#### 09-J1000-17

Original Effective Date: 03/15/10

Reviewed: 07/09/25

Revised: 08/15/25

# Subject: Eculizumab Products [eculizumab (Soliris®), eculizumab-aagh(Epysqli), eculizumab-aeeb (Bkemv)] Injection

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

<u>Dosage/</u> <u>Administration</u>	Position Statement	Billing/Coding	Reimbursement	Program Exceptions	<u>Definitions</u>
Related Guidelines	<u>Other</u>	References	<u>Updates</u>		

## **DESCRIPTION:**

Eculizumab (Soliris®) is a humanized monoclonal antibody against C5, a protein in the complement cascade that is essential for the formation of the membrane attack complex responsible for cell lysis. Eculizumab is indicated for the treatment of paroxysmal nocturnal hemoglobinuria (PNH), atypical hemolytic uremic syndrome (aHUS), generalized myasthenia gravis in persons who are anti-acetylcholine receptor (AchR) antibody positive, and neuromyelitis optica spectrum disorder (NMOSD) in adult patients who are anti-aquaporin-4 (AQP4) antibody positive. Eculizumab is FDA-approved as two biosimilar products: eculizumab-aagh (Epysqli) and eculizumab-aeeb (Bkemv).

PNH is an uncommon, life-threatening hemolytic anemia; the prevalence of PNH ranges from 1 to 5 cases per million people. In the U.S., there are fewer than 500 cases. PNH results from an acquired genetic deficiency in the cytolytic complement cascade that renders red blood cells (RBCs) susceptible to lysis. Chronic destruction of PNH RBCs by complement leads to serious morbidities. Increased hemolysis at night, hypothesized to result from decreased blood pH and activation of the complement system, leads to characteristic bloody morning urination. Excessive or persistent intravascular hemolysis in persons with PNH results in anemia, hemoglobinuria, and complications related to the presence of plasma-free hemoglobin (e.g., thrombosis, abdominal pain, dysphagia, erectile dysfunction, and pulmonary hypertension). In persons with PNH, eculizumab's inhibition of C5 reduces <a href="hemolysis">hemolysis</a> and transfusion requirements.

Evidence for the efficacy and safety of eculizumab in PNH was obtained from the results of the phase 3 study, Transfusion Reduction Efficacy and Safety Clinical Investigation, a Randomized, Multicenter,

Double-Blind, Placebo-Controlled, Using Eculizumab in Paroxysmal Nocturnal Hemoglobinuria (TRIUMPH). TRIUMPH included 87 transfusion-dependent PNH subjects who were not thrombocytopenic. Subjects were randomized to receive an intravenous (IV) infusion of eculizumab or placebo. Eculizumab was dosed at 600 mg weekly for 4 weeks, then 900 mg in week 5, and 900 mg every other week to complete 26 weeks of treatment. Outcome measures included the proportion of subjects with hemoglobin levels maintained above an individualized set point, number of blood transfusions, serum levels of lactate dehydrogenase (LDH; an indication of hemolysis), and quality of life (QOL) outcomes.

- Twenty-one of 43 eculizumab-treated subjects (49%) achieved hemoglobin stabilization compared with none of the 44 placebo-treated subjects (p<0.001)
- The median (interquartile range) number of transfusions for 6 months before treatment was 8.5 (7-12.5) units in the placebo group and 9 (6-12) units in the eculizumab group. During six months of treatment, these values were 10 (6-16) and 0 (0-6) in the placebo and eculizumab groups, respectively (p<0.001)
- Mean serum LDH levels [± standard error] after treatment were lower in the eculizumab group compared with the placebo group (327.3 [±67.6] U/L vs. 2,418 [±140.3] U/L, p<0.001).
- QOL measures worsened in the placebo group and improved in the eculizumab group.

Hemolytic uremic syndrome (HUS) describes the clinical condition of persons who present with simultaneous occurrence of microangiopathic hemolytic anemia, thrombocytopenia, and acute renal failure. Typical HUS constitutes 90-95% of HUS and is secondary to infection by Shiga toxin-producing Escherichia coli (STEC). Atypical HUS (aHUS) is the result of uncontrolled activation of the complement system. Persons with aHUS present with nonimmune hemolytic anemia, thrombocytopenia, and severe renal impairment. Microvascular lesions (thrombotic microangiopathy) result from uncontrolled complement action on endothelial walls of capillary beds primarily in the kidney. In aHUS, eculizumab binds to C5, preventing the formation of C5a (inflammatory peptide) and the membrane-attack complex C5b-9 (cytotoxic), inhibiting terminal complement-mediated thrombotic microangiopathy.

The efficacy of eculizumab in the treatment of aHUS was evaluated in four prospective single-arm studies, which were published as two abstracts. One abstract describes subjects with plasma therapyresistant aHUS (n=17 aged 12 years or older) treated with eculizumab for 26 weeks. The comparator was baseline levels at the start of therapy. Outcomes of interest included the reduction in the signs of thrombotic microangiopathy (TMA; e.g., reduction of serum LDH levels, increased platelet count, improvements in creatinine clearance [CrCl]). These subjects experienced a mean platelet count (primary endpoint) increase from 109,000±32,000 at baseline to 210,000±68,000 after 26 weeks of therapy. The second abstract reported subjects with plasma therapy-sensitive aHUS (n=20 aged 12 years or older), also treated with eculizumab for 26 weeks. The comparator in this study was a baseline measure recorded over an 8 week observation period. The outcome of interest was reduction in the signs of TMA, but in subjects already stabilized on plasma therapy and where eculizumab was substituted, outcomes of interest were maintaining the corrected levels of TMA indicators already achieved with plasma therapy (platelet count and serum LDH levels remain stable compared to baseline). The primary endpoint for the cohort with plasma therapy sensitive aHUS was TMA event free status, defined as 12 weeks or more of stable platelet count, no plasma therapy and no new dialysis. The primary endpoint was achieved in 80% (95% CI 0.56-0.94) of the cohort.

Standard treatment options for PNH include corticosteroids, androgens, splenectomy, blood transfusions, and iron and folate supplementation. For persons with an associated bone-marrow failure syndrome or with major complication of PNH (e.g., refractory transfusion-dependent hemolytic anemia or recurrent life-threatening thromboembolic complications), hematopoietic stem-cell transplant is considered. The American Society of Hematology (ASH) recommends eculizumab for the treatment of PNH.

Any person suspected of having aHUS should be transferred to a specialized center able to provide supportive care for acute renal failure and severe hypertension, and where dialysis and plasma exchange are common practice. Plasma exchange or plasma infusion (PE/PI), which have been used for 30 years, reduce mortality related to acute aHUS episodes from 50% to 25%.

#### **POSITION STATEMENT:**

**Site of Care**: If eculizumab and biosimilars (Soliris, Epysqli, Bkemv) is administered in a hospital-affiliated outpatient setting, additional requirements may apply depending on the member's benefit. Refer to 09-J3000-46: Site of Care Policy for Select Specialty Medications.

**Initiation** of eculizumab or biosimilars (Soliris, Epysqli, Bkemv) **meets the definition of medical necessity** when the following are met:

- A. For Soliris or Bkemv requests only, the member has an inadequate response, contraindication or intolerance to eculizumab-aagh (Epysqli)<sup>[a]</sup> documentation must be submitted
- B. When used to treat **ONE** of the following indications and **ALL** of the indication-specific criteria are met:
  - 1. Paroxysmal Nocturnal Hemoglobinuria (PNH)
    - a. Flow cytometry to confirm PNH in both red and white blood cells (with at least 5% granulocyte or monocyte clone size) lab documentation must be provided
    - b. Member's lactate dehydrogenase (LDH) is elevated (i.e., 1.5 times greater than the upper limit of normal [ULN] as determined by the laboratory performing the test) lab documentation must be provided
    - c. **ONE** of the following:
      - i. Member has been vaccinated against meningococcal infection at least 2 weeks prior to therapy initiation
      - ii. Member has been vaccinated against memingococcal infection less than 2 weeks prior to therapy initiation and will receive prophylactic antibiotics for at least 2 weeks following vaccination
    - d. There is no evidence of an active meningococcal infection
    - e. **ONE** of the following documentation must be provided:
      - i. Member's disease is transfusion-dependent evidenced by 2 or more transfusions in the 12 months prior to eculizumab initiation

- ii. Member has a history of a major adverse vascular event (MAVE) from thromboembolism (e.g., myocardial infarction, cerebrovascular accident, deep vein thrombosis)
- iii. Member has anemia with a hemoglobin less than the lower limit of normal
- f. The member has an inadequate response or contraindication to **BOTH** of the following documentation must be provided<sup>[b]</sup>:
  - i. ravulizumab (Ultomiris)
  - ii. pegcetacoplan (Empaveli)
- g. The member will not receive treatment in combination with an additional complement inhibitor<sup>[c]</sup> (crovalimab, iptacopan, pegcetacoplan, ravulizumab, zilucoplan), efgartigimod, efgartigimod-hyaluronidase, inebilizumab, nipocalimab, rituximab, rozanolixizumab, satralizumab, tocilizumab or chronic immune globulin therapy
- h. The dose does not exceed 600 mg weekly for the first 4 weeks, followed by 900 mg for the fifth dose 1 week later and then 900 mg every 2 weeks

## 2. Atypical Hemolytic Uremic Syndrome (aHUS)

- a. Diagnosis is supported by **BOTH** of the following documentation must be provided:
  - i. No evidence of Shiga toxin-producing E. coli infection all initial and subsequent tests have been negative for the toxin
  - ii. ADAMTS-13 level is greater than 5%
- b. **ONE** of the following:
  - i. Member has been vaccinated against meningococcal infection at least 2 weeks prior to therapy initiation
  - ii.Member has been vaccinated against memingococcal infection less than 2 weeks prior to therapy initiation and will receive prophylactic antibiotics for at least 2 weeks following vaccination
- c. There is no evidence of an active meningococcal infection
- d. The member has an inadequate response or contraindication to ravulizumab (Ultomiris)<sup>[b]</sup> documentation must be provided
- e. The member will not receive treatment in combination with an additional complement inhibitor (crovalimab, iptacopan, pegcetacoplan, ravulizumab, zilucoplan), efgartigimod, efgartigimod-hyaluronidase, inebilizumab, nipocalimab, rituximab, rozanolixizumab, satralizumab, tocilizumab or chronic immune globulin therapy
- f. The dose does not exceed the following:
  - i. Greater than or equal to 40 kg: 900 mg weekly for the first 4 weeks, followed by 1200 mg for the fifth dose 1 week later, then 1200 mg every 2 weeks
  - ii. Greater than or equal to 30 kg and less than 40 kg: 600 mg for the first 2 weeks, followed by 900 mg at week 3, then 900 mg every 2 weeks

- iii. Greater than or equal to 20 kg and less than 30 kg: 600 mg for the first 2 weeks, followed by 600 mg at week 3, then 600 mg every 2 weeks
- iv. Greater than or equal to 10 kg to less than 20 kg: 600 mg single dose at week 1, 300 mg at week 2, then 300 mg every 2 weeks
- v. Greater than or equal to 5 kg to less than 10 kg: 300 mg single dose at week 1, then 300 mg at week 2, then 300 mg every 3 weeks

#### 3. Refractory Generalized Myasthenia Gravis (MG)

- a. Member meets **ALL** of the following documentation must be provided:
  - i. Anti-acetylcholine receptor (AchR) antibody positive disease lab documentation must be provided
  - ii. Myasthenia Gravis Foundation of America (MGFA) Clinical Classification Class II– IV
  - iii. Myasthenia Gravis Activities of Daily Living (MG-ADL) total score greater than or equal to 6
  - iv. **ONE** of the following documentation must be provided<sup>[d]</sup>:
    - 1. Member had an inadequate response to at least one year trial of **TWO** of the following immunosuppressants:
      - a. azathioprine
      - b. cyclosporine
      - c. mycophenolate mofetil
      - d. tacrolimus
      - e. methotrexate
      - f. cyclophosphamide
      - g. rituximab
    - Member had an inadequate response to at least one year trial of ONE immunosuppressant in combination with either chronic immune globulin therapy or plasmapheresis
- b. The member will not receive treatment in combination with an additional complement inhibitor (crovalimab, iptacopan, pegcetacoplan, ravulizumab, zilucoplan), efgartigimod, efgartigimod-hyaluronidase, inebilizumab, nipocalimab, rituximab, rozanolixizumab, satralizumab, tocilizumab or chronic immune globulin therapy
- c. The member has an inadequate response to **ONE** of the following **OR** the member has a contraindication to **ALL** of the following documentation must be provided<sup>(b)</sup>:
  - i. efgartigimod (Vyvgart) OR efgartigimod-hyaluronidase (Vyvgart Hytrulo)
  - ii. ravulizumab (Ultomiris)
  - iii. rozanolixizumab (Rystiggo)
- d. Treatment is prescribed by or in consultation with a neurologist

- e. **ONE** of the following:
  - i. Member has been vaccinated against meningococcal infection at least 2 weeks prior to therapy initiation
    - ii.Member has been vaccinated against memingococcal infection less than 2 weeks prior to therapy initiation and will receive prophylactic antibiotics for at least 2 weeks following vaccination
- f. There is no evidence of an active meningococcal infection
- g. The dose does not exceed the following:
  - i. Greater than or equal to 40 kg: 900 mg weekly for the first 4 weeks, followed by 1200 mg for the fifth dose 1 week later, then 1200 mg every 2 weeks
  - ii. Greater than or equal to 30 kg and less than 40 kg: 600 mg for the first 2 weeks, followed by 900 mg at week 3, then 900 mg every 2 weeks
  - iii. Greater than or equal to 20 kg and less than 30 kg: 600 mg for the first 2 weeks, followed by 600 mg at week 3, then 600 mg every 2 weeks
  - iv. Greater than or equal to 10 kg to less than 20 kg: 600 mg single dose at week 1, 300 mg at week 2, then 300 mg every 2 weeks
  - v. Greater than or equal to 5 kg to less than 10 kg: 300 mg single dose at week 1, then 300 mg at week 2, then 300 mg every 3 weeks

# 4. Neuromyelitis Optica Spectrum Disorder (NMOSD)

- a. Member meets **ALL** of the following documentation must be provided:
  - i. Anti-aquaporin-4 (AQP4) antibody positive disease lab documentation must be provided
  - ii. Member has **ONE** core clinical characteristic of NMOSD and alternative diagnoses have been excluded:
    - 1. Optic neuritis
    - 2. Acute myelitis
    - Area postrema syndrome (episode of otherwise unexplained hiccups or nausea and vomiting)
    - 4. Acute brainstem syndrome
    - 5. Symptomatic narcolepsy or acute diencephalic clinical syndrome with NMOSD-typical diencephalic MRI lesions
    - 6. Symptomatic cerebral syndrome with NMOSD-typical brain lesions
  - iii. Member has a history of at least 1 relapse in the previous year [e]:
  - iv. Member had an inadequate response to at least **ONE** of the following or has a contraindication to **ALL** of the following<sup>[b]</sup> documentation must be provided:
    - 1. inebilizumab (Uplizna)

- 2. ravulizumab (Ultomiris)
- 3. satralizumab (Enspryng)
- v. Member had an inadequate response to a sufficient trial of, or has a contraindication to, rituximab therapy<sup>[b,f]</sup>
- b. The member will not receive treatment in combination with an additional complement inhibitor (crovalimab, iptacopan, pegcetacoplan, ravulizumab, zilucoplan), efgartigimod, efgartigimod-hyaluronidase, inebilizumab, nipocalimab, rituximab, rozanolixizumab, satralizumab, tocilizumab or chronic immune globulin therapy
- c. Treatment is prescribed by or in consultation with a neurologist
- d. **ONE** of the following:
  - i. Member has been vaccinated against meningococcal infection at least 2 weeks prior to therapy initiation
    - ii.Member has been vaccinated against memingococcal infection less than 2 weeks prior to therapy initiation and will receive prophylactic antibiotics for at least 2 weeks following vaccination
- e. There is no evidence of an active meningococcal infection
- f. The dose does not exceed 900 mg weekly for the first 4 weeks, followed by 1200 mg for the fifth dose 1 week later, then 1200 mg every 2 weeks

Approval duration: 60 days

**Continuation** of eculizumab **meets the definition of medical necessity** when **ALL** of the following are met

- 1. For Soliris or Bkemv requests only, the member has an inadequate response, contraindication or intolerance to eculizumab-aagh (Epysqli)<sup>[a]</sup> documentation must be submitted
- 2. Member has a history of beneficial response to eculizumab therapy for the treatment of **ONE** of the following indications:
  - Paroxysmal nocturnal hemoglobinuria (PNH) examples of beneficial response include decreased requirement for transfusions, stabilization of hemoglobin, reduction of LDH – documentation must be provided
  - Atypical hemolytic uremic syndrome (aHUS) examples of beneficial response include improved platelet count, reduction of LDH, improved renal function – documentation must be provided
  - Refractory Generalized Myasthenia Gravis examples of beneficial response include improved MG-ADL total score, Quantitative myasthenia gravis total score – documentation must be provided
  - d. Neuromyelitis Optica Spectrum Disorder (NMOSD)— example of beneficial response includes either the absence of relapse or reduction in relapses documentation must be provided

- 3. The member has been previously approved for eculizumab or biosimilar in the treatment of PNH, aHUS, refractory generalized myasthenia gravis or NMOSD by Florida Blue or another health plan in the past 2 years, **OR** the member has previously met all indication-specific criteria for coverage
- 4. For continuation of therapy for Refractory Generalized Myasthenia Gravis, member's diagnosis has been confirmed by the following lab documentation must be provided:
  - a. Anti-acetylcholine receptor (AchR) antibody positive disease
- 5. For continuation of therapy for Neuromyelitis Optica Spectrum Disorder (NMOSD), the member's diagnosis has been confirmed by the following lab documentation must be provided:
  - a. Anti-aquaporin-4 (AQP4) antibody positive disease
- 6. Member has been revaccinated against meningococcal infection according to current medical guidelines for vaccination while on eculizumab therapy
- 7. There is no evidence of an active meningococcal infection
- 8. The member will not receive treatment in combination with an additional complement inhibitor<sup>[c]</sup> (crovalimab, iptacopan, pegcetacoplan, ravulizumab, zilucoplan), efgartigimod, efgartigimod-hyaluronidase, inebilizumab, nipocalimab, rituximab, rozanolixizumab, satralizumab, tocilizumab or chronic immune globulin therapy
- 9. The dose does not exceed indication specific limitations:
  - a. PNH: 900 mg every 14 days
  - b. NMOSD: 1200 mg every 14 days
  - c. aHUS or Refractory Generalized Myasthenia Gravis:
    - i. Greater than or equal to 40 kg: 1200 mg every 2 weeks
    - ii. Greater than or equal to 30 kg and less than 40 kg: 900 mg every 2 weeks
    - iii. Greater than or equal to 20 kg and less than 30 kg: 600 mg every 2 weeks
    - iv. Greater than or equal to 10 kg to less than 20 kg: 300 mg every 2 weeks
    - v. Greater than or equal to 5 kg to less than 10 kg: 300 mg every 3 weeks

# Approval duration: 1 year

<sup>a</sup> Step does not apply for the treatment of NMOSD or in pediatric patients for the treatment of refractory generalized myasthenia gravis.

<sup>c</sup> Danicopan (Voydeya) is permitted in combination with Soliris for the treatment of extravascular hemolysis in adults with PNH if the Florida Blue Medical Coverage Guideline criteria for Voydeya are met

<sup>d</sup> Step not required if the member previously received treatment with efgartigimod (Vyvgart), efgartigimod-hyaluronidase (Vyvgart Hytrulo), nipocalimab (Imaavy), ravulizumab (Ultomiris), rozanolixizumab (Rystiggo), or zilucoplan (Zilbrysq)

<sup>&</sup>lt;sup>b</sup> Step does not apply to Epysqli

<sup>e</sup> Step not required if the member previously received treatment with inebilizumab (Uplizna), ravulizumab (Ultomiris), rituximab (Rituxan), or satralizumab (Enspryng)

fStep not required if the member previously received treatment with inebilizumab (Uplizna), ravulizumab (Ultomiris), or satralizumab (Enspryng)

NOTE: Quest Diagnostics® can perform the following tests used in the diagnosis of PNH or aHUS

- Flow cytometry assay (PNH with FLAER) used in the diagnosis of PNH
- ADAMTS-13 activity immunoassay used in diagnosis of aHUS
- Shiga Toxin, EIA with reflex to E. coli O157 culture used in the diagnosis of aHUS

#### DOSAGE/ADMINISTRATION:

THIS INFORMATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE USED AS A SOURCE FOR MAKING PRESCRIBING OR OTHER MEDICAL DETERMINATIONS. PROVIDERS SHOULD REFER TO THE MANUFACTURER'S FULL PRESCRIBING INFORMATION FOR DOSAGE GUIDELINES AND OTHER INFORMATION RELATED TO THIS MEDICATION BEFORE MAKING ANY CLINICAL DECISIONS REGARDING ITS USAGE.

**FDA-approved:** eculizumab is indicated for the treatment of persons with paroxysmal nocturnal hemoglobinuria (PNH) to reduce hemolysis and treatment of persons with atypical hemolytic uremic syndrome (aHUS) to inhibit complement-mediated thrombotic microangiopathy. Eculizumab is not indicated for the treatment of persons with Shiga toxin E. coli related hemolytic uremic syndrome (STEC-HUS). Eculizumab is indicated for the treatment of generalized myasthenia gravis in persons who are anti-acetylcholine receptor (AchR) antibody positive. Eculizumab is indicated for the treatment of neuromyelitis optica spectrum disorder (NMOSD) in adult patients who are anti-aquaporin-4 (AQP4) antibody positive.

Eculizumab is administered as an intravenous infusion over 35 minutes in adults and 1 to 4 hours in pediatric patients via gravity feed, a syringe-type pump, or an infusion pump. The recommended dosage regimen is dependent on the disease. Eculizumab should be administered at the recommended dosage regimen time points, or within 2 days of these time points.

- 1. PNH
  - a. 600 mg weekly for weeks 1-4
  - b. 900 mg for the fifth dose on week 5
  - c. 900 mg every 14 days thereafter
- 2. aHUS
  - a. 18 years of age and older
    - o 900 mg weekly for weeks 1-4
    - o 1200 mg for the fifth dose on week 5
    - o 1200 mg every 14 days thereafter

- b. Less than 18 years of age: eculizumab dose is based on body weight. The recommended doses based on body weight are outline in table 1.
- 3. Generalized myasthenia gravis and Neuromyelitis optica spectrum disorder
  - a. 900 mg weekly for weeks 1-4
  - b. 1200 mg for the fifth dose on week 5
  - c. 1200 mg every 14 days thereafter

#### Table 1

Dosing recommendations in members less than 18 years of age for aHUS or Generalized myasthenia gravis age 6 and older			
Member Body Weight	Induction	Maintenance	
40 kg and greater	900 mg weekly x 4 doses	1200 mg at week 5; then 1200 mg every 2	
		weeks	
30 kg to less than 40 kg	600 mg weekly x 2 doses	900 mg at week 3; then 900 mg every 2 weeks	
20 kg to less than 30 kg	600 mg weekly x 2 doses	600 mg at week 3; then 600 mg every 2 weeks	
10 kg to less than 20 kg	600 mg weekly x 1 dose	300 mg at week 2; then 300 mg ever 2 weeks	
5 kg to less than 10 kg	300 mg weekly x 1 dose	300 mg at week 2; then 300 mg every 3 weeks	

# **Dose Adjustments**

- See prescribing information for supplemental dosing of eculizumab if the member has received IVIG for the treatment of generalized myasthenia gravis
- Supplemental dosing of eculizumab is required in the setting of concomitant support with plasmapheresis/plasma exchange (PE) or fresh frozen plasma infusion (FFPI). Table 2 outlines recommended supplemental dosing following PE or PI.

Table 2

Intervention	Most recent eculizumab following PE/F	Supplemental eculizumab dose with each PE/PI intervention	Timing of supplemental dose
PE	300 mg	300 mg per each PE	Within 60 minutes
	600 mg or more	600 mg per PE	after each PE
FFPI	300 mg or more	300 mg per each unit of	60 minutes prior to
		fresh frozen plasma	each 1 unit of FFPI
PE, plasmapheresis or p	olasma exchange; FFPI, fres	h frozen plasma infusion	

**Drug Availability:** eculizumab is available as a 300 mg single-use vial containing 30 mL of 10 mg/mL sterile, preservative-free solution. Due to the risk of meningococcal infections, eculizumab is available only through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS). Under the eculizumab REMS, prescribers must enroll in the program. Enrollment in the eculizumab REMS program and additional information are available by telephone: 1-888-765-4747.

#### PRECAUTIONS:

## **Boxed Warning**

Life-threatening and fatal meningococcal infections have occurred in persons treated with eculizumab and may become rapidly life-threatening or fatal if not recognized and treated early.

- 1. Comply with the most current Advisory Committee on Immunization Practices (ACIP) recommendations for meningococcal vaccination in persons with complement deficiencies.
- 2. Immunize members with a meningococcal vaccine at least 2 weeks prior to administering the first dose of eculizumab, unless the risks of delaying eculizumab therapy outweigh the risks of developing a meningococcal infection.
- 3. Monitor members for early signs of meningococcal infections, and evaluate immediately if infection is suspected.
- 4. Eculizumab is only available through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS).

#### **Contraindications**

 Eculizumab is contraindicated in persons with unresolved serious Neisseria meningitidis infection

## **Precautions/Warnings**

- 1. Discontinue therapy in persons who are being treated for serious meningococcal infections.
- 2. Use caution when administered eculizumab to members with any other systemic infection.
- 3. Monitor patient during infusion; interrupt for reactions and provide supportive measures.

## **BILLING/CODING INFORMATION:**

The following codes may be used to describe:

# **HCPCS Coding**

J1299	Injection, eculizumab, 2 mg
Q5151	Injection, eculizumab-aagh (epysqli), biosimilar, 2 mg
Q5152	Injection, eculizumab-aeeb (bkemv), biosimilar, 2 mg

# **ICD-10 Diagnosis Codes That Support Medical Necessity**

D59.39	Other hemolytic-uremic syndrome (atypical)
D59.5	Paroxysmal nocturnal hemoglobinuria [Marchiafava-Micheli]
G36.0	Neuromyelitis optica [Devic]
G70.00 – G70.01	Myasthenia gravis

## **REIMBURSEMENT INFORMATION:**

Refer to section entitled **POSITION STATEMENT**.

## **PROGRAM EXCEPTIONS:**

Federal Employee Program (FEP): Follow FEP guidelines.

**State Account Organization (SAO):** Follow SAO guidelines.

**Medicare Advantage Products:** No National Coverage Determination (NCD) and/or Local Coverage Determination (LCD) were found at the time of the last guideline revised date. The Site of Care Policy for Select Specialty Medications does not apply to Medicare Advantage members.

**Medicare Part D:** Florida Blue has delegated to Prime Therapeutics authority to make coverage determinations for the Medicare Part D services referenced in this guideline.

If this Medical Coverage Guideline contains a step therapy requirement, in compliance with Florida law 627.42393, members or providers may request a step therapy protocol exemption to this requirement if based on medical necessity. The process for requesting a protocol exemption can be found at <a href="Coverage">Coverage</a> Protocol Exemption Request

#### **DEFINITIONS:**

**Atypical hemolytic uremic syndrome (aHUS): a** rare condition characterized by hemolytic anemia, thrombocytopenia and kidney failure that has no obvious cause.

Hemolysis: breakdown of red blood cells.

**Microangiopathic hemolytic anemia:** a disorder in which narrowing or obstruction of small blood vessels results in distortion and fragmentation of red blood cells, hemolysis, and anemia.

**Paroxysmal nocturnal hemoglobinuria (PNH):** A chronic acquired blood cell dysplasia with proliferation of a clone of stem cells producing erythrocytes, platelets, and granulocytes that are abnormally susceptible to lysis by complement; it is marked by episodes of intravascular hemolysis, causing hemolytic anemia, particularly following infections, and by venous thromboses, especially of the hepatic veins.

**Thrombocytopenia:** a reduced level of circulating platelets, which are cell fragments that normally assist with blood clotting.

# **RELATED GUIDELINES:**

Efgartigimod (Vyvgart, Vyvgart Hytrulo), 09-J4000-18

Inebilizumab (Uplizna), 09-J3000-73

Iptacopan (Fabhalta), 09-J4000-80

Immune Globulin Therapy, 09-J0000-06

Pegcetacoplan (Empaveli), 09-J4000-04

Ravulizumab (Ultomiris), 09-J3000-26

Rituximab Products, 09-J0000-59

Rozanolixizumab-noli (Rystiggo), 09-J4000-55

Satralizumab (Enspryng), 09-J3000-79

Zilucoplan (Zilbrysq), 09-J4000-78

# **OTHER:**

**Table 1: Myasthenia Gravis Foundation of America (MGFA) Clinical Classification System** 

Class I	Any ocular muscle weakness; may have weakness of eye closure. All other muscle
	strength is normal.
Class II	Mild weakness affecting muscles other than ocular muscles; may also have ocular
	muscle weakness of any severity.
	IIa. Predominantly affecting limb, axial muscles, or both. May also have lesser
	involvement of oropharyngeal muscles.
	IIb. Predominantly affecting oropharyngeal, respiratory muscles, or both. May also
	have lesser or equal involvement of limb, axial muscles, or both.
Class III	Moderate weakness affecting muscles other than ocular muscles; may also have
	ocular muscle weakness of any severity.
	Illa. Predominantly affecting limb, axial muscles, or both. May also have lesser
	involvement of oropharyngeal muscles.
	IIIb. Predominantly affecting oropharyngeal, respiratory muscles, or both. May also
	have lesser or equal involvement of limb, axial muscles, or both.
Class IV	Severe weakness affecting muscles other than ocular muscles; may also have ocular
	muscle weakness of any severity.
	IVa. Predominantly affecting limb, axial muscles, or both. May also have lesser
	involvement of oropharyngeal muscles.
	IVb. Predominantly affecting oropharyngeal, respiratory muscles, or both. May also
	have lesser or equal involvement of limb, axial muscles, or both.
Class V	Defined as intubation, with or without mechanical ventilation, except when
	employed during routine postoperative management. The use of a feeding tube
	without intubation places the patient in class IVb.

**Table 2: Myasthenia Gravis Activities of Daily Living (MG-ADL)** 

Grade	0	1	2	3	Score
Talking	Normal	Intermittent	Constant	Difficult to	
		slurring or	slurring or	understand	
		nasal speech	nasal, but can	speech	
			be understood		
Chewing	Normal	Fatigue with	Fatigue with	Gastric tube	
		solid food	soft food		
Swallowing	Normal	Rare episode	Frequent	Gastric tube	
		of choking	choking		

			necessitating	
			changes in diet	
Breathing	Normal	Shortness of	Shortness of	Ventilator
		breath with	breath at rest	dependence
		exertion		
Impairment of	None	Extra effort,	Rest periods	Cannot do one
ability to brush		but no rest	needed	of these
teeth or comb		periods		functions
hair		needed		
Impairment of	None	Mild,	Moderate,	Severe,
ability to arise		sometimes	always uses	requires
from a chair		uses arms	arms	assistance
Double vision	None	Occurs, but	Daily, but not	Constant
		not daily	constant	
Eyelid droop	None	Occurs, but	Daily, but not	Constant
		not daily	constant	
Total Score				

**Table 3: Quantitative Myasthenia Gravis Score for Disease Severity** 

Test item	None	Mild	Moderate	Severe	Score
Grade	0	1	2	3	
(1) Double vision	61	11-60	1-10	Spontaneous	
on lateral gaze,					
seconds					
(2) Ptosis on	61	11-60	1-10	Spontaneous	
upward gaze,					
seconds					
(3) Weakness of	Normal lid	Complete,	Complete,	Incomplete	
facial muscles	closure	weak, some	without		
		resistance	resistance		
(4)Swallowing	Normal	Minimal	Severe	Cannot	
water		coughing or	coughing/choking	swallow (test	
		throat	or nasal	not	
		clearing	regurgitation	attempted)	
(5) Speech after	None at 50	Dysarthria at	Dysarthria at 10-	Dysarthria at	
counting aloud		30-49	29	9	
from 1-50					
(6) Ability to keep	240	90-239	10-89	0-9	
right arm					
outstretched,					
seconds					
(7) Ability to keep	240	90-239	10-89	0-9	
left arm					

		1		I	
outstretched,					
seconds					
(8) Vital capacity	Greater or	65-79	50-64	Less than 50	
as percent of	equal to 80				
predicted					
(9) Right hand	Men – 45 or	Men – 15-44	Men – 5-14	Men –0-4	
grip strength,	greater				
kgW		Women – 10-	Women – 5-9	Women – 0-4	
	Women – 30	29			
	or greater				
(10) Left hand grip	Men – 45 or	Men – 15-44	Men – 5-14	Men –0-4	
strength, kgW	greater				
		Women – 10-	Women – 5-9	Women – 0-4	
	Women – 30	29			
	or greater				
(11) Ability to	120	30-119	1-29	0	
keep head lifted					
when lying					
supine, seconds					
(12) Ability to	100	31-99	1-30	0	
keep the right leg					
outstretched,					
seconds					
(13) Ability to	100	31-99	1-30	0	
keep the left leg					
outstretched,					
seconds					
			To	otal QMG Score:	

## **REFERENCES:**

- 1. Brodsky RA, Young NS, Antonioli E. Multicenter phase 3 study of the complement inhibitor eculizumab for the treatment of patients with paroxysmal nocturnal hemoglobinuria. Blood. 2008 Feb 15;111(4):1840-7.
- 2. Clinical Pharmacology [database online]. Tampa, FL: Gold Standard, Inc.;2025. URL www.clinicalpharmacilogy-ip.com Accessed 04/30/25.
- 3. Eculizumab. In: McEvoy GK, editor. AHFS drug information 2025[monograph on the Internet]. Bethesda (MD): American Society of Health-System Pharmacists; 2025 [cited 2025 Apr 30]. Available from: http://online.statref.com. Subscription required to view.
- 4. Epysqli (eculizumab) [package insert]. Teva Pharmaceuticals USA, Inc. Parsippany (NJ): April 2025.
- 5. Hillmen P, Young NS, Schubert J, et al. The complement inhibitor eculizumab in paroxysmal nocturnal hemoglobinuria. NEJM 2006;335:1233-43.

- 6. Howard JF, Utsugisawa K, Benatar M. Safety and efficacy of eculizumab in anti-acetylcholine receptor antibody-positive refractory generalized myasthenia gravis (REGAIN); a phase 3, randomized, double-blind, placebo-controlled, multicenter study. Lancet Neurol. 2017 Oct 20. http://dx.doi.org/10.1016/S1474-4422(17)30369-1Ingenix HCPCS Level II, Expert 2011.
- 7. Jaretzki A, Barohn RJ, Ernstoff RM et al. Myasthenia Gravis: Recommendations for Clinical Research Standards. Ann Thorac Surg. 2000;70: 327-34.
- 8. Kulasekararaj AG, Hill A, Rottinghaus ST et al. Ravulizumab (ALXN1210) vs eculizumab in C5-inhibitor-experienced adult patients with PNH: the 302 study. Blood: 2018: blood-2018-09-876805.
- 9. Lee JW, Fontbrune Fs, Lee Lee LW et al. Ravulizumab (ALXN1210) vs eculizumab in adult patients with PNH naïve to complement inhibitors: the 301 study. Blood. 2018: blood-2018-09-876136
- 10. Loschi M, Porcher R, Barraco F Impact of eculizumab treatment on paroxysmal nocturnal hemoglobinuria: a treatment versus no-treatment study. Am J Hematol. 2016.;91(4):366-70
- 11. Martí-Carvajal AJ, Anand V, Cardona AF, Solà I. Eculizumab for treating patients with paroxysmal nocturnal hemoglobinuria. Cochrane Database Syst Rev. 2014 Oct 30;10
- 12. Micromedex® Healthcare Series [Internet Database]. Greenwood Village, Colo: Thomson Healthcare. Updated periodically. Accessed 04/30/25.
- 13. Pittock S.J., Berthele A., Fujihara K. et al. Eculizumab in Aquaporin-4-Positive Neuromyelitis Optica Spectrum Disorder. New Engl J Med. 2019 May 3. Doi: 10.1056/NEJMoa1900866
- 14. Sanders DB, Wolfe GI, Benatar M et al. International consensus guidance for management of myasthenia gravis. Neurology. 2016; 87:1-7.
- 15. Soliris (eculizumab) [package insert]. Alexion Pharmaceuticals, Inc. Cheshire (CT): February 2025.

#### **COMMITTEE APPROVAL:**

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Pharmacy Policy Committee on 07/09/25.

#### **GUIDELINE UPDATE INFORMATION:**

03/15/10	New Medical Coverage Guideline.
01/15/11	Revision to guideline; consisting of adding ICD-10 codes.
05/15/11	Review and revision to guideline; consisting of updating references.
11/15/11	Revision to guideline; consisting of adding new FDA-approved indication, updated
	dosing and coding.
05/15/12	Review and revision to guideline; consisting of updating position statement,
	precautions and references.
05/15/13	Review and revision to guideline; consisting of revising position statement to include
	duration of approval and orphan drug designations; revised and reformatted
	description, dosage/administration, and precautions sections; updated references;
	added pertinent definitions.
10/15/13	Revision to guideline; consisting of updating diagnosis criteria in the position
	statement.

05/15/14	Review and revision to guideline; consisting of reformatting position statement and
00, 20, 2	updating references.
05/15/15	Revision to guideline; consisting of updating references.
11/01/15	Revision: ICD-9 Codes deleted.
05/15/16	Review and revision to guideline; consisting of updating position statement, coding
	and references.
05/15/17	Review and revision to guideline; consisting of updating references.
12/15/17	Revision to guideline; consisting of updating position statement, coding, dosing and
	references.
05/15/18	Review and revision to guideline; consisting of updating references.
04/15/19	Review and revision to guideline; consisting of updating position statement and
	references.
09/15/19	Review and revision to guideline; consisting of updating position statement,
	description, coding, dosing, and references.
10/15/19	Revision to guideline consisting of updating the position statement.
11/11/19	Revision to guideline consisting of adding a reference to the Site of Care Policy for
	Select Specialty Medications and updating the Program Exceptions.
05/15/20	Revision to guideline consisting of updating position statement and references.
11/15/20	Revision to guideline consisting of updating position statement and references.
10/15/21	Review and revision to guideline; consisting of updating the position statement,
	warnings and references.
07/15/22	Review and revision to guideline; consisting of updating the position statement and
	references.
10/01/22	Update to ICD-10 coding.
09/15/23	Review and revision to guideline; consisting of updating the list of agents not to be
	used in combination and update to references.
10/15/23	Review and revision to guideline; consisting of updating the position statement for
	Myasthenia Gravis.
05/15/24	Review and revision to guideline; consisting of updating the the position statement
	to revise neuromyelitis optica spectrum disorder and updating agents not to be used
	in combination.
09/15/24	Review and revision to guideline; consisting of updating the the position statement
	to revise the step for paroxysmal nocturnal hemoglobinuria and updating agents not
	to be used in combination.
12/15/24	Revision to guideline; consisting of updating position statement for paroxysmal
	nocturnal hemoglobinuria and updating agents used in combination.
04/01/25	Revision: Added HCPCS code J1299 and deleted code J1300. New code for Soliris
06/15/5	with different billing units.
06/15/25	Review and revision to guideline; consisting of updating the the position statement
	to include biosimilar agents Epysqli and Bkemv. Updated dosing for members less
	than 40 kilograms for generalized Myasthenia Gravis and aHUS. Added HCPCS codes
07/55/55	Q5151 and Q5152 to Billing and Coding section.
07/09/25	Review and revision to guideline; consisting of updating the continuation criteria.