Oscar Clinical Guideline: Skysona (elivaldogene autotemcel) (CG074, Ver. 2)

Skysona (elivaldogene autotemcel)

Disclaimer

Clinical guidelines are developed and adopted to establish evidence-based clinical criteria for utilization management decisions. Clinical guidelines are applicable according to policy and plan type. The Plan may delegate utilization management decisions of certain services to third parties who may develop and adopt their own clinical criteria.

Coverage of services is subject to the terms, conditions, and limitations of a member's policy, as well as applicable state and federal law. Clinical guidelines are also subject to in-force criteria such as the Centers for Medicare & Medicaid Services (CMS) national coverage determination (NCD) or local coverage determination (LCD) for Medicare Advantage plans. Please refer to the member's policy documents (e.g., Certificate/Evidence of Coverage, Schedule of Benefits, Plan Formulary) or contact the Plan to confirm coverage.

Summary

Skysona (elivaldogene autotemcel) is indicated to slow the progression of neurologic dysfunction in boys 4-17 years of age with early, active cerebral adrenoleukodystrophy (CALD). Early, active cerebral adrenoleukodystrophy refers to asymptomatic or mildly symptomatic (neurologic function score, NFS ≤ 1) boys who have gadolinium enhancement on brain magnetic resonance imaging (MRI) and Loes scores of 0.5-9.

Skysona (elivaldogene autotemcel) is a one-time gene therapy, made specifically for each individual, using the person's own blood stem cells. It works by adding functional copies of the *ABCD1* gene to cells. CALD is a rare genetic condition typically found in young males, caused by *ABCD1* gene mutations on the X chromosome, leading to build up of very long chain fatty acids (VLCFAs) in the brain that cause damage to the brain by destroying the protective covering around nerve cells - which can be seen on magnetic resonance imaging (MRI) of the brain. Skysona (elivaldogene autotemcel) may slow the nerve damage in early, active cerebral adrenoleukodystrophy. Functional copies of the *ABCD1* gene added by

Skysona (elivaldogene autotemcel) may help the body break down the VLCFAs, slowing the progression of damage to the brain as well as decline in neurologic function.

Prior to Skysona (elivaldogene autotemcel), there have been no FDA-approved treatments for CALD in the United States (US). Allogeneic hematopoietic stem cell transplant (allo-HSCT) has been the standard of care for the past two decades for boys with early, active CALD. Allo-HSCT carries significant risks, including infection and graft-versus-host disease

Definitions

"**Allogeneic**" is when healthy stem cells are donated (harvested) from someone else's bone marrow.

"**Autologous**" is when healthy stem cells are donated (harvested) from a person's own body, then frozen and stored before starting radiation or chemotherapy. The harvested stem cells are thawed and put back into the individual's body after treatment.

"**Bone marrow transplant**" also known as "**stem cell transplant**" is a procedure that involves getting bone marrow cells from a donor (usually a sibling with similar genes, without or with a milder form of the condition/mutation).

"**Early, active cerebral adrenoleukodystrophy**" refers to asymptomatic or mildly symptomatic (neurologic function score, NFS ≤ 1) boys who have gadolinium enhancement on brain magnetic resonance imaging (MRI) and Loes scores of 0.5-9.

"**Neurologic Function Score (NFS)**" is a 25-point composite scale that focuses on 15 domains of neurologic function, is traditionally used to evaluate the clinical status of CALD patients. A score of 0 indicates absence of clinical signs of cerebral disease (i.e., asymptomatic), and higher scores correspond to increasing severity of neurological dysfunction.

"**Loes score**" is an adrenoleukodystrophy (ALD) MRI score, which rates the severity of white matter lesions and ranges from 0 (normal) – 34 (abnormal), based on location and extent of demyelination, as well as presence/ absence of focal and/or global atrophy. A score of 0 indicates a normal MRI (i.e., no cerebral disease), and higher scores indicate increased severity of cerebral lesions.

"**Gadolinium**", also called "**contrast**," is a large, chemical compound that is injected into a person's vein during an MRI scan.

"**Gadolinium-enhanced magnetic resonance imaging (MRI) scan**" is a technique used to determine the age of a lesion (whether active inflammation is recent). Gadolinium enhancement on brain MRI has been associated with breakdown of the blood-brain barrier and is thought to represent progressive and active inflammatory demyelination associated with increased risk of rapid disease progression.

Medical Necessity Criteria for Authorization

The Plan considers **Skysona (elivaldogene autotemcel)** medically necessary when **ALL** of the following criteria are met:

1. Prescribed by or in consultation with a neurologist, endocrinologist, or hematologist-oncologist***; AND***
2. The member meets **ALL** of the following:
    a. is a male between 4-17 years of age***; and***
    b. has a diagnosis of early, active cerebral adrenoleukodystrophy (CALD) as defined by BOTH of the following:
        i. Elevated very long chain fatty acids (VLCFA) values***; and***
        ii. Brain magnetic resonance imaging (MRI) demonstrating **BOTH** of the following:
            1. Loes score between 0.5 and 9 on the 34-point scale***; and***
            2. Gadolinium enhancement (GdE+) on MRI of demyelinating lesions***; and***
    c. Neurologic Function Score (NFS) less than or equal to (≤) 1***; AND***
3. The member does **NOT** have **ANY** of the following:
    a. Available and willing 10/10 HLA-matched sibling donor (excluding female heterozygotes)***; or***
    b. Cardiac compromise as evidenced by left ventricular ejection fraction <40 percent (%)***; or***
    c. Clinically significant uncontrolled, active bacterial, viral, fungal, parasitic, or prion associated infection***; or***
    d. Contraindications to the (myeloablative and lymphodepleting) conditioning regimen***; or***
    e. Hepatic compromise as evidenced by:
        i. Aspartate transaminase (AST) value greater than (>) 2.5 × upper limit of normal (ULN)***; or***
        ii. Alanine transaminase (ALT) value >2.5 × ULN***; or***

iii. Total bilirubin value >3.0 milligram per deciliter (mg/dL), except if there is a diagnosis of Gilbert's Syndrome and the member is otherwise stable***; or***

f. Hematological compromise as evidenced by:
   i. Peripheral blood absolute neutrophil count (ANC) count <1500 cells/ cubic millimeter (mm^3)***; and either:***
      1. Platelet count <100,000 cells/mm^3***; or***
      2. Hemoglobin <10 gram per deciliter (g/dL)***; or***

g. Positive for presence of human immunodeficiency virus type 1 or 2 (HIV-1, HIV-2), hepatitis B virus (HBV), hepatitis C (HCV), or human T lymphotrophic virus 1 (HTLV-1)***; or***

h. Prior treatment with HSCT or gene therapy***; or***

i. Renal impairment, defined as creatinine clearance ≤ 70 mL/min/1.73 m^2***; AND***

4. Dose is within the recommended range of:
   a. Minimum of 5.0 × 10^6 CD34+ cells/kg***; and***
   b. Maximum of 38.2 x 10^6 CD34+ cells/kg.

Experimental or Investigational / Not Medically Necessary

Skysona (elivaldogene autotemcel) for any other indication is *not covered* by the Plan, as it is considered experimental or investigational. Non-covered indications include, but are not limited to, the following:

- For CALD secondary to head trauma.
- For individuals whose sex is not male, unless the prescriber is able to provide information that the requested agent is medically appropriate for the patient's sex.
- To prevent the development of or treat adrenal insufficiency due to adrenoleukodystrophy.
- Re-treatment [Skysona (elivaldogene autotemcel) is indicated for one-time single-dose intravenous use only].

Applicable Billing Codes (HCPCS/CPT Codes)

Service(s) name	
CPT/HCPCS Codes considered medically necessary if criteria are met:	
Code	*Description*
96365	Intravenous infusion, for therapy, prophylaxis, or diagnosis (specify substance or drug); initial, up to 1 hour

C9399	Unclassified drugs or biologicals
J3590	Unclassified biologics
ICD-10 codes considered medically necessary if criteria are met:	
Code	*Description*
E71.520	Childhood cerebral X-linked adrenoleukodystrophy
E71.521	Adolescent X-linked adrenoleukodystrophy

CPT/HCPCS Codes covered but may be subject to medical-necessity review:	
Code	*Description*
96366	Intravenous infusion, for therapy, prophylaxis, or diagnosis (specify substance or drug); each additional hour (List separately in addition to code for primary procedure)

References

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Clinical Guideline Revision / History Information

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