Clinical trial results:
A phase III, randomized, controlled, observer-blind study to demonstrate effectiveness, immunogenicity and safety of GSK's meningococcal Group B and combined ABCWY vaccines when administered to healthy adolescents and young adults.

Summary

EudraCT number	2019-001666-15
Trial protocol	FI CZ EE Outside EU/EEA
Global end of trial date	13 September 2022

Results information

Result version number	v1
This version publication date	27 March 2023
First version publication date	27 March 2023

Trial information

Trial identification

Sponsor protocol code	205416

Additional study identifiers

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

Notes:

Sponsors

Sponsor organisation name	GlaxoSmithKline
Sponsor organisation address	Rue de l'Institut, 89, Rixensart, Belgium, 1330
Public contact	GSK Response Center, GlaxoSmithKline, 044 8664357343, GSKClinicalSupportHD@gsk.com
Scientific contact	GSK Response Center, GlaxoSmithKline, 044 8664357343, 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?	Yes

Notes:

Results analysis stage

Analysis stage	Interim
Date of interim/final analysis	24 October 2022
Is this the analysis of the primary completion data?	Yes
Primary completion date	13 September 2022
Global end of trial reached?	Yes
Global end of trial date	13 September 2022
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

•Effectiveness of rMenB+OMV NZ and MenABCWY vaccines
- against a panel of N.meningitidis serogroup B strains at 1 month(M) after the 3 and 2-dose rMenB+OMV NZ series and last MenABCWY dose when compared to 1 M after MenACWY dose
- As the percentages of subjects whose sera kill ≥70% of strains tested using enc-hSBA at 1 M after the 3 and 2-dose rMenB+OMV NZ series and 1 M after last MenABCWY dose
•Lot-lot consistency of immune responses of 3 lots of MenACWY component of MenABCWY vaccine,as measured by hSBA GMTs at 1 M after last dose
•Immunological non-inferiority: MenABCWY versus MenACWY as measured by percentages of subjects achieving a 4-fold rise in hSBA titers at 1 M after last MenABCWY dose and 1 M after MenACWY dose
•Effectiveness non-inferiority: MenABCWY versus rMenB+OMV NZ in terms of percentage of samples with bactericidal serum activity at 1 M after last ABCWY dose and 1 M after 3 or 2 dose rMenB+OMV series
•Safety and reactogenicity of MenB,MenABCWY and MenACWY vaccines

Protection of trial subjects:

Vaccine administration is to be preceded by a review of the participants medical history (including previous vaccination and possible occurrence of undesirable events) and a general physical examination at the first visit and symptom-directed physical examination before subsequent vaccinations. Protocol procedures including blood sampling will be done by a qualified healthcare professional.
Vaccines/products will be administered only to eligible participants who had no contraindications to any components of the vaccines/products. Participants will be followed-up for 6 months after third vaccination/product administration.
The participants will be observed closely for at least 30 minutes following the administration of the vaccine(s)/product(s), with appropriate medical treatment readily available in case of anaphylaxis and/or syncope.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	14 August 2020
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	Australia: 295
Country: Number of subjects enrolled	Canada: 229
Country: Number of subjects enrolled	Czechia: 750
Country: Number of subjects enrolled	Estonia: 127
Country: Number of subjects enrolled	Finland: 819
Country: Number of subjects enrolled	Turkey: 333
Country: Number of subjects enrolled	United States: 1085

Worldwide total number of subjects	3638
EEA total number of subjects	1696

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)	702
Adolescents (12-17 years)	1459
Adults (18-64 years)	1477
From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

As per the pre-specified analysis of immunogenicity outcome measures (lot-to-lot consistency) would be conducted for each ABCWY lot (ABCWY-1 Group, ABCWY-2 Group, and ABCWY-3 Group), and the participant flow, baseline characteristics, and adverse event reports were analyzed for the ABCWY pooled group.

Pre-assignment

Screening details:

Out of 3657 participants enrolled, 3638 participants were exposed and started the study.
19 participants did not receive vaccination since they did not meet the eligibility criteria.
In the Population of Trial Subjects section under Trial Information, data is provided for the participants who enrolled in the study as exposed subjects.

Period 1

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

Blinding implementation details:

This is an Observer-blinded study. Recipients & study evaluators were unaware of the vaccine administered.

Arms

Are arms mutually exclusive?	Yes
Arm title	MenB_0_2_6 Group

Arm description:

Participants received 3 doses of rMenB+OMV NZ vaccine at Day 1, Day 61 and Day 181 and 1 dose of MenACWY vaccine at Day 211.

Arm type	Experimental
Investigational medicinal product name	Meningococcal Group B Vaccine (rMenB+OMV NZ)
Investigational medicinal product code	
Other name	Bexsero
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

3 doses of rMenB+OMV NZ vaccine at Day 1, Day 61 and Day 181

Investigational medicinal product name	Meningococcal Groups A, C, W and Y Conjugate Vaccine (MenACWY)
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:

1 dose of MenACWY vaccine at Day 211

Arm title	MenB_0_6 Group

Arm description:

Participants received 2 doses of rMenB+OMV NZ vaccine at Day 1, and Day 181, 1 dose of MenACWY vaccine at Day 61 and 1 dose of Placebo at Day 211.

Arm type	Experimental

Investigational medicinal product name	Meningococcal Group B Vaccine (rMenB+OMV NZ)
Investigational medicinal product code	
Other name	Bexsero
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

2 doses of rMenB+OMV NZ vaccine at Day 1 and Day 181

Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

1 dose of Placebo at Day 211

Investigational medicinal product name	Meningococcal Groups A, C, W and Y Conjugate Vaccine (MenACWY)
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:

1 dose of MenACWY vaccine at Day 61

Arm title	ABCWY_Pooled

Arm description:

Participants received 2 doses of either MenABCWY Lot 1, Lot 2, or Lot 3 vaccine on Day 1 and Day 181 and 2 doses of placebo on Day 61 and Day 211. For the effectiveness analysis of the MenABCWY vaccine against rMenB+OMV and MenACWY vaccines, participants from the ABCWY-1, ABCWY-2, and ABCWY-3 groups were pooled into a single lot.

Arm type	Experimental
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

2 dose of Placebo at Day 61 and Day 211

Investigational medicinal product name	Combined Meningococcal Groups A, B, C, W and Y vaccine (MenABCWY)
Investigational medicinal product code	MenABCWY
Other name	
Pharmaceutical forms	Powder and suspension for suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

2 doses of MenABCWY vaccine at Day 1 and Day 181

Arm title	ACWY Group

Arm description:

Participants received 1 dose of MenACWY vaccine at Day 1, 1 dose of placebo at Day 61 and 2 doses of rMenB+OMV NZ vaccine at Day 181 and Day 211.

Arm type	Active comparator

Investigational medicinal product name	Meningococcal Groups A, C, W and Y Conjugate Vaccine (MenACWY)
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:

1 dose of MenACWY vaccine at Day 1

Investigational medicinal product name	Meningococcal Group B Vaccine (rMenB+OMV NZ)
Investigational medicinal product code	
Other name	Bexsero
Pharmaceutical forms	Suspension for injection
Routes of administration	Intramuscular use

Dosage and administration details:

2 doses of rMenB+OMV NZ vaccine at Day 181 and Day 211

Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intramuscular use

Dosage and administration details:

1 dose of Placebo at Day 61

Notes:

[1] - The roles blinded appear to be inconsistent with a double blind trial.

Justification: This is an Observer-blinded study. Recipients & study evaluators were unaware of the vaccine administered.

Number of subjects in period 1	MenB_0_2_6 Group	MenB_0_6 Group	ABCWY_Pooled
Started	897	906	1657
Completed	797	811	1497
Not completed	100	95	160
Consent withdrawn by subject	46	38	54
Adverse event, non-fatal	7	6	11
Not specified	1	-	1
MIGRATED / MOVED FROM THE STUDY AREA	6	7	9
Lost to follow-up	32	36	69
Protocol deviation	8	8	16

Number of subjects in period 1	ACWY Group
Started	178
Completed	163
Not completed	15
Consent withdrawn by subject	7
Adverse event, non-fatal	1
Not specified	1
MIGRATED / MOVED FROM THE STUDY AREA	1
Lost to follow-up	4

Protocol deviation	1

Baseline characteristics

Reporting groups	
Reporting group title	MenB_0_2_6 Group
Reporting group description:	
Participants received 3 doses of rMenB+OMV NZ vaccine at Day 1, Day 61 and Day 181 and 1 dose of MenACWY vaccine at Day 211.	
Reporting group title	MenB_0_6 Group
Reporting group description:	
Participants received 2 doses of rMenB+OMV NZ vaccine at Day 1, and Day 181, 1 dose of MenACWY vaccine at Day 61 and 1 dose of Placebo at Day 211.	
Reporting group title	ABCWY_Pooled
Reporting group description:	
Participants received 2 doses of either MenABCWY Lot 1, Lot 2, or Lot 3 vaccine on Day 1 and Day 181 and 2 doses of placebo on Day 61 and Day 211. For the effectiveness analysis of the MenABCWY vaccine against rMenB+OMV and MenACWY vaccines, participants from the ABCWY-1, ABCWY-2, and ABCWY-3 groups were pooled into a single lot.	
Reporting group title	ACWY Group
Reporting group description:	
Participants received 1 dose of MenACWY vaccine at Day 1, 1 dose of placebo at Day 61 and 2 doses of rMenB+OMV NZ vaccine at Day 181 and Day 211.	

Reporting group values	MenB_0_2_6 Group	MenB_0_6 Group	ABCWY_Pooled
Number of subjects	897	906	1657
Age categorical 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)	183	172	320
Adolescents (12-17 years)	349	368	666
Adults (18-64 years)	365	366	671
From 65-84 years	0	0	0
85 years and over	0	0	0
Age continuous Units: years			
arithmetic mean	16.5	16.5	16.5
standard deviation	± 4.7	± 4.7	± 4.7
Sex: Female, Male Units: Participants			
Female	464	446	933
Male	433	460	724
Race/Ethnicity, Customized Units: Subjects			
American Indian or Alaska Native	5	5	3
Asian	43	60	71
Black or African American	33	29	59
Native Hawaiian or Other Pacific Islander	3	1	3

Other	17	20	29
White	796	791	1492

Age, Continuous			
Units: YEARS			
arithmetic mean	16.5	16.5	16.5
standard deviation	± 4.7	± 4.7	± 4.7

Reporting group values	ACWY Group	Total	
Number of subjects	178	3638	
Age categorical			
Units: Subjects			
In utero	0	0	
Preterm newborn infants (gestational age < 37 wks)	0	0	
Newborns (0-27 days)	0	0	
Infants and toddlers (28 days-23 months)	0	0	
Children (2-11 years)	27	702	
Adolescents (12-17 years)	76	1459	
Adults (18-64 years)	75	1477	
From 65-84 years	0	0	
85 years and over	0	0	
Age continuous			
Units: years			
arithmetic mean	16.9		
standard deviation	± 4.6	-	
Sex: Female, Male			
Units: Participants			
Female	100	1943	
Male	78	1695	
Race/Ethnicity, Customized			
Units: Subjects			
American Indian or Alaska Native	0	13	
Asian	9	183	
Black or African American	6	127	
Native Hawaiian or Other Pacific Islander	0	7	
Other	1	67	
White	162	3241	
Age, Continuous			
Units: YEARS			
arithmetic mean	16.9		
standard deviation	± 4.6	-	

End points

End points reporting groups

Reporting group title	MenB_0_2_6 Group
Reporting group description:	
Participants received 3 doses of rMenB+OMV NZ vaccine at Day 1, Day 61 and Day 181 and 1 dose of MenACWY vaccine at Day 211.	
Reporting group title	MenB_0_6 Group
Reporting group description:	
Participants received 2 doses of rMenB+OMV NZ vaccine at Day 1, and Day 181, 1 dose of MenACWY vaccine at Day 61 and 1 dose of Placebo at Day 211.	
Reporting group title	ABCWY_Pooled
Reporting group description:	
Participants received 2 doses of either MenABCWY Lot 1, Lot 2, or Lot 3 vaccine on Day 1 and Day 181 and 2 doses of placebo on Day 61 and Day 211. For the effectiveness analysis of the MenABCWY vaccine against rMenB+OMV and MenACWY vaccines, participants from the ABCWY-1, ABCWY-2, and ABCWY-3 groups were pooled into a single lot.	
Reporting group title	ACWY Group
Reporting group description:	
Participants received 1 dose of MenACWY vaccine at Day 1, 1 dose of placebo at Day 61 and 2 doses of rMenB+OMV NZ vaccine at Day 181 and Day 211.	
Subject analysis set title	ABCWY-1 Group
Subject analysis set type	Per protocol
Subject analysis set description:	
Participants received 2 doses of MenABCWY lot 1 vaccine at Day 1 and Day 181 and 2 doses of placebo at Day 61 and Day 211.	
Subject analysis set title	ABCWY-2 Group
Subject analysis set type	Per protocol
Subject analysis set description:	
Participants received 2 doses of MenABCWY lot 2 vaccine at Day 1 and Day 181 and 2 doses of placebo at Day 61 and Day 211.	
Subject analysis set title	ABCWY-3 Group
Subject analysis set type	Per protocol
Subject analysis set description:	
Participants received 2 doses of MenABCWY lot 3 vaccine at Day 1 and Day 181 and 2 doses of placebo at Day 61 and Day 211.	

Primary: Percentage of samples without bactericidal serum activity against each of the endemic US N. meningitidis serogroup B strains at 1 month after the 3-dose (0,2,6-M), 2-dose(0,6-M) vaccination schedule of rMenB+OMV and 1 dose of MenACWY

End point title	Percentage of samples without bactericidal serum activity against each of the endemic US N. meningitidis serogroup B strains at 1 month after the 3-dose (0,2,6-M), 2-dose(0,6-M) vaccination schedule of rMenB+OMV and 1 dose of MenACWY[1]
End point description:	
The effectiveness (test-based) of rMenB+OMV vaccine at 1 month after the 3 doses in MenB_0_2_6 group and 1 month after the 2 dose schedule in MenB_0_6 group when compared to one dose of MenACWY vaccination in ACWY group, against a panel of N. meningitidis serogroup B strains was measured in terms of percentage of samples without bactericidal activity using endogenous complement human Serum Bactericidal Assay (enc-hSBA), which provides a qualitative assessment (yes/no) of the presence of sufficient bactericidal antibodies in human sera to kill a meningococcal strain at a specific dilution of 1:4. Analysis was performed on blood samples collectected from Per Protocol Set (PPS) ,which included all participants who received at least 1 dose of the study treatment to which they were randomized and have post-vaccination data at specified timepoints and did not have any protocol deviations that lead to exclusion from the PPS.	
End point type	Primary

End point timeframe:

At 1 month after vaccination schedule (i.e., Day 211 for MenB_0_2_6 group [3-dose schedule] and MenB_0_6 group, and Day 31 for ACWY group)

Notes:

[1] - 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: As specified in the Protocol, the analysis assesses the effectiveness of the rMenB+OMV vaccine compared to one dose of MenACWY vaccination in the ACWY group.

End point values	MenB_0_2_6 Group	MenB_0_6 Group	ACWY Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	740	751	147	
Units: Percentage of blood samples				
number (not applicable)				
Number of Blood samples (N=25596,26142,4374)	13.3	14.4	79	

Statistical analyses

Statistical analysis title	Statistical analysis 1

Statistical analysis description:

To demonstrate the effectiveness of the rMenB+OMV NZ vaccine against a randomly selected panel of endemic US N. meningitidis serogroup B invasive disease strains as measured by bactericidal activity using enc-hSBA at 1 month after the 3-dose (0,2,6-months) schedule in MenB_0_2_6 group when compared to 1 month after the MenACWY dose in the ACWY group.

Comparison groups	MenB_0_2_6 Group v ACWY Group
Number of subjects included in analysis	887
Analysis specification	Pre-specified
Analysis type	other[2]
Parameter estimate	VE (Vaccine Effectiveness)
Point estimate	83.2
Confidence interval	
level	Other: 97.5 %
sides	2-sided
lower limit	81.9
upper limit	84.4

Notes:

[2] - Effectiveness of rMenB+OMV NZ vaccine is demonstrated if the LL of the 2-sided 97.5% CI for Vaccine Effectiveness (VE) against the selected strain panel between the MenB_0_2_6 and the ACWY groups is above 65%. VE is defined as 1- Risk Ratio (RR) = (1- percentage of samples without bactericidal serum activity at 1:4 dilution in MenB group / percentage of samples without bactericidal serum activity at 1:4 dilution in the ACWY group) x100 percentage.

Statistical analysis title	Statistical analysis 2

Statistical analysis description:

To demonstrate the effectiveness of the rMenB+OMV NZ vaccine against a randomly selected panel of endemic US N. meningitidis serogroup B invasive disease strains as measured by bactericidal activity using enc-hSBA at 1 month after the 2-dose (0,6-M) schedule in MenB_0_6 group when compared to 1 month after the MenACWY dose in the ACWY group.

Comparison groups	MenB_0_6 Group v ACWY Group

Number of subjects included in analysis	898
Analysis specification	Pre-specified
Analysis type	other[3]
Parameter estimate	VE
Point estimate	81.8
Confidence interval	
level	Other: 97.5 %
sides	2-sided
lower limit	80.4
upper limit	83.1

Notes:

[3] - Effectiveness of rMenB+OMV NZ vaccine is demonstrated if the LL of the 2-sided 97.5% CI for VE against the selected strain panel between the MenB_0_ 6 and the ACWY groups is above 65%.
VE is defined as 1- RR = (1- percentage of samples without bactericidal serum activity at 1:4 dilution in MenB group / percentage of samples without bactericidal serum activity at 1:4 dilution in the ACWY group) x100 percentage.

Primary: Percentage of samples without bactericidal serum activity against each of the endemic US N. meningitidis serogroup B strains at 1 month after the 2-dose (0,2-M) vaccination schedule of rMenB+OMV and 1 dose of MenACWY

End point title	Percentage of samples without bactericidal serum activity against each of the endemic US N. meningitidis serogroup B strains at 1 month after the 2-dose (0,2-M) vaccination schedule of rMenB+OMV and 1 dose of MenACWY[4]

End point description:

The effectiveness (test-based) of rMenB+OMV vaccine at 1 month after the 2 doses in MenB_0_2_6 group when compared to one dose of MenACWY vaccination in ACWY group, against a panel of N. meningitidis serogroup B strains was measured in terms of percentage of samples without bactericidal activity using endogenous complement human Serum Bactericidal Assay (enc-hSBA), which provides a qualitative assessment (yes/no) of the presence of sufficient bactericidal antibodies in human sera to kill a meningococcal strain at a specific dilution of 1:4. Analysis was performed on blood samples collectected from Per Protocol Set (PPS) ,which included all participants who received at least 1 dose of the study treatment to which they were randomized and have post-vaccination data at specified timepoints and did not have any protocol deviations that lead to exclusion from the PPS.

End point type	Primary

End point timeframe:

At 1 month after vaccination schedule (i.e., Day 91 for the MenB_0_2_6 group [2-dose schedule] and Day 31 for ACWY group)

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: As specified in the Protocol, the analysis assesses the effectiveness of the rMenB+OMV vaccine compared to one dose of MenACWY vaccination in the ACWY group.

End point values	MenB_0_2_6 Group	ACWY Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	740	147		
Units: Percentage of blood samples				
number (not applicable)				
Number of Blood samples (N=27569,4374)	16.8	79		

Statistical analyses

Statistical analysis title	Statistical analysis 1

Statistical analysis description:

To demonstrate the effectiveness of the rMenB+OMV NZ vaccine against a randomly selected panel of endemic US N. meningitidis serogroup B invasive disease strains as measured by bactericidal activity using enc-hSBA at 1 month after the 2-dose (0,2-M) schedule in MenB_0_2_6 group when compared to 1 month after the MenACWY dose in the ACWY group.

Comparison groups	MenB_0_2_6 Group v ACWY Group
Number of subjects included in analysis	887
Analysis specification	Pre-specified
Analysis type	other[5]
Parameter estimate	VE
Point estimate	78.7
Confidence interval	
level	Other: 97.5 %
sides	2-sided
lower limit	77.2
upper limit	80.1

Notes:

[5] - Effectiveness of rMenB+OMV NZ vaccine is demonstrated if the LL of the 2-sided 97.5% CI for VE against the selected strain panel between the MenB_0_2_6 and the ACWY groups is above 65%.
VE is defined as 1- RR = (1- percentage of samples without bactericidal serum activity at 1:4 dilution in MenB group / percentage of samples without bactericidal serum activity at 1:4 dilution in the ACWY group) x100 percentage.

Primary: Percentage of participants whose sera kill >=70% of the strains tested using enc-hSBA at 1 month after the 2-dose (0,2-M) schedule of rMenB+OMV

End point title	Percentage of participants whose sera kill >=70% of the strains tested using enc-hSBA at 1 month after the 2-dose (0,2-M) schedule of rMenB+OMV[6][7]

End point description:

The effectiveness (responder-based) of the rMenB+OMV NZ vaccine was measured in terms of percentage of participants whose sera kill >=70% of the strains tested using enc-hSBA, calculated based on Clopper Pearson method. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment and had post-vaccination effectiveness data.

End point type	Primary

End point timeframe:

At 1 month after vaccination schedule (i.e., Day 91 for the MenB_0_2_6 group [2-dose schedule])

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 this primary endpoint was descriptive i.e. no statistical hypothesis test was performed.
[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: As specified in the Protocol, the analysis assesses the effectiveness of the rMenB+OMV vaccine by assessing the percentages of subjects whose sera kill ≥70% of strains tested.

End point values	MenB_0_2_6 Group			
Subject group type	Reporting group			
Number of subjects analysed	831			
Units: Percentage of participants				
number (confidence interval 97.5%)	84.8 (81.8 to 87.5)			

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of participants whose sera kill >=70% of the strains tested using enc-hSBA at 1 month after the 3-dose (0,2,6-M) schedule of rMenB+OMV and 2-dose(0,6-M) schedule of rMenB+OMV.

End point title	Percentage of participants whose sera kill >=70% of the strains tested using enc-hSBA at 1 month after the 3-dose (0,2,6-M) schedule of rMenB+OMV and 2-dose(0,6-M) schedule of rMenB+OMV.[8][9]

End point description:

The effectiveness (responder-based) of the rMenB+OMV NZ vaccine was measured in terms of percentage of participants whose sera kill >=70% of the strains tested using enc-hSBA, calculated based on Clopper Pearson method. Analysis was performed on the Full Analysis Set (FAS), which included all participants who were randomized, received at least 1 dose of the study treatment and had post-vaccination effectiveness data.

End point type	Primary

End point timeframe:

At 1 month after vaccination schedule (i.e., Day 211 for MenB_0_2_6 group [3-dose schedule] and MenB_0_6 group)

Notes:

[8] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: The analysis of this primary endpoint was descriptive i.e. no statistical hypothesis test was performed.
[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: As specified in the Protocol, the analysis assesses the effectiveness of the rMenB+OMV vaccine by assessing the percentages of subjects whose sera kill ≥70% of strains tested.

End point values	MenB_0_2_6 Group	MenB_0_6 Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	790	813		
Units: Percentage of participants				
number (confidence interval 97.5%)	93.4 (91.2 to 95.2)	89.8 (87.2 to 92)		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of participants with 4-fold rise in hSBA titers against N. meningitidis serogroups A, C, W and Y at 1 month after last MenABCWY vaccination (pooled lots) and MenACWY vaccination (for the ACWY Group), relative to baseline

End point title	Percentage of participants with 4-fold rise in hSBA titers against N. meningitidis serogroups A, C, W and Y at 1 month after last MenABCWY vaccination (pooled lots) and MenACWY

	vaccination (for the ACWY Group), relative to baseline[10][11]

End point description:

The immunogenicity of the MenABCWY vaccine when compared to MenACWY vaccine, in participants without a previous MenACWY vaccination (unprimed), was measured in terms of percentage of participants, achieving a 4-fold rise in hSBA titers against N. meningitidis 4 serogroups (A, C, W, Y). The calculation was based on Clopper Pearson method. Four-fold rise is defined as: If the pre-vaccination hSBA titer is < 4, then post-vaccination hSBA titer should be >= 16 . If the pre-vaccination hSBA titer is >= limit of detection (LOD) but < LL of quantification (LLOQ), then post-vaccination hSBA titer should be >= 4 times the LLOQ. If the pre-vaccination hSBA titer is >= LLOQ, then post-vaccination hSBA titer should be >= 4 times the pre-vaccination hSBA titer, the analysis was performed on PPS. "99999" is used as a placeholder value for the results from ABCWY and ACWY groups since analysis of final results for these two groups is ongoing and will be updated subsequently.

End point type	Primary

End point timeframe:

At 1 month after vaccination schedule (i.e., Day 211 for the ABCWY_Pooled group and Day 31 for the ACWY Group)

Notes:

[10] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: The analysis of this primary endpoint was descriptive i.e. no statistical hypothesis test was performed.
[11] - 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: As specified in the Protocol, the analysis assesses the effectiveness of the rMenB+OMV vaccine compared to one dose of MenACWY vaccination in the ACWY group.

End point values	ABCWY_Pooled	ACWY Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	1196	119		
Units: Percentage of participants				
number (confidence interval 95%)	99999 (99999 to 99999)	99999 (99999 to 99999)		

Statistical analyses

No statistical analyses for this end point

Primary: Geometric mean titers (GMTs) against serogroups A, C, W and Y for each lot (ABCWY-1 Group, ABCWY-2 Group and ABCWY-3 Group) at 1 month after the last vaccination of MenABCWY

End point title	Geometric mean titers (GMTs) against serogroups A, C, W and Y for each lot (ABCWY-1 Group, ABCWY-2 Group and ABCWY-3 Group) at 1 month after the last vaccination of MenABCWY[12]

End point description:

Immune responses of 3 lots of the MenACWY component of the MenABCWY vaccine was measured in terms of hSBA GMTs directed against serogroups A, C, W and Y. Analysis was performed on PPS, which included all participants who received at least 1 dose of the study treatment to which they were randomized and have post-vaccination data at specified timepoints and did not have any protocol deviations that lead to exclusion from the PPS. "99999" is used as a placeholder value for the results from ABCWY groups since the analysis of final results for these groups is ongoing and will be updated subsequently.

End point type	Primary

End point timeframe:

at 1 month after the last vaccination of MenABCWY(Day 211)

Notes:

[12] - 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 final results for the ABCWY groups is ongoing, statistical analysis for this endpoint will be updated subsequently.

End point values	ABCWY-1 Group	ABCWY-2 Group	ABCWY-3 Group	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	448	449	458	
Units: Titers				
geometric mean (confidence interval 95%)	99999 (99999 to 99999)	99999 (99999 to 99999)	99999 (99999 to 99999)	

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of samples without bactericidal serum activity against each of the endemic U.S N. meningitidis serogroup B strains at 1 month after last MenABCWY vaccination (pooled lots) and MenACWY vaccination (for the ACWY Group)

End point title	Percentage of samples without bactericidal serum activity against each of the endemic U.S N. meningitidis serogroup B strains at 1 month after last MenABCWY vaccination (pooled lots) and MenACWY vaccination (for the ACWY Group)[13][14]

End point description:

The effectiveness (test-based) of 2 doses of MenABCWY vaccine when compared to 1 dose of MenACWY vaccine, against a panel of N. meningitidis serogroup B strains was measured in terms of percentage of samples without bactericidal activity using enc-hSBA, which provides a qualitative assessment (yes/no) of the presence of sufficient bactericidal antibodies in human sera to kill a meningococcal strain at a specific dilution of 1:4. Analysis was performed on blood samples collected from PPS, which included all participants who received at least 1 dose of the study treatment to which they were randomized and have post-vaccination data at specified timepoints and did not have any protocol deviations that lead to exclusion from the PPS. "99999" is used as a placeholder value for the results from ABCWY and ACWY groups since the analysis of final results for these two groups is ongoing and will be updated subsequently.

End point type	Primary

End point timeframe:

At 1 month after the vaccination schedule (i.e., Day 211 for the ABCWY_Pooled group and Day 31 for the ACWY group)

Notes:

[13] - 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 final results for the ABCWY and ACWY groups is ongoing, statistical analysis for this endpoint will be updated subsequently.
[14] - 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: As specified in the Protocol, the analysis assesses the effectiveness of the rMenB+OMV vaccine compared to one dose of MenACWY vaccination in the ACWY group.

End point values	ABCWY_Pooled	ACWY Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	1356	147		
Units: Percentage of blood samples				
number (not applicable)				
Number of Blood samples analyzed	99999	99999		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of samples with bactericidal serum activity against each of the endemic U.S N. meningitidis serogroup B strains at 1 month after the last MenABCWY dose (pooled lots) and 2-dose(0,2-M) schedule of rMenB+OMV

End point title	Percentage of samples with bactericidal serum activity against each of the endemic U.S N. meningitidis serogroup B strains at 1 month after the last MenABCWY dose (pooled lots) and 2-dose(0,2-M) schedule of rMenB+OMV[15][16]

End point description:

The effectiveness of the MenABCWY vaccine (0,6-M schedule) when compared to the rMenB+OMV NZ vaccine (0,2-M) was measured in terms of percentage of samples with bactericidal activity using enc-hSBA, which provides a qualitative assessment (yes/no) of the presence of sufficient bactericidal antibodies in human sera to kill a meningococcal strain at a specific dilution of 1:4. Analysis was performed on blood samples collected from PPS, which included all participants who received at least 1 dose of the study treatment to which they were randomized and have post-vaccination data at specified timepoints and did not have any protocol deviations that lead to exclusion from the PPS. "99999" is used as a placeholder value for the results from ABCWY and MenB groups since the analysis of final results for these two groups is ongoing and will be updated subsequently.

End point type	Primary

End point timeframe:

At 1 month after the vaccination schedule (i.e., Day 211 for the ABCWY_Pooled group and Day 91 for the MenB_0_2_6 Group [2-dose schedule])

Notes:

[15] - 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 final results for the ABCWY and MenB groups is ongoing, statistical analysis for this endpoint will be updated subsequently.
[16] - 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: As specified in the Protocol, the analysis assesses the effectiveness of the MenABCWY vaccine compared to the rMenB+OMV vaccine in terms of the percentage of samples with bactericidal serum activity.

End point values	MenB_0_2_6 Group	ABCWY_Pooled		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	740	1356		
Units: Percentage of blood samples				
number (not applicable)				
Number of Blood samples Analyzed	99999	99999		

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of participants whose sera kill >=70% of the strains tested using enc-hSBA at 1 month after the last vaccination in the ABCWY Group (pooled lots)

End point title	Percentage of participants whose sera kill >=70% of the strains tested using enc-hSBA at 1 month after the last vaccination in the ABCWY Group (pooled lots)[17][18]

End point description:

The effectiveness (responder-based) of the MenABCWY vaccine was measured in terms of percentage of participants whose sera kill >=70% of the strains tested using enc-hSBA, being calculated based on Clopper Pearson method. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data. "99999" is used as a placeholder value for the results from ABCWY groups since the analysis of final results for this group is ongoing and will be updated subsequently.

End point type	Primary

End point timeframe:

at 1 month after the last vaccination of MenABCWY(Day 211)

Notes:

[17] - 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 this primary endpoint was descriptive i.e. no statistical hypothesis test was performed.
[18] - 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: As specified in the Protocol, the analysis assesses the effectiveness of the MenABCWY vaccine.

End point values	ABCWY_Pooled			
Subject group type	Reporting group			
Number of subjects analysed	817			
Units: Percentage of participants				
number (confidence interval 95%)	99999 (99999 to 99999)			

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of participants with any solicited local adverse events (AEs)

End point title	Percentage of participants with any solicited local adverse events (AEs)[19]

End point description:

Assessed solicited local adverse events were injection site pain, erythema, swelling, induration. Any = occurrence of the adverse event regardless of intensity grade. Any erythema and swelling = adverse event reported with a surface diameter greater than 0 millimeters. Analysis was performed on the Solicited Safety Set (SSS), which included all participants who received at least 1 dose of the study treatment and had solicited safety data at specific time points. "99999" is used as a placeholder value for the results from ABCWY groups since the analysis of final results for this group is ongoing and will be updated subsequently.

End point type	Primary

End point timeframe:

During the 7 days (including the day of vaccination) after each vaccination (vaccines administered on

Day 1, Day 61 and Day 181)

Notes:

[19] - 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 this primary endpoint was descriptive i.e. no statistical hypothesis test was performed.

End point values	MenB_0_2_6 Group	MenB_0_6 Group	ABCWY_Pooled	ACWY Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	885	894	1638	178
Units: Percentage of participants				
number (confidence interval 95%)				
Pain, Vaccination 1 (N=885,894,1638,178)	91.2 (89.1 to 93)	91.6 (89.6 to 93.3)	99999 (99999 to 99999)	37.6 (30.5 to 45.2)
Pain, Vaccination 2 (N=823,813,1511,161)	86.8 (84.2 to 89)	27.6 (24.5 to 30.8)	99999 (99999 to 99999)	18.6 (12.9 to 25.5)
Pain, Vaccination 3 (N=765,759,1428,148)	88.5 (86 to 90.7)	89.1 (86.6 to 91.2)	99999 (99999 to 99999)	85.1 (78.4 to 90.4)
Erythema (mm), Vaccination 1(N=885,894,1638,178)	10.2 (8.3 to 12.4)	9.6 (7.8 to 11.7)	99999 (99999 to 99999)	6.2 (3.1 to 10.8)
Erythema (mm), Vaccination 2(N=823,813,1511,161)	10.8 (8.8 to 13.1)	3.2 (2.1 to 4.7)	99999 (99999 to 99999)	0.6 (0 to 3.4)
Erythema (mm), Vaccination 3 (N=765,759,1428,148)	15.4 (12.9 to 18.2)	11.5 (9.3 to 13.9)	99999 (99999 to 99999)	7.4 (3.8 to 12.9)
Swelling (mm), Vaccination 1 (N=885,894,1638,178)	9.8 (7.9 to 12)	10 (8.1 to 12.1)	99999 (99999 to 99999)	6.2 (3.1 to 10.8)
Swelling (mm), Vaccination 2(N=823,813,1511,161)	12 (9.9 to 14.4)	2.7 (1.7 to 4.1)	99999 (99999 to 99999)	0.6 (0 to 3.4)
Swelling (mm), Vaccination 3(N=765,759,1428,148)	14 (11.6 to 16.6)	11.2 (9 to 13.7)	99999 (99999 to 99999)	8.8 (4.8 to 14.6)
Induration (mm), Vaccination 1(N=885,894,1638,178)	6.8 (5.2 to 8.6)	7.2 (5.6 to 9.1)	99999 (99999 to 99999)	3.9 (1.6 to 7.9)
Induration (mm), Vaccination 2(N=823,813,1511,161)	8.1 (6.4 to 10.2)	2.3 (1.4 to 3.6)	99999 (99999 to 99999)	0 (0 to 0)
Induration (mm), Vaccination 3(N=765,759,1428,148)	6.8 (5.1 to 8.8)	7.5 (5.7 to 9.6)	99999 (99999 to 99999)	8.1 (4.3 to 13.7)

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of participants with any solicited systemic AEs

End point title	Percentage of participants with any solicited systemic AEs[20]

End point description:

Assessed solicited systemic AEs were fatigue, nausea, myalgia, arthralgia, headache and fever [temperature >= 38.0Â°C].Any = occurrence of the adverse event regardless of intensity grade or relation to study vaccination. Analysis was performed on the SSS, which included all participants who receive at least 1 dose of the study treatment and had solicited safety data at specific time points. "99999" is used as a placeholder value for the results from ABCWY groups since the analysis of final results for this group is ongoing and will be updated subsequently

End point type	Primary

End point timeframe:

During the 7 days (including the day of vaccination) after each vaccination (vaccines administered on Day 1, Day 61 and Day 181)

Notes:

[20] - 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	MenB_0_2_6 Group	MenB_0_6 Group	ABCWY_Pooled	ACWY Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	885	894	1638	178
Units: Percentage of participants				
number (confidence interval 95%)				
Fatigue, Vaccination 1(N=885,894,1638,178)	47.8 (44.5 to 51.1)	46.3 (43 to 49.6)	99999 (99999 to 99999)	43.8 (36.4 to 51.4)
Fatigue, Vaccination 2(N=823,813,1511,161)	45.2 (41.8 to 48.7)	28 (25 to 31.3)	99999 (99999 to 99999)	22.4 (16.2 to 29.6)
Fatigue, Vaccination 3(N=765,759,1428,148)	48.9 (45.3 to 52.5)	44.9 (41.3 to 48.5)	99999 (99999 to 99999)	37.8 (30 to 46.2)
Nausea, Vaccination 1(N=885,894,1638,178)	12.7 (10.5 to 15)	12.4 (10.3 to 14.8)	99999 (99999 to 99999)	15.2 (10.2 to 21.3)
Nausea, Vaccination 2(N=823,813,1511,161)	12.6 (10.4 to 15.1)	6.9 (5.2 to 8.9)	99999 (99999 to 99999)	11.2 (6.8 to 17.1)
Nausea, Vaccination 3(N=765,759,1428,148)	12.3 (10 to 14.8)	11.1 (8.9 to 13.5)	99999 (99999 to 99999)	9.5 (5.3 to 15.4)
Myalgia, Vaccination 1(N=885,894,1638,178)	10.4 (8.5 to 12.6)	11.9 (9.8 to 14.2)	99999 (99999 to 99999)	7.3 (3.9 to 12.2)
Myalgia, Vaccination 2(N=823,813,1511,161)	13.4 (11.1 to 15.9)	5.7 (4.2 to 7.5)	99999 (99999 to 99999)	1.9 (0.4 to 5.3)
Myalgia, Vaccination 3(N=765,759,1428,148)	13.9 (11.5 to 16.5)	14.4 (11.9 to 17.1)	99999 (99999 to 99999)	11.5 (6.8 to 17.8)
Arthralgia, Vaccination 1(N=885,894,1638,178)	6.3 (4.8 to 8.1)	7.8 (6.2 to 9.8)	99999 (99999 to 99999)	9.6 (5.7 to 14.9)
Arthralgia, Vaccination 2(N=823,813,1511,161)	8.7 (6.9 to 10.9)	4.1 (2.8 to 5.7)	99999 (99999 to 99999)	3.7 (1.4 to 7.9)
Arthralgia, Vaccination 3(N=765,759,1428,148)	9.3 (7.3 to 11.6)	7 (5.3 to 9)	99999 (99999 to 99999)	4.7 (1.9 to 9.5)
Headache, Vaccination 1(N=885,894,1638,178)	40.5 (37.2 to 43.8)	36.9 (33.7 to 40.2)	99999 (99999 to 99999)	38.8 (31.6 to 46.3)
Headache, Vaccination 2(N=823,813,1511,161)	36.6 (33.3 to 40)	27.4 (24.4 to 30.6)	99999 (99999 to 99999)	19.3 (13.5 to 26.2)
Headache, Vaccination 3(N=765,759,1428,148)	39.5 (36 to 43)	37.4 (34 to 41)	99999 (99999 to 99999)	26.4 (19.5 to 34.2)
Fever (C), Vaccination 1(N=885,894,1638,178)	2.1 (1.3 to 3.3)	1.9 (1.1 to 3)	99999 (99999 to 99999)	1.7 (0.3 to 4.8)
Fever (C), Vaccination 2(N=823,813,1511,161)	2.7 (1.7 to 4)	1.5 (0.8 to 2.6)	99999 (99999 to 99999)	0.6 (0 to 3.4)
Fever (C), Vaccination 3(N=765,759,1428,148)	2.7 (1.7 to 4.2)	3 (1.9 to 4.5)	99999 (99999 to 99999)	1.4 (0.2 to 4.8)

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of participants with any unsolicited AEs

End point title	Percentage of participants with any unsolicited AEs[21]

End point description:

Unsolicited AEs are defined as any AE reported in addition to those solicited during the clinical study. Also, any 'solicited' symptom with onset outside the specified period of follow-up for solicited symptoms will be reported as an unsolicited AE.
Unsolicited AEs collected included Serious adverse events (SAEs), AEs leading to withdrawal, Adverse event of special interest (AESIs) and medically attended AEs. Analysis was performed on the Unsolicited Safety Set (USS), which included all participants who received at least 1 dose of the study treatment and had Unsolicited safety data at specific time points. "99999" is used as a placeholder value for the results from ABCWY groups since the analysis of final results for this group is ongoing and will be updated subsequently.

End point type	Primary

End point timeframe:

During the 30 days (including the day of vaccination) after each vaccination (vaccines administered on Day 1, Day 61, and Day 181)

Notes:

[21] - 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	MenB_0_2_6 Group	MenB_0_6 Group	ABCWY_Pooled	ACWY Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	893	900	1648	178
Units: Percentage of participants				
number (confidence interval 95%)				
AEs, Vaccination 1(N=893,900,1648,178)	10.1 (8.2 to 12.2)	13.8 (11.6 to 16.2)	99999 (99999 to 99999)	16.3 (11.2 to 22.6)
AEs, Vaccination 2(N=851,855,1579,170)	12.5 (10.3 to 14.9)	10.3 (8.3 to 12.5)	99999 (99999 to 99999)	8.8 (5.0 to 14.1)
AEs, Vaccination 3(N=815,823,1521,166)	11.8 (9.6 to 14.2)	11.4 (9.3 to 13.8)	99999 (99999 to 99999)	11.4 (7.0 to 17.3)

Statistical analyses

No statistical analyses for this end point

Primary: Percentage of participants with SAEs, AEs leading to withdrawal, AESIs and medically attended AEs

End point title	Percentage of participants with SAEs, AEs leading to withdrawal, AESIs and medically attended AEs [22]

End point description:

A SAEs is any untoward medical occurrence that results in death, is life-threatening, requires hospitalization or prolongation of existing hospitalization, results in disability/incapacity and is a congenital anomaly/birth defect in the offspring of a study subject. AESIs are predefined (serious/non-serious) AEs of scientific and medical concern specific to the product or program, for ongoing, monitoring, and rapid communication by the investigator to the sponsor can be appropriate, because such an event might warrant further investigation to characterize and understand it. Medically attended AEs are symptoms/illnesses requiring hospitalization/emergency room visit/visit to/by a health care provider. Analysis was performed on the Unsolicited Safety Set. "99999" is used as a placeholder value for the results from ABCWY groups since the analysis of final results for this group is ongoing and will be updated subsequently.

End point type	Primary

End point timeframe:

Throughout the study period (Day 1 to Day 361)

Notes:

[22] - 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 this primary endpoint was descriptive i.e. no statistical hypothesis test was performed.

End point values	MenB_0_2_6 Group	MenB_0_6 Group	ABCWY_Pooled	ACWY Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	893	900	1648	178
Units: Percentage of participants				
number (confidence interval 95%)				
SAEs	2.2 (1.4 to 3.4)	2.4 (1.5 to 3.7)	99999 (99999 to 99999)	2.8 (0.9 to 6.4)
AEs leading to withdrawal	0.7 (0.2 to 1.5)	0.4 (0.1 to 1.1)	99999 (99999 to 99999)	0.6 (0 to 3.1)
AESIs	0.1 (0 to 0.6)	0.1 (0 to 0.6)	99999 (99999 to 99999)	0 (0 to 0)
medically attended AEs	26.7 (23.8 to 29.7)	32 (29 to 35.2)	99999 (99999 to 99999)	24.7 (18.6 to 31.7)

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants with 4-fold rise in hSBA titers against N.meningitidis group B strains at 1 month after last MenABCWY dose(ABCWY group-pooled lots) and 1 month afte 2-dose(0,2-M) schedule of rMenB+OMV NZ relative to baseline

End point title	Percentage of participants with 4-fold rise in hSBA titers against N.meningitidis group B strains at 1 month after last MenABCWY dose(ABCWY group-pooled lots) and 1 month afte 2-dose(0,2-M) schedule of rMenB+OMV NZ relative to baseline[23]

End point description:

The immunogenicity of MenABCWY vaccine at 1 month after the last dose compared to 1 month after last dose of rMenB+OMV NZ vaccine according to 2 dose (0,2-M) schedule was measured as percentage of participants achieving a 4-fold rise in hSBA titers against N. meningitidis serogroup B indicator strains (M14459, 96217, M13520 and NZ98/254 for fHbp, NadA, NHBA and PorA P1.4 antigens, respectively).
4-fold rise per each indicator strain was defined as a post-vaccination hSBA titre ≥16 for subjects with a pre-vaccination hSBA titre <4
a post-vaccination hSBA titre ≥4 times the LLOQ for subjects with a pre-vaccination hSBA titre ≥LOD and <LLOQ
a post-vaccination hSBA titre ≥4 times the pre-vaccination hSBA titre for subjects with a pre-vaccination hSBA titre ≥ LLOQ. The analysis was performed on the Per Protocol Set.
"99999" is used as a placeholder value for the results of ABCWY group since analysis of final results for this group is ongoing and will be updated subsequently.

End point type	Secondary

End point timeframe:

At 1 month after the vaccination schedule (i.e., Day 211 for the ABCWY_Pooled group and Day 91 for the MenB_0_2_6 Group [2-dose schedule])

Notes:

[23] - 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: As specified in the Protocol, the analysis assesses the immunological non-inferiority of the MenABCWY vaccine compared to the rMenB+OMV vaccine.

End point values	MenB_0_2_6 Group	ABCWY_Pooled		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	719	678		
Units: Percentage of participants				
number (confidence interval 95%)				
fHbp(N=719,675)	74.7 (71.3 to 77.8)	99999 (99999 to 99999)		
NadA(N=717,671)	96.4 (94.7 to 97.6)	99999 (99999 to 99999)		
NHBA(N=718,678)	58.6 (54.9 to 62.3)	99999 (99999 to 99999)		
PorA(N=704,642)	53.3 (49.5 to 57.0)	99999 (99999 to 99999)		

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of samples without bactericidal serum activity against each of the endemic U.S N. meningitidis serogroup B strains at 1 month after the last MenABCWY dose and 3-dose (0,2,6-M), 2-dose(0,6-M) schedule of rMenB+OMV and 1 dose of MenACWY

End point title	Percentage of samples without bactericidal serum activity against each of the endemic U.S N. meningitidis serogroup B strains at 1 month after the last MenABCWY dose and 3-dose (0,2,6-M), 2-dose(0,6-M) schedule of rMenB+OMV and 1 dose of MenACWY

End point description:

The effectiveness of the 3 dose (0,2,6-M) and 2 dose (0,6-M) schedule of rMenB+OMV NZ vaccine and 2 doses of MenABCWY vaccine when compared to 1 month after the MenACWY vaccination (Day 31), against a panel of N. meningitidis serogroup B strains was measured in terms of percentage of samples without bactericidal activity using enc-hSBA, which provides a qualitative assessment (yes/no) of the presence of sufficient bactericidal antibodies in human sera to kill a meningococcal strain at a specific dilution of 1:4. Analysis was performed on blood samples collected from FAS, which included all participants who were randomized, received at least one dose of the study treatment, and had post-vaccination effectiveness data. "99999" is used as a placeholder value for the results from ABCWY groups since the analysis of final results for this groups is ongoing and will be updated subsequently

End point type	Secondary

End point timeframe:

At 1 month after the vaccination schedule (i.e., Day 211 for the MenB_0_2_6 group [3 dose schedule], MenB_0_6 group, ABCWY_Pooled group and Day 31 for the MenACWY group)

End point values	MenB_0_2_6 Group	MenB_0_6 Group	ABCWY_Pooled	ACWY Group
Subject group type	Reporting group	Reporting group	Reporting group	Reporting group
Number of subjects analysed	839	814	1507	173
Units: Percentage of blood samples				
number (not applicable)				
Meningitis B M10713 Ab	0.4	0.4	99999	15.6
Meningitis B M08641 Ab	6.6	6.2	99999	96.6
Meningitis B M12898 Ab	8.4	11.4	99999	68.1
Meningitis B M09150 Ab	5.2	8.5	99999	73

Meningitis B M09401 Ab	50.2	46.5	99999	98
Meningitis B M07463 Ab	1.5	1.8	99999	49
Meningitis B M10496 Ab	54.4	47.9	99999	100
Meningitis B M14530 Ab	2.1	1.6	99999	100
Meningitis B M15668 Ab	0.8	2.2	99999	87.8
Meningitis B M14028 Ab	2.8	5.7	99999	100
Meningitis B M09909 Ab	79.1	83.4	99999	100
Meningitis B M14385 Ab	0.9	0.8	99999	16.3
Meningitis B M07992 Ab	0.4	0	99999	0
Meningitis B M09155 Ab	1.7	2	99999	97.8
Meningitis B M13085 Ab	13.5	27.5	99999	69.3
Meningitis B M18303 Ab	2.9	4	99999	100
Meningitis B M18711 Ab	5.2	4.2	99999	75.8
Meningitis B M15009 Ab	11.8	20.5	99999	86.5
Meningitis B M07773 Ab	0.7	0.4	99999	74.3
Meningitis B M09662 Ab	61.4	50.8	99999	95.8
Meningitis B M18483 Ab	3	5.1	99999	72.2
Meningitis B M11906 Ab	23.7	30.3	99999	84.7
Meningitis B M14987 Ab	1.2	8.8	99999	68.6
Meningitis B M12014 Ab	0.4	0.7	99999	67.4
Meningitis B M18200 Ab	6.3	14.8	99999	33.7
Meningitis B M08912 Ab	0.4	0	99999	0
Meningitis B M16748 Ab	0.8	0	99999	0
Meningitis B M08152 Ab	22.4	25.3	99999	66.8
Meningitis B M09973 Ab	0.8	1.1	99999	83.3
Meningitis B M15352 Ab	8.9	8.4	99999	97
Meningitis B M15165 Ab	0	1.2	99999	92.9
Meningitis B M08127 Ab	0.7	0.4	99999	84.3
Meningitis B M18347 Ab	45.4	50.9	99999	82.1
Meningitis B M12500 Ab	0.9	2.4	99999	95.3
Meningitis B M07499 Ab	70.7	75.7	99999	100
Meningitis B M09960 Ab	1.2	0	99999	3
Meningitis B M18045 Ab	0	0.4	99999	92.7
Meningitis B M10548 Ab	8.1	11.9	99999	74.1
Meningitis B M09354 Ab	1.2	1.3	99999	80
Meningitis B M11051 Ab	61	64.2	99999	97.8
Meningitis B M10104 Ab	58.7	52.3	99999	97.6
Meningitis B M13361 Ab	0.8	0.4	99999	85.3
Meningitis B M11042 Ab	19.8	25.5	99999	85.7
Meningitis B M18467 Ab	1.2	0.4	99999	78.7
Meningitis B M11113 Ab	30.1	39.5	99999	75.2
Meningitis B M07253 Ab	34.7	33.8	99999	86.4
Meningitis B M07356 Ab	0.4	0	99999	41.4
Meningitis B M10710 Ab	1.6	2	99999	92.5
Meningitis B M17147 Ab	2.3	5.4	99999	100
Meningitis B M14401 Ab	1.7	0.4	99999	83.7
Meningitis B M14293 Ab	45.8	25.1	99999	95.7
Meningitis B M08540 Ab	1.6	0.8	99999	38.2
Meningitis B M07960 Ab	3.6	4.1	99999	94.9
Meningitis B M16135 Ab	0	1.7	99999	95.1
Meningitis B M14548 Ab	2.6	3.4	99999	94.7
Meningitis B M09181 Ab	0	0.4	99999	72.1

Meningitis B M14224 Ab	0.4	0.4	99999	82.5
Meningitis B M07452 Ab	2.7	8.1	99999	85.1
Meningitis B M13520 Ab	3.2	0.9	99999	66.7
Meningitis B M09385 Ab	0.4	1.6	99999	46.9
Meningitis B M14881 Ab	4.2	5.8	99999	95
Meningitis B M13252 Ab	0.7	1.2	99999	98
Meningitis B M07818 Ab	0.4	0.8	99999	90.7
Meningitis B M09914 Ab	85.4	86.8	99999	98
Meningitis B M15083 Ab	51.4	56.7	99999	84.5
Meningitis B M11290 Ab	61.4	61.7	99999	100
Meningitis B M14988 Ab	0.4	0	99999	60
Meningitis B M10536 Ab	19.7	14.3	99999	91.7
Meningitis B M08959 Ab	0.8	0.4	99999	85.1
Meningitis B M08785 Ab	0.8	0.4	99999	53.8
Meningitis B M07245 Ab	0	0	99999	23.3
Meningitis B M19315 Ab	3.8	3.1	99999	79.4
Meningitis B M14376 Ab	0	1.4	99999	92.7
Meningitis B M08994 Ab	2.5	7.6	99999	62.7
Meningitis B M11646 Ab	0	1.3	99999	83.3
Meningitis B M13362 Ab	0	0.4	99999	81.6
Meningitis B M08080 Ab	27.4	41	99999	85.7
Meningitis B M08370 Ab	2.3	1.5	99999	97.7
Meningitis B M08129 Ab	4.1	4.7	99999	71.4
Meningitis B M07111 Ab	0.4	1.2	99999	90.9
Meningitis B M07537 Ab	95.9	95.9	99999	100
Meningitis B M13438 Ab	1.2	0.8	99999	16
Meningitis B M10661 Ab	2	2.9	99999	97
Meningitis B M10920 Ab	29.1	27.8	99999	91.2
Meningitis B M15564 Ab	0.4	0.7	99999	77.5
Meningitis B M10934 Ab	0.4	0.8	99999	100
Meningitis B M09400 Ab	0.8	1.8	99999	97.4
Meningitis B M08781 Ab	71.9	74.4	99999	100
Meningitis B M09173 Ab	0.4	0.4	99999	95.2
Meningitis B M14113 Ab	15.4	21.2	99999	100
Meningitis B M08389 Ab	10.7	7	99999	87.2
Meningitis B M16822 Ab	67.8	76.4	99999	100
Meningitis B M10995 Ab	5.2	17.8	99999	85.1
Meningitis B M08780 Ab	1.3	0.8	99999	92.5
Meningitis B M09910 Ab	1.6	1.2	99999	93
Meningitis B M08320 Ab	33.6	39.7	99999	87
Meningitis B M14879 Ab	2.1	2.1	99999	21.3
Meningitis B M09345 Ab	19.3	20.1	99999	81.2
Meningitis B M14594 Ab	20.8	27.4	99999	97.7
Meningitis B M07621 Ab	1.2	1.2	99999	77.5
Meningitis B M13568 Ab	5.4	3.8	99999	95
Meningitis B M18017 Ab	0.4	0	99999	96.8
Meningitis B M08420 Ab	0.8	0.4	99999	95
Meningitis B M07959 Ab	1.7	2.5	99999	97.1
Meningitis B M06970 Ab	19.6	17.6	99999	85.7
Meningitis B M10491 Ab	5.4	8.4	99999	82.1
Meningitis B M13569 Ab	0.9	2.9	99999	96.8
Meningitis B M10182 Ab	0.4	0	99999	0

Meningitis B M13547 Ab	2.4	7	99999	47.7
Meningitis B M15276 Ab	0.4	0	99999	87.8

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of samples without bactericidal serum activity using enc-hSBA against each of the endemic U.S N. meningitidis serogroup B strains at 1 month after the 2-dose(0,6-M) schedule of rMenB+OMV and 1 dose of MenACWY

End point title	Percentage of samples without bactericidal serum activity using enc-hSBA against each of the endemic U.S N. meningitidis serogroup B strains at 1 month after the 2-dose(0,6-M) schedule of rMenB+OMV and 1 dose of MenACWY[24]

End point description:

The effectiveness of the 2 dose (0,2-M) schedule of rMenB+OMV NZ vaccine when compared to 1 month after the MenACWY vaccination (Day 31), against a panel of N. meningitidis serogroup B strains(M14459, 96217, M13520 and NZ98/254 for fHbp, NadA, NHBA and PorA P1.4 antigens, respectively) was measured in terms of percentage of samples without bactericidal activity using enc-hSBA, which provides a qualitative assessment (yes/no) of the presence of sufficient bactericidal antibodies in human sera to kill a meningococcal strain at a specific dilution of 1:4. Analysis was performed on blood samples collectected from FAS , which included all participants who were randomized, received at least 1 dose of the study treatment and had post-vaccination effectiveness

End point type	Secondary

End point timeframe:

At 1 month after the vaccination schedule (i.e., Day 91 for the MenB_0_2_6 group [2 dose schedule] and Day 31 for the MenACWY group)

Notes:

[24] - 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: As specified in the Protocol, the analysis assesses the effectiveness of the rMenB+OMV vaccine compared to one dose of MenACWY vaccination in the ACWY group.

End point values	MenB_0_2_6 Group	ACWY Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	839	173		
Units: Percentage of blood samples				
number (not applicable)				
Meningitis B M10713 Ab	1.9	15.6		
Meningitis B M08641 Ab	11.2	96.6		
Meningitis B M12898 Ab	12.4	69		
Meningitis B M09150 Ab	9.3	68.6		
Meningitis B M09401 Ab	47	98		
Meningitis B M07463 Ab	2.6	49		
Meningitis B M10496 Ab	50.5	100		
Meningitis B M14530 Ab	3.9	100		
Meningitis B M15668 Ab	0.4	87.8		
Meningitis B M14028 Ab	5.4	100		
Meningitis B M09909 Ab	82	100		
Meningitis B M14385 Ab	0	16.3		
Meningitis B M07992 Ab	0	0		

Meningitis B M09155 Ab	2.5	97.8		
Meningitis B M13085 Ab	21	66.4		
Meningitis B M18303 Ab	9.1	100		
Meningitis B M18711 Ab	7.7	75.8		
Meningitis B M15009 Ab	22.2	86.5		
Meningitis B M07773 Ab	1.1	74.3		
Meningitis B M09662 Ab	58.1	95.8		
Meningitis B M18483 Ab	4.3	77.3		
Meningitis B M11906 Ab	38.8	85.3		
Meningitis B M14987 Ab	10.7	62.3		
Meningitis B M12014 Ab	0.7	63.2		
Meningitis B M18200 Ab	12.1	34.4		
Meningitis B M08912 Ab	0	0		
Meningitis B M16748 Ab	0	0		
Meningitis B M08152 Ab	35.6	67.2		
Meningitis B M09973 Ab	1.5	83.3		
Meningitis B M15352 Ab	11.9	97		
Meningitis B M15165 Ab	0.8	92.9		
Meningitis B M08127 Ab	0.4	84.3		
Meningitis B M18347 Ab	60.5	80.4		
Meningitis B M12500 Ab	3.4	95.3		
Meningitis B M07499 Ab	81.1	100		
Meningitis B M09960 Ab	4.4	3		
Meningitis B M18045 Ab	0	92.7		
Meningitis B M10548 Ab	11.9	74.1		
Meningitis B M09354 Ab	0.4	80		
Meningitis B M11051 Ab	68.9	97.8		
Meningitis B M10104 Ab	61.8	97.6		
Meningitis B M13361 Ab	0.4	85.3		
Meningitis B M11042 Ab	30.1	84.2		
Meningitis B M18467 Ab	0.4	78.7		
Meningitis B M11113 Ab	43.1	75.6		
Meningitis B M07253 Ab	43.3	85.3		
Meningitis B M07356 Ab	0	41.4		
Meningitis B M10710 Ab	2.2	92.5		
Meningitis B M17147 Ab	5.1	100		
Meningitis B M14401 Ab	0.8	83.7		
Meningitis B M14293 Ab	36.4	95.7		
Meningitis B M08540 Ab	0.4	38.2		
Meningitis B M07960 Ab	4.1	94.9		
Meningitis B M16135 Ab	0.8	95.1		
Meningitis B M14548 Ab	2.8	94.7		
Meningitis B M09181 Ab	0	72.1		
Meningitis B M14224 Ab	0.7	82.5		
Meningitis B M07452 Ab	13.5	85.1		
Meningitis B M13520 Ab	0.9	66.7		
Meningitis B M09385 Ab	2.2	46.9		
Meningitis B M14881 Ab	14.7	95		
Meningitis B M13252 Ab	3.1	98		
Meningitis B M07818 Ab	0.4	90.7		
Meningitis B M09914 Ab	87.7	98		
Meningitis B M15083 Ab	63.7	78		

Meningitis B M11290 Ab	70.5	100		
Meningitis B M14988 Ab	0.4	60		
Meningitis B M10536 Ab	23.2	91.7		
Meningitis B M08959 Ab	0.4	85.1		
Meningitis B M08785 Ab	0.4	53.8		
Meningitis B M07245 Ab	0	23.3		
Meningitis B M19315 Ab	6.3	79.4		
Meningitis B M14376 Ab	0	92.7		
Meningitis B M08994 Ab	8.9	55.7		
Meningitis B M11646 Ab	1.6	83.3		
Meningitis B M13362 Ab	1.5	81.6		
Meningitis B M08080 Ab	46.8	87.1		
Meningitis B M08370 Ab	3.9	97.7		
Meningitis B M08129 Ab	7.4	71.4		
Meningitis B M07111 Ab	0.4	90.9		
Meningitis B M07537 Ab	96.4	100		
Meningitis B M13438 Ab	0.4	16		
Meningitis B M10661 Ab	2.7	97		
Meningitis B M10920 Ab	50.2	91.2		
Meningitis B M15564 Ab	0.8	77.5		
Meningitis B M10934 Ab	0	100		
Meningitis B M09400 Ab	1.1	97.4		
Meningitis B M08781 Ab	75.8	100		
Meningitis B M09173 Ab	0	95.2		
Meningitis B M14113 Ab	28.3	100		
Meningitis B M08389 Ab	1.9	86.7		
Meningitis B M16822 Ab	85	100		
Meningitis B M10995 Ab	16.3	85.1		
Meningitis B M08780 Ab	0.8	92.5		
Meningitis B M09910 Ab	1.2	93		
Meningitis B M08320 Ab	45.1	86.8		
Meningitis B M14879 Ab	3.3	23.2		
Meningitis B M09345 Ab	32.3	74.9		
Meningitis B M14594 Ab	35.8	97.7		
Meningitis B M07621 Ab	0.4	77.5		
Meningitis B M13568 Ab	9.7	95		
Meningitis B M18017 Ab	0	96.8		
Meningitis B M08420 Ab	0.8	95		
Meningitis B M07959 Ab	1.2	97.1		
Meningitis B M06970 Ab	28.8	90.6		
Meningitis B M10491 Ab	16.1	82.1		
Meningitis B M13569 Ab	0.4	96.8		
Meningitis B M10182 Ab	0	0		
Meningitis B M13547 Ab	5	47.7		
Meningitis B M15276 Ab	0.4	87.8		

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants classified by percentage of serogroup B invasive disease strains killed using enc-hSBA in each subject at 1 month after vaccination schedule for the MenB_0_2_6 group [3 dose], MenB_0_6 group and last MenABCWY dose (pooled lots)

End point title	Percentage of participants classified by percentage of serogroup B invasive disease strains killed using enc-hSBA in each subject at 1 month after vaccination schedule for the MenB_0_2_6 group [3 dose], MenB_0_6 group and last MenABCWY dose (pooled lots)[25]

End point description:

The percentage of participants are classified by percentage of N.meningitidis serogroup B invasive strains killed using enc-hSBA and the corresponding 2- sided 95% CI based on Clopper-Pearson method is calculated for each vaccine group. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data. "99999" is used as a placeholder value for the results from ABCWY groups since the analysis of final results for this group is ongoing and will be updated subsequently.

End point type	Secondary

End point timeframe:

At 1 month after the vaccination schedule (Day 211 for MenB_0_2_6 group (3 dose schedule), MenB_0_6 group and ABCWY_Pooled group)

Notes:

[25] - 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: As specified in the Protocol, the analysis assesses the percentage of serogroup B invasive disease strains killed within a subject using enc-hSBA of the rMenB+OMV and MenABCWY vaccines.

End point values	MenB_0_2_6 Group	MenB_0_6 Group	ABCWY_Pooled	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	790	813	817	
Units: Percentage of participants				
number (confidence interval 95%)				
>=50% killed strains	98.7 (97.7 to 99.4)	98.5 (97.4 to 99.2)	99999 (99999 to 99999)	
>=55% killed strains	98.4 (97.2 to 99.1)	97.4 (96.1 to 98.4)	99999 (99999 to 99999)	
>=60% killed strains	97.8 (96.6 to 98.7)	96.8 (95.3 to 97.9)	99999 (99999 to 99999)	
>=65% killed strains	96.5 (94.9 to 97.6)	93.6 (91.7 to 95.2)	99999 (99999 to 99999)	
>=70% killed strains	93.4 (91.5 to 95)	89.8 (87.5 to 91.8)	99999 (99999 to 99999)	
>=75% killed strains	86.8 (84.3 to 89.1)	82.2 (79.4 to 84.7)	99999 (99999 to 99999)	
>=80% killed strains	79.2 (76.2 to 82)	75.5 (72.4 to 78.4)	99999 (99999 to 99999)	
>=85% killed strains	62.8 (59.3 to 66.2)	60.4 (56.9 to 63.8)	99999 (99999 to 99999)	
>=90% killed strains	43.7 (40.2 to 47.2)	41.3 (37.9 to 44.8)	99999 (99999 to 99999)	
>=95% killed strains	22.5 (19.7 to 25.6)	21 (18.3 to 24)	99999 (99999 to 99999)	
100% killed strains	10 (8 to 12.3)	8.4 (6.6 to 10.5)	99999 (99999 to 99999)	

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants classified by percentage of serogroup B invasive disease strains killed using enc-hSBA in each subject at 1 month after vaccination with rMenB+OMV NZ (0,2-months)

End point title	Percentage of participants classified by percentage of serogroup B invasive disease strains killed using enc-hSBA in each subject at 1 month after vaccination with rMenB+OMV NZ (0,2-months)[26]

End point description:

The percentage of participants are classified by percentage of N.meningitidis serogroup B invasive strains killed using enc-hSBA and the corresponding 2- sided 95% CI based on Clopper-Pearson method is calculated for each vaccine group. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data. "99999" is used as a placeholder value for the results from ABCWY groups since the analysis of final results for this group is ongoing and will be updated subsequently

End point type	Secondary

End point timeframe:

At 1 month after the vaccination schedule (Day 211 for ABCWY_Pooled group, and Day 91 for MenB_0_2_6 group (2 dose schedule))

Notes:

[26] - 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: As specified in the Protocol, the analysis assesses the percentage of serogroup B invasive disease strains killed within a subject using enc-hSBA of the rMenB+OMV and MenABCWY vaccines.

End point values	MenB_0_2_6 Group	ABCWY_Pooled		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	831	817		
Units: Percentage of participants				
number (confidence interval 95%)				
>=50% killed strains	98.6 (97.5 to 99.3)	99999 (99999 to 99999)		
>=55% killed strains	97.7 (96.5 to 98.6)	99999 (99999 to 99999)		
>=60% killed strains	96.5 (95 to 97.7)	99999 (99999 to 99999)		
>=65% killed strains	92.2 (90.1 to 93.9)	99999 (99999 to 99999)		
>=70% killed strains	84.8 (82.2 to 87.2)	99999 (99999 to 99999)		
>=75% killed strains	75.7 (72.6 to 78.6)	99999 (99999 to 99999)		
>=80% killed strains	66.7 (63.3 to 69.9)	99999 (99999 to 99999)		
>=85% killed strains	49.7 (46.2 to 53.2)	99999 (99999 to 99999)		

>=90% killed strains	33.8 (30.6 to 37.1)	99999 (99999 to 99999)		
>=95% killed strains	16.2 (13.8 to 18.9)	99999 (99999 to 99999)		
100% killed strains	7.7 (6 to 9.7)	99999 (99999 to 99999)		

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants with hSBA titers >= LLOQ for each and all serogroup B indicator strains at Day 1 and at 1 month after vaccination with rMenB+OMV NZ (0,2,6-months and 0,6-months) and last dose of MenABCWY (ABCWY group-pooled lots)

End point title	Percentage of participants with hSBA titers >= LLOQ for each and all serogroup B indicator strains at Day 1 and at 1 month after vaccination with rMenB+OMV NZ (0,2,6-months and 0,6-months) and last dose of MenABCWY (ABCWY group-pooled lots)[27]

End point description:

The immune response to rMenB+OMV NZ and MenABCWY vaccine was evaluated by measuring bactericidal activity against each (individual response) and all (composite response) N. meningitidis serogroup B indicator strains(M14459, 96217, M13520 and NZ98/254 for fHbp, NadA, NHBA and PorA P1.4 antigens, respectively). Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data. "99999" is used as a placeholder value for the results from ABCWY groups since analysis of final results for this group is ongoing and will be updated subsequently

End point type	Secondary

End point timeframe:

At Day 1 (pre-vaccination) and1 month after the vaccination schedule (i.e., Day 211 for MenB_0_2_6 group [3 dose schedule], MenB_0_6 group and ABCWY_Pooled group)

Notes:

[27] - 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: As specified in the Protocol, the analysis assesses the immune response of the rMenB+OMV and MenABCWY vaccines against N. meningitidis serogroup B indicator strains.

End point values	MenB_0_2_6 Group	MenB_0_6 Group	ABCWY_Pooled	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	749	731	780	
Units: Percentage of participants				
number (confidence interval 95%)				
fHbp, Day 1 (N=749,730,762)	4.9 (3.5 to 6.7)	3.4 (2.2 to 5)	99999 (99999 to 99999)	
fHbp, Day 211 (N=690,707,738)	97.4 (95.9 to 98.4)	94.6 (92.7 to 96.2)	99999 (99999 to 99999)	
NadA, Day 1 (N=744,731,780)	6.2 (4.6 to 8.2)	4.4 (3 to 6.1)	99999 (99999 to 99999)	
NadA, Day 211 (N=691,707,734)	100 (99.5 to 100)	98 (96.7 to 98.9)	99999 (99999 to 99999)	
NHBA, Day 1 (N=749,731,764)	23.2 (20.3 to 26.4)	20.9 (18 to 24.1)	99999 (99999 to 99999)	
NHBA, Day 211 (N=695,711,738)	97 (95.4 to 98.1)	97.5 (96 to 98.5)	99999 (99999 to 99999)	

PorA, Day 1 (N=738,716,751)	2.3 (1.3 to 3.7)	1.4 (0.7 to 2.6)	99999 (99999 to 99999)	
PorA, Day 211 (N=657,684,709)	85.8 (82.9 to 88.4)	82.6 (79.5 to 85.4)	99999 (99999 to 99999)	
Composite Response, Day=1 (N=727,708,747)	1.1 (0.5 to 2.2)	0.6 (0.2 to 1.4)	99999 (99999 to 99999)	
Composite Response, Day=211 (N=654,683,707)	83.3 (80.3 to 86.1)	80.7 (77.5 to 83.6)	99999 (99999 to 99999)	

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants with hSBA titers >= LLOQ for each and all serogroup B indicator strains at Day 1 and at 1 month after vaccination with rMenB+OMV NZ (0,2-months) and last dose of MenABCWY (ABCWY group-pooled lots)

End point title	Percentage of participants with hSBA titers >= LLOQ for each and all serogroup B indicator strains at Day 1 and at 1 month after vaccination with rMenB+OMV NZ (0,2-months) and last dose of MenABCWY (ABCWY group-pooled lots)[28]

End point description:

The immune response to rMenB+OMV NZ and MenABCWY vaccine was evaluated by measuring bactericidal activity against each (individual response) and all (composite response) N. meningitidis serogroup B indicator strains(M14459, 96217, M13520 and NZ98/254 for fHbp, NadA, NHBA and PorA P1.4 antigens, respectively). Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment and had post-vaccination effectiveness data.

End point type	Secondary

End point timeframe:

At Day 1 (pre-vaccination) and1 month after the vaccination schedule (i.e., Day 91 for MenB_0_2 group and Day 211 for ABCWY_Pooled group)

Notes:

[28] - 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: As specified in the Protocol, the analysis assesses the immune response of the rMenB+OMV and MenABCWY vaccines against N. meningitidis serogroup B indicator strains.

End point values	MenB_0_2_6 Group			
Subject group type	Reporting group			
Number of subjects analysed	753			
Units: Percentage of participants				
number (confidence interval 95%)				
fHbp, Day 1 (N=749)	4.9 (3.5 to 6.7)			
fHbp, Day 91 (N=750)	92.9 (90.9 to 94.7)			
NadA, Day 1 (N=744)	6.2 (4.6 to 8.2)			
NadA, Day 91 (N=753)	99.5 (98.6 to 99.9)			
NHBA, Day 1 (N=749)	23.2 (20.3 to 26.4)			
NHBA, Day 91 (N=750)	96.1 (94.5 to 97.4)			
PorA, Day 1 (N=738)	2.3 (1.3 to 3.7)			

PorA, Day 91 (N=745)	80 (76.9 to 82.8)			
Composite Response, Day=1 (N=727)	1.1 (0.5 to 2.2)			
Composite Response, Day=91 (N=744)	75.5 (72.3 to 78.6)			

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants with 4-fold rise in hSBA titers for each of the serogroup B strains at 1 month after vaccination with rMenB+OMV NZ (0,2,6-months and 0,6-months) and last dose of MenABCWY (ABCWY group-pooled lots)

End point title	Percentage of participants with 4-fold rise in hSBA titers for each of the serogroup B strains at 1 month after vaccination with rMenB+OMV NZ (0,2,6-months and 0,6-months) and last dose of MenABCWY (ABCWY group-pooled lots)[29]

End point description:

The immune response to 3 dose (0,2,6-M), 2 dose (0,6-M) schedule of rMenB+OMV NZ and 2 doses of MenABCWY vaccine was evaluated by measuring bactericidal activity against each of the N. meningitidis serogroup B test strains- M14459, 96217, NZ98/254 and M13520 compared to baseline. Four-fold rise per each indicator strain was defined as a post-vaccination hSBA titre ≥16 for subjects with a pre-vaccination hSBA titre <4
a post-vaccination hSBA titre ≥4 times the LLOQ for subjects with a pre-vaccination hSBA titre ≥LOD and <LLOQ
a post-vaccination hSBA titre ≥4 times the pre-vaccination hSBA titre for subjects with a pre-vaccination hSBA titre ≥ LLOQ. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data. "99999" is used as placeholder value for the results of ABCWY group since analysis of final results for this group is ongoing and will be updated subsequently.

End point type	Secondary

End point timeframe:

At 1 month after the vaccination schedule (i.e., Day 211 for MenB_0_2_6 group [3 dose schedule], MenB_0_6 group and ABCWY_Pooled group)

Notes:

[29] - 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: As specified in the Protocol, the analysis assesses the immune response of the rMenB+OMV and MenABCWY vaccines against N. meningitidis serogroup B indicator strains.

End point values	MenB_0_2_6 Group	MenB_0_6 Group	ABCWY_Pooled	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	685	704	731[30]	
Units: Percentage of participants				
number (confidence interval 95%)				
fHbp, Day 211(N=679,699,)	86.7 (84.0 to 89.2)	82.4 (79.4 to 85.2)	99999 (99999 to 99999)	
NadA, Day 211(N=679,700	98.7 (97.5 to 99.4)	95.3 (93.4 to 96.7)	99999 (99999 to 99999)	
NHBA, Day 211(N=685,704	66.9 (63.2 to 70.4)	69.5 (65.9 to 72.8)	99999 (99999 to 99999)	
PorA, Day 211(N=637,664)	56.5 (52.6 to 60.4)	57.2 (53.4 to 61.0)	99999 (99999 to 99999)	

Notes:

[30] - Analysis of final results for the ABCWY group is ongoing and will be updated subsequently.

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants with 4-fold rise in hSBA titers for each of the serogroup B strains at Day 1 and 1 month after vaccination with rMenB+OMV NZ (0,2 months)

End point title	Percentage of participants with 4-fold rise in hSBA titers for each of the serogroup B strains at Day 1 and 1 month after vaccination with rMenB+OMV NZ (0,2 months)[31]

End point description:

The immune response to 2 dose (0,2-M) was evaluated by measuring bactericidal activity against each of the N. meningitidis serogroup B test strains- M14459, 96217, NZ98/254 and M13520 compared to baseline. Four-fold rise per each indicator strain was defined as a post-vaccination hSBA titre ≥16 for subjects with a pre-vaccination hSBA titre <4
a post-vaccination hSBA titre ≥4 times the LLOQ for subjects with a pre-vaccination hSBA titre ≥LOD and <LLOQ
a post-vaccination hSBA titre ≥4 times the pre-vaccination hSBA titre for subjects with a pre-vaccination hSBA titre ≥ LLOQ.
Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data.

End point type	Secondary

End point timeframe:

At Day 1 (pre-vaccination) and 1 month after the vaccination schedule (i.e., Day 91 for MenB_0_2_6 [2-dose schedule])

Notes:

[31] - 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: As specified in the Protocol, the analysis assesses the immune response of the rMenB+OMV vaccines against N. meningitidis serogroup B indicator strains.

End point values	MenB_0_2_6 Group			
Subject group type	Reporting group			
Number of subjects analysed	739			
Units: Percentage of participants				
number (confidence interval 95%)				
fHbp, Day 91 (N=739)	74.6 (71.3 to 77.7)			
NadA, Day 91(N=738)	96.3 (94.7 to 97.6)			
NHBA, Day 91(N=739)	58.5 (54.8 to 62.0)			
PorA, Day 91(N=724)	53.5 (49.7 to 57.1)			

Statistical analyses

No statistical analyses for this end point

Secondary: hSBA GMTs against each of the N. meningitidis serogroup B strains at Day 1 and at 1 month after vaccination with rMenB+OMV NZ (0,2,6-months, 0,6-months) and last dose of MenABCWY (ABCWY group-pooled lots)

End point title	hSBA GMTs against each of the N. meningitidis serogroup B strains at Day 1 and at 1 month after vaccination with rMenB+OMV NZ (0,2,6-months, 0,6-months) and last dose of MenABCWY (ABCWY group-pooled lots)[32]

End point description:

The immune response to rMenB+OMV NZ and MenABCWY vaccine was evaluated by measuring bactericidal activity against N. meningitidis serogroup B test strains in terms of GMTs after vaccination compared to baseline (Day 1). For each N. meningitidis serogroup B test strain (M14459, M13520, 96217 and NZ98/254), The GMTs (After vaccination/baseline) are calculated, with their associated 2-sided 95% CIs. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data.
"99999" is used as a placeholder value for the results from ABCWY groups since the analysis of final results for this group is ongoing and will be updated subsequently.

End point type	Secondary

End point timeframe:

At Day 1 (pre-vaccination) and at 1 month after the vaccination schedule (i.e., Day 211 for MenB_0_2_6 group (3 dose schedule), MenB_0_6 group and ABCWY_Pooled group)

Notes:

[32] - 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: As specified in the Protocol, the analysis assesses the immune response of the rMenB+OMV and MenABCWY vaccines against N. meningitidis serogroup B indicator strains.

End point values	MenB_0_2_6 Group	MenB_0_6 Group	ABCWY_Pooled	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	749	731	780	
Units: Titers				
geometric mean (confidence interval 95%)				
fHbp, Day 1 (N=749,730,762)	2.8 (2.7 to 2.8)	2.7 (2.6 to 2.8)	99999 (99999 to 99999)	
fHbp, Day 211(N=690,707,738)	30.8 (28.3 to 33.5)	28.1 (25.9 to 30.6)	99999 (99999 to 99999)	
NadA, Day 1(N=744,731,780)	8.4 (8.1 to 8.6)	8.3 (8 to 8.6)	99999 (99999 to 99999)	
NadA, Day 211(N=691,707,734)	267.2 (243.7 to 293)	215.1 (196.2 to 235.9)	99999 (99999 to 99999)	
NHBA, Day 1(N=749,731,764)	3.4 (3.1 to 3.7)	3.2 (3 to 3.5)	99999 (99999 to 99999)	
NHBA, Day 211(N=695,711,738)	30.6 (27.7 to 33.7)	33.2 (30.2 to 36.6)	99999 (99999 to 99999)	
PorA, Day 1(N=738,716,751)	3.2 (3.1 to 3.2)	3.1 (3 to 3.2)	99999 (99999 to 99999)	
PorA, Day 211(N=657,684,709)	18.1 (16.3 to 20.1)	17.7 (15.9 to 19.6)	99999 (99999 to 99999)	

Statistical analyses

No statistical analyses for this end point

Secondary: hSBA GMTs against each of the N. meningitidis serogroup B strains at Day 1 and at 1 month after vaccination with rMenB+OMV NZ (0,2-months)

End point title	hSBA GMTs against each of the N. meningitidis serogroup B strains at Day 1 and at 1 month after vaccination with rMenB+OMV NZ (0,2-months)[33]

End point description:

The immune response to rMenB+OMV NZ and MenABCWY vaccine is evaluated by measuring bactericidal activity against N. meningitidis serogroup B test strains in terms of GMTs after vaccination compared to baseline (Day 1). For each N. meningitidis serogroup B test strain (M14459, M13520, 96217 and NZ98/254), The GMTs (After vaccination/baseline) are calculated, with their associated 2-sided 95% CIs. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data.

End point type	Secondary

End point timeframe:

At Day 1 (pre-vaccination) and at 1 month after the vaccination schedule (i.e., Day 91 for MenB_0_2_6 group[2-dose schedule])

Notes:

[33] - 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: As specified in the Protocol, the analysis assesses the immune response of the rMenB+OMV and MenABCWY vaccines against N. meningitidis serogroup B indicator strains.

End point values	MenB_0_2_6 Group			
Subject group type	Reporting group			
Number of subjects analysed	753			
Units: Titers				
geometric mean (confidence interval 95%)				
fHbp, Day 1(N=749)	2.8 (2.7 to 2.8)			
fHbp, Day 91(N=750)	20.9 (18.9 to 23.1)			
NadA, Day 1(N=744)	8.4 (8.1 to 8.6)			
NadA, Day 91(N=753)	178.5 (161.7 to 197.2)			
NHBA, Day 1(N=749)	3.4 (3.1 to 3.7)			
NHBA, Day 91(N=750)	27.2 (24.1 to 30.6)			
PorA, Day 1(N=738)	3.2 (3.1 to 3.2)			
PorA, Day 91(N=745)	17.1 (15.2 to 19.3)			

Statistical analyses

No statistical analyses for this end point

Secondary: hSBA Geometric Mean Ratios (GMRs) for each of the N. meningitidis serogroup B strains at 1 month after vaccination with rMenB+OMV NZ (0,2,6-months, 0,6-months) and last dose of MenABCWY (ABCWY group-pooled lots)

End point title	hSBA Geometric Mean Ratios (GMRs) for each of the N. meningitidis serogroup B strains at 1 month after vaccination

	with rMenB+OMV NZ (0,2,6-months, 0,6-months) and last dose of MenABCWY (ABCWY group-pooled lots)[34]

End point description:

The immune response to rMenB+OMV NZ vaccine was evaluated by measuring bactericidal activity against N. meningitidis serogroup B test strains after vaccination compared to baseline (Day 1). For each N. meningitidis serogroup B test strain (M14459, M13520, 96217 and NZ98/254), the GMRs (after vaccination/baseline) are calculated, with their associated 2-sided 95% CIs. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data. "99999" is used as a placeholder value for the results from ABCWY groups since the analysis of final results for this group is ongoing and will be updated subsequently.

End point type	Secondary

End point timeframe:

At Day 1 (pre-vaccination) and at 1 month after the vaccination schedule (i.e., Day 211 for MenB_0_2_6 group (3 dose schedule), MenB_0_6 group and ABCWY_Pooled group)

Notes:

[34] - 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: As specified in the Protocol, the analysis assesses the immune response of the rMenB+OMV and MenABCWY vaccines against N. meningitidis serogroup B indicator strains.

End point values	MenB_0_2_6 Group	MenB_0_6 Group	ABCWY_Pooled	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	685	704	731	
Units: Ratio				
geometric mean (confidence interval 95%)				
fHbp(N=679,699,729)	11.2 (10.3 to 12.2)	10.5 (9.6 to 11.4)	99999 (99999 to 99999)	
NadA(N=679,700,725)	32.1 (29.1 to 35.3)	25.8 (23.5 to 28.4)	99999 (99999 to 99999)	
NHBA(N=685,704,731)	9.1 (8.2 to 10.1)	10.6 (9.5 to 11.7)	99999 (99999 to 99999)	
PorA(N=637,664,693)	5.8 (5.2 to 6.5)	5.8 (5.2 to 6.4)	99999 (99999 to 99999)	

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants with hSBA titers >= LLOQ for each of the N. meningitidis serogroups A,C,W,Y at Day 1 and at 1 month after the first and the last MenABCWY vaccination for ABCWY_Pooled group and 1 month after the MenACWY vaccine for ACWY group

End point title	Percentage of participants with hSBA titers >= LLOQ for each of the N. meningitidis serogroups A,C,W,Y at Day 1 and at 1 month after the first and the last MenABCWY vaccination for ABCWY_Pooled group and 1 month after the MenACWY vaccine for ACWY group [35]

End point description:

The immune responses to MenABCWY and MenACWY vaccines was evaluated by measuring bactericidal activity against N. meningitidis serogroups A, C, W and Y after vaccination compared to baseline (Day 1) and expressed as the percentage of participants with hSBA titers >= LLOQ for serogroups A, C, W and Y at baseline and 1 month after vaccination schedule of MenABCWY and MenACWY vaccines. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data. "99999" is used as a placeholder

value for the results from ABCWY and ACWY groups since analysis of final results for these two groups is ongoing and will be updated subsequently.

End point type	Secondary

End point timeframe:

At Day 1, and 1 month after vaccination schedule (i.e, at Day 31 for ABCWY group [pooled lots -first dose] and for ACWY Group, and at Day 211 for ABCWY group [pooled lots – second dose])

Notes:

[35] - 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: As specified in the Protocol, the analysis assesses the immune response of the MenABCWY and MenACWY vaccines against N. meningitidis serogroups A, C, W, and Y.

End point values	ABCWY_Pooled	ACWY Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	1489	141		
Units: Percentage of participants				
number (confidence interval 95%)	99999 (99999 to 99999)	99999 (99999 to 99999)		

Statistical analyses

No statistical analyses for this end point

Secondary: Percentage of participants with 4-fold rise in hSBA titers for each of the N. meningitidis serogroups A, C, W and Y at Day 1 and at 1 month after the first and last MenABCWY dose for ABCWY_Pooled group and 1 month after the MenACWY vaccine for ACWY group

End point title	Percentage of participants with 4-fold rise in hSBA titers for each of the N. meningitidis serogroups A, C, W and Y at Day 1 and at 1 month after the first and last MenABCWY dose for ABCWY_Pooled group and 1 month after the MenACWY vaccine for ACWY group[36]

End point description:

The corresponding 2- sided 95% CI based on Clopper-Pearson method was calculated for each vaccine group. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data. "99999" is used as a placeholder value for the results from ABCWY and ACWY groups since the analysis of final results for these two groups is ongoing and will be updated subsequently.

End point type	Secondary

End point timeframe:

At Day 1 (pre-vaccination) and 1 month after vaccination schedule (i.e, at Day 31 for ABCWY group [pooled lots -first dose] and for ACWY Group, and at Day 211 for ABCWY group [pooled lots – second dose])

Notes:

[36] - 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: As specified in the Protocol, the analysis assesses the immune response of the MenABCWY and MenACWY vaccines against N. meningitidis serogroups A, C, W, and Y.

End point values	ABCWY_Pooled	ACWY Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	1247	120		
Units: Percentage of participants				
number (confidence interval 95%)	99999 (99999 to 99999)	99999 (99999 to 99999)		

Statistical analyses

No statistical analyses for this end point

Secondary: hSBA Geometric Mean Ratios (GMRs) for each of the N. meningitidis serogroup B strains at 1 month after vaccination with rMenB+OMV NZ (0,2-months)

End point title	hSBA Geometric Mean Ratios (GMRs) for each of the N. meningitidis serogroup B strains at 1 month after vaccination with rMenB+OMV NZ (0,2-months)[37]

End point description:

The immune response to rMenB+OMV NZ vaccine was evaluated by measuring bactericidal activity against N. meningitidis serogroup B test strains after vaccination compared to baseline (Day 1). For each N. meningitidis serogroup B test strain (M14459, M13520, 96217 and NZ98/254), the GMRs (after vaccination/baseline) are calculated, with their associated 2-sided 95% CIs. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data.

End point type	Secondary

End point timeframe:

At Day 1 (pre-vaccination) and at 1 month after the vaccination schedule (i.e., Day 91 for MenB_0_2_6 group[2-dose schedule])

Notes:

[37] - 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: As specified in the Protocol, the analysis assesses the immune response of the rMenB+OMV vaccines against N. meningitidis serogroup B indicator strains.

End point values	MenB_0_2_6 Group			
Subject group type	Reporting group			
Number of subjects analysed	739			
Units: Ratio				
geometric mean (confidence interval 95%)				
fHbp(N=739)	7.7 (6.9 to 8.5)			
NadA((N=738)	21.7 (19.5 to 24)			
NHBA(N=739)	8 (7.1 to 9)			
PorA((N=724)	5.5 (4.9 to 6.2)			

Statistical analyses

No statistical analyses for this end point

Secondary: GMRs for each of the N. meningitidis serogroups A, C, W and Y at 1 month after the first and the last MenABCWY vaccination for the ABCWY _Pooled group and at 1 month after the MenACWY vaccination for ACWY Group

End point title	GMRs for each of the N. meningitidis serogroups A, C, W and Y at 1 month after the first and the last MenABCWY vaccination for the ABCWY _Pooled group and at 1 month after the MenACWY vaccination for ACWY Group[38]

End point description:

The immune responses to MenABCWY and MenACWY vaccines was evaluated by measuring bactericidal activity against N. meningitidis serogroups A, C, W and Y at Day 31 compared to baseline (Day 1). For each N. meningitidis serogroups A, C, W and Y, the GMRs (after vaccination/baseline) are calculated, with their associated 2-sided 95% CIs. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data. "99999" is used as a placeholder value for the results from ABCWY and ACWY groups since the analysis of final results for these two groups is ongoing and will be updated subsequently.

End point type	Secondary

End point timeframe:

1 month after vaccination schedule (i.e, at Day 31 for ABCWY group [pooled lots -first dose] and for ACWY Group, and at Day 211 for ABCWY group [pooled lots – second dose])

Notes:

[38] - 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: As specified in the Protocol, the analysis assesses the immune response of the MenABCWY and MenACWY vaccines against N. meningitidis serogroups A, C, W, and Y.

End point values	ABCWY_Pooled	ACWY Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	1446	140		
Units: Ratio				
geometric mean (confidence interval 95%)	99999 (99999 to 99999)	99999 (99999 to 99999)		

Statistical analyses

No statistical analyses for this end point

Secondary: hSBA GMTs against each of the N. meningitidis serogroups A, C, W and Y at Day 1 and 1 month after the first and the last MenABCWY vaccination for the ABCWY_Pooled group and at 1 month after the MenACWY vaccination for ACWY Group

End point title	hSBA GMTs against each of the N. meningitidis serogroups A, C, W and Y at Day 1 and 1 month after the first and the last MenABCWY vaccination for the ABCWY_Pooled group and at 1 month after the MenACWY vaccination for ACWY Group[39]

End point description:

The immune responses to MenABCWY and MenACWY vaccines was evaluated by measuring bactericidal activity against N. meningitidis serogroups A, C, W and Y in terms of GMTs after vaccination compared to baseline (Day 1). For each N. meningitidis serogroups A, C, W and Y, the GMTs (after vaccination/baseline) are calculated, with their associated 2-sided 95% CIs. Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data. "99999" is used as a placeholder value for the results from ABCWY and ACWY groups since the analysis of final results for these two groups is ongoing and will be updated subsequently.

End point type	Secondary

End point timeframe:

At Day 1, and 1 month after vaccination schedule (i.e, at Day 31 for ABCWY group [pooled lots -first dose] and for ACWY Group, and at Day 211 for ABCWY group [pooled lots – second dose])

Notes:

[39] - 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: As specified in the Protocol, the analysis assesses the immune response of the MenABCWY and MenACWY vaccines against N. meningitidis serogroups A, C, W, and Y.

End point values	ABCWY_Pooled	ACWY Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	1489	141		
Units: Titers				
geometric mean (confidence interval 95%)	99999 (99999 to 99999)	99999 (99999 to 99999)		

Statistical analyses

No statistical analyses for this end point

Secondary: Immunoglobulin G (IgG) antibodies against N. meningitidis serogroups A, C, W and Y at Day 1 and 1 month after the first and the last MenABCWY vaccination for ABCWY _Pooled group and 1 month after the MenACWY vaccination for ACWY Group

End point title	Immunoglobulin G (IgG) antibodies against N. meningitidis serogroups A, C, W and Y at Day 1 and 1 month after the first and the last MenABCWY vaccination for ABCWY _Pooled group and 1 month after the MenACWY vaccination for ACWY Group[40]

End point description:

The immune responses to MenABCWY and MenACWY vaccines was evaluated by measuring the total IgG in terms of enzyme-linked immunosorbent assay (ELISA) geometric mean concentrations (GMCs) after vaccination compared to baseline (Day 1). Analysis was performed on the FAS, which included all participants who were randomized, received at least 1 dose of the study treatment, and had post-vaccination effectiveness data. "99999" is used as a placeholder value for the results from MenB and ACWY groups since the analysis of final results for these two groups is ongoing and will be updated subsequently.

End point type	Secondary

End point timeframe:

At Day 1, and 1 month after vaccination schedule (i.e, at Day 31 for ABCWY group [pooled lots -first dose] and for ACWY Group, and at Day 211 for ABCWY group [pooled lots – second dose])

Notes:

[40] - 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: As specified in the Protocol, the analysis assesses the immune response of the MenABCWY and MenACWY vaccines against N. meningitidis serogroups A, C, W, and Y.

End point values	MenB_0_2_6 Group	MenB_0_6 Group	ACWY Group	
Subject group type	Reporting group	Reporting group	Reporting group	
Number of subjects analysed	897	906	178	
Units: microgram per milliliter(µg/mL)				
geometric mean (confidence interval 95%)	99999 (99999 to 99999)	99999 (99999 to 99999)	99999 (99999 to 99999)	

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information

Timeframe for reporting adverse events:

SAEs and Non serious AEs(Other AEs) were collected through the entire period of the study (from Day 1 up to study end [Day 361]).

Adverse event reporting additional description:

The analysis of final results for the ABCWY groups is ongoing and will be updated subsequently.

Assessment type	Systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	25.0

Reporting groups

Reporting group title	MenB_0_2_6 Group

Reporting group description:

Participants received 3 doses of rMenB+OMV NZ vaccine at Day 1, Day 61 and Day 181 and 1 dose of MenACWY vaccine at Day 211.

Reporting group title	ACWY Group

Reporting group description:

Participants, received 1 dose of MenACWY vaccine at Day 1, 1 dose of placebo at Day 61 and 2 doses of rMenB+OMV NZ vaccine at Day 181 and Day 211.

Reporting group title	MenB_0_6 Group

Reporting group description:

Participants received 2 doses of rMenB+OMV NZ vaccine at Day 1, and Day 181, 1 dose of MenACWY vaccine at Day 61 and 1 dose of Placebo at Day 211.

Serious adverse events	MenB_0_2_6 Group	ACWY Group	MenB_0_6 Group
Total subjects affected by serious adverse events			
subjects affected / exposed	20 / 897 (2.23%)	5 / 178 (2.81%)	22 / 906 (2.43%)
number of deaths (all causes)	1	0	1
number of deaths resulting from adverse events			
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Testis cancer			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Vascular disorders			
Haematoma			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Pregnancy, puerperium and perinatal			

conditions			
Complication of pregnancy			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Abortion spontaneous			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Placental insufficiency			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Pre-eclampsia			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
General disorders and administration site conditions			
Pyrexia			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences causally related to treatment / all	0 / 0	0 / 0	1 / 2
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Chest pain			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Immune system disorders			
Anaphylactic reaction			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Respiratory, thoracic and mediastinal disorders			
Dyspnoea			

subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Psychiatric disorders			
Suicide attempt			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 2
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Substance-induced psychotic disorder			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Anxiety			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Depression			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	2 / 906 (0.22%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 2
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Depression suicidal			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Major depression			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Investigations			
Troponin T increased			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Injury, poisoning and procedural complications			
Alcohol poisoning			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 1	0 / 0	0 / 0
Concussion			
subjects affected / exposed	3 / 897 (0.33%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences causally related to treatment / all	0 / 3	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Road traffic accident			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Lower limb fracture			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Post procedural haemorrhage			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Poisoning			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 1	0 / 0	0 / 0
Overdose			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 1
Intentional overdose			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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

Toxicity to various agents			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Tendon rupture			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Subdural haemorrhage			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Skin laceration			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Traumatic liver injury			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Ulna fracture			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Injury			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Congenital, familial and genetic disorders			
Urachal abnormality			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

Nervous system disorders			
Aphasia			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Dizziness			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Dysarthria			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Headache			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Nervous system disorder			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Petit mal epilepsy			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Speech disorder			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 1	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Subarachnoid haemorrhage			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Paresis			

subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Eye disorders			
Hypermetropia			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Gastrointestinal disorders			
Abdominal pain			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Vomiting			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Nausea			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Colitis ulcerative			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	1 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Hepatobiliary disorders			
Hepatitis toxic			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Cholelithiasis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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

Skin and subcutaneous tissue disorders			
Excessive granulation tissue			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Vancomycin infusion reaction			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Renal and urinary disorders			
Urethral stenosis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Nephrolithiasis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Musculoskeletal and connective tissue disorders			
Rhabdomyolysis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Intervertebral disc protrusion			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Appendicitis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	3 / 906 (0.33%)
occurrences causally related to treatment / all	0 / 1	0 / 0	0 / 3
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Cellulitis			

subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Sepsis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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
Peritonsillar abscess			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Gastroenteritis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Tonsillitis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 1
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Tooth abscess			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (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

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

Non-serious adverse events	MenB_0_2_6 Group	ACWY Group	MenB_0_6 Group
Total subjects affected by non-serious adverse events			
subjects affected / exposed	876 / 897 (97.66%)	173 / 178 (97.19%)	872 / 906 (96.25%)
Neoplasms benign, malignant and unspecified (incl cysts and polyps)			
Basal cell carcinoma			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Benign soft tissue neoplasm			

subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Skin papilloma			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	1	0	2
Vascular disorders			
Haematoma			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Varicose vein			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Hot flush			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Hypertension			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	1	0	2
Pallor			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
General disorders and administration site conditions			
Administration site pain			
subjects affected / exposed	851 / 897 (94.87%)	149 / 178 (83.71%)	853 / 906 (94.15%)
occurrences (all)	2229	240	1768
Administration site swelling			
subjects affected / exposed	202 / 897 (22.52%)	22 / 178 (12.36%)	158 / 906 (17.44%)
occurrences (all)	293	25	200
Asthenia			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Chest pain			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	2 / 906 (0.22%)
occurrences (all)	0	1	2
Chills			

subjects affected / exposed	8 / 897 (0.89%)	0 / 178 (0.00%)	3 / 906 (0.33%)
occurrences (all)	8	0	4
Administration site erythema			
subjects affected / exposed	209 / 897 (23.30%)	21 / 178 (11.80%)	157 / 906 (17.33%)
occurrences (all)	300	24	203
Administration site induration			
subjects affected / exposed	138 / 897 (15.38%)	17 / 178 (9.55%)	113 / 906 (12.47%)
occurrences (all)	180	19	142
Cyst			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Fatigue			
subjects affected / exposed	604 / 897 (67.34%)	105 / 178 (58.99%)	579 / 906 (63.91%)
occurrences (all)	1183	174	1005
Feeling hot			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	1 / 906 (0.11%)
occurrences (all)	0	1	1
Induration			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Influenza like illness			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	2	0	3
Injection site bruising			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Injection site swelling			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Injection site hypoaesthesia			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Injection site induration			
subjects affected / exposed	8 / 897 (0.89%)	2 / 178 (1.12%)	5 / 906 (0.55%)
occurrences (all)	11	2	5
Injection site mass			

subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	1	0	2
Injection site pain			
subjects affected / exposed	3 / 897 (0.33%)	1 / 178 (0.56%)	8 / 906 (0.88%)
occurrences (all)	3	1	8
Injection site pruritus			
subjects affected / exposed	2 / 897 (0.22%)	1 / 178 (0.56%)	1 / 906 (0.11%)
occurrences (all)	4	1	2
Injection site rash			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	1	0	2
Injection site haematoma			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Vaccination site warmth			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Vaccination site urticaria			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Vaccination site pruritus			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Vaccination site pain			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Thirst			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Swelling			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Pyrexia			
subjects affected / exposed	66 / 897 (7.36%)	7 / 178 (3.93%)	59 / 906 (6.51%)
occurrences (all)	69	7	62
Peripheral swelling			

subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Pain			
subjects affected / exposed	4 / 897 (0.45%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	5	0	2
Non-cardiac chest pain			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Malaise			
subjects affected / exposed	4 / 897 (0.45%)	0 / 178 (0.00%)	3 / 906 (0.33%)
occurrences (all)	5	0	3
Injection site warmth			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	3	0	1
Vessel puncture site pain			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	0	0	2
Immune system disorders			
Anaphylactoid reaction			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Seasonal allergy			
subjects affected / exposed	7 / 897 (0.78%)	2 / 178 (1.12%)	7 / 906 (0.77%)
occurrences (all)	7	2	7
Multiple allergies			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	2	0	1
Hypersensitivity			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Food allergy			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	2	0	1
Drug hypersensitivity			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1

Reproductive system and breast disorders			
Breast cyst			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Penile rash			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Nipple enlargement			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Menstruation irregular			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Intermenstrual bleeding			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Heavy menstrual bleeding			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Endometriosis			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Dysmenorrhoea			
subjects affected / exposed	14 / 897 (1.56%)	6 / 178 (3.37%)	10 / 906 (1.10%)
occurrences (all)	19	6	10
Breast tenderness			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Breast mass			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Breast inflammation			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Premenstrual syndrome			

subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Testicular pain			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Vaginal haemorrhage			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Ovarian cyst			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Respiratory, thoracic and mediastinal disorders			
Asthma			
subjects affected / exposed	4 / 897 (0.45%)	0 / 178 (0.00%)	6 / 906 (0.66%)
occurrences (all)	5	0	8
Tonsillolith			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Sneezing			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Rhinorrhoea			
subjects affected / exposed	4 / 897 (0.45%)	2 / 178 (1.12%)	1 / 906 (0.11%)
occurrences (all)	4	2	1
Rhinitis allergic			
subjects affected / exposed	2 / 897 (0.22%)	1 / 178 (0.56%)	3 / 906 (0.33%)
occurrences (all)	2	1	3
Rhinalgia			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Respiratory tract congestion			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Oropharyngeal pain			

subjects affected / exposed	12 / 897 (1.34%)	0 / 178 (0.00%)	11 / 906 (1.21%)
occurrences (all)	12	0	12
Nasal congestion			
subjects affected / exposed	12 / 897 (1.34%)	0 / 178 (0.00%)	6 / 906 (0.66%)
occurrences (all)	13	0	6
Epistaxis			
subjects affected / exposed	1 / 897 (0.11%)	1 / 178 (0.56%)	3 / 906 (0.33%)
occurrences (all)	1	1	3
Dyspnoea			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Cough			
subjects affected / exposed	4 / 897 (0.45%)	3 / 178 (1.69%)	3 / 906 (0.33%)
occurrences (all)	4	3	4
Upper-airway cough syndrome			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Wheezing			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Psychiatric disorders			
Anxiety			
subjects affected / exposed	6 / 897 (0.67%)	0 / 178 (0.00%)	8 / 906 (0.88%)
occurrences (all)	6	0	8
Anxiety disorder			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Attention deficit hyperactivity disorder			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	4 / 906 (0.44%)
occurrences (all)	0	0	4
Binge eating			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Confusional state			

subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Depression			
subjects affected / exposed	6 / 897 (0.67%)	2 / 178 (1.12%)	4 / 906 (0.44%)
occurrences (all)	6	2	4
Adjustment disorder			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Adjustment disorder with depressed mood			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Aggression			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Anorexia nervosa			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Depression suicidal			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Disruptive mood dysregulation disorder			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Tic			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Insomnia			
subjects affected / exposed	3 / 897 (0.33%)	1 / 178 (0.56%)	3 / 906 (0.33%)
occurrences (all)	3	1	3
Panic attack			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	3	0	0
Sleep disorder			

subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Stress			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Suicidal ideation			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Investigations			
Body temperature increased			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Cardiac murmur			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Computerised tomogram abdomen abnormal			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Haemoglobin decreased			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Heart rate irregular			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Liver function test increased			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
SARS-CoV-2 test positive			
subjects affected / exposed	6 / 897 (0.67%)	1 / 178 (0.56%)	7 / 906 (0.77%)
occurrences (all)	6	1	7
Serum ferritin decreased			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Streptococcus test positive			

subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Thyroid hormones decreased			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Injury, poisoning and procedural complications			
Alcohol poisoning			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Ankle fracture			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Arthropod bite			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Arthropod sting			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Clavicle fracture			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Concussion			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	3	0	0
Contusion			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	3	0	2
Eye abrasion			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Eye injury			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Facial bones fracture			

subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Fall			
subjects affected / exposed	1 / 897 (0.11%)	2 / 178 (1.12%)	2 / 906 (0.22%)
occurrences (all)	1	2	2
Fibula fracture			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	2 / 906 (0.22%)
occurrences (all)	0	1	2
Foot fracture			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	5 / 906 (0.55%)
occurrences (all)	2	0	6
Hand fracture			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	3	0	1
Head injury			
subjects affected / exposed	1 / 897 (0.11%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	1	1	0
Human bite			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Humerus fracture			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Post-traumatic neck syndrome			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Joint dislocation			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	4 / 906 (0.44%)
occurrences (all)	0	1	4
Joint injury			
subjects affected / exposed	4 / 897 (0.45%)	0 / 178 (0.00%)	3 / 906 (0.33%)
occurrences (all)	4	0	3
Ligament rupture			
subjects affected / exposed	1 / 897 (0.11%)	1 / 178 (0.56%)	1 / 906 (0.11%)
occurrences (all)	1	1	1
Ligament sprain			

subjects affected / exposed	5 / 897 (0.56%)	1 / 178 (0.56%)	16 / 906 (1.77%)
occurrences (all)	7	1	17
Limb injury			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	5 / 906 (0.55%)
occurrences (all)	3	0	5
Lower limb fracture			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Meniscus injury			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Muscle rupture			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Muscle strain			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Musculoskeletal foreign body			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Nail injury			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	0	0	2
Post procedural complication			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	1	0	2
Infusion related reaction			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Procedural complication			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Traumatic haematoma			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Procedural nausea			

subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Procedural pain			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Procedural vomiting			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Radius fracture			
subjects affected / exposed	1 / 897 (0.11%)	1 / 178 (0.56%)	2 / 906 (0.22%)
occurrences (all)	1	1	2
Road traffic accident			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	0	0	2
Scratch			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Skin abrasion			
subjects affected / exposed	3 / 897 (0.33%)	2 / 178 (1.12%)	2 / 906 (0.22%)
occurrences (all)	3	2	3
Skin laceration			
subjects affected / exposed	5 / 897 (0.56%)	1 / 178 (0.56%)	5 / 906 (0.55%)
occurrences (all)	5	1	5
Tendon injury			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Thermal burn			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Tibia fracture			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Torus fracture			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Procedural dizziness			

subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Ulna fracture			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Vaccination complication			
subjects affected / exposed	2 / 897 (0.22%)	1 / 178 (0.56%)	3 / 906 (0.33%)
occurrences (all)	2	1	3
Wrist fracture			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	2	0	2
Upper limb fracture			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	4 / 906 (0.44%)
occurrences (all)	1	0	5
Congenital, familial and genetic disorders			
Multiple endocrine neoplasia Type 1			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Familial mediterranean fever			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Rathke's cleft cyst			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Type V hyperlipidaemia			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Cardiac disorders			
Palpitations			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Tachycardia paroxysmal			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Supraventricular tachycardia			

subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Nervous system disorders			
Speech disorder			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Dizziness			
subjects affected / exposed	6 / 897 (0.67%)	1 / 178 (0.56%)	6 / 906 (0.66%)
occurrences (all)	8	1	6
Dyskinesia			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Headache			
subjects affected / exposed	578 / 897 (64.44%)	97 / 178 (54.49%)	525 / 906 (57.95%)
occurrences (all)	999	148	874
Hypoaesthesia			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Lethargy			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	0	0	2
Migraine			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	5 / 906 (0.55%)
occurrences (all)	3	0	5
Myoclonus			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Neuromuscular blockade			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Presyncope			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Psychomotor hyperactivity			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0

Seizure			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Somnolence			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Syncope			
subjects affected / exposed	1 / 897 (0.11%)	1 / 178 (0.56%)	2 / 906 (0.22%)
occurrences (all)	1	1	2
Taste disorder			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Blood and lymphatic system disorders			
Iron deficiency anaemia			
subjects affected / exposed	4 / 897 (0.45%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	4	0	1
Anaemia			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Lymphadenitis			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	2	0	1
Lymphadenopathy			
subjects affected / exposed	5 / 897 (0.56%)	1 / 178 (0.56%)	7 / 906 (0.77%)
occurrences (all)	6	1	7
Ear and labyrinth disorders			
Vertigo			
subjects affected / exposed	4 / 897 (0.45%)	0 / 178 (0.00%)	3 / 906 (0.33%)
occurrences (all)	4	0	3
Tympanic membrane perforation			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Tinnitus			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Hypoacusis			

subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Eustachian tube dysfunction			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Ear pain			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	3	0	2
Cerumen impaction			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	0	0	2
Ear discomfort			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Eye disorders			
Astigmatism			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Blepharitis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Blindness transient			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Conjunctivitis allergic			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Eye irritation			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Eye pain			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Vision blurred			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1

Swelling of eyelid			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Ocular hyperaemia			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Keratitis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Glaucoma			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Eye swelling			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Gastrointestinal disorders			
Anal fissure			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Abdominal pain upper			
subjects affected / exposed	7 / 897 (0.78%)	2 / 178 (1.12%)	9 / 906 (0.99%)
occurrences (all)	7	2	10
Abdominal pain lower			
subjects affected / exposed	3 / 897 (0.33%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	3	1	0
Abdominal pain			
subjects affected / exposed	7 / 897 (0.78%)	1 / 178 (0.56%)	11 / 906 (1.21%)
occurrences (all)	7	1	12
Abdominal distension			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Abdominal discomfort			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	1	0	2
Colitis			

subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	0	0	2
Lip swelling			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Irritable bowel syndrome			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	0	0	2
Hypoaesthesia oral			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Hyperchlorhydria			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Haemorrhoids			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	2 / 906 (0.22%)
occurrences (all)	0	1	2
Haematemesis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Gastrooesophageal reflux disease			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	4 / 906 (0.44%)
occurrences (all)	2	0	4
Gastritis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	1	0	2
Food poisoning			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	2 / 906 (0.22%)
occurrences (all)	0	1	2
Enteritis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Dyspepsia			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Diarrhoea			

subjects affected / exposed	14 / 897 (1.56%)	5 / 178 (2.81%)	16 / 906 (1.77%)
occurrences (all)	15	5	19
Dental caries			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Constipation			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	3	0	1
Mouth ulceration			
subjects affected / exposed	1 / 897 (0.11%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	1	1	0
Nausea			
subjects affected / exposed	245 / 897 (27.31%)	45 / 178 (25.28%)	204 / 906 (22.52%)
occurrences (all)	324	59	262
Oral pain			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Oral pruritus			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Pancreatitis relapsing			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Peptic ulcer			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Toothache			
subjects affected / exposed	1 / 897 (0.11%)	1 / 178 (0.56%)	5 / 906 (0.55%)
occurrences (all)	1	1	6
Vomiting			
subjects affected / exposed	6 / 897 (0.67%)	1 / 178 (0.56%)	11 / 906 (1.21%)
occurrences (all)	6	1	11
Hepatobiliary disorders			
Hepatic steatosis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0

Skin and subcutaneous tissue disorders			
Cold urticaria			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Acne			
subjects affected / exposed	8 / 897 (0.89%)	1 / 178 (0.56%)	7 / 906 (0.77%)
occurrences (all)	8	1	7
Dermatitis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Dermatitis allergic			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Rash			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	3	0	2
Pruritus			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	3	0	0
Pityriasis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Pain of skin			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Miliaria			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Ingrowing nail			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	3	0	1
Hyperhidrosis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	0	0	2
Hand dermatitis			

subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Erythema			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	4	0	0
Dermatitis atopic			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Dermatitis contact			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	3	0	2
Eczema			
subjects affected / exposed	4 / 897 (0.45%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	4	0	2
Urticaria			
subjects affected / exposed	2 / 897 (0.22%)	1 / 178 (0.56%)	3 / 906 (0.33%)
occurrences (all)	2	1	3
Skin lesion			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Rash pruritic			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Rash macular			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Rash maculo-papular			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Renal and urinary disorders			
Dysuria			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Hydronephrosis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0

Nephritis			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	3	0	0
Nephrolithiasis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Pollakiuria			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Urinary retention			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Urinary tract inflammation			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Haematuria			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Endocrine disorders			
Thyroid stimulating hormone deficiency			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Hypothyroidism			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	154 / 897 (17.17%)	25 / 178 (14.04%)	127 / 906 (14.02%)
occurrences (all)	205	30	163
Muscle tightness			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Axillary mass			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Back pain			

subjects affected / exposed	7 / 897 (0.78%)	2 / 178 (1.12%)	15 / 906 (1.66%)
occurrences (all)	7	2	15
Epiphysiolysis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Flank pain			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Foot deformity			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Growing pains			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Intervertebral disc protrusion			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Joint hyperextension			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Joint swelling			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Joint warmth			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Knee deformity			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Muscle swelling			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Arthritis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Muscular weakness			

subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	3 / 906 (0.33%)
occurrences (all)	0	0	3
Myalgia			
subjects affected / exposed	240 / 897 (26.76%)	30 / 178 (16.85%)	209 / 906 (23.07%)
occurrences (all)	325	35	276
Myositis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Neck mass			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Neck pain			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	3 / 906 (0.33%)
occurrences (all)	1	0	3
Osteochondrosis			
subjects affected / exposed	4 / 897 (0.45%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	4	0	1
Pain in extremity			
subjects affected / exposed	5 / 897 (0.56%)	1 / 178 (0.56%)	11 / 906 (1.21%)
occurrences (all)	5	1	11
Rotator cuff syndrome			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Sever's disease			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Spinal pain			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Temporomandibular joint syndrome			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Tendon pain			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Tenosynovitis			

subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Musculoskeletal chest pain			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	0	0	2
Infections and infestations			
COVID-19			
subjects affected / exposed	93 / 897 (10.37%)	26 / 178 (14.61%)	107 / 906 (11.81%)
occurrences (all)	96	26	111
Bullous impetigo			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Bronchitis			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	2	0	2
Body tinea			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Bacterial vaginosis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	1	0	2
Asymptomatic COVID-19			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	3	0	0
Adenovirus infection			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Acute sinusitis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	4 / 906 (0.44%)
occurrences (all)	0	0	4
Acarodermatitis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
COVID-19 pneumonia			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1

Cellulitis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	0	0	2
Chlamydial infection			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Genital herpes			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Gastroenteritis viral			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	6 / 906 (0.66%)
occurrences (all)	3	0	6
Gastroenteritis			
subjects affected / exposed	6 / 897 (0.67%)	0 / 178 (0.00%)	4 / 906 (0.44%)
occurrences (all)	6	0	5
Folliculitis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Eyelid infection			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Eye infection			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Erythema migrans			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Enterovirus infection			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Enterobiasis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	0	0	2
Endometritis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1

Ear infection			
subjects affected / exposed	3 / 897 (0.33%)	1 / 178 (0.56%)	2 / 906 (0.22%)
occurrences (all)	3	1	2
Cystitis			
subjects affected / exposed	1 / 897 (0.11%)	1 / 178 (0.56%)	3 / 906 (0.33%)
occurrences (all)	1	1	3
Coronavirus infection			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Gingivitis			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Oral herpes			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	5 / 906 (0.55%)
occurrences (all)	0	0	6
Nasopharyngitis			
subjects affected / exposed	29 / 897 (3.23%)	11 / 178 (6.18%)	37 / 906 (4.08%)
occurrences (all)	33	11	42
Mycoplasma genitalium infection			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Lyme disease			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Lower respiratory tract infection			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Localised infection			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	4 / 906 (0.44%)
occurrences (all)	1	0	4
Influenza			
subjects affected / exposed	10 / 897 (1.11%)	1 / 178 (0.56%)	11 / 906 (1.21%)
occurrences (all)	10	1	12
Infectious mononucleosis			
subjects affected / exposed	2 / 897 (0.22%)	2 / 178 (1.12%)	0 / 906 (0.00%)
occurrences (all)	2	2	0

Infected bite			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	1 / 906 (0.11%)
occurrences (all)	0	1	1
Impetigo			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Hordeolum			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Herpes zoster			
subjects affected / exposed	1 / 897 (0.11%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	1	1	0
Helicobacter gastritis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Onychomycosis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Paronychia			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	2	0	1
Parotitis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Pelvic inflammatory disease			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Pharyngitis			
subjects affected / exposed	8 / 897 (0.89%)	2 / 178 (1.12%)	19 / 906 (2.10%)
occurrences (all)	9	2	24
Pharyngitis streptococcal			
subjects affected / exposed	2 / 897 (0.22%)	1 / 178 (0.56%)	4 / 906 (0.44%)
occurrences (all)	2	1	4
Postoperative wound infection			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1

Pulpitis dental			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	2	0	2
Respiratory tract infection			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Respiratory tract infection bacterial			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Otitis externa			
subjects affected / exposed	4 / 897 (0.45%)	0 / 178 (0.00%)	4 / 906 (0.44%)
occurrences (all)	5	0	4
Otitis media			
subjects affected / exposed	6 / 897 (0.67%)	0 / 178 (0.00%)	3 / 906 (0.33%)
occurrences (all)	6	0	3
Otitis media acute			
subjects affected / exposed	3 / 897 (0.33%)	1 / 178 (0.56%)	1 / 906 (0.11%)
occurrences (all)	4	1	2
Otosalpingitis			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Respiratory tract infection viral			
subjects affected / exposed	2 / 897 (0.22%)	2 / 178 (1.12%)	7 / 906 (0.77%)
occurrences (all)	3	2	8
Rhinitis			
subjects affected / exposed	4 / 897 (0.45%)	2 / 178 (1.12%)	8 / 906 (0.88%)
occurrences (all)	4	2	8
Tracheitis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Tooth infection			
subjects affected / exposed	1 / 897 (0.11%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	1	1	0
Tooth abscess			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	3 / 906 (0.33%)
occurrences (all)	1	0	3

Tonsillitis streptococcal			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	0	0	2
Tonsillitis			
subjects affected / exposed	10 / 897 (1.11%)	5 / 178 (2.81%)	15 / 906 (1.66%)
occurrences (all)	10	6	17
Tinea versicolour			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Suspected COVID-19			
subjects affected / exposed	5 / 897 (0.56%)	0 / 178 (0.00%)	6 / 906 (0.66%)
occurrences (all)	5	0	6
Streptococcal infection			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Soft tissue infection			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Skin infection			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Sinusitis			
subjects affected / exposed	4 / 897 (0.45%)	2 / 178 (1.12%)	3 / 906 (0.33%)
occurrences (all)	4	2	3
Sialoadenitis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Rhinovirus infection			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Yersinia infection			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Wound infection			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0

Vulvovaginal mycotic infection			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	3 / 906 (0.33%)
occurrences (all)	1	0	3
Vulvovaginal candidiasis			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	2	0	2
Viral upper respiratory tract infection			
subjects affected / exposed	3 / 897 (0.33%)	0 / 178 (0.00%)	4 / 906 (0.44%)
occurrences (all)	3	0	4
Viral pharyngitis			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Varicella			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Vaginal infection			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	1 / 906 (0.11%)
occurrences (all)	0	2	1
Urinary tract infection			
subjects affected / exposed	9 / 897 (1.00%)	3 / 178 (1.69%)	9 / 906 (0.99%)
occurrences (all)	11	3	10
Upper respiratory tract infection bacterial			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Upper respiratory tract infection			
subjects affected / exposed	35 / 897 (3.90%)	6 / 178 (3.37%)	42 / 906 (4.64%)
occurrences (all)	38	6	46
Trichomoniasis			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Viral infection			
subjects affected / exposed	5 / 897 (0.56%)	0 / 178 (0.00%)	5 / 906 (0.55%)
occurrences (all)	5	0	6
Metabolism and nutrition disorders			

Abnormal loss of weight			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Vitamin B complex deficiency			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Type 2 diabetes mellitus			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Vitamin D deficiency			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	2 / 906 (0.22%)
occurrences (all)	1	0	2
Zinc deficiency			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Folate deficiency			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Glucose tolerance impaired			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	2	0	0
Gluten sensitivity			
subjects affected / exposed	0 / 897 (0.00%)	1 / 178 (0.56%)	0 / 906 (0.00%)
occurrences (all)	0	1	0
Hypercholesterolaemia			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	1	0	1
Hyperlipidaemia			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Hyponatraemia			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1
Insulin resistance			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	3 / 906 (0.33%)
occurrences (all)	0	0	3

Iron deficiency			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	3 / 906 (0.33%)
occurrences (all)	1	0	3
Lactose intolerance			
subjects affected / exposed	1 / 897 (0.11%)	0 / 178 (0.00%)	0 / 906 (0.00%)
occurrences (all)	1	0	0
Obesity			
subjects affected / exposed	2 / 897 (0.22%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	2	0	1
Vitamin B12 deficiency			
subjects affected / exposed	0 / 897 (0.00%)	0 / 178 (0.00%)	1 / 906 (0.11%)
occurrences (all)	0	0	1

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
23 May 2019	As per the recommendation from CBER, the scope of the study has been extended to include the 3-dose (0,2,6-M) schedule and an additional 2-dose schedule (0,6-M) along with the 2-dose (0,2-M) schedule planned originally. The study will assess the immunogenicity of the 2-dose and 3-doses vaccination with rMenB+OMV NZ vaccine along with effectiveness and safety.
18 March 2020	The scope of this post-marketing commitment study has been extended to demonstrate the effectiveness, immunogenicity and safety of GSK's investigational combined meningococcal ABCWY vaccine (from a phase III MenABCWY study) along with the rMenB+OMV NZ vaccine.
23 September 2020	This protocol is amended primarily as a consequence of feedback from regulatory authorities of participating countries following their review of Protocol Amendment 2. Additional changes have been made to improve the clarity of the text.
09 May 2021	The protocol is being amended to document the increase in blood volumes drawn at certain visits (Visit 2 and Visit 6). The allowed windows for study visits during special circumstances have also been widened to maintain subject visit compliance during the COVID-19 pandemic. Additionally, considering that some of the study interventions are combination products constituted of a device and biologic product (pre-filled syringes), the amended protocol provides instructions for collection of safety information related to the use of medical devices. The reporting period for pregnancies has also been updated in line with the current guidelines

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported