

Zokinvy (lonafarnib)

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

Hutchinson-Gilford progeria syndrome (HGPS) is a rare autosomal dominant disease affecting an estimated 1 in 20 million individuals. HGPS causes premature aging, beginning at ages 9 to 12 months, and is associated with an increased risk of cardiovascular and cerebrovascular disease (e.g., heart attacks, stroke). Processing-deficient progeroid laminopathies (PLs) are also incredibly rare (affecting an estimated 1 in 25 million individuals), with similar clinical features as HGPS. In 2023 the first ever therapy for HGPS and PLs was approved by the United States Food and Drug Administration, Zokinvy (lonafarnib).

Zokinvy (lonafarnib) is approved for use in certain types of genetic disorders such as:

- Hutchinson-Gilford progeria syndrome (HGPS) to lower the risk of death
- Certain health problems called processing-deficient Progeroid Laminopathies (PLs)

Both HGPS and PLs are extremely rare and fatal genetic premature aging diseases. Zokinvy (lonafarnib) is not indicated for other Progeroid Syndromes or processing-proficient Progeroid Laminopathies. Based upon its mechanism of action, it is unlikely to be effective in these populations.

Definitions

“Body Surface Area” is a measure of the total surface area of the body used to calculate drug dosages.

“Genetic mutation” is a permanent alteration in the sequence, number, structure, or function of the unit of inheritance, also known as a gene.

“Heterozygous” describes a genetic disorder inherited from one parent.

“Homozygous” describes a rare genetic disorder inherited from both parents.

Medical Necessity Criteria for Initial Authorization

The Plan considers Zokinvy (lonafarnib) medically necessary when ALL of the following criteria are met:

1. Prescribed by or in consultation with a geneticist, metabolic disorder specialist, or progeria specialist; *AND*
2. The member meets ALL of the following:
 - a. Is 12 months of age or older; *and*
 - b. Has a body surface area (BSA) of 0.39 m² or above; *and*
 - c. Has a confirmed diagnosis of ONE (1) of the following:
 - i. Hutchinson-Gilford Progeria Syndrome (HGPS) with confirmatory mutational analysis showing G608G mutation in the lamin A gene; *or*
 - ii. A processing-deficient Progeroid Laminopathies with either:
 1. Heterozygous *LMNA* mutation with progerin-like protein accumulation; *or*
 2. Homozygous or compound heterozygous *ZMPSTE24* mutations; *AND*
3. The member meets all of the following criteria:
 - a. No evidence of concomitant strong or moderate CYP3A inhibitors or inducers; *or*
 - b. No evidence of concomitant midazolam; *or*
 - c. No evidence of concomitant lovastatin, simvastatin, or atorvastatin; *AND*
4. Is being prescribed within the manufacturer’s published dosing guidelines or falls within dosing guidelines found in a compendia of current literature; *AND*
5. Chart documentation and supporting laboratory test results are provided for review to substantiate the above listed requirements.

If the above prior authorization criteria are met, Zokinvy (lonafarnib) will be approved for up to 6-months.

Medical Necessity Criteria for Reauthorization

Reauthorization for up to 12 months will be granted if BOTH of the following are met:

1. The member still meets the applicable initial criteria; *AND*
2. Recent chart documentation (within the last 6 months) shows the member has experienced a positive clinical response to therapy (e.g., weight gain rate $\geq$ 50% higher than the pre-therapy estimated rate, weight gain instead of pre-therapy estimated weight loss).

Experimental or Investigational / Not Medically Necessary

Zokinvy (lonafarnib) for any other indication is considered not medically necessary by the Plan, as it is deemed to be experimental, investigational, or unproven.

References

1. Borthakur G, Kantarjian H, Daley G, et al. Pilot study of lonafarnib, a farnesyl transferase inhibitor, in patients with chronic myeloid leukemia in the chronic or accelerated phase that is resistant or refractory to imatinib therapy. *Cancer*. 2006;106(2):346-352. doi:10.1002/cncr.21590
2. Gordon LB, Kleinman ME, Massaro J, et al. Clinical Trial of the Protein Farnesylation Inhibitors Lonafarnib, Pravastatin, and Zoledronic Acid in Children With Hutchinson-Gilford Progeria Syndrome. *Circulation*. 12 July 2016. 134(2):114-25.
3. Gordon LB, Kleinman ME, Miller DT, et al. Clinical trial of a farnesyltransferase inhibitor in children with Hutchinson-Gilford progeria syndrome. *Proc Natl Acad Sci U S A*. 2012 Oct 9;109(41):16666-71. doi: 10.1073/pnas.1202529109. Epub 2012 Sep 24.
4. Gordon LB, Shappell H, Massaro J, et al. Association of Lonafarnib Treatment vs No Treatment With Mortality Rate in Patients with Hutchinson-Gilford Progeria Syndrome. *JAMA*. 24 April 2018. 319(16):1687-1695.
5. Lonafarnib. LiverTox: Clinical and Research Information on Drug-Induced Liver Injury [Internet]. Bethesda (MD): National Institute of Diabetes and Digestive and Kidney Diseases. 7 Jan 2021.
6. Suzuki M, Jeng LJB, Chefo S, et al. FDA approval summary for lonafarnib (Zokinvy) for the treatment of Hutchinson-Gilford progeria syndrome and processing-deficient progeroid laminopathies. *Genet Med*. 2023 Feb;25(2):100335. doi: 10.1016/j.gim.2022.11.003. Epub 2022 Dec 12.
7. Wong NS, Morse MA. Lonafarnib for cancer and progeria.. *Expert Opin Investig Drugs*. July 2012. 21(7):1043-55.
8. Zokinvy (lonafarnib) [prescribing information]. Palo Alto, CA: Eiger BioPharmaceuticals Inc; March 2024.

Clinical Guideline Revision / History Information

Original Date: 03/11/2021

Reviewed/Revised: 12/01/2021, 03/17/2022, 12/08/2022, 12/14/2023, 12/19/2024, 03/02/2026