Medical Drug Clinical Criteria

Subject:	Amtagvi (lifileucel)		
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Overview

This document addresses the use of Amtagvi (lifileucel), a one-time, autologous tumor infiltrating lymphocyte (TIL) cell therapy that uses TIL recovered from a patient's tumor tissue to produce billions of polyclonal patient-specific TIL during a 22-day centralized manufacturing process. Following a single infusion of lifileucel, TIL migrate to tumor sites throughout the body, where they recognize and target a multitude of individualized, tumor associated neoantigens and mediate tumor cell lysis.

Amtagvi has an accelerated FDA for the treatment of adult patients with unresectable or metastatic melanoma previously treated with a PD-1 blocking antibody, and if BRAF V600 mutation positive, a BRAF inhibitor with or without a MEK inhibitor.

Definitions and Measures

Allogeneic cells: Harvested from a histocompatible donor.

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

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

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

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

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

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

Line of Therapy:

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

- Third-line therapy: Treatment given when both initial (first-line therapy) and subsequent treatment (second-line therapy) are not effective or there is disease progression.

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

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

Clinical Criteria

Amtagvi (lifileucel)

Requests for lifileucel may be approved if the following criteria are met (Label, NCT02360579):

I. Individual is 18 years of age or older; **AND**
II. Individual has a diagnosis of unresectable or metastatic melanoma; **AND**
III. Individual has progressed on a programmed cell death protein-1 (PD-1) blocking antibody and if BRAF V600 mutation-positive, a BRAF inhibitor with or without a MEK inhibitor; **AND**
IV. Individual has met all the following hematologic parameters:
    A. Absolute neutrophil count (ANC) ≥ 1000 cells/mm^3; **AND**
    B. Hemoglobin (Hb) ≥ 9.0 g/dL; **AND**
    C. Platelet count ≥ 100,000 cells/mm^3; **AND**
V. Individual has an Eastern Cooperative Oncology Group (ECOG) performance status of 0 to 1; **AND**
VI. Individual is using as a one-time, single administration treatment for autologous use only.

Amtagvi (lifileucel) may not be approved for the following (Label, NCT092360579):

I. Repeat administration; **OR**
II. Individual has received an organ allograft or prior cell transfer therapy; **OR**
III. Individual has melanoma of uveal or ocular origin; **OR**
IV. Individual has symptomatic and/or untreated brain metastases (of any size and any number); **OR**
V. If prescribed in combination with other CAR T-cell immunotherapy (e.g. Abecma, Breyanzi, Carvykti, Kymriah, Tecartus, Yescarta); **OR**
VI. History of chimeric antigen receptor therapy or other genetically modified T-cell therapy; **OR**
VII. Individual is currently using chronic systemic steroid therapy for any reason; **OR**
VIII. Left ventricular ejection fraction (LVEF) less than 45% or New York Heart Association (NYHA) functional classification > Class 1; **OR**
IX. Individual has active primary immunodeficiency diseases (for example severe combined immunodeficiency disease (SCID) and acquired immunodeficiency syndrome (AIDS)); **OR**
X. Individual who has a forced expiratory volume in 1 second (FEV1) of ≤ 60%; **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

J3490	Unclassified drugs (When specified as [Amtagvi] (lifileucel))
J3590	Unclassified biologics (When specified as [Amtagvi] (lifileucel))

ICD-10 Diagnosis

	All diagnosis pend

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- 02/23/2024 –Select Review: New clinical criteria for Amtagvi (lifileucel). Coding Reviewed: Added HCPCS J3490, J3590. All diagnosis pend.

References

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2. NCT02360579. ClinicalTrials.gov. U.S. National Library of Medicine. Available https://clinicaltrials.gov/study/NCT02360579. Accessed February 20, 2024.
3. Rohaan MW, Borch TH, van den Berg JH, et al. Tumor-Infiltrating Lymphocyte Therapy or Ipilimumab in Advanced Melanoma. N Engl J Med. 2022;387(23):2113-2125. doi:10.1056/NEJMoa2210233. Available at: https://www.nejm.org/doi/pdf/10.1056/NEJMoa2210233?articleTools=true. Accessed February 20, 2024.
4. Sarnaik AA, Hamid O, Khushalani NI, et al. Lifileucel, a Tumor-Infiltrating Lymphocyte Therapy, in Metastatic Melanoma [published correction appears in J Clin Oncol. 2021 Sep 10;39(26):2972]. J Clin Oncol. 2021;39(24):2656-2666. doi:10.1200/JCO.21.00612. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8376325/. Accessed February 20, 2024.