VYONDYS 53- golodirsen injection
Sarepta Therapeutics, Inc.

HIGHLIGHTS OF PRESCRIBING INFORMATION
These highlights do not include all the information needed to use VYONDYS 53 safely and effectively. See full prescribing information for VYONDYS 53.

VYONDYS 53 (golodirsen) injection, for intravenous use
Initial U.S. Approval: 2019

RECENT MAJOR CHANGES

Dosage and Administration (2.4)	06/2024
Contraindications (4)	06/2024
Warnings and Precautions (5.1)	06/2024

INDICATIONS AND USAGE

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. This indication is approved under accelerated approval based on an increase in dystrophin production in skeletal muscle observed in patients treated with VYONDYS 53. Continued approval for this indication may be contingent upon verification of a clinical benefit in confirmatory trials. (1)

DOSAGE AND ADMINISTRATION

- Serum cystatin C, urine dipstick, and urine protein-to-creatinine ratio should be measured before starting VYONDYS 53 (2.1)
- 30 milligrams per kilogram once weekly (2.2)
- Administer as an intravenous infusion over 35 to 60 minutes via an in-line 0.2 micron filter (2.2, 2.4)
- Dilution required prior to administration (2.3)

DOSAGE FORMS AND STRENGTHS

Injection: 100 mg/2 mL (50 mg/mL) in a single-dose vial (3)

CONTRAINDICATIONS

VYONDYS 53 is contraindicated in patients with serious hypersensitivity to golodirsen or to any of the inactive ingredients in VYONDYS 53. (4, 5.1)

WARNINGS AND PRECAUTIONS

- Hypersensitivity Reactions: Hypersensitivity reactions, including anaphylaxis, rash, pyrexia, pruritus, urticaria, dermatitis, and skin exfoliation have occurred in patients who were treated with VYONDYS 53. If a hypersensitivity reaction occurs, institute appropriate medical treatment and consider slowing the infusion, interrupting or discontinuing the VYONDYS 53 therapy. (2.3, 4, 5.1)
- Kidney Toxicity: Based on animal data, may cause kidney toxicity. Kidney function should be monitored; creatinine may not be a reliable measure of renal function in DMD patients. (5.2, 13.2)

ADVERSE REACTIONS

The most common adverse reactions (incidence ≥20% and higher than placebo) were headache, pyrexia, fall, abdominal pain, nasopharyngitis, cough, vomiting, and nausea. (6.1)
To report SUSPECTED ADVERSE REACTIONS, contact Sarepta Therapeutics, Inc. at 1-888-SAREPTA (1-888-727-3782) or FDA at 1-800-FDA-1088 or *www.fda.gov/medwatch*.

See 17 for PATIENT COUNSELING INFORMATION.

Revised: 6/2024

FULL PRESCRIBING INFORMATION: CONTENTS*

* Sections or subsections omitted from the full prescribing information are not listed.

FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

VYONDYS 53 is 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. This indication is approved under accelerated approval based on an increase in dystrophin production in skeletal muscle observed in patients treated with VYONDYS 53 *[see Clinical Studies (14)]*. Continued approval for this indication may be contingent upon verification of a clinical benefit in confirmatory trials.

2 DOSAGE AND ADMINISTRATION

2.1 Monitoring to Assess Safety

Serum cystatin C, urine dipstick, and urine protein-to-creatinine ratio should be measured before starting VYONDYS 53. Consider measurement of glomerular filtration rate prior to initiation of VYONDYS 53. Monitoring for kidney toxicity during treatment is recommended. Obtain the urine samples prior to infusion of VYONDYS 53 or at least 48 hours after the most recent infusion *[see Warnings and Precautions (5.2)]*.

2.2 Dosing Information

The recommended dosage of VYONDYS 53 is 30 milligrams per kilogram administered once weekly as a 35 to 60-minute intravenous infusion via an in-line 0.2 micron filter.

If a dose of VYONDYS 53 is missed, it may be administered as soon as possible after the scheduled dose.

2.3 Preparation Instructions

VYONDYS 53 is supplied in single-dose vials as a preservative-free concentrated solution that requires dilution prior to administration. Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration, whenever solution and container permit. Use aseptic technique.

a. Calculate the total dose of VYONDYS 53 to be administered based on the patient's weight and the recommended dose of 30 milligrams per kilogram. Determine the volume of VYONDYS 53 needed and the correct number of vials to supply the full calculated dose.
b. Allow the vials to warm to room temperature. Mix the contents of each vial by gently inverting 2 or 3 times. Do not shake.
c. Visually inspect each vial of VYONDYS 53. The solution is a clear to slightly opalescent, colorless liquid, and may contain trace amounts of small, white to off-white amorphous particles. Do not use if the solution in the vials is cloudy, discolored or contains extraneous particulate matter other than trace amounts of small, white to off-white amorphous particles.
d. With a syringe fitted with a 21-gauge or smaller bore non-coring needle, withdraw the calculated volume of VYONDYS 53 from the appropriate number of vials.
e. Dilute the withdrawn VYONDYS 53 in 0.9% Sodium Chloride Injection, USP, to make a total volume of 100 to150 mL. Gently invert 2 to 3 times to mix. Do not shake. Visually inspect the diluted solution. Do not use if the solution is cloudy, discolored or contains extraneous particulate matter other than trace amounts of small, white to off-white amorphous particles.
f. Administer the diluted solution via an in-line 0.2 micron filter.
g. VYONDYS 53 contains no preservatives and should be administered immediately after dilution. Complete infusion of diluted VYONDYS 53 within 4 hours of dilution. If immediate use is not possible, the diluted product may be stored for up to 24 hours at 2°C to 8°C (36°F to 46°F). Do not freeze. Discard unused VYONDYS 53.

2.4 Administration Instructions

Application of a topical anesthetic cream to the infusion site prior to administration of VYONDYS 53 may be considered.

VYONDYS 53 is administered via intravenous infusion. Flush the intravenous access line with 0.9% Sodium Chloride Injection, USP, prior to and after infusion.

Infuse the diluted VYONDYS 53 over 35 to 60 minutes via an in-line 0.2 micron filter. Do not mix other medications with VYONDYS 53 or infuse other medications concomitantly via the same intravenous access line with VYONDYS 53.

If a hypersensitivity reaction occurs, consider slowing the infusion, interrupting, or discontinuing the VYONDYS 53 therapy *[see Contraindications (4), Warnings and Precautions (5.1,) and Adverse Reactions (6.1)]*.

3 DOSAGE FORMS AND STRENGTHS

VYONDYS 53 is a clear to slightly opalescent, colorless liquid, and may contain trace amounts of small, white to off-white amorphous particles, and available as:

- Injection: 100 mg/2 mL (50 mg/mL) solution in a single-dose vial

4 CONTRAINDICATIONS

VYONDYS 53 is contraindicated in patients with a serious hypersensitivity reaction to golodirsen or to any of the inactive ingredients in VYONDYS 53. Anaphylaxis has occurred in patients receiving VYONDYS 53 *[see Warnings and Precautions (5.1)]*.

5 WARNINGS AND PRECAUTIONS

5.1 Hypersensitivity Reactions

Hypersensitivity reactions, including anaphylaxis, rash, pyrexia, pruritus, urticaria, dermatitis, and skin exfoliation have occurred in VYONDYS 53-treated patients, some requiring treatment. If a hypersensitivity reaction occurs, institute appropriate medical treatment and consider slowing the infusion, interrupting, or discontinuing the VYONDYS 53 therapy and monitor until the condition resolves *[see Dosage and Administration (2.4)].* VYONDYS 53 is contraindicated in patients with a history of a serious hypersensitivity reaction to golodirsen or to any of the inactive ingredients in VYONDYS 53 *[see Contraindications (4)].*

5.2 Kidney Toxicity

Kidney toxicity was observed in animals who received golodirsen *[see Use in Specific Populations (8.4)]*. Although kidney toxicity was not observed in the clinical studies with VYONDYS 53, the clinical experience with VYONDYS 53 is limited, and kidney toxicity, including potentially fatal glomerulonephritis, has been observed after administration of some antisense oligonucleotides. Kidney function should be monitored in patients taking VYONDYS 53. Because of the effect of reduced skeletal muscle mass on creatinine measurements, creatinine may not be a reliable measure of kidney function in DMD patients. Serum cystatin C, urine dipstick, and urine protein-to-creatinine ratio should be measured before starting VYONDYS 53. Consider also measuring glomerular filtration rate using an exogenous filtration marker before starting VYONDYS 53. During treatment, monitor urine dipstick every month, and serum cystatin C and urine protein-to-creatinine ratio every three months. Only urine expected to be free of excreted

VYONDYS 53 should be used for monitoring of urine protein. Urine obtained on the day of VYONDYS 53 infusion prior to the infusion, or urine obtained at least 48 hours after the most recent infusion, may be used. Alternatively, use a laboratory test that does not use the reagent pyrogallol red, as this reagent has the potential to cross react with any VYONDYS 53 that is excreted in the urine and thus lead to a false positive result for urine protein.

If a persistent increase in serum cystatin C or proteinuria is detected, refer to a pediatric nephrologist for further evaluation.

6 ADVERSE REACTIONS

The following serious adverse reactions are described below and elsewhere in the labeling:

- Hypersensitivity Reactions *[see Warnings and Precautions (5.1)]*

6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

In the VYONDYS 53 clinical development program, 58 patients received at least one intravenous dose of VYONDYS 53, ranging between 4 mg/kg (0.13 times the recommended dosage) and 30 mg/kg (the recommended dosage). All patients were male and had genetically confirmed Duchenne muscular dystrophy. Age at study entry was 6 to 13 years. Most (86%) patients were Caucasian.

VYONDYS 53 was studied in 2 double-blind, placebo-controlled studies.

In Study 1 Part 1, patients were randomized to receive once-weekly intravenous infusions of VYONDYS 53 (n=8) in four increasing dose levels from 4 mg/kg to 30 mg/kg or placebo (n=4), for at least 2 weeks at each level. All patients who participated in Study 1 Part 1 (n=12) were continued into Study 1 Part 2, an open-label extension, during which they received VYONDYS 53 at a dose of 30 mg/kg IV once weekly *[see Clinical Studies (14)]*.

In Study 2, patients received VYONDYS 53 (n=33) 30 mg/kg or placebo (n=17) IV once weekly for up to 96 weeks, after which all patients received VYONDYS 53 at a dose of 30 mg/kg.

Adverse reactions observed in at least 20% of treated patients in the placebo-controlled sections of Studies 1 and 2 are shown in Table 1.

Table 1: Adverse Reactions That Occurred in At Least 20% of VYONDYS 53-Treated Patients and at a Rate Greater than Placebo in Studies 1 and 2

Adverse Reaction	VYONDYS 53 (N = 41) %	Placebo (N = 21) %
Headache	41	10
Pyrexia	41	14
Fall	29	19

Abdominal pain	27	10
Nasopharyngitis	27	14
Cough	27	19
Vomiting	27	19
Nausea	20	10

Other adverse reactions that occurred at a frequency greater than 5% of VYONDYS 53-treated patients and at a greater frequency than placebo were: administration site pain, back pain, pain, diarrhea, dizziness, ligament sprain, contusion, influenza, oropharyngeal pain, rhinitis, skin abrasion, ear infection, seasonal allergy, tachycardia, catheter site related reaction, constipation, and fracture.

Hypersensitivity reactions have occurred in patients treated with VYONDYS 53 *[see Warnings and Precautions (5.1)].*

6.2 Postmarketing Experience

The following adverse reactions have been identified during postapproval use of VYONDYS 53. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

Immune System Disorders: anaphylaxis *[see Contraindications (4) and Warnings and Precautions (5.1)]*

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Risk Summary

There are no human or animal data available to assess the use of VYONDYS 53 during pregnancy. In the U.S. general population, major birth defects occur in 2 to 4% and miscarriage occurs in 15 to 20% of clinically recognized pregnancies.

8.2 Lactation

Risk Summary

There are no human or animal data to assess the effect of VYONDYS 53 on milk production, the presence of golodirsen in milk, or the effects of VYONDYS 53 on the breastfed infant.

The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for VYONDYS 53 and any potential adverse effects on the breastfed infant from VYONDYS 53 or from the underlying maternal condition.

8.4 Pediatric Use

VYONDYS 53 is 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, including pediatric patients *[see Clinical Studies (14)].*

Intravenous administration of golodirsen (0, 100, 300, or 900 mg/kg) to juvenile male rats once weekly for 10 weeks (postnatal days 14 to 77) did not result in postnatal developmental (e.g., neurobehavioral, immune function, or male reproductive) toxicity. However, at the highest dose tested (900 mg/kg/week), golodirsen resulted in the death of animals because of renal impairment or failure. In surviving animals (including one animal at the lowest dose tested), there was a dose-dependent increase in the incidence and severity of renal tubular effects (including degeneration/regeneration, fibrosis, vacuolation, and dilatation), which correlated with changes in clinical pathology parameters, reflecting a dose-dependent impairment of renal function. In addition, decreases in bone area, mineral content, and mineral density were observed at the highest dose tested (900 mg/kg week) but with no effect on bone growth. A no-effect dose for renal toxicity was not identified; the lowest dose tested (100 mg/kg/week) was associated with plasma exposures (AUC) approximately 2.5 times that in humans at the recommended human dose of 30 mg/kg/week.

8.5 Geriatric Use

DMD is largely a disease of children and young adults; therefore, there is no geriatric experience with VYONDYS 53.

8.6 Patients with Renal Impairment

Renal clearance of golodirsen is reduced in non-DMD adults with renal impairment, based on estimated glomerular filtration rate calculated using the Modification of Diet and Renal Disease (MDRD) equation *[see Clinical Pharmacology (12.3)].* However, because of the effect of reduced skeletal muscle mass on creatinine measurements in DMD patients, no specific dosage adjustment can be recommended for DMD patients with renal impairment based on estimated glomerular filtration rate. Patients with known renal function impairment should be closely monitored during treatment with VYONDYS 53.

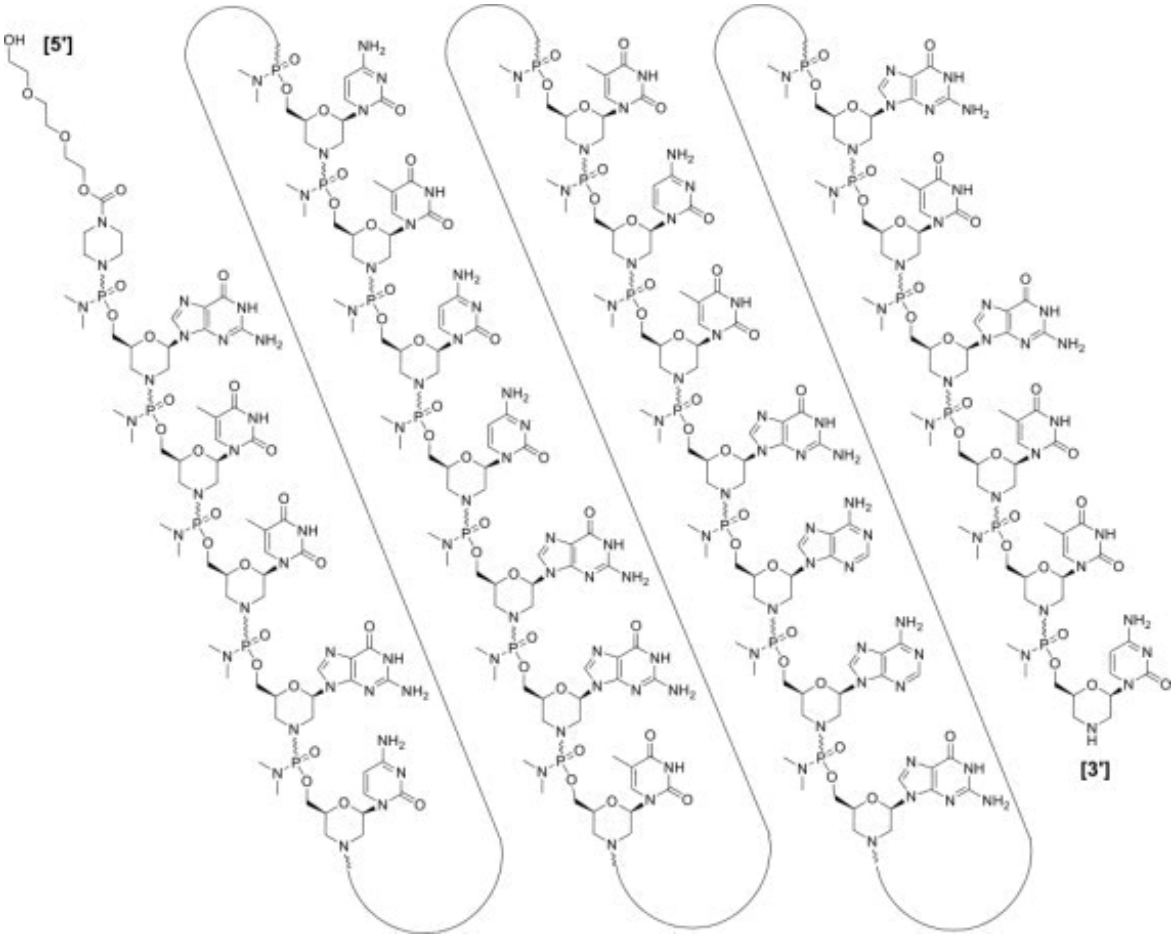
11 DESCRIPTION

VYONDYS 53 (golodirsen) injection is a sterile, aqueous, preservative-free, concentrated solution for dilution prior to intravenous administration. VYONDYS 53 is a clear to slightly opalescent, colorless liquid, and may contain trace amounts of small, white to off-white amorphous particles. VYONDYS 53 is supplied in single-dose vials containing 100 mg golodirsen (50 mg/mL). VYONDYS 53 is formulated as an isotonic phosphate buffered saline solution with an osmolality of 260 to 320 mOSM and a pH of 7.5. Each milliliter of VYONDYS 53 contains: 50 mg golodirsen; 0.2 mg potassium chloride; 0.2 mg potassium phosphate monobasic; 8 mg sodium chloride; and 1.14 mg sodium phosphate dibasic, anhydrous, in water for injection. The product may contain hydrochloric acid or sodium hydroxide to adjust pH.

Golodirsen is an antisense oligonucleotide of the phosphorodiamidate morpholino oligomer (PMO) subclass. PMOs are synthetic molecules in which the five-membered ribofuranosyl rings found in natural DNA and RNA are replaced by a six-membered morpholino ring. Each morpholino ring is linked through an uncharged phosphorodiamidate moiety rather than the negatively charged phosphate linkage that is present in natural DNA and RNA. Each phosphorodiamidate morpholino subunit contains one of the heterocyclic bases found in DNA (adenine, cytosine, guanine, or thymine). Golodirsen contains 25 linked subunits. The sequence of bases from the 5' end to 3' end

is GTTGCCTCCGGTTCTGAAGGTGTTC. The molecular formula of golodirsen is $C_{305}H_{481}N_{138}O_{112}P_{25}$ and the molecular weight is 8647.28 daltons.

The structure of golodirsen is:



12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Golodirsen is 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 *[see Clinical Studies (14)].*

12.2 Pharmacodynamics

After treatment with VYONDYS 53, all patients evaluated (n=25) in Study 1 Part 2 *[see Clinical Studies (14)]* had an increase in skipping of exon 53 demonstrated by reverse transcription polymerase chain reaction (RT-PCR), compared to baseline.

In Study 1 Part 2 *[see Clinical Studies (14)],* dystrophin levels as assessed by the Sarepta western blot assay increased from 0.10% (SD 0.07) of normal at baseline to 1.02% (SD 1.03) of normal after 48 weeks of treatment with VYONDYS 53. The mean change from baseline in dystrophin after 48 weeks of treatment with VYONDYS 53 was 0.92% (SD

1.01) of normal levels ($p<0.001$); the median change from baseline was 0.88%. This increase in dystrophin protein expression positively correlated with the level of exon skipping. Dystrophin levels assessed by western blot can be meaningfully influenced by differences in sample processing, analytical technique, reference materials, and quantitation methodologies. Therefore, comparing dystrophin results from different assay protocols will require a standardized reference material and additional bridging studies.

Correct localization of truncated dystrophin to the sarcolemma in muscle fibers of patients treated with golodirsen was demonstrated by immunofluorescence staining.

12.3 Pharmacokinetics

The pharmacokinetics of golodirsen was evaluated in DMD patients following administration of intravenous doses ranging from 4 mg/kg/week to 30 mg/kg/week (i.e., recommended dosage). Golodirsen exposure increased proportionally with dose, with minimal accumulation with once-weekly dosing. Inter-subject variability (as %CV) for C_{max} and AUC ranged from 38% to 72%, and 34% to 44%, respectively.

Distribution

Steady-state volume of distribution was similar between DMD patients and healthy subjects. The mean golodirsen steady-state volume of distribution was 668 mL/kg (%CV=32.3) at a dose of 30 mg/kg. Golodirsen plasma protein binding ranged from 33% to 39% and is not concentration dependent.

Elimination

Golodirsen elimination half-life (SD) was 3.4 (0.6) hours, and plasma clearance was 346 mL/hr/kg at the 30 mg/kg dose.

Metabolism

Golodirsen is metabolically stable. No metabolites were detected in plasma or urine.

Excretion

Golodirsen is mostly excreted unchanged in the urine. The elimination half-life ($t_{1/2}$) was 3.4 hours.

Specific Populations

Age:

The pharmacokinetics of golodirsen have been evaluated in male pediatric DMD patients. There is no experience with the use of VYONDYS 53 in DMD patients 65 years of age or older.

Sex:

Sex effects have not been evaluated; VYONDYS 53 has not been studied in female patients.

Race:

The potential impact of race is not known because 92% of the patients in studies were Caucasians.

Patients with Renal Impairment:

The effect of renal impairment on the pharmacokinetics of golodirsen was evaluated in non-DMD subjects aged 41 to 65 years with Stage 2 chronic kidney disease (CKD) (n=8, estimated glomerular filtration rate (eGFR) ≥60 and <90 mL/min/1.73 m^2) or Stage 3 CKD (n=8, eGFR ≥30 and <60 mL/min/1.73 m^2) and matched healthy subjects (n=8, eGFR ≥90 mL/min/1.73 m^2). Subjects received a single 30 mg/kg IV dose of golodirsen.

In subjects with Stage 2 or Stage 3 CKD, exposure (AUC) increased approximately 1.2-fold and 1.9-fold, respectively. There was no change in the C_{max} in subjects with Stage 2 CKD; in subjects with Stage 3 CKD, there was a 1.2-fold increase in C_{max} compared with subjects with normal renal function. The effect of Stage 4 or Stage 5 CKD on golodirsen pharmacokinetics and safety has not been studied.

Estimated GFR values derived from MDRD equations and the threshold definitions for various CKD stages in otherwise healthy adults would not be generalizable to pediatric patients with DMD. Therefore, no specific dosage adjustment can be recommended for patients with renal impairment *[see Use in Specific Populations (8.6)].*

Patients with Hepatic Impairment:

VYONDYS 53 has not been studied in patients with hepatic impairment.

Drug Interaction Studies

Golodirsen did not inhibit CYP1A2, CYP2B6, CYP2C8, CYP2C9, CYP2C19, CYP2D6, or CYP3A4/5 *in vitro.* Golodirsen was a weak inducer of CYP1A2 and did not induce CYP2B6 or CYP3A4. Golodirsen was not metabolized by human hepatic microsomes and was not a substrate or strong inhibitor of any of the key human drug transporters tested (OAT1, OAT3, OCT2, OATP1B1, MATE1, P-gp, BCRP, and MRP2, OATP1B3 and MATE2-K). Based on *in vitro* data, golodirsen has a low potential for drug-drug interactions in humans.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Carcinogenesis

Administration of golodirsen to male transgenic (Tg.rasH2) mice (0, 100, 300, or 1000 mg/kg) weekly for 26 weeks by subcutaneous injection and to male rats (0, 30, 100, or 300 mg/kg) weekly for up to 102 weeks by intravenous injection resulted in no increase in neoplasms.

Mutagenesis

Golodirsen was negative in *in vitro* (bacterial reverse mutation and chromosomal aberration in CHO cells) and *in vivo* (mouse bone marrow micronucleus) assays.

Impairment of Fertility

Fertility studies in animals were not conducted with golodirsen. No effects of golodirsen on the male reproductive system were observed following weekly subcutaneous administration (0, 120, 300, or 600 mg/kg to male mice or weekly intravenous administration (0, 80, 200, or 400 mg/kg) to male monkeys. Plasma exposure (AUC) at the highest doses tested in mouse and monkey are approximately 10 and 45 times that in humans at the recommended weekly intravenous dose of 30 mg/kg.

13.2 Animal Toxicology and/or Pharmacology

Kidney toxicity was observed in studies in male mice and rats; findings in urinary bladder were observed in male mice.

In male mice, golodirsen was administered weekly for 12 weeks by intravenous injection (0, 12, 120, or 960 mg/kg) or for 26 weeks by subcutaneous injection (0, 120, 300, or 600 mg/kg). In the 12-week study, microscopic findings in kidney (tubular dilatation, basophilic or eosinophilic casts, vacuolation), correlated with increases in serum markers of renal function (e.g., urea nitrogen, creatinine), were observed primarily at the highest dose tested; hypertrophy of the transitional epithelium of the ureter or urinary bladder was observed at all doses. In the 26-week study, renal tubular degeneration and degeneration of the transitional epithelium of the urinary bladder were observed at all doses.

In male rats, intravenous administration of golodirsen (0, 60, 100, 300, or 600 mg/kg) weekly for 13 weeks resulted in tubular degeneration at all but the lowest dose tested; at the high dose, the microscopic changes were accompanied by increases in serum urea nitrogen.

In male monkeys, intravenous administration of golodirsen (0, 80, 200, or 400 mg/kg) weekly for 39 weeks resulted in microscopic changes in kidney (basophilia, dilatation, or mononuclear cell infiltration) at all doses, which correlated with increases in serum markers of renal function (urea nitrogen, creatinine) at the highest dose tested.

14 CLINICAL STUDIES

The effect of VYONDYS 53 on dystrophin production was evaluated in one study in DMD patients with a confirmed mutation of the *DMD* gene that is amenable to exon 53 skipping (Study 1; NCT02310906).

Study 1 Part 1 was a double-blind, placebo-controlled, dose-titration study in 12 DMD patients. Patients were randomized 2:1 to receive VYONDYS 53 or matching placebo. VYONDYS 53-treated patients received four escalating dose levels, ranging from 4 mg/kg/week (less than the recommended dosage) to 30 mg/kg/week, by intravenous infusion for 2 weeks at each dose level.

Study 1 Part 2 was a 168-week, open-label study assessing the efficacy and safety of VYONDYS 53 at a dose of 30 mg/kg/week in the 12 patients enrolled in Part 1, plus 13 additional treatment-naive patients with DMD amenable to exon 53 skipping. At study entry (either in Part 1 or Part 2), patients had a median age of 8 years and were on a stable dose of corticosteroids for at least 6 months. Efficacy was assessed based on change from baseline in the dystrophin protein level (measured as % of the dystrophin level in healthy subjects, i.e., % of normal) at Week 48 of Part 2. Muscle biopsies were obtained at baseline prior to treatment and at Week 48 of Part 2 in all VYONDYS 53-treated patients (n=25), and were analyzed for dystrophin protein level by Sarepta western blot. Mean dystrophin levels increased from 0.10% (SD 0.07) of normal at baseline to 1.02% (SD 1.03) of normal by Week 48 of Study 1 Part 2, with a mean change in dystrophin of 0.92% (SD 1.01) of normal levels ($p<0.001$); the median change from baseline was 0.88%.

Individual patient dystrophin levels from Study 1 are shown in Table 2.

Table 2: Dystrophin Expression Sarepta Western Blot by Individual Patient From Study 1

Patient Number	Sarepta Western Blot % Normal Dystrophin			Patient number	Sarepta Western Blot % Normal Dystrophin		
	Baseline	Part 2 Week 48	Change from baseline		Baseline	Part 2 Week 48	Change from baseline
1	0.08	0.09	0.01	14	0.22	0.28	0.06
2	0.11	0.11	0.01	15	0.14	0.21	0.07
3	0.21	0.22	0.01	16	0.05	0.42	0.37
4	0.05	0.12	0.08	17	0.07	1.03	0.97
5	0.03	0.12	0.09	18	0.02	1.57	1.55
6	0.06	0.14	0.09	19	0.12	1.17	1.05
7	0.12	0.37	0.25	20	0.03	1.72	1.69
8	0.11	1.06	0.95	21	0.11	1.77	1.66
9	0.06	0.54	0.48	22	0.31	4.30	3.99
10	0.05	0.97	0.92	23	0.11	0.36	0.25
11	0.06	1.55	1.49	24	0.03	0.91	0.88
12	0.07	1.91	1.84	25	0.07	1.29	1.22
13	0.10	3.25	3.15				

16 HOW SUPPLIED/STORAGE AND HANDLING

16.1 How Supplied

VYONDYS 53 injection is supplied in single dose vials. The solution is a clear to slightly opalescent, colorless liquid, and may contain trace amounts of small, white to off-white amorphous particles.

- Single-dose vials containing 100 mg/2mL (50 mg/mL) NDC 60923-465-02

16.2 Storage and Handling

Store VYONDYS 53 at 2°C to 8°C (36°F to 46°F). Do not freeze. Store in original carton until ready for use to protect from light.

17 PATIENT COUNSELING INFORMATION

Hypersensitivity Reactions

Advise patients and/or caregivers that hypersensitivity reactions, including anaphylaxis, rash, pyrexia, pruritus, urticaria, dermatitis, and skin exfoliation have occurred in patients who were treated with VYONDYS 53. Instruct them to seek immediate medical care should they experience signs and symptoms of hypersensitivity *[see Warnings and Precautions (5.1)]*.

Kidney Toxicity

Inform patients nephrotoxicity has occurred with drugs similar to VYONDYS 53. Advise patients of the importance of monitoring for kidney toxicity by their healthcare providers during treatment with VYONDYS 53 *[see Warnings and Precautions (5.2)]*.

Manufactured for:
Sarepta Therapeutics, Inc.
Cambridge, MA 02142 USA

Principal Display Panel - Carton Label

NDC: 60923-465-02

Rx Only

VYONDYS **53**
(golodirsen) Injection

100 mg/2 mL

(50 mg/mL)

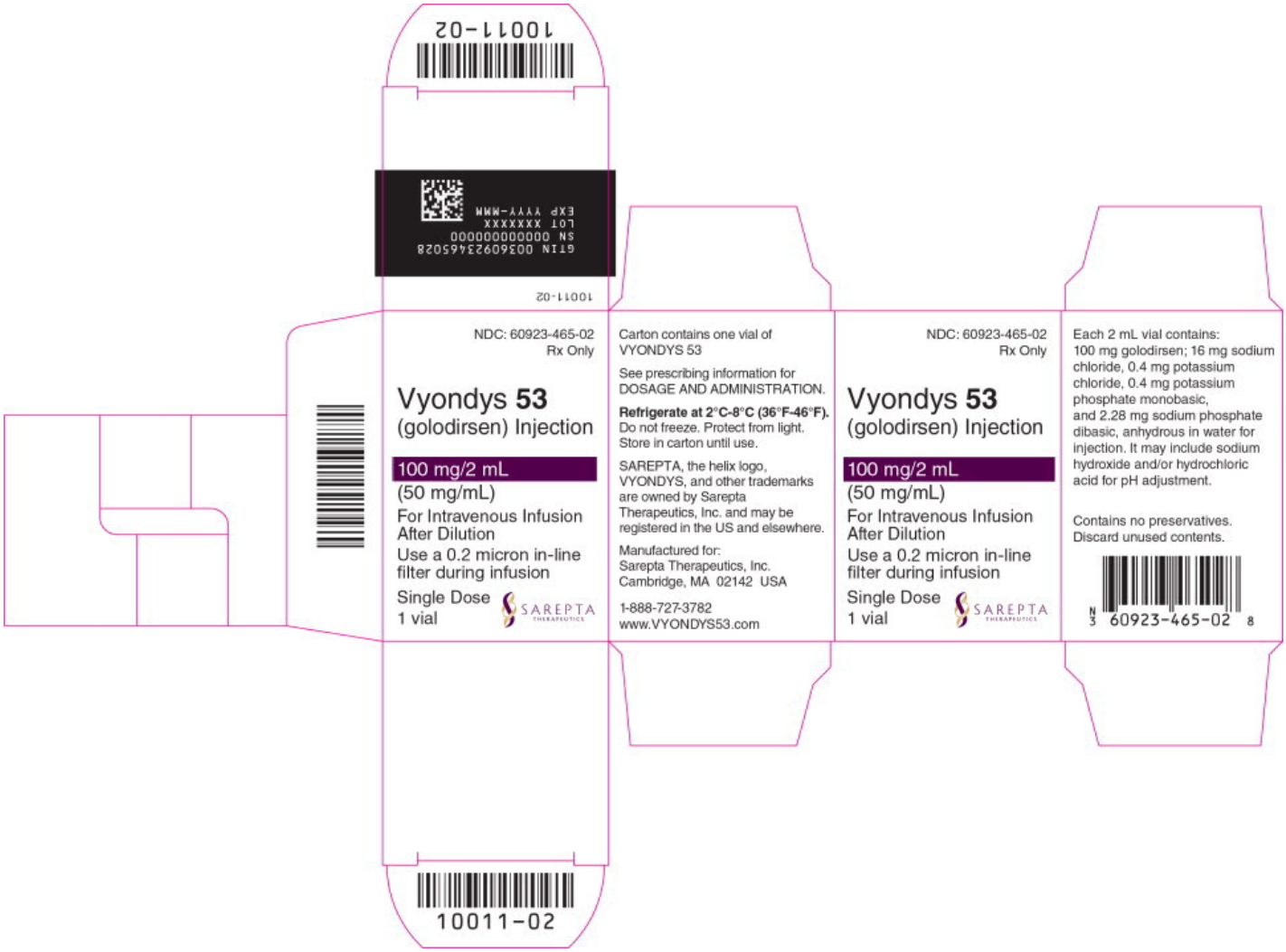
For Intravenous Infusion
After Dilution

Use a 0.2 micron in-line
filter during infusion

Single Dose

1 vial

SAREPTA
THERAPEUTICS



Principal Display Panel - Vial Label

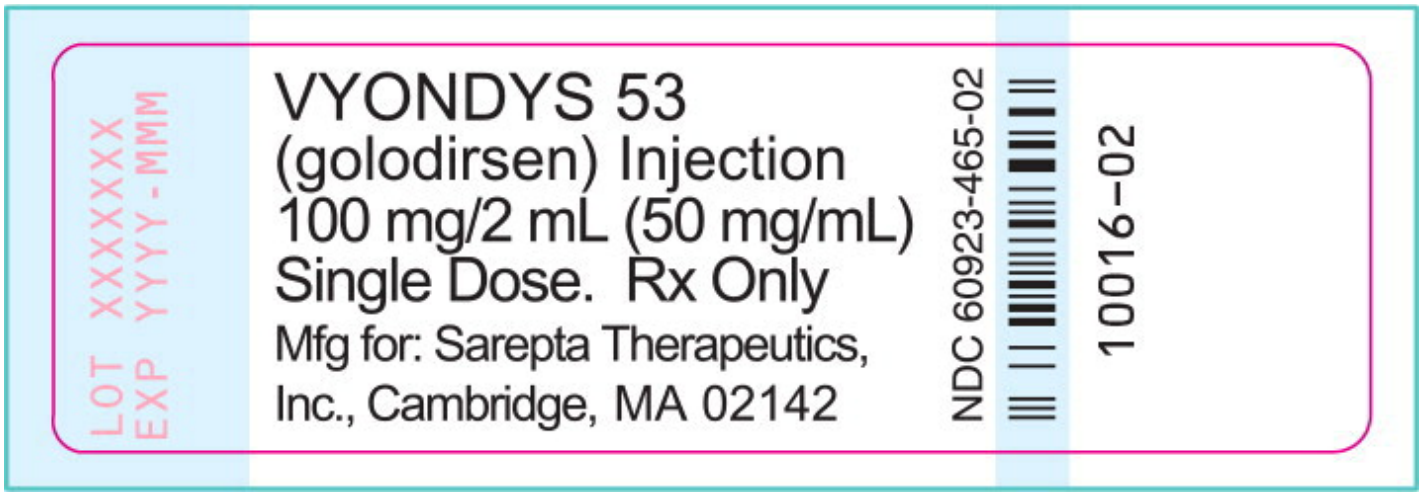
NDC: 60923-465-02

VYONDYS 53
(golodirsen) Injection

100 mg/2 mL (50 mg/mL)

Single Dose. Rx Only

Mfg for: Sarepta Therapeutics,
Inc., Cambridge, MA 02142



VYONDYS 53

golodirsen injection

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:60923-465
Route of Administration	INTRAVENOUS		

Active Ingredient/Active Moiety		
Ingredient Name	**Basis of Strength**	**Strength**
golodirsen (UNII: 033072U4MZ) (golodirsen - UNII:033072U4MZ)	golodirsen	50 mg in 1 mL

Inactive Ingredients	
Ingredient Name	**Strength**
sodium chloride (UNII: 451W47IQ8X)	
potassium chloride (UNII: 660YQ98I10)	
potassium phosphate, monobasic (UNII: 4J9FJ0HL51)	
sodium phosphate, dibasic, anhydrous (UNII: 22ADO53M6F)	
sodium hydroxide (UNII: 55X04QC32I)	
hydrochloric acid (UNII: QTT17582CB)	
water (UNII: 059QF0KO0R)	

Packaging				
#	**Item Code**	**Package Description**	**Marketing Start Date**	**Marketing End Date**
1	NDC:60923-465-02	1 in 1 CARTON	12/12/2019	
1		2 mL in 1 VIAL, SINGLE-USE; Type 0: Not a Combination Product		

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
NDA	NDA211970	12/12/2019	

Labeler - Sarepta Therapeutics, Inc. (121653406)

Revised: 3/2025 Sarepta Therapeutics, Inc.