

Medical Drug Clinical Criteria

Subject:	Breyanzi (lisocabtagene maraleucel)		
Document #:	CC-0187	Publish Date:	12/21/2022
Status:	Revised	Last Review Date:	11/18/2022

Table of Contents

Overview	Coding	References
Clinical criteria	Document history	

Overview

This document addresses the use of Breyanzi (lisocabtagene maraleucel), a CD19-directed immunotherapy, for treatment of relapsed or refractory large B-cell lymphomas.

The FDA approved indications for the treatment of adult patients with large B-cell lymphoma (LBCL), including diffuse large B cell lymphoma (DLBCL) not otherwise specified (including DLBCL arising from indolent lymphoma), high-grade B-cell lymphoma, primary mediastinal large B-cell lymphoma, and follicular lymphoma grade 3B who have:

- refractory disease to first-line chemoimmunotherapy or relapse within 12 months of first-line chemoimmunotherapy; or
- refractory disease to first-line chemoimmunotherapy or relapse after first-line chemoimmunotherapy and are not eligible for hematopoietic stem cell transplantation (HSCT) due to comorbidities or age; or
- relapsed or refractory disease after two or more lines of systemic therapy

Breyanzi is the third CAR-T therapy indicated for large B-cell lymphoma, following Yescarta (axicabtagene ciloleucel) and Kymriah (tisagenlecleucel).

Breyanzi (lisocabtagene maraleucel, also called liso-cel) is a CD19-directed, genetically-modified autologous T-cell immunotherapy, also known as chimeric antigen receptor (CAR) T-cell therapy. CAR T-cells are made by first collecting T-cells from the patient. The cells are then sent to a laboratory where they are genetically engineered to produce chimeric antigen receptors. The modified T-cells, now known as CAR T-cells, have the ability to better recognize an antigen (the CD19 protein) on targeted tumor cells. After the CAR T-cells have multiplied in the laboratory, they are then infused back into the patient. The modified CAR T-cells help the body's immune system better target and treat the tumor cells.

Of note, Breyanzi's TRANSCEND study originally allowed individuals with an ECOG score of 2 to be enrolled, but the protocol was amended in 2017 (2 years after study initiation) to restrict to only ECOG of 0 to 1 for unknown reasons. A total of 4 patients (1% of study population) had ECOG of 2.

Breyanzi has a black box warning for cytokine release syndrome (CRS) and should not be administered in patients with active infection or inflammatory disorders due to risk of life-threatening reactions and death. Severe or life-threatening CRS should be treated with tocilizumab with or without corticosteroids. Breyanzi also has black box warning for causing neurological toxicities, which could also be severe and life-threatening. Monitoring for neurological events after administration is recommended. Due to these black box warnings, Breyanzi is only available through a Risk Evaluation and Mitigation Strategy (REMS) program.

Definitions and Measures

Allogeneic cells: Harvested from a histocompatible donor.

Autologous cells: Harvested from the individual's own cells.

Bone marrow: A spongy tissue located within flat bones, including the hip and breast bones and the skull. This tissue contains stem cells, the precursors of platelets, red blood cells, and white cells.

Chemotherapy: The medical treatment of a disease, particularly cancer, with drugs or other chemicals.

Chimerism: Cell populations derived from different individuals; may be mixed or complete.

Complete Response (CR): The disappearance of all signs of cancer as a result of treatment; also called complete remission; does not indicate the cancer has been cured.

Cytotoxic: Treatment that is destructive to cells, preventing their reproduction or growth.

ECOG or Eastern Cooperative Oncology Group Performance Status: A scale and criteria used by doctors and researchers to assess how an individual's disease is progressing, assess how the disease affects the daily living abilities of the individual, and determine appropriate treatment and prognosis. This scale may also be referred to as the WHO (World Health Organization) or Zubrod score which is based on the following scale:

- 0 = Fully active, able to carry on all pre-disease performance without restriction
- 1 = Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, for example, light house work, office work
- 2 = Ambulatory and capable of all self-care but unable to carry out any work activities. Up and about more than 50% of waking hours
- 3 = Capable of only limited self-care, confined to bed or chair more than 50% of waking hours
- 4 = Completely disabled. Cannot carry on any self-care. Totally confined to bed or chair
- 5 = Dead

Hematopoietic stem cells: Primitive cells capable of replication and formation into mature blood cells in order to repopulate the bone marrow.

Line of Therapy:

- First-line therapy: The first or primary treatment for the diagnosis, which may include surgery, chemotherapy, radiation therapy or a combination of these therapies.
- Second-line therapy: Treatment given when initial treatment (first-line therapy) is not effective or there is disease progression.
- Third-line therapy: Treatment given when both initial (first-line therapy) and subsequent treatment (second-line therapy) are not effective or there is disease progression.

Refractory Disease: Illness or disease that does not respond to treatment.

Relapse or recurrence: After a period of improvement, during which time a disease (for example, cancer) could not be detected, the return of signs and symptoms of illness or disease. For cancer, it may come back to the same place as the original (primary) tumor or to another place in the body.

Clinical Criteria

When a drug is being reviewed for coverage under a member's medical benefit plan or is otherwise subject to clinical review (including prior authorization), the following criteria will be used to determine whether the drug meets any applicable medical necessity requirements for the intended/prescribed purpose.

Breyanzi (lisocabtagene maraleucel)

Requests for Breyanzi (lisocabtagene maraleucel) for **large B-cell lymphoma** may be approved if the following criteria are met:

- I. Individual is 18 years of age or older; **AND**
- II. Individual has a histologically confirmed diagnosis of one of the following:
 - A. Diffuse large B-cell lymphoma (DLBCL), not otherwise specified; **OR**
 - B. Transformed DLBCL from indolent histology; **OR**
 - C. High-grade B-cell lymphoma; **OR**
 - D. Primary mediastinal large B-cell lymphoma; **OR**
 - E. Follicular lymphoma Grade 3B; **OR**
 - F. AIDS Related B-Cell Lymphomas (NCCN 2A); **OR**
 - G. Monomorphic Post-Transplant Lymphoproliferative (B-cell type) Disorders (PTLD) (NCCN 2A); **AND**
- III. Is using in one of the following ways:
 - A. Relapsed or refractory disease, defined as progression after two or more lines of systemic therapy (which may or may not include therapy supported by haematopoietic stem cell transplant), including *all* of the following:
 1. Anti-CD20 monoclonal antibody, such as rituximab; **AND**
 2. An anthracycline-containing chemotherapy regimen; **AND**
 - B. Individual has an Eastern Cooperative Oncology Group (ECOG) performance status of 0 to 1;

OR

- C. Refractory disease to first-line chemotherapy or relapse within 12 months of first-line chemotherapy including all of the following:
 - 1. Anti-CD20 monoclonal antibody, such as rituximab; **AND**
 - 2. An anthracycline-containing chemotherapy regimen; **AND**
- D. Individual has an Eastern Cooperative Oncology Group (ECOG) performance status of 0-1;

OR

- E. Refractory disease to first-line chemotherapy or relapse after first-line chemotherapy including *all* of the following:
 - 1. Anti-CD20 monoclonal antibody, such as rituximab; **AND**
 - 2. An anthracycline-containing chemotherapy regimen; **AND**
- F. Are not eligible for hematopoietic stem cell transplantation (HSCT) due to comorbidities or age; **AND**
- G. Individual has an Eastern Cooperative Oncology Group (ECOG) performance status of 0 to 2;

AND

- IV. Individual has adequate bone marrow reserve; **AND**
- V. If individual has a history of an allogeneic stem cell transplant, there are no signs of active graft versus host disease (GVHD); **AND**
- VI. Individual has not received prior treatment with CAR T-cell therapy or other genetically modified T-cell therapy; **AND**
- VII. Individual is using as a one-time, single administration treatment.

Breyanzi (lisocabtagene maraleucel) may not be approved for the following:

- I. Repeat administration; **OR**
- II. Diagnosis of primary central nervous system lymphoma; **OR**
- III. Cardiac ejection fraction (EF) less than 40%, or other clinically significant cardiac disease; **OR**
- IV. Using in combination with other chemotherapy agents (not including the use of lymphodepleting chemotherapy prior to infusion); **OR**
- V. History or presence of CNS disorders such as epilepsy/seizure disorder, paresis, aphasia, stroke, cerebral edema, severe brain injuries, dementia, Parkinson's disease, cerebellar disease, organic brain syndrome, or psychosis; **OR**
- VI. If prescribed in combination with other CAR T-cell immunotherapy (e.g. Abecma, Carvykti, Kymriah, Tecartus, Yescarta); **OR**
- VII. Individual has active GVHD; **OR**
- VIII. Active or latent hepatitis B, active hepatitis C, human immunodeficiency virus (HIV) positive, or other active, uncontrolled infection; **OR**
- IX. When the above criteria are not met, and for all other indications.

Coding

The following codes for treatments and procedures applicable to this document are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement policy. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

HCPCS

Q2054 Lisocabtagene maraleucel, up to 110 million autologous anti-cd19 car-positive viable t cells, including leukapheresis and dose preparation procedures, per therapeutic dose [Breyanzi]

ICD-10 Diagnosis

All diagnosis pend (applies to NOC codes only)

C82.40	Follicular lymphoma grade IIIb
C82.41	Follicular lymphoma grade IIIb, lymph nodes of head, face, and neck
C82.42	Follicular lymphoma grade IIIb, intrathoracic lymph nodes
C82.43	Follicular lymphoma grade IIIb, intra-abdominal lymph nodes
C82.44	Follicular lymphoma grade IIIb, lymph nodes of axilla and upper limb
C82.45	Follicular lymphoma grade IIIb, lymph nodes of inguinal region and lower limb
C82.46	Follicular lymphoma grade IIIb, intrapelvic lymph nodes
C82.47	Follicular lymphoma grade IIIb, spleen
C82.48	Follicular lymphoma grade IIIb, lymph nodes of multiple sites

C82.49 Follicular lymphoma grade IIIb, extranodal and solid organ sites
 C83.30 Diffuse large B-cell lymphoma, unspecified site
 C83.31 Diffuse large B-cell lymphoma, lymph nodes of head, face, and neck
 C83.32 Diffuse large B-cell lymphoma, intrathoracic lymph nodes
 C83.33 Diffuse large B-cell lymphoma, intra-abdominal lymph nodes
 C83.34 Diffuse large B-cell lymphoma, lymph nodes of axilla and upper limb
 C83.35 Diffuse large B-cell lymphoma, lymph nodes of inguinal region and lower limb
 C83.36 Diffuse large B-cell lymphoma, intrapelvic lymph nodes
 C83.37 Diffuse large B-cell lymphoma, spleen
 C83.38 Diffuse large B-cell lymphoma, lymph nodes of multiple sites
 C83.39 Diffuse large B-cell lymphoma, extranodal and solid organ sites
 C83.90 Non-follicular (diffuse) lymphoma, unspecified
 C83.91 Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of head, face, and neck
 C83.92 Non-follicular (diffuse) lymphoma, unspecified, intrathoracic lymph nodes
 C83.93 Non-follicular (diffuse) lymphoma, unspecified, intra-abdominal lymph nodes
 C83.94 Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of axilla and upper limb
 C83.95 Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of inguinal region and lower limb
 C83.96 Non-follicular (diffuse) lymphoma, unspecified, intrapelvic lymph nodes
 C83.97 Non-follicular (diffuse) lymphoma, unspecified, spleen
 C83.98 Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of multiple sites
 C83.99 Non-follicular (diffuse) lymphoma, unspecified, extranodal and solid organ sites
 C85.10 Unspecified B-cell lymphoma, unspecified site
 C85.11 Unspecified B-cell lymphoma, lymph nodes of head, face, and neck
 C85.12 Unspecified B-cell lymphoma, intrathoracic lymph nodes
 C85.13 Unspecified B-cell lymphoma, intra-abdominal lymph nodes
 C85.14 Unspecified B-cell lymphoma, lymph nodes of axilla and upper limb
 C85.15 Unspecified B-cell lymphoma, lymph nodes of inguinal region and lower limb
 C85.16 Unspecified B-cell lymphoma, intrapelvic lymph nodes
 C85.17 Unspecified B-cell lymphoma, spleen
 C85.18 Unspecified B-cell lymphoma, lymph nodes of multiple sites
 C85.19 Unspecified B-cell lymphoma, extranodal and solid organ sites
 C85.20 Mediastinal (thymic) large B-cell lymphoma, unspecified site
 C85.21 Mediastinal (thymic) large B-cell lymphoma, lymph nodes of head, face, and neck
 C85.22 Mediastinal (thymic) large B-cell lymphoma, intrathoracic lymph nodes
 C85.23 Mediastinal (thymic) large B-cell lymphoma, intra-abdominal lymph nodes
 C85.24 Mediastinal (thymic) large B-cell lymphoma, lymph nodes of axilla and upper limb
 C85.25 Mediastinal (thymic) large B-cell lymphoma, lymph nodes of inguinal region and lower limb
 C85.26 Mediastinal (thymic) large B-cell lymphoma, intrapelvic lymph nodes
 C85.27 Mediastinal (thymic) large B-cell lymphoma, spleen
 C85.28 Mediastinal (thymic) large B-cell lymphoma, lymph nodes of multiple sites
 C85.29 Mediastinal (thymic) large B-cell lymphoma, extranodal and solid organ sites
 C85.80 Other specified types of non-Hodgkin lymphoma, unspecified site
 C85.81 Other specified types of non-Hodgkin lymphoma, lymph nodes of head, face, and neck
 C85.82 Other specified types of non-Hodgkin lymphoma, intrathoracic lymph nodes

C85.83	Other specified types of non-Hodgkin lymphoma, intra-abdominal lymph nodes
C85.84	Other specified types of non-Hodgkin lymphoma, lymph nodes of axilla and upper limb
C85.85	Other specified types of non-Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C85.86	Other specified types of non-Hodgkin lymphoma, intrapelvic lymph nodes
C85.87	Other specified types of non-Hodgkin lymphoma, spleen
C85.88	Other specified types of non-Hodgkin lymphoma, lymph nodes of multiple sites
C85.89	Other specified types of non-Hodgkin lymphoma, extranodal and solid organ sites
Z51.12	Encounter for antineoplastic immunotherapy

Document History

Revised: 11/18/2022

Document History:

- 11/28/2022 – Annual Review: Update criteria to include diagnoses with 2A recommendations from NCCN for AIDS related B cell lymphomas and monomorphic PTLD; Add criteria for history of allogeneic stem cell transplant; Add criteria for prior CAR -T cell therapy; Update may not be approved criteria for combination use with other CAR T- cell therapy and active GVHD individuals; Removed following criteria from may not be approved section: CrCL, history of allogeneic stem cell transplant, and history of CAR T therapy. Coding Reviewed: No changes.
- 08/19/2022 – Select Review: Update criteria with FDA indications for use in refractory disease to first line chemotherapy. Coding Reviewed: Removed ICD-10-CM C82.40-C82.59, C83.30-C83.99, C85.20-C85.29. Added ICD-10-CM C83.90, C83.91, C83.92, C83.93, C83.94, C83.95, C83.96, C83.97, C83.98, C83.99, C85.10, C85.12, C85.13, C85.14, C85.15, C85.16, C85.17, C85.18, C85.19, C85.20, C85.21, C85.22, C85.23, C85.24, C85.25, C85.26, C85.27, C85.28, C85.29. Effective 10/1/2022- Added ICD-10-CM C82.40-C82.49, C83.30-C83.39, C85.80-C85.89.
- 11/19/2021 – Annual Review: No changes. Coding reviewed: No changes.
- 02/19/2021 – Annual Review: Add clinical criteria for Breyanzi (lisocabtagene maraleucl). Coding reviewed: Added HCPCS J3490, J3590, J9999. All diagnosis pend. Effective 7/1/2021 Added HCPCS C9076. Added ICD-10-CM 82.40-C82.59, C83.30-C83.99, C85.20-C85.29, Z51.12. Removed HCPCS J9999. Effective 10/1/2021 Added Q2054. Removed C9076, J3490, J3590.

References

1. Abramson JS, Paloma ML, Gordon LI, et al. Pivotal Safety and Efficacy Results from Transcend NHL 001, a Multicenter Phase 1 Study of Lisocabtagene Maraleucl (liso-cel) in Relapsed/Refractory (R/R) Large B Cell Lymphomas. *Blood* (2019) 134 (Supplement_1): 241. Available at https://ashpublications.org/blood/article/134/Supplement_1/241/426207/Pivotal-Safety-and-Efficacy-Results-from-Transcend?searchresult=1.
2. Abramson JS, Paloma ML, Gordon LI, et al. Lisocabtagene maraleucl for patients with relapsed or refractory large B-cell lymphomas (Transcend NHL 001): a multicenter seamless design study. *Lancet* 2020; 396:839-52. Available at [https://doi.org/10.1016/S0140-6736\(20\)31366-0](https://doi.org/10.1016/S0140-6736(20)31366-0).
3. Abramson JS, Paloma ML, Gordon LI, et al. Lisocabtagene maraleucl for patients with relapsed or refractory large B-cell lymphomas (Transcend NHL 001): a multicenter seamless design study. Supplementary appendix. *Lancet* 2020. Available at [https://doi.org/10.1016/S0140-6736\(20\)31366-0](https://doi.org/10.1016/S0140-6736(20)31366-0).
4. Bachier CR, Palomba ML, Abramson JS, et al. Outpatient Treatment with Lisocabtagene Maraleucl (liso-cel) in Three Ongoing Clinical Studies in Relapsed/Refractory (R/R) B Cell Non-Hodgkin Lymphoma (NHL), Including Second-Line Transplant Ineligible Patients: Transcend NHL 001, Outreach, and PILOT. *Blood* (2019) 134 (Supplement_1): 2868. Available at https://ashpublications.org/blood/article/134/Supplement_1/2868/423386/Outpatient-Treatment-with-Lisocabtagene-Maraleucl?searchresult=1.
5. Bristol-Myers Squibb Announces Liso-Cel Met Primary and Secondary Endpoints in TRANSCEND NHL 001 Study. Press Release 12/7/2019. Available at <https://news.bms.com/press-release/corporatefinancial-news/bristol-myers-squibb-announces-liso-cel-met-primary-and-second>.
6. Clinical Pharmacology [database online]. Tampa, FL: Gold Standard, Inc.: 2022. URL: <http://www.clinicalpharmacology.com>. Updated periodically.
7. DailyMed. Package inserts. U.S. National Library of Medicine, National Institutes of Health website. <http://dailymed.nlm.nih.gov/dailymed/about.cfm>. Accessed: October 13, 2022.
8. DrugPoints® System [electronic version]. Truven Health Analytics, Greenwood Village, CO. Updated periodically.
9. Jain T, Bar M, Kansagra AJ, et al., Use of Chimeric Antigen Receptor T Cell Therapy in Clinical Practice for Relapsed/Refractory Aggressive B Cell Non-Hodgkin Lymphoma: An Expert Panel Opinion from the American Society for Transplantation and Cellular Therapy. *Biol Blood Marrow Transplant*. 2019 Dec;25(12):2305-2321. doi: 10.1016/j.bbmt.2019.08.015. Epub 2019 Aug 22. PMID: 31446199. Accessed October 13, 2022.
10. Lexi-Comp ONLINE™ with AHFS™, Hudson, Ohio: Lexi-Comp, Inc.; 2022; Updated periodically.

11. NCCN Clinical Practice Guidelines in Oncology™. © 2022 National Comprehensive Cancer Network, Inc. For additional information visit the NCCN website: <http://www.nccn.org/index.asp>. Accessed October 16, 2022.
 - a. B-Cell Lymphomas. V5.2022. Revised July 12, 2022.
12. NCT02631044. ClinicalTrials.gov. U.S. National Library of Medicine. Available <https://clinicaltrials.gov/ct2/show/NCT02631044?term=nct02631044&draw=2&rank=1>.

Federal and state laws or requirements, contract language, and Plan utilization management programs or policies may take precedence over the application of this clinical criteria.

No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from the health plan.

© CPT Only – American Medical Association