Zolgensma® (onasemnogene abeparvovec-xioi)
(Intravenous)

Document Number: IC-0468

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I. Length of Authorization

Coverage will be provided for one dose and may not be renewed.

II. Dosing Limits

A. Quantity Limit (max daily dose) [NDC Unit]:

- 1 kit (based on weight chart below)

B. Max Units (per dose and over time) [HCPCS Unit]:

- 1 kit (based on weight chart below)

III. Initial Approval Criteria [1-7]

- Submission of medical records related to the medical necessity criteria is REQUIRED on all requests for authorizations. Records will be reviewed at the time of submission. Please provide documentation via direct upload through the PA web portal or by fax.

Coverage is provided in the following conditions:

Spinal Muscular Atrophy (SMA) † Φ

- Patient must be less than 2 years of age; **AND**
- Patient has a diagnosis of 5q spinal muscular atrophy confirmed by either bi-allelic deletion or dysfunctional point mutation of the *SMN1* gene; **AND**
- Patient must have SMA phenotype 1 confirmed by one or more of the following:
    - Patient must have 1-2 copies of the *SMN2* gene; **OR**
    - Patient has 3 copies of the *SMN2* gene in the absence of the c.859G>C single base substitution modification in exon 7; **AND**
- Patient must have a baseline anti-AAV9 antibody titer of ≤ 1:50 measured by ELISA; **AND**
- Patient does not have pre-existing hepatic insufficiency; **AND**

- Must be used concomitantly with parenteral corticosteroids (see dosage/administration below); **AND**
- Patient must not have advanced disease (complete limb paralysis, permanent ventilation support, etc.); **AND**
- Patient will not use in combination with other agents for SMA (e.g., nusinersen, risdiplam, etc.)

SMA phenotype 1 (aka Werdnig-Hoffman disease) has a natural history characterized by onset of symptoms (i.e. severe weakness) prior to 6 months of age, inability to sit without support, and an average life span of less than 2 years (in patients without prior therapy to increase SMN protein). Deficiency of SMN protein, due to homozygous deletion/mutation in the *SMN1* gene, results in loss of motor neurons in the spinal cord and brain stem manifesting clinically as atrophy and weakness. Copy number of the *SMN2* gene, which produces approximated 5-10% functional SMN protein, are positively correlated with milder phenotype.

- Approximately 80% of patients with SMA1 have 1 or 2 copies of the *SMN2* gene; approximately 20% have 3 copies (estimated percentages vary)
- The c.859G>C single base substitution modification in exon 7 of the SMN2 gene is predictive of a milder phenotype

Onasemnogene abeparvovec-xioi is a recombinant self-complementary AAV9 containing a transgene encoding the human survival motor neuron (SMN) protein.

† FDA Approved Indication(s); ‡ Compendium Recommended Indication(s); Φ Orphan Drug

IV. Renewal Criteria

Coverage cannot be renewed.

V. Dosage/Administration

Indication	Dose
SMA1	**For single-dose intravenous infusion only.** Preparing for Administration: • One day prior to Zolgensma infusion, begin administration of systemic corticosteroids equivalent to oral prednisolone at 1 mg/kg of body weight per day for a total of 30 days Zolgensma Infusion: • Administer as a single-dose intravenous infusion through a venous catheter • Administer as a slow infusion over 60 minutes • The recommended dose of Zolgensma is 1.1×10^{14} vector genomes per kilogram (vg/kg) of body weight

- Zolgensma is shipped frozen at ≤ -60 °C. Thaw prior to infusion. Store refrigerated. Must use within 14 days of receipt.
- Zolgensma is an adeno-associated virus vector-based gene therapy. Follow precautions for viral vector shedding for one month after the infusion

VI. Billing Code/Availability Information

HCPCS code:

- J3399 – Injection, onasemnogene abeparvovec-xioi, per treatment, up to $5x10^{15}$ vector genomes: 1 billable unit = 1 treatment, up to $5x10^{15}$ vector genomes

NDC:

Zolgensma kit sizes:

Patient Weight (kg)	NDC	Patient Weight (kg)	NDC
2.6 – 3.0	71894-0120	8.1 – 8.5	71894-0131
3.1 – 3.5	71894-0121	8.6 – 9.0	71894-0132
3.6 – 4.0	71894-0122	9.1 – 9.5	71894-0133
4.1 – 4.5	71894-0123	9.6 – 10.0	71894-0134
4.6 – 5.0	71894-0124	10.1 – 10.5	71894-0135
5.1 – 5.5	71894-0125	10.6 – 11.0	71894-0136
5.6 – 6.0	71894-0126	11.1 – 11.5	71894-0137
6.1 – 6.5	71894-0127	11.6 – 12.0	71894-0138
6.6 – 7.0	71894-0128	12.1 – 12.5	71894-0139
7.1 – 7.5	71894-0129	12.6 – 13.0	71894-0140
7.6 – 8.0	71894-0130	13.1 – 13.5	71894-0141

VII. References

1. Zolgensma [package insert]. Bannockburn, IL; AveXis, Inc., May 2019. Accessed June 2020.
2. Mendell JR, Al-Zaidy S, Shell R. Single-dose gene-replacement therapy for spinal muscular atrophy. N Engl J Med. 2017;377(18):1713-1722. doi: 10.1056/NEJMoa1706198.
3. Wang CH, Finkel RS, Bertini ES, et al. Consensus statement for standard of care in spinal muscular atrophy. J Child Neurol. 2007 Aug;22(8):1027-49.
4. Prior TW, Finanger E. Spinal muscular atrophy. GeneReviews. www.ncbi.nlm.nih.gov/books/NBK1352/ (Accessed on June 10, 2019)
5. Dabbous O, Maru B, Jansen JP, et al. Survival, Motor Function, and Motor Milestones: Comparison of AVXS-101 Relative to Nusinersen for the Treatment of Infants with Spinal Muscular Atrophy Type 1. Adv Ther. 2019 May;36(5):1164-1176.
6. Al-Zaidy S, Pickard AS, Kotha K, et al. Health outcomes in spinal muscular atrophy type 1 following AVXS-101 gene replacement therapy. Pediatr Pulmonol. 2019 Feb;54(2):179-185.
7. Al-Zaidy SA, Kolb SJ, Lowes L, et al. AVXS-101 (Onasemnogene Abeparvovec) for SMA1: Comparative Study with a Prospective Natural History Cohort. J Neuromuscul Dis. 2019;6(3):307-317. doi: 10.3233/JND-190403.

Appendix 1 – Covered Diagnosis Codes

ICD-10	ICD-10 Description
G12.0	Infantile spinal muscular atrophy, type I [Werdnig-Hoffmann]

Appendix 2 – Centers for Medicare and Medicaid Services (CMS)

Medicare coverage for outpatient (Part B) drugs is outlined in the Medicare Benefit Policy Manual (Pub. 100-2), Chapter 15, §50 Drugs and Biologicals. In addition, National Coverage Determination (NCD), Local Coverage Articles (LCAs) and Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable. They can be found at: http://www.cms.gov/medicare-coverage-database/search/advanced-search.aspx. Additional indications may be covered at the discretion of the health plan.

Medicare Part B Covered Diagnosis Codes (applicable to existing NCD/LCA/LCD): N/A

Medicare Part B Administrative Contractor (MAC) Jurisdictions		
Jurisdiction	**Applicable State/US Territory**	**Contractor**
E (1)	CA, HI, NV, AS, GU, CNMI	Noridian Healthcare Solutions, LLC
F (2 & 3)	AK, WA, OR, ID, ND, SD, MT, WY, UT, AZ	Noridian Healthcare Solutions, LLC
5	KS, NE, IA, MO	Wisconsin Physicians Service Insurance Corp (WPS)
6	MN, WI, IL	National Government Services, Inc. (NGS)
H (4 & 7)	LA, AR, MS, TX, OK, CO, NM	Novitas Solutions, Inc.
8	MI, IN	Wisconsin Physicians Service Insurance Corp (WPS)
N (9)	FL, PR, VI	First Coast Service Options, Inc.
J (10)	TN, GA, AL	Palmetto GBA, LLC
M (11)	NC, SC, WV, VA (excluding below)	Palmetto GBA, LLC
L (12)	DE, MD, PA, NJ, DC (includes Arlington & Fairfax counties and the city of Alexandria in VA)	Novitas Solutions, Inc.
K (13 & 14)	NY, CT, MA, RI, VT, ME, NH	National Government Services, Inc. (NGS)
15	KY, OH	CGS Administrators, LLC