

STATISTICAL ANALYSIS PLAN

**A multicenter, Post-Marketing Surveillance study to Monitor the Safety of
Novartis Meningococcal ACWY Conjugate Vaccine (MenACWY-CRM)
Administered According to the Prescribing Information to Healthy Subjects
from 11 to 55 Years of Age in the Republic of South Korea**

Product Name : Menveo (MenACWY-CRM)

Protocol No. : V59_62

Version : V1.0

Date : 06-MAR-2013

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Revisions

DATE OF REVISION	INDICATION REVISION	REASON FOR CHANGE	AUTHOR NAME

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1. Study Objective

The primary objective of the study is to monitor the safety of a single dose of MenACWY-CRM vaccine in subjects from 11 to 55 years of age, as evaluated by:

1. Local and systemic solicited reactions reported from study Day 1(day of vaccination) through study Day 7 post-vaccination
2. All unsolicited Adverse Events (AEs) reported from study Day 1(day of vaccination) through study Day 7 post-vaccination
3. Medically attended Adverse Events reported from study Day 1 to study termination (Day 29/early termination)
4. All Serious Adverse Events (SAEs) reported from study Day 1 to study termination (Day 29/early termination)

2. Study Method and Study Period

2.1 Study Period

The trial period shall be from market launch date till approximately 22 May 2018.

2.2 Number of Subjects

A total of approximately 3,300 subjects are planned for enrolment into this study.

Assuming a 10% drop-out rate, this should provide approximately 3,000 evaluable subjects. This sample size meets the post-licensure requirements of the KFDA to provide continued safety monitoring in the Korean population.

2.3 Study population

2.3.1 Inclusion criteria

Individuals eligible for enrolment in this study are those:

1. Male and female subjects from 11 to 55 years of the age at the time of Visit 1(including all 55

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years old subjects, up to one day before their 56th year birthday), who are scheduled to receive vaccination with MenACWY-CRM conjugate vaccine, according to the local prescribing information and routine clinical practice

2. To whom the nature of the study has been described and the subject or subject's parent/legal representative has provided written informed consent
3. Whom the investigator believes that the subject can and will comply with the requirements of the protocol
4. Who are in good health as determined by the outcome of medical history, physical assessment and clinical judgment of the investigator

2.3.2 Exclusion criteria

Contraindication, special warnings and/or precautions, as evaluated by the investigators, reported in the MenACWY-CRM conjugate vaccine Korean prescribing information. In particular, should not be included in the study a subject who has ever had:

1. An allergic reaction to the active substances or any of the other ingredients of the study vaccine; an allergic reaction to diphtheria toxoid;
2. An illness with high fever; however, a mild fever or upper respiratory infection (for example cold) itself is not a reason to delay vaccination.

Special care should be taken for subjects having haemophilia or any other problem that may stop your blood from clotting properly, such as persons receiving blood thinners (anticoagulants)

2.4 Study Method

In order to obtain information on Regulatory PMS data after market launch, NVD or delegate will create the Regulatory PMS contract with the relevant clinics/hospitals and the physician in charge of the survey shall implement this Regulatory PMS in subjects that receive MenACWY-CRM in the relevant hospital/clinic since the contract date until the number of contracted survey cases, without omission, is reached.

Overview of Study Design

This is a multicenter post marketing surveillance study to monitor the safety of MenACWY-CRM

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administered according to the prescribing information to 3,300 healthy subjects from 11 to 55 years of age in Korea.

Subjects will be enrolled at the time of their visit to a participating clinic or hospital for vaccination with MenACWY-CRM according to the routine clinical care.

At Visit 1 (Day 1), after obtaining consent from the subjects or subjects' parents/legal representative, the vaccination will be administered. Subjects will remain under observation for at least 30 minutes in the clinic after study immunization.

The subjects or subject's parent/legal representative will be then instructed to complete the Diary Card daily, reporting local and systemic reaction and all other AEs occurring within 7 days following immunizations, and medically attended AEs or SAEs occurring up to Day 29.

Subjects will also be instructed to return the completed diaries to the study site at Day 29 as follows:

- During a visit at the study center or
- Using the provided pre-addressed stamped envelope (PASE).

At the investigator discretion, the subject or subject's parent/legal representative will be reminded of the date of the study termination by a phone call at Day 29. If any clarification is required after Diary Card retrieval the site staff will follow up by phone, and any additional finding will be recorded on the subject's medical record.

In case the Diary Card is not retrieved within 10 days after Day 29, subject or subject's parent/legal representative will be contacted by phone to assess the occurrence of adverse events, determine the subject's clinical status and complete study termination. All information will be recorded by the site staff on the subject's medical record and collected in the appropriate section of the CRF.

All SAEs will be monitored until resolution and/or the cause is identified. If a SAE remains unresolved at study termination, a clinical assessment will be made by the investigator and the NVD regional physician to determine whether continued follow up of the SAE is needed.

Table 3.1-1: Safety Assessment Table

<p>Medical History: All significant past diagnoses including all allergies, major surgeries requiring inpatient hospitalization, other significant injuries or hospitalizations, any conditions requiring prescription or chronic medication (i.e., >2 weeks in duration), or other significant medical</p>	<p>From birth, collected at clinic visit Day 1</p>
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conditions based on the investigator's judgment.	
<p>Immediate reactions: Subjects will be assessed for immediate hypersensitivity reactions.</p>	For at least 30 minutes after vaccination
<p>Local reactions: Erythema, induration, pain.</p>	Days 1-7 after vaccination
<p>Systemic reactions: Chills, nausea, malaise, myalgia, arthralgia, headache, rash, fever.</p>	Days 1-7 after vaccination
All unsolicited AEs will be collected	Days 1-7 after vaccination
<p>Medically attended Adverse Events: Events that require a physician's visit or an emergency room visit (<i>events that are managed by telephone or means other than a face-to-face evaluation by a clinician do not qualify as medically attended AEs</i>).</p>	From Day 1 to study termination (Day 29/early termination)
<p>Serious AEs: All SAEs will be collected.</p>	From Day 1 to study termination (Day 29/early termination)
<p>Medications: Any medications used to treat any solicited local and systemic reaction and unsolicited AE be collected.</p>	From Day 1 to Day 7
<p>Medications: Any medications used to treat any medically attended AE or SAE will be collected.</p>	From Day 1 to study termination (Day 29/early termination)

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1. Analysis Sets

1.1 Safety Analysis Sets

Safety Set

All subjects who

- have signed an informed consent form, undergone screening procedure(s) and received a subject number,
- received a study vaccination,
- provided post vaccination safety data.

Safety per protocol set

All subjects in the safety Set with the exclusions of the following cases:

- (1) Subjects administered prior to the contract date.
- (2) Subjects who didn't receive MenACWY-CRM.
- (3) Subjects who already receive MenACWY-CRM.
- (4) Follow-up failure: The subjects whose safety information can not be identified due to follow-up loss.
- (5) Not applicable to the indication of study drug
[Indication]
 - To prevent invasive meningococcal disease caused by Neisseria meningitidis serogroups A, C, Y and W-135 in persons 11 through 55 years of age.
- (6) Subjects who violate of Protocol: Those who do not meet one item at least of the inclusion/exclusion criteria.
[Inclusion criteria]
 - 1) Male and female subjects from 11 to 55 years of the age at the time of Visit 1(including all 55 years old subjects, up to one day before their 56th year birthday), who are scheduled to receive vaccination with MenACWY-CRM conjugate vaccine, according to the local prescribing information and routine clinical practice.
 - 2) To whom the nature of the study has been described and the subject or subject's parent/legal representative has provided written informed consent.
 - 3) Whom the investigator believes that the subject can and will comply with the requirements of the protocol.

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- 4) Who are in good health as determined by the outcome of medical history, physical assessment and clinical judgment of the investigator.
- [Exclusion criteria]
- 1) An allergic reaction to the active substances or any of the other ingredients of the study vaccine; an allergic reaction to diphtheria toxoid;
 - 2) An illness with high fever; however, a mild fever or upper respiratory infection (for example cold) itself is not a reason to delay vaccination.
- (7) Subjects who prescribed off-label dosage.
- Violation of intramuscular injection only (0.5ml)

Non-Safety per protocol set

Subjects excluded from safety per protocol set except for subjects who did not receive MenACWY-CRM and follow-up failure.

Based on rules for estimation of each number of safety evaluation cases, the following local regulation and Guideline on Standards for re-examination for new drugs, etc ~~are excluded from the safety analysis set~~ are excluded from the safety analysis set:

- ※ Guideline on Standards for re-examination for new drugs, etc (Chapter II, no. 3)
Patient Population for Surveillance
 - A) Patients planned to receive a drug under surveillance by investigator's medical judgment shall be subject.
 - B) Subject who do not use within approved range shall not be included in the subject in principal.
 - ※ However, if data of subject whose use is beyond approved range is collected, perform analysis as a separate item.
 - C) Describe actual selection methods of subject in detail.

1.2 Efficacy Analysis Set

Not Applicable

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2. Endpoints

2.1 Safety Endpoints

Safety will be assessed after administration of study vaccine in terms of the number and percentage of subjects with:

- Local and systemic solicited reactions reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination;
- Unsolicited AEs reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination;
- Medically attended AEs reported from study Day 1 to study termination (Day 29/early termination);
- SAEs reported from study Day 1 to study termination (Day 29/early termination).

3. Assessment Criteria

3.1 Safety Assessment Criteria

Not Applicable

4. Statistical Analyses

4.1 Baseline Characteristics

Descriptive statistics (mean, standard deviation, median, minimum and maximum) for baseline characteristics such as age, height and weight at enrollment will be calculated in the Safety set and Safety per Protocol set.

The following baseline characteristics will be reported:

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< Subject Baseline Information >

- gender, age, ethnic origin, weight, height, past diagnosis, pre-Immunization temperature, temperature location, pregnancy

< Study Vaccine Information >

- vaccine site, concomitant medications

4.2 Safety Analyses

The number of subjects of AE[†] and the number of AEs[†] incurred shall be calculated, the incidence rate of AEs[†] and its 95% confidence interval will be calculated using the normal approximation on the safety set and safety per protocol set.

† AE : AE includes solicited and unsolicited AE (DAY 1-7), medically attended AE (DAY 1-29) and SAE (DAY 1-29).

6.2.1 Adverse Events by Baseline Characteristics

AE[†]s (as described below) will be reported (n, %) for the following the baseline characteristics in the safety set and safety per protocol set :

- Age group (11-18, 19-34, 35-55)
- Children group (<18, ≥18)
- Gender (male, female)
- Past diagnosis (yes, no)
- Temperature location (axillary, oral, rectal, ear)
- Administration site (left deltoid, right deltoid, other)
- Concomitant medication (yes, no)
- Kidney disorder (yes, no)
- Liver disorder (yes, no)
- Pregnancy (yes, no)

The n(%) of AEs[†] and its 95% confidence interval will be calculated using the normal approximation and analyzed using χ^2 - test or Fisher's exact test.

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† AE : AE includes solicited and unsolicited AE (DAY 1-7) and medically attended AE (DAY 1-29) and SAEs.

6.2.2. Analysis of Solicited AE

Frequencies and percentages of subjects experiencing each reaction will be presented for each symptom severity. Summary tables showing the occurrence of any local or systemic reaction overall and at each time point will also be presented (see Table 4.1.3 and 4.2.3).

Post-vaccination reactions reported from Day 1 to Day 7 will be summarized by maximal severity. The severity of local reactions, including injection-site, erythema and induration will be categorized as: none (0 mm), 1 to 25 mm, 26 to 50 mm, 51 to 100 mm, >100 mm.

The severity of pain and systemic reactions occurring up to 7 days after each vaccination will be categorized as None, Mild (present but not interfering with daily activity), Moderate (some interference with daily activity), and Severe (prevents daily activity) except for rash, which will be categorized as None, Urticarial, or other.

Body temperature will be categorized as <38°C (no fever), ≥38°C (fever) and will be summarized by 0.5°C increments from 36.0°C up to ≥40°C. Additionally, no fever vs. fever will be reported.

Each local and systemic reaction will also be categorized as none vs. any.

6.2.3 Analysis of Unsolicited AE

All unsolicited AEs and MAAE recorded in the CRF will be mapped to preferred terms using the most recent MedDRA dictionary and classified by System organ class (SOC) and Preferred Terms (PT). Under the classification standard of MedDRA terms, and all AEs excluding the AEs whose causal relation with the study medication is ‘Not Related’ shall be treated as AEs whose causal relation cannot be excluded {hereafter “Adverse Drug Reaction(ADR)”}.

- ① The number and percentage of unsolicited AE (Day 1-7) and MAAE (Day 1-29) and SAEs (Day 1-29) according to the serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM regarding occurred AE will be calculated.

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- ② Unsolicited AEs (Day 1-7) and MAAE (Day 1-29) and SAEs (Day 1-29) will be classified into the preferred terms according to the serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM. Also, the number and percentage of each AE (PT) will be calculated.
- ③ The number of subjects and the number of unexpected AE/ADR, SAE/Serious ADR (SADR) and MAAE/ADR will be calculated according to the preferred terms. Also, the incidence rate will be estimated.
- ④ For subjects excluded from safety per protocol set[†], The number of subjects and the number of unexpected AE/ADR, SAE/Serious ADR (SADR) and MAAE/ADR will be calculated according to the preferred terms. Also, the incidence rate will be estimated.
 - † Subject excluded from safety per protocol set: Except for subjects who didn't receive study vaccination and follow-up failure.

5. List of Table and Data Listings

5.1 Distribution of Subjects

- Number of subjects contracted to the study: The number of subjects are to be collected(under contract) as contracted by the investigator
- Number of retrieving completed CRFs: Total number of subjects whose completed CRFs
- Number of safety assessment population: Number of safety assessment population among total number

5.2 Baseline Characteristics

- Mean and standard deviation (SD) or frequency and percentage by gender, age, weight, height, past diagnosis, pre-Immunization temperature, temperature location, pregnancy
- Frequency and percentage by vaccine site, concomitant medications

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5.3 Safety Analyses

- Incidence rate and the number of AEs according to the baseline characteristics (frequency and percentage)
- The number of the serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM for Unsolicited AE (DAY 1-7) and MAAE (frequency and percentage)
- The number of AEs for the severity, day, fever to MenACWY-CRM according to individual solicited AE (DAY 1-7) (frequency and percentage)
- Incidence rate and number according to the preferred terms of SAE/SADR, unexpected AE/unexpected ADR, and MAAE/ADR (frequency and percentage)
- For subjects excluded from safety per protocol set[†] incidence rate and number according to the preferred terms of SAE/SADR, unexpected AE/unexpected ADR, and MAAE/ADR (frequency and percentage)
 - † Subject excluded from safety per protocol set: Except for subjects who didn't receive study medication and follow-up failure

6. Notes

- Each statistical analysis will be carried out with SAS Software version 9.2 or more recent version.
- In the descriptive statistics, mean, SD, minimum, median, and maximum will be calculated for continuous variables, and frequency and percentage for categorical variables.
- Data including sign of inequality such as “≥20”, “>20” will be excluded from analysis.
- All test statistics will be the results of two-sided tests with the statistical significant level of 0.05.
- The followings shall be included only in re-examination report:
 - Analysis by type of concomitant medications
 - Item ② of paragraph 6.2.3
 - Estimation of 95% confidence interval for incidence of AEs by background factors

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Appendix1

1. Demographic and baseline values, medication characteristics, specific characteristics

- **Baseline characteristics will be reported on the safety set and safety per protocol set.**

1.1 Safety Set

Table 1.1.1 Total subject

Safety Set	Total No. subjects (%)
Total	

Table 1.1.2 Demographic characteristics

1) (Administration start date)-(birth)+1

Safety Set		Total No. subjects (%)
Age(years) ¹⁾	No. subjects mean±std median min~max	
Age(years)	11-18 19-34 35-55 Total	
Children group(years)	< 18 ≥ 18 Total	
Ethnic Origin	Asian Black Caucasian Hispanic Other	

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Safety Set		Total No. subjects (%)
	Total	
Gender	Male	
	Female	
	Total	
Weight(kg)	No. subjects	
	mean±std	
	median	
	min~max	
Height(cm)	No. subjects	
	mean±std	
	median	
	min~max	

Table 1.1.3 Past diagnosis

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.4 Pre-Immunization temperature

Safety Set	Total No. subjects (%)
No. subjects	
mean±std (°C)	
median	
min~max	

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Table 1.1.5 Temperature Location

Safety Set	Total No. subjects (%)
Axillary	
Oral	
Rectal	
Ear	
Total	

Table 1.1.6 Administration Site

Safety Set	Total No. subjects (%)
Left Deltoid	
Right Deltoid	
Other	
Total	

Table 1.1.7 Concomitant medication

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.8 Kidney Disorder

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

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Table 1.1.9 Liver disorder

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.10 Pregnancy

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

1.2 Safety Per Protocol Set

Table 1.2.1 Total subject

Safety per protocol set	Total No. subjects (%)
Total	

Table 1.2.2 Demographic characteristics

1) (Administration start date)-(birth)+1

Safety per protocol set		Total No. subjects (%)
Age(years) ¹⁾	No. subjects mean±std median min~max	
Age(years)	11-18 19-34 35-55	

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Safety per protocol set		Total No. subjects (%)
	Total	
Children group(years)	< 18	
	≥ 18	
	Total	
Ethnic Origin	Asian	
	Black	
	Caucasian	
	Hispanic	
	Other	
	Total	
Gender	Male	
	Female	
	Total	
Weight(kg)	No. subjects	
	mean±std	
	median	
	min~max	
Height(cm)	No. subjects	
	mean±std	
	median	
	min~max	

Table 1.2.3 Past diagnosis

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.2.4 Pre-Immunization temperature

Safety per protocol set	Total

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	No. subjects (%)
No. subjects	
mean±std (°C)	
median	
min~max	

Table 1.2.5 Temperature Location

Safety per protocol set	Total No. subjects (%)
Axillary	
Oral	
Rectal	
Ear	
Total	

Table 1.2.6 Administration Site

Safety per protocol set	Total No. subjects (%)
Left Deltoid	
Right Deltoid	
Other	
Total	

Table 1.2.7 Concomitant medication

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.2.8 Kidney Disorder

Safety per protocol set	Total

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	No. subjects (%)
Yes	
No	
Total	

Table 1.2.9 Liver disorder

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.2.10 Pregnancy

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

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2. Safety Analyses

- **AE includes solicited and unsolicited AE (Day 1-7) and medically attended AE (Day 1-29) and SAEs (Day 1-29)**
- **AE will be reported on the safety set and safety per protocol set.**
- **SAE/SADR will be reported on the safety set, safety per protocol set and non-safety per protocol set.**

2.1 Safety Set

Table 2.1.1 Summary of AE

Safety Set	No. subjects with AE n (%)	95% CI [†] for the percentage of subjects with AE (Lower , Upper)	No. AEs n	Total n (%)
Solicited AE				
Injection site Reaction				
Systemic Reaction				
Unsolicited AE				
MAAE				
Total				

† 95% CI will be calculated using the normal approximation.

Table 2.1.2 Summary of AE by Age (year)

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
11-18				X ² -test or Exact test
19-34				
35-55				
Total				

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Table 2.1.3 Summary of AE by Children group

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
< 18 years				X ² -test or Exact test
≥ 18 years				
Total				

Table 2.1.4 Summary of AE by Gender

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Male				X ² -test or Exact test
Female				
Total				

Table 2.1.5 Summary of AE by Past diagnosis

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.6 Summary of AE by Temperature Location

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)
Axillary			
Oral			
Rectal			
Ear			
Total			

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Table 2.1.7 Summary of AE by Administration Site

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)
Left Deltoid			
Right Deltoid			
Other			
Total			

Table 2.1.8 Summary of AE by Concomitant medication

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.9 Summary of AE by Kidney Disorder

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.10 Summary of AE by Liver disorder

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

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Table 2.1.11 Summary of AE by Pregnancy

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

2.2 Safety per protocol set

Table 2.2.1 Summary of AE

Safety per protocol Set	No. subjects with AE n (%)	95% CI [†] for the percentage of subjects with AE (Lower , Upper)	No. AEs n	Total n (%)
Solicited AE				
Injection site Reaction				
Systemic Reaction				
Unsolicited AE				
MAAE				
Total				

† 95% CI will be calculated using the normal approximation.

Table 2.2.2 Summary of AE by Age (year)

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
11-18				X ² -test or Exact test
19-34				
35-55				
Total				

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Table 2.2.3 Summary of AE by Children group

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
< 18 years				X ² -test or Exact test
≥ 18 years				
Total				

Table 2.2.4 Summary of AE by Gender

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Male				X ² -test or Exact test
Female				
Total				

Table 2.2.5 Summary of AE by Past diagnosis

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.6 Summary of AE by Temperature Location

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)
Axillary			
Oral			
Rectal			
Ear			
Total			

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Table 2.2.7 Summary of AE by Administration Site

Safety per protocol Set	No. subjects with AE	No. AEs	Total
	n (%)	n	n (%)
Left Deltoid			
Right Deltoid			
Other			
Total			

Table 2.2.8 Summary of AE by Concomitant medication

Safety per protocol Set	No. subjects with AE	No. AEs	Total	p-value
	n (%)	n	n (%)	
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.9 Summary of AE by Kidney Disorder

Safety per protocol Set	No. subjects with AE	No. AEs	Total	p-value
	n (%)	n	n (%)	
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.10 Summary of AE by Liver disorder

Safety per protocol Set	No. subjects with AE	No. AEs	Total	p-value
	n (%)	n	n (%)	
Yes				X ² -test or Exact test
No				
Total				

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Table 2.2.11 Summary of AE by Pregnancy

Safety per protocol Set	No. subjects with AE	No. AEs	Total	p-value
	n (%)	n	n (%)	
Yes				X ² -test or Exact test
No				
Total				

3. Information of AEs

3.1 Safety Set

Table 3.1.1 Summary of solicited AE and unsolicited AE for 7 days after vaccination

Safety Set		AE	
		Incidence Rate n (%)	No. of AEs n
Injection site Reactions	Pain		
	Erythema		
	Induration		
	Sub Total		
Systemic Reactions	Chills		
	Nausea		
	Malaise		
	Myalgia		
	Arthralgia		
	Headache		
	Rash		
	Sub Total		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		

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	Sub Total		
Total			

Table 3.1.2 Summary of medically attended AEs for 28 days after vaccination

Safety Set		AE	
		Incidence Rate n (%)	No. of AEs n
MAAE	System Organ Class(SOC)		
	Preferred Term(PT)		
Total			

3.2 Safety per protocol set

Table 3.2.1 Summary of solicited AE and unsolicited AE for 7 days after vaccination

Safety per protocol Set		AE	
		Incidence Rate n (%)	No. of AEs n
Injection site Reactions	Pain		
	Erythema		
	Induration		
	Sub Total		
Systemic Reactions	Chills		
	Nausea		
	Malaise		
	Myalgia		
	Arthralgia		
	Headache		

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	Rash		
	Sub Total		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

Table 3.2.2 Summary of medically attended AEs for 28 days after vaccination

Safety per protocol Set		AE	
		Incidence Rate n (%)	No. of AEs n
MAAE	System Organ Class(SOC)		
	Preferred Term(PT)		
Total			

4. Solicited AE (DAY 1-7)

4.1 Safety Set

Table 4.1.1 Summary of Injection site Reaction by Max severity

Safety Set		1*	2*	3*	4*	Total
		n (%)				
Injection site	Pain					
Reactions	Erythema					

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	Induration				
--	------------	--	--	--	--

* Mild(1), Moderate(2), Severe(3) : Pain

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.1.2 Summary of Systemic Reaction by Max severity

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic Reactions	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache

* Urticarial(1) : Rash

Table 4.1.3 Summary of Solicited AE by day

Safety Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Injection site Reactions	Pain									
	Erythema									
	Induration									
	Sub Total									
Systemic Reactions	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
Sub Total										
Total										

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Table 4.1.4 Summary of Fever

Safety Set		Total n (%)
	Fever	
	No fever	
	Total	
Temperature(°C)	36-36.5	
	36.5-37	
	37-37.5	
	37.5-38	
	38-38.5	
	38.5-39	
	39-39.5	
	39.5-40	
	>40	

4.2 Safety per protocol set

Table 4.2.1 Summary of Injection site Reaction by Max severity

Safety per protocol Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Injection site Reactions	Pain					
	Erythema					
	Induration					

* Mild(1), Moderate(2), Severe(3) : Pain

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.2.2 Summary of Systemic Reaction by Max severity

Safety per protocol Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic Reactions	Chills				
	Nausea				
	Malaise				

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Myalgia					
Arthralgia					
Headache					
Rash					

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache

* Urticarial(1) : Rash

Table 4.2.3 Summary of Solicited AE by day

Safety per protocol Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Injection site Reactions	Pain									
	Erythema									
	Induration									
	Sub Total									
Systemic Reactions	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
	Sub Total									
Total										

Table 4.2.4 Summary of Fever

Safety per protocol Set		Total n (%)
	Fever	
	No fever	
	Total	
Temperature(°C)	36-36.5	
	36.5-37	
	37-37.5	

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	37.5-38	
	38-38.5	
	38.5-39	
	39-39.5	
	39.5-40	
	>40	

5. Unsolicited AE (DAY 1-7)

5.1 Safety Set

Table 5.1.1 Summary of Unsolicited AE by Expected

Safety Set	Total No. AEs (%)
Expected AE	
Unexpected AE	
Total	

Table 5.1.2 Summary of Unsolicited AE by Serious

Safety Set	Total No. AEs (%)
Yes	
No	
Total	

Table 5.1.3 Summary of Unsolicited AE by Severity

Safety Set	Total No. AEs (%)
Mild	
Moderate	
Severe	
Total	

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Table 5.1.4 Summary of Unsolicited AE by Frequency

Safety Set	Total No. AEs (%)
Single/Continuous	
Intermittent	
Total	

Table 5.1.5 Summary of Unsolicited AE by Action Taken

Safety Set	Total No. AEs (%)
None	
Uncertain	
Procedure or physical therapy	
Blood or blood products	
Withdrawn from study due to AE	
Prescription drug therapy	
Non-prescription drug therapy	
Hospitalization	
IV fluids	
Physician visit	
Other	
Total	

Table 5.1.6 Summary of Unsolicited AE by Outcome

Safety Set	Total No. AEs (%)
Complete recovery/Return to baseline	
Alive with sequelae	
Death	
Unknown/Lost to follow-up	
AE persisting	
Total	

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Table 5.1.7 Summary of Unsolicited AE by Relationship to study vaccine

Safety Set	Total No. AEs (%)
Not related	
Possibly related	
Probably related	
Total	

5.2 Safety per protocol set

Table 5.2.1 Summary of Unsolicited AE by Expected

Safety per protocol Set	Total No. AEs (%)
Expected AE	
Unexpected AE	
Total	

Table 5.2.2 Summary of Unsolicited AE by Serious

Safety per protocol Set	Total No. AEs (%)
Yes	
No	
Total	

Table 5.2.3 Summary of Unsolicited AE by Severity

Safety per protocol Set	Total No. AEs (%)
Mild	
Moderate	
Severe	
Total	

Table 5.2.4 Summary of Unsolicited AE by Frequency

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Safety per protocol Set	Total No. AEs (%)
Single/Continuous	
Intermittent	
Total	

Table 5.2.5 Summary of Unsolicited AE by Action Taken

Safety per protocol Set	Total No. AEs (%)
None	
Uncertain	
Procedure or physical	
Therapy	
Blood or blood products	
Withdrawn from study due to AE	
Prescription drug therapy	
Non-prescription drug therapy	
Hospitalization	
IV fluids	
Physician visit	
Other	
Total	

Table 5.2.6 Summary of Unsolicited AE by Outcome

Safety per protocol Set	Total No. AEs (%)
Complete recovery/Return to baseline	
Alive with sequelae	
Death	
Unknown/Lost to follow-up	
AE persisting	
Total	

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Table 5.2.7 Summary of Unsolicited AE by Relationship to study vaccine

Safety per protocol Set	Total	
	No. AEs	(%)
Not related		
Possibly related		
Probably related		
Total		

6. MAAE (DAY 1-29)

6.1 Safety Set

Table 6.1.1 Summary of MAAE by Expected

Safety Set	Total	
	No. AEs	(%)
Expected AE		
Unexpected AE		
Total		

Table 6.1.2 Summary of MAAE by Serious

Safety Set	Total	
	No. AEs	(%)
Yes		
No		
Total		

Table 6.1.3 Summary of MAAE by Severity

Safety Set	Total	
	No. AEs	(%)
Mild		
Moderate		
Severe		

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Safety Set	Total No. AEs (%)
Total	

Table 6.1.4 Summary of MAAE by Frequency

Safety Set	Total No. AEs (%)
Single/Continuous	
Intermittent	
Total	

Table 6.1.5 Summary of MAAE by Action Taken

Safety Set	Total No. AEs (%)
None	
Uncertain	
Procedure or physical therapy	
Blood or blood products	
Withdrawn from study due to AE	
Prescription drug therapy	
Non-prescription drug therapy	
Hospitalization	
IV fluids	
Physician visit	
Other	
Total	

Table 6.1.6 Summary of MAAE by Outcome

Safety Set	Total No. AEs (%)
Complete recovery/Return to baseline	
Alive with sequelae	

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Safety Set	Total No. AEs (%)
Death	
Unknown/Lost to follow-up	
AE persisting	
Total	

Table 6.1.7 Summary of MAAE by Relationship to study vaccine

Safety Set	Total No. AEs (%)
Not related	
Possibly related	
Probably related	
Total	

6.2 Safety per protocol set

Table 6.2.1 Summary of MAAE by Expected

Safety per protocol Set	Total No. AEs (%)
Expected AE	
Unexpected AE	
Total	

Table 6.2.2 Summary of MAAE by Serious

Safety per protocol Set	Total No. AEs (%)
Yes	
No	
Total	

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Table 6.2.3 Summary of MAAE by Severity

Safety per protocol Set	Total No. AEs (%)
Mild	
Moderate	
Severe	
Total	

Table 6.2.4 Summary of MAAE by Frequency

Safety per protocol Set	Total No. AEs (%)
Single/Continuous	
Intermittent	
Total	

Table 6.2.5 Summary of MAAE by Action Taken

Safety per protocol Set	Total No. AEs (%)
None	
Uncertain	
Procedure or physical therapy	
Blood or blood products	
Withdrawn from study due to AE	
Prescription drug therapy	
Non-prescription drug therapy	
Hospitalization	
IV fluids	
Physician visit	
Other	
Total	

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Table 6.2.6 Summary of MAAE by Outcome

Safety per protocol Set	Total No. AEs (%)
Complete recovery/Return to baseline	
Alive with sequelae	
Death	
Unknown/Lost to follow-up	
AE persisting	
Total	

Table 6.2.7 Summary of MAAE by Relationship to study vaccine

Safety per protocol Set	Total No. AEs (%)
Not related	
Possibly related	
Probably related	
Total	

7. SAE/SADR for 28 days after vaccination

7.1 Safety Set

Table 7.1 SAE and SADR

Safety Set	Serious AE		Serious ADR	
	Incidence Rate n (%)	No. of AEs n	Incidence Rate n (%)	No. of AEs n
System Organ Class(SOC)				
Preferred Term(PT)				

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Total

* MedDRA

7.2 Safety per protocol set

Table 7.2 SAE and SADR

Safety per protocol Set	Serious AE		Serious ADR	
	Incidence Rate n (%)	No. of AEs n	Incidence Rate n (%)	No. of AEs n
System Organ Class(SOC)				
Preferred Term(PT)				
Total				

* MedDRA

7.3 Non-Safety per protocol set

Table 7.3 SAE and SADR

Non- Safety per protocol Set	Serious AE		Serious ADR	
	Incidence Rate n (%)	No. of AEs n	Incidence Rate n (%)	No. of AEs n
System Organ Class(SOC)				
Preferred Term(PT)				
Total				

* MedDRA

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8. Unexpected AE/ADR for 28 days after vaccination

8.1 Safety Set

Table 8.1 Unexpected AE and ADR

Safety Set	Unexpected AE		Unexpected ADR	
	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs
	n (%)	n	n (%)	n
System Organ Class(SOC)				
Preferred Term(PT)				
Total				

* MedDRA

8.2 Safety per protocol set

Table 8.2 Unexpected AE and ADR

Safety per protocol Set	Unexpected AE		Unexpected ADR	
	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs
	n (%)	n	n (%)	n
System Organ Class(SOC)				
Preferred Term(PT)				
Total				

* MedDRA

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8.3 Non-Safety per protocol set

Table 8.3 Unexpected AE and ADR

Non-Safety per protocol Set	Unexpected AE		Unexpected ADR	
	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs
	n (%)	n	n (%)	n
System Organ Class(SOC)				
Preferred Term(PT)				
Total				

* MedDRA

9. MAAE/ADR for 28 days after vaccination

9.1 Safety Set

Table 9.1 MAAE and ADR

Safety Set	MAAE		ADR	
	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs
	n (%)	n	n (%)	n
System Organ Class(SOC)				
Preferred Term(PT)				
Total				

* MedDRA

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9.2 Safety per protocol set

Table 9.2 MAAE and ADR

Safety per protocol Set	MAAE		ADR	
	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs
	n (%)	n	n (%)	n
System Organ Class(SOC)				
Preferred Term(PT)				
Total				

* MedDRA

9.3 Non-Safety per protocol set

Table 9.3 MAAE and ADR

Non- Safety per protocol Set	MAAE		ADR	
	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs
	n (%)	n	n (%)	n
System Organ Class(SOC)				
Preferred Term(PT)				
Total				

* MedDRA

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**A Multicenter, Post Marketing Surveillance study to Monitor the Safety of
Novartis Meningococcal ACWY Conjugate Vaccine (MenACWY-CRM)
Administered According to the Prescribing Information to Healthy Subjects
from 2 to 55 Years of Age in the Republic of South Korea**

Product Name : Menveo (MenACWY-CRM)

Protocol No. : V59_62

Version : V2.0

Date : 22-NOV-2013

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 Date

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Revisions

DATE OF REVISION	INDICATION REVISION	REASON FOR CHANGE	AUTHOR NAME
22-NOV-2013	All	Protocol Amendment	PPD

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1. Study Objective

The primary objective of the study is to monitor the safety of a single dose of MenACWY-CRM vaccine in subjects from 2 to 55 years of age, as evaluated by:

1. Local and systemic solicited adverse events reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination
2. All unsolicited Adverse Events (AEs) reported from study Day 1(day of vaccination) through study Day 7 post-vaccination
3. Medically attended Adverse Events reported from study Day 1 to study termination (Day 29/early termination)
4. All Serious Adverse Events (SAEs) reported from study Day 1 to study termination (Day 29/early termination)

2. Study Method and Study Period

2.1 Study Period

The trial period shall be from market launch date till approximately 22 May 2018.

2.2 Number of Subjects

A total of approximately 3,300 subjects are planned for enrolment into this study.

Assuming a 10% drop-out rate, this should provide approximately 3,000 evaluable subjects. This sample size meets the post-licensure requirements of the MFDS to provide continued safety monitoring in the Korean population.

2.3 Study population

2.3.1 Inclusion criteria

Individuals eligible for enrolment in this study are those:

1. Male and female subjects from 2 to 55 years of the age at the time of Visit 1(including all 55

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years old subjects, up to one day before their 56th year birthday), who are scheduled to receive vaccination with MenACWY-CRM conjugate vaccine, according to the local prescribing information and routine clinical practice

2. To whom the nature of the study has been described and the subject or subject’s parent/legal representative has provided written informed consent (written assent from minors should be also obtained if required by the relevant IRB);
3. Whom the investigator believes that the subject can and will comply with the requirements of the protocol (e.g., completion of the Diary Card);
4. Who are in good health as determined by the outcome of medical history, physical assessment and clinical judgment of the investigator

2.3.2 Exclusion criteria

1. Contraindication, special warnings and/or precautions, as evaluated by the investigators, reported in the MenACWY-CRM conjugate vaccine Korean prescribing information.

2.4 Study Method

In order to obtain information on Regulatory PMS data after market launch, NVD or delegate will create the Regulatory PMS contract with the relevant clinics/hospitals and the physician in charge of the survey shall implement this Regulatory PMS in subjects that receive MenACWY-CRM in the relevant hospital/clinic since the contract date until the number of contracted survey cases, without omission, is reached.

Overview of Study Design

This is a multicenter post marketing surveillance study to monitor the safety of MenACWY-CRM administered according to the prescribing information to 3,300 healthy subjects from 2 to 55 years of age in Korea.

Subjects will be enrolled at the time of their visit to a participating clinic or hospital for vaccination with MenACWY-CRM according to the routine clinical care.

At Visit 1 (Day 1), after obtaining consent from the subjects or subjects’ parents/legal representative (written assent will be also obtained if required by the relevant IRB), the vaccination will be administered. Subjects will remain under observation for at least 30 minutes in the clinic after study immunization.

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The subjects or subject’s parent/legal representative will be then instructed to complete the Diary Card daily, reporting local and systemic adverse events and all other AEs occurring within 7 days following immunizations, and medically attended AEs or SAEs occurring up to Day 29.

Subjects will also be instructed to return the completed diaries to the study site at Day 29 as follows:

- During a visit at the study center or
- Using the provided pre-addressed stamped envelope (PASE).

At the investigator discretion, the subject or subject’s parent/legal representative will be reminded of the date of the study termination by a phone call at Day 29. If any clarification is required after Diary Card retrieval the site staff will follow up by phone, and any additional finding will be recorded on the subject’s medical record.

In case the Diary Card is not retrieved within 10 days after Day 29, subject or subject’s parent/legal representative will be contacted by phone to assess the occurrence of adverse events, determine the subject’s clinical status and complete study termination. All information will be recorded by the site staff on the subject’s medical record and collected in the appropriate section of the CRF.

All SAEs will be monitored until resolution and/or the cause is identified. If a SAE remains unresolved at study termination, a clinical assessment will be made by the investigator and the NVD regional physician to determine whether continued follow up of the SAE is needed.

Table 3.1-1: Safety Assessment Table

<p>Medical History: All significant past diagnoses including all allergies, major surgeries requiring inpatient hospitalization, other significant injuries or hospitalizations, any conditions requiring prescription or chronic medication (i.e., >2 weeks in duration), or other significant medical conditions based on the investigator’s judgment.</p>	<p>From birth, collected at clinic visit Day 1</p>
<p>Immediate reactions: Subjects will be assessed for immediate hypersensitivity reactions.</p>	<p>For at least 30 minutes after vaccination</p>
<p>Solicited local adverse events: < 6 years : injection site erythema, injection site induration, injection site tenderness</p>	<p>Days 1-7 after vaccination</p>

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≥ 6 years : injection site erythema, injection site induration, injection site pain	
Solicited systemic adverse events: < 6 years : change in eating habits, sleepiness, irritability, rash, vomiting, diarrhea, fever ≥ 6 years : chills, nausea, malaise, generalized myalgia, generalized arthralgia, headache, rash, fever	Days 1-7 after vaccination
All unsolicited AEs will be collected	Days 1-7 after vaccination
Medically attended Adverse Events: Events that require a physician’s visit or an emergency room visit (<i>events that are managed by telephone or means other than a face-to-face evaluation by a clinician do not qualify as medically attended AEs</i>).	From Day 1 to study termination (Day 29/early termination)
Serious AEs: All SAEs will be collected.	From Day 1 to study termination (Day 29/early termination)
Medications: Any medications used to treat any solicited local and systemic reaction and unsolicited AE be collected.	From Day 1 to Day 7
Medications: Any medications used to treat any medically attended AE or SAE will be collected.	From Day 1 to study termination (Day 29/early termination)

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3. Analysis Sets

3.1 Safety Analysis Sets

Safety Set

All subjects who

- have signed an informed consent form, undergone screening procedure(s) and received a subject number,
- received a study vaccination,
- provided post vaccination safety data.

Safety per protocol set

All subjects in the safety Set with the exclusions of the following cases:

- (1) Subjects administered prior to the contract date.
- (2) Subjects who didn't receive MenACWY-CRM.
- (3) Subjects who already receive MenACWY-CRM.
- (4) Follow-up failure: The subjects whose safety information cannot be identified due to follow-up loss.
- (5) Not applicable to the indication of study drug
[Indication]
 - To prevent invasive meningococcal disease caused by Neisseria meningitidis serogroups A, C, Y and W-135 in persons 2 through 55 years of age.
- (6) Subjects who violate of Protocol: Those who do not meet one item at least of the inclusion/exclusion criteria.
[Inclusion criteria]
 - 1) Male and female subjects from 2 to 55 years of the age at the time of Visit 1 (including all 55 years old subjects, up to one day before their 56th year birthday), who are scheduled to receive vaccination with MenACWY-CRM conjugate vaccine, according to the local prescribing information and routine clinical practice.
 - 2) To whom the nature of the study has been described and the subject or subject's parent/legal representative has provided written informed consent.
 - 3) Whom the investigator believes that the subject can and will comply with the requirements of the protocol.

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- 4) Who are in good health as determined by the outcome of medical history, physical assessment and clinical judgment of the investigator.
[Exclusion criteria]
- 1) Contraindication, special warnings and/or precautions, as evaluated by the investigators, reported in the MenACWY-CRM conjugate vaccine Korean prescribing information
- (7) Subjects who prescribed off-label dosage.
 - Violation of intramuscular injection only (0.5ml)

Non-Safety per protocol set

Subjects excluded from safety per protocol set except for subjects who did not receive MenACWY-CRM and follow-up failure.

Based on rules for estimation of each number of safety evaluation cases, the following local regulation and Guideline on Standards for re-examination for new drugs, etc ※ of MFDS, non-safety analysis set are excluded from the safety analysis set:

※ Guideline on Standards for re-examination for new drugs, etc (Chapter II, no. 3)

Patient Population for Surveillance

- A) Patients planned to receive a drug under surveillance by investigator's medical judgment shall be subject.
- B) Subject who do not use within approved range shall not be included in the subject in principal.
 - ※ However, if data of subject whose use is beyond approved range is collected, perform analysis as a separate item.
- C) Describe actual selection methods of subject in detail.

3.2 Efficacy Analysis Set

Not Applicable

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4. Endpoints

4.1 Safety Endpoints

Safety will be assessed after administration of study vaccine in terms of the number and percentage of subjects with:

- Local and systemic solicited adverse events reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination;
- Unsolicited AEs reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination;
- Medically attended AEs reported from study Day 1 to study termination (Day 29/early termination);
- SAEs reported from study Day 1 to study termination (Day 29/early termination).

5. Assessment Criteria

5.1 Safety Assessment Criteria

Not Applicable

6. Statistical Analyses

6.1 Baseline Characteristics

Descriptive statistics (mean, standard deviation, median, minimum and maximum) for baseline characteristics such as age, height and weight at enrollment will be calculated in the Safety set and Safety per Protocol set.

The following baseline characteristics will be reported:

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< Subject Baseline Information >

- gender, age, ethnic origin, weight, height, past diagnosis, pre-Immunization temperature, temperature location, pregnancy

< Study Vaccine Information >

- vaccine site, concomitant medications

6.2 Safety Analyses

The number of subjects of AE[†] and the number of AEs[†] incurred shall be calculated, the incidence rate of AEs[†] and its 95% confidence interval will be calculated using the normal approximation on the safety set and safety per protocol set.

† AE : AE includes solicited and unsolicited AE (DAY 1-7), medically attended AE (DAY 1-29) and SAE (DAY 1-29).

6.2.1 Adverse Events by Baseline Characteristics

AE[†]s (as described below) will be reported (n, %) for the following the baseline characteristics in the safety set and safety per protocol set :

- Age group (2-10, 11-18, 19-34, 35-55)
- Children group (<18, ≥18)
- Gender (male, female)
- Past diagnosis (yes, no)
- Temperature location (axillary, oral, rectal, ear)
- Administration site (left deltoid, right deltoid, other)
- Concomitant medication (yes, no)
- Kidney disorder (yes, no)
- Liver disorder (yes, no)
- Pregnancy (yes, no)

The n(%) of AEs[†] and its 95% confidence interval will be calculated using the normal approximation and analyzed using χ^2 - test or Fisher's exact test.

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† AE : AE includes solicited and unsolicited AE (DAY 1-7) and medically attended AE (DAY 1-29) and SAEs.

6.2.2. Analysis of Solicited AE

Frequencies and percentages of subjects experiencing each adverse event will be presented for each symptom severity. Summary tables showing the occurrence of any local or systemic adverse events overall and at each time point will also be presented (see Table 4.1.3 and 4.2.3).

Post-vaccination adverse events reported from Day 1 to Day 7 will be summarized by maximal severity. The severity of local adverse events for subjects < 6 years of age will be categorized as follows. Injection-site erythema and induration : absent (0 to 9 mm), mild (10 to 25 mm), moderate (26 to 50 mm), severe (>50 mm); injection-site tenderness: none, mild (minor light reaction to touch), moderate (cried or protested to touch), severe (cried when injected limb was moved). For subjects ≥ 6 years, injection-site erythema and induration absent (1 to 24 mm), mild (25 to 50 mm), moderate (51 to 100 mm), severe (>100 mm); pain: none, mild (present but does not interfere with activity), moderate (interferes with activity), severe (prevents daily activity).

For subjects ≥ 6 years of age, the severity of systemic adverse events (i.e., chills, nausea, malaise, generalized myalgia, generalized arthralgia, headache) occurring up to 7 days after each vaccination will be categorized as none, mild (present but not interfering with daily activity), moderate (some interference with daily activity), and severe (prevents daily activity) except for rash, which will be categorized as none, urticarial, or other.

For subjects < 6 years of age, the severity of systemic adverse events occurring up to 7 days after each vaccination will be categorized as follows. Change in eating habits : none (no change in appetite), mild (eating less than normal for 1 to feeds), moderate (missed 1 or 2 feeds), severe (missed more than 2 feeds); sleepiness : none (no change in alertness), mild (shows an increased alertness), moderate (sleeps through feeds), severe (sleeps most of the time and it is hard to arouse him/her); irritability : none (no change in child disposition), mild (requires more cudding and he/she is less playful than usual), moderate (more difficult to settle), severe (unable to console); rash : none, urticarial, or other; vomiting : none, mild (1-2 episodes/24 hours), moderate (>2 episodes/24 hours), severe (requires outpatient hydration); diarrhea : none (fewer than 2 loose stools/24 hours), mild (2-3 loose stools or < 400 gms/24 hours), moderate (4-5 stools or 400-800 gms/24 hours), severe (6 or more watery stools

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or > 800 gms/24 hours or requires outpatient IV hydration).

Body temperature will be categorized as <38°C (no fever), ≥38°C (fever) and will be summarized by 0.5°C increments from 36.0°C up to ≥40°C. Additionally, no fever vs. fever will be reported.

Each local and systemic adverse event will also be categorized as none vs. any.

6.2.3 Analysis of Unsolicited AE

All unsolicited AEs and MAAE recorded in the CRF will be mapped to preferred terms using the most recent MedDRA dictionary and classified by System organ class (SOC) and Preferred Terms (PT). Under the classification standard of MedDRA terms, and all AEs excluding the AEs whose causal relation with the study medication is ‘Not Related’ shall be treated as AEs whose causal relation cannot be excluded {hereafter “Adverse Drug Reaction(ADR)”}.

- ① The number and percentage of unsolicited AE (Day 1-7) and MAAE (Day 1-29) and SAEs (Day 1-29) according to the serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM regarding occurred AE will be calculated.
- ② Unsolicited AEs (Day 1-7) and MAAE (Day 1-29) and SAEs (Day 1-29) will be classified into the preferred terms according to the serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM. Also, the number and percentage of each AE (PT) will be calculated.
- ③ The number of subjects and the number of unexpected AE/ADR, SAE/Serious ADR (SADR) and MAAE/ADR will be calculated according to the preferred terms. Also, the incidence rate will be estimated.
- ④ For subjects excluded from safety per protocol set[†], the number of subjects and the number of unexpected AE/ADR, SAE/Serious ADR (SADR) and MAAE/ADR will be calculated according to the preferred terms. Also, the incidence rate will be estimated.

† Subject excluded from safety per protocol set: Except for subjects who didn’t receive study vaccination and follow-up failure.

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7. List of Table and Data Listings

7.1 Distribution of Subjects

- Number of subjects contracted to the study: The number of subjects are to be collected(under contract) as contracted by the investigator
- Number of retrieving completed CRFs: Total number of subjects whose completed CRFs
- Number of safety assessment population: Number of safety assessment population among total number

7.2 Baseline Characteristics

- Mean and standard deviation (SD) or frequency and percentage by gender, age, ethnic origin, weight, height, past diagnosis, pre-Immunization temperature, temperature location, pregnancy
- Frequency and percentage by vaccine site, concomitant medications

7.3 Safety Analyses

- Incidence rate and the number of AEs according to the baseline characteristics (frequency and percentage)
- The number of the serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM for Unsolicited AE (DAY 1-7) and MAAE (frequency and percentage)
- The number of AEs for the severity, day, fever to MenACWY-CRM according to individual solicited AE (DAY 1-7) (frequency and percentage)
- Incidence rate and number according to the preferred terms of SAE/SADR, unexpected AE/unexpected ADR, and MAAE/ADR (frequency and percentage)
- For subjects excluded from safety per protocol set[†] incidence rate and number according to the preferred terms of SAE/SADR, unexpected AE/unexpected ADR, and MAAE/ADR (frequency and percentage)

† Subject excluded from safety per protocol set: Except for subjects who didn't receive study mediation and follow-up failure

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8. Notes

- Each statistical analysis will be carried out with SAS Software version 9.2 or more recent version.
- In the descriptive statistics, mean, SD, minimum, median, and maximum will be calculated for continuous variables, and frequency and percentage for categorical variables.
- Data including sign of inequality such as “ ≥ 20 ”, “ > 20 ” will be excluded from analysis.
- All test statistics will be the results of two-sided tests with the statistical significant level of 0.05.
- The followings shall be included only in re-examination report:
 - Analysis by type of concomitant medications
 - Item ② of paragraph 6.2.3
 - Estimation of 95% confidence interval for incidence of AEs by background factors

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Appendix1

1. Demographic and baseline values, medication characteristics, specific characteristics

- **Baseline characteristics will be reported on the safety set and safety per protocol set.**

1.1 Safety Set

Table 1.1.1 Total subject

Safety Set	Total No. subjects (%)
Total	

Table 1.1.2 Demographic characteristics

1) (Administration start date)-(birth)+1

Safety Set		Total No. subjects (%)
Age(years) ¹⁾	No. subjects mean±std median min~max	
Age(years)	2-10	
	2-5	
	6-10	
	11-18	
	19-34	
	35-55	
	Total	
Children group(years)	< 18	
	≥ 18	
	Total	
Ethnic Origin	Asian	
	Black	

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Safety Set		Total No. subjects (%)
	Caucasian	
	Hispanic	
	Other	
	Total	
Gender	Male	
	Female	
	Total	
Weight(kg)	No. subjects	
	mean±std	
	median	
	min~max	
Height(cm)	No. subjects	
	mean±std	
	median	
	min~max	

Table 1.1.3 Past diagnosis

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.4 Pre-Immunization temperature

Safety Set	Total No. subjects (%)
No. subjects	
mean±std (°C)	
median	
min~max	

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Table 1.1.5 Temperature Location

Safety Set	Total No. subjects (%)
Axillary	
Oral	
Rectal	
Ear	
Total	

Table 1.1.6 Administration Site

Safety Set	Total No. subjects (%)
Left Deltoid	
Right Deltoid	
Other	
Total	

Table 1.1.7 Concomitant medication

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.8 Kidney Disorder

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

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Table 1.1.9 Liver disorder

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.10 Pregnancy

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

1.2 Safety Per Protocol Set

Table 1.2.1 Total subject

Safety per protocol set	Total No. subjects (%)
Total	

Table 1.2.2 Demographic characteristics

1) (Administration start date)-(birth)+1

Safety per protocol set		Total No. subjects (%)
Age(years) ¹⁾	No. subjects mean±std median min~max	
Age(years)	2-10	
	2-5	
	6-10	

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Safety per protocol set		Total No. subjects (%)
	11-18	
	19-34	
	35-55	
	Total	
Children group(years)	< 18	
	≥ 18	
	Total	
Ethnic Origin	Asian	
	Black	
	Caucasian	
	Hispanic	
	Other	
	Total	
Gender	Male	
	Female	
	Total	
Weight(kg)	No. subjects	
	mean±std	
	median	
	min~max	
Height(cm)	No. subjects	
	mean±std	
	median	
	min~max	

Table 1.2.3 Past diagnosis

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

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Table 1.2.4 Pre-Immunization temperature

Safety per protocol set	Total No. subjects (%)
No. subjects	
mean±std (°C)	
median	
min~max	

Table 1.2.5 Temperature Location

Safety per protocol set	Total No. subjects (%)
Axillary	
Oral	
Rectal	
Ear	
Total	

Table 1.2.6 Administration Site

Safety per protocol set	Total No. subjects (%)
Left Deltoid	
Right Deltoid	
Other	
Total	

Table 1.2.7 Concomitant medication

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

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Table 1.2.8 Kidney Disorder

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.2.9 Liver disorder

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.2.10 Pregnancy

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

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2. Safety Analyses

- **AE includes solicited and unsolicited AE (Day 1-7) and medically attended AE (Day1-29) and SAEs (Day 1-29)**
- **AE will be reported on the safety set and safety per protocol set.**
- **SAE/SADR will be reported on the safety set, safety per protocol set and non-safety per protocol set.**

2.1 Safety Set

Table 2.1.1 Summary of AE

Safety Set	No. subjects with AE		95% CI [†] for the percentage of subjects with AE	No. AEs	Total
	n	(%)	(Lower , Upper)	n	n (%)
Solicited AE (<6years)					
Local AE					
Systemic AE					
Solicited AE(≥ 6years)					
Local AE					
Systemic AE					
Unsolicited AE					
SAE					
MAAE					
Death					
Total					

† 95% CI will be calculated using the normal approximation.

* Day 1-7: Solicited AE, Unsolicited AE

* Day 1-29: MAAE, SAE, Death

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Table 2.1.2 Summary of AE by Age (year)

Safety Set	No. subjects with AE	No. AEs	Total	p-value
	n (%)	n	n (%)	
2-10				X ² -test or Exact test
2-5				
6-10				
11-18				
19-34				
35-55				
Total				

Table 2.1.3 Summary of AE by Age (year)

Safety Set	No. subjects with AE	No. AEs	Total	p-value
	n (%)	n	n (%)	
Solicited AE				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Solicited Local AE				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Solicited Systemic AE				
2-10				
2-5				

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Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
6-10				
11-18				
19-34				
35-55				
Unsolicited AE				
2-10				
11-18				
19-34				
35-55				
SAE				
2-10				
11-18				
19-34				
35-55				
MAAE				
2-10				
11-18				
19-34				
35-55				
Death				
2-10				
11-18				
19-34				
35-55				

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Table 2.1.4 Summary of AE by Children group

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
< 18 years				X ² -test or Exact test
≥ 18 years				
Total				

Table 2.1.5 Summary of AE by Gender

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Male				X ² -test or Exact test
Female				
Total				

Table 2.1.6 Summary of AE by Past diagnosis

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.7 Summary of AE by Temperature Location

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)
Axillary			
Oral			
Rectal			
Ear			
Total			

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Table 2.1.8 Summary of AE by Administration Site

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)
Left Deltoid			
Right Deltoid			
Other			
Total			

Table 2.1.9 Summary of AE by Concomitant medication

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.10 Summary of AE by Kidney Disorder

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.11 Summary of AE by Liver disorder

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

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Table 2.1.12 Summary of AE by Pregnancy

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

2.2 Safety per protocol set

Table 2.2.1 Summary of AE

Safety per protocol Set	No. subjects with AE n (%)	95% CI [†] for the percentage of subjects with AE (Lower , Upper)	No. AEs n	Total n (%)
Solicited AE (< 6years)				
Local AE				
Systemic AE				
Solicited AE (≥6years)				
Local AE				
Systemic AE				
Unsolicited AE				
SAE				
MAAE				
Death				
Total				

† 95% CI will be calculated using the normal approximation.

* Day 1-7: Solicited AE, Unsolicited AE

* Day 1-29: MAAE, SAE, Death

Table 2.2.2 Summary of AE by Age (year)

Safety per protocol Set	No. subjects with AE	No. AEs	Total	p-value
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	n (%)	n	n (%)	
2-10				
2-5				
6-10				
11-18				X ² -test or Exact test
19-34				
35-55				
Total				

Table 2.2.3 Summary of AE by Age (year)

Safety Set	No. subjects with AE	No. AEs	Total	p-value
	n (%)	n	n (%)	
Solicited AE				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Solicited Local AE				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Solicited Systemic AE				
2-10				
2-5				
6-10				
11-18				
19-34				

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Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
35-55				
Unsolicited AE				
2-10				
11-18				
19-34				
35-55				
SAE				
2-10				
11-18				
19-34				
35-55				
MAAE				
2-10				
11-18				
19-34				
35-55				
Death				
2-10				
11-18				
19-34				
35-55				

Table 2.2.4 Summary of AE by Children group

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
< 18 years				
≥ 18 years				X ² -test or Exact test
Total				

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Table 2.2.5 Summary of AE by Gender

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Male				X ² -test or Exact test
Female				
Total				

Table 2.2.6 Summary of AE by Past diagnosis

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.7 Summary of AE by Temperature Location

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)
Axillary			
Oral			
Rectal			
Ear			
Total			

Table 2.2.8 Summary of AE by Administration Site

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)
Left Deltoid			
Right Deltoid			
Other			
Total			

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Table 2.2.9 Summary of AE by Concomitant medication

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.10 Summary of AE by Kidney Disorder

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.11 Summary of AE by Liver disorder

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.12 Summary of AE by Pregnancy

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

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3. Information of AEs

3.1 Safety Set

Table 3.1.1 Summary of solicited AE and unsolicited AE for 7 days after vaccination (<6 years)

Safety Set		AE	
		Incidence Rate n (%)	No. of AEs n
Local AE	Tenderness		
	Erythema		
	Induration		
	Sub Total		
Systemic AE	Change in eating habits		
	Sleepiness		
	Irritability		
	Vomiting		
	Diarrhea		
	Rash		
	Sub Total		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

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Table 3.1.2 Summary of solicited AE and unsolicited AE for 7 days after vaccination (≥ 6 years)

Safety Set		AE	
		Incidence Rate n (%)	No. of AEs n
Local AE	Pain		
	Erythema		
	Induration		
	Sub Total		
Systemic AE	Chills		
	Nausea		
	Malaise		
	Myalgia		
	Arthralgia		
	Headache		
	Rash		
	Sub Total		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

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Table 3.1.3 Summary of solicited AE and unsolicited AE for 7 days after vaccination (≥ 6 years)

Safety Set		AE(6-10)		AE(11-18)		AE(19-34)		AE(35-55)	
		Incidence Rate	No. of AEs						
		n (%)	n	n (%)	n	n (%)	n	n (%)	n
Local AE	Pain								
	Erythema								
	Induration								
	Sub Total								
Systemic AE	Chills								
	Nausea								
	Malaise								
	Myalgia								
	Arthralgia								
	Headache								
	Rash								
	Sub Total								
UNSOLICITED AE	System Organ Class(SOC)								
	Preferred Term(PT)								

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Table 3.1.4 Summary of medically attended AEs for 28 days after vaccination

Safety Set		AE	
		Incidence Rate n (%)	No. of AEs n
MAAE	System Organ Class(SOC)		
	Preferred Term(PT)		
Total			

Table 3.1.5 Summary of medically attended AEs for 28 days after vaccination

Safety Set		AE(2-10)		AE(11-18)		AE(19-34)		AE(35-55)	
		Incidence Rate n (%)	No. of AEs n						
MAAE	System Organ Class(SOC)								
	Preferred Term(PT)								
Total									

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3.2 Safety per protocol set

Table 3.2.1 Summary of solicited AE and unsolicited AE for 7 days after vaccination (<6 years)

Safety per protocol Set		AE	
		Incidence Rate n (%)	No. of AEs n
Local AE	Tenderness		
	Erythema		
	Induration		
	Sub Total		
Systemic AE	Change in eating habits		
	Sleepiness		
	Irritability		
	Vomiting		
	Diarrhea		
	Rash		
	Sub Total		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

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Table 3.2.2 Summary of solicited AE and unsolicited AE for 7 days after vaccination (≥ 6 years)

Safety per protocol Set		AE	
		Incidence Rate n (%)	No. of AEs n
Local AE	Pain		
	Erythema		
	Induration		
	Sub Total		
Systemic AE	Chills		
	Nausea		
	Malaise		
	Myalgia		
	Arthralgia		
	Headache		
	Rash		
	Sub Total		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

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Table 3.2.3 Summary of solicited AE and unsolicited AE for 7 days after vaccination (≥ 6 years)

Safety per protocol Set		AE(6-10)		AE(11-18)		AE(19-34)		AE(35-55)	
		Incidence Rate n (%)	No. of AEs n	Incidence Rate n (%)	No. of AEs n	Incidence Rate n (%)	No. of AEs n	Incidence Rate n (%)	No. of AEs n
Local AE	Pain								
	Erythema								
	Induration								
	Sub Total								
Systemic AE	Chills								
	Nausea								
	Malaise								
	Myalgia								
	Arthralgia								
	Headache								
	Rash								
Sub Total									
UNSOLICITED AE	System Organ Class(SOC)								
	Preferred Term(PT)								
	Sub Total								
Total									

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Table 3.24 Summary of medically attended AEs for 28 days after vaccination

Safety per protocol Set		AE	
		Incidence Rate n (%)	No. of AEs n
MAAE	System Organ Class(SOC)		
	Preferred Term(PT)		
Total			

Table 3.2.5 Summary of medically attended AEs for 28 days after vaccination

Safety Set		AE(2-10)		AE(11-18)		AE(19-34)		AE(35-55)	
		Incidence Rate n (%)	No. of AEs n						
MAAE	System Organ Class(SOC)								
	Preferred Term(PT)								
Total									

4. Solicited AE (DAY 1-7)

4.1 Safety Set

Table 4.1.1 Summary of Local AE Max severity (<6 years)

Safety Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Tenderness					
	Erythema					
	Induration					

* Mild(1), Moderate(2), Severe(3) : Tenderness

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.1.2 Summary of Local AE Max severity (≥6 years)

Safety Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Pain					
	Erythema					
	Induration					

* Mild(1), Moderate(2), Severe(3) : Pain

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.1.3 Summary of Local AE by Max severity

Safety Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Age (2-5)	Tenderness					
	Erythema					
	Induration					
Age (6-10)	Pain					
	Erythema					
	Induration					
Age (11-18)	Pain					

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	Erythema				
	Induration				
Age (19-34)	Pain				
	Erythema				
	Induration				
Age (35-55)	Pain				
	Erythema				
	Induration				

* Mild(1), Moderate(2), Severe(3) : Pain, Tenderness

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.1.4 Summary of Systemic AE by Max severity(<6 years)

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic AE	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				

* Mild(1), Moderate(2), Severe(3) : Change in eating habits, Sleepiness, irritability, vomiting, diarrhea,

*None(1), Urticarial(2), Other(3) : Rash

* ≥ 38°C(1) : Fever

Table 4.1.5 Summary of Systemic AE by Max severity(≥6 years)

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic AE	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				

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Rash

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache

*None(1), Urticarial(2), Other(3) : Rash

Table 4.1.6 Summary of Systemic AE by Max severity

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Age (2-5)	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				
Age (6-10)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				
Age (11-18)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				
Age (19-34)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				

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Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Age (35-55)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache, Change in eating habits, Sleepiness, irritability, vomiting, diarrhea,

*None(1), Urticarial(2), Other(3) : Rash

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Table 4.1.7 Summary of Solicited AE by day (<6 years)

Safety Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Tenderness									
	Erythema									
	Induration									
	Sub Total									
Systemic AE	Change in eating habits									
	Sleepiness									
	Irritability									
	Vomiting									
	Diarrhea									
	Rash									
	Sub Total									
Total										

Table 4.1.8 Summary of Solicited AE by day (≥6 years)

Safety Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Pain									
	Erythema									
	Induration									
	Sub Total									
Systemic AE	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									

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	Sub Total								
Total									

Table 4.1.9 Summary of Solicited AE by day

Safety Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n(%)
Age (2-5)	Tenderness									
	Erythema									
	Induration									
Age (6-10)	Pain									
	Erythema									
	Induration									
Age (11-18)	Pain									
	Erythema									
	Induration									
Age (19-34)	Pain									
	Erythema									
	Induration									
Age (35-55)	Pain									
	Erythema									
	Induration									
	Sub Total									
Age (2-5)	Change in eating habits									
	Sleepiness									
	Irritability									
	Vomiting									
	Diarrhea									
	Rash									
Age (6-10)	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									

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Safety Set		30 min	6hr	2	3	4	5	6	7	Total n(%)
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
Age (11-18)	Rash									
	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
Age(19-34)	Rash									
	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
Age (35-55)	Rash									
	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
Sub Total										
Total										

Table 4.1.10 Summary of Fever

Safety Set		2-10	11-18	19-34	35-55	Total
		n (%)				
	Fever					
	No fever					
	Total					

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Temperature(°C)	36-36.5	
	36.5-37	
	37-37.5	
	37.5-38	
	38-38.5	
	38.5-39	
	39-39.5	
	39.5-40	
	>40	

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4.2 Safety per protocol set

Table 4.2.1 Summary of local AE by Max severity (<6 years)

Safety per protocol Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Tenderness					
	Erythema					
	Induration					

* Mild(1), Moderate(2), Severe(3) : Tenderness

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.2.2 Summary of Local AE Max severity (≥6 years)

Safety per protocol Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Pain					
	Erythema					
	Induration					

* Mild(1), Moderate(2), Severe(3) : Pain

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.2.3 Summary of Local AE by Max severity

Safety per protocol Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Age (2-5)	Tenderness					
	Erythema					
	Induration					
Age (6-10)	Pain					
	Erythema					
	Induration					
Age (11-18)	Pain					
	Erythema					
	Induration					
Age (19-34)	Pain					

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	Erythema				
	Induration				
Age (35-55)	Pain				
	Erythema				
	Induration				

* Mild(1), Moderate(2), Severe(3) : Pain

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.2.4 Summary of Systemic AE by Max severity (<6 years)

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic AE	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				

* Mild(1), Moderate(2), Severe(3) : Change in eating habits, Sleepiness, irritability, vomiting, diarrhea,

*None(1), Urticarial(2), Other(3) : Rash

Table 4.2.5 Summary of Systemic AEs by Max severity (≥6 years)

Safety per protocol Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic AE	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache

*None(1), Urticarial(2), Other(3) : Rash

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Table 4.2.6 Summary of Systemic AE by Max severity

Safety per protocol Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Age (2-5)	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				
Age (6-10)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
Age (11-18)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
Age (19-34)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
Age (35-55)	Chills				
	Nausea				
	Malaise				
	Myalgia				

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Safety per protocol Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
	Arthralgia				
	Headache				
	Rash				

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache

*None(1), Urticarial(2), Other(3) : Rash

Table 4.1.7 Summary of Solicited AE by day (<6 years)

Safety Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Tenderness									
	Erythema									
	Induration									
	Sub Total									
Systemic AE	Change in eating habits									
	Sleepiness									
	Irritability									
	Vomiting									
	Diarrhea									
	Rash									
	Sub Total									
Total										

Table 4.2.8 Summary of Solicited AE by day (≥ 6 years)

Safety per protocol Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Pain									
	Erythema									
	Induration									
	Sub Total									
Systemic AE	Chills									
	Nausea									

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	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
	Sub Total									
Total										

Table 4.2.9 Summary of Solicited AE by day

Safety Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Age (2-5)	Tenderness									
	Erythema									
	Induration									
Age (6-10)	Pain									
	Erythema									
	Induration									
Age (11-18)	Pain									
	Erythema									
	Induration									
Age (19-34)	Pain									
	Erythema									
	Induration									
Age (35-55)	Pain									
	Erythema									
	Induration									
	Sub Total									
Age (2-5)	Change in eating habits									
	Sleepiness									
	Irritability									
	Vomiting									
	Diarrhea									
	Rash									



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Safety Set		30 min	6hr	2	3	4	5	6	7	Total n (%)
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
Age (6-10)	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
Age (11-18)	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
Age(19-34)	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
Age (35-55)	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
	Sub Total									
Total										

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Table 4.2.10 Summary of Fever

Safety per protocol Set		2-10	11-18	19-34	35-55	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
	Fever					
	No fever					
	Total					
Temperature(°C)	36-36.5					
	36.5-37					
	37-37.5					
	37.5-38					
	38-38.5					
	38.5-39					
	39-39.5					
	39.5-40					
	>40					

5. Unsolicited AE (DAY 1-7)

5.1 Safety Set

Table 5.1 Summary of Unsolicited AE

Safety Set		2-10	11-18	19-34	35-55	Total
		No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
		AEs	AEs	AEs	AEs	AEs
Expected	Expected AE					
	Unexpected AE					
Serious	Yes					
	No					
Severity	Mild					
	Moderate					
	Severe					
Frequency	Single/Continuous					

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Safety Set		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)								
	Intermittent										
Action Taken	None Uncertain Procedure or physical therapy Blood or blood products Withdrawn from study due to AE Prescription drug therapy Non-prescription drug therapy Hospitalization IV fluids Physician visit Other										
Outcome	Complete recovery/Return to baseline Alive with sequelae Death Unknown/Lost to follow-up AE persisting										
Relationship to study vaccine	Not related Possibly related Probably related										
Total											

5.2 Safety per protocol set

Table 5.2 Summary of Unsolicited AE

Safety per protocol Set	2-10	11-18	19-34	35-55	Total

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		No. AEs	(%)								
Expected	Expected AE Unexpected AE										
Serious	Yes No										
Severity	Mild Moderate Severe										
Frequency	Single/Continuous Intermittent										
Action Taken	None Uncertain Procedure or physical therapy Blood or blood products Withdrawn from study due to AE Prescription drug therapy Non-prescription drug therapy Hospitalization IV fluids Physician visit Other										
Outcome	Complete recovery/Return to baseline Alive with sequelae Death Unknown/Lost to follow-up AE persisting										
Relationship to study vaccine	Not related Possibly related Probably related										

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Safety per protocol Set	2-10		11-18		19-34		35-55		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
	AEs		AEs		AEs		AEs		AEs	
Total										

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6. MAAE (DAY 1-29)

6.1 Safety Set

Table 6.1 Summary of MAAE

Safety Set		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)
Expected	Expected AE										
	Unexpected AE										
Serious	Yes										
	No										
Severity	Mild										
	Moderate										
	Severe										
Frequency	Single/Continuous										
	Intermittent										
Action Taken	None										
	Uncertain										
	Procedure or physical therapy										
	Blood or blood products										
	Withdrawn from study due to AE										
	Prescription drug therapy										
	Non-prescription drug therapy										
	Hospitalization										
	IV fluids										
	Physician visit										
Other											
Outcome	Complete recovery/Return to baseline										
	Alive with sequelae										
	Death										
	Unknown/Lost to follow-up										

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Safety Set		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)								
	AE persisting										
Relationship to study vaccine	Not related										
	Possibly related										
	Probably related										
Total											

6.2 Safety per protocol set

Table 6.2 Summary of MAAE

Safety per protocol Set		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)
Expected	Expected AE										
	Unexpected AE										
Serious	Yes										
	No										
Severity	Mild										
	Moderate										
	Severe										
Frequency	Single/Continuous										
	Intermittent										
Action Taken	None										
	Uncertain										
	Procedure or physical therapy										
	Blood or blood products										



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Safety per protocol Set		2-10	11-18	19-34	35-55	Total
		No. (%) AEs				
	Withdrawn from study due to AE					
	Prescription drug therapy					
	Non-prescription drug therapy					
	Hospitalization					
	IV fluids					
	Physician visit					
	Other					
Outcome	Complete recovery/Return to baseline					
	Alive with sequelae					
	Death					
	Unknown/Lost to follow-up					
	AE persisting					
Relationship to study vaccine	Not related					
	Possibly related					
	Probably related					
Total						

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7. SAE/SADR for 28 days after vaccination

7.1 Safety Set

Table 7.1 SAE and SADR

Safety Set	2-10		11-18		19-34		35-55		Total	
	Serious AE	Serious ADR								
	No. of AEs	No. of AEs								
	(n%)	(n%)								
System Organ Class(SOC)										

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Safety Set	2-10		11-18		19-34		35-55		Total	
	Serious AE	Serious ADR								
	N o. of A Es									
	() n %									
Preferred Term(PT)										
Total										

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7.2 Safety per protocol set

Table 7.2 SAE and SADR

Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR	
	Incidence Rate of AEs															
	(n%)															
System Organ Class(SOC)																

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Safety per protocol Set	2-10		11-18		19-34		35-55		Total	
	Serious AE	Serious ADR								
	N o. of A Es									
	() n %									
Preferred Term(PT)										
Total										

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7.3 Non-Safety per protocol set

Table 7.3 SAE and SADR

Non- Safety per protocol Set	2-10		11-18		19-34		35-55		Total	
	Serious AE	Serious ADR								
	Incidence Rate of AEs									
	(n %)									
System Organ Class(SOC)										

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Non- Safety per protocol Set	2-10		11-18				19-34				35-55				Total		
	Serious AE	Serious ADR	Serious AE	Serious ADR	Incident of	Incident of	Serious AE	Serious ADR	Incident of	Incident of	Serious AE	Serious ADR	Incident of	Incident of	Serious AE	Serious ADR	
	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
	o.																
	Incident of																
	ce Rate																
	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
	Es																
	((((((((((((((((
	n%																
))))))))))))))))	
Preferred Term(PT)																	
Total																	

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8. Unexpected AE/ADR for 28 days after vaccination

8.1 Safety Set

Table 8.1 Unexpected AE and ADR

Safety Set	2-10		11-18		19-34		35-55		Total	
	Unexpected AE	Unexpected ADR								
	N	N	N	N	N	N	N	N	N	N
	o.	o.								
	Inciden	Inciden								
	ce Rate	ce Rate								
	A	A	A	A	A	A	A	A	A	A
	Es	Es								

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	(n%))	n	(n%))	n	(n %)	n																			
System Organ Class(SOC)																									
Preferred Term(PT)																									
Total																									

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8.2 Safety per protocol set

Table 8.2 Unexpected AE and ADR

Safety per protocol Set	2-10		11-18		19-34		35-55		Total	
	Unexpected AE	Unexpected ADR								
	No. of AEs	No. of ADRs								
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
System Organ Class(SOC)										
Preferred Term(PT)										

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Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	Unexpected AE	Unexpected ADR														
	Incidence Rate of AEs															
	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	((((((((((((((((
	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
	%)	%)	%)	%)	%)	%)	%)	%)	%)	%)	%)	%)	%)	%)	%)	%)
Total																

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8.3 Non-Safety per protocol set

Table 8.3 Unexpected AE and ADR

Non-Safety per protocol Set	2-10		11-18		19-34		35-55		Total	
	Unexpected AE	Unexpected ADR								
	No. of AEs	No. of ADRs								
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
System Organ Class(SOC)										
Preferred Term(PT)										

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Non-Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	Unexpected AE	Unexpected ADR														
	Incidence Rate of AEs															
	(n %)															
Total																

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9. MAAE/ADR for 28 days after vaccination

9.1 Safety Set

Table 9.1 MAAE and ADR

Safety Set	2-10		11-18				19-34				35-55				Total	
	MAAE	ADR														
	Incidence Rate of AEs															
	n (%)															
System Organ Class(SOC)																
Preferred Term(PT)																

Safety Set	2-10		11-18				19-34				35-55				Total	
	MAAE	ADR														
	Number of Adverse Events															
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Total																

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9.2 Safety per protocol set

Table 9.2 MAAE and ADR

Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	MAAE	ADR														
	Incidence Rate of AEs															
	n (%)															
System Organ Class(SOC)																
Preferred Term(PT)																

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Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	MAAE	ADR														
	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	o.															
	Inciden															
	ce Rate															
	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	Es															
	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Total																

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9.3 Non-Safety per protocol set

Table 9.3 MAAE and ADR

Non- Safety per protocol Set	2-10		11-18		19-34		35-55		Total		
	MAAE	ADR									
	N o. of Incidence Rate of Adverse Events										
	n (%)										
System Organ Class(SOC)											
Preferred Term(PT)											

Non- Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	MAAE	ADR														
	Incidence Rate of Adverse Events															
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Total																

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STATISTICAL ANALYSIS PLAN

**A Multicenter, Post Marketing Surveillance study to Monitor the Safety of
Novartis Meningococcal ACWY Conjugate Vaccine (MenACWY-CRM)
Administered According to the Prescribing Information to Healthy Subjects
from 2 to 55 Years of Age in the Republic of South Korea**

Product Name : Menveo (MenACWY-CRM)

Protocol No. : V59_62

Version : V3.0

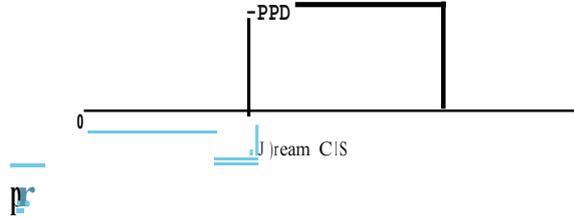
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Approvals

- Author

Biostatistician

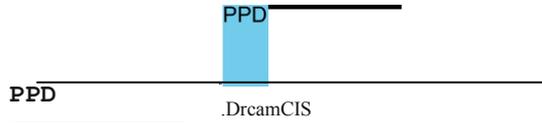


07-MAY-2014

Date

- Approval

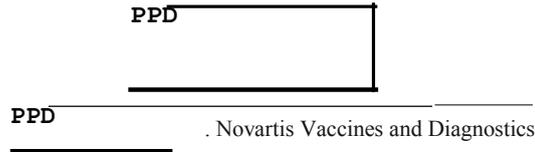
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Revisions

DATE OF REVISION	INDICATION REVISION	REASON FOR CHANGE	AUTHOR NAME
22-NOV-2013	All	Protocol Amendment	PPD
10-APR-2014	Appendix1	Modification of tables to include incidence rate of ADR, Fever added to Solicited reaction	PPD

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1. Study Objective

The primary objective of the study is to monitor the safety of a single dose of MenACWY-CRM vaccine in subjects from 2 to 55 years of age, as evaluated by:

1. Local and systemic solicited adverse events reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination
2. All unsolicited Adverse Events (AEs) reported from study Day 1(day of vaccination) through study Day 7 post-vaccination
3. Medically attended Adverse Events reported from study Day 1 to study termination (Day 29/early termination)
4. All Serious Adverse Events (SAEs) reported from study Day 1 to study termination (Day 29/early termination)

2. Study Method and Study Period

2.1 Study Period

The trial period shall be from market launch date till approximately 22 May 2018.

2.2 Number of Subjects

A total of approximately 3,300 subjects are planned for enrolment into this study.

Assuming a 10% drop-out rate, this should provide approximately 3,000 evaluable subjects. This sample size meets the post-licensure requirements of the MFDS to provide continued safety monitoring in the Korean population.

2.3 Study population

2.3.1 Inclusion criteria

Individuals eligible for enrolment in this study are those:

1. Male and female subjects from 2 to 55 years of the age at the time of Visit 1(including all 55

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years old subjects, up to one day before their 56th year birthday), who are scheduled to receive vaccination with MenACWY-CRM conjugate vaccine, according to the local prescribing information and routine clinical practice

2. To whom the nature of the study has been described and the subject or subject’s parent/legal representative has provided written informed consent (written assent from minors should be also obtained if required by the relevant IRB);
3. Whom the investigator believes that the subject can and will comply with the requirements of the protocol (e.g., completion of the Diary Card);
4. Who are in good health as determined by the outcome of medical history, physical assessment and clinical judgment of the investigator

2.3.2 Exclusion criteria

1. Contraindication, special warnings and/or precautions, as evaluated by the investigators, reported in the MenACWY-CRM conjugate vaccine Korean prescribing information.

2.4 Study Method

In order to obtain information on Regulatory PMS data after market launch, NVD or delegate will create the Regulatory PMS contract with the relevant clinics/hospitals and the physician in charge of the survey shall implement this Regulatory PMS in subjects that receive MenACWY-CRM in the relevant hospital/clinic since the contract date until the number of contracted survey cases, without omission, is reached.

Overview of Study Design

This is a multicenter post marketing surveillance study to monitor the safety of MenACWY-CRM administered according to the prescribing information to 3,300 healthy subjects from 2 to 55 years of age in Korea.

Subjects will be enrolled at the time of their visit to a participating clinic or hospital for vaccination with MenACWY-CRM according to the routine clinical care.

At Visit 1 (Day 1), after obtaining consent from the subjects or subjects’ parents/legal representative (written assent will be also obtained if required by the relevant IRB), the vaccination will be administered. Subjects will remain under observation for at least 30 minutes in the clinic after study immunization.

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The subjects or subject’s parent/legal representative will be then instructed to complete the Diary Card daily, reporting local and systemic adverse events and all other AEs occurring within 7 days following immunizations, and medically attended AEs or SAEs occurring up to Day 29.

Subjects will also be instructed to return the completed diaries to the study site at Day 29 as follows:

- During a visit at the study center or
- Using the provided pre-addressed stamped envelope (PASE).

At the investigator discretion, the subject or subject’s parent/legal representative will be reminded of the date of the study termination by a phone call at Day 29. If any clarification is required after Diary Card retrieval the site staff will follow up by phone, and any additional finding will be recorded on the subject’s medical record.

In case the Diary Card is not retrieved within 10 days after Day 29, subject or subject’s parent/legal representative will be contacted by phone to assess the occurrence of adverse events, determine the subject’s clinical status and complete study termination. All information will be recorded by the site staff on the subject’s medical record and collected in the appropriate section of the CRF.

All SAEs will be monitored until resolution and/or the cause is identified. If a SAE remains unresolved at study termination, a clinical assessment will be made by the investigator and the NVD regional physician to determine whether continued follow up of the SAE is needed.

Table 3.1-1: Safety Assessment Table

<p>Medical History: All significant past diagnoses including all allergies, major surgeries requiring inpatient hospitalization, other significant injuries or hospitalizations, any conditions requiring prescription or chronic medication (i.e., >2 weeks in duration), or other significant medical conditions based on the investigator’s judgment.</p>	<p>From birth, collected at clinic visit Day 1</p>
<p>Immediate reactions: Subjects will be assessed for immediate hypersensitivity reactions.</p>	<p>For at least 30 minutes after vaccination</p>
<p>Solicited local adverse events: < 6 years : injection site erythema, injection site induration, injection site tenderness</p>	<p>Days 1-7 after vaccination</p>

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≥ 6 years : injection site erythema, injection site induration, injection site pain	
Solicited systemic adverse events: < 6 years : change in eating habits, sleepiness, irritability, rash, vomiting, diarrhea, fever ≥ 6 years : chills, nausea, malaise, generalized myalgia, generalized arthralgia, headache, rash, fever	Days 1-7 after vaccination
All unsolicited AEs will be collected	Days 1-7 after vaccination
Medically attended Adverse Events: Events that require a physician’s visit or an emergency room visit (<i>events that are managed by telephone or means other than a face-to-face evaluation by a clinician do not qualify as medically attended AEs</i>).	From Day 1 to study termination (Day 29/early termination)
Serious AEs: All SAEs will be collected.	From Day 1 to study termination (Day 29/early termination)
Medications: Any medications used to treat any solicited local and systemic reaction and unsolicited AE be collected.	From Day 1 to Day 7
Medications: Any medications used to treat any medically attended AE or SAE will be collected.	From Day 1 to study termination (Day 29/early termination)

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3. Analysis Sets

3.1 Safety Analysis Sets

Safety Set

All subjects who

- have signed an informed consent form, undergone screening procedure(s) and received a subject number,
- received a study vaccination,
- provided post vaccination safety data.

Safety per protocol set

All subjects in the safety Set with the exclusions of the following cases:

- (1) Subjects administered prior to the contract date.
- (2) Subjects who didn't receive MenACWY-CRM.
- (3) Subjects who already receive MenACWY-CRM.
- (4) Follow-up failure: The subjects whose safety information cannot be identified due to follow-up loss.
- (5) Not applicable to the indication of study drug
[Indication]
 - To prevent invasive meningococcal disease caused by Neisseria meningitidis serogroups A, C, Y and W-135 in persons 2 through 55 years of age.
- (6) Subjects who violate of Protocol: Those who do not meet one item at least of the inclusion/exclusion criteria.
[Inclusion criteria]
 - 1) Male and female subjects from 2 to 55 years of the age at the time of Visit 1 (including all 55 years old subjects, up to one day before their 56th year birthday), who are scheduled to receive vaccination with MenACWY-CRM conjugate vaccine, according to the local prescribing information and routine clinical practice.
 - 2) To whom the nature of the study has been described and the subject or subject's parent/legal representative has provided written informed consent.
 - 3) Whom the investigator believes that the subject can and will comply with the requirements of the protocol.

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- 4) Who are in good health as determined by the outcome of medical history, physical assessment and clinical judgment of the investigator.
[Exclusion criteria]
- 1) Contraindication, special warnings and/or precautions, as evaluated by the investigators, reported in the MenACWY-CRM conjugate vaccine Korean prescribing information
- (7) Subjects who prescribed off-label dosage.
 - Violation of intramuscular injection only (0.5ml)

Non-Safety per protocol set

Subjects excluded from safety per protocol set except for subjects who did not receive MenACWY-CRM and follow-up failure.

Based on rules for estimation of each number of safety evaluation cases, the following local regulation and Guideline on Standards for re-examination for new drugs, etc ※ of MFDS, non-safety analysis set are excluded from the safety analysis set:

※ Guideline on Standards for re-examination for new drugs, etc (Chapter II, no. 3)

Patient Population for Surveillance

- A) Patients planned to receive a drug under surveillance by investigator's medical judgment shall be subject.
- B) Subject who do not use within approved range shall not be included in the subject in principal.
 - ※ However, if data of subject whose use is beyond approved range is collected, perform analysis as a separate item.
- C) Describe actual selection methods of subject in detail.

3.2 Efficacy Analysis Set

Not Applicable

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4. Endpoints

4.1 Safety Endpoints

Safety will be assessed after administration of study vaccine in terms of the number and percentage of subjects with:

- Local and systemic solicited adverse events reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination;
- Unsolicited AEs reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination;
- Medically attended AEs reported from study Day 1 to study termination (Day 29/early termination);
- SAEs reported from study Day 1 to study termination (Day 29/early termination).

5. Assessment Criteria

5.1 Safety Assessment Criteria

Not Applicable

6. Statistical Analyses

6.1 Baseline Characteristics

Descriptive statistics (mean, standard deviation, median, minimum and maximum) for baseline characteristics such as age, height and weight at enrollment will be calculated in the Safety set and Safety per Protocol set.

The following baseline characteristics will be reported:

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< Subject Baseline Information >

- gender, age, ethnic origin, weight, height, past diagnosis, pre-Immunization temperature, temperature location, pregnancy

< Study Vaccine Information >

- vaccine site, concomitant medications

6.2 Safety Analyses

The number of subjects of AE[†] and the number of AEs[†] incurred shall be calculated, the incidence rate of AEs[†] and its 95% confidence interval will be calculated using the normal approximation on the safety set and safety per protocol set.

† AE : AE includes solicited and unsolicited AE (DAY 1-7), medically attended AE (DAY 1-29) and SAE (DAY 1-29).

6.2.1 Adverse Events by Baseline Characteristics

AE[†]s (as described below) will be reported (n, %) for the following the baseline characteristics in the safety set and safety per protocol set :

- Age group (2-10, 11-18, 19-34, 35-55)
- Children group (<18, ≥18)
- Gender (male, female)
- Past diagnosis (yes, no)
- Temperature location (axillary, oral, rectal, ear)
- Administration site (left deltoid, right deltoid, other)
- Concomitant medication (yes, no)
- Kidney disorder (yes, no)
- Liver disorder (yes, no)
- Pregnancy (yes, no)

The n(%) of AEs[†] and its 95% confidence interval will be calculated using the normal approximation and analyzed using χ^2 - test or Fisher's exact test.

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† AE : AE includes solicited and unsolicited AE (DAY 1-7) and medically attended AE (DAY 1-29) and SAEs.

6.2.2. Analysis of Solicited AE

Frequencies and percentages of subjects experiencing each adverse event will be presented for each symptom severity. Summary tables showing the occurrence of any local or systemic adverse events overall and at each time point will also be presented (see Table 4.1.3 and 4.2.3).

Post-vaccination adverse events reported from Day 1 to Day 7 will be summarized by maximal severity. The severity of local adverse events for subjects < 6 years of age will be categorized as follows. Injection-site erythema and induration : absent (0 to 9 mm), mild (10 to 25 mm), moderate (26 to 50 mm), severe (>50 mm); injection-site tenderness: none, mild (minor light reaction to touch), moderate (cried or protested to touch), severe (cried when injected limb was moved). For subjects ≥ 6 years, injection-site erythema and induration absent (1 to 24 mm), mild (25 to 50 mm), moderate (51 to 100 mm), severe (>100 mm); pain: none, mild (present but does not interfere with activity), moderate (interferes with activity), severe (prevents daily activity).

For subjects ≥ 6 years of age, the severity of systemic adverse events (i.e., chills, nausea, malaise, generalized myalgia, generalized arthralgia, headache) occurring up to 7 days after each vaccination will be categorized as none, mild (present but not interfering with daily activity), moderate (some interference with daily activity), and severe (prevents daily activity) except for rash, which will be categorized as none, urticarial, or other.

For subjects < 6 years of age, the severity of systemic adverse events occurring up to 7 days after each vaccination will be categorized as follows. Change in eating habits : none (no change in appetite), mild (eating less than normal for 1 to feeds), moderate (missed 1 or 2 feeds), severe (missed more than 2 feeds); sleepiness : none (no change in alertness), mild (shows an increased alertness), moderate (sleeps through feeds), severe (sleeps most of the time and it is hard to arouse him/her); irritability : none (no change in child disposition), mild (requires more cudding and he/she is less playful than usual), moderate (more difficult to settle), severe (unable to console); rash : none, urticarial, or other; vomiting : none, mild (1-2 episodes/24 hours), moderate (>2 episodes/24 hours), severe (requires outpatient hydration); diarrhea : none (fewer than 2 loose stools/24 hours), mild (2-3 loose stools or < 400 gms/24 hours), moderate (4-5 stools or 400-800 gms/24 hours), severe (6 or more watery stools

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or > 800 gms/24 hours or requires outpatient IV hydration).

Body temperature will be categorized as <38°C (no fever), ≥38°C (fever) and will be summarized by 0.5°C increments from 36.0°C up to ≥40°C. Additionally, no fever vs. fever will be reported.

Each local and systemic adverse event will also be categorized as none vs. any.

6.2.3 Analysis of Unsolicited AE

All unsolicited AEs and MAAE recorded in the CRF will be mapped to preferred terms using the most recent MedDRA dictionary and classified by System organ class (SOC) and Preferred Terms (PT). Under the classification standard of MedDRA terms, and all AEs excluding the AEs whose causal relation with the study medication is ‘Not Related’ shall be treated as AEs whose causal relation cannot be excluded {hereafter “Adverse Drug Reaction(ADR)”}.

- ① The number and percentage of unsolicited AE (Day 1-7) and MAAE (Day 1-29) and SAEs (Day 1-29) according to the serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM regarding occurred AE will be calculated.
- ② Unsolicited AEs (Day 1-7) and MAAE (Day 1-29) and SAEs (Day 1-29) will be classified into the preferred terms according to the serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM. Also, the number and percentage of each AE (PT) will be calculated.
- ③ The number of subjects and the number of unexpected AE/ADR, SAE/Serious ADR (SADR) and MAAE/ADR will be calculated according to the preferred terms. Also, the incidence rate will be estimated.
- ④ For subjects excluded from safety per protocol set[†], the number of subjects and the number of unexpected AE/ADR, SAE/Serious ADR (SADR) and MAAE/ADR will be calculated according to the preferred terms. Also, the incidence rate will be estimated.

† Subject excluded from safety per protocol set: Except for subjects who didn’t receive study vaccination and follow-up failure.

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7. List of Table and Data Listings

7.1 Distribution of Subjects

- Number of subjects contracted to the study: The number of subjects are to be collected (under contract) as contracted by the investigator
- Number of retrieving completed CRFs: Total number of subjects whose completed CRFs
- Number of safety assessment population: Number of safety assessment population among total number

7.2 Baseline Characteristics

- Mean and standard deviation (SD) or frequency and percentage by gender, age, ethnic origin, weight, height, past diagnosis, pre-Immunization temperature, temperature location, pregnancy
- Frequency and percentage by vaccine site, concomitant medications

7.3 Safety Analyses

- Incidence rate and the number of AEs according to the baseline characteristics (frequency and percentage)
- The number of the serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM for Unsolicited AE (DAY 1-7) and MAAE (frequency and percentage)
- The number of AEs for the severity, day, fever to MenACWY-CRM according to individual solicited AE (DAY 1-7) (frequency and percentage)
- Incidence rate and number according to the preferred terms of SAE/SADR, unexpected AE/unexpected ADR, and MAAE/ADR (frequency and percentage)
- For subjects excluded from safety per protocol set[†] incidence rate and number according to the preferred terms of SAE/SADR, unexpected AE/unexpected ADR, and MAAE/ADR (frequency and percentage)

† Subject excluded from safety per protocol set: Except for subjects who didn't receive study mediation and follow-up failure

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8. Notes

- Each statistical analysis will be carried out with SAS Software version 9.2 or more recent version.
- In the descriptive statistics, mean, SD, minimum, median, and maximum will be calculated for continuous variables, and frequency and percentage for categorical variables.
- Data including sign of inequality such as “ ≥ 20 ”, “ > 20 ” will be excluded from analysis.
- All test statistics will be the results of two-sided tests with the statistical significant level of 0.05.
- The followings shall be included only in re-examination report:
 - Analysis by type of concomitant medications
 - Item ② of paragraph 6.2.3
 - Estimation of 95% confidence interval for incidence of AEs by background factors

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Appendix1

1. Demographic and baseline values, medication characteristics, specific characteristics

- Baseline characteristics will be reported on the safety set and safety per protocol set.

1.1 Safety Set

Table 1.1.1 Total subject

Safety Set	Total No. subjects (%)
Total	

Table 1.1.2 Demographic characteristics

1) (Administration start date)-(birth)+1

Safety Set		Total No. subjects (%)
Age(years) ¹⁾	No. subjects mean±std median min~max	
Age(years)	2-10	
	2-5	
	6-10	
	11-18	
	19-34	
	35-55	
	Total	
Children group(years)	< 18	
	≥ 18	
	Total	
Ethnic Origin	Asian	
	Black	

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Safety Set		Total No. subjects (%)
	Caucasian	
	Hispanic	
	Other	
	Total	
Gender	Male	
	Female	
	Total	
Weight(kg)	No. subjects	
	mean±std	
	median	
	min~max	
Height(cm)	No. subjects	
	mean±std	
	median	
	min~max	

Table 1.1.3 Past diagnosis

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.4 Pre-Immunization temperature

Safety Set	Total No. subjects (%)
No. subjects	
mean±std (°C)	
median	
min~max	

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Table 1.1.5 Temperature Location

Safety Set	Total No. subjects (%)
Axillary	
Oral	
Rectal	
Ear	
Total	

Table 1.1.6 Administration Site

Safety Set	Total No. subjects (%)
Left Deltoid	
Right Deltoid	
Other	
Total	

Table 1.1.7 Concomitant medication

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.8 Kidney Disorder

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

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Table 1.1.9 Liver disorder

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.10 Pregnancy

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

1.2 Safety Per Protocol Set

Table 1.2.1 Total subject

Safety per protocol set	Total No. subjects (%)
Total	

Table 1.2.2 Demographic characteristics

1) (Administration start date)-(birth)+1

Safety per protocol set		Total No. subjects (%)
Age(years) ¹⁾	No. subjects mean±std median min~max	
Age(years)	2-10	
	2-5	
	6-10	

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Safety per protocol set		Total No. subjects (%)
	11-18	
	19-34	
	35-55	
	Total	
Children group(years)	< 18	
	≥ 18	
	Total	
Ethnic Origin	Asian	
	Black	
	Caucasian	
	Hispanic	
	Other	
	Total	
Gender	Male	
	Female	
	Total	
Weight(kg)	No. subjects	
	mean±std	
	median	
	min~max	
Height(cm)	No. subjects	
	mean±std	
	median	
	min~max	

Table 1.2.3 Past diagnosis

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

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Table 1.2.4 Pre-Immunization temperature

Safety per protocol set	Total No. subjects (%)
No. subjects	
mean±std (°C)	
median	
min~max	

Table 1.2.5 Temperature Location

Safety per protocol set	Total No. subjects (%)
Axillary	
Oral	
Rectal	
Ear	
Total	

Table 1.2.6 Administration Site

Safety per protocol set	Total No. subjects (%)
Left Deltoid	
Right Deltoid	
Other	
Total	

Table 1.2.7 Concomitant medication

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

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Table 1.2.8 Kidney Disorder

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.2.9 Liver disorder

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.2.10 Pregnancy

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

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2. Safety Analyses

- **AE includes solicited and unsolicited AE (Day 1-7) and medically attended AE (Day 1-29) and SAEs (Day 1-29)**
- **AE will be reported on the safety set and safety per protocol set.**
- **SAE/SADR will be reported on the safety set, safety per protocol set and non-safety per protocol set.**

2.1 Safety Set

Table 2.1.1 Summary of AE

Safety set	No. subjects with AE n (%)	95% CI† for the percentage of subjects with AE (Lower , Upper)	No. AEs n	No. subjects with ADR n (%)	95% CI† for the percentage of subjects with ADR (Lower , Upper)	No. ADR n	Total n (%)
Solicited AE (< 6 years)							
Local AE							
Systemic AE							
Solicited AE (≥ 6 years)							
Local AE							
Systemic AE							

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Safety set	No. subjects with AE n (%)	95% CI† for the percentage of subjects with AE (Lower , Upper)	No. AEs n	No. subjects with ADR n (%)	95% CI† for the percentage of subjects with ADR (Lower , Upper)	No. ADR n	Total n (%)
Unsolicited AE							
SAE							
MAAE							
Death							
Total							

† 95% CI will be calculated using the normal approximation.

* Day 1-7: Solicited AE, Unsolicited AE

* Day 1-29: MAAE, SAE, Death

Table 2.1.2 Summary of AE by Age (year)

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
2-10				X ² -test or Exact test
2-5				
6-10				
11-18				
19-34				
35-55				
Total				

Table 2.1.3 Summary of AE by Age (year)

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Solicited AE				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Solicited Local AE				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Solicited Systemic AE				
2-10				
2-5				

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Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
6-10				
11-18				
19-34				
35-55				
Unsolicited AE				
2-10				
11-18				
19-34				
35-55				
SAE				
2-10				
11-18				
19-34				
35-55				
MAAE				
2-10				
11-18				
19-34				
35-55				
ADR				
2-10				
11-18				
19-34				
35-55				
Death				
2-10				
11-18				
19-34				
35-55				

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Table 2.1.4 Summary of AE by Children group

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
< 18 years				X ² -test or Exact test
≥ 18 years				
Total				

Table 2.1.5 Summary of AE by Gender

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Male				X ² -test or Exact test
Female				
Total				

Table 2.1.6 Summary of AE by Past diagnosis

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.7 Summary of AE by Temperature Location

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)
Axillary			
Oral			
Rectal			
Ear			
Total			

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Table 2.1.8 Summary of AE by Administration Site

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)
Left Deltoid			
Right Deltoid			
Other			
Total			

Table 2.1.9 Summary of AE by Concomitant medication

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.10 Summary of AE by Kidney Disorder

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.11 Summary of AE by Liver disorder

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

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Table 2.1.12 Summary of AE by Pregnancy

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

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2.2 Safety per protocol set

Table 2.2.1 Summary of AE

Safety per protocol set	No. subjects with AE n (%)	95% CI† for the percentage of subjects with AE (Lower , Upper)	No. AEs n	No. subjects with ADR n (%)	95% CI† for the percentage of subjects with ADR (Lower , Upper)	No. ADR n	Total n (%)
Solicited AE (< 6 years)							
Local AE							
Systemic AE							
Solicited AE (≥ 6 years)							
Local AE							
Systemic AE							
Unsolicited AE							
SAE							
MAAE							
Death							
Total							

† 95% CI will be calculated using the normal approximation.

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* Day 1-7: Solicited AE, Unsolicited AE

* Day 1-29: MAAE, SAE, Death

Table 2.2.2 Summary of AE by Age (year)

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
2-10				
2-5				
6-10				
11-18				X ² -test or Exact test
19-34				
35-55				
Total				

Table 2.2.3 Summary of AE by Age (year)

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Solicited AE				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Solicited Local AE				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Solicited Systemic AE				
2-10				
2-5				

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Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
6-10				
11-18				
19-34				
35-55				
Unsolicited AE				
2-10				
11-18				
19-34				
35-55				
SAE				
2-10				
11-18				
19-34				
35-55				
MAAE				
2-10				
11-18				
19-34				
35-55				
ADR				
2-10				
11-18				
19-34				
35-55				
Death				
2-10				
11-18				
19-34				
35-55				

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Table 2.2.4 Summary of AE by Children group

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
< 18 years				X ² -test or Exact test
≥ 18 years				
Total				

Table 2.2.5 Summary of AE by Gender

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Male				X ² -test or Exact test
Female				
Total				

Table 2.2.6 Summary of AE by Past diagnosis

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.7 Summary of AE by Temperature Location

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)
Axillary			
Oral			
Rectal			
Ear			
Total			

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Table 2.2.8 Summary of AE by Administration Site

Safety per protocol Set	No. subjects with AE	No. AEs	Total
	n (%)	n	n (%)
Left Deltoid			
Right Deltoid			
Other			
Total			

Table 2.2.9 Summary of AE by Concomitant medication

Safety per protocol Set	No. subjects with AE	No. AEs	Total	p-value
	n (%)	n	n (%)	
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.10 Summary of AE by Kidney Disorder

Safety per protocol Set	No. subjects with AE	No. AEs	Total	p-value
	n (%)	n	n (%)	
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.11 Summary of AE by Liver disorder

Safety per protocol Set	No. subjects with AE	No. AEs	Total	p-value
	n (%)	n	n (%)	
Yes				X ² -test or Exact test
No				
Total				

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Table 2.2.12 Summary of AE by Pregnancy

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

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3. Information of AEs

3.1 Safety Set

Table 3.1.1 Summary of solicited AE and unsolicited AE for 7 days after vaccination (<6 years)

Safety Set		AE	
		Incidence Rate n (%)	No. of AEs n
Local AE	Tenderness		
	Erythema		
	Induration		
	Sub Total		
Systemic AE	Change in eating habits		
	Sleepiness		
	Irritability		
	Vomiting		
	Diarrhea		
	Rash		
	Fever		
	Sub Total		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

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Table 3.1.2 Summary of solicited AE and unsolicited AE for 7 days after vaccination (≥ 6 years)

Safety Set		AE	
		Incidence Rate n (%)	No. of AEs n
Local AE	Pain		
	Erythema		
	Induration		
	Sub Total		
Systemic AE	Chills		
	Nausea		
	Malaise		
	Myalgia		
	Arthralgia		
	Headache		
	Rash		
	Fever		
	Sub Total		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

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Table 3.1.3 Summary of solicited AE and unsolicited AE for 7 days after vaccination (≥ 6 years)

Safety Set		AE(6-10)		AE(11-18)		AE(19-34)		AE(35-55)	
		Incidence Rate	No. of AEs						
		n (%)	n	n (%)	n	n (%)	n	n (%)	n
Local AE	Pain								
	Erythema								
	Induration								
	Sub Total								
Systemic AE	Chills								
	Nausea								
	Malaise								
	Myalgia								
	Arthralgia								
	Headache								
	Rash								
	Fever								
	Sub Total								
UNSOLICITED AE	System Organ Class(SOC)								
	Preferred Term(PT)								

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Table 3.1.4 Summary of medically attended AEs for 28 days after vaccination

Safety Set		AE	
		Incidence Rate n (%)	No. of AEs n
MAAE	System Organ Class(SOC)		
	Preferred Term(PT)		
Total			

Table 3.1.5 Summary of medically attended AEs for 28 days after vaccination

Safety Set		AE(2-10)		AE(11-18)		AE(19-34)		AE(35-55)	
		Incidence Rate n (%)	No. of AEs n						
MAAE	System Organ Class(SOC)								
	Preferred Term(PT)								
Total									

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3.2 Safety per protocol set

Table 3.2.1 Summary of solicited AE and unsolicited AE for 7 days after vaccination (<6 years)

Safety per protocol Set		AE	
		Incidence Rate n (%)	No. of AEs n
Local AE	Tenderness		
	Erythema		
	Induration		
	Sub Total		
Systemic AE	Change in eating habits		
	Sleepiness		
	Irritability		
	Vomiting		
	Diarrhea		
	Rash		
	Fever		
	Sub Total		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

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Table 3.2.2 Summary of solicited AE and unsolicited AE for 7 days after vaccination (≥ 6 years)

Safety per protocol Set		AE	
		Incidence Rate n (%)	No. of AEs n
Local AE	Pain		
	Erythema		
	Induration		
	Sub Total		
Systemic AE	Chills		
	Nausea		
	Malaise		
	Myalgia		
	Arthralgia		
	Headache		
	Rash		
	Fever		
	Sub Total		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

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Table 3.2.3 Summary of solicited AE and unsolicited AE for 7 days after vaccination (≥ 6 years)

Safety per protocol Set		AE(6-10)		AE(11-18)		AE(19-34)		AE(35-55)	
		Incidence Rate n (%)	No. of AEs n	Incidence Rate n (%)	No. of AEs n	Incidence Rate n (%)	No. of AEs n	Incidence Rate n (%)	No. of AEs n
Local AE	Pain								
	Erythema								
	Induration								
	Sub Total								
Systemic AE	Chills								
	Nausea								
	Malaise								
	Myalgia								
	Arthralgia								
	Headache								
	Rash								
	Fever								
Sub Total									
UNSOLICITED AE	System Organ Class(SOC)								
	Preferred Term(PT)								
	Sub Total								
Total									

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Table 3.24 Summary of medically attended AEs for 28 days after vaccination

Safety per protocol Set		AE	
		Incidence Rate n (%)	No. of AEs n
MAAE	System Organ Class(SOC)		
	Preferred Term(PT)		
Total			

Table 3.2.5 Summary of medically attended AEs for 28 days after vaccination

Safety Set		AE(2-10)		AE(11-18)		AE(19-34)		AE(35-55)	
		Incidence Rate n (%)	No. of AEs n						
MAAE	System Organ Class(SOC)								
	Preferred Term(PT)								
Total									

4. Solicited AE (DAY 1-7)

4.1 Safety Set

Table 4.1.1 Summary of Local AE Max severity (<6 years)

Safety Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Tenderness					
	Erythema					
	Induration					

* Mild(1), Moderate(2), Severe(3) : Tenderness

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.1.2 Summary of Local AE Max severity (≥6 years)

Safety Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Pain					
	Erythema					
	Induration					

* Mild(1), Moderate(2), Severe(3) : Pain

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.1.3 Summary of Local AE by Max severity

Safety Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Age (2-5)	Tenderness					
	Erythema					
	Induration					
Age (6-10)	Pain					
	Erythema					
	Induration					
Age (11-18)	Pain					

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	Erythema				
	Induration				
Age (19-34)	Pain				
	Erythema				
	Induration				
Age (35-55)	Pain				
	Erythema				
	Induration				

* Mild(1), Moderate(2), Severe(3) : Pain, Tenderness

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.1.4 Summary of Systemic AE by Max severity(<6 years)

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic AE	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				
	Fever				

* Mild(1), Moderate(2), Severe(3) : Change in eating habits, Sleepiness, irritability, vomiting, diarrhea,

*None(1), Urticarial(2), Other(3) : Rash

* $\geq 38^{\circ}\text{C}$ (1) : Fever

Table 4.1.5 Summary of Systemic AE by Max severity(≥ 6 years)

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic AE	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				

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Headache					
Rash					
Fever					

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache

*None(1), Urticarial(2), Other(3) : Rash

* $\geq 38^{\circ}\text{C}$ (1) : Fever

Table 4.1.6 Summary of Systemic AE by Max severity

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Age (2-5)	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				
	Fever				
Age (6-10)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				
	Fever				
Age (11-18)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				
	Fever				
Age (19-34)	Chills				

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Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				
	Fever				
Age (35-55)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Fever				

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache, Change in eating habits, Sleepiness, irritability, vomiting, diarrhea,

*None(1), Urticarial(2), Other(3) : Rash

* $\geq 38^{\circ}\text{C}$ (1) : Fever

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Table 4.1.7 Summary of Solicited AE by day (<6 years)

Safety Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Tenderness									
	Erythema									
	Induration									
	Sub Total									
Systemic AE	Change in eating habits									
	Sleepiness									
	Irritability									
	Vomiting									
	Diarrhea									
	Rash									
	Fever									
	Sub Total									
Total										

Table 4.1.8 Summary of Solicited AE by day (≥6 years)

Safety Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Pain									
	Erythema									
	Induration									
	Sub Total									
Systemic AE	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									

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	Rash									
	Fever									
	Sub Total									
Total										

Table 4.1.9 Summary of Solicited AE by day

Safety Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n%
Age (2-5)	Tenderness									
	Erythema									
	Induration									
Age (6-10)	Pain									
	Erythema									
	Induration									
Age (11-18)	Pain									
	Erythema									
	Induration									
Age (19-34)	Pain									
	Erythema									
	Induration									
Age (35-55)	Pain									
	Erythema									
	Induration									
	Sub Total									
Age (2-5)	Change in eating habits									
	Sleepiness									
	Irritability									
	Vomiting									
	Diarrhea									
	Rash									
	Fever									
Age (6-10)	Chills									
	Nausea									



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Safety Set		30 min	6hr	2	3	4	5	6	7	Total n(%)
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
	Fever									
Age (11-18)	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
	Fever									
Age(19-34)	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
	Fever									
Age (35-55)	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
	Fever									
	Sub Total									

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Safety Set	30 min n (%)	6hr n (%)	2 n (%)	3 n (%)	4 n (%)	5 n (%)	6 n (%)	7 n (%)	Total n(%)
Total									

Table 4.1.10 Summary of Fever

Safety Set		2-10 n (%)	11-18 n (%)	19-34 n (%)	35-55 n (%)	Total n (%)
	Fever					
	No fever					
	Total					
Temperature(°C)	36-36.5					
	36.5-37					
	37-37.5					
	37.5-38					
	38-38.5					
	38.5-39					
	39-39.5					
	39.5-40					
	>40					

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4.2 Safety per protocol set

Table 4.2.1 Summary of local AE by Max severity (<6 years)

Safety per protocol Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Tenderness					
	Erythema					
	Induration					

* Mild(1), Moderate(2), Severe(3) : Tenderness

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.2.2 Summary of Local AE Max severity (≥6 years)

Safety per protocol Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Pain					
	Erythema					
	Induration					

* Mild(1), Moderate(2), Severe(3) : Pain

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.2.3 Summary of Local AE by Max severity

Safety per protocol Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Age (2-5)	Tenderness					
	Erythema					
	Induration					
Age (6-10)	Pain					
	Erythema					
	Induration					
Age (11-18)	Pain					
	Erythema					
	Induration					
Age (19-34)	Pain					

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	Erythema				
	Induration				
Age (35-55)	Pain				
	Erythema				
	Induration				

* Mild(1), Moderate(2), Severe(3) : Pain

* 1-25(1), 26-50(2), 51-100(3), >100(4) : Erythema, Induration

Table 4.2.4 Summary of Systemic AE by Max severity (<6 years)

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic AE	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				
	Fever				

* Mild(1), Moderate(2), Severe(3) : Change in eating habits, Sleepiness, irritability, vomiting, diarrhea,

*None(1), Urticarial(2), Other(3) : Rash

* $\geq 38^{\circ}\text{C}$ (1) : Fever

Table 4.2.5 Summary of Systemic AEs by Max severity (≥ 6 years)

Safety per protocol Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic AE	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				
	Fever				

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache

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*None(1), Urticarial(2), Other(3) : Rash

* $\geq 38^{\circ}\text{C}$ (1) : Fever

Table 4.2.6 Summary of Systemic AE by Max severity

Safety per protocol Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Age (2-5)	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				
	Fever				
Age (6-10)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				
	Fever				
Age (11-18)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				
	Fever				
Age (19-34)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				

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Safety per protocol Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
	Headache				
	Rash				
	Fever				
Age (35-55)	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Fever				

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache

*None(1), Urticarial(2), Other(3) : Rash

* $\geq 38^{\circ}\text{C}$ (1) : Fever

Table 4.1.7 Summary of Solicited AE by day (<6 years)

Safety Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Tenderness									
	Erythema									
	Induration									
	Sub Total									
Systemic AE	Change in eating habits									
	Sleepiness									
	Irritability									
	Vomiting									
	Diarrhea									
	Rash									
	Fever									
Sub Total										
Total										

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Table 4.2.8 Summary of Solicited AE by day (≥ 6 years)

Safety per protocol Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Pain									
	Erythema									
	Induration									
	Sub Total									
Systemic AE	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
	Fever									
	Sub Total									
Total										

Table 4.2.9 Summary of Solicited AE by day

Safety Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Age (2-5)	Tenderness									
	Erythema									
	Induration									
Age (6-10)	Pain									
	Erythema									
	Induration									
Age (11-18)	Pain									
	Erythema									
	Induration									
Age (19-34)	Pain									
	Erythema									



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Safety Set		30 min	6hr	2	3	4	5	6	7	Total n (%)
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
Age (35-55)	Induration									
	Pain									
	Erythema									
	Induration									
	Sub Total									
Age (2-5)	Change in eating habits									
	Sleepiness									
	Irritability									
	Vomiting									
	Diarrhea									
	Rash									
	Fever									
Age (6-10)	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
	Fever									
Age (11-18)	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
	Fever									
Age(19-34)	Chills									
	Nausea									
	Malaise									



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Safety Set		30 min	6hr	2	3	4	5	6	7	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
	Fever									
Age (35-55)	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash									
	Fever									
	Sub Total									
Total										

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Table 4.2.10 Summary of Fever

Safety per protocol Set		2-10	11-18	19-34	35-55	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
	Fever					
	No fever					
	Total					
Temperature(°C)	36-36.5					
	36.5-37					
	37-37.5					
	37.5-38					
	38-38.5					
	38.5-39					
	39-39.5					
	39.5-40					
	>40					

5. Unsolicited AE (DAY 1-7)

5.1 Safety Set

Table 5.1 Summary of Unsolicited AE

Safety Set		2-10	11-18	19-34	35-55	Total
		No. (%) AEs	No. (%) AEs	No. (%) AEs	No. (%) AEs	No. (%) AEs
Expected	Expected AE					
	Unexpected AE					
Serious	Yes					
	No					
Severity	Mild					
	Moderate					
	Severe					
Frequency	Single/Continuous					

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Safety Set		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)								
	Intermittent										
Action Taken	None Uncertain Procedure or physical therapy Blood or blood products Withdrawn from study due to AE Prescription drug therapy Non-prescription drug therapy Hospitalization IV fluids Physician visit Other										
Outcome	Complete recovery/Return to baseline Alive with sequelae Death Unknown/Lost to follow-up AE persisting										
Relationship to study vaccine	Not related Possibly related Probably related										
Total											

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5.2 Safety per protocol set

Table 5.2 Summary of Unsolicited AE

Safety per protocol Set		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)
Expected	Expected AE Unexpected AE										
Serious	Yes No										
Severity	Mild Moderate Severe										
Frequency	Single/Continuous Intermittent										
Action Taken	None Uncertain Procedure or physical therapy Blood or blood products Withdrawn from study due to AE Prescription drug therapy Non-prescription drug therapy Hospitalization IV fluids Physician visit Other										
Outcome	Complete recovery/Return to baseline Alive with sequelae Death Unknown/Lost to follow-up AE persisting										

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Safety per protocol Set		2-10	11-18	19-34	35-55	Total
		No. (%) AEs				
Relationship to study vaccine	Not related					
	Possibly related					
	Probably related					
Total						

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6. MAAE (DAY 1-29)

6.1 Safety Set

Table 6.1 Summary of MAAE

Safety Set		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)
Expected	Expected AE										
	Unexpected AE										
Serious	Yes										
	No										
Severity	Mild										
	Moderate										
	Severe										
Frequency	Single/Continuous										
	Intermittent										
Action Taken	None										
	Uncertain										
	Procedure or physical therapy										
	Blood or blood products										
	Withdrawn from study due to AE										
	Prescription drug therapy										
	Non-prescription drug therapy										
	Hospitalization										
	IV fluids										
	Physician visit										
Other											
Outcome	Complete recovery/Return to baseline										
	Alive with sequelae										
	Death										
	Unknown/Lost to follow-up										

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Safety Set		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)								
	AE persisting										
Relationship to study vaccine	Not related										
	Possibly related										
	Probably related										
Total											

6.2 Safety per protocol set

Table 6.2 Summary of MAAE

Safety per protocol Set		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)
Expected	Expected AE										
	Unexpected AE										
Serious	Yes										
	No										
Severity	Mild										
	Moderate										
	Severe										
Frequency	Single/Continuous										
	Intermittent										
Action Taken	None										
	Uncertain										
	Procedure or physical therapy										
	Blood or blood products										



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Safety per protocol Set		2-10	11-18	19-34	35-55	Total
		No. (%) AEs				
	Withdrawn from study due to AE					
	Prescription drug therapy					
	Non-prescription drug therapy					
	Hospitalization					
	IV fluids					
	Physician visit					
	Other					
Outcome	Complete recovery/Return to baseline					
	Alive with sequelae					
	Death					
	Unknown/Lost to follow-up					
	AE persisting					
Relationship to study vaccine	Not related					
	Possibly related					
	Probably related					
Total						

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7. SAE/SADR for 28 days after vaccination

7.1 Safety Set

Table 7.1 SAE and SADR

Safety Set	2-10		11-18		19-34		35-55		Total	
	Serious AE	Serious ADR								
	Incidence Rate of AEs									
	(n%)									
System Organ Class(SOC)										

Safety Set	2-10		11-18		19-34		35-55		Total	
	Serious AE	Serious ADR								
	N o. of A Es									
	() n %									
Preferred Term(PT)										
Total										

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7.2 Safety per protocol set

Table 7.2 SAE and SADR

Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR	
	Incidence Rate of AEs															
	(n%)															
System Organ Class(SOC)																

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Safety per protocol Set	2-10		11-18		19-34		35-55		Total	
	Serious AE	Serious ADR								
	N o. of A Es									
	() n %)									
Preferred Term(PT)										
Total										

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7.3 Non-Safety per protocol set

Table 7.3 SAE and SADR

Non- Safety per protocol Set	2-10		11-18		19-34		35-55		Total	
	Serious AE	Serious ADR								
	Incidence Rate of Adverse Events (n%)									
System Organ Class(SOC)										

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Non- Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	Incidence Rate of Serious AEs	Number of Serious AEs	Incidence Rate of Serious AEs	Number of Serious AEs	Incidence Rate of Serious AEs	Number of Serious AEs	Incidence Rate of Serious AEs	Number of Serious AEs	Incidence Rate of Serious AEs	Number of Serious AEs	Incidence Rate of Serious AEs	Number of Serious AEs	Incidence Rate of Serious AEs	Number of Serious AEs	Incidence Rate of Serious AEs	Number of Serious AEs
Preferred Term(PT)																
Total																

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8. Unexpected AE/ADR for 28 days after vaccination

8.1 Safety Set

Table 8.1 Unexpected AE and ADR

Safety Set	2-10		11-18		19-34		35-55		Total	
	Unexpected AE	Unexpected ADR								
	N	N	N	N	N	N	N	N	N	N
	o.	o.								
	Inciden	Inciden								
	ce Rate	ce Rate								
	A	A	A	A	A	A	A	A	A	A
	Es	Es								

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	(n%))	n	(n%))	n	(n)																		
System Organ Class(SOC)																							
Preferred Term(PT)																							
Total																							

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8.2 Safety per protocol set

Table 8.2 Unexpected AE and ADR

Safety per protocol Set	2-10		11-18		19-34		35-55		Total	
	Unexpected AE	Unexpected ADR								
	N o. of Incidence Rate of AEs									
	() n % n									
System Organ Class(SOC)										
Preferred Term(PT)										

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Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	Unexpected AE	Unexpected ADR														
	Number of Incidence Rate of AEs															
	(%)															
Total																

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8.3 Non-Safety per protocol set

Table 8.3 Unexpected AE and ADR

Non-Safety per protocol Set	2-10		11-18		19-34		35-55		Total	
	Unexpected AE	Unexpected ADR								
	No. of AEs	No. of ADRs								
	(n %)	(n %)								
System Organ Class(SOC)										
Preferred Term(PT)										

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Non-Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	Unexpected AE	Unexpected ADR														
	Incidence Rate of AEs															
	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()	()
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
Total																

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9. MAAE/ADR for 28 days after vaccination

9.1 Safety Set

Table 9.1 MAAE and ADR

Safety Set	2-10		11-18				19-34				35-55				Total	
	MAAE	ADR														
	Incidence Rate of AEs															
	n (%)															
System Organ Class(SOC)																
Preferred Term(PT)																

Safety Set	2-10		11-18				19-34				35-55				Total	
	MAAE	ADR														
	Number of Adverse Events															
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Total																

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9.2 Safety per protocol set

Table 9.2 MAAE and ADR

Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR
	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs
	n (%)	n	n (%)	n	n (%)	n	n (%)	n	n (%)	n	n (%)	n	n (%)	n	n (%)	n
System Organ Class(SOC)																
Preferred Term(PT)																

Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	MAAE	ADR														
	N	No.														
	Incidence Rate of Adverse Events															
	n (%)															
Total																

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9.3 Non-Safety per protocol set

Table 9.3 MAAE and ADR

Non- Safety per protocol Set	2-10		11-18		19-34		35-55		Total		
	MAAE	ADR									
	N o. of Incidence Rate of Adverse Events										
	n (%)										
System Organ Class(SOC)											
Preferred Term(PT)											

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Non- Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	MAAE	ADR														
	N	No.														
	Incidence Rate of Adverse Events															
	n (%)															
Total																

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10. AE/ADR for 28 days after vaccination

10.1 Safety Set

Table 10.1 AE and ADR

Safety Set	2-10		11-18				19-34				35-55				Total	
	AE	ADR														
	Incidence Rate of AEs															
	n (%)															
System Organ Class(SOC)																

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Safety Set	2-10		11-18				19-34				35-55				Total	
	AE	ADR														
	Incidence Rate of Adverse Events															
	n (%)															
Preferred Term(PT)																
Total																

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10.2 Safety per protocol Set

Table 10.2 AE and ADR

Safety per protocol Set	2-10		11-18				19-34				35-55				Total		No. of AEs
	AE	ADR															
	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	
	(%)	(n)															
System Organ Class(SOC)																	

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Safety per protocol Set	2-10		11-18				19-34				35-55				Total	
	AE	ADR														
	Incidence Rate of AEs															
	n (%)															
Preferred Term(PT)																
Total																

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10.3 Non-Safety per protocol Set

Table 10.3 AE and ADR

Non-Safety per protocol Set	2-10		11-18				19-34				35-55				Total		No. of Adverse Events
	AE	ADR															
	Incidence Rate of Adverse Events	No. of Adverse Events	Incidence Rate of Adverse Events	No. of Adverse Events	Incidence Rate of Adverse Events	No. of Adverse Events	Incidence Rate of Adverse Events	No. of Adverse Events	Incidence Rate of Adverse Events	No. of Adverse Events	Incidence Rate of Adverse Events	No. of Adverse Events	Incidence Rate of Adverse Events	No. of Adverse Events	Incidence Rate of Adverse Events	No. of Adverse Events	
	(%)	(n)															
System Organ Class(SOC)																	

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Non-Safety per protocol Set	2-10		11-18				19-34				35-55				Total		No. of Adverse Events
	AE	ADR															
	Incidence Rate of Adverse Events																
	n (%)																
Preferred Term(PT)																	
Total																	

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V59_62_SAP(V3.0) Revisions

Indication Revision	SAP (V2.0)	SAP (V3.0)	Reason for change
Appendix 1 Table 2.1.1, Table 2.1.3 Table 2.2.1, Table 2.2.3		Add ADR	Reflected by NVD Korea comments
Appendix 1 Table 3.1.1 ~ Table 3.1.3 Table 3.2.1 ~ Table 3.2.3 Table 4.1.4 ~ Table 4.1.9 Table 4.2.4 ~ Table 4.2.9		Add Fever	Reflected by NVD Korea comments
Appendix 1 Table 10.1 ~ Table 10.3		Add AE/ADR Table	Reflected by NVD Korea comments

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**A Multicenter Post Marketing Surveillance Study to Monitor the Safety of
GSK Meningococcal ACWY Conjugate Vaccine (MenACWY-CRM)
Administered According to the Prescribing Information to Healthy
Subjects from 2 months to 55 Years of Age in the Republic of South Korea**

Product Name : Menveo (MenACWY-CRM)

Protocol No. : V59_62

Version : V4.0

Effective Date : 2016-01-29

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STATISTICAL ANALYSIS PLAN(V4.0)		

Revisions

DATE OF REVISION	INDICATION REVISION	REASON FOR CHANGE	AUTHOR NAME
22-NOV-2013	All	Protocol Amendment	PPD
10-APR-2014	Appendix1	Modification of tables to include incidence rate of ADR, Fever added to Solicited reaction	PPD
26-JAN-2016	All	Protocol Amendment	PPD

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1. Study Objective

The primary objective of the study is to monitor the safety of a single dose of MenACWY-CRM vaccine in subjects from 2 months to 55 years of age, as evaluated by:

- Local and systemic solicited adverse events reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination.
- All unsolicited Adverse Events (AEs) reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination.
- Medically attended Adverse Events reported from study Day 1 to study termination (Day 29/early termination).
- All Serious Adverse Events (SAEs) reported from study Day 1 to study termination (Day 29/early termination).

2. Study Method and Study Period

2.1 Study Period

The trial period shall be from market launch date till approximately 22 May 2018.

2.2 Number of Subjects

A total of approximately 3,960 subjects are planned for enrolment into this study.

Assuming a 10% drop-out rate, this should provide approximately 3,000 evaluable subjects in the cohort 2 to 55 years of age and 600 in the cohort 2 to 23 months of age. This sample size meets the post-licensure requirements of the MFDS to provide continued safety monitoring in the Korean population.

2.3 Study population

2.3.1 Inclusion criteria

Individuals eligible for enrolment in this study are those:

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1. Male and female subjects from 2 months to 55 years of the age at the time of vaccination (including all 55 years of age subjects, up to one day before their 56th year birthday), who are scheduled to receive vaccination with MenACWY-CRM conjugate vaccine, according to the local prescribing information and routine clinical practice
2. To whom the nature of the study has been described and the subject or subject's parent/legal representative has provided written informed consent (written assent from minors should be also obtained if required by the relevant IRB);
3. Whom the investigator believes that the subject can and will comply with the requirements of the protocol (e.g., completion of the Diary Card);
4. Who are in good health as determined by the outcome of medical history, physical assessment and clinical judgment of the investigator

2.3.2 Exclusion criteria

1. Contraindication, special warnings and/or precautions, as evaluated by the investigators, reported in the MenACWY-CRM conjugate vaccine Korean prescribing information.
2. Infants who were already enrolled in this trial for previous vaccination.

2.4 Study Method

In order to obtain information on Regulatory PMS data after-market launch, or delegate will create the Regulatory PMS contract with the relevant clinics/hospitals and the physician in charge of the survey shall implement this Regulatory PMS in subjects that receive MenACWY-CRM in the relevant hospital/clinic since the contract date until the number of contracted survey cases, without omission, is reached.

Overview of Study Design

This is a multicenter post marketing surveillance study to monitor the safety of MenACWY-CRM administered according to the prescribing information to 3,960 healthy subjects from 2 months to 55 years of age in Korea.

Subjects will be enrolled at the time of their visit to a participating clinic or hospital for vaccination with MenACWY-CRM according to the routine clinical care.

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At Visit 1 (Day 1), after obtaining consent from the subjects or subjects’ parents/legal representative (and Assent Form, if required by the relevant IRB), the vaccination will be administered. Subjects will remain under observation for at least 30 minutes in the clinic after study immunization.

The subjects or subject’s parent/legal representative will be then instructed to complete the Diary Card daily, reporting local and systemic adverse events and all other AEs occurring within 7 days following immunizations, and medically attended AEs or SAEs occurring up to Day 29 within the surveillance period after each study vaccination.

Subjects will also be instructed to return the completed diaries to the study site at Day 29 as follows:

- During a visit at the study center or
- Using the provided pre-addressed stamped envelope (PASE).

At the investigator discretion, the subject or subject’s parent/legal representative will be reminded of the date of the study termination by a phone call at Day 29. If any clarification is required after Diary Card retrieval the site staff will follow up by phone, and any additional finding will be recorded on the subject’s medical record.

In case the Diary Card is not retrieved within 10 days after Day 29, subject or subject’s parent/legal representative will be contacted by phone to assess the occurrence of adverse events, determine the subject’s clinical status and complete study termination. All information will be recorded by the site staff on the subject’s medical record and collected in the appropriate section of the CRF.

All SAEs will be monitored until resolution and/or the cause is identified. If a SAE remains unresolved at study termination, a clinical assessment will be made by the investigator and the GSK regional physician to determine whether continued follow up of the SAE is needed.

Table 3.1-1: Safety Assessment Table

<p>Medical History: All significant past diagnoses including all allergies, major surgeries requiring inpatient hospitalization, other significant injuries or hospitalizations, any conditions requiring prescription or chronic medication (i.e., >2 weeks in duration), or other significant medical conditions based on the investigator’s judgment.</p>	<p>From birth, collected at clinic visit Day 1</p>
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Immediate reactions: Subjects will be assessed for immediate hypersensitivity reactions.	For at least 30 minutes after vaccination
Solicited local adverse events: < 6 years : injection site erythema, injection site induration, injection site tenderness ≥ 6 years : injection site erythema, injection site induration, injection site pain	Days 1-7 after vaccination
Solicited systemic adverse events: < 6 years : change in eating habits, sleepiness, irritability, rash, vomiting, diarrhea, fever ≥ 6 years : chills, nausea, malaise, generalized myalgia, generalized arthralgia, headache, rash, fever	Days 1-7 after vaccination
All unsolicited AEs will be collected	Days 1-7 after vaccination
Medically attended Adverse Events: Events that require a physician's visit or an emergency room visit (events that are managed by telephone or means other than a face-to-face evaluation by a clinician do not qualify as medically attended AEs).	From Day 1 to study termination (Day 29/early termination)
Serious AEs: All SAEs will be collected.	From Day 1 to study termination (Day 29/early termination)
Medications: Any medications used to treat any solicited local and systemic reaction and unsolicited AE be collected.	From Day 1 to Day 7
Medications: Any medications used to treat any medically attended AE or SAE will be collected.	From Day 1 to study termination (Day 29/early termination)

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3. Analysis Sets

3.1 Safety Analysis Sets

Safety Set

All subjects who

- have signed an informed consent form, undergone screening procedure(s) and received a subject number,
- received a study vaccination,
- provided post vaccination safety data.

Safety per protocol set

All subjects in the safety Set with the exclusions of the following cases:

- (1) Subjects administered prior to the contract date.
- (2) Subjects who didn't receive MenACWY-CRM.
- (3) Follow-up failure: The subjects whose safety information cannot be identified due to follow-up loss.
- (4) Not applicable to the indication of study drug
[Indication]
- To prevent invasive meningococcal disease caused by Neisseria meningitides serogroups A, C, Y and W-135 in persons 2 months through 55 years of age.
- (5) Subjects who violate of Protocol: Those who do not meet one item at least of the inclusion/exclusion criteria.
[Inclusion criteria]
 - 1) Male and female subjects from 2 months to 55 years of the age at the time of Visit 1 (including all 55 years old subjects, up to one day before their 56th year birthday), who are scheduled to receive vaccination with MenACWY-CRM conjugate vaccine, according to the local prescribing information and routine clinical practice.
 - 2) To whom the nature of the study has been described and the subject or subject's parent/legal representative has provided written informed consent.
 - 3) Whom the investigator believes that the subject can and will comply with the requirements of the protocol.
 - 4) Who are in good health as determined by the outcome of medical history, physical

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assessment and clinical judgment of the investigator.

[Exclusion criteria]

- 1) Contraindication, special warnings and/or precautions, as evaluated by the investigators, reported in the MenACWY-CRM conjugate vaccine Korean prescribing information
 - 2) Infants who were already enrolled in this trial for previous vaccination.
- (6) Subjects who prescribed off-label dosage:
- Vaccine schedule for children from 2 to 23 months of age :
 - Infants 2 to 6 months of age : Three doses of MenACWY-CRM, each of 0.5 ml, is to be given with an interval of at least 2 months; the fourth dose schedule be administered during the second year of life with an interval of at least 6 months after the third dose.
 - Infants 7 to 23 months of age : MenACWY-CRM is to be administered as two doses, each as single dose (0.5ml), with the second dose administered in the second year of life and at least three months after the first dose.
 - 2 to 55 years of age : MenACWY-CRM is to be administered as a single dose (0.5ml).
- * The infant from 2 to 23 months of age may enroll at any point, in the vaccination series, including those subjects who may already initiated vaccination series. According to parental consents, these subjects may be followed up for 29 days within the surveillance period after subsequent vaccination(s) at the same study site.

Non-Safety per protocol set

Subjects excluded from safety per protocol set except for subjects who did not receive MenACWY-CRM and follow-up failure.

Based on rules for estimation of each number of safety evaluation cases, the following local regulation and Guideline on Standards for re-examination for new drugs, etc of MFDS, non-safety analysis set are excluded from the safety analysis set:

Guideline on Standards for re-examination for new drugs, etc (Chapter II, no. 3)

Patient Population for Surveillance:

- A) Patients planned to receive a drug under surveillance by investigator's medical judgment shall be subject.
- B) Subject who do not use within approved range shall not be included in the subject in principal.

However, if data of subject whose use is beyond approved range is collected, perform analysis as a separate item.

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C) Describe actual selection methods of subject in detail.

3.2 Efficacy Analysis Set

Not Applicable

4. Endpoints

4.1 Safety Endpoints

Safety will be assessed after administration of study vaccine in terms of the number and percentage of subjects with:

- Local and systemic solicited adverse events reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination;
- Unsolicited AEs reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination;
- Medically attended AEs reported from study Day 1 to study termination (Day 29/early termination);
- SAEs reported from study Day 1 to study termination (Day 29/early termination).

5. Assessment Criteria

5.1 Safety Assessment Criteria

Not Applicable

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6. Statistical Analyses

6.1 Baseline Characteristics

Descriptive statistics (mean, standard deviation, median, minimum and maximum) for baseline characteristics such as age, height and weight at enrollment will be calculated in the Safety set and Safety per Protocol set.

The following baseline characteristics will be reported:

< Subject Baseline Information >

- gender, age, ethnic origin, children group, weight, height, past diagnosis, kidney disorder, liver disorder, pre-Immunization temperature, temperature location, pregnancy

< Study Vaccine Information >

- vaccine site, number of previous Menveo, study vaccination number, concomitant medications

6.2 Safety Analyses

The number of subjects of AE[†] and the number of AEs[†] incurred shall be calculated, the incidence rate of AEs[†] and its 95% confidence interval will be calculated using the normal approximation on the safety set and safety per protocol set.

† AE : AE includes solicited and unsolicited AE (DAY 1-7), medically attended AE (DAY 1-29) and SAE (DAY 1-29).

6.2.1 Adverse Events by Baseline Characteristics

AE[†]s (as described below) will be reported (n %) for the following baseline characteristics in the safety set and safety per protocol set :

- Age group (2-23 months, 2-10, 11-18, 19-34, 35-55)
- Children group (<18, ≥18)
- Gender (male, female)
- Past diagnosis (yes, no)

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- Temperature location (axillary, oral, rectal, ear)
- Administration site (left deltoid, right deltoid, left thigh, right thigh, other)
- Concomitant medication (yes, no)
- Kidney disorder (yes, no)
- Liver disorder (yes, no)
- Pregnancy (yes, no)
- Number of previous Menveo (0, 1, 2, 3)
- Study vaccination number (1, 2, 3, 4)

The n(%) of AEs[†] and its 95% confidence interval will be calculated using the normal approximation and analyzed using χ^2 - test. If more than 20% of expected frequencies of the cell counts are less than 5, Fisher's exact test will be used instead of the chi-square test.

[†] AE : AE includes solicited and unsolicited AE (DAY 1-7), medically attended AE (DAY 1-29) and SAE (DAY 1-29).

6.2.2. Analysis of Solicited AE

Frequencies and % of subjects experiencing each adverse event will be presented for each symptom severity. Summary tables showing the occurrence of any local or systemic reaction overall and at each time point will also be presented (see Appendix 1 Table 4.1.3 and 4.2.3).

Post-vaccination adverse events reported from Day 1 to Day 7 will be summarized by maximal severity. The severity of local adverse events for subjects < 6 years of age will be categorized as follows. Injection-site erythema and induration: absent (0 to 9 mm), mild (10 to 25 mm), moderate (26 to 50 mm), severe (> 50 mm); injection-site tenderness: none, mild (minor light reaction to touch), moderate (cried or protested to touch), severe (cried when injected limb was moved). For subjects \geq 6 years, injection-site erythema and induration absent (1 to 24 mm), mild (25 to 50 mm), moderate (51 to 100 mm), severe (>100 mm); pain: none, mild (present but does not interfere with activity), moderate (interferes with activity), severe (prevents daily activity).

For subjects \geq 6 years of age, the severity of systemic adverse events (i.e., chills, nausea, malaise, generalized myalgia, generalized arthralgia, headache) occurring up to 7 days after each vaccination will be categorized as none, mild (present but not interfering with daily activity), moderate (some interference with daily activity), and severe (prevents daily activity) except for rash, which will be

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categorized as none, urticarial, or other.

For subjects < 6 years of age, the severity of systemic adverse events occurring up to 7 days after each vaccination will be categorized as follows. Change in eating habits : none (no change in appetite), mild (eating less than normal for 1 to feeds), moderate (missed 1 or 2 feeds), severe (missed more than 2 feeds); sleepiness : none (no change in alertness), mild (shows an increased alertness), moderate (sleeps through feeds), severe (sleeps most of the time and it is hard to arouse him/her); irritability : none (no change in child disposition), mild (requires more cudding and he/she is less playful than usual), moderate (more difficult to settle), severe (unable to console); rash : none, urticarial, or other; vomiting : none, mild (1-2 episodes/24 hours), moderate (>2 episodes/24 hours), severe (requires outpatient hydration); diarrhea : none (fewer than 2 loose stools/24 hours), mild (2-3 loose stools or < 400 gms/24 hours), moderate (4-5 stools or 400-800 gms/24 hours), severe (6 or more watery stools or > 800 gms/24 hours or requires outpatient IV hydration).

Body temperature will be categorized as <38°C (no fever), ≥38°C (fever) and will be summarized by 0.5°C increments from 36.0°C up to ≥40°C. Additionally, no fever vs. fever will be reported.

Each local and systemic adverse event will also be categorized as none vs. any.

6.2.3 Analysis of Unsolicited AE

All unsolicited AEs and MAAE recorded in the CRF will be mapped to preferred terms using the most recent MedDRA dictionary and classified by System organ class (SOC) and Preferred Terms (PT). Under the classification standard of MedDRA terms, and all AEs excluding the AEs whose causal relation with the study medication is ‘Not Related’ shall be treated as AEs whose causal relation cannot be excluded {hereafter “Adverse Drug Reaction(ADR)”}.

- ① The frequency and percentage of unsolicited AE (Day 1-7) and MAAE (Day 8-29) according to the expected, serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM regarding occurred AE will be calculated.
- ② The frequency of unsolicited AEs (Day 1-7) and MAAE (Day 8-29) will be classified into the preferred terms according to the expected, serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM.
- ③ The number of subjects and percentage of SAE/Serious ADR (SADR), unexpected AE/ADR,

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MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR will be calculated according to the preferred terms. And the number of subjects and percentage by study vaccination number of SAE/Serious ADR (SADR), unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR will be calculated according to the preferred terms in infants 2 to 23 months.

- ④ For subjects excluded from safety per protocol set[†], the number of subjects and the percentage of SAE/Serious ADR (SADR), unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR will be calculated according to the preferred terms. And the number of subjects and percentage by study vaccination number of SAE/Serious ADR (SADR), unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR will be calculated according to the preferred terms in infants 2 to 23 months.

Subject excluded from safety per protocol set: Except for subjects who didn't receive study vaccination and follow-up failure.

7. List of Table and Data Listings

7.1 Distribution of Subjects

- Number of subjects contracted to the study: The number of subjects are to be collected (under contract) as contracted by the investigator.
- Number of retrieving completed CRFs: Total number of subjects whose completed CRFs.
- Number of safety assessment population: Number of safety assessment population among total number.

7.2 Baseline Characteristics

- Mean and standard deviation (SD) or frequency and percentage by gender, age, ethnic origin, weight, height, past diagnosis, pre-Immunization temperature, temperature location, pregnancy
- Frequency and percentage by vaccine site, number of previous Menveo, study vaccination number, concomitant medications.

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7.3 Safety Analyses

- Incidence rate and the number of AEs according to the baseline characteristics (frequency and percentage).
- The number of the expected serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM for Unsolicited AE (DAY 1-7) and MAAE (DAY 8-29) (frequency and percentage).
- The number of AEs for the severity, day, fever to MenACWY-CRM according to individual solicited AE (DAY 1-7) (frequency and percentage)..
- Incidence rate and number according to the preferred terms of SAE/SADR, unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR (frequency and percentage)
- For subjects excluded from safety per protocol set[†] incidence rate and number according to the preferred terms of SAE/SADR, unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR (frequency and percentage).

Subject excluded from safety per protocol set: Except for subjects who didn't receive study mediation and follow-up failure.

8. Notes

- Each statistical analysis will be carried out with SAS Software version 9.4 or more recent version.
- In the descriptive statistics, mean, SD, minimum, median, and maximum will be calculated for continuous variables, and frequency and percentage for categorical variables.
- Data including sign of inequality such as “≥20”, “>20” will be excluded from analysis.
- All test statistics will be the results of two-sided tests with the statistical significant level of 0.05.
- The followings shall be included only in re-examination report:
 - Analysis by type of concomitant medications
 - Item ② of paragraph 6.2.3
 - Estimation of 95% confidence interval for incidence of AEs by background factors

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1. Demographic and baseline values, medication characteristics, specific characteristics

- Baseline characteristics will be reported on the safety set and safety per protocol set.

1.1 Safety Set

Table 1.1.1 Total subject

Safety Set	Total No. subjects (%)
Total	

Table 1.1.2 Demographic characteristics

1) (Administration start date)-(birth)+1

Safety Set		Total No. subjects (%)
Age(years) ¹⁾	No. subjects mean±std median min~max	
Age(months, years)	2-23 months	
	2-10 years	
	2-5 years	
	6-10 years	
	11-18 years	
	19-34 years	
	35-55 years	
	> 55 years	
	Total	
Children group(years)	< 18	
	≥ 18	
	Total	
Ethnic Origin	Asian	
	Black	

Safety Set		Total No. subjects (%)
	Caucasian Hispanic Other	
	Total	
Gender	Male Female	
	Total	
Weight(kg)	No. subjects mean±std median min~max	
Height(cm)	No. subjects mean±std median min~max	

Table 1.1.3 Past diagnosis

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.4 Pre-Immunization temperature

Safety Set	Total No. subjects (%)
No. subjects mean±std (°C) median min~max	

Table 1.1.5 Temperature Location

Safety Set	Total No. subjects (%)
Axillary	
Oral	
Rectal	
Ear	
Total	

Table 1.1.6 Administration Site

Safety Set	Total No. subjects (%)
Left Deltoid	
Right Deltoid	
Left Thigh (Infant only)	
Right Thigh (Infant only)	
Other	
Total	

Table 1.1.7 Concomitant medication

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.8 Kidney Disorder

Safety Set	Total No. subjects (%)
Yes	

No	
Total	

Table 1.1.9 Liver disorder

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.10 Pregnancy

Safety Set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.1.11 Number of previous MenACWY

Safety Set	Total No. subjects (%)
0	
1	
2	
3	
Total	

Table 1.1.12 Study vaccination number

Safety Set	Total No. subjects (%)
1	
2	
3	
4	

Total	
-------	--

1.2 Safety Per Protocol Set

Table 1.2.1 Total subject

Safety per protocol set	Total No. subjects (%)
Total	

Table 1.2.2 Demographic characteristics

1) (Administration start date)-(birth)+1

Safety per protocol set		Total No. subjects (%)
Age(years) ¹⁾	No. subjects mean±std median min~max	
Age(months, years)	2-23 months	
	2-10 years	
	2-5 years	
	6-10 years	
	11-18 years	
	19-34 years	
	35-55 years	
	Total	
Children group(years)	< 18	
	≥ 18	
	Total	
Ethnic Origin	Asian	
	Black	
	Caucasian	
	Hispanic	
	Other	
	Total	
Gender	Male	

Safety per protocol set		Total No. subjects (%)
	Female	
	Total	
Weight(kg)	No. subjects mean±std median min~max	
Height(cm)	No. subjects mean±std median min~max	

Table 1.2.3 Past diagnosis

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.2.4 Pre-Immunization temperature

Safety per protocol set	Total No. subjects (%)
No. subjects	
mean±std (°C)	
median	
min~max	

Table 1.2.5 Temperature Location

Safety per protocol set	Total No. subjects (%)
Axillary	
Oral	
Rectal	
Ear	
Total	

Table 1.2.6 Administration Site

Safety per protocol set	Total No. subjects (%)
Left Deltoid	
Right Deltoid	
Left Thigh (Infant only)	
Right Thigh (Infant only)	
Other	
Total	

Table 1.2.7 Concomitant medication

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.2.8 Kidney Disorder

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.2.9 Liver disorder

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.2.10 Pregnancy

Safety per protocol set	Total No. subjects (%)
Yes	
No	
Total	

Table 1.2.11 Number of previous MenACWY

Safety per protocol Set	Total No. subjects (%)
0	
1	
2	
3	
Total	

Table 1.2.12 Study vaccination number

Safety per protocol Set	Total No. subjects (%)
1	
2	
3	
4	
Total	

2. Safety Analyses

- AE includes solicited and unsolicited AE (Day 1-7) and medically attended AE (Day 1-29) and SAEs (Day 1-29)
- AE will be reported on the safety set and safety per protocol set.
- SAE/SADR will be reported on the safety set, safety per protocol set and non-safety per protocol set.

2.1 Safety Set

Table 2.1.1 Summary of AE

Safety set	No. subjects with AE n (%)	95% CI† for the percentage of subjects with AE (Lower , Upper)	No. AEs n	No. subjects with ADR n (%)	95% CI† for t percentage o subjects with A (Lower , Upp
Solicited AE (2-23 months)					
Local AE					
Systemic AE					
Solicited AE (2-5 years)					
Local AE					
Systemic AE					
Solicited AE (≥ 6 years)					
Local AE					
Systemic AE					

Safety set	No. subjects with AE n (%)	95% CI† for the percentage of subjects with AE (Lower ,Upper)	No. AEs n	No. subjects with ADR n (%)	95% CI† for the percentage of subjects with ADR (Lower ,Upper)	No. ADR n	Total n (%)
Unsolicited AE							
SAE							
MAAE							
Death							
Total							

† 95% CI will be calculated using the normal approximation.

* Day 1-7: Solicited AE, Unsolicited AE

* Day 1-29: SAE, Death

* Day 8-29: MAAE

Table 2.1.2 Summary of AE by Age (month, year)

Safety Set	No. subjects with AE	No. AEs	Total	p-value
	n (%)	n	n (%)	
2-23 months				X ² -test or Exact test
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
> 55				
Total				

Table 2.1.3 Summary of AE by Age (month, year)

Safety Set	No. subjects with AE	No. AEs	Total	p-value
	n (%)	n	n (%)	
Solicited AE				X ² -test or Exact test
2-23 months				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
> 55				
Solicited Local AE				X ² -test or Exact test
2-23 months				
2-10				
2-5				
6-10				
11-18				
19-34				

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
35-55 > 55				
Solicited Systemic AE 2-23 months 2-10 2-5 6-10 11-18 19-34 35-55 ≥56				X ² -test or Exact test
Unsolicited AE 2-23 months 2-10 2-5 6-10 11-18 19-34 35-55 ≥56				X ² -test or Exact test
SAE 2-23 months 2-10 2-5 6-10 11-18 19-34 35-55 ≥56				X ² -test or Exact test
MAAE 2-23 months 2-10 2-5				X ² -test or Exact test

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
6-10				
11-18				
19-34				
35-55				
≥56				
ADR				
2-23 months				
2-10				
2-5				
6-10				X ² -test or Exact test
11-18				
19-34				
35-55				
≥56				
Death				
2-23 months				
2-10				
2-5				
6-10				X ² -test or Exact test
11-18				
19-34				
35-55				
≥56				

Table 2.1.4 Summary of AE by Children group

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
< 18 years				
≥ 18 years				X ² -test or Exact test
Total				

Table 2.1.5 Summary of AE by Gender

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Male				X ² -test or Exact test
Female				
Total				

Table 2.1.6 Summary of AE by Past diagnosis

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.7 Summary of AE by Temperature Location

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Axillary				X ² -test or Exact test
Oral				
Rectal				
Ear				
Total				

Table 2.1.8 Summary of AE by Administration Site

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Left Deltoid				X ² -test or Exact test
Right Deltoid				
Left Thigh (Infant only)				
Right Thigh (Infant only)				
Other				
Total				

Table 2.1.9 Summary of AE by Concomitant medication

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.10 Summary of AE by Kidney Disorder

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.11 Summary of AE by Liver disorder

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.12 Summary of AE by Pregnancy

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.1.13 Summary of AE by Number of previous MenACWY

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
0				X ² -test or Exact test
1				
2				
3				
Total				

Table 2.1.14 Summary of AE by Study vaccination number

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
1				

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
2				X ² -test or Exact test
3				
4				
Total				

2.2 Safety per protocol set

Table 2.2.1 Summary of AE

Safety per protocol set	No. subjects with AE n (%)	95% CI† for the percentage of subjects with AE (Lower , Upper)	No. AEs n	No. subjects with ADR n (%)	95% CI† for the percentage of subjects with ADR (Lower , Upper)	No. ADR n	Total n (%)
Solicited AE (2-23 months)							
Local AE							
Systemic AE							
Solicited AE (2-5 years)							
Local AE							
Systemic AE							
Solicited AE (≥ 6 years)							
Local AE							
Systemic AE							
Unsolicited AE							
SAE							
MAAE							
Death							
Total							

† 95% CI will be calculated using the normal approximation.

* Day 1-7: Solicited AE, Unsolicited AE

* Day 1-29: SAE, Death

* Day 8-29: MAAE

Table 2.2.2 Summary of AE by Age (month, year)

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
2-23 months				X ² -test or Exact test
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Total				

Table 2.2.3 Summary of AE by Age (year)

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Solicited AE				X ² -test or Exact test
2-23 months				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Solicited Local AE				X ² -test or Exact test
2-23 months				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Solicited Systemic AE				

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
2-23 months				X ² -test or Exact test
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Unsolicited AE				X ² -test or Exact test
2-23 months				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
SAE				X ² -test or Exact test
2-23 months				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
MAAE				X ² -test or Exact test
2-23 months				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
ADR				X ² -test or Exact test
2-23 months				

Safety Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				
Death				X ² -test or Exact test
2-23 months				
2-10				
2-5				
6-10				
11-18				
19-34				
35-55				

Table 2.2.4 Summary of AE by Children group

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
< 18 years				X ² -test or Exact test
≥ 18 years				
Total				

Table 2.2.5 Summary of AE by Gender

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Male				X ² -test or Exact test
Female				
Total				

Table 2.2.6 Summary of AE by Past diagnosis

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.7 Summary of AE by Temperature Location

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Axillary				X ² -test or Exact test
Oral				
Rectal				
Ear				
Total				

Table 2.2.8 Summary of AE by Administration Site

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Left Deltoid				X ² -test or Exact test
Right Deltoid				
Left Thigh (Infant only)				
Right Thigh (Infant only)				
Other				
Total				

Table 2.2.9 Summary of AE by Concomitant medication

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.10 Summary of AE by Kidney Disorder

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.11 Summary of AE by Liver disorder

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.12 Summary of AE by Pregnancy

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
Yes				X ² -test or Exact test
No				
Total				

Table 2.2.13 Summary of AE by Number of previous MenACWY

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
0				X ² -test or Exact test
1				
2				
3				
Total				

Table 2.2.14 Summary of AE by Study vaccination number

Safety per protocol Set	No. subjects with AE n (%)	No. AEs n	Total n (%)	p-value
1				X ² -test or Exact test
2				
3				
4				
Total				

3. Information of AEs

3.1 Safety Set

Table 3.1.1 Summary of solicited AE and unsolicited AE for 7 days after vaccination (<6 years)

Safety Set		AE	
		Incidence Rate n (%)	No. of AEs n
Local AE	Local AE		
	Injection site tenderness		
	Injection site erythema		
	Injection site induration		
Systemic AE	Systemic AE		
	Change in eating habits		
	Sleepiness		
	Irritability		
	Vomiting		
	Diarrhea		
	Rash		
	Fever		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

Table 3.1.2 Summary of solicited AE and unsolicited AE for 7 days after vaccination (<6 years)

Safety Set		AE(2-23 months) N=0		AE(2-5years) N=0	
		Incidence Rate n (%)	No. of AEs n	Incidence Rate n (%)	No. of AEs n
Local AE	Local AE				
	Pain				
	Erythema				
	Induration				
Systemic AE	Systemic AE				
	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				
	Fever				
	Sub Total				
UNSOLICITED AE	System Organ Class(SOC)				
	Preferred Term(PT)				
	Sub Total				
Total					

Table 3.1.3 Summary of solicited AE and unsolicited AE for 7 days after vaccination by study vaccination number (2-23months)

Safety Set		1 N=0		2 N=0		3 N=0		4 N=0	
		Incidence Rate	No. of AEs	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs
		n (%)	n	n (%)	n	n (%)	n	n (%)	n
Local AE	Local AE								
	Pain								
	Erythema Induration								
Systemic AE	Systemic AE								
	Chills								
	Nausea								
	Malaise								
	Myalgia								
	Arthralgia								
	Headache								
	Rash								
	Fever								
	Sub Total								
UNSOLICITED AE	System Organ Class(SOC)								
	Preferred Term(PT)								

Table 3.1.4 Summary of solicited AE and unsolicited AE for 7 days after vaccination (\geq 6years)

Safety Set		AE	
		Incidence Rate n (%)	No. of AEs n
Local AE	Local AE		
	Pain		
	Erythema		
	Induration		
Systemic AE	Systemic AE		
	Chills		
	Nausea		
	Malaise		
	Myalgia		
	Arthralgia		
	Headache		
	Rash		
	Fever		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

Table 3.1.5 Summary of solicited AE and unsolicited AE for 7 days after vaccination (≥ 6 years)

Safety Set		AE(6-10)		AE(11-18)		AE(19-34)		AE(35-55)		AE(≥ 56)	
		N=0		N=0		N=0		N=0		N=0	
		Incidence Rate (n %)	No of AEs (n)								
Local AE	Local AE										
	Pain Erythema Induration										
Systemic AE	Systemic AE										
	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever										
	Sub Total										
UNSOLICITED AE	System Class(SOC)										
	Organ Preferred Term(PT)										
	Sub Total										
Total											

Table 3.1.6 Summary of medically attended AEs for 8 days to 28 days after vaccination

Safety Set		AE	
		Incidence Rate n (%)	No. of AEs n
MAAE	System Organ Class(SOC)		
	Preferred Term(PT)		
Total			

Table 3.1.7 Summary of medically attended AEs for 8 days to 28 days after vaccination

Safety Set		AE(2-23months) N=0		AE(2-10) N=0		AE(11-18) N=0		AE(19-34) N=0		AE(35-55) N=0		AE(≥56) N=0	
		Incidence Rate	No. of AEs	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs
		n (%)	n	n (%)	n	n (%)	n	n (%)	n	n (%)	n	n (%)	n
MAAE	System Organ Class(SOC)												
	Preferred Term(PT)												
Total													

Table 3.1.8 Summary of medically attended AEs for 8 days to 28 days after vaccination by study vaccination number (2-23 months)

Safety Set		1 N=0		2 N=0		3 N=0		4 N=0	
		Incidence Rate	No. of AEs						
		n (%)	n						
MAAE	System Organ Class(SOC)								
	Preferred Term(PT)								
Total									

3.2 Safety per protocol set

Table 3.2.1 Summary of solicited AE and unsolicited AE for 7 days after vaccination (<6 years)

Safety per protocol Set		AE	
		Incidence Rate n (%)	No. of AEs n
Local AE	Local AE		
	Injection site tenderness		
	Injection site erythema		
	Injection site induration		
Systemic AE	Systemic AE		
	Change in eating habits		
	Sleepiness		
	Irritability		
	Vomiting		
	Diarrhea		
	Rash		
	Fever		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

Table 3.2.2 Summary of solicited AE and unsolicited AE for 7 days after vaccination (<6 years)

Safety per protocol Set		AE(2-23 months) N=0		AE(2-5years) N=0	
		Incidence Rate n (%)	No. of AEs n	Incidence Rate n (%)	No. of AEs n
Local AE	Local AE				
	Pain				
	Erythema Induration				
Systemic AE	Systemic AE				
	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash Fever				
	Sub Total				
UNSOLICITED AE	System Organ Class(SOC)				
	Preferred Term(PT)				
	Sub Total				
Total					

Table 3.2.3 Summary of solicited AE and unsolicited AE for 7 days after vaccination by study vaccination number (2-23months)

Safety per protocol Set		1 N=0		2 N=0		3 N=0		4 N=0	
		Incidence Rate	No. of AEs	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs
		n (%)	n	n (%)	n	n (%)	n	n (%)	n
Local AE	Local AE								
	Pain								
	Erythema Induration								
Systemic AE	Systemic AE								
	Chills								
	Nausea								
	Malaise								
	Myalgia								
	Arthralgia								
	Headache								
	Rash								
	Fever								
	Sub Total								
UNSOLICITED AE	System Organ Class(SOC)								
	Preferred Term(PT)								

Safety per protocol Set		1 N=0		2 N=0		3 N=0		4 N=0	
		Incidence Rate	No. of AEs						
		n (%)	n						
	Sub Total								
Total									

Table 3.2.4 Summary of solicited AE and unsolicited AE for 7 days after vaccination (≥ 6 years)

Safety per protocol Set		AE	
		Incidence Rate n (%)	No. of AEs n
Local AE	Local AE		
	Pain		
	Erythema		
	Induration		
Systemic AE	Systemic AE		
	Chills		
	Nausea		
	Malaise		
	Myalgia		
	Arthralgia		
	Headache		
	Fever		
UNSOLICITED AE	System Organ Class(SOC)		
	Preferred Term(PT)		
	Sub Total		
Total			

Table 3.2.5 Summary of solicited AE and unsolicited AE for 7 days after vaccination (≥ 6 years)

Safety per protocol Set		AE(6-10) N=0		AE(11-18) N=0		AE(19-34) N=0		AE(35-55) N=0	
		Incidence Rate	No. of AEs	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs	Incidence Rate	No. of AEs
		n (%)	n	n (%)	n	n (%)	n	n (%)	n
Local AE	Local AE								
	Pain								
	Erythema Induration								
Systemic AE	Systemic AE								
	Chills								
	Nausea								
	Malaise								
	Myalgia								
	Arthralgia								
	Headache								
	Rash Fever								
	Sub Total								
UNSOLICITED AE	System Organ Class(SOC)								
	Preferred Term(PT)								

Safety per protocol Set		AE(6-10) N=0		AE(11-18) N=0		AE(19-34) N=0		AE(35-55) N=0	
		Incidence Rate	No. of AEs						
		n (%)	n						
	Sub Total								
Total									

Table 3.2.6 Summary of medically attended AEs for 8 days to 28 days after vaccination

Safety per protocol Set		AE	
		Incidence Rate n (%)	No. of AEs n
MAAE	System Organ Class(SOC)		
	Preferred Term(PT)		
Total			

Table 3.2.7 Summary of medically attended AEs for 8 days to 28 days after vaccination

Safety per protocol Set		AE(2-23months) N=0		AE(2-10) N=0		AE(11-18) N=0		AE(19-34) N=0		AE(35-55) N=0	
		Incidence Rate No. of AEs n (%)	No. n	Incidence Rate n (%)	No. n						
MAAE	System Organ Class(SOC)										
	Preferred Term(PT)										
Total											

Table 3.2.8 Summary of medically attended AEs for 8 days to 28 days after vaccination by study vaccination number (2-23 months)

Safety per protocol Set		1 N=0		2 N=0		3 N=0		4 N=0	
		Incidence Rate	No. of AEs						
		n (%)	n						
MAAE	System Organ Class(SOC)								
	Preferred Term(PT)								
Total									

4. Solicited AE (DAY 1-7)

4.1 Safety Set

Table 4.1.1 Summary of Local AE Max severity (<6 years)

Safety Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Injection site tenderness					
	Injection site erythema					
	Injection site induration					

* Mild(1), Moderate(2), Severe(3) : Injection site tenderness

* 0-9(1), 10-25(2), 26-50(3), >50(4) : Injection site erythema, Injection site induration

Table 4.1.2 Summary of Local AE Max severity (≥6 years)

Safety Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Injection site pain					
	Injection site erythema					
	Injection site induration					

* Mild(1), Moderate(2), Severe(3) : Injection site pain

* 1-24(1), 25-50(2), 51-100(3), >100(4) : Injection site erythema, Injection site induration

Table 4.1.3 Summary of Local AE by Max severity

Safety Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Age (2-23 months)	Injection site tenderness					
	Injection site erythema					
	Injection site induration					
Age (2-5)	Injection site tenderness					
	Injection site erythema					
	Injection site induration					
Age (6-10)	Injection site pain					

Safety Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
	Injection site erythema Injection site induration					
Age (11-18)	Injection site pain Injection site erythema Injection site induration					
Age (19-34)	Injection site pain Injection site erythema Injection site induration					
Age (35-55)	Injection site pain Injection site erythema Injection site induration					
Age (≥56)	Injection site pain Injection site erythema Injection site induration					

* Mild(1), Moderate(2), Severe(3) : Injection site tenderness, Injection site pain

* 0-9(1), 10-25(2), 26-50(3), >50(4) : Injection site erythema, Injection site induration (Age < 6 years)

* 1-24(1), 25-50(2), 51-100(3), >100(4) : Injection site erythema, Injection site induration (Age ≥ 6 years)

Table 4.1.4 Summary of Systemic AE by Max severity (<6 years)

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic AE	Change in eating habits Sleepiness Irritability Vomiting Diarrhea Rash Fever				

* Mild(1), Moderate(2), Severe(3) : Change in eating habits, Sleepiness, irritability, vomiting, diarrhea,

* None(1), Urticarial(2), Other(3) : Rash

* ≥38°C(1) : Fever

Table 4.1.5 Summary of Systemic AE by Max severity(≥ 6 years)

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic AE	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				
	Fever				

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache

*None(1), Urticarial(2), Other(3) : Rash

* $\geq 38^{\circ}\text{C}$ (1) : Fever

Table 4.1.6 Summary of Systemic AE by Max severity

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Age (2-23 months)	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				
	Fever				
Age (2-5)	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				
	Fever				
Age (6-10)	Chills				
	Nausea				

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
	Malaise Myalgia Arthralgia Headache Rash Fever				
Age (11-18)	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever				
Age (19-34)	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever				
Age (35-55)	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever				
Age (≥56)	Chills Nausea Malaise Myalgia				

Safety Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
	Arthralgia				
	Headache				
	Rash				
	Fever				

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache, Change in eating habits, Sleepiness, irritability, vomiting, diarrhea,

*None(1), Urticarial(2), Other(3) : Rash

* $\geq 38^{\circ}\text{C}$ (1) : Fever

Table 4.1.7 Summary of Solicited AE by day (<6 years)

Safety Set		30 min	6hr	2 days	3 days	4 days	5 days	6 days	7 days	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Solicited AE	Local AE									
	Injection site tenderness									
	Injection site erythema									
	Injection site induration									
	Systemic AE									
	Change in eating habits									
	Sleepiness									
	Irritability									
	Vomiting									
	Diarrhea									
	Rash									
	Fever									
Total										

Table 4.1.8 Summary of Solicited AE by day (≥ 6 years)

Safety Set		30 min n (%)	6hr n (%)	2 days n (%)	3 days n (%)	4 days n (%)	5 days n (%)	6 days n (%)	7 days n (%)	Total n (%)
Solicited AE	Local AE									
	Injection site pain Injection site erythema Injection site induration									
	Systemic AE									
	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever									
Total										

Table 4.1.9 Summary of Solicited AE by day

Safety Set		30 min n (%)	6hr n (%)	2 days n (%)	3 days n (%)	4 days n (%)	5 days n (%)	6 days n (%)	7 days n (%)	Total n(%)
Age (2-23 months)	Injection site tenderness									
	Injection site erythema									
	Injection site induration									
Age (2-5)	Injection site tenderness									
	Injection site erythema									
	Injection site induration									
Age (6-10)	Injection site pain									
	Injection site erythema									

Safety Set		30 min n (%)	6hr n (%)	2 days n (%)	3 days n (%)	4 days n (%)	5 days n (%)	6 days n (%)	7 days n (%)	Total n(%)
Age (11-18)	Injection site induration									
	Injection site pain									
	Injection site erythema									
	Injection site induration									
Age (19-34)	Injection site pain									
	Injection site erythema									
	Injection site induration									
Age (35-55)	Injection site pain									
	Injection site erythema									
	Injection site induration									
Age (≥56)	Injection site pain									
	Injection site erythema									
	Injection site induration									
	Sub Total									
Age (2-23 months)	Change in eating habits									
	Sleepiness									
	Irritability									
	Vomiting									
	Diarrhea									
	Rash									
	Fever									
Age (2-5)	Change in eating habits									
	Sleepiness									
	Irritability									
	Vomiting									
	Diarrhea									
	Rash									
	Fever									
Age (6-10)	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									

Safety Set		30 min n (%)	6hr n (%)	2 days n (%)	3 days n (%)	4 days n (%)	5 days n (%)	6 days n (%)	7 days n (%)	Total n(%)
	Headache Rash Fever									
Age (11-18)	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever									
Age(19-34)	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever									
Age (35-55)	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever									
Age (≥56)	Chills Nausea Malaise Myalgia Arthralgia Headache Rash									

Safety Set		30 min n (%)	6hr n (%)	2 days n (%)	3 days n (%)	4 days n (%)	5 days n (%)	6 days n (%)	7 days n (%)	Total n(%)
	Fever									
	Sub Total									
Total										

Table 4.1.10 Summary of Fever

Safety Set		2- 23months n (%)	2-10 n (%)	11-18 n (%)	19-34 n (%)	35-55 n (%)	≥ 56 n (%)	Total n (%)
	Fever							
	No fever							
	Total							
Temperature(°C)	36-36.5							
	36.5-37							
	37-37.5							
	37.5-38							
	38-38.5							
	38.5-39							
	39-39.5							
	39.5-40							
>40								

4.2 Safety per protocol set

Table 4.2.1 Summary of local AE by Max severity (<6 years)

Safety per protocol Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Injection site tenderness					
	Injection site erythema					
	Injection site induration					

* Mild(1), Moderate(2), Severe(3) : Injection site tenderness

* 0-9(1), 10-25(2), 26-50(3), >50(4) : Injection site erythema, Injection site induration

Table 4.2.2 Summary of Local AE Max severity (≥6 years)

Safety per protocol Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Local AE	Injection site pain					
	Injection site erythema					
	Injection site induration					

* Mild(1), Moderate(2), Severe(3) : Injection site pain

* 1-24(1), 25-50(2), 51-100(3), >100(4) : Injection site erythema, Injection site induration

Table 4.2.3 Summary of Local AE by Max severity

Safety per protocol Set		1*	2*	3*	4*	Total
		n (%)				
Age (2-23 months)	Injection site tenderness					
	Injection site erythema					
	Injection site induration					
Age (2-5)	Injection site tenderness					
	Injection site erythema					
	Injection site induration					
Age (6-10)	Injection site pain					
	Injection site erythema					
	Injection site induration					

Safety per protocol Set		1*	2*	3*	4*	Total
		n (%)	n (%)	n (%)	n (%)	n (%)
Age (11-18)	Injection site pain					
	Injection site erythema					
	Injection site induration					
Age (19-34)	Injection site pain					
	Injection site erythema					
	Injection site induration					
Age (35-55)	Injection site pain					
	Injection site erythema					
	Injection site induration					

* Mild(1), Moderate(2), Severe(3) : Injection site tenderness, Injection site pain

* 0-9(1), 10-25(2), 26-50(3), >50(4) : Injection site erythema, Injection site induration (Age < 6 years)

* 1-24(1), 25-50(2), 51-100(3), >100(4) : Injection site erythema, Injection site induration (Age ≥ 6 years)

Table 4.2.4 Summary of Systemic AE by Max severity (<6 years)

Safety per protocol Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic AE	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				
	Fever				

* Mild(1), Moderate(2), Severe(3) : Change in eating habits, Sleepiness, irritability, vomiting, diarrhea,

*None(1), Urticarial(2), Other(3) : Rash

* ≥38°C(1) : Fever

Table 4.2.5 Summary of Systemic AEs by Max severity (≥ 6 years)

Safety per protocol Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Systemic AE	Chills				
	Nausea				
	Malaise				
	Myalgia				
	Arthralgia				
	Headache				
	Rash				
	Fever				

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache

*None(1), Urticarial(2), Other(3) : Rash

* $\geq 38^{\circ}\text{C}$ (1) : Fever

Table 4.2.6 Summary of Systemic AE by Max severity

Safety per protocol Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
Age (2-23 months)	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				
	Fever				
Age (2-5)	Change in eating habits				
	Sleepiness				
	Irritability				
	Vomiting				
	Diarrhea				
	Rash				
	Fever				
Age (6-10)	Chills				
	Nausea				

Safety per protocol Set		1*	2*	3*	Total
		n (%)	n (%)	n (%)	n (%)
	Malaise Myalgia Arthralgia Headache Rash Fever				
Age (11-18)	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever				
Age (19-34)	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever				
Age (35-55)	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever				

* Mild(1), Moderate(2), Severe(3) : Chills, Nausea, Malaise, Myalgia, Arthralgia, Headache, Change in eating habits, Sleepiness, irritability, vomiting, diarrhea,

*None(1), Urticarial(2), Other(3) : Rash

* $\geq 38^{\circ}\text{C}$ (1) : Fever

Table 4.2.7 Summary of Solicited AE by day (<6 years)

Safety per protocol Set		30 min	6hr	2 days	3 days	4 days	5 days	6 days	7 days	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Solicited AE	Local AE									
	Injection site tenderness									
	Injection site erythema									
	Injection site induration									
	Systemic AE									
	Change in eating habits									
	Sleepiness									
	Irritability									
	Vomiting									
	Diarrhea									
	Rash									
	Fever									
Total										

Table 4.2.8 Summary of Solicited AE by day (≥6 years)

Safety per protocol Set		30 min	6hr	2 days	3 days	4 days	5 days	6 days	7 days	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Solicited AE	Local AE									
	Injection site pain									
	Injection site erythema									
	Injection site induration									
	Systemic AE									

	Chills								
	Nausea								
	Malaise								
	Myalgia								
	Arthralgia								
	Headache								
	Rash								
	Fever								
Total									

Table 4.2.9 Summary of Solicited AE by day

Safety per protocol Set		30 min	6hr	2 days	3 days	4 days	5 days	6 days	7 days	Total
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n%
Age (2-23 months)	Injection site tenderness									
	Injection site erythema									
	Injection site induration									
Age (2-5)	Injection site tenderness									
	Injection site erythema									
	Injection site induration									
Age (6-10)	Injection site pain									
	Injection site erythema									
	Injection site induration									
Age (11-18)	Injection site pain									
	Injection site erythema									
	Injection site induration									
Age (19-34)	Injection site pain									
	Injection site erythema									
	Injection site induration									
Age (35-55)	Injection site pain									
	Injection site erythema									
	Injection site induration									
Age (2-23 months)	Change in eating habits									
	Sleepiness									

Safety per protocol Set		30 min n (%)	6hr n (%)	2 days n (%)	3 days n (%)	4 days n (%)	5 days n (%)	6 days n (%)	7 days n (%)	Total n(%)
	Irritability Vomiting Diarrhea Rash Fever									
Age (2-5)	Change in eating habits Sleepiness Irritability Vomiting Diarrhea Rash Fever									
Age (6-10)	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever									
Age (11-18)	Chills Nausea Malaise Myalgia Arthralgia Headache Rash Fever									
Age (19-34)	Chills Nausea Malaise Myalgia Arthralgia Headache									

Safety per protocol Set		30 min n (%)	6hr n (%)	2 days n (%)	3 days n (%)	4 days n (%)	5 days n (%)	6 days n (%)	7 days n (%)	Total n(%)
Age (35-55)	Rash									
	Fever									
	Chills									
	Nausea									
	Malaise									
	Myalgia									
	Arthralgia									
	Headache									
	Rash Fever									
Sub Total										
Total										

Table 4.2.10 Summary of Fever

Safety per protocol Set		2-23months n (%)	2-10 n (%)	11-18 n (%)	19-34 n (%)	35-55 n (%)	Total n (%)
	Fever						
	No fever						
	Total						
Temperature(°C)	36-36.5						
	36.5-37						
	37-37.5						
	37.5-38						
	38-38.5						
	38.5-39						
	39-39.5						
	39.5-40 >40						

5. Unsolicited AE (DAY 1-7)

5.1 Safety Set

Table 5.1.1 Summary of Unsolicited AE

Safety Set		2-23 months		2-10		11-18		19-34		35-55		≥ 56		Total	
		No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)
Expected	Expected AE														
	Unexpected AE														
Serious	Yes														
	No														
Severity	Mild														
	Moderate														
	Severe														
Frequency	Single/Continuous														
	Intermittent														
Action Taken	None														
	Uncertain														
	Procedure or physical therapy														
	Blood or blood products														
	Withdrawn from study due to AE														
	Prescription drug therapy														

Safety Set		2-23 months	2-10	11-18	19-34	35-55	≥ 56	Total
		No. AEs (%)						
	Non-prescription drug therapy Hospitalization IV fluids Physician visit Other							
Outcome	Complete recovery/Return to baseline Alive with sequelae Death Unknown/Lost to follow-up AE persisting							
Relationship to study vaccine	Not related Possibly related Probably related							
Total								

5.2 Safety per protocol set

Table 5.2.1 Summary of Unsolicited AE

Safety per protocol Set		2-23 months		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)
Expected	Expected AE												
	Unexpected AE												
Serious	Yes												
	No												
Severity	Mild												
	Moderate												
	Severe												
Frequency	Single/Continuous												
	Intermittent												
Action Taken	None												
	Uncertain												
	Procedure or physical therapy												
	Blood or blood products												
	Withdrawn from study due to AE												
	Prescription drug therapy												
	Non-prescription drug therapy												

Safety per protocol Set		2-23 months		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)
	Hospitalization IV fluids Physician visit Other												
Outcome	Complete recovery/Return to baseline Alive with sequelae Death Unknown/Lost to follow-up AE persisting												
Relationship to study vaccine	Not related Possibly related Probably related												
Total													

6. MAAE (DAY 8-29)

6.1 Safety Set

Table 6.1.1 Summary of MAAE

Safety Set		2-23 months		2-10		11-18		19-34		35-55		≥ 56		Total	
		No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)
Expected	Expected AE														
	Unexpected AE														
Serious	Yes														
	No														
Severity	Mild														
	Moderate														
	Severe														
Frequency	Single/Continuous														
	Intermittent														
Action Taken	None														
	Uncertain														
	Procedure or physical therapy														
	Blood or blood products														
	Withdrawn from study due to AE														
	Prescription drug therapy														

Safety Set		2-23 months	2-10	11-18	19-34	35-55	≥ 56	Total
		No. AEs (%)						
	Non-prescription drug therapy Hospitalization IV fluids Physician visit Other							
Outcome	Complete recovery/Return to baseline Alive with sequelae Death Unknown/Lost to follow-up AE persisting							
Relationship to study vaccine	Not related Possibly related Probably related							
Total								

6.2 Safety per protocol set

Table 6.2.1 Summary of MAAE

Safety per protocol Set		2-23 months		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)
Expected	Expected AE												
	Unexpected AE												
Serious	Yes												
	No												
Severity	Mild												
	Moderate												
	Severe												
Frequency	Single/Continuous												
	Intermittent												
Action Taken	None												
	Uncertain												
	Procedure or physical therapy												
	Blood or blood products												
	Withdrawn from study due to AE												
	Prescription drug therapy												
	Non-prescription drug therapy												

Safety per protocol Set		2-23 months		2-10		11-18		19-34		35-55		Total	
		No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)	No. AEs	(%)
	Hospitalization IV fluids Physician visit Other												
Outcome	Complete recovery/Return to baseline Alive with sequelae Death Unknown/Lost to follow-up AE persisting												
Relationship to study vaccine	Not related Possibly related Probably related												
Total													

7. SAE/SADR for 28 days after vaccination

7.1 Safety Set

Table 7.1.1 SAE and SADR

Safety Set		2-23 months		2-10		11-18		19-34		35-55		≥56		Total	
		Serious AE	Serious ADR												
		N	N	N	N	N	N	N	N	N	N	N	N	N	N
		Incidence Rate													
		AE													
		s	s	s	s	s	s	s	s	s	s	s	s	s	s
		((((((((((((((
		n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
))))))))))))))
System	Organ														

Safety Set	2-23 months		2-10		11-18		19-34		35-55		≥56		Total	
	Serious AE	Serious ADR	Serious AE	Serious ADR	Serious AE	Serious ADR	Serious AE	Serious ADR	Serious AE	Serious ADR	Serious AE	Serious ADR	Serious AE	Serious ADR
	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	Incid	Incid	Incid	Incid	Incid	Incid	Incid	Incid	Incid	Incid	Incid	Incid	Incid	Incid
	ence	ence	ence	ence	ence	ence	ence	ence	ence	ence	ence	ence	ence	ence
	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate
	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	s	s	s	s	s	s	s	s	s	s	s	s	s	s
	((((((((((((
	n	n	n	n	n	n	n	n	n	n	n	n	n	n
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
))))))))))))))
Class(SOC)														
Preferred Term(PT)														
Total														

* MedDRA

Table 7.1.1.1 SAE and SADR by study vaccination (2-23 months)

Safety Set	1 N=0				2 N=0				3 N=0				4 N=0				Total			
	Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR	
	Incidence Rate	No. of AEs																		
	(n %)	(n %)																		
System Organ Class(SOC)																				
Preferred Term(PT)																				
Total																				

* MedDRA

7.2 Safety per protocol set

Table 7.2.1 SAE and SADR

Safety per protocol set		2-23 months		2-10		11-18		19-34		35-55		Total	
		Serious AE	Serious ADR										
		Number of SAEs	Number of SADR										
		Incidence Rate											
		(n % n)											
System Class(SOC)	Organ												

Safety per protocol set	2-23 months		2-10		11-18		19-34		35-55		Total	
	Serious AE	Serious ADR										
	Incidence Rate											
	(n %)											
Preferred Term(PT)												
Total												

* MedDRA

Table 7.2.1.1 SAE and SADR by study vaccination (2-23 months)

Safety per protocol set	1 N=0				2 N=0				3 N=0				4 N=0				Total			
	Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR	
	Incidence Rate	No. of AEs																		
	(n %)	(n %)	(n %)	(n %)					(n %)	(n %)										
System Organ Class(SOC)																				
Preferred Term(PT)																				
Total																				

* MedDRA

Table 7.3.1.1 SAE and SADR by study vaccination (2-23 months)

Non-Safety per protocol set	1 N=0				2 N=0				3 N=0				4 N=0				Total			
	Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR		Serious AE		Serious ADR	
	Incidence Rate	No. of AEs																		
	(n %)	(n %)	(n %)	(n %)	[REDACTED]				(n %)	(n %)										
System Organ Class(SOC)																				
Preferred Term(PT)																				
Total																				

* MedDRA

8. Unexpected AE/ADR for 28 days after vaccination

8.1 Safety Set

Table 8.1.1 Unexpected AE and ADR

Safety Set	2-23 months		2-10		11-18		19-34		35-55		≥56		Total	
	Unexpect ed AE	Unexpect ed ADR	Unexpect ed AE	Unexpe cted ADR	Unex pecte d AE	Unex pecte d ADR								
	Incidence Rate of AEs													
	(n % n)													

Safety Set	2-23 months		2-10		11-18		19-34		35-55		≥56		Total		
	Unexpect ed AE	Unexpect ed ADR	Unexpect ed AE	Unexpe cted ADR	Unex pecte d AE	Unex pecte d ADR	Unex pecte d ADR								
	Incidence Rate N o o f A E s														
	(n)														
Total															

* MedDRA

Table 8.1.1.1 Unexpected AE and ADR by study vaccination number (2-23 months)

Safety Set	1 N=0				2 N=0				3 N=0				4 N=0				Total							
	Unexpected AE		Unexpected ADR		Unexpected AE		Unexpected ADR		Unexpected AE		Unexpected ADR		Unexpected AE		Unexpected ADR		Unexpected AE		Unexpected ADR					
	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences				
	(n %)	(n %)																						
System Organ Class(SOC)	[Redacted]																							
Preferred Term(PT)	[Redacted]																							
Total																								

* MedDRA

8.2 Safety per protocol set

Table 8.2.1 Unexpected AE and ADR

Safety per protocol set	2-23 months		2-10		11-18		19-34		35-55		Total		
	Unexpect ed AE	Unexpecte d ADR	Unexpecte d AE	Unexpect ed ADR	Unexpect ed AE	Unspec ted ADR							
	Incidence Rate N o o f A E s (n)												
System													
Organ													
Class(SOC)													
Preferred Term(PT)													

Safety per protocol set	2-23 months		2-10		11-18		19-34		35-55		Total	
	Unexpect ed AE	Unexpecte d ADR	Unexpecte d AE	Unexpect ed ADR	Unexpect ed AE	Unspec ted ADR						
	N o o f A E s											
	(n %)	(n %)	[REDACTED]	[REDACTED]	(n %)	(n %)	(n %)	[REDACTED]	(n %)	(n %)	(n %)	(n %)
Total												

* MedDRA

Table 8.2.1.1 Unexpected AE and ADR by study vaccination number (2-23 months)

Safety per protocol set	1 N=0				2 N=0				3 N=0				4 N=0				Total			
	Unexpected AE		Unexpected ADR		Unexpected AE		Unexpected ADR		Unexpected AE		Unexpected ADR		Unexpected AE		Unexpected ADR		Unexpected AE		Unexpected ADR	
	Incidence Rate of AEs	No. of AEs	Incidence Rate of ADRs	No. of ADRs	Incidence Rate of AEs	No. of AEs	Incidence Rate of ADRs	No. of ADRs	Incidence Rate of AEs	No. of AEs	Incidence Rate of ADRs	No. of ADRs	Incidence Rate of AEs	No. of AEs	Incidence Rate of ADRs	No. of ADRs	Incidence Rate of AEs	No. of AEs	Incidence Rate of ADRs	No. of ADRs
	(n %)	n	(n %)	n	(n %)	n	(n %)	n	(n %)	n	(n %)	n	(n %)	n	(n %)	n	(n %)	n	(n %)	n
System Organ Class(SOC)	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]			
Preferred Term(PT)	[Redacted]				[Redacted]				[Redacted]				[Redacted]				[Redacted]			
Total																				

* MedDRA

8.3 Non-Safety per protocol set

Table 8.3.1 Unexpected AE and ADR

Non-Safety protocol set	2-23 months		2-10		11-18		19-34		35-55		≥56		Total	
	Unexpected AE	Unexpected ADR												
	Incidence Rate													
	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	o	o	o	o	o	o	o	o	o	o	o	o	o	o

	o	o	o	o	o	o	o	o	o	o	o	o	o	o
	f	f	f	f	f	f	f	f	f	f	f	f	f	f
	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	s	s	s	s	s	s	s	s	s	s	s	s	s	s
	((((((((((((
	n	n			n	n	n	n	n	n	n	n	n	n
	%	%			%	%	%	%	%	%	%	%	%	%
))))))))))))
System Class(SOC)														
Organ														

		2-23 months		2-10		11-18		19-34		35-55		≥56		Total	
Non-Safety protocol set	per	Unexpect ed AE	Unexpect ed ADR												
		Incidence Rate	Incidence Rate												
		N of AE	N of ADR												
		Incidence Rate	Incidence Rate												
		(n %)	(n %)												
Preferred Term(PT)															
Total															

* MedDRA

Table 8.3.1.1 Unexpected AE and ADR by study vaccination number (2-23 months)

Non-Safety protocol set	1 N=0				2 N=0				3 N=0				4 N=0				Total			
	Unexpected AE		Unexpected ADR		Unexpected AE		Unexpected ADR		Unexpected AE		Unexpected ADR		Unexpected AE		Unexpected ADR		Unexpected AE		Unexpected ADR	
	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs
	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)
System Organ Class(SOC)																				
Preferred Term(PT)																				
Total																				

* MedDRA

9. MAAE/ADR for 8 days to 28 days after vaccination

9.1 Safety Set

Table 9.1.1 MAAE and ADR

Safety Set	2-23 months		2-10		11-18		19-34		35-55		≥ 56		Total	
	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR
	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	o	o	o	o	o	o	o	o	o	o	o	o	o	o

Incid	Incid	Incid	Incid	Inci	Inci	Inci								
ence	ence	ence	ence	o denc	o den	o den								
Rate	f Rate	f Rate	f Rate	f e A Rate	f ce Rate	f ce Rate								
	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	s	s	s	s	s	s	s	s	s	s	s	s	s	s
	((((((((((((((
	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
))))))))))))))

Safety Set	2-23 months		2-10		11-18		19-34		35-55		≥ 56		Total	
	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR	MAAE	ADR
	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	o	o	o	o	o	o	o	o	o	o	o	o	o	o
	Incid	Incid	Incid	Inci										
	ence	ence	ence	o denc										
	Rate	Rate	Rate	f e f	f e f	f e f	f e f	f e f	f e f	f e f	f e f	f e f	f e f	f e f
	A	A	A	A Rate										
	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	s	s	s	s	s	s	s	s	s	s	s	s	s	s
	((
	n %	n %	n	n	n %	n %	n %	n %	n %	n %	n %	n %	n %	n %
))))))))))))))
System														
Organ														
Class(SOC)														
Preferred Term(PT)														
Total														

* MedDRA

Table 9.1.1.1 MAAE and ADR by study vaccination number (2-23months)

Safety Set	1 N=0				2 N=0				3 N=0				4 N=0				Total			
	MAAE		ADR		MAAE		ADR		MAAE		ADR		MAAE		ADR		MAAE		ADR	
	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences
	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)
System Organ Class(SOC)																				
Preferred Term(PT)																				
Total																				

* MedDRA

9.2 Safety per protocol set

Table 9.2.1 MAAE and ADR

Safety per protocol Set	2-23 months		2-10		11-18		19-34		35-55		Total	
	MAAE	ADR										
	Number of Incidence Rate											
	(n %)	(n %)	[REDACTED]	[REDACTED]	(n %)	(n %)	(n %)	[REDACTED]	(n %)	(n %)	(n %)	(n %)
System												
Organ												
Class(SOC)												
Preferred Term(PT)												

Safety per protocol Set	2-23 months		2-10		11-18		19-34		35-55		Total	
	MAAE	ADR										
	N o o o f A E s											
	(n)											
Total												

* MedDRA

Table 9.2.1.1 MAAE and ADR by study vaccination number (2-23months)

Safety Per Protocol Set	1 N=0				2 N=0				3 N=0				4 N=0				Total				
	MAAE		ADR		MAAE		ADR		MAAE		ADR		MAAE		ADR		MAAE		ADR		
	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	
	(n %)	(n)																			
System Organ Class(SOC)																					
Preferred Term(PT)																					
Total																					

* MedDRA

9.3 Non-Safety per protocol set

Table 9.3.1 MAAE and ADR

Non-Safety per protocol set	2-23 months		2-10		11-18		19-34		35-55		≥ 56		Total	
	MAAE	ADR												
	Incidence Rate													
	(n%)													
System Class(SOC)														
Preferred Term(PT)														

Table 9.3.1.1 MAAE and ADR by study vaccination number (2-23months)

Non-Safety protocol set	1 N=0				2 N=0				3 N=0				4 N=0				Total							
	MAAE		ADR		MAAE		ADR		MAAE		ADR		MAAE		ADR		MAAE		ADR					
	Inciden ce Rate	N o. of A Es																						
	(n)	% n	(n)	% n																				
System																								
Organ																								
Class(SOC)																								
Preferred																								
Term(PT)																								
Total																								

* MedDRA

Table 10.1.1.1 Unsolicited AE and ADR by study vaccination number (2-23 months)

Safety set	1 N=0				2 N=0				3 N=0				4 N=0				Total			
	AE		ADR		AE		ADR		AE		ADR		AE		ADR		AE		ADR	
	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs
	(n %)	n	(n %)	n	(n %)	n	(n %)	n	(n %)	n	(n %)	n	(n %)	n	(n %)	n	(n %)	n	(n %)	n
System Organ Class(SOC)																				
Preferred Term(PT)																				
Total																				

* MedDRA

10.2 Safety per protocol Set

Table 10.2.1 Unsolicited AE and ADR

Safety per protocol set		2-23 months		2-10		11-18		19-34		35-55		Total	
		AE	ADR										
		Incidence Rate											
		(n %)											
System	Organ												
Class(SOC)													
Preferred Term(PT)													

Safety per protocol set	2-23 months		2-10		11-18		19-34		35-55		Total	
	AE	ADR										
	N o o o f A E s											
	(n)											
Total												

* MedDRA

Table 10.2.1.1 Unsolicited AE and ADR by study vaccination number (2-23 months)

Safety Per Protocol set	1 N=0				2 N=0				3 N=0				4 N=0				Total				
	AE		ADR		AE		ADR		AE		ADR		AE		ADR		AE		ADR		
	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	
	(n %)	n																			
System Organ Class(SOC)																					
Preferred Term(PT)																					
Total																					

* MedDRA

10.3 Non-Safety per protocol Set

Table 10.3.1 Unsolicited AE and ADR

Non-Safety per protocol set	2-23 months		2-10		11-18		19-34		35-55		≥ 56		Total	
	AE	ADR												
	Incidence Rate													
	(n %)													
System Class(SOC)														
Organ Preferred Term(PT)														

Table 10.3.1.1 Unsolicited AE and ADR by study vaccination number (2-23 months)

Non-Safety protocol set	1 N=0				2 N=0				3 N=0				4 N=0				Total			
	AE		ADR		AE		ADR		AE		ADR		AE		ADR		AE		ADR	
	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs
	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)	(n %)
System Organ Class(SOC)																				
Preferred Term(PT)																				
Total																				

* MedDRA

Safety set	2-23 months		2-10		11-18		19-34		35-55		≥ 56		Total	
	AE	ADR	AE	ADR	AE	ADR	AE	ADR	AE	ADR	AE	ADR	AE	ADR
	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	o	o	o	o	o	o	o	o	o	o	o	o	o	o

Incid	Incid	Incid	Incid	Inci										
ence	ence	ence	ence	o denc										
Rate	Rate	Rate	Rate	f e f	f e f	f e f	f e f	f e f	f e f	f e f	f e f	f e f	f e f	f e f
	A	A	A	A Rate										
	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	s	s	s	s	s	s	s	s	s	s	s	s	s	s
	((
	n %	n %												
))												
Total														

* MedDRA

Table 11.1.1.1 Continuous Solicited AE by study vaccination number (2-23 months)

Safety Set	1 N=0				2 N=0				3 N=0				4 N=0				Total				
	AE		ADR		AE		ADR		AE		ADR		AE		ADR		AE		ADR		
	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	Incidence Rate of AEs	No. of Incidences	
	(n %)	(n %)																			
System Organ Class(SOC)																					
Preferred Term(PT)																					
Total																					

* MedDRA

11.2 Safety per protocol set

Table 11.2.1 Continuous Solicited AE

Safety per protocol set		2-23 months		2-10		11-18		19-34		35-55		Total	
		AE	ADR										
		Incidence Rate											
		(n % n)											
System	Organ												
Class(SOC)													
Preferred Term(PT)													

Safety per protocol set	2-23 months		2-10		11-18		19-34		35-55		Total	
	AE	ADR										
	N o o o f A E s											
	(n)											
Total												

* MedDRA

Table 11.2.1.1 Continuous Solicited AE by study vaccination number (2-23 months)

Safety Per Protocol Set	1 N=0				2 N=0				3 N=0				4 N=0				Total				
	AE		ADR		AE		ADR		AE		ADR		AE		ADR		AE		ADR		
	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	Incidence Rate of AEs	No. of AEs	
	(n %)	(n %)																			
System Organ Class(SOC)																					
Preferred Term(PT)																					
Total																					

* MedDRA

11.3 Non-Safety per protocol set

Table 11.3.1 Continuous Solicited AE

Non-Safety per protocol set	2-23 months		2-10		11-18		19-34		35-55		≥ 56		Total	
	AE	ADR												
	Incidence Rate													
	(n %)													
System														
Organ Class(SOC)														
Preferred Term(PT)														

Table 11.3.1.1 Continuous Solicited AE by study vaccination number (2-23 months)

Non-Safety Protocol Set	1 N=0		2 N=0		3 N=0		4 N=0		Total	
	AE	ADR								
	Incidence Rate of AEs									
	(n %)									
System Organ Class(SOC)										
Preferred Term(PT)										
Total										

* MedDRA

STATISTICAL ANALYSIS PLAN

**A Multicenter Post Marketing Surveillance Study to Monitor the Safety of
GSK Meningococcal ACWY Conjugate Vaccine (MenACWY-CRM)
Administered According to the Prescribing Information to Healthy
Subjects from 2 months to 55 Years of Age in the Republic of South Korea**

Product Name : Menveo (MenACWY-CRM)

Protocol No. : V59_62

Version : V5.0

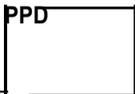
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STATISTICAL ANALYSIS PLAN(V5.0)		

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Revisions

DATE OF REVISION	INDICATION REVISION	REASON FOR CHANGE	AUTHOR NAME
22-NOV-2013	All	Protocol Amendment	PPD
10-APR-2014	Appendix1	Modification of tables to include incidence rate of ADR, Fever added to Solicited reaction	PPD
26-JAN-2016	All	Protocol Amendment	PPD
07-JUL-2016	6.3 Additional Analyses for DDS (Data Disclosure Shell)	Add the DDS(Data Disclosure Shell) analysis	PPD
	7.4 Additional Analyses for DDS (Data Disclosure Shell)	Add the DDS(Data Disclosure Shell) analysis	
	8. Notes	Add the DDS(Data Disclosure Shell) analysis in re-examination report	
	Appendix1	Add the DDS(Data Disclosure Shell) analysis	

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1. Study Objective

The primary objective of the study is to monitor the safety of a single dose of MenACWY-CRM vaccine in subjects from 2 months to 55 years of age, as evaluated by:

- Local and systemic solicited adverse events reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination.
- All unsolicited Adverse Events (AEs) reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination.
- Medically attended Adverse Events reported from study Day 1 to study termination (Day 29/early termination).
- All Serious Adverse Events (SAEs) reported from study Day 1 to study termination (Day 29/early termination).

2. Study Method and Study Period

2.1 Study Period

The trial period shall be from market launch date till approximately 22 May 2018.

2.2 Number of Subjects

A total of approximately 3,960 subjects are planned for enrolment into this study.

Assuming a 10% drop-out rate, this should provide approximately 3,000 evaluable subjects in the cohort 2 to 55 years of age and 600 in the cohort 2 to 23 months of age. This sample size meets the post-licensure requirements of the MFDS to provide continued safety monitoring in the Korean population.

2.3 Study population

2.3.1 Inclusion criteria

Individuals eligible for enrolment in this study are those:

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1. Male and female subjects from 2 months to 55 years of the age at the time of vaccination (including all 55 years of age subjects, up to one day before their 56th year birthday), who are scheduled to receive vaccination with MenACWY-CRM conjugate vaccine, according to the local prescribing information and routine clinical practice
2. To whom the nature of the study has been described and the subject or subject's parent/legal representative has provided written informed consent (written assent from minors should be also obtained if required by the relevant IRB);
3. Whom the investigator believes that the subject can and will comply with the requirements of the protocol (e.g., completion of the Diary Card);
4. Who are in good health as determined by the outcome of medical history, physical assessment and clinical judgment of the investigator

2.3.2 Exclusion criteria

1. Contraindication, special warnings and/or precautions, as evaluated by the investigators, reported in the MenACWY-CRM conjugate vaccine Korean prescribing information.
2. Infants who were already enrolled in this trial for previous vaccination.

2.4 Study Method

In order to obtain information on Regulatory PMS data after-market launch, or delegate will create the Regulatory PMS contract with the relevant clinics/hospitals and the physician in charge of the survey shall implement this Regulatory PMS in subjects that receive MenACWY-CRM in the relevant hospital/clinic since the contract date until the number of contracted survey cases, without omission, is reached.

Overview of Study Design

This is a multicenter post marketing surveillance study to monitor the safety of MenACWY-CRM administered according to the prescribing information to 3,960 healthy subjects from 2 months to 55 years of age in Korea.

Subjects will be enrolled at the time of their visit to a participating clinic or hospital for vaccination with MenACWY-CRM according to the routine clinical care.

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At Visit 1 (Day 1), after obtaining consent from the subjects or subjects’ parents/legal representative (and Assent Form, if required by the relevant IRB), the vaccination will be administered. Subjects will remain under observation for at least 30 minutes in the clinic after study immunization.

The subjects or subject’s parent/legal representative will be then instructed to complete the Diary Card daily, reporting local and systemic adverse events and all other AEs occurring within 7 days following immunizations, and medically attended AEs or SAEs occurring up to Day 29 within the surveillance period after each study vaccination.

Subjects will also be instructed to return the completed diaries to the study site at Day 29 as follows:

- During a visit at the study center or
- Using the provided pre-addressed stamped envelope (PASE).

At the investigator discretion, the subject or subject’s parent/legal representative will be reminded of the date of the study termination by a phone call at Day 29. If any clarification is required after Diary Card retrieval the site staff will follow up by phone, and any additional finding will be recorded on the subject’s medical record.

In case the Diary Card is not retrieved within 10 days after Day 29, subject or subject’s parent/legal representative will be contacted by phone to assess the occurrence of adverse events, determine the subject’s clinical status and complete study termination. All information will be recorded by the site staff on the subject’s medical record and collected in the appropriate section of the CRF.

All SAEs will be monitored until resolution and/or the cause is identified. If a SAE remains unresolved at study termination, a clinical assessment will be made by the investigator and the GSK regional physician to determine whether continued follow up of the SAE is needed.

Table 3.1-1: Safety Assessment Table

<p>Medical History: All significant past diagnoses including all allergies, major surgeries requiring inpatient hospitalization, other significant injuries or hospitalizations, any conditions requiring prescription or chronic medication (i.e., >2 weeks in duration), or other significant medical conditions based on the investigator’s judgment.</p>	<p>From birth, collected at clinic visit Day 1</p>
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<p>Immediate reactions: Subjects will be assessed for immediate hypersensitivity reactions.</p>	For at least 30 minutes after vaccination
<p>Solicited local adverse events: < 6 years : injection site erythema, injection site induration, injection site tenderness ≥ 6 years : injection site erythema, injection site induration, injection site pain</p>	Days 1-7 after vaccination
<p>Solicited systemic adverse events: < 6 years : change in eating habits, sleepiness, irritability, rash, vomiting, diarrhea, fever ≥ 6 years : chills, nausea, malaise, generalized myalgia, generalized arthralgia, headache, rash, fever</p>	Days 1-7 after vaccination
All unsolicited AEs will be collected	Days 1-7 after vaccination
<p>Medically attended Adverse Events: Events that require a physician's visit or an emergency room visit (events that are managed by telephone or means other than a face-to-face evaluation by a clinician do not qualify as medically attended AEs).</p>	From Day 1 to study termination (Day 29/early termination)
<p>Serious AEs: All SAEs will be collected.</p>	From Day 1 to study termination (Day 29/early termination)
<p>Medications: Any medications used to treat any solicited local and systemic reaction and unsolicited AE be collected.</p>	From Day 1 to Day 7
<p>Medications: Any medications used to treat any medically attended AE or SAE will be collected.</p>	From Day 1 to study termination (Day 29/early termination)

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3. Analysis Sets

3.1 Safety Analysis Sets

Safety Set

All subjects who

- have signed an informed consent form, undergone screening procedure(s) and received a subject number,
- received a study vaccination,
- provided post vaccination safety data.

Safety per protocol set

All subjects in the safety Set with the exclusions of the following cases:

- (1) Subjects administered prior to the contract date.
- (2) Subjects who didn't receive MenACWY-CRM.
- (3) Follow-up failure: The subjects whose safety information cannot be identified due to follow-up loss.
- (4) Not applicable to the indication of study drug
[Indication]
- To prevent invasive meningococcal disease caused by Neisseria meningitides serogroups A, C, Y and W-135 in persons 2 months through 55 years of age.
- (5) Subjects who violate of Protocol: Those who do not meet one item at least of the inclusion/exclusion criteria.
[Inclusion criteria]
 - 1) Male and female subjects from 2 months to 55 years of the age at the time of Visit 1 (including all 55 years old subjects, up to one day before their 56th year birthday), who are scheduled to receive vaccination with MenACWY-CRM conjugate vaccine, according to the local prescribing information and routine clinical practice.
 - 2) To whom the nature of the study has been described and the subject or subject's parent/legal representative has provided written informed consent.
 - 3) Whom the investigator believes that the subject can and will comply with the requirements of the protocol.
 - 4) Who are in good health as determined by the outcome of medical history, physical

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assessment and clinical judgment of the investigator.

[Exclusion criteria]

- 1) Contraindication, special warnings and/or precautions, as evaluated by the investigators, reported in the MenACWY-CRM conjugate vaccine Korean prescribing information
 - 2) Infants who were already enrolled in this trial for previous vaccination.
- (6) Subjects who prescribed off-label dosage:
- Vaccine schedule for children from 2 to 23 months of age :
 - Infants 2 to 6 months of age : Three doses of MenACWY-CRM, each of 0.5 ml, is to be given with an interval of at least 2 months; the fourth dose schedule be administered during the second year of life with an interval of at least 6 months after the third dose.
 - Infants 7 to 23 months of age : MenACWY-CRM is to be administered as two doses, each as single dose (0.5ml), with the second dose administered in the second year of life and at least three months after the first dose.
 - 2 to 55 years of age : MenACWY-CRM is to be administered as a single dose (0.5ml).
 - * The infant from 2 to 23 months of age may enroll at any point, in the vaccination series, including those subjects who may already initiated vaccination series. According to parental consents, these subjects may be followed up for 29 days within the surveillance period after subsequent vaccination(s) at the same study site.

Non-Safety per protocol set

Subjects excluded from safety per protocol set except for subjects who did not receive MenACWY-CRM and follow-up failure.

Based on rules for estimation of each number of safety evaluation cases, the following local regulation and Guideline on Standards for re-examination for new drugs, etc of MFDS, non-safety analysis set are excluded from the safety analysis set:

Guideline on Standards for re-examination for new drugs, etc (Chapter II, no. 3)

Patient Population for Surveillance:

- A) Patients planned to receive a drug under surveillance by investigator's medical judgment shall be subject.
- B) Subject who do not use within approved range shall not be included in the subject in principal.

However, if data of subject whose use is beyond approved range is collected, perform analysis as a separate item.

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C) Describe actual selection methods of subject in detail.

3.2 Efficacy Analysis Set

Not Applicable

4. Endpoints

4.1 Safety Endpoints

Safety will be assessed after administration of study vaccine in terms of the number and percentage of subjects with:

- Local and systemic solicited adverse events reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination;
- Unsolicited AEs reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination;
- Medically attended AEs reported from study Day 1 to study termination (Day 29/early termination);
- SAEs reported from study Day 1 to study termination (Day 29/early termination).

5. Assessment Criteria

5.1 Safety Assessment Criteria

Not Applicable

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6. Statistical Analyses

6.1 Baseline Characteristics

Descriptive statistics (mean, standard deviation, median, minimum and maximum) for baseline characteristics such as age, height and weight at enrollment will be calculated in the Safety set and Safety per Protocol set.

The following baseline characteristics will be reported:

< Subject Baseline Information >

- gender, age, ethnic origin, children group, weight, height, past diagnosis, kidney disorder, liver disorder, pre-Immunization temperature, temperature location, pregnancy

< Study Vaccine Information >

- vaccine site, number of previous Menveo, study vaccination number, concomitant medications

6.2 Safety Analyses

The number of subjects of AE[†] and the number of AEs[†] incurred shall be calculated, the incidence rate of AEs[†] and its 95% confidence interval will be calculated using the normal approximation on the safety set and safety per protocol set.

† AE : AE includes solicited and unsolicited AE (DAY 1-7), medically attended AE (DAY 1-29) and SAE (DAY 1-29).

6.2.1 Adverse Events by Baseline Characteristics

AE[†]s (as described below) will be reported (n %) for the following baseline characteristics in the safety set and safety per protocol set :

- Age group (2-23 months, 2-10, 11-18, 19-34, 35-55)
- Children group (<18, ≥18)
- Gender (male, female)
- Past diagnosis (yes, no)

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- Temperature location (axillary, oral, rectal, ear)
- Administration site (left deltoid, right deltoid, left thigh, right thigh, other)
- Concomitant medication (yes, no)
- Kidney disorder (yes, no)
- Liver disorder (yes, no)
- Pregnancy (yes, no)
- Number of previous Menveo (0, 1, 2, 3)
- Study vaccination number (1, 2, 3, 4)

The n(%) of AEs[†] and its 95% confidence interval will be calculated using the normal approximation and analyzed using χ^2 - test. If more than 20% of expected frequencies of the cell counts are less than 5, Fisher's exact test will be used instead of the chi-square test.

[†] AE : AE includes solicited and unsolicited AE (DAY 1-7), medically attended AE (DAY 1-29) and SAE (DAY 1-29).

6.2.2. Analysis of Solicited AE

Frequencies and % of subjects experiencing each adverse event will be presented for each symptom severity. Summary tables showing the occurrence of any local or systemic reaction overall and at each time point will also be presented (see Appendix 1 Table 4.1.3 and 4.2.3).

Post-vaccination adverse events reported from Day 1 to Day 7 will be summarized by maximal severity. The severity of local adverse events for subjects < 6 years of age will be categorized as follows. Injection-site erythema and induration: absent (0 to 9 mm), mild (10 to 25 mm), moderate (26 to 50 mm), severe (> 50 mm); injection-site tenderness: none, mild (minor light reaction to touch), moderate (cried or protested to touch), severe (cried when injected limb was moved). For subjects \geq 6 years, injection-site erythema and induration absent (1 to 24 mm), mild (25 to 50 mm), moderate (51 to 100 mm), severe (>100 mm); pain: none, mild (present but does not interfere with activity), moderate (interferes with activity), severe (prevents daily activity).

For subjects \geq 6 years of age, the severity of systemic adverse events (i.e., chills, nausea, malaise, generalized myalgia, generalized arthralgia, headache) occurring up to 7 days after each vaccination will be categorized as none, mild (present but not interfering with daily activity), moderate (some interference with daily activity), and severe (prevents daily activity) except for rash, which will be

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categorized as none, urticarial, or other.

For subjects < 6 years of age, the severity of systemic adverse events occurring up to 7 days after each vaccination will be categorized as follows. Change in eating habits : none (no change in appetite), mild (eating less than normal for 1 to feeds), moderate (missed 1 or 2 feeds), severe (missed more than 2 feeds); sleepiness : none (no change in alertness), mild (shows an increased alertness), moderate (sleeps through feeds), severe (sleeps most of the time and it is hard to arouse him/her); irritability : none (no change in child disposition), mild (requires more cudding and he/she is less playful than usual), moderate (more difficult to settle), severe (unable to console); rash : none, urticarial, or other; vomiting : none, mild (1-2 episodes/24 hours), moderate (>2 episodes/24 hours), severe (requires outpatient hydration); diarrhea : none (fewer than 2 loose stools/24 hours), mild (2-3 loose stools or < 400 gms/24 hours), moderate (4-5 stools or 400-800 gms/24 hours), severe (6 or more watery stools or > 800 gms/24 hours or requires outpatient IV hydration).

Body temperature will be categorized as <38°C (no fever), ≥38°C (fever) and will be summarized by 0.5°C increments from 36.0°C up to ≥40°C. Additionally, no fever vs. fever will be reported.

Each local and systemic adverse event will also be categorized as none vs. any.

6.2.3 Analysis of Unsolicited AE

All unsolicited AEs and MAAE recorded in the CRF will be mapped to preferred terms using the most recent MedDRA dictionary and classified by System organ class (SOC) and Preferred Terms (PT). Under the classification standard of MedDRA terms, and all AEs excluding the AEs whose causal relation with the study medication is ‘Not Related’ shall be treated as AEs whose causal relation cannot be excluded {hereafter “Adverse Drug Reaction(ADR)”}.

- ① The frequency and percentage of unsolicited AE (Day 1-7) and MAAE (Day 8-29) according to the expected, serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM regarding occurred AE will be calculated.
- ② The frequency of unsolicited AEs (Day 1-7) and MAAE (Day 8-29) will be classified into the preferred terms according to the expected, serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM.
- ③ The number of subjects and percentage of SAE/Serious ADR (SADR), unexpected AE/ADR,

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MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR will be calculated according to the preferred terms. And the number of subjects and percentage by study vaccination number of SAE/Serious ADR (SADR), unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR will be calculated according to the preferred terms in infants 2 to 23 months.

- ④ For subjects excluded from safety per protocol set[†], the number of subjects and the percentage of SAE/Serious ADR (SADR), unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR will be calculated according to the preferred terms. And the number of subjects and percentage by study vaccination number of SAE/Serious ADR (SADR), unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR will be calculated according to the preferred terms in infants 2 to 23 months.

Subject excluded from safety per protocol set: Except for subjects who didn't receive study vaccination and follow-up failure.

6.3 Additional Analyses for DDS (Data Disclosure Shell)

The following will be presented in the Safety set and Safety per Protocol set.

- Frequency and percentage by Age group (2-23 months, 2-11 12-17, 18-64) will be presented.
- Frequency and percentage by study termination and reason not completed will be presented.
- The number of subjects of Non-SAE and the number of Non-SAE incurred shall be calculated, the incidence rate of Non-SAE and its 95% confidence interval will be calculated using the normal approximation.
- The number of death resulting from AE shall be calculated.
- The number of subjects and percentage of Non-SAE will be calculated according to the preferred terms.

7. List of Table and Data Listings

7.1 Distribution of Subjects

- Number of subjects contracted to the study: The number of subjects are to be collected (under contract) as contracted by the investigator.

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- Number of retrieving completed CRFs: Total number of subjects whose completed CRFs.
- Number of safety assessment population: Number of safety assessment population among total number.

7.2 Baseline Characteristics

- Mean and standard deviation (SD) or frequency and percentage by gender, age, ethnic origin, weight, height, past diagnosis, pre-Immunization temperature, temperature location, pregnancy
- Frequency and percentage by vaccine site, number of previous Menveo, study vaccination number, concomitant medications.

7.3 Safety Analyses

- Incidence rate and the number of AEs according to the baseline characteristics (frequency and percentage).
- The number of the expected serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM for Unsolicited AE (DAY 1-7) and MAAE (DAY 8-29) (frequency and percentage).
- The number of AEs for the severity, day, fever to MenACWY-CRM according to individual solicited AE (DAY 1-7) (frequency and percentage)..
- Incidence rate and number according to the preferred terms of SAE/SADR, unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR (frequency and percentage)
- For subjects excluded from safety per protocol set[†] incidence rate and number according to the preferred terms of SAE/SADR, unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR (frequency and percentage).

Subject excluded from safety per protocol set: Except for subjects who didn't receive study mediation and follow-up failure.

7.4 Additional Analyses for DDS (Data Disclosure Shell)

- Frequency and percentage by Age group (2-23 months, 2-11 12-17, 18-64)
- Frequency and percentage by study termination and reason not completed
- Incidence rate and the number of Non-SAE
- The number of death resulting from AE (frequency and percentage)

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- Incidence rate and number according to the preferred terms of Non-SAE (frequency and percentage)

8. Notes

- Each statistical analysis will be carried out with SAS Software version 9.4 or more recent version.
- In the descriptive statistics, mean, SD, minimum, median, and maximum will be calculated for continuous variables, and frequency and percentage for categorical variables.
- Data including sign of inequality such as “ ≥ 20 ”, “ > 20 ” will be excluded from analysis.
- All test statistics will be the results of two-sided tests with the statistical significant level of 0.05.
- The followings shall be included only in re-examination report:
 - Analysis by type of concomitant medications
 - Item ② of paragraph 6.2.3
 - Estimation of 95% confidence interval for incidence of AEs by background factors
 - Paragraph 6.3

STATISTICAL ANALYSIS PLAN

**A Multicenter Post Marketing Surveillance Study to Monitor the Safety of
GSK Meningococcal ACWY Conjugate Vaccine (MenACWY-CRM)
Administered According to the Prescribing Information to Healthy
Subjects from 2 months to 55 Years of Age in the Republic of South Korea**

Product Name : Menveo (MenACWY-CRM)

Protocol No. : V59_62

Version : V6.0

Effective Date : 23-APR-2018

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Approvals

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Biostatistician

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20-APR-2018

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• Approval

BSM

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Revisions

DATE OF REVISION	INDICATION REVISION	REASON FOR CHANGE	AUTHOR NAME
22-NOV-2013	All	Protocol Amendment	PPD
10-APR-2014	Appendix1	Modification of tables to include incidence rate of ADR, Fever added to Solicited reaction	PPD
26-JAN-2016	All	Protocol Amendment	PPD
07-JUL-2016	6.3 Additional Analyses for DDS (Data Disclosure Shell)	Add the DDS(Data Disclosure Shell) analysis	PPD
	7.4 Additional Analyses for DDS (Data Disclosure Shell)	Add the DDS(Data Disclosure Shell) analysis	
	8. Notes	Add the DDS(Data Disclosure Shell) analysis in re-examination report	
	Appendix1	Add the DDS(Data Disclosure Shell) analysis	
20-APR-2018	All	Using more appropriate word	PPD
	6.2.3 Analysis of Unsolicited AE	Change the of criteria MAAE	
	7.3 Safety Analyses		
	6.4 Additional Analyses for AE in the Local Product Document (Unsolicited AE Day 1-29)	Add the analysis requested by MFDS	
	7.5 Additional Analyses for AE in the Local Product Document (Unsolicited AE Day 1-29)		

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1. Study Objective

The primary objective of the study is to monitor the safety of a single dose of MenACWY-CRM vaccine in subjects from 2 months to 55 years of age, as evaluated by:

- Local and systemic solicited adverse events reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination.
- All unsolicited Adverse Events (AEs) reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination.
- Medically attended Adverse Events reported from study Day 1 to study termination (Day 29/early termination).
- All Serious Adverse Events (SAEs) reported from study Day 1 to study termination (Day 29/early termination).

2. Study Method and Study Period

2.1 Study Period

The trial period shall be from market launch date till approximately 22 May 2018.

2.2 Number of Subjects

A total of approximately 3,960 subjects are planned for enrolment into this study.

Assuming a 10% drop-out rate, this should provide approximately 3,000 evaluable subjects in the cohort 2 to 55 years of age and 600 in the cohort 2 to 23 months of age. This sample size meets the post-licensure requirements of the MFDS to provide continued safety monitoring in the Korean population.

2.3 Study population

2.3.1 Inclusion criteria

Individuals eligible for enrolment in this study are those:

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1. Male and female subjects from 2 months to 55 years of the age at the time of vaccination (including all 55 years of age subjects, up to one day before their 56th year birthday), who are scheduled to receive vaccination with MenACWY-CRM conjugate vaccine, according to the local prescribing information and routine clinical practice
2. To whom the nature of the study has been described and the subject or subject's parent/legal representative has provided written informed consent (written assent from minors should be also obtained if required by the relevant IRB);
3. Whom the investigator believes that the subject can and will comply with the requirements of the protocol (e.g., completion of the Diary Card);
4. Who are in good health as determined by the outcome of medical history, physical assessment and clinical judgment of the investigator

2.3.2 Exclusion criteria

1. Contraindication, special warnings and/or precautions, as evaluated by the investigators, reported in the MenACWY-CRM conjugate vaccine Korean prescribing information.
2. Infants who were already enrolled in this trial for previous vaccination.

2.4 Study Method

In order to obtain information on Regulatory PMS data after-market launch, or delegate will create the Regulatory PMS contract with the relevant clinics/hospitals and the physician in charge of the survey shall implement this Regulatory PMS in subjects that receive MenACWY-CRM in the relevant hospital/clinic since the contract date until the number of contracted survey cases, without omission, is reached.

Overview of Study Design

This is a multicenter post marketing surveillance study to monitor the safety of MenACWY-CRM administered according to the prescribing information to 3,960 healthy subjects from 2 months to 55 years of age in Korea.

Subjects will be enrolled at the time of their visit to a participating clinic or hospital for vaccination with MenACWY-CRM according to the routine clinical care.

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At Visit 1 (Day 1), after obtaining consent from the subjects or subjects’ parents/legal representative (and Assent Form, if required by the relevant IRB), the vaccination will be administered. Subjects will remain under observation for at least 30 minutes in the clinic after study immunization.

The subjects or subject’s parent/legal representative will be then instructed to complete the Diary Card daily, reporting local and systemic adverse events and all other AEs occurring within 7 days following immunizations, and medically attended AEs or SAEs occurring up to Day 29 within the surveillance period after each study vaccination.

Subjects will also be instructed to return the completed diaries to the study site at Day 29 as follows:

- During a visit at the study center or
- Using the provided pre-addressed stamped envelope (PASE).

At the investigator discretion, the subject or subject’s parent/legal representative will be reminded of the date of the study termination by a phone call at Day 29. If any clarification is required after Diary Card retrieval the site staff will follow up by phone, and any additional finding will be recorded on the subject’s medical record.

In case the Diary Card is not retrieved within 10 days after Day 29, subject or subject’s parent/legal representative will be contacted by phone to assess the occurrence of adverse events, determine the subject’s clinical status and complete study termination. All information will be recorded by the site staff on the subject’s medical record and collected in the appropriate section of the CRF.

All SAEs will be monitored until resolution and/or the cause is identified. If a SAE remains unresolved at study termination, a clinical assessment will be made by the investigator and the GSK regional physician to determine whether continued follow up of the SAE is needed.

Table 3.1-1: Safety Assessment Table

<p>Medical History: All significant past diagnoses including all allergies, major surgeries requiring inpatient hospitalization, other significant injuries or hospitalizations, any conditions requiring prescription or chronic medication (i.e., >2 weeks in duration), or other significant medical conditions based on the investigator’s judgment.</p>	<p>From birth, collected at clinic visit Day 1</p>
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<p>Immediate reactions: Subjects will be assessed for immediate hypersensitivity reactions.</p>	For at least 30 minutes after vaccination
<p>Solicited local adverse events: < 6 years : injection site erythema, injection site induration, injection site tenderness ≥ 6 years : injection site erythema, injection site induration, injection site pain</p>	Days 1-7 after vaccination
<p>Solicited systemic adverse events: < 6 years : change in eating habits, sleepiness, irritability, rash, vomiting, diarrhea, fever ≥ 6 years : chills, nausea, malaise, generalized myalgia, generalized arthralgia, headache, rash, fever</p>	Days 1-7 after vaccination
All unsolicited AEs will be collected	Days 1-7 after vaccination
<p>Medically attended Adverse Events: Events that require a physician's visit or an emergency room visit (events that are managed by telephone or means other than a face-to-face evaluation by a clinician do not qualify as medically attended AEs).</p>	From Day 1 to study termination (Day 29/early termination)
<p>Serious AEs: All SAEs will be collected.</p>	From Day 1 to study termination (Day 29/early termination)
<p>Medications: Any medications used to treat any solicited local and systemic reaction and unsolicited AE be collected.</p>	From Day 1 to Day 7
<p>Medications: Any medications used to treat any medically attended AE or SAE will be collected.</p>	From Day 1 to study termination (Day 29/early termination)

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3. Analysis Sets

3.1 Safety Analysis Sets

Safety Set

All subjects who

- have signed an informed consent form, undergone screening procedure(s) and received a subject number,
- received a study vaccination,
- provided post vaccination safety data.

Safety per protocol set

All subjects in the safety Set with the exclusions of the following cases:

- (1) Subjects administered prior to the contract date.
- (2) Subjects who didn't receive MenACWY-CRM.
- (3) Follow-up failure: The subjects whose safety information cannot be identified due to follow-up loss.
- (4) Not applicable to the indication of study drug
[Indication]
- To prevent invasive meningococcal disease caused by Neisseria meningitides serogroups A, C, Y and W-135 in persons 2 months through 55 years of age.
- (5) Subjects who violate of Protocol: Those who do not meet one item at least of the inclusion/exclusion criteria.
[Inclusion criteria]
 - 1) Male and female subjects from 2 months to 55 years of the age at the time of Visit 1 (including all 55 years old subjects, up to one day before their 56th year birthday), who are scheduled to receive vaccination with MenACWY-CRM conjugate vaccine, according to the local prescribing information and routine clinical practice.
 - 2) To whom the nature of the study has been described and the subject or subject's parent/legal representative has provided written informed consent.
 - 3) Whom the investigator believes that the subject can and will comply with the requirements of the protocol.
 - 4) Who are in good health as determined by the outcome of medical history, physical

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assessment and clinical judgment of the investigator.

[Exclusion criteria]

- 1) Contraindication, special warnings and/or precautions, as evaluated by the investigators, reported in the MenACWY-CRM conjugate vaccine Korean prescribing information
 - 2) Infants who were already enrolled in this trial for previous vaccination.
- (6) Subjects who prescribed off-label dosage:
- Vaccine schedule for children from 2 to 23 months of age :
 - Infants 2 to 6 months of age : Three doses of MenACWY-CRM, each of 0.5 ml, is to be given with an interval of at least 2 months; the fourth dose schedule be administered during the second year of life with an interval of at least 6 months after the third dose.
 - Infants 7 to 23 months of age : MenACWY-CRM is to be administered as two doses, each as single dose (0.5ml), with the second dose administered in the second year of life and at least three months after the first dose.
 - 2 to 55 years of age : MenACWY-CRM is to be administered as a single dose (0.5ml).
 - * The infant from 2 to 23 months of age may enroll at any point, in the vaccination series, including those subjects who may already initiated vaccination series. According to parental consents, these subjects may be followed up for 29 days within the surveillance period after subsequent vaccination(s) at the same study site.

Non-Safety per protocol set

Subjects excluded from safety per protocol set except for subjects who did not receive MenACWY-CRM and follow-up failure.

Based on rules for estimation of each number of safety evaluation cases, the following local regulation and Guideline on Standards for re-examination for new drugs, etc of MFDS, non-safety analysis set are excluded from the safety analysis set:

Guideline on Standards for re-examination for new drugs, etc (Chapter II, no. 3)

Patient Population for Surveillance:

- A) Patients planned to receive a drug under surveillance by investigator's medical judgment shall be subject.
- B) Subject who do not use within approved range shall not be included in the subject in principal.

However, if data of subject whose use is beyond approved range is collected, perform analysis as a separate item.

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C) Describe actual selection methods of subject in detail.

3.2 Efficacy Analysis Set

Not Applicable

4. Endpoints

4.1 Safety Endpoints

Safety will be assessed after administration of study vaccine in terms of the number and percentage of subjects with:

- Local and systemic solicited adverse events reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination;
- Unsolicited AEs reported from study Day 1 (day of vaccination) through study Day 7 post-vaccination;
- Medically attended AEs reported from study Day 1 to study termination (Day 29/early termination);
- SAEs reported from study Day 1 to study termination (Day 29/early termination).

5. Assessment Criteria

5.1 Safety Assessment Criteria

Not Applicable

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6. Statistical Analyses

6.1 Baseline Characteristics

Descriptive statistics (mean, standard deviation, median, minimum and maximum) for baseline characteristics such as age, height and weight at enrollment will be calculated in the Safety set and Safety per Protocol set.

The following baseline characteristics will be reported:

< Subject Baseline Information >

- gender, age, ethnic origin, children group, weight, height, past diagnosis, kidney disorder, liver disorder, pre-Immunization temperature, temperature location, pregnancy

< Study Vaccine Information >

- vaccine site, number of previous Menveo, study vaccination number, concomitant medications

6.2 Safety Analyses

The number of subjects of AE[†] and the number of AEs[†] incurred shall be calculated, the incidence proportion of AEs[†] and its 95% confidence interval will be calculated using the normal approximation on the safety set and safety per protocol set.

† AE : AE includes solicited and unsolicited AE (DAY 1-7), medically attended AE (DAY 1-29) and SAE (DAY 1-29).

6.2.1 Adverse Events by Baseline Characteristics

AE[†]s (as described below) will be reported (n %) for the following baseline characteristics in the safety set and safety per protocol set :

- Age group (2-23 months, 2-10, 11-18, 19-34, 35-55, 55-64)
- Children group (<18, ≥18)
- Gender (male, female)
- Past diagnosis (yes, no)

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- Temperature location (axillary, oral, rectal, ear)
- Administration site (left deltoid, right deltoid, left thigh, right thigh, other)
- Concomitant medication (yes, no)
- Kidney disorder (yes, no)
- Liver disorder (yes, no)
- Pregnancy (yes, no)
- Number of previous Menveo (0, 1, 2, 3)
- Study vaccination number (1, 2, 3, 4)

The n(%) of AEs[†] and its 95% confidence interval will be calculated using the normal approximation and analyzed using χ^2 - test. If more than 20% of expected frequencies of the cell counts are less than 5, Fisher’s exact test will be used instead of the chi-square test.

† AE : AE includes solicited and unsolicited AE (DAY 1-7), medically attended AE (DAY 1-29) and SAE (DAY 1-29).

6.2.2. Analysis of Solicited AE

Frequencies and % of subjects experiencing each adverse event will be presented for each symptom severity. Summary tables showing the occurrence of any local or systemic reaction overall and at each time point will also be presented (see Appendix 1 Table 4.1.3 and 4.2.3).

Post-vaccination adverse events reported from Day 1 to Day 7 will be summarized by maximal severity. The severity of local adverse events for subjects < 6 years of age will be categorized as follows. Injection-site erythema and induration: absent (0 to 9 mm), mild (10 to 25 mm), moderate (26 to 50 mm), severe (> 50 mm); injection-site tenderness: none, mild (minor light reaction to touch), moderate (cried or protested to touch), severe (cried when injected limb was moved). For subjects \geq 6 years, injection-site erythema and induration absent (1 to 24 mm), mild (25 to 50 mm), moderate (51 to 100 mm), severe (>100 mm); pain: none, mild (present but does not interfere with activity), moderate (interferes with activity), severe (prevents daily activity).

For subjects \geq 6 years of age, the severity of systemic adverse events (i.e., chills, nausea, malaise, generalized myalgia, generalized arthralgia, headache) occurring up to 7 days after each vaccination will be categorized as none, mild (present but not interfering with daily activity), moderate (some interference with daily activity), and severe (prevents daily activity) except for rash, which will be

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categorized as none, urticarial, or other.

For subjects < 6 years of age, the severity of systemic adverse events occurring up to 7 days after each vaccination will be categorized as follows. Change in eating habits : none (no change in appetite), mild (eating less than normal for 1 to feeds), moderate (missed 1 or 2 feeds), severe (missed more than 2 feeds); sleepiness : none (no change in alertness), mild (shows an increased alertness), moderate (sleeps through feeds), severe (sleeps most of the time and it is hard to arouse him/her); irritability : none (no change in child disposition), mild (requires more cudding and he/she is less playful than usual), moderate (more difficult to settle), severe (unable to console); rash : none, urticarial, or other; vomiting : none, mild (1-2 episodes/24 hours), moderate (>2 episodes/24 hours), severe (requires outpatient hydration); diarrhea : none (fewer than 2 loose stools/24 hours), mild (2-3 loose stools or < 400 gms/24 hours), moderate (4-5 stools or 400-800 gms/24 hours), severe (6 or more watery stools or > 800 gms/24 hours or requires outpatient IV hydration).

Body temperature will be categorized as <38°C (no fever), ≥38°C (fever) and will be summarized by 0.5°C increments from 36.0°C up to ≥40°C. Additionally, no fever vs. fever will be reported.

Each local and systemic adverse event will also be categorized as none vs. any.

6.2.3 Analysis of Unsolicited AE

All unsolicited AEs and MAAE recorded in the CRF will be mapped to preferred terms using the most recent MedDRA dictionary and classified by System organ class (SOC) and Preferred Terms (PT). Under the classification standard of MedDRA terms, and all AEs excluding the AEs whose causal relation with the study medication is ‘Not Related’ shall be treated as AEs whose causal relation cannot be excluded {hereafter “Adverse Drug Reaction(ADR)”}.

- ① The frequency and percentage of unsolicited AE (Day 1-7) and MAAE (Day 1-29) according to the expected, serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM regarding occurred AE will be calculated.
- ② The frequency of unsolicited AEs (Day 1-7) and MAAE (Day 1-29) will be classified into the preferred terms according to the expected, serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM.
- ③ The number of subjects and percentage of SAE/Serious ADR (SADR), unexpected AE/ADR,

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MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR will be calculated according to the preferred terms. And the number of subjects and percentage by study vaccination number of SAE/Serious ADR (SADR), unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR will be calculated according to the preferred terms in infants 2 to 23 months.

- ④ For subjects excluded from safety per protocol set[†], the number of subjects and the percentage of SAE/Serious ADR (SADR), unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR will be calculated according to the preferred terms. And the number of subjects and percentage by study vaccination number of SAE/Serious ADR (SADR), unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR will be calculated according to the preferred terms in infants 2 to 23 months.

[†] Subject excluded from safety per protocol set: Except for subjects who didn't receive study vaccination and follow-up failure.

6.3 Additional Analyses for DDS (Data Disclosure Shell)

The following will be presented in the Safety set and Safety per Protocol set.

- Frequency and percentage by Age group (2-23 months, 2-10, 11-18, 19-64) will be presented.
- Frequency and percentage by study termination and reason not completed will be presented.
- The number of subjects of Non-SAE and the number of Non-SAE incurred shall be calculated, the incidence proportion of Non-SAE and its 95% confidence interval will be calculated using the normal approximation.
- The number of death resulting from AE shall be calculated.
- The number of subjects and percentage of Non-SAE will be calculated according to the preferred terms.

6.4 Additional Analyses for AE in the Local Product Label (Unsolicited AE Day 1-29)

The following will be presented in the Safety set and Safety per Protocol set.

- Preferred terms of Serious AE/ADR, unexpected AE/ADR will be presented respectively according to the proportion of AE in the local product label.

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7. List of Table and Data Listings

7.1 Distribution of Subjects

- Number of subjects contracted to the study: The number of subjects are to be collected (under contract) as contracted by the investigator.
- Number of retrieving completed CRFs: Total number of subjects whose completed CRFs.
- Number of safety assessment population: Number of safety assessment population among total number.

7.2 Baseline Characteristics

- Mean and standard deviation (SD) or frequency and percentage by gender, age, ethnic origin, weight, height, past diagnosis, pre-Immunization temperature, temperature location, pregnancy
- Frequency and percentage by vaccine site, number of previous Menveo, study vaccination number, concomitant medications.

7.3 Safety Analyses

- Incidence proportion and the number of AEs according to the baseline characteristics (frequency and percentage).
- The number of the expected serious, severity, frequency, action taken, outcome, relationship to MenACWY-CRM for Unsolicited AE (DAY 1-7) and MAAE (DAY 1-29) (frequency and percentage).
- The number of AEs for the severity, day, fever to MenACWY-CRM according to individual solicited AE (DAY 1-7) (frequency and percentage).
- Incidence proportion and number according to the preferred terms of SAE/SADR, unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR (frequency and percentage)
- For subjects excluded from safety per protocol set[†] incidence proportion and number according to the preferred terms of SAE/SADR, unexpected AE/ADR, MAAE/ADR, unsolicited AE/ADR and continuous solicited AE/ADR (frequency and percentage).

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† Subject excluded from safety per protocol set: Except for subjects who didn't receive study mediation and follow-up failure.

7.4 Additional Analyses for DDS (Data Disclosure Shell)

- Frequency and percentage by Age group (2-23 months, 2-10, 11-18, 19-64)
- Frequency and percentage by study termination and reason not completed
- Incidence proportion and the number of Non-SAE
- The number of death resulting from AE (frequency and percentage)
- Incidence proportion and number according to the preferred terms of Non-SAE (frequency and percentage)

7.5 Additional Analyses for AE in the Local Product Label (Unsolicited AE Day 1-29)

- Preferred terms of Serious AE/ADR, unexpected AE/ADR will be presented respectively according to the proportion.

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8. Notes

- Each statistical analysis will be carried out with SAS Software version 9.4 or more recent version.
- In the descriptive statistics, mean, SD, minimum, median, and maximum will be calculated for continuous variables, and frequency and percentage for categorical variables.
- Data including sign of inequality such as “ ≥ 20 ”, “ > 20 ” will be excluded from analysis.
- All test statistics will be the results of two-sided tests with the statistical significant level of 0.05.
- The followings shall be included only in re-examination report:
 - Analysis by type of concomitant medications
 - Item ② of paragraph 6.2.3
 - Estimation of 95% confidence interval for incidence proportion of AEs by background factors
 - Paragraph 6.3, 6.4