

Oscar Clinical Guideline: Kymriah (tisagenlecleucel) (CG058, Ver. 8)

Kymriah (tisagenlecleucel)

Disclaimer

Clinical guidelines are developed and adopted to establish evidence-based clinical criteria for utilization management decisions. Clinical guidelines are applicable according to policy and plan type. The Plan may delegate utilization management decisions of certain services to third parties who may develop and adopt their own clinical criteria.

Coverage of services is subject to the terms, conditions, and limitations of a member's policy, as well as applicable state and federal law. Clinical guidelines are also subject to in-force criteria such as the Centers for Medicare & Medicaid Services (CMS) national coverage determination (NCD) or local coverage determination (LCD) for Medicare Advantage plans. Please refer to the member's policy documents (e.g., Certificate/Evidence of Coverage, Schedule of Benefits, Plan Formulary) or contact the Plan to confirm coverage.

Summary

The Plan members who have certain types of treatment-resistant lymphoma or leukemia may be eligible for chimeric antigen receptor (CAR) T-cell therapy. CAR T-cell treatment involves genetically modifying an individual's white blood cells to specifically target the cancer cells in the body. This type of therapy is also known as adoptive immunotherapy. The process involves:

- 1. Collecting an individual's white blood cells (T-cells) from their blood.
- 2. Genetically modifying the T-cells in a lab to express CARs that target specific cancer cell antigens (like CD19).
- 3. Multiplying the number of these CAR T-cells.
- 4. Depleting the individual's existing immune system, often with chemotherapy.
- 5. Infusing the expanded CAR T-cells back into the individual. The modified CAR T-cells can then recognize and attack cancer cells expressing the targeted antigen. They may continue to multiply and remain in the body long-term, potentially guarding against cancer recurrence.

This guideline does not address adoptive T-cell therapy for metastatic prostate cancer: Sipuleucel-T (Provenge™). For sipuleucel-T (Provenge™), please review the criteria outlined in MCG Sipuleucel-T (A-0661).

Definitions:

"Allogeneic Stem Cell Transplant" is a treatment where matched donor stem cells are harvested and transferred into individuals with cancer or disorders (after their own immune system has been depleted using chemotherapy or total body irradiation) to repopulate their entire bone marrow with healthy cells derived from the donor.

"Autologous Stem Cell Transplant" is similar to allogeneic stem cell transfer, except the individual's own stem cells are used instead of a matched donor.

"B-cell lymphomas" refer to a group of non-Hodgkin lymphomas developing from cancerous white blood cells (specifically B-lymphocytes), often involving lymph nodes or other extranodal tissues. This group of lymphomas includes, but is not limited to, the following:

- Burkitt lymphoma
- Diffuse large B-cell lymphoma (DLBCL)
- Primary mediastinal B-cell lymphoma (PMBCL)
- Mantle cell lymphoma
- Marginal zone lymphomas
- Transformed follicular lymphoma

"CAR T-cell" or "Chimeric Antigen Receptor T-cell" therapy is a type of adoptive immunotherapy where an individual's white blood cells (specifically T-lymphocytes) are genetically engineered to specifically target the receptors on the cancer cells (CD19 receptor in B-cell lymphomas and leukemias), B-cell maturation antigen (BCMA, in multiple myeloma) or prostatic acid phosphatase (PAP) in prostate cancer).

"CAR-T cell-related encephalopathy syndrome" (CRES) is another inflammatory immune response that can occur with CAR-T treatment and is treated in the same way as CRS.

"Cytokine release syndrome" (CRS) is an inflammatory immune response that may occur with CAR T-cell treatment. It often manifests as fever, hypotension, nausea, and other symptoms, and is an emergent condition that may require prompt treatment with tocilizumab (treatment binds to and inhibits IL-6 to reduce inflammatory and immune excessive response) and/or corticosteroids.

"ECOG score" (Eastern Cooperative Oncology Group score) is a measure of an individual's general well-being and ability to participate in activities of daily living. The score ranges from 0 (fully active with restrictions) to 5 (dead) and is available at https://ecog-acrin.org/resources/ecog-performance-status.

"Leukemia" refers to a type of malignancy affecting the bone marrow and circulating cells in the bloodstream. Acute lymphoid leukemia (ALL) is one example.

"Metastatic Castrate-Resistant Prostate Cancer" is prostate cancer that has metastasized or spread outside of the pelvis. Castrate-resistant refers to the state of the cancer not responding to medications or systemic agents that typically inhibit progression by blocking hormonal signals.

"Relapsed" refers to a lymphoma or leukemia that had previously responded to treatment with remission but has returned after a period since the last treatment.

"Refractory" refers to a lymphoma or leukemia that has not responded, has progressed, or has not achieved remission.

Medical Necessity Criteria for Authorization

The Plan considers <u>Kymriah (tisagenlecleucel)</u> medically necessary when ALL the following criteria are met:

- 1. Prescribed by or in consultation with a hematologist-oncologist; AND
- 2. The member has documented evidence of ALL of the following:
 - a. The member is scheduled for and can safely undergo lymphodepleting therapy (including chemotherapy and/or total body irradiation) before CAR T-cell treatment; *and*
 - b. The member has undergone screening and meets ALL of the following:
 - i. No evidence of active Central Nervous System (CNS) involvement by malignancy; *or*
 - ii. No evidence of active uncontrolled infection or inflammatory disorders; or
 - iii. No evidence of history of allogeneic stem cell transplantation, active graft vs. host disease (GVHD); *or*
 - iv. No evidence of previous treatment with Kymriah or any other CD19-targeted CAR T-cell therapy; *AND*
- 3. The facility and/or provider attests they are prepared for the potential occurrence of a serious adverse effect; *AND*
- 4. The member meets the medical necessity criteria for the applicable indications listed below:

Acute lymphoblastic leukemia, relapsed or refractory

The Plan considers <u>Kymriah (tisagenlecleucel)</u> medically necessary when the member has documented evidence of ALL of the following:

- 5. The member meets the above General Medical Necessity Criteria; AND
- 6. The member has a diagnosis of B-cell acute lymphoblastic leukemia (ALL); AND
- 7. The member meets ONE of the following criteria:
 - a. The member is less than 18 years of age AND has documented evidence of ONE (1) of the following:
 - i. Philadelphia chromosome-negative B-ALL that is refractory or in second or later relapse (≥ 2 relapses); or

- ii. Philadelphia (Ph) chromosome-negative or Ph-like B-ALL that is minimal residual disease positive (MRD+) after consolidation therapy; *or*
- iii. Philadelphia chromosome-positive B-ALL AND ONE (1) of the following:
 - 1. Refractory to at least TWO tyrosine kinase inhibitors (e.g., bosutinib, dasatinib, imatinib, nilotinib, ponatinib), unless contraindicated/intolerant; *or*
 - 2. Relapse post-hematopoietic stem cell transplant (HSCT); or
 - 3. With less than complete response or MRD+ at end of consolidation therapy; *or*
- b. The member is 18 to 25 years of age with B-ALL that is refractory or in second or later relapse (≥ 2 relapses) AND documented evidence of ONE of the following:
 - i. Philadelphia chromosome-negative B-ALL; or
 - ii. Philadelphia chromosome-positive B-ALL AND failure of 2 tyrosine kinase inhibitors (e.g., bosutinib, dasatinib, imatinib, nilotinib, ponatinib), unless contraindicated/intolerant.

B-Cell Lymphomas

B-cell Lymphomas, relapsed or refractory

The Plan considers <u>Kymriah (tisagenlecleucel)</u> medically necessary when the member has documented evidence of ALL of the following:

- 5. The member meets the above General Medical Necessity Criteria; AND
- 6. The member is 18 years of age or older; AND
- 7. The Member has a diagnosis of ONE of the following relapsed or refractory large B-cell lymphoma:
 - a. AIDS-related B-cell lymphoma; or
 - b. Diffuse large B-cell lymphoma; or
 - c. The member meets ONE of the following HIV-related B-cell lymphomas:
 - i. HHV-8 associated B-cell lymphoma; or
 - ii. HIV-related diffuse large B-cell lymphoma; or
 - iii. Primary effusion lymphoma; or

HIV-related plasmablastic lymphoma; or

- d. Monomorphic post-transplant lymphoproliferative disorder (B-cell type); or
- e. Other high-grade B-cell lymphoma; or
- f. Transformed follicular lymphoma (into an aggressive large B-cell lymphoma); or
- g. Transformed nodal marginal zone lymphoma (into diffuse large B-cell lymphoma); AND
- 8. Documented evidence that the member meets ALL of the following if applicable:
 - For members with CD20-positive tumors, previous chemoimmunotherapy regimens must have included an anti-CD20 monoclonal antibody (e.g., Rituxan or rituximab biosimilars), unless contraindicated; and/or

- b. For diffuse large B-cell lymphoma arising from follicular lymphoma (i.e., histological transformation) of ONE (1) of the following:
 - i. As additional therapy for transformed disease following partial response, no response, or progressive disease to initial therapy with anthracycline-based regimens; *or*
 - ii. As additional therapy after multiple lines of prior therapies including ≥2 chemoimmunotherapy regimens for indolent disease prior to histologic transformation (treatment should have included at least one anthracycline-based regimen, unless contraindicated).

Follicular lymphoma, relapsed or refractory

The Plan considers <u>Kymriah (tisagenlecleucel)</u> medically necessary when the member has documented evidence of ALL of the following:

- 5. The member meets the above General Medical Necessity Criteria; AND
- 6. The member is 18 years of age or older; AND
- 7. Follicular lymphoma is prescribed for ONE of the following:
 - a. Preferred third-line and subsequent therapy (if not previously given) for partial response, no response, relapsed, or progressive disease in those with indications for treatment; or
 - b. Relapsed after autologous hematopoietic stem cell transplant (HSCT).

Length of Stay

Initial Inpatient Admission - Up to 7 days

Extension Stay Criteria

Additional inpatient hospital days after 7 days are medically necessary when the member meets ONE of the following:

- 1. The Member has cytokine release syndrome (CRS); OR
- 2. The Member has neurotoxicity, CAR-T Related Encephalopathy Syndrome (CRES); OR
- 3. The Member has developed any adverse reaction continuing after infusion that include, but are not limited to, fever, hypoxia, hypotension, tachycardia, hypersensitive reactions, hypogammaglobulinemia, infections-pathogen unspecified, bleeding episodes, diarrhea, nausea, vomiting, headache, acute kidney injury, edema, and delirium; *OR*
- 4. The Member is not stable for discharge, as outlined in the general recovery course and discharge criteria in MCG General Recovery Care > Problem Oriented General Recovery Guidelines > Medical Oncology GRG (PG-ONC).

Experimental or Investigational / Not Medically Necessary

CAR T-cell therapy for any other indication is considered experimental, investigational, or unproven. Non-covered indications and contraindications include, but are not limited to, the following:

- Any lymphoma subtype not mentioned above, including primary CNS lymphoma and Mantle cell lymphoma; *OR*
- Any leukemia subtype except acute lymphoid leukemia (ALL, not mentioned above); OR
- Any other cancer type or condition not included in the Clinical Indications criteria above; OR
- Burkitt's lymphoma/leukemia (i.e. those with mature B-cell ALL, leukemia with B-cell [slg positive and kappa or lambda restricted positivity] ALL, with FAB L3 morphology and/or a MYC translocation); *OR*
- When any other newly diagnosed malignancy or other malignancy that is under active treatment or not currently in remission is present; *OR*
- Those with an ECOG score of 3-4, as the efficacy and evidence for use in those with poor performance status is limited; *OR*
- The member has any of the following:
 - Current pregnancy; or
 - Live vaccination within 6 weeks of planned treatment date; or

Applicable Billing Codes (HCPCS/CPT Codes)

Table 1	
CPT/HCPCS codes for Acute Lymphoblastic Leukemia (ALL) considered medically necessary if criteria are met:	
Code	Description
38228	Chimeric antigen receptor T-cell (CAR-T) therapy; CAR-T cell administration, autologous
38225	Chimeric antigen receptor T-cell (CAR-T) therapy; harvesting of blood-derived T lymphocytes for development of genetically modified autologous CAR-T cells, per day
38226	Chimeric antigen receptor T-cell (CAR-T) therapy; preparation of blood-derived T lymphocytes for transportation (eg, cryopreservation, storage)
38227	Chimeric antigen receptor T-cell (CAR-T) therapy; receipt and preparation of CAR-T cells for administration
Q2042	Tisagenlecleucel, up to 600 million CAR-positive viable T cells, including leukapheresis and dose preparation procedures, per therapeutic dose

Table 2:	
ICD-10 diagnosis codes considered medically necessary for Acute Lymphoblastic Leukemia (ALL) with Table 1 (CPT/HCPCS) codes if criteria are met:	
Code	Description
C91.00	Acute lymphoblastic leukemia not having achieved remissionAcute lymphoblastic leukemia
C91.01	Acute lymphoblastic leukemia, in remission
C91.02	Acute lymphoblastic leukemia, in relapse

Table 3:		
CPT/HCPCS Code	CPT/HCPCS Codes for B-cell Lymphomas considered medically necessary if criteria are met:	
Code	Description	
38228	Chimeric antigen receptor T-cell (CAR-T) therapy; CAR-T cell administration, autologous	
38225	Chimeric antigen receptor T-cell (CAR-T) therapy; harvesting of blood-derived T lymphocytes for development of genetically modified autologous CAR-T cells, per day	
38226	Chimeric antigen receptor T-cell (CAR-T) therapy; preparation of blood-derived T lymphocytes for transportation (eg, cryopreservation, storage)	
38227	Chimeric antigen receptor T-cell (CAR-T) therapy; receipt and preparation of CAR-T cells for administration	
Q2042	Tisagenlecleucel, up to 600 million CAR-positive viable T cells, including leukapheresis and dose preparation procedures, per therapeutic dose	

Table 4:	
ICD-10 diagnosis codes considered medically necessary for B-cell Lymphomas with Table 3 if criteria are met:	
Code	Description
B20	Human immunodeficiency virus [HIV] disease
C83.00	Small cell B-cell lymphoma, unspecified site
C83.01	Small cell B-cell lymphoma, lymph nodes of head, face and neck

C83.02	Small cell B-cell lymphoma, intrathoracic lymph nodes
C83.03	Small cell B-cell lymphoma, intra-abdominal lymph nodes
C83.04	Small cell B-cell lymphoma, lymph nodes of axilla and upper limb
C83.05	Small cell B-cell lymphoma, lymph nodes of inguinal region and lower limb
C83.06	Small cell B-cell lymphoma, intrapelvic lymph nodes
C83.07	Small cell B-cell lymphoma, spleen
C83.08	Small cell B-cell lymphoma, lymph nodes of multiple sites
C83.09	Small cell B-cell lymphoma, 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
C83.390	Primary central nervous system lymphoma
C83.398	Diffuse large B-cell lymphoma of other extranodal and solid organ sites
C83.50	Lymphoblastic (diffuse) lymphoma, unspecified site
C83.51	Lymphoblastic (diffuse) lymphoma, lymph nodes of head, face, and neck
C83.52	Lymphoblastic (diffuse) lymphoma, intrathoracic lymph nodes
C83.53	Lymphoblastic (diffuse) lymphoma, intra-abdominal lymph nodes
C83.54	Lymphoblastic (diffuse) lymphoma, lymph nodes of axilla and upper limb
C83.55	Lymphoblastic (diffuse) lymphoma, lymph nodes of inguinal region and lower limb
C83.56	Lymphoblastic (diffuse) lymphoma, intrapelvic lymph nodes
C83.57	Lymphoblastic (diffuse) lymphoma, spleen
C83.58	Lymphoblastic (diffuse) lymphoma, lymph nodes of multiple sites
C83.59	Lymphoblastic (diffuse) lymphoma, extranodal and solid organ sites
C83.80	Other non-follicular lymphoma, unspecified site

Table 4:	
C83.81	Other non-follicular lymphoma, lymph nodes of head, face, and neck
C83.82	Other non-follicular lymphoma, intrathoracic lymph nodes
C83.83	Other non-follicular lymphoma, intra-abdominal lymph nodes
C83.84	Other non-follicular lymphoma, lymph nodes of axilla and upper limb
C83.85	Other non-follicular lymphoma, lymph nodes of inguinal region and lower limb
C83.86	Other non-follicular lymphoma, intrapelvic lymph nodes
C83.87	Other non-follicular lymphoma, spleen
C83.88	Other non-follicular lymphoma, lymph nodes of multiple sites
C83.89	Other non-follicular lymphoma, extranodal and solid organ sites
C83.90	Non-follicular (diffuse) lymphoma, unspecified, unspecified site
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

Table 4:	
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
D47.Z1	Post-transplant lymphoproliferative disorder (PTLD)
Z85.72	Personal history of non-Hodgkin lymphomas

Table 5:		
CPT/HCPCS Code	CPT/HCPCS Codes for Follicular Lymphomas considered medically necessary if criteria are met:	
Code	Description	
38228	Chimeric antigen receptor T-cell (CAR-T) therapy; CAR-T cell administration, autologous	
38225	Chimeric antigen receptor T-cell (CAR-T) therapy; harvesting of blood-derived T lymphocytes for development of genetically modified autologous CAR-T cells, per day	
38226	Chimeric antigen receptor T-cell (CAR-T) therapy; preparation of blood-derived T lymphocytes for transportation (eg, cryopreservation, storage)	
38227	Chimeric antigen receptor T-cell (CAR-T) therapy; receipt and preparation of CAR-T cells for administration	
Q2042	Tisagenlecleucel, up to 600 million CAR-positive viable T cells, including leukapheresis and dose preparation procedures, per therapeutic dose	

Table 6:	
ICD-10 diagnosis codes considered medically necessary for Follicular Lymphomas with Table 5 if	
criteria are met:	
C82.00	Follicular lymphoma grade I, unspecified site
C82.01	Follicular lymphoma grade I, lymph nodes of head, face, and neck
C82.02	Follicular lymphoma grade I, intrathoracic lymph nodes
C82.03	Follicular lymphoma grade I, intra-abdominal lymph nodes
C82.04	Follicular lymphoma grade I, lymph nodes of axilla and upper limb
C82.05	Follicular lymphoma grade I, lymph nodes of inguinal region and lower limb
C82.06	Follicular lymphoma grade I, intrapelvic lymph nodes
C82.07	Follicular lymphoma grade I, spleen
C82.08	Follicular lymphoma grade I, lymph nodes of multiple sites
C82.09	Follicular lymphoma grade I, extranodal and solid organ sites
C82.10	Follicular lymphoma grade II, unspecified site
C82.11	Follicular lymphoma grade II, lymph nodes of head, face, and neck
C82.12	Follicular lymphoma grade II, intrathoracic lymph nodes
C82.13	Follicular lymphoma grade II, intra-abdominal lymph nodes
C82.14	Follicular lymphoma grade II, lymph nodes of axilla and upper limb

Table 6:	
C82.15	Follicular lymphoma grade II, lymph nodes of inguinal region and lower limb
C82.16	Follicular lymphoma grade II, intrapelvic lymph nodes
C82.17	Follicular lymphoma grade II, spleen
C82.18	Follicular lymphoma grade II, lymph nodes of multiple sites
C82.19	Follicular lymphoma grade II, extranodal and solid organ sites
C82.20	Follicular lymphoma grade III, unspecified, unspecified site
C82.21	Follicular lymphoma grade III, unspecified, lymph nodes of head, face, and neck
C82.22	Follicular lymphoma grade III, unspecified, intrathoracic lymph nodes
C82.23	Follicular lymphoma grade III, unspecified, intra-abdominal lymph nodes
C82.24	Follicular lymphoma grade III, unspecified, lymph nodes of axilla and upper limb
C82.25	Follicular lymphoma grade III, unspecified, lymph nodes of inguinal region and lower limb
C82.26	Follicular lymphoma grade III, unspecified, intrapelvic lymph nodes
C82.27	Follicular lymphoma grade III, unspecified, spleen
C82.28	Follicular lymphoma grade III, unspecified, lymph nodes of multiple sites
C82.29	Follicular lymphoma grade III, unspecified, extranodal and solid organ sites
C82.30	Follicular lymphoma grade IIIa, unspecified site
C82.31	Follicular lymphoma grade IIIa, lymph nodes of head, face, and neck
C82.32	Follicular lymphoma grade IIIa, intrathoracic lymph nodes
C82.33	Follicular lymphoma grade IIIa, intra-abdominal lymph nodes
C82.34	Follicular lymphoma grade IIIa, lymph nodes of axilla and upper limb
C82.35	Follicular lymphoma grade IIIa, lymph nodes of inguinal region and lower limb
C82.36	Follicular lymphoma grade IIIa, intrapelvic lymph nodes
C82.37	Follicular lymphoma grade IIIa, spleen
C82.38	Follicular lymphoma grade IIIa, lymph nodes of multiple sites
C82.39	Follicular lymphoma grade IIIa, extranodal and solid organ sites
C82.40	Follicular lymphoma grade IIIb, unspecified site
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

Table 6:	
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
C82.50	Diffuse follicle center lymphoma, unspecified site
C82.51	Diffuse follicle center lymphoma, lymph nodes of head, face, and neck
C82.52	Diffuse follicle center lymphoma, intrathoracic lymph nodes
C82.53	Diffuse follicle center lymphoma, intra-abdominal lymph nodes
C82.54	Diffuse follicle center lymphoma, lymph nodes of axilla and upper limb
C82.55	Diffuse follicle center lymphoma, lymph nodes of inguinal region and lower limb
C82.56	Diffuse follicle center lymphoma, intrapelvic lymph nodes
C82.57	Diffuse follicle center lymphoma, spleen
C82.58	Diffuse follicle center lymphoma, lymph nodes of multiple sites
C82.59	Diffuse follicle center lymphoma, extranodal and solid organ sites
C82.60	Cutaneous follicle center lymphoma, unspecified site
C82.61	Cutaneous follicle center lymphoma, lymph nodes of head, face, and neck
C82.62	Cutaneous follicle center lymphoma, intrathoracic lymph nodes
C82.63	Cutaneous follicle center lymphoma, intra-abdominal lymph nodes
C82.64	Cutaneous follicle center lymphoma, lymph nodes of axilla and upper limb
C82.65	Cutaneous follicle center lymphoma, lymph nodes of inguinal region and lower limb
C82.66	Cutaneous follicle center lymphoma, intrapelvic lymph nodes
C82.67	Cutaneous follicle center lymphoma, spleen
C82.68	Cutaneous follicle center lymphoma, lymph nodes of multiple sites
C82.69	Cutaneous follicle center lymphoma, extranodal and solid organ sites
C82.80	Other types of follicular lymphoma, unspecified site
C82.81	Other types of follicular lymphoma, lymph nodes of head, face, and neck
C82.82	Other types of follicular lymphoma, intrathoracic lymph nodes
C82.83	Other types of follicular lymphoma, intra-abdominal lymph nodes
C82.84	Other types of follicular lymphoma, lymph nodes of axilla and upper limb
C82.85	Other types of follicular lymphoma, lymph nodes of inguinal region and lower limb
C82.86	Other types of follicular lymphoma, intrapelvic lymph nodes
C82.87	Other types of follicular lymphoma, spleen

Table 6:	
C82.88	Other types of follicular lymphoma, lymph nodes of multiple sites
C82.89	Other types of follicular lymphoma, extranodal and solid organ sites
C82.90	Follicular lymphoma, unspecified, unspecified site
C82.91	Follicular lymphoma, unspecified, lymph nodes of head, face, and neck
C82.92	Follicular lymphoma, unspecified, intrathoracic lymph nodes
C82.93	Follicular lymphoma, unspecified, intra-abdominal lymph nodes
C82.94	Follicular lymphoma, unspecified, lymph nodes of axilla and upper limb
C82.95	Follicular lymphoma, unspecified, lymph nodes of inguinal region and lower limb
C82.96	Follicular lymphoma, unspecified, intrapelvic lymph nodes
C82.97	Follicular lymphoma, unspecified, spleen
C82.98	Follicular lymphoma, unspecified, lymph nodes of multiple sites
C82.99	Follicular lymphoma, unspecified, extranodal and solid organ sites

Table 7:		
ICD-10 diagnosis codes considered experimental, investigational, or unproven:		
C71.0	Malignant neoplasm of cerebrum, except lobes and ventricles	
C71.1	Malignant neoplasm of frontal lobe	
C71.2	Malignant neoplasm of temporal lobe	
C71.3	Malignant neoplasm of parietal lobe	
C71.4	Malignant neoplasm of occipital lobe	
C71.5	Malignant neoplasm of cerebral ventricle	
C71.6	Malignant neoplasm of cerebellum	
C71.7	Malignant neoplasm of brain stem	
C71.8	Malignant neoplasm of overlapping sites of brain	
C71.9	Malignant neoplasm of brain, unspecified	
C74.00	Malignant neoplasm of adrenal gland	
C74.00	Malignant neoplasm of cortex of unspecified adrenal gland	
C74.01	Malignant neoplasm of cortex of right adrenal gland	
C74.02	Malignant neoplasm of cortex of left adrenal gland	
C74.10	Malignant neoplasm of medulla of unspecified adrenal gland	
C74.11	Malignant neoplasm of medulla of right adrenal gland	

Table 7:	
C74.12	Malignant neoplasm of medulla of left adrenal gland
C74.90	Malignant neoplasm of unspecified part of unspecified adrenal gland
C74.91	Malignant neoplasm of unspecified part of right adrenal gland
C74.92	Malignant neoplasm of unspecified part of left adrenal gland
C81.00	Nodular lymphocyte predominant Hodgkin lymphoma, unspecified site
C81.01	Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of head, face, and neck
C81.02	Nodular lymphocyte predominant Hodgkin lymphoma, intrathoracic lymph nodes
C81.03	Nodular lymphocyte predominant Hodgkin lymphoma, intra-abdominal lymph nodes
C81.04	Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of axilla and upper limb
C81.05	Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of inguinal region and upper limb
C81.06	Nodular lymphocyte predominant Hodgkin lymphoma, intrapelvic lymph nodes
C81.07	Nodular lymphocyte predominant Hodgkin lymphoma, spleen
C81.08	Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of multiple sites
C81.09	Nodular lymphocyte predominant Hodgkin lymphoma, extranodal and solid organ sites
C81.10	Nodular sclerosis Hodgkin lymphoma, unspecified site
C81.11	Nodular sclerosis Hodgkin lymphoma, lymph nodes of head, face, and neck
C81.12	Nodular sclerosis Hodgkin lymphoma, intrathoracic lymph nodes
C81.13	Nodular sclerosis Hodgkin lymphoma, intra-abdominal lymph nodes
C81.14	Nodular sclerosis Hodgkin lymphoma, lymph nodes of axilla and upper limb
C81.15	Nodular sclerosis Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C81.16	Nodular sclerosis Hodgkin lymphoma, intrapelvic lymph nodes
C81.17	Nodular sclerosis Hodgkin lymphoma, spleen
C81.18	Nodular sclerosis Hodgkin lymphoma, lymph nodes of multiple sites
C81.19	Nodular sclerosis Hodgkin lymphoma, extranodal and solid organ sites
C81.20	Mixed cellularity Hodgkin lymphoma, unspecified site
C81.21	Mixed cellularity Hodgkin lymphoma, lymph nodes of head, face, and neck
C81.22	Mixed cellularity Hodgkin lymphoma, intrathoracic lymph nodes
C81.23	Mixed cellularity Hodgkin lymphoma, intra-abdominal lymph nodes

Table 7:	
C81.24	Mixed cellularity Hodgkin lymphoma, lymph nodes of axilla and upper limb
C81.25	Mixed cellularity Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C81.26	Mixed cellularity Hodgkin lymphoma, intrapelvic lymph nodes
C81.27	Mixed cellularity Hodgkin lymphoma, spleen
C81.28	Mixed cellularity Hodgkin lymphoma, lymph nodes of multiple sites
C81.29	Mixed cellularity Hodgkin lymphoma, extranodal and solid organ sites
C81.30	Lymphocyte depleted Hodgkin lymphoma, unspecified site
C81.31	Lymphocyte depleted Hodgkin lymphoma, lymph nodes of head, face, and neck
C81.32	Lymphocyte depleted Hodgkin lymphoma, intrathoracic lymph nodes
C81.33	Lymphocyte depleted Hodgkin lymphoma, intra-abdominal lymph nodes
C81.34	Lymphocyte depleted Hodgkin lymphoma, lymph nodes of axilla and upper limb
C81.35	Lymphocyte depleted Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C81.36	Lymphocyte depleted Hodgkin lymphoma, intrapelvic lymph nodes
C81.37	Lymphocyte depleted Hodgkin lymphoma, spleen
C81.38	Lymphocyte depleted Hodgkin lymphoma, lymph nodes of multiple sites
C81.39	Lymphocyte depleted Hodgkin lymphoma, extranodal and solid organ sites
C81.40	Lymphocyte-rich Hodgkin lymphoma, unspecified site
C81.41	Lymphocyte-rich Hodgkin lymphoma, lymph nodes of head, face, and neck
C81.42	Lymphocyte-rich Hodgkin lymphoma, intrathoracic lymph nodes
C81.43	Lymphocyte-rich Hodgkin lymphoma, intra-abdominal lymph nodes
C81.44	Lymphocyte-rich Hodgkin lymphoma, lymph nodes of axilla and upper limb
C81.45	Lymphocyte-rich Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C81.46	Lymphocyte-rich Hodgkin lymphoma, intrapelvic lymph nodes
C81.47	Lymphocyte-rich Hodgkin lymphoma, spleen
C81.48	Lymphocyte-rich Hodgkin lymphoma, lymph nodes of multiple sites
C81.49	Lymphocyte-rich Hodgkin lymphoma, extranodal and solid organ sites
C81.70	Other Hodgkin lymphoma, unspecified site
C81.71	Other Hodgkin lymphoma, lymph nodes of head, face, and neck
C81.72	Other Hodgkin lymphoma, intrathoracic lymph nodes
C81.73	Other Hodgkin lymphoma, intra-abdominal lymph nodes
C81.74	Other Hodgkin lymphoma, lymph nodes of axilla and upper limb

Table 7:	
C81.75	Other Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C81.76	Other Hodgkin lymphoma, intrapelvic lymph nodes
C81.77	Other Hodgkin lymphoma, spleen
C81.78	Other Hodgkin lymphoma, lymph nodes of multiple sites
C81.79	Other Hodgkin lymphoma, extranodal and solid organ sites
C81.90	Hodgkin lymphoma, unspecified, unspecified site
C81.91	Hodgkin lymphoma, unspecified, lymph nodes of head, face, and neck
C81.92	Hodgkin lymphoma, unspecified, intrathoracic lymph nodes
C81.93	Hodgkin lymphoma, unspecified, intra-abdominal lymph nodes
C81.94	Hodgkin lymphoma, unspecified, lymph nodes of axilla and upper limb
C81.95	Hodgkin lymphoma, unspecified, lymph nodes of inguinal region and lower limb
C81.96	Hodgkin lymphoma, unspecified, intrapelvic lymph nodes
C81.97	Hodgkin lymphoma, unspecified, spleen
C81.98	Hodgkin lymphoma, unspecified, lymph nodes of multiple sites
C81.99	Hodgkin lymphoma, unspecified, extranodal and solid organ sites
C83.10	Mantle cell lymphoma, unspecified site
C83.11	Mantle cell lymphoma, lymph nodes of head, face, and neck
C83.12	Mantle cell lymphoma, intrathoracic lymph nodes
C83.13	Mantle cell lymphoma, intra-abdominal lymph nodes
C83.14	Mantle cell lymphoma, lymph nodes of axilla and upper limb
C83.15	Mantle cell lymphoma, lymph nodes of inguinal region and lower limb
C83.16	Mantle cell lymphoma, intrapelvic lymph nodes
C83.17	Mantle cell lymphoma, spleen
C83.18	Mantle cell lymphoma, lymph nodes of multiple sites
C83.19	Mantle cell lymphoma, extranodal and solid organ sites
C83.70	Burkitt lymphoma, unspecified site
C83.71	Burkitt lymphoma, lymph nodes of head, face, and neck
C83.72	Burkitt lymphoma, intrathoracic lymph nodes
C83.73	Burkitt lymphoma, intra-abdominal lymph nodes

Table 7:	
C83.74	Burkitt lymphoma, lymph nodes of axilla and upper limb
C83.75	Burkitt lymphoma, lymph notes of inguinal region and lower limb
C83.76	Burkitt lymphoma, intrapelvic lymph nodes
C83.77	Burkitt lymphoma, spleen
C83.78	Burkitt lymphoma, lymph nodes of multiple sites
C83.79	Burkitt lymphoma, extranodal and solid organ sites
C84.A0	Cutaneous T- lymphoma, unspecified, unspecified site
C84.A1	Cutaneous T-cell lymphoma, unspecified lymph nodes of head, face, and neck
C84.A2	Cutaneous T-cell lymphoma, unspecified, intrathoracic lymph nodes
C84.A3	Cutaneous T-cell lymphoma, unspecified, intra-abdominal lymph nodes
C84.A4	Cutaneous T-cell lymphoma, unspecified, lymph nodes of axilla and upper limb
C84.A5	Cutaneous T-cell lymphoma, unspecified, lymph nodes of inguinal region and lower limb
C84.A6	Cutaneous T-cell lymphoma, unspecified, intrapelvic lymph nodes
C84.A7	Cutaneous T-cell lymphoma, unspecified, spleen
C84.A8	Cutaneous T-cell lymphoma, unspecified, lymph nodes of multiple sites
C84.A9	Cutaneous T-cell lymphoma, unspecified, extranodal and solid organ sites
C84.60	Anaplastic large cell lymphoma, ALK-positive, unspecified site
C84.61	Anaplastic large cell lymphoma, ALK-positive, lymph nodes of head, face, and neck
C84.62	Anaplastic large cell lymphoma, ALK-positive, intrathoracic lymph nodes
C84.63	Anaplastic large cell lymphoma, ALK-positive, intra-abdominal lymph nodes
C84.64	Anaplastic large cell lymphoma, ALK-positive, lymph nodes of axilla and upper limb
C84.65	Anaplastic large cell lymphoma, ALK-positive, lymph nodes of inguinal region and lower limb
C84.66	Anaplastic large cell lymphoma, ALK-positive, intrapelvic lymph nodes
C84.67	Anaplastic large cell lymphoma, ALK-positive, spleen
C84.68	Anaplastic large cell lymphoma, ALK-positive, lymph nodes of multiple sites
C84.69	Anaplastic large cell lymphoma, ALK-positive, extranodal and solid organ sites
C84.70	Anaplastic large cell lymphoma, ALK-negative, unspecified site
C84.71	Anaplastic large cell lymphoma, ALK-negative, lymph nodes of head, face, and neck

Table 7:	
C84.72	Anaplastic large cell lymphoma, ALK-negative, intrathoracic lymph nodes
C84.73	Anaplastic large cell lymphoma, ALK-negative, intra-abdominal lymph nodes
C84.74	Anaplastic large cell lymphoma, ALK-negative, lymph nodes of axilla and upper limb
C84.75	Anaplastic large cell lymphoma, ALK-negative, lymph nodes of inguinal region and lower limb
C84.76	Anaplastic large cell lymphoma, ALK-negative, intrapelvic lymph nodes
C84.77	Anaplastic large cell lymphoma, ALK-negative, spleen
C84.78	Anaplastic large cell lymphoma, ALK-negative, lymph nodes of multiple sites
C84.79	Anaplastic large cell lymphoma, ALK-negative, extranodal and solid organ sites
C90.00	Multiple myeloma not having achieved remission
C90.01	Multiple myeloma in remission
C90.02	Multiple myeloma in relapse
C90.20	Extramedullary plasmacytoma not having achieved remission
C90.21	Extramedullary plasmacytoma in remission
C90.22	Extramedullary plasmacytoma in relapse
C91.10	Chronic lymphocytic leukemia (CLL) of B-cell type not having achieved remission
C91.11	Chronic lymphocytic leukemia (CLL) of B-cell type in remission
C91.12	Chronic lymphocytic leukemia (CLL) of B-cell type in relapse
C91.50	Adult T-cell lymphoma/leukemia (HTLV-1-associated) not having achieved remission
C91.51	Adult T-cell lymphoma/leukemia (HTLV-1-associated), in remission
C91.52	Adult T-cell lymphoma/leukemia (HTLV-1-associated), in relapse
C91.60	Prolymphocytic leukemia of T-cell type not having achieved remission
C91.61	Prolymphocytic leukemia of T-cell type, in remission
C91.62	Prolymphocytic leukemia of T-cell type, in relapse
C92.00	Acute myeloblastic leukemia, not having achieved remission
C91.01	Acute myeloblastic leukemia, in remission
C91.02	Acute myeloblastic leukemia, in relapse

References

- 1. ACTEMRA(R) intravenous, subcutaneous injection, tocilizumab intravenous, subcutaneous injection. Genentech Inc (per FDA), South San Francisco, CA, 2021.
- 2. Bishop MR, Dickinson M, Purtill D, et al. Second-Line Tisagenlecleucel or Standard Care in Aggressive B-Cell Lymphoma. N Engl J Med. 2022 Feb 17;386(7):629-639. doi: 10.1056/NEJMoa2116596. Epub 2021 Dec 14.

- 3. Burstein DS, Maude S, Grupp S, et al. Cardiac profile of chimeric antigen receptor T cell therapy in children: A single-institution experience. Biol Blood Marrow Transplant. 2018; 24(8):1590-1595.
- 4. Chavez JC, Bachmeier C, Kharfan-dabaja MA. CAR T-cell therapy for B-cell lymphomas: clinical trial results of available products. Ther Adv Hematol. 2019;10:2040620719841581.
- 5. Denlinger, N., Bond, D., & Jaglowski, S. (2021). CAR T-cell therapy for B-cell lymphoma. Current Problems in Cancer, 100826.
- 6. Dreyling M, Fowler NH, Dickinson M, et al. Durable response after tisagenlecleucel in adults with relapsed/refractory follicular lymphoma: ELARA trial update. Blood. 2024 Apr 25;143(17):1713-1725. doi: 10.1182/blood.2023021567.
- 7. El-Galaly, T. C., Cheah, C. Y., Kristensen, D., Hutchison, A., Hay, K., Callréus, T., & Villa, D. (2020). Potentials, challenges and future of chimeric antigen receptor T-cell therapy in non-Hodgkin lymphomas. Acta Oncologica, 59(7), 766-774. Retrieved from: https://pubmed.ncbi.nlm.nih.gov/32189546/
- 8. Grupp S, Laetsch T, Buechner J, et al. Analysis of a global registration trial of the efficacy and safety of CTL019 in pediatric and young Adults with relapsed/refractory acute lymphoblastic leukemia (ALL). Blood. 2016; 128(22):221.
- 9. Halford, Z., Anderson, M. K., Bennett, L. L., & Moody, J. (2021). Tisagenlecleucel in Acute Lymphoblastic Leukemia: A Review of the Literature and Practical Considerations. Annals of Pharmacotherapy, 55(4), 466-479. Retrieved from: https://pubmed.ncbi.nlm.nih.gov/32762363/
- 10. Kite Pharma, Inc. Authorized treatment centers for Yescarta (axicabtagene ciloleucel). Available at: https://www.yescarta.com/authorized-treatment-centers/. Accessed on April 17, 2020.
- 11. Kochenderfer JN, Dudley ME, Kassim SH, et al. Chemotherapy-refractory diffuse large B-cell lymphoma and indolent B-cell malignancies can be effectively treated with autologous T cells expressing an anti-CD19 chimeric antigen receptor. J Clin Oncol 2015; 33:540.
- 12. Kymriah (tisagenlecleucel) [prescribing information]. East Hanover, NJ: Novartis Pharmaceuticals Corporation; May 2022.
- 13. Laetsch TW, Maude SL, Rives S, et al. Three-Year Update of Tisagenlecleucel in Pediatric and Young Adult Patients With Relapsed/Refractory Acute Lymphoblastic Leukemia in the ELIANA Trial. J Clin Oncol. 2023 Mar 20;41(9):1664-1669. doi: 10.1200/JCO.22.00642. Epub 2022 Nov 18.
- 14. Laetsch TW, Myers GD, Baruchel A, et al. Patient-reported quality of life after tisagenlecleucel infusion in children and young adults with relapsed or refractory B-cell acute lymphoblastic leukaemia: a global, single-arm, phase 2 trial. Lancet Oncol. 2019 Dec;20(12):1710-1718. doi: 10.1016/S1470-2045(19)30493-0. Epub 2019 Oct 9.
- 15. Lamprecht M, Dansereau C. CAR T-Cell Therapy: Update on the State of the Science. Clin J Oncol Nurs. 2019;23(2):6-12.
- Locke FL, Neelapu SS, Bartlett NL, et al. Phase 1 Results of ZUMA-1: A Multicenter Study of KTE-C19 Anti-CD19 CAR T Cell Therapy in Refractory Aggressive Lymphoma. Mol Ther. 2017;25(1):285-295.
- 17. Locke FL, Ghobadi A, Jacobson CA, et al. Long-term study and activity of axicabtagene ciloleucel in refractory long B-cell lymphoma (ZUMA-1): a single-arm, multicenter, phase 1-2 trial. Lancet Oncol. 2019; 20:21-42.
- 18. Locke FL, Rossi J, Xue X, et al. Abstract CT020: immune signatures of cytokine release syndrome and neurologic events in a multicenter registrational trial (ZUMA-1) in subjects with refractory diffuse large B cell lymphoma treated with axicabtagene ciloleucel (KTE-C19). In: Proceedings of the AACR Annual Meeting, 1–5 April 2017 Washington, DC.
- 19. Maude SL, Laetsch TW, Buechner J, et al. Tisagenlecleucel in children and young adults with B-Cell lymphoblastic leukemia. N Engl J Med. 2018; 378(5):439-448.
- 20. Maude SL, Frey N, Shaw PA, et al. Chimeric antigen receptor T cells for sustained remissions in leukemia. N Engl J Med. 2014; 371(16):1507-1517.
- 21. National Comprehensive Cancer Network® (NCCN), "NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)," Acute Lymphoblastic Leukemia. Version 4.2023 February 05, 2024. Accessed 3/12/2024.

- 22. National Comprehensive Cancer Network® (NCCN), "NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)," Acute Lymphoblastic Leukemia. Version 3.2024 December 20, 2024. Accessed 5/13/2025.
- 23. National Comprehensive Cancer Network® (NCCN), "NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)," B-Cell Lymphomas. Version 1.2024 January 18, 2024. Accessed 3/12/2024.
- 24. National Comprehensive Cancer Network® (NCCN), "NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)," B-Cell Lymphomas. Version 2.2025 February 10, 2025. Accessed 5/13/2025.
- 25. National Comprehensive Cancer Network® (NCCN), "NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)," Pediatric Acute Lymphoblastic Leukemia. Version 4.2024 February 07, 2024. Accessed 3/12/2024.
- 26. National Comprehensive Cancer Network® (NCCN), "NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)," Pediatric Acute Lymphoblastic Leukemia. Version 3.2025 March 17, 2025. Accessed 5/13/2025.
- 27. National Comprehensive Cancer Network® (NCCN), "NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)," Management of Immunotherapy-Related Toxicities. Version 1.2024 December 7, 2023. Accessed 3/12/2024.
- 28. National Comprehensive Cancer Network® (NCCN), "NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®)," Management of Immunotherapy-Related Toxicities. Version 1.2025 December 20, 2024. Accessed 5/13/2025.
- 29. National Comprehensive Cancer Network. Dictionary. https://www.nccn.org/patients/resources/dictionary/default.aspx Accessed 1/25/2021.
- 30. Neelapu SS, Locke FL, Bartlett NL, et al. Axicabtagene Ciloleucel CAR T-Cell Therapy in Refractory Large B-Cell Lymphoma. N Engl J Med 2017; 377:2531.
- 31. Ogbda N, Arwood NM, Bartlett NL, et al. Chimeric Antigen Receptor T-Cell Therapy. JNCCN. 2018;16(9). doi:https://doi.org/10.6004/jnccn.2018.0073.
- 32. O'Leary MC, Lu X, Huang Y, Let al. FDA Approval Summary: Tisagenlecleucel for Treatment of Patients with Relapsed or Refractory B-cell Precursor Acute Lymphoblastic Leukemia. Clin Cancer Res. 2019 Feb 15;25(4):1142-1146. doi: 10.1158/1078-0432.CCR-18-2035. Epub 2018 Oct 11.
- 33. Pongas, G., & Cheson, B. (2021). Recent advances in the management of patients with relapsed/refractory follicular lymphoma. Blood and Lymphatic Cancer: Targets and Therapy, 11, 55. Retrieved from: https://pubmed.ncbi.nlm.nih.gov/34354386/
- 34. Schuster SJ, Bishop MR, Tam C, et al. Sustained disease control for adult patients with relapsed or refractory diffuse large B-Cell lymphoma: an updated analysis of Juliet, a global pivotal phase 2 trial of tisagenlecleucel. Blood 2018; 132: 1684.
- 35. Schuster SJ, Svoboda J, Chong EA, et al. Chimeric Antigen Receptor T Cells in Refractory B-Cell Lymphomas. N Engl J Med 2017; 377:2545.
- 36. Schuster SJ, Tam CS, Borchmann P, et al. Long-term clinical outcomes of tisagenlecleucel in patients with relapsed or refractory aggressive B-cell lymphomas (JULIET): a multicentre, open-label, single-arm, phase 2 study. Lancet Oncol. 2021 Oct;22(10):1403-1415. doi: 10.1016/S1470-2045(21)00375-2. Epub 2021 Sep 10.
- 37. Schepisi G, Cursano MC, Casadei C, et al. CAR-T cell therapy: a potential new strategy against prostate cancer. Journal for ImmunoTherapy of Cancer 2019;7:258. doi: 10.1186/s40425-019-0741-7
- 38. Sharma P, King GT, Shinde SS, Purev E, Jimeno A. Axicabtagene ciloleucel for the treatment of relapsed/refractory B-cell non-Hodgkin's lymphomas. Drugs Today. 2018;54(3):187-198.
- 39. US Food and Drug Administration (FDA). FDA drug safety communication: FDA investigating serious risk of T-cell malignancy following BCMA-directed or CD19-directed autologous chimeric antigen receptor (CAR) T cell immunotherapies. https://www.fda.gov/safety/medical-product-safety-information/bcma-directed-or-cd19-directed-autologous-chimeric-antigen-receptor-car-t-cell-immunotherapies-fda. Published November 28, 2023.

- 40. Yescarta. [Product Information] Label. Santa Monica, CA.. Available at: https://www.fda.gov/downloads/biologicsbloodvaccines/cellulargenetherapyproducts/approved products/ucm581226.pdf
- 41. Yu H, Pan J, Guo Z, et al. CART cell therapy for prostate cancer: status and promise. *Onco Targets Ther.* 2019; 12: 391–395. doi: 10.2147/OTT.S185556
- 42. Zhang C, Kasi A. Chimeric Antigen Receptor (CAR) T-Cell Therapy. [Updated 2019 Feb 6]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2019 Jan.

Clinical Guideline Revision / History Information

Original Date: 5/5/2020

Reviewed/Revised: 03/11/2021, 12/01/2021, 03/17/2022, 3/23/2023, 3/21/2024, 5/29/2024,

01/01/2026