Gaucher Disease Products
Approved by NJ DURB, October 2019

Background:
Gaucher disease is caused by a deficiency of the lysosomal enzyme acid β-glucosidase (for example, glucocerebrosidase), which catalyzes the conversion of the sphingolipid glucocerebroside into glucose and ceramide. The enzymatic deficiency causes an accumulation of glucosylceramide (GL-1), primarily in the lysosomal compartment of macrophages, giving rise to foam cells or "Gaucher cells."

Cerezyme, Vpriv, and Elelyso are FDA-approved as enzyme replacement therapy (ERT) for Gaucher disease

Cerdelga is FDA-approved as substrate reduction therapy (SRT) for Gaucher disease

Zavesca is FDA-approved as substrate reduction therapy (SRT) for Gaucher disease and reviewed under Miglustat Products ABH Medicaid QSet C27080-A 12_2023

Criteria for approval:

Enzyme Replacement Therapy (ERT):
Cerezyme® (imiglucerase)
Elelyso® (taliglucerase)
Vpriv® (velaglucerase)

1. Patient has a diagnosis of Type 1 or Type 3 Gaucher disease
2. Diagnosis of Gaucher disease is confirmed by:
    a. Beta-glucosidase leukocyte (BGL) test; OR
    b. Genotype testing indicating mutation of two alleles of the glucocerebrosidase genome (for example, GBA gene)
3. Patient exhibits clinical signs and symptoms of the disease including anemia, thrombocytopenia, skeletal disease, hepatomegaly or splenomegaly
4. Prescription is written by or in consultation with a hematologist, neurologist, or geneticist
5. 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, or national guidelines.

Substrate Replacement Therapy (SRT):
Cerdelga® (eliglustat)

1. Patient is 18 years of age and older
2. Patient has a diagnosis of Type 1 Gaucher disease
3. Diagnosis of Gaucher disease is confirmed by:
    a. Beta-glucosidase leukocyte (BGL) test; OR
    b. Genotype testing indicating mutation of two alleles of the glucocerebrosidase genome (for example, GBA gene)

4. Patient exhibits clinical signs and symptoms of the disease including anemia, thrombocytopenia, skeletal disease, hepatomegaly, or splenomegaly
5. Prescription is written by or in consultation with a hematologist, neurologist, or geneticist
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, or national guidelines.

Additionally, for Cerdelga requests:

a. Patient is one of the following as detected by an FDA-cleared test:
    i. CYP2D6 extensive metabolizer (EMs)
    ii. CYP2D6 intermediate metabolizer (IMs)
    iii. CYP2D6 poor metabolizer (PMs)
b. The patient does not have any of the following contraindications to therapy based on type of metabolizer
    i. CYP2D6 extensive metabolizer (EMs)
        1. Taking a strong or moderate CYP2D6 inhibitor concomitantly with a strong
        2. or moderate CYP3A inhibitor.
        3. Moderate or severe hepatic impairment.
        4. Mild hepatic impairment taking a strong or moderate CYP2D6 inhibitor.
    ii. CYP2D6 intermediate metabolizer (IMs)
        1. Taking a strong or moderate CYP2D6 inhibitor concomitantly with a strong
        2. or moderate CYP3A inhibitor
        3. Taking a strong CYP3A inhibitor
        4. Any degree of hepatic impairment
    iii. CYP2D6 poor metabolizer (PMs)
        1. Taking a strong CYP3A inhibitor
        2. Any degree of hepatic impairment

Initial Approval Duration: 3 months

<u>Continuation of therapy</u>

1. Documentation of positive clinical response to therapy (e.g. reduced severity of symptoms)
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, or national guidelines.

3. For dose increases, weight must be received for drugs that have weight-based dosing. For dose increases, height and weight must be received for drugs that have dosing based on body surface area.

Renewal Approval Duration: 6 months

References:

1. Cerdelga [package insert]. Waterford, Ireland: Genzyme Corp; August 2014.
2. Cerezyme [package insert]. Genzyme Corporation, Cambridge, MA; April 02142
3. Elelyso [package insert]. New York, NY: Pfizer, Inc; December 2016.
4. Vpriv [package insert]. Shire Human Genetic Therapies, Inc., Lexington, MA; April 2015
5. National Gaucher Foundation website: https://www.gaucherdisease.org/ Accessed August 27, 2019
6. Clinical Pharmacology® Gold Standard Series [Internet database]. Tampa FL. Elsevier 2016. Updated periodically
7. National Center for Advancing Translational Sciences: Genetic and Rare Diseases Information Center (GARD). Gaucher disease type 3. National Institute of Health (NIH). Available at: https://rarediseases.info.nih.gov/diseases/2443/gaucher-disease-type-3. Accessed September 11, 2019.
8. National Organization for Rare Disorders. Gaucher Disease. Available at https://rarediseases.org/physicianguide/gaucher-disease/. Accessed September 11, 2019.
9. Kaplan P, et al. Revised recommendations for the management of Gaucher disease in children. Eur J Pediatr (2013) 172:447-458
10. Schiffmann R, et al. Randomized, Controlled Trial of Miglustat in Gaucher's Disease Type 3. Ann Neurol. 2008 Nov; 64(5): 514–522. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2605167/. Accessed September 12, 2019.