Soliris

**Description**

Soliris (eculizumab)

**Background**

Soliris is a complement inhibitor indicated for the treatment of patients with paroxysmal nocturnal hemoglobinuria (PNH) to reduce hemolysis, atypical hemolytic uremic syndrome (aHUS), generalized Myasthenia Gravis (gMG), or neuromyelitis optica spectrum disorder (NMOSD). Paroxysmal nocturnal hemoglobinuria (PNH) is a rare, acquired genetic blood disorder characterized by hemolytic anemia, thrombosis, impaired bone marrow function and a 3% to 5% risk of developing leukemia. Atypical hemolytic uremic syndrome (aHUS) is a rare and chronic blood disease that can lead to kidney failure and is associated with increased risk of death and stroke. Soliris is a targeted therapy that works by inhibiting proteins that play a role in aHUS (1).

**Regulatory Status**

FDA-approved indication: Soliris is a complement inhibitor indicated for the treatment of patients with: (1)

1. Paroxysmal nocturnal hemoglobinuria (PNH) to reduce hemolysis
2. Atypical hemolytic uremic syndrome (aHUS) to inhibit complement-mediated thrombotic microangiopathy
3. Generalized Myasthenia Gravis (gMG) who are anti-acetylcholine receptor (AchR) antibody positive
4. Neuromyelitis optica spectrum disorder (NMOSD) in adult patients who are anti-aquaporin-4 (AQP4) antibody positive

Limitation of Use:
Soliris is not indicated for the treatment of patients with Shiga toxin E. coli related hemolytic uremic syndrome (STEC-HUS) (1).

Soliris includes a boxed warning of life-threatening and fatal meningococcal infections. Additionally, all patients must be vaccinated with a meningococcal vaccine at least 2 weeks prior to receiving their first dose (1).

Soliris is not indicated for the treatment of patients with Shiga toxin E. coli-related hemolytic uremic syndrome (STEC-HUS). Alexion Pharmaceutical has developed the Soliris OneSource program to assist patients and healthcare providers with education on PNH and aHUS, and to facilitate access to Soliris (1).

The safety and effectiveness of Soliris for the treatment of PNH, gMG, and NMOSD in pediatric patients below the age of 18 years have not been established. Four clinical studies assessing the safety and effectiveness of Soliris for the treatment of aHUS included a total of 25 pediatric patients (ages 2 months to 17 years). The safety and effectiveness of Soliris for the treatment of aHUS appear similar in pediatric and adult patients (1).

Soliris is available only through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS). Under the Soliris REMS prescribers must enroll in the Program (1).

Related policies
Ultomiris

This policy statement applies to clinical review performed for pre-service (Prior Approval, Precertification, Advanced Benefit Determination, etc.) and/or post-service claims.

Soliris may be considered medically necessary in patients 18 years of age or older for the treatment of paroxysmal nocturnal hemoglobinuria (PNH), Myasthenia Gravis (gMG), or neuromyelitis optica spectrum disorder (NMOSD); and if the conditions indicated below are met.

Soliris may be considered medically necessary in patients for the treatment of paroxysmal atypical hemolytic uremic syndrome (aHUS); and if the conditions indicated below are met.
Soliris is considered **investigational** in patients outside of these age ranges and for all other indications.

**Prior-Approval Requirements**

**Diagnoses**

The patient must have **ONE** of the following:

1. Paroxysmal nocturnal hemoglobinuria (PNH)
   a. 18 years of age or older
   b. Documented baseline value for serum lactate dehydrogenase (LDH)
   c. **NO** dual therapy with another terminal complement inhibitor such as Ultomiris

2. Atypical hemolytic uremic syndrome (aHUS)
   a. Documented baseline value for serum lactate dehydrogenase (LDH)
   b. **NO** dual therapy with another terminal complement inhibitor such as Ultomiris (ravulizumab-cwvz)

3. Myasthenia Gravis (gMG)
   a. 18 years of age or older
   b. Positive serologic test for anti-AChR antibodies
   c. Myasthenia Gravis Foundation of America (MGFA) Clinical Classification Class II to IV
   d. Documented baseline MG-Activities of Daily Living (MG-ADL) total score ≥ 6

4. Neuromyelitis optica spectrum disorder (NMOSD)
   a. 18 years of age or older
   b. Anti-aquaporin-4 (AQP4) antibody positive

**AND ALL** of the following:

a. Vaccination against Neisseria meningitides at least 2 weeks prior to initiation
   [unless Soliris (eculizumab) treatment cannot be delayed]

b. **Does NOT** have Shiga toxin E. coli related hemolytic uremic syndrome (STEC-HUS)

c. Prescribing physician is enrolled in Soliris REMS program
Prior – Approval *Renewal* Requirements

Diagnoses

The patient must have **ONE** of the following:

1. Paroxysmal nocturnal hemoglobinuria (PNH)
   a. 18 years of age or older
   b. Decrease in serum LDH from pretreatment baseline
   c. **NO** dual therapy with another terminal complement inhibitor such as Ultomiris

2. Atypical hemolytic uremic syndrome (aHUS)
   a. Decrease in serum LDH from pretreatment baseline
   b. **NO** dual therapy with another terminal complement inhibitor such as Ultomiris (ravulizumab-cwvz)

3. Myasthenia Gravis (gMG)
   a. 18 years of age or older
   b. Decrease of (MG-ADL) total score from baseline

4. Neuromyelitis optica spectrum disorder (NMOSD)
   a. 18 years of age or older
   b. Patient has had fewer relapses while on Soliris therapy

**AND ALL** of the following:
   a. Does **NOT** have Shiga toxin E. coli related hemolytic uremic syndrome (STEC-HUS)
   b. Prescribing physician is enrolled in Soliris REMS program
   c. Absence of unacceptable toxicity from the drug

**Policy Guidelines**
Pre – PA Allowance
None

Prior - Approval Limits
Duration 12 months

Prior – Approval Renewal Limits
Same as above

Rationale

Summary
Soliris is a complement inhibitor indicated for the treatment of patients with paroxysmal nocturnal hemoglobinuria (PNH) to reduce hemolysis and for the treatment of patients age 18 and older with atypical hemolytic uremic syndrome (aHUS) to inhibit complement-mediated thrombotic microangiopathy. Soliris is also used for myasthenia gravis and neuromyelitis optica spectrum disorder. Soliris includes a boxed warning of life-threatening and fatal meningococcal infections. Soliris is not indicated for the treatment of patients with Shiga toxin E. coli-related hemolytic uremic syndrome (STEC-HUS). Soliris is available only through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS) (1).

Prior authorization is required to ensure the safe, clinically appropriate and cost effective use of Soliris while maintaining optimal therapeutic outcomes.

References

Policy History

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<thead>
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<tr>
<td>September 2011</td>
<td>New Policy</td>
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<tr>
<td>January 13, 2012</td>
<td>New FDA-approved diagnosis of aHUS added to criteria.</td>
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<tr>
<td>September 2012</td>
<td>Annual editorial and reference update</td>
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### Section: Prescription Drugs  
**Effective Date:** January 1, 2020

### Subsection: Hematological Agents  
**Original Policy Date:** September 8, 2011

### Subject: Soliris  
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<th>Date</th>
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<tr>
<td>September 2017</td>
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| November 2017  | Addition of Myasthenia Gravis (gMG) and renewal requirements  
|             | Addition of documented baseline value for serum lactate dehydrogenase (LDH) and decrease of in serum LDH from pretreatment baseline |
| March 2018    | Annual review |
| August 2018   | Removal of requirements: documented baseline value for serum lactate dehydrogenase (LDH) from initiation and decrease in serum LDH from pretreatment baseline from renewal for gMG |
| September 2018| Annual review and reference update |
| January 2019  | Addition of requirement of no dual therapy with another terminal complement inhibitor such as Ultomiris to PNH indication |
| March 2019    | Annual review |
| June 2019     | Annual review |
| July 2019     | Addition of indication: neuromyelitis optica spectrum disorder (NMOSD) |
| September 2019 | Annual review |
| November 2019 | Addition of aHUS requirement of no dual therapy with another terminal complement inhibitor such as Ultomiris and vaccination requirement is only necessary if Soliris treatment can be delayed |
| December 2019 | Annual review |

**Keywords**

This policy was approved by the FEP® Pharmacy and Medical Policy Committee on December 6, 2019 and is effective January 1, 2020.