Clinical trial results:
An Open-Label, Multi-Center Study to Evaluate the Persistence of Antibody Responses Among Adolescents Who Previously Received MenACWY-CRM Conjugate Vaccine or Menactra®

Due to a system error, the data reported in v1 is not correct and has been removed from public view.

Summary

EudraCT number	2014-004903-63
Trial protocol	Outside EU/EEA
Global end of trial date	28 November 2012

Results information

Result version number	v2 (current)
This version publication date	03 June 2016
First version publication date	02 April 2015
Version creation reason	• Correction of full data set re-QC of the study needed because of EudraCT system glitch and updates are required.

Trial information

Trial identification

Sponsor protocol code	V59P13E1

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT00856297
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Novartis Vaccines and Diagnostics Inc.
Sponsor organisation address	350 Massachusetts Avenue, Cambridge, United States, 02139
Public contact	Posting Director, Novartis Vaccines and Diagnostics, RegistryContactVaccinesUS@novartis.com
Scientific contact	Posting Director, Novartis Vaccines and Diagnostics, RegistryContactVaccinesUS@novartis.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?	Yes

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	09 July 2013
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	28 November 2012
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

To evaluate the immunity against meningococcal serogroups A, C, W-135 and Y at 21 months, 3 years, and 5 years after vaccination with either Novartis MenACWY Conjugate Vaccine or Menactra® in study V59P13 in terms of percentage of subjects with human SBA (hSBA) titers ≥ 1:8 directed against N. meningitidis serogroups A, C, W-135, and Y.

Protection of trial subjects:

This clinical study was designed, implemented and reported in accordance with the ICH Harmonized Tripartite Guidelines for GCP, with applicable local regulations, including the European Directive 2001/20/EC, the US CFR Title 21, Novartis codes on the protection of human rights, and with the ethical principles laid down in the Declaration of Helsinki.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	16 February 2009
Long term follow-up planned	Yes
Long term follow-up rationale	Efficacy
Long term follow-up duration	5 Years
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	United States: 389
Worldwide total number of subjects	389
EEA total number of subjects	0

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)	117
Adults (18-64 years)	272
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Subjects were recruited from 19 sites in US.

Pre-assignment

Screening details:

All enrolled subjects were included in the trial.

Period 1

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

Arms

Are arms mutually exclusive?	Yes
Arm title	MenACWY-CRM

Arm description:

Subjects received one primary dose of MenACWY-CRM conjugate vaccine in the parent study and were followed for persistence in the present study.

Arm type	Experimental
Investigational medicinal product name	Meningococcal (groups A, C, W, and Y) oligosaccharide diphtheria CRM-197 conjugate vaccine
Investigational medicinal product code	
Other name	Menveo
Pharmaceutical forms	Powder and solution for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

One 0.5 mL dose of MenACWY-CRM was administered by intramuscular (IM) injection in the anterolateral area of the left deltoid.

Arm title	Licensed Comparator

Arm description:

Subjects received one primary dose of a quadrivalent meningococcal conjugate vaccine with diphtheria toxoid as the protein carrier in the parent study and were followed for persistence in the present study at 5 years postvaccination.

Arm type	Active comparator
Investigational medicinal product name	Meningococcal ACWY polysaccharide-protein conjugate vaccine
Investigational medicinal product code	
Other name	Menactra
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

One 0.5 mL dose of Menactra® was administered by IM injection in the anterolateral area of left deltoid area.

Arm title	Naive

Arm description:

Subjects who were age-matched to the other study groups and had not received any previous meningococcal vaccinations.
One dose MenACWY-CRM conjugate vaccine or Licensed comparator was offered to naive subjects after blood draw at end.

Arm type	Active comparator

Investigational medicinal product name	Meningococcal (groups A, C, W, and Y) oligosaccharide diphtheria CRM-197 conjugate vaccine
Investigational medicinal product code	
Other name	Menveo
Pharmaceutical forms	Powder and solution for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

One 0.5 mL dose of MenACWY-CRM was administered by intramuscular (IM) injection in the anterolateral area of the left deltoid.

Investigational medicinal product name	Meningococcal ACWY polysaccharide-protein conjugate vaccine
Investigational medicinal product code	
Other name	Menactra
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

One 0.5 mL dose of Menactra® was administered by IM injection in the anterolateral area of left deltoid area.

Arm title	MenACWY-CRM/MenACWY-CRM

Arm description:

Subjects received one primary dose of the MenACWY-CRM conjugate vaccine in the parent study and one booster dose of MenACWY-CRM conjugate vaccine at 3 years after primary vaccination.

Arm type	Experimental
Investigational medicinal product name	Meningococcal (groups A, C, W, and Y) oligosaccharide diphtheria CRM-197 conjugate vaccine
Investigational medicinal product code	
Other name	Menveo
Pharmaceutical forms	Powder and solution for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

One 0.5 mL dose of MenACWY-CRM was administered by intramuscular (IM) injection in the anterolateral area of the left deltoid.

Arm title	Licensed Comparator /MenACWY-CRM

Arm description:

Subjects received one primary dose of quadrivalent meningococcal diphtheria toxoid conjugate vaccine in the parent study and one booster dose of MenACWY-CRM conjugate vaccine at 3 years after primary vaccination.

Arm type	Experimental
Investigational medicinal product name	Meningococcal ACWY polysaccharide-protein conjugate vaccine
Investigational medicinal product code	
Other name	Menactra
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

One 0.5 mL dose of Menactra® was administered by IM injection in the anterolateral area of left deltoid area.

Investigational medicinal product name	Meningococcal (groups A, C, W, and Y) oligosaccharide diphtheria CRM-197 conjugate vaccine
Investigational medicinal product code	
Other name	Menveo
Pharmaceutical forms	Powder and solution for solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

One 0.5 mL dose of MenACWY-CRM was administered by intramuscular (IM) injection in the anterolateral area of the left deltoid.

Number of subjects in period 1	MenACWY-CRM	Licensed Comparator	Naive
Started	131	76	107
Completed	129	76	107
Not completed	2	0	0
Unable to classify	2	-	-

Number of subjects in period 1	MenACWY-CRM/MenACWY-CRM	Licensed Comparator /MenACWY-CRM
Started	44	31
Completed	44	31
Not completed	0	0
Unable to classify	-	-

Baseline characteristics

Reporting groups	
Reporting group title	MenACWY-CRM
Reporting group description:	
Subjects received one primary dose of MenACWY-CRM conjugate vaccine in the parent study and were followed for persistence in the present study.	
Reporting group title	Licensed Comparator
Reporting group description:	
Subjects received one primary dose of a quadrivalent meningococcal conjugate vaccine with diphtheria toxoid as the protein carrier in the parent study and were followed for persistence in the present study at 5 years postvaccination.	
Reporting group title	Naive
Reporting group description:	
Subjects who were age-matched to the other study groups and had not received any previous meningococcal vaccinations. One dose MenACWY-CRM conjugate vaccine or Licensed comparator was offered to naive subjects after blood draw at end.	
Reporting group title	MenACWY-CRM/MenACWY-CRM
Reporting group description:	
Subjects received one primary dose of the MenACWY-CRM conjugate vaccine in the parent study and one booster dose of MenACWY-CRM conjugate vaccine at 3 years after primary vaccination.	
Reporting group title	Licensed Comparator /MenACWY-CRM
Reporting group description:	
Subjects received one primary dose of quadrivalent meningococcal diphtheria toxoid conjugate vaccine in the parent study and one booster dose of MenACWY-CRM conjugate vaccine at 3 years after primary vaccination.	

Reporting group values	MenACWY-CRM	Licensed Comparator	Naive
Number of subjects	131	76	107
Age categorical Units: Subjects			
Age continuous Units: years arithmetic mean standard deviation	 19.4 ± 2.4	 18.8 ± 2.4	 19.3 ± 2.4
Gender categorical Units: Subjects			
Female	65	29	68
Male	66	47	39

Reporting group values	MenACWY-CRM/MenACWY-CRM	Licensed Comparator /MenACWY-CRM	Total
Number of subjects	44	31	389
Age categorical Units: Subjects			
Age continuous Units: years arithmetic mean	 19	 19.7	

standard deviation	± 1.9	± 2.3	-

Gender categorical Units: Subjects			
Female	21	13	196
Male	23	18	193

End points

End points reporting groups

Reporting group title	MenACWY-CRM

Reporting group description:

Subjects received one primary dose of MenACWY-CRM conjugate vaccine in the parent study and were followed for persistence in the present study.

Reporting group title	Licensed Comparator

Reporting group description:

Subjects received one primary dose of a quadrivalent meningococcal conjugate vaccine with diphtheria toxoid as the protein carrier in the parent study and were followed for persistence in the present study at 5 years postvaccination.

Reporting group title	Naive

Reporting group description:

Subjects who were age-matched to the other study groups and had not received any previous meningococcal vaccinations.
One dose MenACWY-CRM conjugate vaccine or Licensed comparator was offered to naive subjects after blood draw at end.

Reporting group title	MenACWY-CRM/MenACWY-CRM

Reporting group description:

Subjects received one primary dose of the MenACWY-CRM conjugate vaccine in the parent study and one booster dose of MenACWY-CRM conjugate vaccine at 3 years after primary vaccination.

Reporting group title	Licensed Comparator /MenACWY-CRM

Reporting group description:

Subjects received one primary dose of quadrivalent meningococcal diphtheria toxoid conjugate vaccine in the parent study and one booster dose of MenACWY-CRM conjugate vaccine at 3 years after primary vaccination.

Subject analysis set title	All enrolled population
Subject analysis set type	Intention-to-treat

Subject analysis set description:

All subjects who had data in the DEMOG panel, signed an informed consent form, underwent screening procedures(s) and were randomized at visit 6.

Subject analysis set title	MITT Post-Booster Persistence Population
Subject analysis set type	Modified intention-to-treat

Subject analysis set description:

All subjects in the enrolled population who provided one evaluable serum sample before or after vaccination with MenACWY-CRM (at 3 years after vaccination inV59P13) and whose 5 year assay result was available for at least one serogroup.

Subject analysis set title	Per Protocol (PP) Persistence Population
Subject analysis set type	Per protocol

Subject analysis set description:

Naive subjects:
▫ All subjects in the MITT population who had no major protocol deviations as defined prior to analysis.
Subjects who previously participated in V59P13 study:
▫ All subjects in the MITT population who had no major protocol deviations as defined prior to analysis.
A major deviation was defined as a protocol deviation that was considered to have a significant impact on the immunogenicity results of the subject.

Subject analysis set title	Modified Intention-to-treat (MITT) Persistence Population
Subject analysis set type	Modified intention-to-treat

Subject analysis set description:

Naive subjects:
▫ All subjects in the enrolled population who provided one evaluable serum sample at baseline.
Subjects who previously participated in V59P13 study:
▫ All subjects in the enrolled population who provided one serum sample with an assay result at any visit (i.e. MenACWY and Menactra groups: 21 months, 3 years and 5 years; ACWY/ACWY and Menac/ACWY

groups: 3 years and 5 years).

Subject analysis set title	PP Post-Booster Persistence Population
Subject analysis set type	Per protocol

Subject analysis set description:

All subjects in the MITT population who:
- correctly received the vaccine, and
- provided at least one evaluable 5 year serum sample and whose assay result was available for at least one serogroup,
- had no major protocol deviations as defined prior to analysis.

Subject analysis set title	All Exposed Population
Subject analysis set type	Safety analysis

Subject analysis set description:

All enrolled subjects who received a study vaccination in V59P13 and subjects vaccinated after the amendment at 5 years.

Subject analysis set title	Safety Population
Subject analysis set type	Safety analysis

Subject analysis set description:

All subjects in the exposed population who provided postbaseline safety data.
All groups at 5 years
▫ All subjects enrolled at 5 years were included in the safety follow-up for 24 hours after blood draw and for analysis of medical history to identify new onset of chronic diseases.
MenACWY, Menactra and Naive group subjects (postvaccination safety follow-up):
▫ All subjects in the enrolled population who received a vaccination with meningococcal conjugate vaccine at 5 years (first visit for naive subjects enrolled at 5 years) and provided safety follow-up information for any period during the 28 day follow-up.
In case of randomization errors, subjects were analyzed 'as treated' in the exposed and safety analyses.

Subject analysis set title	Post-Booster Solicited Safety Population
Subject analysis set type	Safety analysis

Subject analysis set description:

All subjects in the exposed population who had previously been vaccinated in the parent study with MenACWY-CRM or licensed comparator who reported solicited local and systemic adverse events within 7 days after the administration of a booster dose of MenACWY-CRM conjugate vaccine at 3 year time point.

Subject analysis set title	Post-vaccination Safety Follow-up Population
Subject analysis set type	Safety analysis

Subject analysis set description:

Subjects in the MenACWY and Menactra groups who were vaccinated at visit 6 with MenACWY or Menactra booster per ACIP recommendation and followed up to 28 days for safety.

Subject analysis set title	Licensed Comparator (Overall Safety)
Subject analysis set type	Safety analysis

Subject analysis set description:

Subjects received one primary dose of a quadrivalent meningococcal conjugate vaccine with diphtheria toxoid as the protein carrier in the parent study and were followed for persistence in the present study at 5 years postvaccination.
Analysis was done on the overall safety dataset, i.e. the subjects in the exposed population who provided postvaccination safety data during the whole study.

Subject analysis set title	MenACWY-CRM/MenACWY-CRM (Overall Safety)
Subject analysis set type	Safety analysis

Subject analysis set description:

Subjects received one primary dose of the MenACWY-CRM conjugate vaccine in the parent study and one booster dose of MenACWY-CRM conjugate vaccine at 3 years after primary vaccination.
Analysis was done on the overall safety dataset, i.e. the subjects in the exposed population who provided postvaccination safety data during the whole study.

Subject analysis set title	MenACWY-CRM (Overall Safety)
Subject analysis set type	Safety analysis

Subject analysis set description:

Subjects received one primary dose of MenACWY-CRM conjugate vaccine in the parent study and were followed for persistence in the present study.
Analysis was done on the overall safety dataset, i.e. the subjects in the exposed population who provided postvaccination safety data during the whole study.

Subject analysis set title	Licensed Comparator /MenACWY-CRM (Overall Safety)
Subject analysis set type	Safety analysis

Subject analysis set description:

Subjects received one primary dose of quadrivalent meningococcal diphtheria toxoid conjugate vaccine in the parent study and one booster dose of MenACWY-CRM conjugate vaccine at 3 years after primary vaccination.
Analysis was done on the overall safety dataset, i.e. the subjects in the exposed population who provided postvaccination safety data during the whole study.

Primary: 1. Percentages of Subjects With Human Complement Serum Bactericidal Activity (hSBA) Titers≥ 1:8, After One Dose of Either MenACWY-CRM Conjugate or Licensed Comparator Vaccine

End point title	1. Percentages of Subjects With Human Complement Serum Bactericidal Activity (hSBA) Titers≥ 1:8, After One Dose of Either MenACWY-CRM Conjugate or Licensed Comparator Vaccine[1][2]

End point description:

Immune response of one dose of MenACWY-CRM conjugate vaccine compared to that of one dose of licensed comparator vaccine at 21 months, 3 years and 5 years after vaccination, as measured by the percentages of subjects with human complement serum bactericidal activity (hSBA) titers≥ 1:8 directed against N meningitidis serogroups A, C, W and Y.
Analysis was done on a subset of the 5-year PP persistence population - subjects who provided one evaluable serum sample at every visit (21 months, 3 years and 5 years) and had no major protocol deviations. Only subjects who also had evaluable blood samples at the 21-month and 3-year time points are included in this analysis.

End point type	Primary

End point timeframe:

21 months, 3 years and 5 years postvaccination

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: statistical analyses not applicable for this endpoint.

[2] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: statistical analyses not applicable for this endpoint.

End point values	MenACWY-CRM	Licensed Comparator		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	100	60		
Units: percentages of subjects				
number (confidence interval 95%)				
MenA - 21 months	45 (35 to 55)	27 (16 to 40)		
MenA - 3 Years	38 (28 to 48)	18 (10 to 30)		
MenA - 5 Years	35 (26 to 45)	37 (25 to 50)		
Men C - 21 Months (N=100, 59)	61 (51 to 71)	63 (49 to 75)		
Men C - 3 Years (N=100, 59)	68 (58 to 77)	68 (54 to 79)		
Men C - 5 Years (N=100, 59)	64 (54 to 73)	63 (49 to 75)		
MenW- 21 Months (N=99, 57)	86 (77 to 92)	60 (46 to 72)		
MenW - 3 Years (N=99, 57)	85 (76 to 91)	65 (51 to 77)		
MenW - 5 Years (N=99, 57)	85 (76 to 91)	70 (57 to 82)		
MenY- 21 Months	71 (61 to 80)	53 (40 to 66)		
MenY - 3 Years	69 (59 to 78)	55 (42 to 68)		

MenY - 5 Years	67 (57 to 76)	55 (42 to 68)		

Statistical analyses

No statistical analyses for this end point

Secondary: 2. Percentages of Subjects With hSBA Titers≥ 1:4, After One Dose of Either MenACWY-CRM Conjugate or Licensed Comparator Vaccine

End point title	2. Percentages of Subjects With hSBA Titers≥ 1:4, After One Dose of Either MenACWY-CRM Conjugate or Licensed Comparator Vaccine[3]

End point description:

Immune response of one dose of MenACWY-CRM conjugate vaccine compared to that of one dose of licensed comparator vaccine at 21 months, 3 years and 5 years after vaccination, as measured by the percentages of subjects with hSBA titers≥ 1:4 against N meningitidis serogroups A, C, W and Y. Analysis was done on PP persistence population - subjects who provided one evaluable serum sample at baseline at any visit (21 months, 3 years and 5 years) and had no major protocol deviations. Only subjects who also had evaluable blood samples at the 21-month and 3-year timepoints are included in this analysis.

End point type	Secondary

End point timeframe:

21 months, 3 years and 5 years postvaccination

Notes:

[3] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period. Justification: statistical analyses not applicable for this endpoint.

End point values	MenACWY-CRM	Licensed Comparator		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	100	60		
Units: percentages of subjects				
number (confidence interval 95%)				
MenA - 21 months	45 (35 to 55)	32 (20 to 45)		
MenA - 3 Years	39 (29 to 49)	22 (12 to 34)		
MenA - 5 Years	38 (28 to 48)	37 (25 to 50)		
Men C - 21 Months (N=100, 59)	73 (63 to 81)	71 (58 to 82)		
Men C - 3 Years (N=100, 59)	80 (71 to 87)	78 (65 to 88)		
Men C - 5 Years (N=100, 59)	72 (62 to 81)	71 (58 to 82)		
MenW- 21 Months (N=99, 57)	89 (81 to 94)	61 (48 to 74)		
MenW - 3 Years (N=99, 57)	88 (80 to 94)	67 (53 to 79)		
MenW - 5 Years (N=99, 57)	85 (76 to 91)	70 (57 to 82)		
MenY- 21 Months	79 (70 to 87)	63 (50 to 75)		
MenY - 3 Years	77 (68 to 85)	63 (50 to 75)		
MenY - 5 Years	74 (64 to 82)	63 (50 to 75)		

Statistical analyses

No statistical analyses for this end point

Secondary: 3. hSBA Geometric Mean Titers (GMTs), After One Dose of Either MenACWY-CRM Conjugate or Licensed Comparator Vaccine

End point title	3. hSBA Geometric Mean Titers (GMTs), After One Dose of Either MenACWY-CRM Conjugate or Licensed Comparator Vaccine[4]

End point description:

Immune response of one dose of MenACWY-CRM conjugate vaccine compared to that of one dose of licensed comparator vaccine at 21 months, 3 years and 5 years after vaccination, as measured by the hSBA Geometric Mean Titers (GMTs) against N meningitidis serogroups A, C, W and Y.
Analysis was done on PP persistence population - subjects who provided one evaluable serum sample at baseline at any visit (21 months, 3 years and 5 years) and had no major protocol deviations. Only subjects who also had evaluable blood samples at the 21-month and 3-year timepoints are included in this analysis.

End point type	Secondary

End point timeframe:

21 months, 3 years and 5 years postvaccination

Notes:

[4] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: statistical analyses not applicable for this endpoint.

End point values	MenACWY-CRM	Licensed Comparator		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	100	60		
Units: Geometric Mean Titers				
geometric mean (confidence interval 95%)				
MenA - 21 months	6.57 (4.77 to 9.05)	4.1 (2.82 to 5.97)		
MenA - 3 Years	5.63 (3.97 to 7.99)	3.67 (2.44 to 5.53)		
MenA - 5 Years	4.43 (3.13 to 6.26)	4.89 (3.26 to 7.33)		
Men C - 21 Months (N=100, 59)	11 (8.12 to 15)	7.64 (5.4 to 11)		
Men C - 3 Years (N=100, 59)	16 (11 to 25)	18 (11 to 29)		
Men C - 5 Years (N=100, 59)	14 (8.83 to 24)	20 (11 to 36)		
MenW- 21 Months (N=99, 57)	18 (14 to 25)	9.3 (6.57 to 13)		
MenW - 3 Years (N=99, 57)	31 (21 to 46)	17 (11 to 28)		
MenW - 5 Years (N=99, 57)	32 (21 to 47)	19 (12 to 31)		
MenY- 21 Months	14 (10 to 19)	6.77 (4.73 to 9.69)		
MenY - 3 Years	14 (9.68 to 20)	7.11 (4.65 to 11)		
MenY - 5 Years	13 (8.8 to 20)	8.02 (4.94 to 13)		

Statistical analyses

No statistical analyses for this end point

Secondary: 4. Percentages of Subjects With No Previous Meningococcal Vaccination With hSBA Titers≥ 1:4 and ≥ 1:8

End point title	4. Percentages of Subjects With No Previous Meningococcal Vaccination With hSBA Titers≥ 1:4 and ≥ 1:8[5]

End point description:

Antibody levels of age-matched naive subjects with no previous meningococcal vaccination, as measured by the percentages of subjects with hSBA titers≥ 1:4, and ≥ 1:8 against N meningitidis serogroups A, C, W and Y.
Analysis was done on PP persistence population - subjects who provided one evaluable serum sample at baseline and had no major protocol deviations.

End point type	Secondary

End point timeframe:

Day 1

Notes:

[5] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: statistical analyses not applicable for this endpoint.

End point values	Naive			
Subject group type	Reporting group			
Number of subjects analysed	106			
Units: percentages of subjects				
number (confidence interval 95%)				
MenA hSBA ≥ 1:4	11 (6 to 19)			
MenA hSBA ≥ 1:8	8 (3 to 14)			
MenC hSBA ≥ 1:4 (N=105)	51 (41 to 61)			
MenC hSBA ≥ 1:8 (N=105)	38 (29 to 48)			
MenW hSBA ≥ 1:4 (N=105)	66 (56 to 75)			
MenW hSBA ≥ 1:8 (N=105)	66 (56 to 75)			
MenY hSBA ≥ 1:4 (N=105)	45 (35 to 55)			
MenY hSBA ≥ 1:8 (N=105)	39 (30 to 49)			

Statistical analyses

No statistical analyses for this end point

Secondary: 5. hSBA Geometric Mean Titers (GMT) in Subjects With No Previous Meningococcal Vaccination

End point title	5. hSBA Geometric Mean Titers (GMT) in Subjects With No Previous Meningococcal Vaccination[6]

End point description:

Antibody levels of age-matched subjects with no previous meningococcal vaccination, as measured by hSBA geometric mean titers (GMTs) against N meningitidis serogroups A, C, W and Y.
Analysis was done on PP persistence population (Naive subjects) - subjects who provided one evaluable serum sample at baseline and had no major protocol deviations.

End point type	Secondary

End point timeframe:

Day 1

Notes:

[6] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: statistical analyses not applicable for this endpoint.

End point values	Naive			
Subject group type	Reporting group			
Number of subjects analysed	106			
Units: Geometric Mean Titers				
geometric mean (confidence interval 95%)				
MenA	2.34 (1.73 to 3.16)			
MenC (N=105)	4.33 (2.72 to 6.88)			
MenW (N=105)	18 (12 to 27)			
MenY (N=105)	5.4 (3.61 to 8.1)			

Statistical analyses

No statistical analyses for this end point

Secondary: 6. Percentages of Subjects With hSBA Titers≥ 1:4 and ≥ 1:8 After a Booster Dose of MenACWY-CRM Conjugate Vaccine

End point title	6. Percentages of Subjects With hSBA Titers≥ 1:4 and ≥ 1:8 After a Booster Dose of MenACWY-CRM Conjugate Vaccine[7]

End point description:

Immune response at one month after one dose of MenACWY-CRM conjugate vaccine in subjects who had previously received one dose of MenACWY-CRM conjugate vaccine or licensed comparator vaccine, as measured by percentages of subjects with hSBA Titers≥ 1:4 and ≥ 1:8 against N meningitidis serogroups A, C, W and Y.
Analysis was done on PP post booster persistence population - subjects who correctly received the vaccine, provided at least one evaluable serum sample at the relevant timepoints (3 and 5 years), whose assay result was available for at least one serogroup, and had no major protocol deviations as defined prior to analysis.

End point type	Secondary

End point timeframe:

1 month post booster vaccination

Notes:

[7] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: statistical analyses not applicable for this endpoint.

End point values	MenACWY-CRM/MenACWY-CRM	Licensed Comparator /MenACWY-CRM		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	42	30		
Units: percentages of subjects				
number (confidence interval 95%)				
MenA hSBA ≥ 1:4	100 (92 to 100)	100 (88 to 100)		
MenC hSBA ≥ 1:4	100 (92 to 100)	100 (88 to 100)		
MenW hSBA ≥ 1:4 (N=41, 29)	100 (91 to 100)	100 (88 to 100)		
MenY hSBA ≥ 1:4	100 (92 to 100)	100 (88 to 100)		

MenA hSBA ≥ 1:8	100 (92 to 100)	100 (88 to 100)		
MenC hSBA ≥ 1:8	100 (92 to 100)	100 (88 to 100)		
MenW hSBA ≥ 1:8 (N=41, 29)	100 (91 to 100)	100 (88 to 100)		
MenY hSBA ≥ 1:8	100 (92 to 100)	100 (88 to 100)		

Statistical analyses

No statistical analyses for this end point

Secondary: 7. Percentages of Subjects With hSBA Titers≥ 1:4 and ≥ 1:8 in Subjects After a Booster Dose of MenACWY-CRM Conjugate Vaccine

End point title	7. Percentages of Subjects With hSBA Titers≥ 1:4 and ≥ 1:8 in Subjects After a Booster Dose of MenACWY-CRM Conjugate Vaccine[8]

End point description:

Persistence of immune response at two years following administration of one dose of MenACWY-CRM conjugate vaccine in subjects who previously received one dose of either MenACWY-CRM conjugate or licensed comparator vaccine, as measured by hSBA titers≥ 1:4 and ≥ 1:8 against N meningitidis serogroups A, C, W and Y.
Analysis was done on PP post booster persistence population - subjects who provided one evaluable serum sample at baseline at any visit (3 years and 5 years) and had no major protocol deviations, whose assay result was available for at least one serogroup, and had no major protocol deviations as defined prior to analysis.

End point type	Secondary

End point timeframe:

2 years post booster vaccination

Notes:

[8] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: statistical analyses not applicable for this endpoint.

End point values	MenACWY-CRM/MenACWY-CRM	Licensed Comparator /MenACWY-CRM		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	44	31		
Units: percentages of subjects				
number (confidence interval 95%)				
MenA hSBA ≥ 1:4	77 (62 to 89)	87 (70 to 96)		
MenA hSBA ≥ 1:8	77 (62 to 89)	77 (59 to 90)		
MenC hSBA ≥ 1:4	95 (85 to 99)	97 (83 to 100)		
MenC hSBA ≥ 1:8	95 (85 to 99)	87 (70 to 96)		
MenW hSBA ≥ 1:4	100 (92 to 100)	97 (83 to 100)		
MenW hSBA ≥ 1:8	100 (92 to 100)	97 (83 to 100)		
MenY hSBA ≥ 1:4	98 (88 to 100)	94 (79 to 99)		
MenY hSBA ≥ 1:8	95 (85 to 99)	94 (79 to 99)		

Statistical analyses

No statistical analyses for this end point

Secondary: 8. Persistence of hSBA Geometric Mean Titers (GMTs) in Subjects After a Booster Dose of MenACWY-CRM Conjugate Vaccine

End point title	8. Persistence of hSBA Geometric Mean Titers (GMTs) in Subjects After a Booster Dose of MenACWY-CRM Conjugate Vaccine[9]

End point description:

Persistence of immune response at two years following administration of one dose of MenACWY-CRM conjugate vaccine in subjects who previously received one dose of either MenACWY-CRM conjugate or licensed comparator vaccine, as measured by hSBA GMTs against N meningitidis serogroups A, C, W and Y.
Analysis was done on PP post booster persistence population - subjects who provided one evaluable serum sample at baseline at any visit (3 years and 5 years) and had no major protocol deviations, whose assay result was available for at least one serogroup, and had no major protocol deviations as defined prior to analysis.

End point type	Secondary

End point timeframe:

One month and 2 years post booster vaccination

Notes:

[9] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: statistical analyses not applicable for this endpoint.

End point values	MenACWY-CRM/MenACWY-CRM	Licensed Comparator /MenACWY-CRM		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	42	30		
Units: Geometric Mean Titers				
geometric mean (confidence interval 95%)				
MenA (one month post booster)	326 (215 to 494)	390 (248 to 614)		
MenA (2 years post booster)	22 (12 to 41)	20 (10 to 39)		
MenC (one month post booster)(N=41,29)	597 (352 to 1014)	477 (268 to 849)		
MenC (2 years post booster)(N=41,29)	124 (62 to 250)	61 (29 to 132)		
MenW (one month post booster)	673 (398 to 1137)	1111 (631 to 1956)		
MenW (2 years post booster)	93 (58 to 148)	110 (67 to 183)		
MenY (one month post booster)	532 (300 to 942)	454 (243 to 846)		
MenY (2 years post booster)	55 (30 to 101)	46 (24 to 89)		

Statistical analyses

No statistical analyses for this end point

Secondary: 9. Number of Subjects Reporting Solicited Local and Systemic Adverse Events

End point title	9. Number of Subjects Reporting Solicited Local and Systemic Adverse Events

End point description:

Safety was assessed as the number of subjects who had previously been vaccinated in the parent study with MenACWY-CRM or licensed comparator who reported solicited local and systemic adverse events within 7 days after the administration of a booster dose of MenACWY-CRM conjugate vaccine at 3 year time point.

End point type	Secondary

End point timeframe:

Day 1 to Day 7

End point values	MenACWY-CRM/MenACWY-CRM (Overall Safety)	Licensed Comparator /MenACWY-CRM (Overall Safety)		
Subject group type	Subject analysis set	Subject analysis set		
Number of subjects analysed	83	77		
Units: Subjects				
Any Local	40	40		
Injection site pain	37	37		
Injection site erythema	6	7		
Injection site induration	9	4		
Any systemic	41	39		
Chills	9	2		
Nausea	9	8		
Malaise	4	8		
Headache	21	21		
Myalgia	30	26		
Arthralgia	6	7		
Rash	0	0		
Fever (>= 38C)	2	0		
Others	15	9		
Stayed home	2	1		
Analgesic Antipyretic	14	9		

Statistical analyses

No statistical analyses for this end point

Secondary: 10. Number of Subjects With New Medical Diagnoses of Chronic Diseases, After One Dose of Either MenACWY-CRM Conjugate Vaccine or Licensed Comparator

End point title	10. Number of Subjects With New Medical Diagnoses of Chronic Diseases, After One Dose of Either MenACWY-CRM Conjugate Vaccine or Licensed Comparator

End point description:

Safety was assessed in terms of number of subjects with new diagnoses of chronic diseases, among subjects who had previously received at least one dose of either MenACWY-CRM conjugate vaccine or licensed comparator vaccine.

End point type	Secondary

End point timeframe:

Day 1 to 5 years

End point values	Licensed Comparator (Overall Safety)	MenACWY-CRM/MenACWY-CRM (Overall Safety)	MenACWY-CRM (Overall Safety)	Licensed Comparator /MenACWY-CRM (Overall Safety)
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	Subject analysis set
Number of subjects analysed	284	192	83	77
Units: Subjects				
Circulatory system - 21 months (N=278, 192, 0, 0)	1	0	0	0
Circulatory system -3 Years (N=284, 178, 83, 77)	0	0	1	0
Circulatory system - 5 Years (N=131, 76, 44, 31)	0	0	0	0
Digestive system- 21 months (N=278, 192, 0, 0)	4	1	0	0
Digestive system- 3 years(N=284, 178, 83, 77)	1	0	2	0
Digestive system- 5 years(N=131, 76, 44, 31)	3	1	0	0
Congenital anomalies - 21 months(N=278, 192, 0, 0)	0	0	0	0
Congenital anomalies - 3 years(N=284, 178, 83, 77)	0	1	0	0
Congenital anomalies - 5 years(N=131, 76, 44, 31)	0	0	0	0
Endoc. nutri. metab. imm. 21 months(N=278,192,0,0)	2	0	0	0
Endoc. nutri. metab. imm. 3 years(N=284,178,83,77)	0	0	0	0

Endoc. nutri. metab. imm. 5 years (N=131,76,44,31)	2	1	0	0
Fact. influ. hlth. stat. 21 months(N=278,192,0,0)	0	1	0	0
Fact. influ. hlth. stat. 3 years(N=284,178,83,77)	0	0	1	0
Fact. influ. hlth. stat. 5 years(N=131, 76, 44, 31	1	0	0	0
Mental disorders - 21 Months(N=278, 192, 0, 0)	8	5	0	0
Mental disorders - 3 years(N=284, 178, 83, 77)	10	6	7	4
Mental disorders - 5 years(N=131, 76, 44, 31)	9	5	2	2
Muscul. sys. conn. tiss. 21 Months(N=278,192,0,0)	0	0	0	0
Muscul. sys. conn. tiss. 3 years(N=284,178,83,77)	1	3	0	1
Muscul. sys. conn. tiss. 5 years(N=131,76,44,31)	0	0	0	0
Nervous syst. sense org. 21 Months(N=278,192,0,0)	0	2	0	0
Nervous syst. sense org. 3 years(N=284,178,83,77)	2	0	1	1
Nervous syst. sense org. 5 years(N=131,76,44,31)	3	0	2	0
Pregnancy, childb. puerp. 21 Months(N=278,192,0,0)	0	0	0	0
Pregnancy, childb. puerp. 3 years(N=284,178,83,77)	0	0	0	0
Pregnancy, childb. puerp. 5 years(N=131,76,44,31)	1	0	0	0
Respiratory system - 21 Months (N=278, 192, 0, 0)	7	3	0	0
Respiratory system - 3 years(N=284, 178, 83, 77)	5	1	5	3
Respiratory system - 5 years(N=131, 76, 44, 31)	7	2	1	0
Skin and subcut. tiss. - 21 Months (N=278,192,0,0)	0	1	0	0
Skin and subcut. tiss. - 3 years(N=284,178,83,77)	1	2	0	1
Skin and subcut. tiss. - 5 years(N=131,76,44,31)	2	2	0	0
Symptoms, signs, ill-def. 21 months(N=278,192,0,0)	0	0	0	0
Symptoms, signs, ill-def. 3 years(N=284,178,83,77)	2	0	1	1
Symptoms, signs, ill-def. 5 years(N=131,76,44,31)	4	3	0	1
Genitourinary system - 21 months (N=278,192,0,0)	1	0	0	0
Genitourinary system - 3 years(N=284, 178, 83, 77)	0	0	0	0
Genitourinary system - 5 years(N=131, 76, 44, 31)	3	0	1	0
Injury and poisoning- 21 months (N=0,0,0,0)	0	0	0	0
Injury and poisoning- 3 Years (N= 131,76, 107,44)	2	0	1	0

Statistical analyses

No statistical analyses for this end point

Secondary: 11. Number of Subjects Who Reported Medically Attended Adverse Events, After One Dose of Either MenACWY-CRM Conjugate or Licensed Comparator Vaccine

End point title	11. Number of Subjects Who Reported Medically Attended Adverse Events, After One Dose of Either MenACWY-CRM Conjugate or Licensed Comparator Vaccine[10]

End point description:

Safety was assessed in terms of number of subjects with medically attended AEs within 28 days after vaccination at the 5 year time point with one dose of either MenACWY-CRM conjugate or licensed comparator vaccine.
Post-vaccination Safety follow-up population: Subjects in the MenACWY and Menactra groups who were vaccinated at visit 6 with MenACWY or Menactra booster per ACIP recommendation and followed up to 28 days for safety.

End point type	Secondary

End point timeframe:

28 days postvaccination

Notes:

[10] - The end point is not reporting statistics for all the arms in the baseline period. It is expected all the baseline period arms will be reported on when providing values for an end point on the baseline period.
Justification: statistical analyses not applicable for this endpoint.

End point values	MenACWY-CRM	Licensed Comparator	Naive	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	82	53	81	
Units: Subjects				
Ear and Labyrinth Disorders- Cerumen Impaction	0	1	0	
Gastrointestinal Disorders - Stomatitis	1	0	0	
Infections & Infestations - Acarodermatitis	0	0	1	
Infections & Infestations -Acute Sinusitis	1	0	0	
Infections & Infestations -Chlamydial Infection	0	0	1	
Infections & Infestations- Genital Herpes	0	0	1	
Infections & Inf-Genitourinary Chlamydia Infection	1	0	0	
Infections & Infestations- Herpes Zoster	0	0	1	
Infections & Infestations - Oral Herpes	1	0	0	
Infections & Infestations - Sinusitis	0	0	3	
Infections & Infestations - Urinary Tract Infec	0	0	1	
Injury and Poisoning - Arthropod Bite	0	0	1	
Investigation - Tuberculin Test	0	0	1	

Skin & Subcutaneous Tissue Dis-Dermatitis Contact	0	1	0	

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Solicited and unsolicited AEs reported up to 1 month after vaccination. SAE occurring within 24 hours from last blood draw or within 28 days of vaccination.

Adverse event reporting additional description:

Subjects in the MenACWY, Licensed comparator and naive groups were followed for 1 month for unsolicited reactions, if vaccinated at 5 year visit. For the booster groups, solicited AEs were collected for 7 days post booster; unsolicited AEs were collected for 1 month post booster.

Assessment type	Non-systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	15.1

Reporting groups

Reporting group title	Licensed Comparator /MenACWY-CRM

Reporting group description:

Subjects received one primary dose of quadrivalent meningococcal diphtheria toxoid conjugate vaccine in the parent study and one booster dose of MenACWY-CRM conjugate vaccine at 3 years after primary vaccination.

Reporting group title	MenACWY-CRM/MenACWY-CRM

Reporting group description:

Subjects received one primary dose of the MenACWY-CRM conjugate vaccine in the parent study and one booster dose of MenACWY-CRM conjugate vaccine at 3 years after primary vaccination.

Reporting group title	Licensed Comparator

Reporting group description:

Subjects received one primary dose of a quadrivalent meningococcal conjugate vaccine with diphtheria toxoid as the protein carrier in the parent study and were followed for persistence in the present study at 5 years postvaccination.

Reporting group title	Naive

Reporting group description:

Subjects who were age-matched to the other study groups and had not received any previous meningococcal vaccinations.
One dose MenACWY-CRM conjugate vaccine or Licensed comparator was offered to naive subjects after blood draw at end.

Reporting group title	MenACWY-CRM

Reporting group description:

Subjects received one primary dose of MenACWY-CRM conjugate vaccine in the parent study and were followed for persistence in the present study.

Serious adverse events	Licensed Comparator /MenACWY-CRM	MenACWY-CRM/MenACWY-CRM	Licensed Comparator
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 77 (1.30%)	0 / 83 (0.00%)	1 / 178 (0.56%)
number of deaths (all causes)	0	0	1
number of deaths resulting from adverse events	0	0	0
General disorders and administration site conditions			
Death	Additional description: Another unrelated death occurred after the 3 year visit but before enrollment for the 5 year visit and has already been reported in the 3 years CSR.		

subjects affected / exposed	0 / 77 (0.00%)	0 / 83 (0.00%)	1 / 178 (0.56%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 1
Infections and infestations			
Appendicitis			
subjects affected / exposed	1 / 77 (1.30%)	0 / 83 (0.00%)	0 / 178 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Serious adverse events	Naive	MenACWY-CRM	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
General disorders and administration site conditions			
Death	Additional description: Another unrelated death occurred after the 3 year visit but before enrollment for the 5 year visit and has already been reported in the 3 years CSR.		
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Appendicitis			
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
occurrences causally related to treatment / all	0 / 0	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

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

Non-serious adverse events	Licensed Comparator /MenACWY-CRM	MenACWY-CRM/MenACWY-CRM	Licensed Comparator
Total subjects affected by non-serious adverse events			
subjects affected / exposed	49 / 77 (63.64%)	55 / 83 (66.27%)	0 / 178 (0.00%)
Nervous system disorders			
Headache			
alternative assessment type: Systematic			

subjects affected / exposed	21 / 77 (27.27%)	21 / 83 (25.30%)	0 / 178 (0.00%)
occurrences (all)	29	22	0
General disorders and administration site conditions			
Chills			
alternative assessment type: Systematic			
subjects affected / exposed	2 / 77 (2.60%)	9 / 83 (10.84%)	0 / 178 (0.00%)
occurrences (all)	2	10	0
Injection site induration			
alternative assessment type: Systematic			
subjects affected / exposed	4 / 77 (5.19%)	9 / 83 (10.84%)	0 / 178 (0.00%)
occurrences (all)	4	9	0
Injection site pain			
alternative assessment type: Systematic			
subjects affected / exposed	37 / 77 (48.05%)	37 / 83 (44.58%)	0 / 178 (0.00%)
occurrences (all)	38	38	0
Malaise			
alternative assessment type: Systematic			
subjects affected / exposed	8 / 77 (10.39%)	4 / 83 (4.82%)	0 / 178 (0.00%)
occurrences (all)	8	4	0
Injection site erythema			
alternative assessment type: Systematic			
subjects affected / exposed	7 / 77 (9.09%)	6 / 83 (7.23%)	0 / 178 (0.00%)
occurrences (all)	7	6	0
Gastrointestinal disorders			
Nausea			
alternative assessment type: Systematic			
subjects affected / exposed	8 / 77 (10.39%)	9 / 83 (10.84%)	0 / 178 (0.00%)
occurrences (all)	8	10	0
Musculoskeletal and connective tissue disorders			
Arthralgia			
alternative assessment type: Systematic			
subjects affected / exposed	7 / 77 (9.09%)	6 / 83 (7.23%)	0 / 178 (0.00%)
occurrences (all)	7	7	0
Myalgia			
alternative assessment type:			

Systematic			
subjects affected / exposed	26 / 77 (33.77%)	30 / 83 (36.14%)	0 / 178 (0.00%)
occurrences (all)	28	33	0

Non-serious adverse events	Naive	MenACWY-CRM	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
Nervous system disorders			
Headache			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
occurrences (all)	0	0	
General disorders and administration site conditions			
Chills			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
occurrences (all)	0	0	
Injection site induration			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
occurrences (all)	0	0	
Injection site pain			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
occurrences (all)	0	0	
Malaise			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
occurrences (all)	0	0	
Injection site erythema			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
occurrences (all)	0	0	
Gastrointestinal disorders			

Nausea			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
occurrences (all)	0	0	
Musculoskeletal and connective tissue disorders			
Arthralgia			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
occurrences (all)	0	0	
Myalgia			
alternative assessment type: Systematic			
subjects affected / exposed	0 / 343 (0.00%)	0 / 284 (0.00%)	
occurrences (all)	0	0	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
09 February 2010	Amendment No. 1: The primary rationale for this amendment was to allow for evaluation of antibody response at 1 month, 2 years, and 4 years after one dose of MenACWY in subjects who had previously received one dose of Menactra or MenACWY vaccine.
09 June 2010	Amendment No. 2: Updated several of the enrollment windows so as to increase the flexibility of enrollment; several other minor corrections and clarifications to the protocol.
28 February 2012	Amendment No. 3: - The study design was updated to remove the year 7 assessment. - Number of naive subjects was reduced from 400 to 300. - As per ACIP recommendation, subjects who received the first dose of MenACWY-CRM and Menactra® (MenACWY and Menactra groups) at the age of 11-15 years in the V59P13 study were offered a dose of either MenACWY-CRM or Menactra® after the blood draw at 5 years. - MenACWY-CRM was added as alternative vaccine to Menactra®, to be offered at the end of the study to subjects enrolled in Naive, MenACWY and Menactra groups.
18 June 2012	Amendment No. 4: Added a new requirement for a 28 day safety monitoring period after receipt of the optional dose of meningococcal conjugate vaccine at the 5 year time point.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported

Online references

http://www.ncbi.nlm.nih.gov/pubmed/21339701