

PHARMACY POLICY STATEMENT

Mississippi Medicaid

DRUG NAME	Ultomiris (ravulizumab-cwvz)
BENEFIT TYPE	Medical
STATUS	Prior Authorization Required

Ultomiris was originally approved by the FDA in 2018 for the treatment of paroxysmal nocturnal hemoglobinuria (PNH). It is a terminal complement inhibitor that specifically binds to the complement protein C5 with high affinity, thereby inhibiting its cleavage to C5a (the proinflammatory anaphylatoxin) and C5b (the initiating subunit of the membrane attack complex [MAC or C5b-9]) thus preventing MAC formation.

Ultomiris was engineered from an earlier product, Soliris, to have a longer half-life allowing for extended dosing intervals (every 2 weeks vs. every 8 weeks). Ultomiris and Soliris are virtually identical aside from Ultomiris having the longer half-life.

Ultomiris is also approved for the treatment of atypical hemolytic uremic syndrome (aHUS) to inhibit complement-mediated thrombotic microangiopathy (TMA), for the treatment of anti-acetylcholine receptor (AChR) antibody-positive generalized myasthenia gravis (gMG), and for anti-aquaporin-4 (AQP4) antibody positive neuromyelitis optica spectrum disorder (NMOSD).

Ultomiris (ravulizumab-cwvz) will be considered for coverage when the following criteria are met:

Atypical Hemolytic Uremic Syndrome (aHUS)

For **initial** authorization:

1. Medication is prescribed by or in consultation with a hematologist or nephrologist; AND
2. Member has a diagnosis of aHUS supported by ALL of the following:
 - a) Thrombocytopenia (platelet count $< 150 \times 10^9/L$)
 - b) Evidence of microangiopathic hemolytic anemia (MAHA) e.g., hemoglobin < 10 g/dL, elevated lactate dehydrogenase (LDH), low haptoglobin, presence of fragmented red blood cells or schistocytes on blood smear
 - c) Evidence of renal impairment (e.g., raised SCr or low eGFR); AND
3. Shiga toxin-producing E. coli related HUS (STEC-HUS) has been ruled out; AND
4. ADAMTS13 activity level is $> 10\%$ (to rule out TTP); AND
5. Member has received meningococcal vaccine.
6. **Dosage allowed/Quantity limit:**
IV infusion: loading dose followed by maintenance doses starting 2 weeks later, based on body weight, per prescribing information. See appendix 1.
Subcutaneous (adults only): 490 mg once weekly (8 cartons per 28 days)

If all the above requirements are met, the medication will be approved for 6 months.

For **reauthorization**:

1. Chart notes must demonstrate hematologic normalization as evidenced by increased platelet count or LDH maintained below upper limit of normal; AND
2. Improved or preserved kidney function.

If all the above requirements are met, the medication will be approved for an additional 12 months.

Paroxysmal Nocturnal Hemoglobinuria (PNH)

For **initial** authorization:

1. Medication is prescribed by or in consultation with a hematologist; AND
2. Member has a documented diagnosis of PNH as confirmed by flow cytometry; AND
3. Member has a lactate dehydrogenase (LDH) level >1.5x upper limit of normal (ULN); AND
4. Member has at least one PNH-related sign/symptom e.g., fatigue, hemoglobin <10 g/dL, thrombosis, pRBC transfusion, shortness of breath; AND
5. Member has received meningococcal vaccine.
6. **Dosage allowed/Quantity limit:**
IV infusion: loading dose followed by maintenance doses starting 2 weeks later, based on body weight, per prescribing information. See appendix 1.
Subcutaneous (adults only): 490 mg once weekly (8 cartons per 28 days).

If all the above requirements are met, the medication will be approved for 6 months.

For **reauthorization**:

1. Clinical evidence of positive response to therapy such as increased hemoglobin level, decreased need for transfusions, normalized LDH levels, improved fatigue.

If all the above requirements are met, the medication will be approved for an additional 12 months.

Generalized Myasthenia Gravis (gMG)

For **initial** authorization:

1. Member is at least 18 years of age; AND
2. Medication is prescribed by or in consultation with a neurologist; AND
3. Member has a documented diagnosis of MGFA class II-IV myasthenia gravis (see appendix 2); AND
4. Lab result in chart notes shows the member is seropositive for AChR antibodies; AND
5. Member has tried and failed at least 1 conventional therapy:
 - a) Pyridostigmine
 - b) Corticosteroid for at least 3 months
 - c) Non-steroid immunosuppressant (e.g., azathioprine) for at least 6 months; AND
6. Member has tried and failed IV Vyvgart; AND
7. Member has received meningococcal vaccine.
8. **Dosage allowed/Quantity limit:** Administered by IV infusion; loading dose followed by maintenance doses starting 2 weeks later, based on body weight, per prescribing information. See appendix 1.

If all the above requirements are met, the medication will be approved for 6 months.

For **reauthorization**:

1. Chart notes must document clinically meaningful improvement in symptom severity and daily functioning compared to pre-treatment baseline (e.g., improved MG-ADL or QMG scores).

If all the above requirements are met, the medication will be approved for an additional 12 months.

Neuromyelitis Optica Spectrum Disorder (NMOSD)

For **initial** authorization:

1. Member is at least 18 years of age; AND
2. Medication must be prescribed by or in consultation with a neurologist; AND
3. Member has a documented diagnosis of NMOSD and is seropositive for aquaporin-4 (AQP4) IgG antibodies; AND

4. Member had had 1 or more relapses within the past year; AND
5. Member has tried and failed rituximab for at least 6 months (requires prior auth); AND
6. Member has received meningococcal vaccine.
7. **Dosage allowed/Quantity limit:** Administered by IV infusion; loading dose followed by maintenance doses starting 2 weeks later, based on body weight, per prescribing information. See appendix 1.

If all the above requirements are met, the medication will be approved for 6 months.

For **reauthorization**:

1. Chart notes must document disease stabilization, symptom improvement, and/or reduced frequency of relapses.

If all the above requirements are met, the medication will be approved for an additional 12 months.

TrueCare considers Ultomiris (ravulizumab-cwvz) not medically necessary for the treatment of conditions that are not listed in this document. For any other indication, please refer to the Off-Label policy.

DATE	ACTION/DESCRIPTION
05/07/2019	New policy for Ultomiris created.
10/26/2019	New diagnosis of aHUS added.
06/03/2021	aHUS: Updated references. Added specialist requirement. Revised diagnostic parameters. Summarized excluded causes. Removed list of restrictions from clinical trials. Revised renewal criteria. PNH: Updated references. Removed nephrology as specialist. Removed transfusion and organ damage requirements. Updated dosing information. Reduced initial approval duration from 12 months to 6 months. Revised renewal criteria.
05/19/2022	Diagnosis of myasthenia gravis added.
08/12/2022	Added dosing for new subQ product (adults with PNH or aHUS only); added pharmacy benefit.
07/19/2023	gMG: Added reference. Split list of conventional drug trials. Added trial of Vyvgart IV. aHUS: Updated and added references. Corrected ADAMTS13 level cutoff. Changed "evidence of hemolysis" to evidence of MAHA. PNH: Added reference. Added that they must be symptomatic.
04/04/2024	Added criteria section for new indication of NMOSD.

APPENDIX 1:

Table 1: ULTOMIRIS Vial for Intravenous (IV) Administration Weight-Based Dosing Regimen – PNH, aHUS, gMG, or NMOSD*

Indications	Body Weight Range (kg)	Loading Dose (mg)**	Maintenance Dose (mg) and Dosing Interval	
PNH or aHUS	5 to less than 10	600	300	Every 4 weeks
	10 to less than 20	600	600	
	20 to less than 30	900	2,100	Every 8 weeks
	30 to less than 40	1,200	2,700	
PNH, aHUS, gMG, or NMOSD	40 to less than 60	2,400	3,000	Every 8 weeks
	60 to less than 100	2,700	3,300	
	100 or greater	3,000	3,600	

APPENDIX 2:

MG Foundation of America (MGFA) Clinical Classification	
Class I	any ocular weakness; all other muscle strength is normal
Class II	mild weakness affecting other than ocular muscles; may also have ocular weakness at any level
Class III	moderate weakness affecting other than ocular muscles; may also have ocular weakness at any level
Class IV	severe weakness affecting other than ocular muscles; may also have ocular weakness at any level
Class V	defined by intubation, with or without mechanical ventilation

References:

1. Ultomiris [package insert]. Boston, MA: Alexion Pharmaceuticals, Inc., 2024.
2. Tanaka K, Adams B, Aris AM, et al. The long-acting C5 inhibitor, ravulizumab, is efficacious and safe in pediatric patients with atypical hemolytic uremic syndrome previously treated with eculizumab [published correction appears in *Pediatr Nephrol*. 2020 Dec 9;]. *Pediatr Nephrol*. 2021;36(4):889-898. doi:10.1007/s00467-020-04774-2
3. Ariceta G, Dixon BP, Kim SH, et al. The long-acting C5 inhibitor, ravulizumab, is effective and safe in pediatric patients with atypical hemolytic uremic syndrome naïve to complement inhibitor treatment [published correction appears in *Kidney Int*. 2023 Jul;104(1):205]. *Kidney Int*. 2021;100(1):225-237. doi:10.1016/j.kint.2020.10.046
4. Barbour T, Scully M, Ariceta G, et al. Long-Term Efficacy and Safety of the Long-Acting Complement C5 Inhibitor Ravulizumab for the Treatment of Atypical Hemolytic Uremic Syndrome in Adults. *Kidney Int Rep*. 2021;6(6):1603-1613. Published 2021 Mar 24. doi:10.1016/j.ekir.2021.03.884.
5. Loirat C, Fakhouri F, Ariceta G, et al. An international consensus approach to the management of atypical hemolytic uremic syndrome in children. *Pediatr Nephrol*. 2016;31(1):15-39. doi:10.1007/s00467-015-3076-8
6. Pugh D, O'Sullivan ED, Duthie FA, Masson P, Kavanagh D. Interventions for atypical haemolytic uraemic syndrome. *Cochrane Database Syst Rev*. 2021;3(3):CD012862. Published 2021 Mar 23. doi:10.1002/14651858.CD012862.pub2
7. Kato H, Nangaku M, Hataya H, et al. Clinical guides for atypical hemolytic uremic syndrome in Japan. *Clin Exp Nephrol*. 2016;20(4):536-543. doi:10.1007/s10157-016-1276-6
8. Tseng MH, Lin SH, Tsai JD, et al. Atypical hemolytic uremic syndrome: Consensus of diagnosis and treatment in Taiwan. *J Formos Med Assoc*. 2023;122(5):366-375. doi:10.1016/j.jfma.2022.10.006
9. Lee H, Kang E, Kang HG, et al. Consensus regarding diagnosis and management of atypical hemolytic uremic syndrome. *Korean J Intern Med*. 2020;35(1):25-40. doi:10.3904/kjim.2019.388
10. Scully M, Goodship T. How I treat thrombotic thrombocytopenic purpura and atypical haemolytic uraemic syndrome. *Br J Haematol*. 2014;164(6):759-766. doi:10.1111/bjh.12718
11. Parker CJ. Update on the diagnosis and management of paroxysmal nocturnal hemoglobinuria. *Hematology Am Soc Hematol Educ Program*. 2016;2016(1):208-216. doi:10.1182/asheducation-2016.1.208

12. Patriquin CJ, Kiss T, Caplan S, et al. How we treat paroxysmal nocturnal hemoglobinuria: A consensus statement of the Canadian PNH Network and review of the national registry. *Eur J Haematol*. 2019;102(1):36-52. doi:10.1111/ejh.13176
13. Devos T, Meers S, Boeckx N, et al. Diagnosis and management of PNH: Review and recommendations from a Belgian expert panel. *Eur J Haematol*. 2018;101(6):737-749. doi:10.1111/ejh.13166
14. Lee JW, Sicre de Fontbrune F, Wong Lee L, et al. Ravulizumab (ALXN1210) vs eculizumab in adult patients with PNH naive to complement inhibitors: the 301 study. *Blood*. 2019;133(6):530-539. doi:10.1182/blood-2018-09-876136
15. Kulasekararaj AG, Hill A, Rottinghaus ST, et al. Ravulizumab (ALXN1210) vs eculizumab in C5-inhibitor-experienced adult patients with PNH: the 302 study. *Blood*. 2019;133(6):540-549. doi:10.1182/blood-2018-09-876805
16. Bodó I, Amine I, Boban A, et al. Complement Inhibition in Paroxysmal Nocturnal Hemoglobinuria (PNH): A Systematic Review and Expert Opinion from Central Europe on Special Patient Populations. *Adv Ther*. 2023;40(6):2752-2772. doi:10.1007/s12325-023-02510-4
17. Sanders DB, Wolfe GI, Benatar M, et al. International consensus guidance for management of myasthenia gravis: Executive summary. *Neurology*. 2016;87(4):419-425. doi:10.1212/WNL.0000000000002790
18. Narayanaswami P, Sanders DB, Wolfe G, et al. International Consensus Guidance for Management of Myasthenia Gravis: 2020 Update. *Neurology*. 2021;96(3):114-122. doi:10.1212/WNL.0000000000011124
19. Alhaidar MK, Abumurad S, Soliven B, Rezanian K. Current Treatment of Myasthenia Gravis. *J Clin Med*. 2022;11(6):1597. Published 2022 Mar 14. doi:10.3390/jcm11061597
20. Meisel A, Annane D, Vu T, et al. Long-term efficacy and safety of ravulizumab in adults with anti-acetylcholine receptor antibody-positive generalized myasthenia gravis: results from the phase 3 CHAMPION MG open-label extension. *J Neurol*. 2023;270(8):3862-3875. doi:10.1007/s00415-023-11699-x
21. Jarius S, Aktas O, Ayzenberg I, et al. Update on the diagnosis and treatment of neuromyelitis optica spectrum disorders (NMOSD) - revised recommendations of the Neuromyelitis Optica Study Group (NEMOS). Part I: Diagnosis and differential diagnosis. *J Neurol*. 2023;270(7):3341-3368. doi:10.1007/s00415-023-11634-0
22. Kümpfel T, Giglhuber K, Aktas O, et al. Update on the diagnosis and treatment of neuromyelitis optica spectrum disorders (NMOSD) - revised recommendations of the Neuromyelitis Optica Study Group (NEMOS). Part II: Attack therapy and long-term management [published correction appears in *J Neurol*. 2024 Apr 5;]. *J Neurol*. 2024;271(1):141-176. doi:10.1007/s00415-023-11910-z
23. Wingerchuk DM, Zhang I, Kielhorn A, et al. Network Meta-analysis of Food and Drug Administration-approved Treatment Options for Adults with Aquaporin-4 Immunoglobulin G-positive Neuromyelitis Optica Spectrum Disorder. *Neurol Ther*. 2022;11(1):123-135. doi:10.1007/s40120-021-00295-8
24. Aungsumart S, Youngkong S, Dejthevaporn C, et al. Efficacy and safety of monoclonal antibody therapy in patients with neuromyelitis optica spectrum disorder: A systematic review and network meta-analysis. *Front Neurol*. 2023;14:1166490. Published 2023 Apr 4. doi:10.3389/fneur.2023.1166490

Effective date: 07/01/2025

Revised date: 04/04/2024

MS-MED-P-3719704