Mepsevii ® (vestronidase alfa-vjbk)

October 2020

Background:
Mucopolysaccharidosis VII (MPS VII, Sly syndrome) is caused by mutations in the gene encoding the beta-glucuronidase (GUS) enzyme, located on chromosome 7q11.21. Beta-glucuronidase enzyme deficiency causes glycosaminoglycans (GAGs) to accumulate in cells throughout the body. Vestronidase alfa is a recombinant human lysosomal beta glucuronidase intended to provide exogenous GUS enzyme for uptake into cellular lysosomes.

Mepsevii is a recombinant human lysosomal beta glucuronidase indicated in pediatric and adult patients for the treatment of Mucopolysaccharidosis VII (MPS VII, Sly syndrome).

Criteria for initial approval:

1. Patient has a documented diagnosis of Mucopolysaccharidosis VII (MPS VII, Sly syndrome); **AND**
2. Diagnosis has been confirmed by one of the following:
    a. Detection of mutations in the GUSB gene
    b. Elevated urinary glycosaminoglycan (uGAG) excretion at a minimum of 3-fold over the mean normal for age at screening; **AND**
3. At least one of the following baseline testing has been completed and will be used to assess response to therapy: Six-minute walk test (6MWT), motor function [e.g., Bruininks-Oseretsky Test of Motor Proficiency (BOT-2)], liver and/or spleen volume, urinary excretion of glycosaminoglycans (GAGs) such as chondroitin sulfate and dermatan sulfate, skeletal involvement, pulmonary function tests, shoulder flexion, visual acuity.
4. Patient does not have any contraindication(s) to the requested medication; **AND**
5. Medication is being prescribed by or in consultation with an endocrinologist, geneticist, metabolic disorders specialist, or an expert in the disease state; **AND**
6. 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**
7. Weight must be received for drugs that have weight-based dosing; **AND**

8. Mepsevii will be administered under the supervision of a healthcare professional with the capability to manage anaphylaxis.

Initial approval duration: 6 months

Continuation of therapy:

1. Patient has responded to treatment compared to baseline as shown by at least one of the following:
    a. Stability or improvement in six-minute walk test (6MWT), motor function [for example, Bruininks-Oseretsky Test of Motor Proficiency (BOT-2)], pulmonary function tests, shoulder flexion, visual acuity, and/or other motor functions; **OR**
    b. Reduction in liver and/or spleen volume; **OR**
    c. Reduction in urinary excretion of glycosaminoglycans (GAGs) such as chondroitin sulfate and dermatan sulfate; **OR**
    d. Stability of skeletal disease; **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. For dose increase requests, weight must be received for drugs that have weight-based dosing.

Renewal approval duration: 12 months

Note: Mepsevii has a black box warning:

- Anaphylaxis has occurred with MEPSEVII administration, as early as the first dose, therefore appropriate medical support should be readily available when MEPSEVII is administered.
- Closely observe patients during and for 60 minutes after MEPSEVII infusion
- Immediately discontinue the MEPSEVII infusion if the patient experiences anaphylaxis

References:

1. Mepsevii [Product information]. Ultragenyx Pharmaceutical Inc. Novato, CA; 12/2019.
2. “Mucopolysaccharidosis Type VII.” NORD (National Organization for Rare Disorders), rarediseases.org/rare-diseases/sly-syndrome/.
3. "Mucopolysaccharidosis Type VII | Genetic and Rare Diseases Information Center (GARD) – An NCATS Program". Rarediseases.Info.Nih.Gov, 2019, https://rarediseases.info.nih.gov/diseases/7096/mucopolysaccharidosis-type-vii. Accessed 20 June 2020.

4. Clinicaltrials.gov. A Phase 3 Study of UX003 Recombinant Human Beta-glucuronidase (rhGUS) Enzyme Replacement Therapy in Patients with Mucopolysaccharidosis Type 7 (MPS 7). NCT02230566. Available at: https://clinicaltrials.gov/ct2/show/NCT02230566
5. Clinicaltrials.gov. An Open-Label Phase 1/2 Study to Assess the Safety, Efficacy and Dose of Study Drug UX003 Recombinant Human Beta-glucuronidase (rhGUS) Enzyme Replacement Therapy in Patients with Mucopolysaccharidosis Type 7 (MPS 7). NCT01856218. Available at: https://clinicaltrials.gov/ct2/show/NCT01856218
6. National MPS Society. A guide to understanding MPS VII. Available at https://mpssociety.org/cms/wp-content/uploads/2017/04/MPS_VII_2008.pdf