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5.75.031

Section:	Prescription Drugs	**Effective Date:**	October 1, 2024
Subsection:	Neuromuscular Drugs	**Original Policy Date:**	January 20, 2020
Subject:	Vyondys 53	**Page:**	1 of 6

Last Review Date: September 6, 2024

Vyondys 53

Description

Vyondys 53 (golodirsen)

Background
Vyondys 53 (golodirsen) is an antisense oligonucleotide indicated for the treatment of Duchenne muscular dystrophy (DMD) designed to bind to exon 53 of dystrophin pre-mRNA resulting in exclusion of this exon during mRNA processing in patients with genetic mutations that are amenable to exon 53 skipping. Exon 53 skipping is intended to allow for production of an internally truncated dystrophin protein in patients with genetic mutations that are amenable to exon 53 skipping (1).

Regulatory Status
FDA-approved indication: Vyondys 53 is an antisense oligonucleotide indicated for the treatment of Duchenne muscular dystrophy (DMD) in patients who have a confirmed mutation of the DMD gene that is amenable to exon 53 skipping (1).

Hypersensitivity reactions during and after administration of Vyondys 53 have occurred. Clinical manifestations may include generalized rash, rash, pyrexia, pruritus, urticaria, dermatitis, and skin exfoliation. If a hypersensitivity reaction occurs, institute appropriate medical treatment and consider slowing the infusion or interrupting the Vyondys 53 therapy (1).

Renal toxicity, including potentially fatal glomerulonephritis, has been observed after administration of some antisense oligonucleotides. Measurement of glomerular filtration rate prior to initiation of Vyondys 53 and monitoring for renal toxicity during treatment is

recommended. No specific dosage adjustments can be recommended for DMD patients with renal impairment based on estimated glomerular filtration rate, due to the effect of reduced skeletal muscle mass on creatinine measurements in DMD patients. Patients with known renal function impairment should be closely monitored during treatment (1).

Monitoring motor changes in patients with DMD requires functional evaluation along with measurement of muscle strength. The need for a reliable outcome measure in diseases of rapid deterioration such as DMD has led to the use of motor functional tests. In a large, multicenter, international clinical trial, the six minute walk test (6MWT) proved to be feasible and highly reliable. Also used are the Motor Function Measure (MFM) and North Star Ambulatory Assessment (NSAA) to help predict loss of ambulation 1 year before its occurrence in order to allow time to adapt rehabilitation, change the patient's environment, and consider acquisition of assistive aids or the use of medications (2-4).

Vyondys 53 is indicated for patients who have a confirmed mutation of the *DMD* gene that is amenable to exon 53 skipping, including pediatric patients. There is no experience with the use of Vyondys 53 in DMD patients 65 years of age or older (1).

Related policies
Agamree, Amondys 45, Duvyzat, Elevidys, Emflaza, Exondys 51, Viltepso

Policy

This policy statement applies to clinical review performed for pre-service (Prior Approval, Precertification, Advanced Benefit Determination, etc.) and/or post-service claims.

Vyondys 53 may be considered **medically necessary** if the conditions indicated below are met.

Vyondys 53 may be considered **investigational** for all other indications.

Prior-Approval Requirements

Age 20 years of age or younger

Diagnosis

Patient must have the following:

Duchenne muscular dystrophy (DMD)

AND ALL of the following:

1. Confirmed mutation of the DMD gene that is amenable to exon 53 skipping
2. Prescribed by or in consultation with a neurologist specializing in DMD
3. Prescriber agrees to measure glomerular filtration rate prior to initiation of therapy and monitor for renal toxicity during treatment
4. Patient will be advised to monitor for hypersensitivity reactions
5. Obtain a baseline muscle strength score from **ONE** of the following:
   a. 6-minute walk test (6MWT)
   b. North Star ambulatory assessment (NSAA)
   c. Motor Function Measure (MFM)
6. **NO** concurrent therapy with another exon skipping therapy for DMD (see Appendix 1)

Prior – Approval *Renewal* Requirements

Age 20 years of age or younger

Diagnosis

Patient must have the following:

Duchenne muscular dystrophy (DMD)

AND ALL of the following:

1. Prescriber agrees to monitor for renal toxicity during treatment
2. Patient will be advised to monitor for hypersensitivity reactions
3. Patient has had an improvement from baseline in **ONE** of the following:
   a. 6-minute walk test (6MWT)
   b. North Star ambulatory assessment (NSAA)
   c. Motor Function Measure (MFM)
4. **NO** concurrent therapy with another exon skipping therapy for DMD (see Appendix 1)

Policy Guidelines

Pre - PA Allowance

None

Prior - Approval Limits

Duration 12 months

Prior – Approval *Renewal* Limits

Duration 24 months

Rationale

Summary

Vyondys 53 (golodirsen) is an antisense oligonucleotide indicated for the treatment of Duchenne muscular dystrophy (DMD) in patients who have a confirmed mutation of the DMD gene that is amenable to exon 53 skipping. Hypersensitivity reactions during and after administration of Vyondys 53 have occurred. Renal toxicity, including potentially fatal glomerulonephritis, has been observed after administration of some antisense oligonucleotides. There is no experience with the use of Vyondys 53 in DMD patients 65 years of age or older (1).

Prior approval is required to ensure the safe, clinically appropriate, and cost-effective use of Vyondys 53 while maintaining optimal therapeutic outcomes.

References

1. Vyondys 53 [package insert]. Cambridge, MA: Sarepta Therapeutics, Inc; June 2024.
2. Mcdonald C, Henricson E, et al. The 6-Minute Walk test and Other Clinical Endpoints in Duchenne Muscular Dystrophy: Reliability, Concurrent Validity, and Minimal Clinically Important Differences from a Multicenter Study. Muscle Nerve. 2013 Sep; 48(3): 357‑368.
3. Mcdonald C, Henricson E, et al. The 6-Minute Walk test and Other Endpoints in Duchenne Muscular Dystrophy: Longitudinal Natural History Observations Over 48 weeks from a Multicenter Study. Muscle Nerve. 2013 Sep; 48(3): 343‑356.
4. Vuillerot C, Girardot F, et al. Monitoring changes and predicting loss of ambulation in Duchenne muscular dystrophy with the Motor Function Measure. *Developmental Medicine & Child Neurology* 2010, 52: 60–65.

Policy History

Date	Action
January 2020	Addition to PA
March 2020	Annual review
June 2020	Annual review. Changed age requirement from 65 years of age and younger to 20 years of age and younger per SME
December 2020	Annual review and reference update. Per FEP, addition of requirement of no concurrent therapy with another exon skipping therapy for DMD
June 2021	Annual editorial review and reference update. Updated Appendix 1
December 2022	Annual review. Changed policy number to 5.75.031
December 2023	Annual review
June 2024	Annual review
September 2024	Annual editorial review and reference update

Keywords

This policy was approved by the FEP® Pharmacy and Medical Policy Committee on September 6, 2024 and is effective on October 1, 2024.

Appendix 1 - List of Exon Skipping Therapies for Duchenne Muscular Dystrophy (DMD)

Generic Name	Brand Name
casimersen	Amondys 45
eteplirsen	Exondys 51
golodirsen	Vyondys 53
viltolarsen	Viltepso