |
| ≥ 0.5 µg/mL | 80 (28.4 to 99.5) | 70 (45.7 to 88.1) | | |
| ≥ 1 µg/mL | 60 (14.7 to 94.7) | 65 (40.8 to 84.6) | | |
| ≥ 2 µg/mL | 60 (14.7 to 94.7) | 50 (27.2 to 72.8) | | |

| | | | | |
|---|---|---|---|---|
| ≥ 3 µg/mL | 60 (14.7 to 94.7) | 50 (27.2 to 72.8) | | |
| ≥ 5 µg/mL | 60 (14.7 to 94.7) | 45 (23.1 to 68.5) | | |
| ≥ 8 µg/mL | 20 (0.5 to 71.6) | 40 (19.1 to 63.9) | | |

## Statistical analyses

No statistical analyses for this end point

## Primary: Percentage of All Subjects with Antibody Concentrations of GBS Serotype III above pre-specified thresholds - Day 61

| End point title | Percentage of All Subjects with Antibody Concentrations of GBS Serotype III above pre-specified thresholds - Day 61[3] |
|---|---|

End point description:

Percentage of subjects who reach pre-defined sequential serotype-specific serum antibody levels for serotype III at day 61 post-vaccination. As the singleton ELISA was no longer in use at the time of serotypes Ib and III testing, results for both serotypes were tested using multiplex immunoassay.

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

End point timeframe:

At Day 61

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 analysis of the primary endpoint was descriptive i.e. no statistical hypothesis test was performed.

| **End point values** | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 13 | 13 | 15 | 10 |
| Units: Percentage of subjects | | | | |
| number (confidence interval 95%) | | | | |
| ≥ 0.1 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 0.2 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 0.5 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 1 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 2 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 3 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 5 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 8 µg/mL | 100 (75.3 to 100) | 92 (64 to 99.81) | 100 (78.2 to 100) | 100 (69.2 to 100) |

| End point values | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 5 | 20 | | |
| Units: Percentage of subjects | | | | |
| number (confidence interval 95%) | | | | |
| ≥ 0.1 µg/mL | 100 (47.8 to 100) | 100 (83.2 to 100) | | |
| ≥ 0.2 µg/mL | 100 (47.8 to 100) | 80 (56.3 to 94.3) | | |
| ≥ 0.5 µg/mL | 80 (28.4 to 99.5) | 80 (56.3 to 94.3) | | |
| ≥ 1 µg/mL | 40 (5.3 to 85.3) | 75 (50.9 to 91.3) | | |
| ≥ 2 µg/mL | 40 (5.3 to 85.3) | 65 (40.8 to 84.6) | | |
| ≥ 3 µg/mL | 40 (5.3 to 85.3) | 65 (40.8 to 84.6) | | |
| ≥ 5 µg/mL | 40 (5.3 to 85.3) | 50 (27.2 to 72.8) | | |
| ≥ 8 µg/mL | 40 (5.3 to 85.3) | 50 (27.2 to 72.8) | | |

### Statistical analyses

No statistical analyses for this end point

### Primary: Numbers of subjects with solicited local and systemic Adverse Events (AEs)

| End point title | Numbers of subjects with solicited local and systemic Adverse Events (AEs)[4] |
|---|---|

End point description:

Threshold for Erythema, Swelling and Induration: None (0 mm), Any (>= 1 mm).

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

End point timeframe:

Day 1 to Day 7

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 analysis of the primary endpoint was descriptive i.e. no statistical hypothesis test was performed.

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 14 | 14 | 15 | 10 |
| Units: Participants | | | | |
| Any Local (N=14,14,15,10,5,21) | 11 | 12 | 10 | 6 |
| Pain (N=14,14,15,10,5,21) | 10 | 9 | 9 | 6 |
| Erythema (N=14,14,15,10,5,21) | 1 | 4 | 2 | 1 |
| Swelling (N=14,14,15,10,5,20) | 0 | 2 | 4 | 1 |
| Warmth (N=14,14,15,10,5,21) | 1 | 4 | 4 | 2 |
| Induration (N=14,14,15,10,5,20) | 2 | 2 | 5 | 2 |

| | | | | |
|---|---|---|---|---|
| Ecchymosis (N=14,14,15,10,5,20) | 0 | 0 | 1 | 0 |
| Any Systemic (N=14,14,15,10,5,21) | 5 | 11 | 7 | 5 |
| Chills (N=14,14,15,10,5,21) | 0 | 0 | 1 | 1 |
| Nausea (N=14,14,15,10,5,21) | 0 | 2 | 2 | 0 |
| Malaise (N=14,14,15,10,5,21) | 0 | 2 | 2 | 2 |
| Generalized Myalgia (N=14,14,15,10,5,21) | 2 | 2 | 2 | 1 |
| Generalized Arthralgia (N=14,14,15,10,5,21) | 0 | 1 | 2 | 0 |
| Headache (N=14,14,15,10,5,21) | 4 | 4 | 5 | 2 |
| Fatigue (N=14,14,15,10,5,21) | 3 | 10 | 4 | 4 |
| Body Rash (N=14,14,15,10,5,21) | 0 | 1 | 0 | 0 |
| Fever (≥ 38°C) (N=14,14,15,10,5,21) | 0 | 0 | 0 | 0 |

| **End point values** | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 5 | 21 | | |
| Units: Participants | | | | |
| Any Local (N=14,14,15,10,5,21) | 3 | 11 | | |
| Pain (N=14,14,15,10,5,21) | 3 | 11 | | |
| Erythema (N=14,14,15,10,5,21) | 1 | 3 | | |
| Swelling (N=14,14,15,10,5,20) | 1 | 0 | | |
| Warmth (N=14,14,15,10,5,21) | 2 | 2 | | |
| Induration (N=14,14,15,10,5,20) | 1 | 0 | | |
| Ecchymosis (N=14,14,15,10,5,20) | 0 | 1 | | |
| Any Systemic (N=14,14,15,10,5,21) | 2 | 5 | | |
| Chills (N=14,14,15,10,5,21) | 1 | 0 | | |
| Nausea (N=14,14,15,10,5,21) | 0 | 1 | | |
| Malaise (N=14,14,15,10,5,21) | 1 | 1 | | |
| Generalized Myalgia (N=14,14,15,10,5,21) | 1 | 1 | | |
| Generalized Arthralgia (N=14,14,15,10,5,21) | 0 | 0 | | |
| Headache (N=14,14,15,10,5,21) | 2 | 4 | | |
| Fatigue (N=14,14,15,10,5,21) | 1 | 2 | | |
| Body Rash (N=14,14,15,10,5,21) | 0 | 0 | | |
| Fever (≥ 38°C) (N=14,14,15,10,5,21) | 0 | 0 | | |

## Statistical analyses

No statistical analyses for this end point

## Primary: Number of subjects with any unsolicited Adverse Events (AEs)

| End point title | Number of subjects with any unsolicited Adverse Events |
|---|---|

End point description:

The number of subjects with any unsolicited AEs from the day of vaccination in study V98_06E1 to Day 31. An unsolicited adverse event is an adverse event that was not solicited using a Subject Diary and

that was spontaneously communicated by a subject who has signed the informed consent. Potential unsolicited AEs may be medically attended (defined as symptoms or illnesses requiring hospitalization, or emergency room visit, or visit to/by a health care provider), or were of concern to the subject. Possibly Related AE definition: the administration of the investigational vaccine and AE are considered reasonably related in time and the AE could be explained by exposure to the investigational vaccine or by other causes. Probably Related AE definition: exposure to the investigational vaccine and AE are reasonably related in time and no alternative explanation has been identified.

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

End point timeframe:

Day 1 to Day 31

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 analysis of the primary endpoint was descriptive i.e. no statistical hypothesis test was performed.

| **End point values** | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 14 | 14 | 15 | 10 |
| Units: Participants | | | | |
| Any AE | 4 | 5 | 4 | 4 |
| At least possibly or probably related AEs | 1 | 1 | 0 | 0 |

| **End point values** | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 6 | 21 | | |
| Units: Participants | | | | |
| Any AE | 4 | 9 | | |
| At least possibly or probably related AEs | 1 | 1 | | |

### Statistical analyses

No statistical analyses for this end point

### Primary: Number of subjects with Serious Adverse Events (SAEs), medically attended AEs, and AEs leading to study withdrawal

| End point title | Number of subjects with Serious Adverse Events (SAEs), medically attended AEs, and AEs leading to study withdrawal[6] |
|---|---|

End point description:

An SAE is defined as any untoward medical occurrence that at any dose results in one or more of the following: Death; life-threatening; that does not refer to an event which hypothetically might have caused death if it were more severe; required or prolonged hospitalization; persistent or significant disability/incapacity; congenital anomaly/or birth defect; any important and significant medical event that may not be immediately life-threatening or resulting in death or hospitalization but, based upon appropriate medical judgement, may jeopardize the subject or may require intervention to prevent one of the other outcomes listed above. "Medically attended adverse event" is defined as an adverse event that leads to a visit to a healthcare provider and "AEs leading to withdrawal" are defined as adverse events leading to study or vaccine withdrawal.

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

End point timeframe:

Day 1 to Day 181

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 analysis of the primary endpoint was descriptive i.e. no statistical hypothesis test was performed.

| **End point values** | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 14 | 14 | 15 | 10 |
| Units: Participants | | | | |
| SAEs | 0 | 0 | 0 | 0 |
| Medically attended AEs | 5 | 5 | 7 | 0 |
| AEs leading to withdrawal | 0 | 0 | 0 | 0 |

| **End point values** | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 6 | 21 | | |
| Units: Participants | | | | |
| SAEs | 0 | 0 | | |
| Medically attended AEs | 2 | 5 | | |
| AEs leading to withdrawal | 0 | 0 | | |

## Statistical analyses

No statistical analyses for this end point

## Secondary: Percentage of Subjects with ELISA Antibody Concentrations of GBS Serotype Ia above pre-specified thresholds - Day 31

| End point title | Percentage of Subjects with ELISA Antibody Concentrations of GBS Serotype Ia above pre-specified thresholds - Day 31 |
|---|---|

End point description:

Percentage of subjects who reach pre-defined sequential serotype-specific serum antibody levels for serotype Ia at Day 31 post-vaccination, as measured by ELISA.

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

End point timeframe:

At Day 31

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 13 | 14 | 15 | 10 |
| Units: Percentage of subjects | | | | |
| number (confidence interval 95%) | | | | |
| ≥ 0.1 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 0.2 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 0.5 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 1 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 2 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 3 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 5 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 93 (68.1 to 99.83) | 90 (55.5 to 99.75) |
| ≥ 8 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 93 (68.1 to 99.83) | 90 (55.5 to 99.75) |

| End point values | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 6 | 20 | | |
| Units: Percentage of subjects | | | | |
| number (confidence interval 95%) | | | | |
| ≥ 0.1 µg/mL | 100 (54.1 to 100) | 100 (83.2 to 100) | | |
| ≥ 0.2 µg/mL | 100 (54.1 to 100) | 85 (62.1 to 96.8) | | |
| ≥ 0.5 µg/mL | 100 (54.1 to 100) | 80 (56.3 to 94.3) | | |
| ≥ 1 µg/mL | 83 (35.9 to 99.58) | 75 (50.9 to 91.3) | | |
| ≥ 2 µg/mL | 67 (22.3 to 95.7) | 60 (36.1 to 80.9) | | |
| ≥ 3 µg/mL | 67 (22.3 to 95.7) | 60 (36.1 to 80.9) | | |
| ≥ 5 µg/mL | 67 (22.3 to 95.7) | 60 (36.1 to 80.9) | | |
| ≥ 8 µg/mL | 67 (22.3 to 95.7) | 60 (36.1 to 80.9) | | |

### Statistical analyses

No statistical analyses for this end point

## Secondary: Percentage of Subjects with Antibody Concentrations of GBS Serotype Ib above pre-specified thresholds - Day 31

| End point title | Percentage of Subjects with Antibody Concentrations of GBS Serotype Ib above pre-specified thresholds - Day 31 |
|---|---|

End point description:

Percentage of subjects who reach pre-defined sequential serotype-specific serum antibody levels for serotype Ib at day 31 post-vaccination. As the singleton ELISA was no longer in use at the time of serotypes Ib and III testing, results for both serotypes were tested using multiplex immunoassay.

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

End point timeframe:

At Day 31

| **End point values** | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 13 | 14 | 15 | 10 |
| Units: Percentage of subjects | | | | |
| number (confidence interval 95%) | | | | |
| ≥ 0.1 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 0.2 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 0.5 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 1 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 2 µg/mL | 100 (75.3 to 100) | 100 (76.8 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 3 µg/mL | 100 (75.3 to 100) | 93 (66.1 to 99.82) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 5 µg/mL | 92 (64 to 99.81) | 93 (66.1 to 99.82) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 8 µg/mL | 85 (54.6 to 98.1) | 93 (66.1 to 99.82) | 93 (68.1 to 99.83) | 100 (69.2 to 100) |

| **End point values** | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 6 | 20 | | |
| Units: Percentage of subjects | | | | |
| number (confidence interval 95%) | | | | |
| ≥ 0.1 µg/mL | 100 (54.1 to 100) | 75 (50.9 to 91.3) | | |
| ≥ 0.2 µg/mL | 100 (54.1 to 100) | 70 (45.7 to 88.1) | | |
| ≥ 0.5 µg/mL | 83 (35.9 to 99.58) | 60 (36.1 to 80.9) | | |
| ≥ 1 µg/mL | 83 (35.9 to 99.58) | 45 (23.1 to 68.5) | | |
| ≥ 2 µg/mL | 50 (11.8 to 88.2) | 45 (23.1 to 68.5) | | |
| ≥ 3 µg/mL | 50 (11.8 to 88.2) | 45 (23.1 to 68.5) | | |

| | | | | |
|---|---|---|---|---|
| ≥ 5 µg/mL | 50 (11.8 to 88.2) | 45 (23.1 to 68.5) | | |
| ≥ 8 µg/mL | 50 (11.8 to 88.2) | 45 (23.1 to 68.5) | | |

**Statistical analyses**

No statistical analyses for this end point

**Secondary: Percentage of Subjects with Antibody Concentrations of GBS Serotype III above pre-specified thresholds - Day 31**

| End point title | Percentage of Subjects with Antibody Concentrations of GBS Serotype III above pre-specified thresholds - Day 31 |
|---|---|

End point description:

Percentage of subjects who reach pre-defined sequential serotype-specific serum antibody levels for serotype III at day 31 post-vaccination. As the singleton ELISA was no longer in use at the time of serotypes Ib and III testing, results for both serotypes were tested using multiplex immunoassay.

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

End point timeframe:

At Day 31

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 13 | 13 | 15 | 10 |
| Units: Percentage of subjects | | | | |
| number (confidence interval 95%) | | | | |
| ≥ 0.1 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 0.2 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 0.5 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 1 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 2 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 3 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 5 µg/mL | 100 (75.3 to 100) | 100 (75.3 to 100) | 100 (78.2 to 100) | 100 (69.2 to 100) |
| ≥ 8 µg/mL | 100 (75.3 to 100) | 92 (64 to 99.81) | 100 (78.2 to 100) | 100 (69.2 to 100) |

| End point values | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 6 | 20 | | |

| Units: Percentage of subjects | | | | |
|---|---|---|---|---|
| number (confidence interval 95%) | | | | |
| ≥ 0.1 µg/mL | 100 (54.1 to 100) | 100 (83.2 to 100) | | |
| ≥ 0.2 µg/mL | 67 (22.3 to 95.7) | 75 (50.9 to 91.3) | | |
| ≥ 0.5 µg/mL | 67 (22.3 to 95.7) | 70 (45.7 to 88.1) | | |
| ≥ 1 µg/mL | 50 (11.8 to 88.2) | 65 (40.8 to 84.6) | | |
| ≥ 2 µg/mL | 50 (11.8 to 88.2) | 60 (36.1 to 80.9) | | |
| ≥ 3 µg/mL | 33 (4.3 to 77.7) | 55 (31.5 to 76.9) | | |
| ≥ 5 µg/mL | 33 (4.3 to 77.7) | 55 (31.5 to 76.9) | | |
| ≥ 8 µg/mL | 33 (4.3 to 77.7) | 50 (27.2 to 72.8) | | |

### Statistical analyses

No statistical analyses for this end point

## Secondary: Geometric Mean ELISA Antibody Concentrations of GBS Serotype Ia

| End point title | Geometric Mean ELISA Antibody Concentrations of GBS Serotype Ia |
|---|---|

End point description:

The Geometric Mean ELISA Antibody Concentrations of GBS Serotype Ia in All Subjects were estimated for at Day 1, Day 31 and Day 61.

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

End point timeframe:

At Day 1, Day 31 and Day 61

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 14 | 14 | 15 | 10 |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Serotype Ia-Day 1(V98_06E1), (N=14;14;15;10;6;20) | 9.32 (3.03 to 29) | 5.50 (1.79 to 17) | 3.44 (1.16 to 10) | 2.18 (0.58 to 8.24) |
| Serotype Ia-Day 31, (N=13;14;15;10;6;20) | 61.13 (23 to 165) | 81.61 (31 to 213) | 64.19 (25 to 162) | 57.54 (19 to 179) |
| Serotype Ia-Day 61, (N=13;14;15;10;5;20) | 51.53 (21 to 129) | 65.30 (27 to 158) | 44.69 (19 to 105) | 50.67 (18 to 145) |

| End point values | Placebo/GBS | Naive/GBS | | |
|---|---|---|---|---|

| | NoAdj Group | NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 6 | 20 | | |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Serotype Ia-Day 1(V98_06E1), (N=14;14;15;10;6;20) | 1.05 (0.19 to 5.86) | 0.32 (0.13 to 0.83) | | |
| Serotype Ia-Day 31, (N=13;14;15;10;6;20) | 19.25 (4.46 to 83) | 10.06 (4.52 to 22) | | |
| Serotype Ia-Day 61, (N=13;14;15;10;5;20) | 21.36 (4.85 to 94) | 10.02 (4.77 to 21) | | |

**Statistical analyses**

No statistical analyses for this end point

**Secondary: Geometric Mean Antibody Concentrations of GBS Serotype Ib**

| End point title | Geometric Mean Antibody Concentrations of GBS Serotype Ib |
|---|---|

End point description:

The Geometric Mean Antibody Concentrations of GBS Serotype Ib in All Subjects were estimated for at Day 1, Day 31 and Day 61. As the singleton ELISA was no longer in use at the time of serotypes Ib and III testing, results for both serotypes were tested using multiplex immunoassay.

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

End point timeframe:

At Day 1, Day 31 and Day 61

| **End point values** | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 14 | 14 | 15 | 10 |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Day 1, (N = 14; 14; 15, 10; 4; 20) | 0.19 (0.093 to 0.41) | 0.15 (0.073 to 0.32) | 0.10 (0.049 to 0.20) | 0.16 (0.068 to 0.39) |
| Day 31, (N = 13; 14; 15; 10; 6; 20) | 80.62 (28 to 232) | 74.96 (27 to 207) | 89.59 (33 to 241) | 85.9 (26 to 286) |
| Day 61, (N = 13; 14; 15; 10; 5; 20) | 56.32 (22 to 145) | 57.82 (23 to 143) | 59.13 (24 to 143) | 65.53 (22 to 192) |

| **End point values** | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 6 | 20 | | |
| Units: µg/mL | | | | |
| geometric mean (confidence interval | | | | |

| 95%) | | | | |
|---|---|---|---|---|
| Day 1, (N = 14; 14; 15, 10; 4; 20) | 0.14 (0.035 to 0.55) | 0.17 (0.093 to 0.32) | | |
| Day 31, (N = 13; 14; 15; 10; 6; 20) | 6.61 (0.99 to 44) | 3.55 (1.52 to 8.34) | | |
| Day 61, (N = 13; 14; 15; 10; 5; 20) | 5.51 (1.01 to 30) | 4.47 (2.09 to 9.58) | | |

## Statistical analyses

No statistical analyses for this end point

## Secondary: Geometric Mean Antibody Concentrations of GBS Serotype III

| End point title | Geometric Mean Antibody Concentrations of GBS Serotype III |
|---|---|

End point description:

The Geometric Mean Antibody Concentrations of GBS Serotype III in All Subjects were estimated for at Day 1, Day 31 and Day 61. As the singleton ELISA was no longer in use at the time of serotypes Ib and III testing, results for both serotypes were tested using multiplex immunoassay.

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

End point timeframe:

At Day 1, Day 31 and Day 61

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 14 | 13 | 15 | 10 |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Day 1, (N = 14; 13; 15; 10; 4; 20) | 0.41 (0.20 to 0.82) | 0.17 (0.085 to 0.36) | 0.25 (0.13 to 0.49) | 0.17 (0.076 to 0.39) |
| Day 31, (N = 13; 13; 15; 10; 6; 20) | 111.3 (42 to 294) | 104.55 (40 to 277) | 109.23 (44 to 269) | 216.39 (71 to 655) |
| Day 61, (N = 13; 13; 15; 10; 5; 20) | 91.3 (39 to 214) | 80.94 (34 to 190) | 81.71 (37 to 180) | 200.78 (76 to 531) |

| End point values | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 6 | 20 | | |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Day 1, (N = 14; 13; 15; 10; 4; 20) | 0.15 (0.040 to 0.54) | 0.31 (0.17 to 0.55) | | |
| Day 31, (N = 13; 13; 15; 10; 6; 20) | 2.66 (0.46 to 15) | 5.33 (2.43 to 12) | | |

| | | | | |
|---|---|---|---|---|
| Day 61, (N = 13; 13; 15; 10; 5; 20) | 2.67 (0.57 to 12) | 5.82 (2.92 to 12) | | |

### Statistical analyses

No statistical analyses for this end point

## Secondary: Geometric Mean ELISA Antibody Concentrations of GBS Serotype Ia in subjects with < LLQ

| End point title | Geometric Mean ELISA Antibody Concentrations of GBS Serotype Ia in subjects with < LLQ |
|---|---|

End point description:

The Geometric Mean ELISA Antibody Concentrations of GBS Serotype Ia in with subjects < LLQ were estimated for at Day 1, Day 31 and Day 61.

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

End point timeframe:

At Day 1, Day 31 and Day 61

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 7 | 10 | 9 | 7 |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Serotype Ia-Day 1 (V98_06E1), (N=7;10;9;7;4;15) | 1.36 (0.43 to 4.27) | 2.59 (0.99 to 6.75) | 0.81 (0.30 to 2.24) | 1.12 (0.36 to 3.52) |
| Serotype Ia-Day 31, (N=7;10;9;7;4;15) | 32.25 (8.59 to 121) | 62.54 (21 to 189) | 35.47 (11 to 114) | 46.11 (12 to 173) |
| Serotype Ia-Day 61, (N=7;10;9;7;3;15) | 26.33 (8.12 to 85) | 49.01 (18 to 131) | 24.89 (8.82 to 70) | 39.56 (12 to 128) |

| End point values | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 4 | 15 | | |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Serotype Ia-Day 1 (V98_06E1), (N=7;10;9;7;4;15) | 0.45 (0.099 to 2.05) | 0.16 (0.074 to 0.36) | | |
| Serotype Ia-Day 31, (N=7;10;9;7;4;15) | 6.34 (1.10 to 36) | 3.98 (1.61 to 9.84) | | |
| Serotype Ia-Day 61, (N=7;10;9;7;3;15) | 5.79 (0.96 to 35) | 4.25 (1.90 to 9.48) | | |

## Statistical analyses

No statistical analyses for this end point

## Secondary: Geometric Mean Antibody Concentrations of GBS Serotype Ib in subjects with < LLQ

| End point title | Geometric Mean Antibody Concentrations of GBS Serotype Ib in subjects with < LLQ |
|---|---|

End point description:

The Geometric Mean Antibody Concentrations of GBS Serotype Ib in subjects with < LLQ were estimated for at Day 1, Day 31 and Day 61. As the singleton ELISA was no longer in use at the time of serotypes Ib and III testing, results for both serotypes were tested using multiplex immunoassay.

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

End point timeframe:

At Day 1, Day 31 and Day 61

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 10 | 9 | 14 | 8 |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Day 1 | 0.078 (0.078 to 0.078) | 0.078 (0.078 to 0.078) | 0.078 (0.078 to 0.078) | 0.078 (0.078 to 0.078) |
| Day 31 | 60.78 (20 to 182) | 69.05 (22 to 220) | 53.01 (21 to 134) | 65.50 (19 to 224) |
| Day 61 | 40.59 (15 to 111) | 47.71 (16 to 138) | 34.12 (15 to 80) | 47.58 (15 to 147) |

| End point values | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 3 | 15 | | |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Day 1 | 0.078 (0.078 to 0.078) | 0.078 (0.078 to 0.078) | | |
| Day 31 | 1.47 (0.2 to 11) | 0.79 (0.32 to 1.95) | | |
| Day 61 | 1.32 (0.21 to 8.37) | 1.19 (0.52 to 2.71) | | |

## Statistical analyses

No statistical analyses for this end point

## Secondary: Geometric Mean Antibody Concentrations of GBS Serotype III in subjects with < LLQ

| End point title | Geometric Mean Antibody Concentrations of GBS Serotype III in subjects with < LLQ |
|---|---|

End point description:

The Geometric Mean Antibody Concentrations of GBS Serotype III in subjects with < LLQ were estimated for at Day 1, Day 31 and Day 61. As the singleton ELISA was no longer in use at the time of serotypes Ib and III testing, results for both serotypes were tested using multiplex immunoassay.

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

End point timeframe:

At Day 1, Day 31 and Day 61

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 10 | 12 | 11 | 9 |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Day 1 | 0.15 (0.15 to 0.15) | 0.15 (0.15 to 0.15) | 0.15 (0.15 to 0.15) | 0.15 (0.15 to 0.15) |
| Day 31 | 109.31 (40 to 301) | 77.97 (31 to 197) | 126.89 (48 to 333) | 188.63 (65 to 549) |
| Day 61 | 83.19 (33 to 208) | 60.01 (26 to 138) | 87.4 (37 to 209) | 169.45 (65 to 444) |

| End point values | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 4 | 15 | | |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Day 1 | 0.15 (0.15 to 0.15) | 0.15 (0.15 to 0.15) | | |
| Day 31 | 1.9 (0.38 to 9.44) | 2.12 (0.93 to 4.84) | | |
| Day 61 | 1.92 (0.45 to 8.16) | 2.52 (1.2 to 5.32) | | |

### Statistical analyses

No statistical analyses for this end point

## Secondary: Geometric Mean ELISA Antibody Concentrations of GBS Serotype Ia in subjects with ≥ LLQ

| End point title | Geometric Mean ELISA Antibody Concentrations of GBS Serotype Ia in subjects with ≥ LLQ |
|---|---|

End point description:

The Geometric Mean ELISA Antibody Concentrations of GBS Serotype Ia in subjects with ≥ LLQ were estimated for at Day 1, Day 31 and Day 61.

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

End point timeframe:

At Day 1, Day 31 and Day 61

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 7 | 3 | 6 | 2 |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Serotype Ia - Day 1 (V98_06E1), (N=7;3;6;2;2;5) | 64.06 (23 to 178) | 98.43 (21 to 469) | 29.83 (9.89 to 90) | 39.57 (5.84 to 268) |
| Serotype Ia - Day 31, (N=6;3;6;2;2;5) | 128.91 (71 to 234) | 196.32 (85 to 456) | 156.26 (86 to 284) | 85.63 (31 to 240) |
| Serotype Ia - Day 61, (N=6;3;6;2;2;5) | 112.78 (57 to 222) | 197.67 (76 to 515) | 107.57 (55 to 212) | 93.02 (29 to 300) |

| End point values | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 2 | 5 | | |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Serotype Ia - Day 1 (V98_06E1), (N=7;3;6;2;2;5) | 5.76 (0.85 to 39) | 2.54 (0.76 to 8.50) | | |
| Serotype Ia - Day 31, (N=6;3;6;2;2;5) | 177.38 (63 to 498) | 161.99 (84 to 311) | | |
| Serotype Ia - Day 61, (N=6;3;6;2;2;5) | 151.27 (47 to 488) | 131.48 (63 to 276) | | |

## Statistical analyses

No statistical analyses for this end point

## Secondary: Geometric Mean Antibody Concentrations of GBS Serotype Ib in subjects with ≥ LLQ

| End point title | Geometric Mean Antibody Concentrations of GBS Serotype Ib in subjects with ≥ LLQ |
|---|---|

End point description:

The Geometric Mean Antibody Concentrations of GBS Serotype Ib in subjects with ≥ LLQ s were estimated for at Day 1, Day 31 and Day 61. As the singleton ELISA was no longer in use at the time of serotypes Ib and III testing, results for both serotypes were tested using multiplex immunoassay.

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

End point timeframe:

At Day 1, Day 31 and Day 61

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 4 | 5 | 1 | 2 |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Day 1, (N = 4; 5; 1; 2; 1; 5) | 1.96 (0.56 to 6.85) | 0.52 (0.17 to 1.6) | 3.42 (0.28 to 42) | 3.12 (0.53 to 18) |
| Day 31, (N = 3; 5; 1; 2; 1; 5) | 287.34 (90 to 917) | 121.6 (44 to 333) | 373.02 (48 to 2877) | 338.8 (78 to 1469) |
| Day 61, (N = 4; 5; 1; 2; 1; 5) | 228.26 (72 to 726) | 118.94 (43 to 326) | 367.26 (48 to 2818) | 300.1 (69 to 1296) |

| End point values | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 1 | 5 | | |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Day 1, (N = 4; 5; 1; 2; 1; 5) | 0.82 (0.067 to 10) | 1.92 (0.63 to 5.89) | | |
| Day 31, (N = 3; 5; 1; 2; 1; 5) | 557.46 (75 to 4142) | 557.03 (225 to 1379) | | |
| Day 61, (N = 4; 5; 1; 2; 1; 5) | 378.7 (51 to 2800) | 403.16 (163 to 996) | | |

## Statistical analyses

No statistical analyses for this end point

## Secondary: Geometric Mean Antibody Concentrations of GBS Serotype III in subjects with ≥ LLQ

| End point title | Geometric Mean Antibody Concentrations of GBS Serotype III in subjects with ≥ LLQ |
|---|---|

End point description:

The Geometric Mean Antibody Concentrations of GBS Serotype III in subjects with ≥ LLQ were estimated for at Day 1, Day 31 and Day 61. As the singleton ELISA was no longer in use at the time of serotypes Ib and III testing, results for both serotypes were tested using multiplex immunoassay.

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

End point timeframe:

At Day 1, Day 31 and Day 61

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 4 | 1 | 4 | 1 |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Day 1, (N = 4; 1; 4; 1; 0; 5) | 5.33 (0.76 to 37) | 1.41 (0.029 to 68) | 1.07 (0.15 to 7.46) | 0.74 (0.015 to 36) |
| Day 31, (N = 3; 1; 4; 1; 0; 5) | 171.67 (13 to 2214) | 270.01 (3.46 to 21064) | 120.0 (13 to 1113) | 149.93 (1.81 to 12454) |
| Day 61, (N = 3; 1; 4; 1; 0; 5) | 186.63 (24 to 1439) | 231.17 (7.12 to 7509) | 107.21 (18 to 635) | 180.29 (5.28 to 6158) |

| End point values | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 0[7] | 5 | | |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | | | | |
| Day 1, (N = 4; 1; 4; 1; 0; 5) | ( to ) | 2.79 (0.49 to 16) | | |
| Day 31, (N = 3; 1; 4; 1; 0; 5) | ( to ) | 136.68 (19 to 979) | | |
| Day 61, (N = 3; 1; 4; 1; 0; 5) | ( to ) | 116.43 (24 to 561) | | |

Notes:

[7] - No particpants analyzed in this group

## Statistical analyses

No statistical analyses for this end point

## Secondary: Geometric Mean ELISA Anti-Diphtheria Antibody Concentrations in All Subjects

| End point title | Geometric Mean ELISA Anti-Diphtheria Antibody Concentrations in All Subjects |
|---|---|

End point description:

Geometric Mean ELISA Anti-Diphtheria Antibody Concentrations (95%CI) in All Subjects at Day 1 Pre-vaccination in the V98_06 study or V98_06E1 for the Naive Group and at Day 61 Post-vaccination in Study V98_06E1. Analysis was not performed.

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

End point timeframe:

At Day 1 (V98_06 or V98_06E1) and Day 61

| End point values | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group | GBS MF59 Full/GBS NoAdj Group |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | Reporting group | Reporting group |
| Number of subjects analysed | 0[8] | 0[9] | 0[10] | 0[11] |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | ( to ) | ( to ) | ( to ) | ( to ) |

Notes:

[8] - Analysis was not performed.

[9] - Analysis was not performed.

[10] - Analysis was not performed.

[11] - Analysis was not performed.

| End point values | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group | | |
|---|---|---|---|---|
| Subject group type | Reporting group | Reporting group | | |
| Number of subjects analysed | 0[12] | 0[13] | | |
| Units: µg/mL | | | | |
| geometric mean (confidence interval 95%) | ( to ) | ( to ) | | |

Notes:

[12] - Analysis was not performed.

[13] - Analysis was not performed.

## Statistical analyses

No statistical analyses for this end point

## Adverse events

### Adverse events information

Timeframe for reporting adverse events:

Solicited AEs were collected until 7 days after vaccination. Unsolicited AEs were collected from Day 1 to Day 181. SAEs were collected from Day 1 to Day 181.

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

### Dictionary used

| | |
|---|---|
| Dictionary name | MedDRA |
| Dictionary version | 19.1 |

### Reporting groups

| | |
|---|---|
| Reporting group title | GBS NoAdj/GBS NoAdj Group |

Reporting group description:

Subjects who had received unadjuvanted GBS Trivalent Vaccine in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181).

| | |
|---|---|
| Reporting group title | GBS Alum/GBS NoAdj Group |

Reporting group description:

Subjects who had received GBS Trivalent Vaccine with alum adjuvant in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181).

| | |
|---|---|
| Reporting group title | GBS MF59 Half/GBS NoAdj Group |

Reporting group description:

Subjects who had received GBS Trivalent Vaccine with half dose of MF59 in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181).

| | |
|---|---|
| Reporting group title | GBS MF59 Full/GBS NoAdj Group |

Reporting group description:

Subjects who had received GBS Trivalent Vaccine with full dose of MF59 in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181).

| | |
|---|---|
| Reporting group title | Placebo/GBS NoAdj Group |

Reporting group description:

Subjects who had received placebo in parent study V98_06 (205468 – NCT01150123) and received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181).

| | |
|---|---|
| Reporting group title | Naive/GBS NoAdj Group |

Reporting group description:

Healthy non-pregnant female subjects aged 22 through 46 years inclusive on the day of informed consent who had not received any GBS vaccine in the past and who received a single dose of unadjuvanted GBS Trivalent Vaccine in V98_06E1 (205421 - NCT02690181).

| Serious adverse events | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group |
|---|---|---|---|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| number of deaths (all causes) | 0 | 0 | 0 |
| number of deaths resulting from adverse events | | | |

| Serious adverse events | GBS MF59 Full/GBS | Placebo/GBS NoAdj | Naive/GBS NoAdj |
|---|---|---|---|

| | NoAdj Group | Group | Group |
|---|---|---|---|
| Total subjects affected by serious adverse events | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| number of deaths (all causes) | 0 | 0 | 0 |
| number of deaths resulting from adverse events | | | |

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

| **Non-serious adverse events** | GBS NoAdj/GBS NoAdj Group | GBS Alum/GBS NoAdj Group | GBS MF59 Half/GBS NoAdj Group |
|---|---|---|---|
| Total subjects affected by non-serious adverse events | | | |
| subjects affected / exposed | 13 / 14 (92.86%) | 13 / 14 (92.86%) | 13 / 15 (86.67%) |
| Vascular disorders | | | |
| Hot flush | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 1 / 14 (7.14%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 2 | 0 |
| General disorders and administration site conditions | | | |
| Chills | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 1 / 15 (6.67%) |
| occurrences (all) | 0 | 0 | 1 |
| Fatigue | | | |
| subjects affected / exposed | 3 / 14 (21.43%) | 10 / 14 (71.43%) | 4 / 15 (26.67%) |
| occurrences (all) | 11 | 13 | 9 |
| Feeling hot | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Influenza like illness | | | |
| subjects affected / exposed | 1 / 14 (7.14%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Injection site erythema | | | |
| subjects affected / exposed | 1 / 14 (7.14%) | 4 / 14 (28.57%) | 2 / 15 (13.33%) |
| occurrences (all) | 3 | 6 | 2 |
| Injection site haemorrhage | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 1 / 15 (6.67%) |
| occurrences (all) | 0 | 0 | 3 |
| Injection site induration | | | |

| | | | |
|---|---|---|---|
| subjects affected / exposed | 2 / 14 (14.29%) | 2 / 14 (14.29%) | 5 / 15 (33.33%) |
| occurrences (all) | 3 | 3 | 10 |
| Injection site pain | | | |
| subjects affected / exposed | 10 / 14 (71.43%) | 9 / 14 (64.29%) | 9 / 15 (60.00%) |
| occurrences (all) | 20 | 15 | 19 |
| Injection site swelling | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 2 / 14 (14.29%) | 4 / 15 (26.67%) |
| occurrences (all) | 0 | 3 | 6 |
| Injection site warmth | | | |
| subjects affected / exposed | 1 / 14 (7.14%) | 4 / 14 (28.57%) | 4 / 15 (26.67%) |
| occurrences (all) | 2 | 5 | 7 |
| Malaise | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 2 / 14 (14.29%) | 2 / 15 (13.33%) |
| occurrences (all) | 0 | 3 | 3 |
| Hangover | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Immune system disorders | | | |
| Allergy to arthropod bite | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 1 / 14 (7.14%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 1 | 0 |
| Reproductive system and breast disorders | | | |
| Vulvovaginal discomfort | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Respiratory, thoracic and mediastinal disorders | | | |
| Oropharyngeal pain | | | |
| subjects affected / exposed | 1 / 14 (7.14%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Nasal congestion | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Injury, poisoning and procedural complications | | | |
| Laceration | | | |

| | | | |
|---|---|---|---|
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Procedural pain | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Stress fracture | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 1 / 14 (7.14%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 1 | 0 |
| Nervous system disorders | | | |
| Dizziness | | | |
| subjects affected / exposed | 1 / 14 (7.14%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Headache | | | |
| subjects affected / exposed | 5 / 14 (35.71%) | 6 / 14 (42.86%) | 5 / 15 (33.33%) |
| occurrences (all) | 12 | 12 | 9 |
| Ear and labyrinth disorders | | | |
| Ear disorder | | | |
| subjects affected / exposed | 1 / 14 (7.14%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Tinnitus | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Eye disorders | | | |
| Conjunctival irritation | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 1 / 15 (6.67%) |
| occurrences (all) | 0 | 0 | 1 |
| Eye irritation | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 1 / 15 (6.67%) |
| occurrences (all) | 0 | 0 | 1 |
| Gastrointestinal disorders | | | |
| Abdominal discomfort | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 1 / 14 (7.14%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 1 | 0 |
| Diarrhoea | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 1 / 14 (7.14%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 1 | 0 |
| Gastric disorder | | | |

| | | | |
|---|---|---|---|
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Nausea | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 3 / 14 (21.43%) | 2 / 15 (13.33%) |
| occurrences (all) | 0 | 4 | 3 |
| Tongue ulceration | | | |
| subjects affected / exposed | 1 / 14 (7.14%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Skin and subcutaneous tissue disorders | | | |
| Rash | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 1 / 14 (7.14%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 1 | 0 |
| Rash macular | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 1 / 14 (7.14%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 1 | 0 |
| Musculoskeletal and connective tissue disorders | | | |
| Arthralgia | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 1 / 14 (7.14%) | 2 / 15 (13.33%) |
| occurrences (all) | 0 | 1 | 2 |
| Back pain | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 1 / 15 (6.67%) |
| occurrences (all) | 0 | 0 | 1 |
| Intervertebral disc protrusion | | | |
| subjects affected / exposed | 1 / 14 (7.14%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Muscle spasms | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Myalgia | | | |
| subjects affected / exposed | 2 / 14 (14.29%) | 2 / 14 (14.29%) | 3 / 15 (20.00%) |
| occurrences (all) | 4 | 3 | 4 |
| Tendonitis | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 1 / 14 (7.14%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 1 | 0 |
| Infections and infestations | | | |

| | | | |
|---|---|---|---|
| Chlamydial infection | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 1 / 15 (6.67%) |
| occurrences (all) | 0 | 0 | 1 |
| Gastroenteritis | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 1 / 14 (7.14%) | 1 / 15 (6.67%) |
| occurrences (all) | 0 | 1 | 1 |
| Sinusitis | | | |
| subjects affected / exposed | 1 / 14 (7.14%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Sinusitis bacterial | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 1 / 15 (6.67%) |
| occurrences (all) | 0 | 0 | 1 |
| Tonsillitis | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 1 / 15 (6.67%) |
| occurrences (all) | 0 | 0 | 1 |
| Tooth infection | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 1 / 15 (6.67%) |
| occurrences (all) | 0 | 0 | 1 |
| Upper respiratory tract infection | | | |
| subjects affected / exposed | 1 / 14 (7.14%) | 0 / 14 (0.00%) | 1 / 15 (6.67%) |
| occurrences (all) | 1 | 0 | 1 |
| Gingivitis | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Rhinitis | | | |
| subjects affected / exposed | 0 / 14 (0.00%) | 0 / 14 (0.00%) | 0 / 15 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |

| **Non-serious adverse events** | GBS MF59 Full/GBS NoAdj Group | Placebo/GBS NoAdj Group | Naive/GBS NoAdj Group |
|---|---|---|---|
| Total subjects affected by non-serious adverse events | | | |
| subjects affected / exposed | 7 / 10 (70.00%) | 4 / 6 (66.67%) | 17 / 21 (80.95%) |
| Vascular disorders | | | |
| Hot flush | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| General disorders and administration site conditions | | | |

| | | | |
|---|---|---|---|
| Chills | | | |
| subjects affected / exposed | 1 / 10 (10.00%) | 1 / 6 (16.67%) | 0 / 21 (0.00%) |
| occurrences (all) | 1 | 1 | 0 |
| Fatigue | | | |
| subjects affected / exposed | 4 / 10 (40.00%) | 1 / 6 (16.67%) | 2 / 21 (9.52%) |
| occurrences (all) | 6 | 3 | 2 |
| Feeling hot | | | |
| subjects affected / exposed | 1 / 10 (10.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 1 | 0 | 0 |
| Influenza like illness | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Injection site erythema | | | |
| subjects affected / exposed | 1 / 10 (10.00%) | 1 / 6 (16.67%) | 3 / 21 (14.29%) |
| occurrences (all) | 1 | 8 | 5 |
| Injection site haemorrhage | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 1 / 21 (4.76%) |
| occurrences (all) | 0 | 0 | 3 |
| Injection site induration | | | |
| subjects affected / exposed | 2 / 10 (20.00%) | 1 / 6 (16.67%) | 0 / 21 (0.00%) |
| occurrences (all) | 6 | 5 | 0 |
| Injection site pain | | | |
| subjects affected / exposed | 6 / 10 (60.00%) | 3 / 6 (50.00%) | 11 / 21 (52.38%) |
| occurrences (all) | 10 | 12 | 23 |
| Injection site swelling | | | |
| subjects affected / exposed | 1 / 10 (10.00%) | 1 / 6 (16.67%) | 0 / 21 (0.00%) |
| occurrences (all) | 3 | 5 | 0 |
| Injection site warmth | | | |
| subjects affected / exposed | 2 / 10 (20.00%) | 2 / 6 (33.33%) | 2 / 21 (9.52%) |
| occurrences (all) | 3 | 8 | 2 |
| Malaise | | | |
| subjects affected / exposed | 2 / 10 (20.00%) | 1 / 6 (16.67%) | 1 / 21 (4.76%) |
| occurrences (all) | 3 | 1 | 1 |
| Hangover | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 1 / 21 (4.76%) |
| occurrences (all) | 0 | 0 | 1 |

| | | | |
|---|---|---|---|
| Immune system disorders | | | |
| Allergy to arthropod bite | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Reproductive system and breast disorders | | | |
| Vulvovaginal discomfort | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 1 / 6 (16.67%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 1 | 0 |
| Respiratory, thoracic and mediastinal disorders | | | |
| Oropharyngeal pain | | | |
| subjects affected / exposed | 1 / 10 (10.00%) | 0 / 6 (0.00%) | 2 / 21 (9.52%) |
| occurrences (all) | 1 | 0 | 2 |
| Nasal congestion | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 1 / 21 (4.76%) |
| occurrences (all) | 0 | 0 | 1 |
| Injury, poisoning and procedural complications | | | |
| Laceration | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 1 / 6 (16.67%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 1 | 0 |
| Procedural pain | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 2 / 21 (9.52%) |
| occurrences (all) | 0 | 0 | 2 |
| Stress fracture | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Nervous system disorders | | | |
| Dizziness | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Headache | | | |
| subjects affected / exposed | 3 / 10 (30.00%) | 2 / 6 (33.33%) | 4 / 21 (19.05%) |
| occurrences (all) | 3 | 4 | 6 |
| Ear and labyrinth disorders | | | |
| Ear disorder | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |

| | | | |
|---|---|---|---|
| Tinnitus | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 1 / 21 (4.76%) |
| occurrences (all) | 0 | 0 | 1 |
| Eye disorders | | | |
| Conjunctival irritation | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Eye irritation | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Gastrointestinal disorders | | | |
| Abdominal discomfort | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Diarrhoea | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Gastric disorder | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 1 / 6 (16.67%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 1 | 0 |
| Nausea | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 1 / 21 (4.76%) |
| occurrences (all) | 0 | 0 | 1 |
| Tongue ulceration | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Skin and subcutaneous tissue disorders | | | |
| Rash | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Rash macular | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Musculoskeletal and connective tissue disorders | | | |
| Arthralgia | | | |

| | | | |
|---|---|---|---|
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Back pain | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 2 / 21 (9.52%) |
| occurrences (all) | 0 | 0 | 2 |
| Intervertebral disc protrusion | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Muscle spasms | | | |
| subjects affected / exposed | 1 / 10 (10.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 2 | 0 | 0 |
| Myalgia | | | |
| subjects affected / exposed | 1 / 10 (10.00%) | 1 / 6 (16.67%) | 1 / 21 (4.76%) |
| occurrences (all) | 1 | 1 | 1 |
| Tendonitis | | | |
| subjects affected / exposed | 1 / 10 (10.00%) | 0 / 6 (0.00%) | 1 / 21 (4.76%) |
| occurrences (all) | 1 | 0 | 1 |
| Infections and infestations | | | |
| Chlamydial infection | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Gastroenteritis | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 1 / 6 (16.67%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 1 | 0 |
| Sinusitis | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Sinusitis bacterial | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |
| Tonsillitis | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 1 / 21 (4.76%) |
| occurrences (all) | 0 | 0 | 1 |
| Tooth infection | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 0 / 21 (0.00%) |
| occurrences (all) | 0 | 0 | 0 |

| | | | |
|---|---|---|---|
| Upper respiratory tract infection | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 3 / 21 (14.29%) |
| occurrences (all) | 0 | 0 | 3 |
| Gingivitis | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 1 / 21 (4.76%) |
| occurrences (all) | 0 | 0 | 1 |
| Rhinitis | | | |
| subjects affected / exposed | 0 / 10 (0.00%) | 0 / 6 (0.00%) | 1 / 21 (4.76%) |
| occurrences (all) | 0 | 0 | 1 |

## More information

### Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

### Interruptions (globally)

Were there any global interruptions to the trial? No

### Limitations and caveats

None reported