Protocol for Naglazyme® (galsulfase)

October 2020

Background:
Mucopolysaccharidosis VI (MPS VI) is a very rare autosomal recessive disorder caused by mutations in the arylsulfatase B (ARSB) gene, which lead to deficient activity of the lysosomal enzyme ASB. This enzyme is important for the breakdown of the glycosaminoglycans (GAGs) dermatan sulfate and chondroitin sulfate, which accumulate in body tissues and organs of MPS VI patients.

Naglazyme *is indicated for patients with Mucopolysaccharidosis VI (MPS VI; Maroteaux-Lamy syndrome). It has been shown to improve walking and stair-climbing capacity.*

Criteria for initial approval

Initial approval duration: 6 months

1. Patient is 5 years of age or older; **AND**
2. Patient has a diagnosis of Mucopolysaccharidosis VI (MPS VI, Maroteaux-Lamy syndrome); **AND**
3. Diagnosis has been confirmed by one of the following:
    a. Detection of mutations in the ARSB gene (5q.13-q14)
    b. Absence or deficient activity (in leukocytes or fibroblasts) of N-acetylgalactosamine 4-sulfatase (arylsulfatase); **AND**
4. At least one of the following baseline tests have been completed and will be used to assess response to therapy:
    a. Urinary glycosaminoglycan (uGAG) levels; **OR**
    b. Endurance test [e.g., Distance walked in six minutes (6-MWT) or Timed 25-foot walk (T25FW), 3-minute stair-climb test]; **OR**
    c. Pulmonary test [e.g., Forced vital capacity (FVC), Forced expiration volume in 1 second (FEV_1)]; **AND**
5. Documented clinical signs and symptoms of the disease (e.g., kyphoscoliosis, pectus carinatum, gait disturbance, etc.)
6. Patient does not have any contraindication(s) to the requested medication; **AND**
7. Medication is being prescribed by or in consultation with an endocrinologist, geneticist, metabolic disorders specialist, or an expert in the disease state; **AND**
8. Medication is prescribed in accordance with Food and Drug Administration (FDA) established indication and dosing regimens or in accordance with medically

appropriate off-label indication and dosing according to American Hospital Formulary Service, Micromedex, Clinical Pharmacology, Wolters Kluwer Lexi-Drugs (Lexicomp), national guidelines, or other peer-reviewed evidence; **AND**

9. Weight must be received for drugs that have weight-based dosing.

Continuation of therapy:

Renewal approval duration: 12 months

1. Patient has responded to treatment as demonstrated by an improvement and/or stabilization compared to baseline in at least one of the following:
    a. Improved endurance test [e.g., Distance walked in six minutes (6-MWT) or Timed 25-foot walk (T25FW), 3-minute stair-climb test]; **OR**
    b. Improved pulmonary function [e.g., Forced vital capacity (FVC), Forced expiration volume in 1 second (FEV1)]; **OR**
    c. Reduction in urinary GAG levels; **AND**

2. Medication is prescribed in accordance with Food and Drug Administration (FDA) established indication and dosing regimens or in accordance with medically appropriate off-label indication and dosing according to American Hospital Formulary Service, Micromedex, Clinical Pharmacology, Wolters Kluwer Lexi-Drugs (Lexicomp), national guidelines, or other peer-reviewed evidence; **AND**

3. Member has not experienced any unacceptable toxicity from treatment.

4. For dose increase requests, weight must be received for drugs that have weight-based dosing.

References:

1. Naglazyme [Product information]. BioMarin Pharmaceutical Inc. Novato, CA; 12/2019.
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3. Giugliani R, Harmatz P, Wraith JE. Management guidelines for mucopolysaccharidosis VI. Pediatrics. 2007;120:405-418
4. Giugliani, R, Lampe, C, Guffon, N. Natural history and galsulfase treatment in mucopolysaccharidosis VI (MPS VI, Maroteaux-Lamy syndrome) – 10-year follow-up of patients who previously participated in an MPS VI survey study. Am J Med Genet A. 2014;164A(8):1953–1964.
5. Akyol, M.U., Alden, T.D., Amartino, H. et al. Recommendations for the management of MPS VI: systematic evidence- and consensus-based guidance. Orphanet J Rare Dis 14, 118 (2019). https://doi.org/10.1186/s13023-019-1080-y
6. Dafne D G Horovitz , Tatiana S P C Magalhães, Angelina Acosta, et al. Enzyme replacement therapy with galsulfase in 34 children younger than five years of age with MPS VI. Mol Genet Metab. 2013 May;109(1):62-9. doi: 10.1016/j.ymgme.2013.02.014. Epub 2013 Mar 5.
7. Vairo F et al. Diagnostic and treatment strategies in mucopolysaccharidosis VI. Appl Clin Genet. 2015; 8: 245–255.