

Clinical Policy: Lisocabtagene Maraleucel (Breyanzi)

Reference Number: PA.CP.PHAR.483

Effective Date: 04/2021

Last Review Date: 04/2024

Description

Lisocabtagene maraleucel (Breyanzi[®]) is a CD19-directed genetically modified autologous T-cell immunotherapy.

FDA Approved Indication(s)

Breyanzi is indicated 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), highgrade 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
- 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
- Relapsed or refractory disease after two or more lines of systemic therapy
- Relapsed or refractory chronic lymphocytic leukemia (CLL) or small lymphocytic lymphoma (SLL) who have received at least 2 prior lines of therapy, including a Bruton tyrosine kinase inhibitor (BTKi) and a B-cell lymphoma 2 inhibitor (BCL-2i).*
- Relapsed or refractory follicular lymphoma (FL) who have received 2 or more prior lines of systemic therapy.*
- Relapsed or refractory mantle cell lymphoma (MCL) who have received at least 2 prior lines of systemic therapy, including a BTKi.

Limitation of use: Breyanzi is not indicated for the treatment of patients with primary central nervous system (CNS) lymphoma.

Policy/Criteria

Provider must submit documentation (such as office chart notes, lab results or other clinical information) supporting that member has met all approval criteria.

All requests reviewed under this policy **require medical director review.**

It is the policy of PA Health & Wellness[®] that Breyanzi is **medically necessary** when the following criteria are met:

I. Initial Approval Criteria

A. Large B-Cell Lymphoma* (must meet all):

**Only for initial treatment dose; subsequent doses will not be covered.*

1. Diagnosis of one of the following LBCL (a-h);
 - a. DLBCL;

- b. DLBCL transformed from one of the following (i – v):
 - i. Follicular lymphoma;
 - ii. Nodal marginal zone lymphoma;
 - iii. Gastric mucosa-associated lymphoid tissue (MALT) lymphoma;
 - iv. Nongastric MALT Lymphoma (noncutaneous);
 - v. Splenic marginal zone lymphoma
 - c. Primary mediastinal large B-cell lymphoma;
 - d. Follicular lymphoma grade 3B;
 - e. High-grade B-cell lymphomas with translocations of MYC and BCL2 and/or BCL6 (double/triple hit lymphoma) or high-grade B-cell lymphomas, not otherwise specified;
 - f. Monomorphic post-transplant lymphoproliferative disorders (B-cell type);
 - g. HIV-related diffuse large B-cell lymphoma, primary effusion lymphoma, and HHV8-positive diffuse large B-cell lymphoma;
 - h. T cell/histiocyte-rich LBCL;
2. Prescribed by or in consultation with an oncologist or hematologist;
 3. Age \geq 18 years;
 4. Request is for one of the following (a, b, c or d):
 - a. Disease is refractory or member has relapsed after \geq 2 lines of systemic therapy that includes an anti-CD20 therapy (e.g., rituximab) and one anthracycline-containing regimen (e.g., doxorubicin);*
 - b. Disease that is refractory (defined as no complete remission) to or has relapsed (defined as complete remission followed by biopsy-proven disease relapse) no more than 12 months after first-line chemoimmunotherapy that included an anti-CD20 monoclonal antibody (e.g., rituximab*) and anthracycline-containing regimen (e.g., doxorubicin);
 - c. Member is not eligible for HSCT due to comorbidities or age (see *Appendix D* for examples) and disease is refractory (defined as no complete remission) to or has relapsed (defined as complete remission followed by biopsy-proven disease relapse) after first-line chemoimmunotherapy that included an anti-CD20 monoclonal antibody (e.g., rituximab*) and anthracycline-containing regimen (e.g., doxorubicin);
 - d. Member intends to proceed to transplant and has disease that is relapsed or is refractory $>$ 12 months after first-line therapy and had a partial response following second-line therapy;
- *Prior authorization may be required for rituximab*
5. Member does not have primary CNS disease;
 6. Member has not previously received treatment with CAR T-cell immunotherapy (e.g., Abecma[®], Carvykti[™], Kymriah[™], Tecartus[™], Yescarta[™]);
 7. Breyanzi is not prescribed concurrently with other CAR T-cell immunotherapy (e.g., Abecma[®], Carvykti[™], Kymriah[™], Tecartus[™], Yescarta[™]);
 8. Dose does not exceed 110×10^6 chimeric antigen receptor (CAR)-positive viable T cells.

Approval duration: 3 months (1 dose only, with 4 doses of tocilizumab (Actemra) at up to 800 mg per dose)

B. Chronic Lymphocytic Leukemia, Small Lymphocytic Lymphoma* (must meet all):

**Only for initial treatment dose; subsequent doses will not be covered.*

1. Diagnosis of relapsed or refractory CLL or SLL;
2. Prescribed by or in consultation with an oncologist or hematologist;
3. Age \geq 18 years;
4. One of the following (a or b):
 - a. Member has measurable disease as evidenced by one of the following assessed within the last 30 days (i, ii, or iii):
 - i. Measurable lymph nodes \geq 1.5 cm in the greatest transverse diameter;
 - ii. Hepatomegaly;
 - iii. Splenomegaly;
 - b. Demonstration of CLL cells in the peripheral blood by flow cytometry;
5. Member has received \geq 2 prior lines of therapy (*see Appendix B for examples*) that include both of the following (a and b):
 - a. One BTKi (e.g., Brukinsa[®], Calquence[®], Imbruvica[®]);
 - b. One BCL2i (e.g., Venclexta[®]);**Prior authorization may be required.*
6. Member does not have active CNS involvement by malignancy or history or presence of clinically relevant CNS pathology (e.g., epilepsy, generalized seizure disorder, aphasia, stroke with current neurologic sequelae, severe brain injuries, dementia, Parkinson's disease, cerebellar disease, cerebral edema, or psychosis);
7. Member has not previously received treatment with CAR T-cell immunotherapy (e.g., Abecma, Carvykti, Kymriah, Tecartus, Yescarta);
8. Breyanzi is not prescribed concurrently with other CAR T-cell immunotherapy (e.g., Abecma, Carvykti, Kymriah, Tecartus, Yescarta);
9. Dose does not exceed 110×10^6 CAR-positive viable T-cells.

Approval duration: 3 months (1 dose only, with 4 doses of tocilizumab (Actemra) if requested at up to 800 mg per dose)

C. Follicular Lymphoma* (must meet all):

**Only for initial treatment dose; subsequent doses will not be covered.*

1. Diagnosis of FL grade 1, 2, or 3a;
2. Prescribed by or in consultation with an oncologist or hematologist;
3. Age \geq 18 years;
4. Disease is relapsed/refractory after \geq 2 lines of systemic therapy that includes a combination of an anti-CD20 monoclonal antibody (e.g., rituximab or Gazyva[®]) and an alkylating agent (e.g., bendamustine, cyclophosphamide, chlorambucil)*;
**Prior authorization may be required*
5. Member does not have CNS-only involvement by malignancy (secondary CNS involvement is allowed);
6. Member does not have history or presence of clinically relevant CNS pathology (e.g., epilepsy, generalized seizure disorder, aphasia, stroke with current neurologic sequelae, severe brain injuries, dementia, Parkinson's disease, cerebellar disease, cerebral edema, or psychosis);
7. Member has not previously received treatment with CAR T-cell immunotherapy (e.g., Abecma, Carvykti, Kymriah, Tecartus, Yescarta);

8. Breyanzi is not prescribed concurrently with other CAR T-cell immunotherapy (e.g., Abecma, Carvykti, Kymriah, Tecartus, Yescarta);
9. Dose does not exceed 100×10^6 CAR-positive viable T cells.

Approval duration: 3 months (1 dose only, with 4 doses of tocilizumab (Actemra) if requested at up to 800 mg per dose)

D. Mantle Cell Lymphoma* (must meet all):

**Only for initial treatment dose; subsequent doses will not be covered.*

1. Diagnosis of relapsed or refractory MCL;
2. Prescribed by or in consultation with an oncologist or hematologist;
3. Age ≥ 18 years;
4. Member has previously received ≥ 2 prior lines of systemic therapy that included all the following (a, b, and c):
 - a. Anti-CD20 monoclonal antibody therapy (e.g., rituximab);
 - b. BTKi (e.g., Imbruvica, Calquence, Brukinsa, Jaypirca[®]);
 - c. Alkylating agent (e.g., bendamustine, cyclophosphamide, platinum [carboplatin, cisplatin, or oxaliplatin]);
5. Member does not have CNS-only involvement by malignancy (secondary CNS involvement is allowed);
6. Member does not have history or presence of clinically relevant CNS pathology (e.g., epilepsy, generalized seizure disorder, aphasia, stroke with current neurologic sequelae, severe brain injuries, dementia, Parkinson's disease, cerebellar disease, cerebral edema, or psychosis);
7. Member has not previously received treatment with CAR T-cell immunotherapy (e.g., Abecma, Carvykti, Kymriah, Tecartus, Yescarta);
8. Breyanzi is not prescribed concurrently with other CAR T-cell immunotherapy (e.g., Abecma, Carvykti, Kymriah, Tecartus, Yescarta);
9. Dose does not exceed 100×10^6 CAR-positive viable T cells.

Approval duration: 3 months (1 dose only, with 4 doses of tocilizumab (Actemra) if requested at up to 800 mg per dose)

E. Other diagnoses/indications

1. Refer to the off-label use policy for the relevant line of business if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): PA.CP.PMN.53

II. Continued Therapy

A. All Indications in Section I:

1. Continued therapy will not be authorized as Breyanzi is indicated to be dosed one time only.

Approval duration: Not applicable

B. Other diagnoses/indications

1. Refer to the off-label use policy if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): PA.CP.PMN.53

III. Diagnoses/Indications for which coverage is NOT authorized:

- A. Non-FDA approved indications, which are not addressed in this policy, unless there is sufficient documentation of efficacy and safety according to the off label use policies – PA.CP.PMN.53;
- B. Primary CNS disease.

IV. Appendices/General Information

Appendix A: Abbreviation/Acronym Key

| | |
|--|---|
| ALC: absolute lymphocyte count | FDA: Food and Drug Administration |
| BTKi: Bruton tyrosine kinase inhibitor | FL: follicular lymphoma |
| BCL2i: B-cell lymphoma 2 inhibitor | HSCT: hematopoietic stem cell transplantation |
| CLL: chronic lymphocytic leukemia | LBCL: large B-cell lymphoma |
| CAR: chimeric antigen receptor | MALT: mucosa-associated lymphoid tissue |
| CNS: central nervous system | MCL: mantle cell lymphoma |
| CRS: cytokine release syndrome | SLL: small lymphocytic lymphoma |
| DLBCL: diffuse large B-cell lymphoma | |

Appendix B: Therapeutic Alternatives

This table provides a listing of preferred alternative therapy recommended in the approval criteria. The drugs listed here may not be a formulary agent for all relevant lines of business and may require prior authorization.

| Drug Name | Dosing Regimen | Dose Limit/ Maximum Dose |
|--|----------------|--------------------------|
| LBCL: First-Line Treatment Regimens | | |
| RCHOP (rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone) | Varies | Varies |
| RCEPP (rituximab, cyclophosphamide, etoposide, prednisone, procarbazine) | Varies | Varies |
| RCDOP (rituximab, cyclophosphamide, liposomal doxorubicin, vincristine, prednisone) | Varies | Varies |
| DA-EPOCH (etoposide, prednisone, vincristine, cyclophosphamide, doxorubicin) + rituximab | Varies | Varies |
| RCEOP (rituximab, cyclophosphamide, etoposide, vincristine, prednisone) | Varies | Varies |
| RGCVP (rituximab, gemcitabine, cyclophosphamide, vincristine, prednisone) | Varies | Varies |
| LBCL: Second-Line Treatment Regimens | | |
| Bendeka [®] (bendamustine) ± rituximab | Varies | Varies |
| CEPP (cyclophosphamide, etoposide, prednisone, procarbazine) ± rituxima) | Varies | Varies |
| CEOP (cyclophosphamide, etoposide, vincristine, prednisone) ± rituximab | Varies | Varies |
| DA-EPOCH ± rituximab | Varies | Varies |

| Drug Name | Dosing Regimen | Dose Limit/ Maximum Dose |
|--|-------------------------------|---|
| GDP (gemcitabine, dexamethasone, cisplatin) ± rituximab | Varies | Varies |
| gemcitabine, dexamethasone, carboplatin ± rituximab | Varies | Varies |
| GemOx (gemcitabine, oxaliplatin) ± rituximab | Varies | Varies |
| gemcitabine, vinorelbine ± rituximab | Varies | Varies |
| lenalidomide ± rituximab | Varies | Varies |
| Rituximab (Riabni™, Rituxan®, Ruxience®, Truxima®) | Varies | Varies |
| DHAP (dexamethasone, cisplatin, cytarabine) ± rituximab | Varies | Varies |
| DHAX (dexamethasone, cytarabine, oxaliplatin) ± rituximab | Varies | Varies |
| ESHAP (etoposide, methylprednisolone, cytarabine, cisplatin) ± rituximab | Varies | Varies |
| ICE (ifosfamide, carboplatin, etoposide) ± rituximab | Varies | Varies |
| MINE (mesna, ifosfamide, mitoxantrone, etoposide) ± rituximab | Varies | Varies |
| CLL/SLL: First-Line Therapies | | |
| Calquence (acalabrutinib) ± Gazyva® (obinutuzumab) | Varies | Varies |
| Venclexta® (venetoclax) + Gazyva (obinutuzumab) | Varies | Varies |
| Brukina (zanubrutinib) | 160 mg PO BID or 320 mg PO QD | 320 mg/day 640 mg/day when used with a moderate CYP3A4 inducer |
| Imbruvica® (ibrutinib) | 420 mg PO QD | 420 mg/day |
| Imbruvica (ibrutinib) + Gazyva (obinutuzumab) | Varies | Varies |
| Imbruvica (ibrutinib) + rituximab | Varies | Varies |
| Imbruvica (ibrutinib) + Venclexta (venetoclax) | Varies | Varies |
| CLL/SLL: Second-Line or Third-Line Therapies | | |
| Calquence (acalabrutinib) | 100 mg PO BID | 400 mg/day |
| Venclexta (venetoclax) ± rituximab | Varies | Varies |
| Brukina (zanubrutinib) | 160 mg PO BID or 320 mg PO QD | 320 mg/day 640 mg/day when used with a moderate CYP3A4 inducer |
| Imbruvica (ibrutinib) | 420 mg PO QD | 420 mg/day |

| CLL/SLL: Therapies for Relapsed or Refractory Disease After Prior BTKi- and BCL2i-Based Regimens | | |
|---|--|-------------|
| Copiktra [®] (duvelisib) | 25 mg PO BID | 50 mg/day |
| Zydelig [®] (idelalisib) ± rituximab | 150 mg PO BID | 300 mg/day |
| Jaypirca [™] (pirtobrutinib) | 200 mg PO QD | 200 mg/day |
| FCR (fludarabine, cyclophosphamide, rituximab) | Varies | Varies |
| Revlimid [®] (lenalidomide) ± rituximab | Varies | Varies |
| Gazyva (obinutuzumab) | 100 mg IV on day 1, 900 mg IV on day 2 of cycle 1, then 1,000 mg IV on days 8 and 15 of cycle 1; begin the next cycle of therapy on day 29. For cycles 2 to 6, give 1,000 mg IV on day 1 repeated every 28 days. | See regimen |
| Campath [®] (alemtuzumab) ± rituximab | 30 mg/day IV three times per week for 12 weeks | See regimen |
| CLL/SLL: Therapies for Relapsed or Refractory Disease After Prior BTKi- and BCL2i-Based Regimens | | |
| High-dose methylprednisolone ± rituximab or Gazyva (obinutuzumab) | Varies | Varies |
| FL First-Line and Second-Line + Subsequent Treatment Regimens | | |
| bendamustine + (Gazyva [®] (obinutuzumab) or rituximab) | Varies | Varies |
| CHOP (cyclophosphamide, doxorubicin, vincristine, prednisone) + (Gazyva [®] (obinutuzumab) or rituximab) | Varies | Varies |
| CVP (cyclophosphamide, vincristine, prednisone) + Gazyva [®] (obinutuzumab) or rituximab | Varies | Varies |
| rituximab ± (lenalidomide, chlorambucil, or cyclophosphamide) | Varies | Varies |
| rituximab | Varies | Varies |
| Gazyva [®] (obinutuzumab) | Varies | Varies |
| Zevalin [®] (ibritumomab tiuxetan) | Varies | Varies |
| MCL | | |
| HyperCVAD (cyclophosphamide, vincristine, doxorubicin, dexamethasone/methotrexate/ cytarabine) + rituximab | Varies | Varies |
| NORDIC (rituximab + cyclophosphamide, vincristine, doxorubicin, prednisone/rituximab + cytarabine) | Varies | Varies |

| | | |
|---|--|--------------|
| RCHOP/RDHAP (rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone)/(rituximab, dexamethasone, cisplatin, cytarabine) | Varies | Varies |
| RDHA (rituximab, dexamethasone, cytarabine) + platinum (carboplatin, cisplatin, or oxaliplatin) | Varies | Varies |
| RCHOP (rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone) | Varies | Varies |
| Bendeka [®] (bendamustine) ± rituximab | Varies | Varies |
| VR-CAP (bortezomib, rituximab, cyclophosphamide, doxorubicin, prednisone) | Varies | Varies |
| Revlimid [®] (lenalidomide) + rituximab | Varies | Varies |
| bortezomib ± rituximab | Varies | Varies |
| lenalidomide ± rituximab | Varies | Varies |
| Imbruvica [®] (ibrutinib) ± rituximab | 560 mg PO QD | 560 mg/day |
| Calquence [®] (acalabrutinib) | 100 mg PO BID | 400 mg/day |
| MCL | | |
| Brukina [®] (zanubrutinib) | 160 mg PO BID or 320 mg PO QD | 320 mg/day |
| Jaypirca [®] (pirtobrutinib) | 200 mg PO QD | 200 mg PO QD |
| Venclexta [®] (venetoclax) | 20 mg/day for week 1, 50 mg/day for week 2, 100 mg/day for week 3, 200 mg/day for week 4, 400 mg/day for week 5. Week 6 and thereafter: 800 mg/day | 800 mg/day |

Therapeutic alternatives are listed as Brand name[®] (generic) when the drug is available by brand name only and generic (Brand name[®]) when the drug is available by both brand and generic.

Appendix C: Contraindications/Boxed Warnings

- Contraindication(s): none reported
- Boxed warning(s): cytokine release syndrome and neurologic toxicities

Appendix D: General Information

- Patients with primary CNS disease were excluded from the TRANSCEND NHL 001 trial. For primary CNS lymphoma, NCCN treatment guidelines for CNS cancers recommend a high-dose methotrexate induction based regimen or whole brain radiation therapy, and consolidation therapy with high-dose chemotherapy with stem cell rescue, high-dose cytarabine with or without etoposide, low dose whole brain radiation therapy, or continuation with monthly high-dose methotrexate-based regimen.
- In the TRANSCEND NHL 001 trial, three of six patients in the efficacy-evaluable set with secondary CNS lymphoma achieved a complete response.
- No prespecified threshold for blood counts, including absolute lymphocyte count, was required for enrollment in the TRANSCEND NHL 001 trial.

- The PILOT study evaluated transplant-ineligible patients with relapsed or refractory LBCL after one line of chemoimmunotherapy. The study required at least one of the following criteria to identify patients who were not eligible for high-dose therapy and autologous HSCT: age \geq 70 years, adjusted diffusing capacity of the lung for carbon monoxide (DLCO) \leq 60%; left ventricular ejection fraction (LVEF) $<$ 50%; creatinine clearance $<$ 60mL/min; aspartate transaminase (AST) or alanine aminotransferase (ALT) greater than two times the upper limit or normal, or Eastern Cooperative Oncology Group (ECOG) performance status of 2 (capable of all self-care but unable to carry out any work activities; up and about $>$ 50% of waking hours).

V. Dosage and Administration

| Indication | Dosing Regimen | Maximum Dose |
|--|--|---|
| LBCL after two or more lines of therapy | Target dose: 50 to 110 x 10 ⁶ CAR-positive viable T cells | 110 x 10 ⁶ CAR-positive viable T cells |
| LBCL after one line of therapy, CLL/SLL, FL, MCL | Target dose: 90 to 110 x 10 ⁶ CAR-positive viable T cells | 110 x 10 ⁶ CAR-positive viable T cells |

VI. Product Availability

Single-dose 5 mL vial: frozen suspension of genetically modified autologous T-cells labeled for the specific recipient

VII. References

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 11. Sehgal A, Hoda D, Riedell PA, et al. Lisocabtagene maraleucel as second-line therapy in adults with relapsed or refractory large B-cell lymphoma who were not intended for haematopoietic stem cell transplantation (PILOT): an open-label, phase 2 study. *Lancet Oncol*. 2022 Aug; 23 (8): 1066-1077.
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Coding Implications

Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

| HCPCS Codes | Description |
|-------------|--|
| Q2054 | Lisocabtagene maraleucel, up to 110 million autologous anti-CD 19 CAR-positive viable T cells, including leukapheresis and dose preparation procedures, per therapeutic dose |

| Reviews, Revisions, and Approvals | Date |
|---|---------|
| Policy created. | 04/2021 |
| 2Q 2022 annual review: clarified per NCCN Compendium additional DLBCL transformed diseases; added supported use for AIDS-related primary effusion lymphoma;.per NCCN added additional AIDS-related uses in diffuse large B-cell lymphoma and HHV8-positive diffuse large B-cell lymphoma; updated HCPCS codes; references reviewed and updated. | 04/2022 |
| RT4: FDA-approved status per updated prescribing information for relapsed/refractory LBsCL in the second-line setting; references reviewed and updated. | 10/2022 |
| 2Q 2023 annual review: no significant changes; modified AIDS-related DLBCL to HIV-related per NCCN Compendium; references reviewed and updated. | 04/2023 |
| 2Q 2024 annual review: for T-cell/histiocyte-rich LBCL removed requirement for use as second line therapy; references reviewed and updated. | 04/2024 |
| RT4: added new indications for CLL/SLL, FL and MCL. | 06/2024 |