c1 esterase inhibitor (recombinant) (Ruconest)

Medical Benefit Drug Policy

Place of Service
Home infusion Administration
Infusion Center Administration
Office Administration
Outpatient Facility Administration
Self-Administration *(covered under Medical Benefit)*

Drug Details

USP Category: IMMUNOLOGICAL AGENTS
Mechanism of Action: Recombinant analogue of human complement component 1 esterase inhibitor
HCPCS:
J0596:Injection, c1 esterase inhibitor (recombinant), ruconest, 10 units
How Supplied:
2100 IU lyophilized powder for reconstitution for injection in a single-use vial

Condition(s) listed in policy *(see coverage criteria for details)*

- Hereditary angioedema, treatment

Special Instructions and Pertinent Information

Provider must submit documentation (such as office chart notes, lab results or other clinical information) to ensure the member has met all medical necessity requirements.

The member's specific benefit may impact drug coverage. Other utilization management processes, and/or legal restrictions may take precedence over the application of this clinical criteria.

Coverage Criteria
The following condition(s) require Prior Authorization/Preservice.

Hereditary angioedema, treatment
Meets medical necessity if all the following are met:
1. Being used to treat acute attacks of hereditary angioedema

Covered Doses:
Up to 50 units/kg (max of 4200 units) per dose given intravenously, not to exceed 2 doses within a 24-hour period

Coverage Period:
Once per attack

ICD-10:

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Additional Information

HAE Diagnosis:

- Suspicion of HAE-1/2 should prompt laboratory investigations to support a diagnosis
  - Measurements of serum/plasma levels of C1-INH function, C1- INH protein, and C4 are used to diagnose HAE-1/2
  - HAE-1: Both concentration and function of C1-INH are low (<50% of normal).
  - HAE-2:
    - C1-INH concentrations are normal or elevated
    - C1-INH function is low (<50% of normal)
  - C4 levels are usually low in HAE-1/2 patients, but the sensitivity and specificity of C4 as a marker for HAE are limited.
  - Sequencing of the SERPING1 gene can be supportive in the diagnostic workup of some HAE-1/2 patients (including prenatal diagnosis); however, bio-chemical C1-INH testing is effective and less expensive than genetic testing
- HAE with normal C1 inhibitor (HAE-nC1-INH)
  - The different forms of HAE share some clinical features and, possibly, therapeutic options with HAE-1/2
  - Can only be diagnosed by genetic testing, which is becoming increasingly available
  - Genetic testing should be performed and include testing for the 6 recognized HAE types:
    - HAE with mutation in the factor XII gene (HAE-FXII)
    - HAE with mutation in the angiopoietin-1 gene (HAE-ANGPT1)
    - HAE with mutation in the plasminogen gene (HAE-PLG)
    - HAE with mutation in the kininogen 1 gene (HAE-KNG1)
    - HAE with mutation in the myoferlin gene (HAE-MYOF)
    - HAE with mutation in the heparan sulfate 3-O- sulfotransferase 6 gene (HAE-HS3ST6).
  - Additional mutations are likely to be identified in the future and should be included in the genetic diagnostic workup for HAE.

Type of Angioedema	Laboratory Findings		
	C4 Level	Antigenic C1 INH Level	Functional C1 INH Level
HAE – Type I	↓	↓	↓
HAE – Type II	↓	↔ or ↑	↓

Key: ↓ - decreased, ↑ - increased, ↔ - normal

Maurer, M, Magerl, M, Betschel, S, et al. The international WAO/EAACI guideline for the management of hereditary angioedema—The 2021 revision and update. Allergy. 2022; 77: 1961– 1990.

References

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2. Busse PJ, Christiansen SC, Riedl MA, et al. US HAEA Medical Advisory Board 2020 Guidelines for the Management of Hereditary Angioedema. J Allergy Clin Immunol Pract. 2020; S2213-2198(20)30878-3. doi:10.1016/j.jaip.2020.08.046
3. DrugDex. Available by subscription at http://www.micromedexsolutions.com/home/dispatch
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5. Maurer, M, Magerl, M, Betschel, S, et al. The international WAO/EAACI guideline for the management of hereditary angioedema -The 2021 revision and update. Allergy. 2022; 77: 1961– 1990.
6. Zuraw BL, Bernstein JA, Lang DM, et al. A focused parameter update: Hereditary angioedema, acquired C1 inhibitor deficiency, and angiotensin-converting enzyme inhibitor–associated angioedema. J Allergy Clin Immunol. 2013 Jun;131(6):1491 - 3. DOI: https://doi.org/10.1016/j.jaci.2013.03.034

Review History

Date of Last Annual Review: 3Q2026

Changes from previous policy version:

- No clinical changes following routine annual review

Blue Shield of California Medication Policy to Determine Medical Necessity
Reviewed by P&T Committee