Approval Date: April 27, 2018

Product: Menactra

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

Manufacturer: Sanofi Pasteur Inc

Indication: Active immunization of individuals 9 months through 55 years of age for the prevention of invasive meningococcal disease caused by Neisseria meningitidis serogroups A, C, Y and W-135.

Description: Menactra is a sterile, intramuscularly administered vaccine that contains N meningitidis serogroup A, C, Y and W-135 capsular polysaccharide antigens individually conjugated to diphtheria toxoid protein.

BLA: 125089

Regulatory Milestone: Menactra was licensed for use and distribution in the US in 2005 for individuals 11 through 55 years of age. In 2007 the age range for use was extended to include persons 2 through 10 years of age, and in 2011 approved for use in children 9 through 23 months of age.

PDUFA Goal Date: September 16, 2016

Package Insert: Package Insert - Menactra

Summary Basis for Regulatory Approval: September 16, 2016 Summary Basis of Regulatory Action - Menactra

European Public Assessment Report: None

Advisory Committee:

Did not require input from Vaccines and Related Biological Products Advisory Committee.

Safety:

There were no primary endpoints for safety; however, safety was evaluated as secondary (descriptive) endpoints and included 7 days post-vaccination assessment of solicited local and systemic reactions, 30 days post-vaccination assessment of unsolicited AEs, and monitoring of serious adverse events throughout the study duration. The most frequently reported solicited local reaction at either the Menactra or DAPTACEL injection site across all groups was pain, reported in 52% to 72% of subjects at the DAPTACEL site and 52% to 61% of subjects at the Menactra site. The most frequently reported solicited systemic reaction across all groups was myalgia across all study groups, reported in 25.8% to 46.2% of subjects following administration of DAPTACEL alone or with a concomitant vaccine, and in 24.2% to 37.3% subjects following administration of Menactra alone or with a concomitant vaccine. The reported rates and types of unsolicited AEs are similar to that seen in the general population for children 4 to 6 years of age. None of the three reported SAEs were considered related to study vaccination and there were no deaths reported during the study.

NCT Numbers:

- NCT04358731
- NCT01442675
- NCT01689155
- NCT01359449

- NCT01642589
- NCT02864927
- NCT01270503
- NCT01890759
- NCT02699840
- NCT00539032
- NCT01239043
- NCT01086969
- NCT02633787
- NCT00700713
- NCT03964012
- NCT00384397
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- NCT00874549
- NCT00355121
- NCT00862277
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- NCT00254995
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- NCT02640404
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- NCT02591290
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- NCT00290329
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- NCT02544048
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- NCT00248833
- NCT00262002
- NCT00262028
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- NCT03917654
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- NCT01461980
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- NCT00345579
- NCT00586612
- NCT00345683
- NCT00801957
- NCT00314041
- NCT00463437
- NCT03399396

EudraCT Numbers:

- 2015-005181-33
- 2014-004903-63
- 2016-003186-25
- 2014-005161-72
- 2012-002718-38
- 2012-001305-25
- 2014-003504-79
- 2020-004341-36
- 2019-004460-22
- 2019-004313-13
- 2016-003722-16

Publications:

- Ostergaard, L., Lucksinger, G. H., Absalon, J., Beeslaar, J., Eiden, J., Jansen, K. U., York, L. J., Quinn, A., Graversen, M. E., & Perez, J. L. (2016). A phase 3, randomized, active-controlled study to assess the safety and tolerability of meningococcal serogroup B vaccine bivalent rLP2086 in healthy adolescents and young adults. *Vaccine*, *34*(12), 1465–1471. https://doi.org/10.1016/j.vaccine.2016.01.044
- Bona, G., Castiglia, P., Zoppi, G., de Martino, M., Tasciotti, A., D'Agostino, D., Han, L., & Smolenov, I. (2016). Safety and immunogenicity of a CRM or TT conjugated meningococcal vaccine in healthy toddlers. *Vaccine*, *34*(29), 3363–3370. https://doi.org/10.1016/j.vaccine.2016.05.009
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- Robertson, C. A., Greenberg, D. P., Hedrick, J., Pichichero, M., Decker, M. D., & Saunders, M. (2016). Safety and immunogenicity of a booster dose of meningococcal (groups A, C, W, and Y) polysaccharide diphtheria toxoid conjugate vaccine. *Vaccine*, *34*(44), 5273–5278. https://doi.org/10.1016/j.vaccine.2016.09.003
- Iro, M. A., Snape, M. D., Voysey, M., Jawad, S., Finn, A., Heath, P. T., Bona, G., Esposito, S., Diez-Domingo, J., Prymula, R., Odueyungbo, A., Toneatto, D., Dull, P., Pollard, A. J., & European Men B Vaccine Study Group (2017). Persistence of bactericidal antibodies following booster vaccination with 4CMenB at 12, 18 or 24months and immunogenicity of a fifth dose administered at 4years of age-a phase 3 extension to a randomised controlled trial. *Vaccine*, *35*(2), 395–402. https://doi.org/10.1016/j.vaccine.2016.11.009
- Quiambao, B. P., Bavdekar, A., Dubey, A. P., Jain, H., Kolhe, D., Bianco, V., Miller, J. M., & Van der Wielen, M. (2017). Antibody persistence up to 5 y after vaccination with a quadrivalent meningococcal ACWY-tetanus toxoid conjugate vaccine in adolescents. *Human vaccines & immunotherapeutics*, *13*(3), 636–644. https://doi.org/10.1080/21645515.2016.1248009
- Knuf, M., Helm, K., Kolhe, D., Van Der Wielen, M., & Baine, Y. (2018). Antibody persistence and booster response 68 months after vaccination at 2-10 years of age with one dose of MenACWY-TT conjugate vaccine. *Vaccine*, *36*(23), 3286–3295. https://doi.org/10.1016/j.vaccine.2018.04.064
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