21 August 2025
EMADOC-1700519818-2153689
Human Medicines Division

Assessment report for paediatric studies submitted in accordance with article 46 of regulation (EC) No 1901/2006

Hexacima

diphtheria, tetanus, pertussis (acellular, component), hepatitis b (rdna), poliomyelitis (inact.) and haemophilus type b conjugate vaccine (adsorbed)

Procedure no.: EMA/PAM/0000273897

Note

Assessment report as adopted by the CHMP with all information of a commercially confidential nature deleted.

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Status of this report and steps taken for the assessment			
Current step	**Description**	**Planned date**	**Actual Date**
☐	CHMP Rapporteur AR	28 July 2025	28 July 2025
☐	CHMP comments	11 August 2025	N/A
☐	Updated CHMP Rapporteur AR	14 August 2025	N/A
☒	CHMP outcome	21 August 2025	21 August 2025

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1. Introduction

On 15 May 2025, the MAH submitted a completed paediatric study for Hexacima and Hexyon, in accordance with Article 46 of Regulation (EC) No1901/2006, as amended.

The same clinical study report related to the study MET58 will be submitted for the Meningococcal (Groups A, C, Y and W) Conjugate Vaccine (Menquadfi) in a Type II variation for extension of age, in Q3 2025

A critical expert overview has also been provided.

Assessment of Procedure EMA/PAM/0000273897 for Hexacima as covered herein is similar to Procedure EMA/PAM/0000273909 for Hexyon.

2. Scientific discussion

2.1. Information on the development program

The MAH stated that Study MET58 is a stand-alone study.

2.2. Information on the pharmaceutical formulation used in the study

Approved Medicinal Product (17Apr2013)

Suspension for injection

2.3. Clinical aspects

2.3.1. Introduction

The MAH submitted a final report for:

- **Study MET58**

Immunogenicity and Safety Study of a Quadrivalent Meningococcal Conjugate Vaccine When Co-administered With Routine Paediatric Vaccines in Healthy Infants and Toddlers in Europe
EU 2017-004731-36

2.3.2. Clinical study MET58

Description

The purpose of the study MET58 was to compare the immunogenicity and describe the safety of MenACYW conjugate vaccine and the licensed MenACWY conjugate vaccine (Nimenrix) when administered as a 3-dose (2+1) schedule concomitantly with routine paediatric vaccines to healthy infants and toddlers in Europe. The study also assessed the immunogenicity and safety of MenACYW conjugate vaccine in a 4-dose (3+1) schedule concomitantly with routine paediatric vaccines.

Sanofi's diphtheria, tetanus, pertussis (acellular, component), hepatitis B (HB) (recombinant DNA [rDNA]), poliomyelitis (inactivated) and Haemophilus influenzae type b (Hib) conjugate vaccine (adsorbed), (trade names Hexyion, Hexacima) was used as concomitant vaccine.

Study period (first subject first visit to last subject last visit): 14 December 2018 to 17 May 2023.

The final results of MET58 study involving paediatric patients are submitted as a PAM LEG for Hexacima and Hexyon in accordance with Article 46 of the paediatric regulation.

The Marketing Authorization Holder does not propose to modify the Product Information.

Methods

This was a Phase 3, partially modified double-blind (open-label for some of the vaccines / study groups), randomized, parallel-group, active-controlled, multi-center study to compare the immunogenicity and describe the safety of MenACYW conjugate vaccine and Nimenrix (Meningococcal group A, C, W-135, and Y conjugate vaccine) when administered as a 3-dose series concomitantly with routine paediatric vaccines to healthy infants and toddlers in Europe.

Licensed paediatric vaccines administered concomitantly with the study vaccines were the following:

Hexacima/Hexyon (DTaP-IPV-HB-Hib; combined Diphtheria, Tetanus, acellular, Pertussis, Hepatitis B, Inactivated Poliovirus and *Haemophilus influenzae* type b conjugate vaccine; **hexavalent vaccine**)

Prevenar 13 (pneumococcal 13-valent conjugate vaccine; PCV13) , Synflorix (pneumococcal 10-valent conjugate vaccine; PCV10), M-M-RVAXPRO (measles, mumps, rubella vaccine; MMR vaccine).

Blood sampling

All subjects provided 4 blood samples for immunogenicity assessment.

Collection of safety data

Safety data were collected as follows: Immediate unsolicited systemic adverse events (AEs) information was collected within 30 minutes after each vaccination. Solicited AEs information was collected from Day 0 to Day 7 after each vaccination; unsolicited AEs information was collected from Day 0 to Day 30 after each vaccination; serious adverse events (SAEs) (including adverse events of special interest [AESIs]) information was collected throughout the study from Visit 1 until Day 30 after the last vaccination at 12 to 18 months of age (Visit 5 for Groups 1, 2, and 3 and Visit 6 for Group 4).

The safety of the investigational product was continuously monitored by the Sponsor. Periodic blinded (when applicable) safety data review was performed by the Sponsors Safety Management Team (SMT).

Study participants

Approximately 1652 healthy infants aged 6 to 12 weeks of age (ie. $\geq$ 42 to $\leq$ 89 days at enrolment) at enrolment were planned to be randomized as follows depending on the pneumococcal vaccines that was administered in the respective countries.

4 Treatment Groups have been studied (refer to Section below)

Treatments

Countries where the pneumococcal vaccination administered was PCV10 (Czech Republic, Romania, Sweden, Finland, and Poland): 1432 subjects were to be randomized in a 1:1 ratio to 1 of the following 2 groups:

Group 1: MenACYW conjugate vaccine (2+1 regimen) + PCV10 + **Hexavalent vaccine** +/- MMR vaccine (n=716)

Group 2: Nimenrix (2+1 regimen) + PCV10 + **Hexavalent vaccine** +/- MMR vaccine (n=716)

Countries where the pneumococcal vaccination administered was PCV13 (Italy and Spain): 220 subjects were to be randomized in a 1:1 ratio to one of the following 2 groups:

Group 3: MenACYW conjugate vaccine (2+1 regimen) + PCV13 + **Hexavalent vaccine** +/- MMR vaccine (n=110)

Group 4: MenACYW conjugate vaccine (3+1 regimen) + PCV13 + **Hexavalent vaccine** +/- MMR vaccine (n=110)

Subjects in Groups 1, 2, and 3 received either 3 doses of MenACYW conjugate vaccine or 3 doses of Nimenrix administered concomitantly with routine vaccines at approximately 2 months of age (Visit 1), 4 months of age (Visit 2), and 12 to 18 months of age (Visit 4). The hexavalent vaccine and the pneumococcal vaccines (PCV10 or PCV13) were administered in a 2+1 regimen (i.e., 2 doses in infancy and 1 final dose in the 2nd year of life).

Subjects in Group 4 received 4 doses of MenACYW conjugate vaccine with routine paediatric vaccines at approximately 2 months of age (Visit 1), 4 months of age (Visit 2), 6 months of age (Visit 3; MenACYW conjugate vaccine only), and 12 to 18 months of age (Visit 5; MenACYW conjugate vaccine and routine vaccines). The hexavalent vaccine and PCV13 were administered in a 2+1 regimen, concomitantly with the 1st and 2nd doses in infancy and the 4th dose of MenACYW conjugate vaccine. The 3rd dose of MenACYW conjugate vaccine was administered alone, without any other routine paediatric vaccines.

Objective(s)

Primary Objective

To demonstrate the non-inferiority (NI) of the antibody response against meningococcal serogroups A, C, W, and Y following the administration of a 3-dose series of MenACYW conjugate vaccine compared to a 3-dose series of Nimenrix when each vaccine was administered concomitantly with routine paediatric vaccines (pneumococcal conjugate vaccine 10-valent, absorbed [PCV10] and hexavalent vaccine) to infants and toddlers from 6 weeks to 18 months of age (Group 1 versus Group 2).

Secondary Objectives

1) To demonstrate the NI of the antibody response against meningococcal serogroups A, C, W, and Y following the administration of 2 doses in infancy of MenACYW conjugate vaccine compared to 2 doses in infancy of Nimenrix when each vaccine was administered concomitantly with routine paediatric vaccines (PCV10 and hexavalent vaccine) (Group 1 versus Group 2)

2) To describe the antibody responses against meningococcal serogroups A, C, W, and Y when MenACYW conjugate vaccine was administered in a 3-dose series concomitantly with the routine paediatric vaccines (Group 3)

3) To describe the **antibody responses** against the antigens of the **routine paediatric vaccines** administered in a 3-dose series concomitantly with MenACYW conjugate vaccine or Nimenrix (**Groups 1, 2, and 3**)

4) To describe the antibody responses against meningococcal serogroups A, C, W, and Y measured by serum bactericidal assay using human complement (hSBA) when MenACYW conjugate vaccine or Nimenrix was administered in a 3-dose series concomitantly with PCV10 and other routine paediatric vaccines (Groups 1 and 2)

5) To describe the antibody responses against meningococcal serogroups A, C, W, and Y measured by hSBA when MenACYW conjugate vaccine was administered in a 4-dose series concomitantly with pneumococcal conjugate vaccine (13-valent, absorbed) (PCV13) and other routine paediatric vaccines (Group 4)

6) To describe the **antibody responses** against the antigens of the **routine paediatric vaccines** administered concomitantly with MenACYW conjugate vaccine administered in a 4-dose series (**Group 4**)

Observational Objectives

Immunogenicity

To describe the antibody responses against meningococcal serogroups A, C, W, and Y measured by serum bactericidal assay using baby rabbit complement (rSBA) in a subset of subjects when MenACYW conjugate vaccine or Nimenrix was administered concomitantly with routine paediatric vaccines (all groups)

Safety

To describe the safety profile of MenACYW conjugate vaccine and Nimenrix when administered concomitantly with routine paediatric vaccines in healthy infants and toddlers.

Primary Endpoint

Antibody titers (geometric mean titters [GMTs]) against meningococcal serogroups A, C, W, and Y measured by serum bactericidal assay using human complement (hSBA) in Groups 1 and 2, 30 days after the booster dose (3rd dose/toddler dose) of MenACYW conjugate vaccine or Nimenrix when administered concomitantly with routine paediatric vaccines (PCV10 and hexavalent vaccine) to m 6 weeks to 18 months of age (Group 1 versus Group 2)

Sample size

Table 1: Study MET58 sample size

	Group 1: MenACYW (3 doses) + Routine Vaccines (incl. PCV10)	Group 2: Nimenrix (3 doses) + Routine Vaccines (incl. PCV10)	Group 3: MenACYW (3 doses) + Routine Vaccines (incl. PCV13)	Group 4: MenACYW (4 doses) + Routine Vaccines (incl. PCV13)
Planned	716	716	110	110
Actual	714	726	112	108
FAS1	669	670	107	102
FAS2	668	680	106	102
PPAS1	522	524	96	90
PPAS2	560	584	94	90
Overall SafAS	696	706	112	108
SafAS1	696	706	112	108
SafAS2	694	704	111	106
SafAS3	-	-	-	105
SafAS4	686	696	106	104

Abbreviations: FAS, Full Analysis Set, PPAS, Per-Protocol Analysis Set; SafAS, Safety Analysis Set

- **FAS1:** subset of randomized subjects who received at least 1 dose of the study vaccine in the primary series and had a valid post-primary series vaccination blood sample result
- **FAS2:** subset of randomized subjects who received at least 1 dose of the study vaccine at booster vaccination and had a valid post-booster vaccination blood sample result

SafAS subsets:

- **Overall SafAS:** subjects who had received at least 1 dose of the study vaccines and had any safety data available. All subjects had their safety analyzed after any dose according to the vaccine received at the 1st dose.
- **SafAS1:** subjects who had received the study vaccine at Visit 1 and have any safety data available. All subjects had their safety analyzed after the Visit 1 dose according to the vaccines they received at Visit 1.
- **SafAS2:** subjects who had received the study vaccine at Visit 2 and had any safety data available. All subjects had their safety analyzed after the Visit 2 dose according to the vaccines they received at Visit 2.
- **SafAS3:** subjects who had received the study vaccine at Visit 3 and had any safety data available. All subjects had their safety analyzed after the Visit 3 dose according to the vaccines they received at Visit 3.
- **SafAS4:** subjects who had received the study vaccine at Visit 4 / 5 (depending on the schedule) and had any safety data available. All subjects had their safety analyzed after the Visit 4 / 5 dose according to the vaccines they received at Visit 4 / 5.

PPAS subsets:

- **PPAS1:** subset of the FAS1; PPAS for the primary series
- **PPAS2:** subset of the FAS2; PPAS for the booster

Randomisation and blinding (masking)

1432 subjects were randomized in a 1:1 ratio to Groups 1 and 2, and 220 subjects were randomized in a 1:1 ratio to Groups 3 and 4.

Statistical Methods

The planned analyses, comparisons, and determination of sample size are described in the final version of the statistical analysis plan (SAP) and contained in the protocol (Section 12) in Appendix 1.

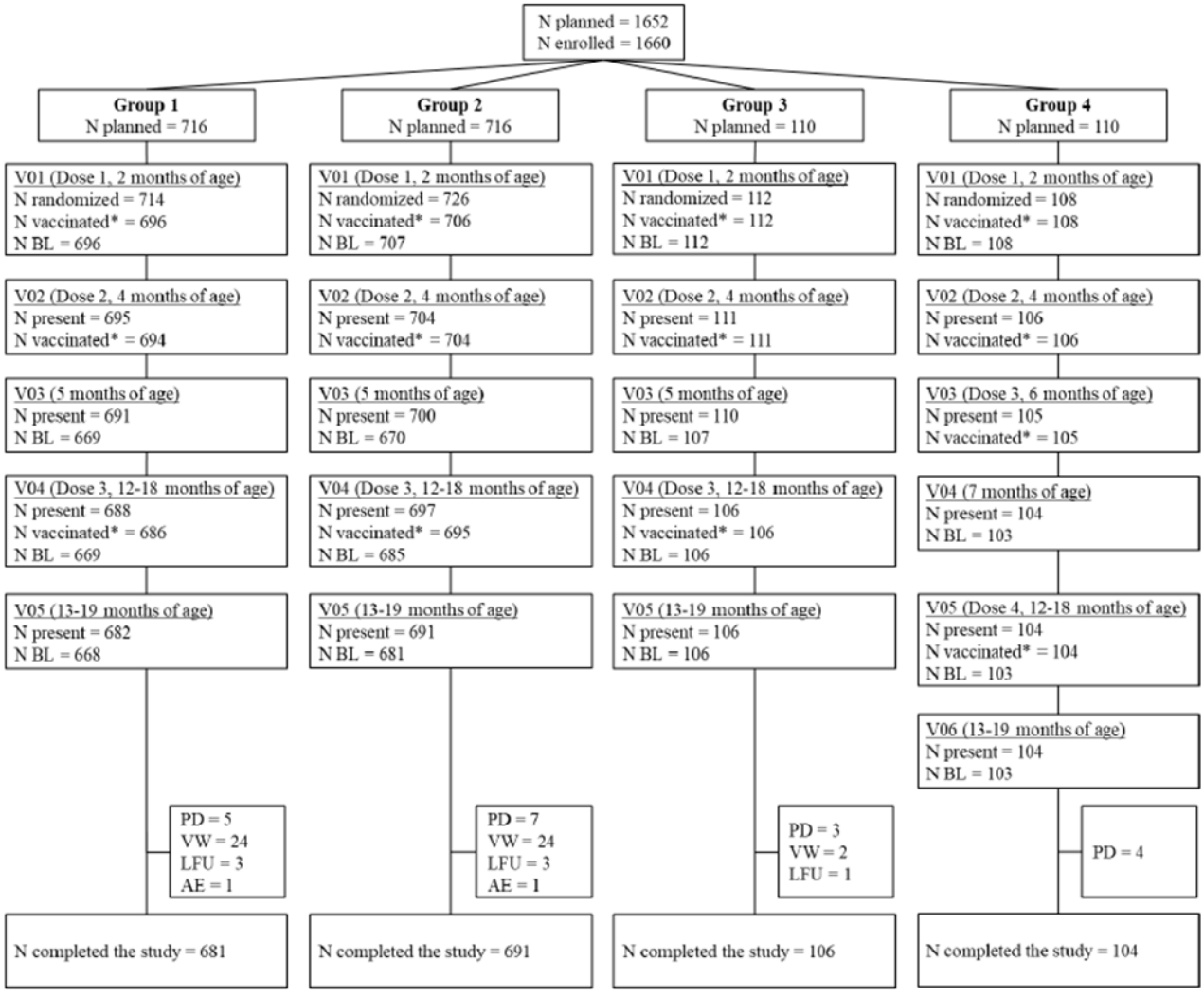
Results

Participant flow

In Groups 1, 2, and 3, a total of 1552 subjects were enrolled and randomized between 14 December 2018 and 01 April 2022. Among these subjects, 714 subjects were randomized to Group 1, 726 subjects to Group 2, and 112 subjects to Group 3. The last visit last subject (LVLS) of the active phase period (Visit 1 to Visit 5) was on 17 May 2023. The study duration was 1616 days. The mean subject duration was 348 (±70.1) days.

In Group 4, 108 subjects were enrolled and randomized between 17 December 2018 and 08 January 2020. The LVLS of the active phase period (Visit 1 to Visit 6) was on 15 March 2021. The study duration was 848 days. The mean subject duration was 382 (±74.6) days.

Figure 1 - Subject disposition flow chart



AE, adverse event; BL, blood sample; LFU, lost to follow-up; PD, protocol deviation; V, visit; VW, voluntary withdrawal by parent(s)/LAR(s)l
*The numbers of subjects who received MenACYW conjugate vaccine (Groups 1, 3, and 4) or Nimenrix (Group 2) are presented.

Source: Figure 1 Clinical Overview

Baseline data

Overall, there were 836 females (50.4%) and 824 males (49.6%) included. There were more males than females in Group 3 (67 males [59.8%] and 45 females [40.2%]), and more females than males in Group 2 (348 males [47.9%] and 378 females [52.1%]), and in Group 4 (50 males [46.3%] and 58 females [53.7%]). The percentage of males and females was balanced in Group 1 (359 males [50.3%] and 355 females [49.7%]). The male/female ratio was 1.01 in Group 1, 0.92 in Group 2, 1.49 in Group 3, and 0.86 in Group 4.

The overall mean age of subjects was 71.2 days (±12.1). The mean age of subjects was lower in Groups 3 and 4 than in other groups. The mean age was 72.6 days (±12.2) in Group 1, 72.4 days (±12.1) in Group 2, 62.5 days (±7.12) in Group 3, and 63.3 days (±7.93) in Group 4.

Most subjects were White (96.3%). Most subjects were Not Hispanic or Latino (82.5%).

Baseline demographics were similar in the other analysis sets.

Number analysed

A total of 1548 subjects (93.3%) were included in the full analysis set 1 (FAS1):

- 669 subjects (93.7%) in Group 1
- 670 subjects (92.3%) in Group 2
- 107 subjects (95.5%) in Group 3
- 102 subjects (94.4%) in Group 4

A total of 1232 subjects (74.2%) were included in the per protocol analysis set 1 (PPAS1):

- 522 subjects (73.1%) in Group 1
- 524 subjects (72.2%) in Group 2
- 96 subjects (85.7%) in Group 3
- 90 subjects (83.3%) in Group 4

A total of 1623 subjects were included in the Overall safety analysis set (Saf S) for any dose and all were included in the SafAS for vaccination at 2 months of age (SafAS1):

- 696 subjects (100%) in Group 1
- 706 subjects (100%) in Group 2
- 112 subjects (100%) in Group 3
- 108 subjects (100%) in Group 4

Efficacy results

The primary objective was not met. At D30 post-dose 3 (booster dose at 12 to 18-month of age), the NI of MenACYW conjugate vaccine (Group 1) compared to Nimenrix (Group 2) was demonstrated in the PPAS2 for meningococcal serogroups C, Y, and W, but not for serogroup A. The lower limit of the 2-sided

95% confidence interval (CI) of the ratio of hSBA GMTs between Group 1 and Group 2 was greater than 1/1.5 for serogroups C, Y, and W and lower than 1/1.5 for serogroup A.

Overall, antibody responses of concomitant routine paediatric vaccines administered with MenACYW conjugate vaccine or Nimenrix in infants and toddlers were comparable for the 3-dose-series (Groups 1, 2, and 3).

A robust antibody response against the antigens contained in the concomitant routine vaccines after a 4-dose series was observed in Group 4 (Hexavalent vaccine as 2+1 schedule as in Groups 1, 2, and 3).

Safety results

Safety results were described for subjects in all groups after vaccination at 2, 4, and 12-18 months of age (Groups 1, 2 and 3) and at 2, 4, 6, and 12-18 months of age (Group 4).

Immediate unsolicited AEs within 30 minutes

2 Subjects: 1 subject in Group 1 and 1 subject in Group 4 as presented below.

In Group 1, a subject had contusion within 30 minutes of the administration of the 2nd dose of MenACYW conjugate vaccine with paediatric routine vaccines which resolved spontaneously in 6 days. This non-serious event was assessed as not related to the study vaccine by the Investigator.

In Group 4, a subject had syncope within 30 minutes of the administration of the 3rd dose of MenACYW conjugate vaccine at 6 months of age which required health care contact and resolved the same day. This non-serious event was assessed as related to study vaccine by the Investigator.

Solicited Reactions

The proportion of subjects who experienced at least 1 solicited injection site reaction after any vaccination was 90.2% in Group 1, 89.6% in Group 2, 84.8% in Group 3, and 81.1% in Group 4.

Hexavalent vaccine, any vaccination

83.9% of subjects in Group 1, 81.8% of subjects in Group 2, 72.3% of subjects in Group 3, and 67.0% of subjects in Group 4 had at least 1 solicited injection site reaction.

Injection site tenderness was reported by 72.4% of subjects in Group 1, 72.5% of subjects in Group 2, 65.2% of subjects in Group 3 and 59.4% of subjects in Group 4.
Injection site erythema was reported by 66.2% of subjects in Group 1, 61.7% of subjects in Group 2, 35.7% of subjects in Group 3 and 34.0% of subjects in Group 4.
Injection site swelling was reported by 49.6% of subjects in Group 1, 46.5% of subjects in Group 2, 25.0% of subjects in Group 3 and 33.0% of subjects in Group 4.

Most of the reactions were of Grade 1 or Grade 2 intensity. Grade 3 reports:
7.6% of subjects in Group 1, 7.2% of subjects in Group 2, 8.9% of subjects in Group 3 and 6.6% of subjects in Group 4 reported Grade 3 injection site tenderness.
4.5% of subjects in Group 1, 3.4% of subjects in Group 2, 1.8% of subjects in Group 3 and none of subjects in Group 4 reported Grade 3 injection site erythema
2.4% of subjects in Group 1, 2.0% of subjects in Group 2, 0.9% of subjects in Group 3 and none of subjects in Group 4 reported Grade 3 injection site swelling.

In all groups, most solicited and resolved (spontaneously) after 1-3 days.

Solicited systemic reactions

After any vaccination, the proportion of subjects with at least 1 solicited systemic reaction was 95.0% in Group 1, 93.5% in Group 2, 89.3% in Group 3, and 90.6% in Group 4.

Grade 3 solicited reactions after any vaccination were reported for 26.7% of subjects in Group 1, 27.1% of subjects in Group 2, 24.1% of subjects in Group 3, and 24.5% of subjects in Group 4.

Irritability was the most frequently reported solicited systemic reaction within 7 days, with 86.1%, 86.1%, 81.3%, and 81.1% of subjects in Group 1, Group 2, Group 3, and Group 4, respectively.
Crying abnormal, drowsiness, appetite lost, fever, and vomiting were less frequent:

- Crying abnormal in 83.0% in Group 1, 82.1% in Group 2, 66.1% in Group 3, and 70.8% in Group 4
- Drowsiness in 76.0% in Group 1, 77.3% in Group 2, 59.8% in Group 3, and 70.8% in Group 4
- Appetite lost in 55.9% in Group 1, 52.8% in Group 2, 53.6% in Group 3, and 54.7% in Group 4
- Fever in 49.1% in Group 1, 44.3% in Group 2, 35.7% in Group 3, and 34.9% in Group 4
- Vomiting in 27.7% in Group 1, 27.4% in Group 2, 20.5% in Group 3, and 24.5% in Group 4

In all groups, most solicited systemic reactions were of Grade 1 or 2 intensity. Grade 3 solicited systemic reactions:

- Crying abnormal reported for 72 subjects (10.3%) in Group 1 and 72 subjects (10.2%) in Group 2
- Irritability reported for 14 subjects (12.5%) in Group 3 and 11 subjects (10.4%) in Group 4

Most solicited systemic reactions started within D0-D3) and resolved (spontaneously) after 1-3 days.

Unsolicited AEs

The proportion of subjects with at least 1 unsolicited AE after any vaccination was 65.8% in Group 1, 68.0% in Group 2, 71.4% in Group 3, and 73.1% in Group 4. There were 18.4% in Group 1, 18.1% in Group 2, 8.9% in Group 3, and 15.7% in Group 4 with at least 1 unsolicited adverse reaction (AR).

The proportion of subjects who experienced at least 1 unsolicited non-serious AE was 65.1% in Group 1, 67.6% in Group 2, 70.5% in Group 3, and 73.1% in Group 4. There were 18.4% of subjects in Group 1, 18.1% of subjects in Group 2, 8.9% of subjects in Group 3, and 15.7% of subjects in Group 4 with at least 1 unsolicited non-serious AR. The proportion of subjects with at least 1 unsolicited non-serious systemic AR was 8.0% in Group 1, 8.9% in Group 2, 3.6% in Group 3, and 3.7% in Group 4.

Hexavalent vaccine, any vaccination, non-serious unsolicited injection site reactions

After **any vaccination with hexavalent vaccine**, the proportion of subjects with at least 1 unsolicited non-serious injection site AR was 22.7% in Group 1, 20.1% in Group 2, 4.5% in Group 3, and 3.7% in Group 4.

Discontinuation due to AEs

No AEs caused subject discontinuation from the study within 30 days of any vaccination in any group.

Serious AEs including AESIs and deaths

Within 30 days of any vaccination, there were 18 subjects (2.6%) in Group 1, 16 subjects (2.3%) in Group 2, 2 subjects (1.8%) in Group 3, and 1 subject (0.9%) in Group 4 with at least 1 SAE. No SAEs were related to study vaccine.

One subject in Group 1 (0.1%) experienced 1 AESI which was assessed as not related to study vaccine (febrile convulsion 23 days following the administration of the 3rd dose of MenACYW conjugate vaccine with paediatric routine vaccines).

During the study, there were 51 subjects (7.3%) in Group 1, 57 subjects (8.1%) in Group 2, 8 subjects (7.1%) in Group 3, and 3 subjects (2.8%) in Group 4 with at least 1 SAE. There were 3 subjects (0.4%) in Group 1 and 3 subjects (0.4%) in Group 2 with reported at least 1 AESI. All AESIs were assessed as not related to study vaccine.

No deaths were reported during the study in any group.

Literature

The results observed in the MET58 study are consistent with those previously published for co-administration of Hexacima/Hexyon with another MenACWY conjugate vaccine (Nimemrix) [1].

In MET33 study (another study from the Sanofi MenACYW conjugate vaccine clinical development program) in which Hexacima/Hexyon was co-administered with either the Sanofi MenACYW conjugate vaccine (MenQuadfi - Group 1) or another MenACYW conjugate vaccine (Menveo - Group 2), immune responses observed 1 month after the booster (4th dose) of Hexacima given at 12 months of age were high in both groups with pertussis responses rates (PT, FHA) ≥83.3% and seroprotection rates (other antigens) ≥93.3%.

In MET58 study in which Hexacima/Hexyon was given as a 2-dose primary vaccination followed by a booster dose (2+1 schedule), the immunogenicity results are consistent with those previously described after primary vaccination and after booster for such schedule [2].

Since initiation of the MET58 study, no new clinically relevant information was published modifying the risk/benefit ratio already documented for Hexacima/Hexyon.

References

1 Vesikari T, Borrow R, Da Costa X, et al. Concomitant administration of a fully liquid ready-to-use DTaP-IPV-HB-PRP-T hexavalent vaccine with a meningococcal ACWY conjugate vaccine in toddlers. Vaccine. 2018 Dec 18;36(52):8019–8027. doi: 10.1016/j.vaccine.2018.10.100

2 Vesikari T, Silfverdal SA, Jordanov E, Feroldi E. A Randomized, Controlled Study of DTaP-IPV-HB- PRP-T, a Fully Liquid Hexavalent Vaccine, Administered in a 3-, 5- and 11- to 12-month Schedule. *Pediatr Infect Dis J*. 2017;36(1):87-93. doi:10.1097/INF.0000000000001358

2.3.3. Discussion on clinical aspects

The primary objective of the study was to demonstrate the non-inferiority (NI) of the antibody response against meningococcal serogroups A, C, W, and Y following the administration of a 3- dose series of MenACYW conjugate vaccine (MenQuadfi) compared to a 3-dose series of Nimenrix when each vaccine was administered concomitantly with routine paediatric vaccines (pneumococcal conjugate vaccine 10-

valent, absorbed [PCV10] and hexavalent vaccine) to infants and toddlers from 6 weeks to 18 months of age (Group 1 versus Group 2).

The MET58 study was conducted as part of the clinical development of the Sanofi MenACYW Conjugate Vaccine (MenQuadfi). Results provide additional data for co-administration of Hexacima**/**Hexyon with MenACWY conjugate vaccines (MenQuadfi or Nimenrix) (3+1 and 2+1 schedule).

Hexacima/Hexyon was investigated as concomitantly administered routine vaccine.

High immune responses were observed for the hexavalent vaccine whether co-administered with MenACYW conjugate vaccine (MenQuadfi) or with Nimenrix, and whether given with PCV13 or PCV10.

The safety profile of the hexavalent vaccine whether co-administered with MenACYW conjugate vaccine (MenQuadfi) or with Nimenrix was similar.

Reported ARs are in accordance with the safety profile as reflected in the product information.

The MAH proposes no changes to the product information based upon the results of MET58 study data. This proposal is acknowledged.

3. CHMP overall conclusion and recommendation

Hexacima**/**Hexyon is indicated for primary and booster vaccination of infants and toddlers from 6 weeks of age against diphtheria, tetanus, pertussis, Hepatitis B, polio, and invasive diseases caused by *Haemophilus influenzae* type b. The use of the vaccine should be in accordance with official recommendations.

Its labelling already includes co-administration with meningococcal C conjugate vaccine or meningococcal group A, C, W-135 and Y conjugate vaccine based on a study conducted as part of the Hexacima/Hexyon clinical development plan.

No amendment to the Product Information is considered to be necessary.

☒ **Fulfilled:**

No regulatory action required.