

# Medical Drug Clinical Criteria

<b>Subject:</b>	Carvykti (ciltacabtagene autoleucl)		
<b>Document #:</b>	CC-0214	<b>Publish Date:</b>	12/21/2022
<b>Status:</b>	Revised	<b>Last Review Date:</b>	11/18/2022

## Table of Contents

<a href="#">Overview</a>	<a href="#">Coding</a>	<a href="#">References</a>
<a href="#">Clinical criteria</a>	<a href="#">Document history</a>	

## Overview

This document addresses the use of Carvykti (ciltacabtagene autoleucl), a B-cell maturation antigen (BCMA)-directed genetically modified autologous T cell immunotherapy indicated for the treatment of adult patients with relapsed or refractory multiple myeloma, after four or more prior lines of therapy, including a proteasome inhibitor, an immunomodulatory agent, and an anti-CD38 monoclonal antibody.

Ciltacabtagene autoleucl is prepared from the patient's peripheral blood mononuclear cells (obtained via leukapheresis), which are enriched for T cells. When infused back into the patient, the anti-BCMA CAR T cells recognize and eliminate BCMA-expressing target cells. In addition to T cells, ciltacabtagene autoleucl may contain natural killer (NK) cells.

Carvykti has a black box warning for life-threatening or fatal cytokine release syndrome (CRS), neurologic toxicities, Hemophagocytic Lymphohistiocytosis/Macrophage Activation Syndrome HLH/MAS and prolonged and/or recurrent cytopenia. Due to these black box warnings, Carvykti is only available through a Risk Evaluation and Mitigation Strategy (REMS) program.

### Definitions and Measures

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

Disease Progression: Cancer that continues to grow or spread.

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.

### Carvykti (ciltacabtagene autoleucl)

Requests for Carvykti (ciltacabtagene autoleucl) may be approved if the following criteria are met:

- I. Individual is 18 years of age or older; **AND**
- II. Individual has a diagnosis of relapsed or refractory multiple myeloma; **AND**
- III. If individual has a history of an allogeneic stem cell transplant, there are no signs of active graft versus host disease (GVHD); **AND**
- IV. Individual has adequate bone marrow reserve defined by all of the following:
  - A. Absolute neutrophil count (ANC)  $\geq$  1000 cells/uL; **AND**
  - B. Platelet count  $\geq$  50,000 cells/uL; **AND**
- V. Individual has an Eastern Cooperative Oncology Group (ECOG) performance status of 0 to 1; **AND**
- VI. Individual has not received prior CAR T-cell or B-cell maturation antigen (BCMA) targeted therapy; **OR**
- VII. Individual is using as a one-time, single administration treatment.

Carvykti (ciltacabtagene autoleucl) may not be approved for the following (Berdeja 2021):

- I. Repeat administration; **OR**
- II. Active presence or history of central nervous system involvement with myeloma; **OR**
- III. Using in combination with other chemotherapy agents (not including the use of lymphodepleting chemotherapy prior to infusion); **OR**
- IV. Presence of plasma cell leukemia, Waldenstrom's macroglobulinemia, POEMS syndrome, or primary AL amyloidosis; **OR**
- V. Individual has active GVHD; **OR**
- VI. History of autologous stem cell transplant less than or equal to 12 weeks before apheresis; **OR**
- VII. If prescribed in combination with other CAR T-cell immunotherapy (e.g. Abecma, Breyanzi, Kymriah, Tecartus, Yescarta); **OR**
- VIII. History of cardiac conditions, such as New York Heart Association (NYHA) stage III or IV congestive heart failure, myocardial infarction or coronary artery bypass graft (CABG) within the past 6 months, history of clinically significant ventricular arrhythmia or unexplained syncope, not believed to be vasovagal in nature or due to dehydration, or history of severe non-ischemic cardiomyopathy; **OR**
- IX. Left ventricular ejection fraction (LVEF) less than 45% (scan performed  $\leq$  8 weeks of apheresis); **OR**
- X. Active hepatitis B, active hepatitis C, human immunodeficiency virus (HIV) positive, or other active, uncontrolled infection; **OR**
- XI. 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

Q2056 Ciltacabtagene autoleucl, up to 100 million autologous b-cell maturation antigen (bcma) directed car-positive t cells, including leukapheresis and dose preparation procedures, per therapeutic dose [Carvykti]

### ICD-10 Diagnosis

C90.00 Multiple myeloma not having achieved remission

C90.02 Multiple myeloma in relapse

## Document History

Revised: 11/18/2022

Document History:

- 11/18/2022 – Annual Review: Simplify criteria for diagnosis to relapsed/refractory multiple myeloma; added clarifying criteria for those with a history of an allogeneic stem cell transplant, added criteria for those who have received prior CAR T-cell or B-cell maturation antigen targeted therapy. In the may not be approved criteria, added criteria around CNS disease with myeloma, added active GVHD, and combination use with another CAR T cell therapy. Deleted in the may not be approved criteria: history of allogeneic stem cell transplant, or history of CAR T therapy or other genetically modified T cell therapy. Coding Reviewed: No changes.
- 03/14/2022– Select Review: Add new clinical criteria for Carvykti (Ciltacabtagene autoleucl). Coding reviewed: Added HCPCS J3490, J3590, C9399. All diagnoses pend. Effective 7/1/2022 Added HCPCS C9098. Removed HCPCS C9399. Added ICD-10-CM C90.00, C90.02. Remove All diagnoses pend. Removed C90.0-C90.3. Effective 10/1/2022 Added HCPCS Q2056. Removed HCPCS J3490, J3590, C9399, C9098.

## References

1. Berdeja JG, Madduri D, Usmani SZ, et al. Ciltacabtagene autoleucl, a B-cell maturation antigen-directed chimeric antigen receptor T-cell therapy in patients with relapsed or refractory multiple myeloma (CARTITUDE-1): a phase 1b/2 open-label study. *Lancet*. Vol 398:10297:314-324. 24 July 2021. Accessed October 7, 2022.
2. Madduri D, Berdeja JG, Usmani SZ, et al. CARTITUDE-1: phase 1b/2 study of ciltacabtagene autoleucl, a B-cell maturation antigen-directed chimeric antigen receptor T cell therapy, in relapsed/refractory multiple myeloma. Presented at the 62<sup>nd</sup> ASH Annual Meeting and Exposition 2020 Dec 5-8. Presented orally 2020 Dec 5. Available at: <https://ash.confex.com/ash/2020/webprogram/Paper136307.html>. Accessed October 7, 2022.
3. 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 on October 7, 2022
  - a. Multiple Myeloma. V1.2023. Revised September 14, 2022.

4. NCT03548207. ClinicalTrials.gov. U.S. National Library of Medicine. Available <https://clinicaltrials.gov/ct2/show/NCT03548207?term=nct03548207&draw=2&rank=1>. Accessed on October 7, 2022.

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