

Approval Date: [July 28, 2020](#)

Product: MENVEO

Proper Name: Meningococcal (Groups A, C, Y, and W-135) Oligosaccharide Diphtheria CRM197 Conjugate Vaccine

Manufacturer: GlaxoSmithKline Biologicals SA

Indication: For active immunization to prevent invasive meningococcal disease caused by *Neisseria meningitidis* serogroups A, C, Y, and W-135. MENVEO is approved for use in persons aged 2 months through 55 years.

Description: MENVEO [Meningococcal (Groups A, C, Y, and W-135) Oligosaccharide Diphtheria CRM197 Conjugate Vaccine] is a sterile liquid vaccine administered by intramuscular injection that contains *N. meningitidis* serogroup A, C, Y, and W-135 oligosaccharides conjugated individually to *Corynebacterium diphtheriae* CRM197 protein.

BLA: 125300

Regulatory Milestone:

The applicant submitted on April 13, 2011, an sBLA (STN 125300/226), which was a revision of the sBLA 125300/201 that received a Refuse to File letter, to expand the indication of the MenACWY to infants and toddlers 2 through 23 months of age. A Complete Response (CR) letter was issued on February 10, 2012, listing 55 points that Novartis needed to address. The majority of these points (45 of the 55 points) were related to data collection and analysis during the clinical trials. For the three pivotal studies (V59P14, V59P21, and V59P23), additional

information was requested to clarify the percentage of diary cards that that were not returned or were completed based on recall. The CR letter questioned discrepancies between the Clinical Study Report (CSR) and reported data in each of the dataset files as well as deviations in the study protocols. There was no specific safety concern or signal that contributed to the CR letter being issued, but rather there were concerns regarding the data quality. In response, the sponsor conducted the Menveo Metadata Collection project (MMC) to assess the accuracy, reliability, and verifiability of the safety data collected in the pivotal studies. From the MMC, the sponsored concluded that the various methodological concerns raised by CBER, when carefully examined and reviewed, do not fundamentally change any of the overall conclusions regarding the safety profile for MenACWY for the infant and toddler 4 populations. With the results of the MMC and other supplied data, the sponsor addressed these 55 points of the CR letter and resubmitted the application on January 30, 2013. A new clinical study report for Study V59_33, that is the pivotal study of immunogenicity and contributed to the non-detailed safety database, and the final study report for V59P23 were included in the resubmission (the April 13, 2011, submission had an interim study report for V59P23). The data submitted in STN 125300/226 will satisfy PREA-PMRs 3, 4, 5, and 7 regarding deferred pediatric studies from the approval letter for the original BLA, dated February 19, 2010.

PDUFA Goal Date: August 1, 2013

Package Insert: [Package Insert - MENVEO](#)

Summary Basis for Regulatory Approval: [Summary Basis for Regulatory Action \(BLA/STN# 125300/226\)](#)

European Public Assessment Report: [Human medicine European public assessment report \(EPAR\): Menveo](#)

Advisory Committee:

The safety and effectiveness data from the trials conducted to support the use of this vaccine in children 2 through 23 months of age were not presented to the Vaccines and Related Products Advisory Committee because the product did not raise particular concerns or controversial issues which would have benefited from advisory committee feedback. The concept for the use of the hSBA as a correlate of protection to measure the immune response for inferred effectiveness for the licensing pathway of meningococcal vaccines intended for infants was presented and agreed upon by the Advisory Committee on [April 7, 2011](#).

Safety:

The clinical reviewers concluded that 1) the impact of the missing data therefore does not alter the overall conclusions of her review, and 2) the safety profile of Menveo was acceptable for approval of this application.

NCT Numbers:

- NCT02986854
- NCT03433482
- NCT03652610
- NCT03077438
- NCT03682939
- NCT03630705
- NCT01192997
- NCT02223637
- NCT03537508
- NCT03493919
- NCT01782066
- NCT02199691
- NCT00901940
- NCT04239430
- NCT03673462
- NCT03675256
- NCT01766206
- NCT03694405
- NCT01452464
- NCT02287688
- NCT01452438
- NCT02811120
- NCT00962624
- NCT01967238
- NCT04318548
- NCT03691610
- NCT00616421
- NCT02676895
- NCT04707391
- NCT02106390
- NCT04084769
- NCT02526394
- NCT04502693
- NCT02324751
- NCT03587207
- NCT04400838
- NCT01992536
- NCT04440163
- NCT03165617
- NCT01593514
- NCT02140762
- NCT02072525
- NCT03636906
- NCT02097849

- NCT00474526

EudraCT Numbers:

- 2018-001473-24
- 2018-001471-20
- 2016-003186-25
- 2017-004977-15
- 2016-001963-35
- 2019-004460-22
- 2010-022505-18
- 2019-004459-35
- 2016-002381-31
- 2019-004461-41
- 2010-023523-23
- 2011-004421-27
- 2017-003692-61
- 2017-003456-23
- 2011-001333-17
- 2018-001468-48
- 2020-001072-15
- 2020-001228-32
- 2019-004313-13
- 2014-004577-16
- 2014-004617-82
- 2014-004537-95
- 2014-005160-15
- 2017-000166-30
- 2014-004477-16
- 2014-005133-30
- 2014-005055-11
- 2013-000145-39
- 2014-004973-17
- 2014-005392-90
- 2011-000476-34
- 2017-002919-33
- 2013-000862-13
- 2017-000665-79
- 2016-003526-16
- 2014-002978-36
- 2016-003722-16
- 2016-005117-44
- 2014-004446-95
- 2015-000979-27
- 2010-023858-37
- 2011-000475-14
- 2012-003937-41
- 2017-005128-12
- 2016-002883-15
- 2016-004421-17
- 2019-001666-15
- 2014-003504-79
- 2018-000431-27

Publications:

- Tomillero, A., & Moral, M. A. (2010). Gateways to clinical trials. *Methods and findings in experimental and clinical pharmacology*, 32(7), 517–548.
<https://doi.org/10.1358/mf.2010.32.7.1549223>
- Cooper, B., DeTora, L., & Stoddard, J. (2011). Menveo®: a novel quadrivalent meningococcal CRM197 conjugate vaccine against serogroups A, C, W-135 and Y. *Expert review of vaccines*, 10(1), 21–33. <https://doi.org/10.1586/erv.10.147>
- Dull, P., Gill, C., Webster, C. *et al.* 532 Safety Profile of Menveo® in Adolescents and Adults Enrolled in Phase Iii Clinical Trials. *Pediatr Res* 68, 272 (2010).
<https://doi.org/10.1203/00006450-201011001-00532>

- Brian Cooper, Lisa DeTora & Jeffrey Stoddard (2011) Menveo[®]: a novel quadrivalent meningococcal CRM₁₉₇ conjugate vaccine against serogroups A, C, W-135 and Y, Expert Review of Vaccines, 10:1, 21-33, DOI: [10.1586/erv.10.147](https://doi.org/10.1586/erv.10.147)
- Tanya R. Myers & Michael M. McNeil (2018) Current safety issues with quadrivalent meningococcal conjugate vaccines, Human Vaccines & Immunotherapeutics, 14:5, 1175-1178, DOI: [10.1080/21645515.2017.1366393](https://doi.org/10.1080/21645515.2017.1366393)