Subject:	Lartruvo (olaratumab)		
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Overview

This document addresses the use of Lartruvo (olaratumab). Lartruvo is recombinant human immunoglobulin G subclass 1 (IgG1) monoclonal antibody used for the treatment of adults with late stage soft tissue sarcoma under certain conditions. Olaratumab specifically binds platelet-derived growth factor receptor α (PDGFRα), thereby blocking platelet derived growth factor-AA (PDGF-AA), PDGF-BB, and PDGF-CC binding and receptor activation.

The FDA approved indications for Lartruvo is indicated, in combination with doxorubicin, for the treatment of adult patients with soft tissue sarcoma (STS) with a histologic subtype for which an anthracycline-containing regimen is appropriate and which is not amenable to curative treatment with radiotherapy or surgery.

On April 2019, Eli Lilly, the manufacturer of Lartruvo withdrew it from the market for the treatment of advanced soft tissue sarcoma. The withdrawal comes after the failure of the Phase III ANNOUNCE clinical trial, where Lartruvo didn't improve patient survival. The trial was a randomized, double-blind, Phase III of Lartruvo in combination with doxorubicin, followed by Lartruvo alone compared to doxorubicin plus placebo followed by placebo in patients with advanced or metastatic STS. The two primary endpoints were overall survival (OS) in the intent-to-treat (ITT) population and OS in the leiomyosarcoma (LMS) sub-population. Additionally, the National Comprehensive Cancer Network (NCCN) has removed any recommendations regarding Lartruvo from its documents.

Other Uses

Additional uses of olaratumab under investigation include glioblastoma, non-small cell lung cancer, prostate cancer and ovarian cancer. However, olaratumab is not a generally accepted treatment option for any of these indications.

Several trials have found that olaratumab used in the combination with other drugs was not more effective than the other drugs alone. Gerber and colleagues (2017) did not find that the addition of olaratumab to a treatment regimen of paclitaxel/carboplatin significantly improved overall survival (OS) or progression free survival (PFS) for individuals with NSCLC. Moreover, Hakenberg (2019) found a similar median OS in individuals with metastatic castration-resistant prostate cancer who were treated with mitoxantrone/prednisone versus mitoxantrone/prednisone plus olaratumab. Additionally, McGuire and colleagues (2018) did not find that the combination of olaratumab and liposomal doxorubicin resulted in a greater improvement in OS or PFS than single agent liposomal doxorubicin in individuals with advanced ovarian cancer.

Definitions and Measures

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

Metastasis: The spread of cancer from one part of the body to another; a metastatic tumor contains cells that are like those in the original (primary) tumor and have spread.

Monoclonal antibody: A protein developed in the laboratory that can locate and bind to specific substances in the body and on the surface of cancer cells.

Overall-survival (OS): The length of time from either date of diagnosis or the start of treatment for a disease, such as cancer, that individuals diagnosed with the disease remain alive.

Progression free survival (PFS): The length of time during and after treatment that an individual lives but does not get worse (usually measured by the size of a tumor or amount of cancer 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.

Lartruvo (olaratumab)

Requests for Lartruvo (olaratumab) may be approved if the following criteria are met:

I. Individual has a diagnosis of Soft Tissue Sarcoma; **AND**
II. Individual has histologically confirmed diagnosis of late stage soft tissue sarcoma (locally advanced or metastatic); **AND**
III. Individual has not been previously treated with an anthracycline; **AND**
IV. Individual is unable to use radiotherapy or surgery as a curative treatment option; **AND**
V. Individual has an Eastern Cooperative Oncology Group (ECOG) performance status of 0-2; **AND**
VI. If individual is less than 18 years of age, Lartruvo is not used as first-line chemotherapy; **AND**
VII. Individual is using in combination with doxorubicin and, after at least 8 cycles with doxorubicin or earlier discontinuation of doxorubicin due to toxicity, and then if so chosen, continuing olaratumab as monotherapy in the absence of unacceptable toxicities until disease progression.

Requests for Lartruvo (olaratumab) may not be approved if the following criteria above 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

J9285	Injection, olaratumab, 10 mg [Lartruvo]

ICD-10 Diagnosis

C47.0-C47.9	Malignant neoplasm of peripheral nerves and autonomic nervous system
C48.0-C48.8	Malignant neoplasm of retroperitoneum and peritoneum
C49.0-C49.9	Malignant neoplasm of other connective and soft tissue [excluding GIST]
Z85.831	Personal history of malignant neoplasm of soft tissue

Document History

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Document History:

- 02/25/2022 – Annual Review: No changes. Coding Reviewed: No changes.
- 02/19/2021 – Annual Review: No changes. Coding Reviewed: No changes.

- 02/21/2020 – Annual Review: No changes. Coding Review: Added ICD-9-CM Z85.831.
- 05/17/2019 – Annual Review: Initial review of Lartruvo (olaratumab). Wording and formatting changes. Coding Review: No changes.

References

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4. Gerber DE, Swanson P, Lopez-Chavez A, et al. Phase II study of olaratumab with paclitaxel/carboplatin (P/C) or P/C alone in previously untreated advanced NSCLC. Lung Cancer. 2017. 111:108-115.
5. Hakenberg OW, Perez-Gracia JL, Castellano D et al, Randomised phase II study of second-line olaratumab with mitoxantrone/prednisone versus mitoxantrone/prednisone alone in metastatic castration-resistant prostate cancer. Eur J Cancer. 2019;107:186-195.
6. Lexi-Comp ONLINE™ with AHFS™, Hudson, Ohio: Lexi-Comp, Inc.; 2022; Updated periodically.
7. McGuire WP, Penson RT, Gore, M et al. Randomized phase II study of the PDGFRa antibody olaratumab plus liposomal doxorubicin versus liposomal doxorubicin alone in patients with platinum-refractory or platinum-resistant advanced ovarian cancer. BMC Cancer 2018; 18: 1292.

Federal and state laws or requirements, contract language, and Plan utilization management programs or polices may take precedence over the application of this clinical criteria.