

## Clinical Policy: Brexucabtagene Autoleucel (Tecartus)

Reference Number: PA.CP.PHAR.472

Effective Date: 08/2020

Last Review Date: 01/2024

### Description

Brexucabtagene autoleucel (Tecartus<sup>®</sup>) is a CD19-directed chimeric antigen receptor (CAR) T cell therapy.

### FDA Approved Indication(s)

Tecartus is indicated for the treatment of:

- Adult patients with relapsed or refractory mantle cell lymphoma (MCL)\*
- Adult patients with relapsed or refractory B-cell precursor acute lymphoblastic lymphoma (ALL)

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*\*This indication is approved under accelerated approval based on overall response rate and durability of response. Continued approval for this indication may be contingent upon verification and description of clinical benefit in a confirmatory trial.*

### 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.*

It is the policy of PA Health & Wellness<sup>®</sup> that Tecartus is **medically necessary** when the following criteria are met:

#### I. Initial Approval Criteria

##### A. 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  $\geq$  18 years;
4. Recent (within the last 30 days) absolute lymphocyte count (ALC)  $\geq$  100 cells/ $\mu$ L;
5. Member has previously received 2 to 5 prior regimens that included all of the following (a, b, and c):
  - a. Anthracycline (e.g., doxorubicin) or bendamustine-containing chemotherapy;
  - b. Anti-CD20 monoclonal antibody therapy (e.g., rituximab);
  - c. Bruton tyrosine kinase (BTK) inhibitor (e.g., Imbruvica<sup>®</sup>, Calquence<sup>®</sup>, Brukinsa<sup>™</sup>);
6. Member does not have a history of or current central nervous system (CNS) disease or CNS disorders as detected by magnetic resonance imaging [MRI] (i.e., detectable cerebrospinal fluid malignant cells or brain metastases, CNS lymphoma, seizure disorder, cerebrovascular ischemia/hemorrhage, dementia, cerebellar disease, cerebral edema, posterior reversible encephalopathy syndrome, or any autoimmune disease with CNS involvement);
7. Member does not have a history of allogeneic stem cell transplantation;

8. Member has not previously received treatment with CAR T-cell immunotherapy (e.g., Abecma, Breyanzi, Carvykti™, Kymriah, Yescarta);
9. Tecartus is not prescribed concurrently with other CAR T-cell immunotherapy (e.g., Abecma, Breyanzi, Carvykti™, Kymriah, Yescarta);
10. Dose does not exceed  $2 \times 10^8$  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. Acute Lymphoblastic Leukemia\*** (must meet all):

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

1. Diagnosis of B-cell precursor ALL;
2. Prescribed by or in consultation with an oncologist or hematologist;
3. Age  $\geq 18$  years;
4. Recent (within the last 30 days) ALC  $\geq 100/\mu\text{L}$ ;
5. Request meets one of the following (a or b):
  - a. Member has relapsed or refractory disease defined as one of the following (i - iv):
    - i. Primary refractory disease;
    - ii. First relapse if first remission  $\leq 12$  months;
    - iii. Relapsed or refractory disease after 2 or more lines of systemic therapy;
    - iv. Relapsed following allogeneic stem cell transplantation (allo-SCT) and must be  $\geq 100$  days from allo-SCT at the time of Tecartus infusion;
  - b. Disease is relapsed or refractory, Philadelphia chromosome positive, and member has received 2 tyrosine kinase inhibitors (e.g., imatinib, Sprycel®, Tasigna®, Bosulif®, Iclusig®);
6. If previously treated with Blincyto®, documentation of CD19 tumor expression on blasts obtained from bone marrow or peripheral blood after completion of the most recent prior line of therapy;
7. Member does not have CNS-3 disease\* or have a history or presence of any CNS disorder (e.g., seizure disorder, cerebrovascular ischemia/hemorrhage, dementia, cerebellar disease, any autoimmune disease with CNS involvement, posterior reversible encephalopathy syndrome, or cerebral edema);  
*\*CNS-3 disease is defined as detectable cerebrospinal blast cells in a sample of CSF with  $\geq 5$  white blood cells (WBCs) per  $\text{mm}^3$*
8. If member has CNS-2 disease\*, documentation of no clinically evident neurological changes;  
*\*CNS-2 disease is defined as CSF blast cells with  $< 5$  WBC/ $\text{mm}^3$*
9. Member has not previously received treatment with CAR T-cell immunotherapy (e.g., Abecma, Breyanzi, Carvykti™, Kymriah, Yescarta);
10. Tecartus is not prescribed concurrently with other CAR T-cell immunotherapy (e.g., Abecma, Breyanzi, Carvykti™, Kymriah, Yescarta);
11. Dose does not exceed  $1 \times 10^8$  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. Other diagnoses/indications**

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

**II. Continued Therapy**

**A. All Indications in Section I**

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

**Approval duration: Not applicable**

**B. 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 for Medicaid.

**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.** MCL: History of or current CNS disease or CNS disorders as detected by MRI (i.e., detectable cerebrospinal fluid malignant cells or brain metastases, CNS lymphoma, seizure disorder, cerebrovascular ischemia/hemorrhage, dementia, cerebellar disease, cerebral edema, posterior reversible encephalopathy syndrome, or any autoimmune disease with CNS involvement);
- C.** MCL: History of allo-SCT;
- D.** ALL: History or presence of any CNS disorder, such as a seizure disorder, cerebrovascular ischemia/hemorrhage, dementia, cerebellar disease, any autoimmune disease with CNS involvement, posterior reversible encephalopathy syndrome, or cerebral edema;
- E.** ALL: Presence of CNS-3 disease defined as detectable cerebrospinal blast cells in a sample of CSF with  $\geq 5$  white blood cells (WBCs) per  $\text{mm}^3$  with or without neurological changes.

**IV. Appendices/General Information**

*Appendix A: Abbreviation/Acronym Key*

ALC: absolute lymphocyte count

Allo-SCT: allogeneic stem cell transplantation

ALL: acute lymphoblastic leukemia

CAR: chimeric antigen receptor

CNS: central nervous system

CSF: cerebrospinal fluid

FDA: Food and Drug Administration

MCL: mantle cell lymphoma

MRI: magnetic resonance imaging

WBC: white blood cells

*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
<b>Mantle Cell Lymphoma</b>		
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 <sup>®</sup> (bendamustine) ± rituximab	Varies	Varies
VR-CAP (bortezomib, rituximab, cyclophosphamide, doxorubicin, prednisone)	Varies	Varies
Revlimid <sup>®</sup> (lenalidomide) + rituximab	Varies	Varies
bortezomib ± rituximab	Varies	Varies
lenalidomide ± rituximab	Varies	Varies
Imbruvica <sup>®</sup> (ibrutinib) ± rituximab	560 mg PO QD	560 mg/day
Calquence <sup>®</sup> (acalabrutinib)	100 mg PO BID	400 mg/day
Brukinsa <sup>®</sup> (zanubrutinib)	160 mg PO BID or 320 mg PO QD	320 mg/day
Venclexta <sup>®</sup> (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
<b>Acute Lymphoblastic Leukemia</b>		
imatinib mesylate (Gleevec <sup>®</sup> )	Adults with Ph+ ALL: 600 mg/day Pediatrics with Ph+ ALL: 340 mg/m <sup>2</sup> /day	Adults: 800 mg/day Pediatrics: 600 mg/day
Sprycel <sup>®</sup> (dasatinib)	Ph+ ALL: 140 mg per day	180 mg/day

Drug Name	Dosing Regimen	Dose Limit/ Maximum Dose
Iclusig <sup>®</sup> (ponatinib)	Ph+ ALL: 45 mg per day	45 mg/day
Tasigna <sup>®</sup> (nilotinib)	Resistant or intolerant Ph+ CML-CP and CML-AP: 400 mg twice per day	800 mg/day
Bosulif <sup>®</sup> (bosutinib)	Ph+ CML: 500 mg per day	600 mg/day
Various combination regimens that may include the following: daunorubicin, doxorubicin, vincristine, dexamethasone, prednisone, pegaspargase, nelarabine, methotrexate, cyclophosphamide, cytarabine, rituximab, 6-mercaptopurine	Ph- ALL: varies	Varies

*Therapeutic alternatives are listed as Brand name<sup>®</sup> (generic) when the drug is available by brand name only and generic (Brand name<sup>®</sup>) 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: do not administer Tecartus to patients with active infection or inflammatory disorders; treat severe or life-threatening cytokine release syndrome with tocilizumab or tocilizumab and corticosteroids
  - Neurologic toxicities: monitor for neurologic toxicities after treatment with Tecartus; provide supportive care and/or corticosteroids, as needed

*Appendix D: General Information*

- The ZUMA-2 trial included only patients with an ALC  $\geq$  100 cells/ $\mu$ L and a magnetic resonance imaging (MRI) of the brain showing no evidence of CNS lymphoma. Subjects with detectable cerebrospinal fluid malignant cells or brain metastases or with a history of CNS lymphoma were excluded. The trial also excluded patients with history or presence of CNS disorder, such as seizure disorder, cerebrovascular ischemia/hemorrhage, dementia, cerebellar disease, cerebral edema, posterior reversible encephalopathy syndrome, or any autoimmune disease with CNS involvement. Additionally, patients with a history of allogeneic stem cell transplantation or prior CAR therapy or other genetically modified T-cell therapy were excluded.
- Tecartus is available only through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS) called the Yescarta and Tecartus REMS Program.
- Refractory disease is defined as an inability to achieve a complete response to therapy.
- The ZUMA-3 trial in patients with ALL excluded patients with:
  - Presence of CNS-3 disease defined as detectable cerebrospinal blast cells in a sample of CSF with  $\geq$  5 WBCs per  $\text{mm}^3$  with or without neurological changes;

- Presence of CNS-2 disease defined as detectable cerebrospinal blast cells in a sample of CSF with <5 WBCs per mm<sup>3</sup> with neurological changes;
- History or presence of any CNS disorder, such as a seizure disorder, cerebrovascular ischemia/hemorrhage, dementia, cerebellar disease, any autoimmune disease with CNS involvement, posterior reversible encephalopathy syndrome, or cerebral edema.

**V. Dosage and Administration**

Indication	Dosing Regimen	Maximum Dose
MCL	Target dose: 2 × 10 <sup>6</sup> CAR-positive viable T cells per kg body weight	2 × 10 <sup>8</sup> CAR-positive viable T cells
ALL	1 × 10 <sup>6</sup> CAR-positive viable T cells/kg	1 × 10 <sup>8</sup> CAR-positive viable T cells/kg

**VI. Product Availability**

Single-dose unit infusion bag: frozen suspension of genetically modified autologous T-cells labeled for the specific recipient

**VII. References**

1. Tecartus Prescribing Information. Santa Monica, CA: Kite Pharma, Inc.; October 2021. Available at: <https://www.gilead.com/-/media/files/pdfs/medicines/oncology/tecartus/tecartus-pi.pdf>. Accessed October 6, 2023.
2. Wang M, Munoz J, Goy A, et al. KTE-X19 CAR T-Cell Therapy in Relapsed or Refractory Mantle-Cell Lymphoma. N Engl J Med 2020;382:1331-42.
3. National Comprehensive Cancer Network. B-cell Lymphomas Version 6.2023. Available at: [https://www.nccn.org/professionals/physician\\_gls/pdf/b-cell.pdf](https://www.nccn.org/professionals/physician_gls/pdf/b-cell.pdf). Accessed October 12, 2023.
4. Shah BD, Ghobadi A, Oluwole OO, et al. KTE-X19 for relapsed or refractory adult B-cell acute lymphoblastic leukaemia: phase 2 results of the single-arm, open-label, multicentre ZUMA-3 study. Lancet. 2021 Jun 3; S0140-6736 (21) 01222-8.
5. National Comprehensive Cancer Network. Acute Lymphoblastic Leukemia Version 1.2024. Available at: [https://www.nccn.org/professionals/physician\\_gls/pdf/all.pdf](https://www.nccn.org/professionals/physician_gls/pdf/all.pdf). Accessed October 12, 2023.

**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
Q2053	Brexucabtagene autoleucl, up to 200 million autologous anti-cd19 car positive viable t cells, including leukapheresis and dose preparation procedures, per therapeutic dose

Reviews, Revisions, and Approvals	Date
Policy created	09/2020

<b>Reviews, Revisions, and Approvals</b>	<b>Date</b>
1Q 2021 annual review: clarified CNS disease should be ruled out by MRI; references reviewed and updated.	01/2021
1Q 2022 annual review: ALL – criteria updated per FDA labeling; added additional requirements for CNS disease exclusions per ZUMA-3 clinical trial exclusion criteria; coding information added; references reviewed and updated.	01/2022
1Q 2023 annual review: no significant changes; added Carvykti as examples listed for CAR-T therapies; references reviewed and updated.	01/2023
1Q 2024 annual review: per NCCN for Ph+ ALL, revised requirement to include relapse or refractory disease and modified verbiage from “failure of” to “member has received 2 tyrosine kinase inhibitors”; references reviewed and updated.	01/2024