Reference number(s)
5629-A

Standard Medicare Part B Management Skysona

Products Referenced by this Document

Drugs that are listed in the following table include both brand and generic and all dosage forms and strengths unless otherwise stated. Over-the-counter (OTC) products are not included unless otherwise stated.

Brand Name	Generic Name
Skysona	elivaldogene autotemcel

Indications

The indications below including FDA-approved indications and compendial uses are considered a covered benefit provided that all the approval criteria are met and the member has no exclusions to the prescribed therapy.

FDA-approved Indications[1]

Skysona is indicated to slow the progression of neurologic dysfunction in boys 4-17 years of age with early, active cerebral adrenoleukodystrophy (CALD) without an available human leukocyte antigen (HLA)-matched donor for allogenic stem cell transplant. 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.

This indication is approved under accelerated approval based on 24-month Major Functional Disability (MFD)-free survival. Continued approval for this indication may be contingent upon verification and description of clinical benefit in a confirmatory trial(s).

Limitations of Use

- Skysona does not prevent the development of or treat adrenal insufficiency due to adrenoleukodystrophy.
- An immune response to Skysona may limit the persistence of descendent cells of Skysona,

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causing rapid loss of efficacy of Skysona in patients with full deletions of the human adenosine triphosphate binding cassette, sub family D, member 1 (ABCD1) gene.
- Skysona has not been studied in CALD secondary to head trauma.
- Given the risk of hematologic malignancy with Skysona, and unclear long-term durability of Skysona and human adrenoleukodystrophy protein (ALDP) expression, careful consideration should be given to the appropriateness and timing of treatment for each boy, especially for boys with isolated pyramidal tract disease since their clinical manifestations do not usually occur until adulthood.

All other indications will be assessed on an individual basis. Submissions for indications other than those listed in this criteria should be accompanied by supporting evidence from Medicare approved compendia.

Documentation

The following documentation must be available, upon request, for all submissions:

Chart notes, medical records, or lab results documenting all of the following:

- Pathogenic (or likely pathogenic) variant in the ABCD1 gene.
- Elevated very long chain fatty acids (VLCFA) values.
- Active central nervous system (CNS) disease on central radiographic review of brain magnetic resonance imaging (MRI) demonstrating:
    - Loes score between 0.5 and 9 (inclusive) on the 34-point scale, and
    - Gadolinium enhancement on MRI of demyelinating lesions.
- Neurologic Function Score (NFS) less than or equal to 1.

Exclusions

Coverage will not be provided for members with any of the following exclusions:

- Skysona will be used to treat or prevent adrenal insufficiency.
- Member has either of the following:
    - Full deletions of the ABCD1 transgene.
    - CALD secondary to head trauma.

Coverage Criteria

Cerebral Adrenoleukodystrophy (CALD)[1,2]

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Authorization of 3 months for a one-time administration may be granted for treatment of cerebral adrenoleukodystrophy (CALD) when all of the following criteria are met:

- Member must be a male between 4 and 17 years of age.
- Member has a diagnosis of adrenoleukodystrophy confirmed by both of the following:
  - The presence of a pathogenic (or likely pathogenic) variant in the ABCD1 gene as detected by genetic testing, and
  - Elevated very long chain fatty acids (VLCFA) values per reference range of the laboratory performing the test.
- Member has early active disease as defined by all of the following:
  - Central radiographic review of brain MRI demonstrating both of the following:
    - Loes score between 0.5 and 9 (inclusive) on the 34-point scale, and
    - Gadolinium enhancement on MRI of demyelinating lesions.
  - NFS of less than or equal to 1.
- Member is eligible for a hematopoietic stem cell transplant (HSCT) but is unable to find a human leukocyte antigen (HLA)-matched donor.
- Member has not received Skysona or any other gene therapy previously.
- Member has not received a prior allogeneic hematopoietic stem cell transplant (allo-HSCT).

Summary of Evidence

The contents of this policy were created after examining the following resources:

- The prescribing information for Skysona.
- The available compendium
  - National Comprehensive Cancer Network (NCCN) Drugs and Biologics Compendium
  - Micromedex DrugDex
  - American Hospital Formulary Service- Drug Information (AHFS-DI)
  - Lexi-Drugs
  - Clinical Pharmacology
- X-Linked Adrenoleukodystrophy - Gene Reviews

After reviewing the information in the above resources, the FDA-approved indications listed in the prescribing information for Skysona are covered.

Explanation of Rationale

Support for FDA-approved indications can be found in the manufacturer's prescribing information.

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References

1. Skysona [package insert]. Somerville, MA: Bluebird bio, Inc.; August 2025.
2. Raymond GV, Moser AB, Fatemi A. X-Linked Adrenoleukodystrophy. 1999 Mar 26 [Updated 2023 Apr 6]. In: Adam MP, Everman DB, Mirzaa GM, et al., editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2023. Available from: https://www.ncbi.nlm.nih.gov/books/NBK1315/. Accessed November 18, 2025.

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