

Benlysta® (belimumab) (Intravenous)

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04/2020, 01/2021, 04/2021, 04/2022, 09/2022, 04/2023, 09/2023, 04/2024

I. Length of Authorization

Coverage will be provided for 12 months and may be renewed.

II. Dosing Limits

A. Quantity Limit (max daily dose) [NDC Unit]:

- Loading Dose (doses administered on days 1, 15 and 29):
 - Benlysta 120 mg single-dose vial for injection: 9 vials per 29 days
 - Benlysta 400 mg single-dose vial for injection: 9 vials per 29 days
- Maintenance Dose:
 - Benlysta 120 mg single-dose vial for injection: 3 vials per 28 days
 - Benlysta 400 mg single-dose vial for injection: 3 vials per 28 days

B. Max Units (per dose and over time) [HCPCS Unit]:

- Loading Dose:
 - o 120 billable units on days 1, 15 and 29
- Maintenance Dose:
 - 120 billable units per 28 days

III. Initial Approval Criteria 1

Patient is required to meet Site of Service specialty infusion program requirements (refer to the <u>Dean Health Plan Site of Service Policy</u>).

Patient is at least 5 years of age; AND

Universal Criteria 1

- Patient must not have an active infection; AND
- Patient will not receive live vaccines during therapy or within 30 days prior to starting treatment;
 AND
- Patient does not have severe active central nervous system lupus; AND

- Will be used in combination with standard therapy (e.g., anti-malarials, corticosteroids, nonsteroidal anti-inflammatory drugs, immunosuppressives);
- Will not be used in combination with rituximab, anifrolumab, or IV cyclophosphamide*; AND
- * Note: May be used in combination with IV cyclophosphamide for Lupus Nephritis.

Systemic Lupus Erythematosus (SLE) † 1,9,11,12, 22-27,29

- Patient has a confirmed diagnosis of SLE as evidenced by all of the following:
 - Confirmed SLE classification criteria score ≥10* (Note: must include clinical and immunologic domains criteria)
 - Anti-nuclear antibody (ANA) titer of ≥1:80 measured via indirect immunofluorescence (IIF) on human epithelial (HEp-2) cells (or an equivalent ANA positive test) at least once; AND
- Patient has documented active disease; AND
- Physician has assessed baseline disease severity utilizing an objective measure/tool (i.e., Systemic Lupus Erythematosus Disease Activity Index 2000 (SLEDAI 2K), British Isles Lupus Assessment Group-2004 (BILAG 2004), and/or Physician's Global Assessment (PGA) score);
 AND
- Patient has failed to respond adequately to at least one (1) standard therapy such as antimalarials, corticosteroids, non-steroidal anti-inflammatory drugs, immunosuppressives**
- ** **Note:** For patients already established on biologic therapy, trial and failure of standard therapy is not required.

Lupus Nephritis (LN) † 1,9,11,12,19,22,28-30

- Patient has active lupus nephritis Class III, IV, or V as confirmed by renal biopsy; AND
- Patient has a confirmed diagnosis of SLE as evidenced by all of the following**:
 - Confirmed SLE classification criteria score ≥10* (Note: must include clinical and immunologic domains criteria)
 - Anti-nuclear antibody (ANA) titer of ≥1:80 measured via indirect immunofluorescence (IIF) on human epithelial (HEp-2) cells (or an equivalent ANA positive test) at least once; AND
- Physician has obtained a baseline measurement of one or more of the following: urine protein:creatinine ratio (uPCR), estimated glomerular filtration rate (eGFR), or urine protein

^{**}Patients with class III, IV, or V disease that do not meet the SLE diagnostic criteria will be reviewed on a case-by-case basis

*Classification Criteria for Systemic Lupus Erythematosus (SLE) ²²		
Clinical Score ^A (range: 0-39)	Clinical Domains and Criteria	
2	Constitutional: Unexplained fever > 101°F	
	Hematologic:	
3	White blood cell count < 4,000/mm ³	
4	Platelet count < 100,000/mm ³ or Autoimmune hemolysis	
	Neuropsychiatric:	
2	Delirium	



3	Psychosis	
5	Primary generalized seizure or partial/focal seizure	
	Mucocutaneous +:	
2	Non-scarring alopecia or oral ulcers	
4	Subacute cutaneous or discoid lupus	
6	Acute cutaneous lupus	
	Serosal:	
5	Pleural or pericardial effusion	
6	Acute pericarditis	
6	Musculoskeletal: Joint involvement with either synovitis involving 2 or more joints with	
	swelling or effusion OR tenderness in 2 or more joints with at least 30 minutes of morning stiffness	
4	Renal: Proteinuria > 0.5g/24 hr by a 24-hour urine or equivalent spot urine protein-to-creatinine ratio	
8	Renal biopsy class II or V lupus nephritis	
10	Renal biopsy Class III or IV lupus nephritis	
Immunologic Score ^a (range: 0-12)	Immunologic Domains and Criteria	
2	Presence of antiphospholipid antibodies (i.e., positive lupus anticoagulant, positive anti-β2GP1 antibodies, and/or anti-cardiolipin antibodies at medium or high titer)	
	Presence of low complement proteins (below lower limit of normal):	
3	Low C3 OR low C4	
4	Low C3 AND C4	
6	Presence of anti-Sm and/or anti-dsDNA antibodies	

^{*}A web-based scoring calculator as well as further definitions of each criterion are available at: https://rheumatology.org/criteria

† FDA Approved Indication(s); ‡ Compendia Recommended Indication(s); • Orphan Drug

IV. Renewal Criteria 1

Coverage can be renewed based on the following criteria:

- Patient continues to meet universal and other indication-specific relevant criteria such as concomitant therapy requirements (not including prerequisite therapy), performance status, etc. identified in section III; AND
- Absence of unacceptable toxicity from the drug. Examples of unacceptable toxicity include: depression, suicidal thoughts, serious infections, suspected or confirmed progressive multifocal leukoencephalopathy (PML), malignancy, severe hypersensitivity reactions/anaphylaxis, serious infusion-related reactions, etc.; AND



^A Occurrence on at least one occasion is sufficient to count toward score when all other causes have been ruled out. Count only the highest weighted score within each of the 10 domains (7 clinical and 3 immunologic) and any additional criteria within the same domain will not count.

⁺ Observed by a physician via clinical exam or photograph review

Systemic Lupus Erythematosus (SLE) 1,9,21-27,29

- Adequate documentation of disease stability and/or improvement as indicated by one or more of the following when compared to pre-treatment baseline:
 - Improvement in the SELENA-SLEDAI-2K; OR
 - Reduction of baseline BILAG-2004 (e.g. reduction from A to B or from B to C/D, and no BILAG-2004 worsening in other organ systems, as defined by ≥2 new BILAG-2004 B or ≥1 new BILAG A); OR
 - No worsening (<0.30-point increase) in Physician's Global Assessment (PGA) score; OR
 - Seroconverted (negative)

Lupus Nephritis (LN) 1,19,22,30

- Adequate documentation of disease stability and/or improvement as indicated by one or more of the following when compared to pre-treatment baseline:
 - Urine protein:creatinine ratio (uPCR); OR
 - Estimated glomerular filtration rate (eGFR); OR
 - Urine protein

V. Dosage/Administration ¹

Indication	Dose
Systemic Lupus	 Loading Dose: 10 mg/kg intravenously (by a healthcare provider) every 2 weeks
Erythematosus	for the first 3 doses (days 1, 15 and 29)
(SLE) or Lupus	 Maintenance Dose: 10 mg/kg intravenously (by a healthcare provider) every 4
Nephritis (LN)	weeks

VI. Billing Code/Availability Information

HCPCS Code:

J0490 – Injection, belimumab, 10 mg; 1 billable unit = 10 mg

NDC(s):

- Benlysta 120 mg/5 mL single-dose vial for injection: 49401-0101-xx
- Benlysta 400 mg/20 mL single-dose vial for injection: 49401-0102-xx

VII. References

- 1. Benlysta [package insert]. Philadelphia, PA; GlaxoSmithKline LLC; February 2024. Accessed February 2024.
- 2. Boyce EG, Fusco BE. Belimumab: review of use in systemic lupus erythematosus. Clin Ther. 2012 May;34(5):1006-22. doi: 10.1016/j.clinthera.2012.02.028. Epub 2012 Mar 30.



- 3. Navarra SV, Guzmán RM, Gallacher AE, et al. Efficacy and safety of belimumab in patients with active systemic lupus erythematosus: a randomised, placebo-controlled, phase 3 trial. Lancet. 2011 Feb;377(9767):721-31. doi: 10.1016/SO140-6736(10)61354-2. Epub 2011 Feb 4.
- Furie R, Petri M, Zamani O, et al. A phase III, randomized, placebo-controlled study of belimumab, a monoclonal antibody that inhibits B lymphocyte stimulator, in patients with systemic lupus erythematosus. Arthritis Rheum. 2011 Dec;63(12):3918-30. doi: 10.1002/art.30613.
- 5. Petri M, Orbai AM, Alarcón GS, et al. Derivation and validation of the Systemic Lupus International Collaborating Clinics classification criteria for systemic lupus erythematosus. Arthritis Rheum. 2012 Aug;64(8):2677-86. doi: 10.1002/art.34473.
- 6. Furie R, Stohl W, Ginzler EM, et al. Biologic activity and safety of belimumab, a neutralizing anti-B-lymphocyte stimulator (BLyS) monoclonal antibody: a phase I trial in patients with systemic lupus erythematosus. Arthritis Res Ther. 2008;10(5):R109. doi: 10.1186/ar2506. Epub 2008 Sep 11.
- 7. Kim SS, Kirou KA, Erkan D. Belimumab in systemic lupus erythematosus: an update for clinicians. Ther Adv Chronic Dis. 2012 Jan;3(1):11-23. doi: 10.1177/2040622311424806.
- 8. Calvo-Alén J1, Silva-Fernández L, Úcar-Angulo E, et al. SER consensus statement on the use of biologic therapy for systemic lupus erythematosus. Reumatol Clin. 2013 Sep-Oct;9(5):281-96.
- 9. Gordon C, Amissah-Arthur MB, Gayed M, et al. The British Society for Rheumatology guideline for the management of systemic lupus erythematosus in adults. Rheumatology (Oxford). 2018 Jan 1;57(1):e1-e45. doi: 10.1093/rheumatology/kex286.
- 10. NICE. Belimumab for treating active autoantibody-positive systemic lupus erythematosus: Technology Appraisal Guidance [TA397]. https://www.nice.org.uk/guidance/ta397. Published: 22 June 2016. Accessed March 2021.
- 11. American College of Rheumatology Ad Hoc Committee on Systemic Lupus Erythematosus Guidelines. Guidelines for referral and management of systemic lupus erythematosus in adults. Arthritis Rheum. 1999;42(9):1785–1796.
- 12. Lam NC, Ghetu MV, Bieniek ML. Systemic Lupus Erythematosus: Primary Care Approach to Diagnosis and Management. Am Fam Physician. 2016 Aug 15;94(4):284-94.
- 13. Wallace DJ, Stohl W, Furie RA, et al. A Phase II, Randomized, Double-Blind, Placebo-Controlled, Dose-Ranging Study of Belimumab in Patients With Active Systemic Lupus Erythematosus. Arthritis Rheum, 61 (9), 1168-78, 2009 Sept 15. doi: 10.1002/art.24699
- 14. D'Cruz D, Maksimowicz-McKinnon K, Oates J, et al. Efficacy and safety of belimumab in patients of black race with systemic lupus erythematosus: results from the EMBRACE study. 10.1136/lupus-2019-lsm.199
- 15. Brunner HI, Abud-Mendoza C, Viola DI, et al. Efficacy and Safety of Intravenous Belimumab in Children with Systemic Lupus Erythematosus [abstract]. *Arthritis Rheumatol*. 2018; 70 (suppl 10). https://acrabstracts.org/abstract/efficacy-and-safety-of-intravenous-belimumab-in-children-with-systemic-lupus-erythematosus/
- 16. Stohl W, Schwarting A, Okada M, et al. Efficacy and Safety of Subcutaneous Belimumab in Systemic Lupus Erythematosus: A Fifty-Two-Week Randomized, Double-Blind, Placebo-Controlled Study. Arthritis Rheumatol, 69 (5), 1016-1027; May 2017. DOI: 10.1002/art.40049.



- 17. Fanouriakis A, Kostopoulou M, Alunno A, et al. 2019 update of the EULAR recommendations for the management of systemic lupus erythematosus. Ann Rheum Dis 2019;78: 736–745.
- 18. Furie R, Rovin BH, Houssiau F, et al. Two-Year, Randomized, Controlled Trial of Belimumab in Lupus Nephritis. N Engl J Med 2020; 383:1117-1128. DOI: 10.1056/NEJMoa2001180.
- 19. Hahn BH, McMahon MA, Wilkinson A, et al. American College of Rheumatology guidelines for screening, treatment, and management of lupus nephritis. Arthritis Care Res (Hoboken). 2012;64(6):797-808. doi:10.1002/acr.21664.
- 20. Bertsias GK, Tektonidou M, Amoura Z, et al. Joint European League Against Rheumatism and European Renal Association-European Dialysis and Transplant Association (EULAR/ERA-EDTA) recommendations for the management of adult and paediatric lupus nephritis. Ann Rheum Dis. 2012;71(11):1771-1782. doi:10.1136/annrheumdis-2012-201940.
- 21. NICE. Belimumab for treating active autoantibody-positive systemic lupus erythematosus: Technology appraisal guidance [TA752]. https://www.nice.org.uk/guidance/ta752. Published: 15 December 2021.
- 22. Aringer M, Costenbader K, Daikh D, et al. 2019 European League against Rheumatism/American College of rheumatology classification criteria for systemic lupus erythematosus. Arthritis Rheumatol 2019;71:1400–12.
- 23. Fanouriakis A, Tziolos N, Bertsias G, et al. Update on the diagnosis and management of systemic lupus erythematosus. Ann Rheum Dis 2021; 80:14-25. doi:10.1136/annrheumdis-2020-218272
- 24. Lam NC, Brown JA, Sharma R. Systemic Lupus Erythematosus: Diagnosis and Treatment. Am Fam Physician. 2023 Apr 107(4):383-395.
- 25. Yee CS, Cresswell L, Farewell V, Rahman A, Teh LS, Griffiths B et al. Numerical scoring for the BILAG-2004 index. Rheumatology (Oxford) 2010; 49(9):1665-9.
- 26. Gladman DD, Ibanez D, Urowitz MB. Systemic lupus erythematosus disease activity index 2000. J Rheumatol 2002; 29(2):288-91.
- 27. Chessa E, Piga M, Floris A, Devilliers H, Cauli A, Arnaud L. Use of Physician Global Assessment in systemic lupus erythematosus: a systematic review of its psychometric properties. Rheumatology (Oxford). 2020 Dec 1;59(12):3622-3632. doi: 10.1093/rheumatology/keaa383.
- 28. Fanouriakis A, Kostopoulou M, Cheema K, et al: 2019 update of the Joint European League Against Rheumatism and European Renal Association-European Dialysis and Transplant Association (EULAR/ERA-EDTA) recommendations for the management of lupus nephritis. Ann Rheum Dis 2020; 79(6):713-723
- 29. Fanouriakis A, Kostopoulou M, Andersen J, et al. EULAR recommendations for the management of systemic lupus erythematosus: 2023 update. Ann Rheum Dis. 2024 Jan 2;83(1):15-29. doi: 10.1136/ard-2023-224762.
- 30. Kidney Disease: Improving Global Outcomes (KDIGO) Lupus Nephritis Work Group. KDIGO 2024 Clinical Practice Guideline for the Management of Lupus Nephritis. Kidney Int. 2024;105(1S):S1–S69.



Appendix 1 - Covered Diagnosis Codes

ICD-10	ICD-10 Description	
M32.10	Systemic lupus erythematosus organ or system involvement unspecified	
M32.11	Endocarditis in systemic lupus erythematosus	
M32.12	Pericarditis in systemic lupus erythematosus	
M32.13	Lung involvement in systemic lupus erythematosus	
M32.14	Glomerular disease in systemic lupus erythematosus	
M32.15	Tubulo-interstitial nephropathy in systemic lupus erythematosus	
M32.19	Other organ or system involvement in systemic lupus erythematosus	
M32.8	Other forms of systemic lupus erythematosus	
M32.9	Systemic lupus erythematosus, unspecified	

Appendix 2 – Centers for Medicare and Medicaid Services (CMS)

The preceding information is intended for non-Medicare coverage determinations. Medicare coverage for outpatient (Part B) drugs is outlined in the Medicare Benefit Policy Manual (Pub. 100-2), Chapter 15, §50 Drugs and Biologicals. In addition, National Coverage Determinations (NCDs) and/or Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable. Local Coverage Articles (LCAs) may also exist for claims payment purposes or to clarify benefit eligibility under Part B for drugs which may be self-administered. The following link may be used to search for NCD, LCD, or LCA documents: https://www.cms.gov/medicare-coverage-database/search.aspx. Additional indications, including any preceding information, may be applied at the discretion of the health plan.

Medicare Part B Covered Diagnosis Codes (applicable to existing NCD/LCD/LCA): N/A

Medicare Part B Administrative Contractor (MAC) Jurisdictions				
Jurisdicti on	Applicable State/US Territory	Contractor		
E (1)	CA, HI, NV, AS, GU, CNMI	Noridian Healthcare Solutions, LLC		
F (2 & 3)	AK, WA, OR, ID, ND, SD, MT, WY, UT, AZ	Noridian Healthcare Solutions, LLC		
5	KS, NE, IA, MO	Wisconsin Physicians Service Insurance Corp (WPS)		
6	MN, WI, IL	National Government Services, Inc. (NGS)		
H (4 & 7)	LA, AR, MS, TX, OK, CO, NM	Novitas Solutions, Inc.		
8	MI, IN	Wisconsin Physicians Service Insurance Corp (WPS)		
N (9)	FL, PR, VI	First Coast Service Options, Inc.		
J (10)	TN, GA, AL	Palmetto GBA		
M (11)	NC, SC, WV, VA (excluding below)	Palmetto GBA		







Medicare Part B Administrative Contractor (MAC) Jurisdictions				
Jurisdicti	Applicable State/US Territory	Contractor		
on				
L (12)	DE, MD, PA, NJ, DC (includes Arlington & Fairfax counties and the city of Alexandria in VA)	Novitas Solutions, Inc.		
K (13 & 14)	NY, CT, MA, RI, VT, ME, NH	National Government Services, Inc. (NGS)		
15	KY, OH	CGS Administrators, LLC		

