Allograft Injection for Degenerative Disc Disease

Medicare Advantage Medical Policy No.: MNG-007

The Health Plan reserves the right to amend this policy and procedure at any time. Exceptions to this policy and procedure will be made on a case-by-case basis at the total discretion of the Health Plan.

Effective Date: February 20, 2024

Instructions for use

This policy serves to provide guidance in determining coverage based on medical necessity. It also gives a list of resources used to create these guidelines. Medical necessity determinations will be made in accordance with generally accepted standards of medical practice, taking into account credible scientific evidence published in peer reviewed medical literature generally recognized by the relevant medical community, physician specialty society recommendations, and the views of the physicians practicing in relevant clinical areas, and other relevant factors, as they relate to the member's clinical circumstances.

Medicare Advantage Members

Coverage criteria for Medicare Advantage members can be found in Medicare coverage guidelines in statutes, regulations, National Coverage Determinations (NCD)s, and Local Coverage Determinations (LCD)s. To determine if a National or Local Coverage Determination addresses coverage for a specific service, refer to the Medicare Coverage Database at the following link: https://www.cms.gov/medicare-coverage-database/search.aspx. You may wish to review the Guide to the MCD Search here: https://www.cms.gov/medicare-coverage-database/help/mcd-bene-help.aspx.

When coverage criteria are not fully established in applicable Medicare statutes, regulations, NCDs or LCDs, internal coverage criteria will be developed. This policy is to serve as the summary of evidence, a list of resources and an explanation of the rationale that supports the adoption of the coverage criteria and is to be used by all plans and lines of business unless Federal or State law, contract language, including member or provider contracts, take precedence over the policy.

InterQual® is utilized as a source of medical evidence to support medical necessity and level of care decisions. InterQual® criteria are intended to be used in connection with the independent professional medical judgment of a qualified health care provider. InterQual® criteria are clinically based on best practice, clinical data, and medical literature. The criteria are updated continually and released annually. InterQual® criteria are a first-level screening tool to assist in determining if the proposed services are clinically indicated and provided in the appropriate level or whether further evaluation is required. The utilization review nurse does the first-level screening. If the criteria are met, the case is approved; if the criteria are not met, the case is referred to the medical director.

Basic Requirements for Clinical Appropriateness:

1. Before diagnostic or therapeutic intervention, a clinician must confirm the diagnosis or establish the likelihood based on a history and physical exam and, when appropriate, a review of laboratory studies, previous diagnostic testing and response to any prior interventions, specifically relevant to the clinical situation.
2. An alternative treatment or other appropriate intervention should not offer any greater benefit based on standards of medical practice and/or current literature.

3. The potential benefit to the patient should outweigh the risk of the diagnostic or therapeutic intervention.
4. A reasonable likelihood of the intervention changing management and/or leading to an improved outcome for the patient must exist, based on the clinical evaluation, current literature and standards of medical practice.

If these requirements are not apparent in the request for authorization, including the clinical documentation provided, the determination of appropriateness will most likely require a peer-to-peer conversation to understand the individual and unique facts that would supersede the requirements set forth above. During the peer-to-peer conversation, factors such as patient acuity and setting of service may also be taken into account.

Simultaneous ordering of multiple diagnostic or therapeutic interventions and/or repeated diagnostic or therapeutic interventions in the same anatomic area may be denied, unless individual circumstances support the medical necessity of performing interventions simultaneously or repeatedly. This should be apparent in the clinical documentation or in peer-to-peer conversations.

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Services are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices, or biological products.

Based on review of available data, the Health Plan considers injection of allograft (e.g., VIA Disc Matrix) into the intervertebral disc for the treatment of degenerative disc disease as not covered, as it is considered investigational.*

Background/Overview

Degenerative Disc Disease

While back pain is common in adults, and most episodes will resolve within one month, a small percentage will become chronic. Age related degeneration of the intervertebral discs is common and frequently observed on spine imaging, e.g., MRI, CT, but in the absence of radiculopathy, identifying the source of the back pain is challenging.

Treatment

First-line treatment for most patients with back pain involves conservative management with nonsteroidal anti-inflammatory drugs or other analgesics for symptom relief, and activity modification in conjunction with exercise. For persistent nonradicular back pain, guidelines recommend using physical rehabilitation in conjunction with psychological or psychosocial intervention. Opioids may also be prescribed. Spinal fusion surgery may be performed for non-specific back pain with degenerative changes to the disc, but has not been shown to be more effective than comprehensive conservative treatment. Cellular therapy is being studied for treatment of degenerative disc disease and one such randomized controlled trial involves intradiscal injection of a mixture of nucleus pulposus allograft and viable cells (VIA Disc Matrix-Vivex Biomedical) into the degenerated disc. The evidence is insufficient to determine that the technology results in an improvement in net health outcomes.

FDA or Other Governmental Regulatory Approval

U.S. Food and Drug Administration (FDA)

VIA Disc Matrix (Vivex Biomedical) is composed of human disc tissue donated from cadavers with viable cells. It consists of a nucleus pulposus allograft suspension that is mixed with a minimum of 6 x 106 cryopreserved cells. The cell source and method of processing has not been disclosed, and it is not clear if VIA Disc Matrix meets the U.S. Food and Drug Administration (FDA) criteria for what is considered minimal manipulation and homologous use for human cells, tissues, and cellular and tissue-based products (HCT/Ps).

The FDA regulates human cells and tissues intended for implantation, transplantation, or infusion through the Center for Biologics Evaluation and Research, under Code of Federal Regulation, Title 21, parts 1270 and 1271. In 2017, the FDA published clarification of HCT/Ps.

HCT/Ps are defined as human cells or tissues that are intended for implantation, transplantation, infusion, or transfer into a human recipient. If an HCT/P does not meet the criteria below and does not qualify for any of the stated exceptions, the HCT/P will be regulated as a drug, device, and/or biological product and applicable regulations and premarket review will be required.

An HCT/P is regulated solely under section 361 of the Public Health Service (PHS) Act and Title 21 Code of Federal Regulations (CFR) Part 1271 if it meets all of the following criteria:

1. "The HCT/P is minimally manipulated;
2. The HCT/P is intended for homologous use only, as reflected by the labeling, advertising, or other indications of the manufacturer's objective intent;
3. The manufacture of the HCT/P does not involve the combination of the cells or tissues with another article, except for water, crystalloids, or a sterilizing, preserving, or storage agent, provided that the addition of water, crystalloids, or the sterilizing, preserving, or storage agent does not raise new clinical safety concerns with respect to the HCT/P; and
4. Either:
    1. The HCT/P does not have a systemic effect and is not dependent upon the metabolic activity of living cells for its primary function; or
    2. The HCT/P has a systemic effect or is dependent upon the metabolic activity of living cells for its primary function, and:
        1. Is for autologous user
        2. Is for allogeneic use in a first-degree or second-degree blood relative; or
        3. Is for reproductive use"

Rexlemestrocel-L (MPC-06-ID, Mesoblast) is an allogeneic mesenchymal precursor cell (MPC) therapy under investigation for the treatment of chronic low back pain caused by disc degeneration in individuals "who have exhausted conservative treatment options, may have failed epidural steroid injections and have no further treatment option other than invasive and costly surgical intervention." Amirdelfan et al (2021) published results of a multicenter, randomized, controlled study of rexlemestrocel-L in 100 individuals with degenerative disc disease (NCT01290367). Additionally, in July

of 2021, Mesoblast completed a larger Phase 3 randomized, double-blind, placebo-controlled trial of rexlemestrocel-L in 404 individuals with degenerative disc disease with 36 months of follow-up (NCT02412735). Although this trial is not yet published, it has been reviewed by FDA's Office of Tissues and Advanced Therapies (OTAT). Based on FDA OTAT feedback, as part of their market approval application, Mesoblast plans to conduct an additional US Phase 3 trial with pain reduction at 12 months as the primary endpoint.

Rationale/Source

This medical policy was developed through consideration of peer-reviewed medical literature generally recognized by the relevant medical community, U.S. Food and Drug Administration approval status, nationally accepted standards of medical practice and accepted standards of medical practice in this community, technology evaluation centers, reference to federal regulations, other plan medical policies, and accredited national guidelines. Degeneration of the intervertebral discs is commonly observed in imaging and has been proposed to be a source of back pain. In order to treat the observed changes in the discs, cellular therapies such as mesencyhmal stem cells are being studied. One of these cellular therapies involves the intradiscal injection of a mixture of nucleus pulposus allograft and viable cells into the degenerated disc.

Summary of Evidence

For individuals with degenerative disc disease who receive a viable allograft injection, the evidence includes 12-month results from a randomized controlled trial (RCT). Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. Results from the first 12 months of the planned 36 months of follow-up did not find statistically significant differences between the active allograft, placebo allograft, and conservative management groups on the co-primary pain and disability endpoints. However, the proportion of treatment responders was significantly greater in the active allograft group on some, but not all pain and disability response outcomes. Given the various important comparator and outcome relevance, data completeness, and power limitations, evidence from well-conducted trials demonstrating consistent improvements in health outcomes is still needed. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Supplemental Information

Reference material is provided as follows:

American College of Physicians

In 2017, the American College of Physicians recommended that patients with chronic low back pain first try nonpharmacologic treatment such as exercise, multidisciplinary rehabilitation, yoga, stress reduction, cognitive behavioral therapy and spinal manipulation. Patients with an inadequate response to nonpharmacologic treatment should then consider pharmacologic treatment with nonsteroidal anti-inflammatory drugs as first-line therapy, or tramadol or duloxetine as second-line therapy. Clinicians should only consider opioids in patients who have failed the aforementioned treatments, and only if potential benefits outweigh the risks for individual patients.

North American Spine Society et al

In 2020, the North American Spine Society, along with 9 other societies, published multidisciplinary evidence-based guidelines on the diagnosis and treatment of low back pain. There were 82 clinical questions that were addressed in the comprehensive evidence review. Regarding degenerative disc disease, the guideline gave a grade A recommendation that provocative discography without manometric measurements correlates with both pain reproduction in the presence of moderate to severe disc degeneration on MRI/CT [magnetic resonance imaging/computed tomography] discography and with the presence of endplate abnormalities on MRI imaging. There was insufficient evidence to make a recommendation for or against the use of intradiscal bone marrow concentrate in patients with discogenic low back pain, and no review of intradiscal allograft injection.

Medicare National Coverage

There is no national coverage determination, therefore, coverage decisions are left to the discretion of local Medicare carriers.

Exclusions: None.

References:

1. North American Spine Society. Evidence-based clinical guidelines for multidisciplinary spine care: Diagnosis and treatment of low back pain. 2020. https://www.spine.org/Portals/0/assets/downloads/ResearchClinicalCare/Guidelines/LowBackPain.pdf.
2. U.S. Food and Drug Administration. Regulatory Considerations for Human Cells, Tissues, and Cellular and Tissue-Based Products: Minimal Manipulation and Homologous Use Guidance for Industry and Food and Drug Administration Staff. 2017 https://www.regulations.gov/document?D=FDA-2017-D-6146-0003.
3. Blue Cross and Blue Shield of Louisiana Website. Medical Policy: Allograft Injection for Degenerative Disc Disease. Policy #00750. Original Effective Date: 11/01/2021. Current Effective Date: 11/13/2023. Accessed 01/21/2024. Available at:

   Medical Policies | Blue Cross and Blue Shield of Louisiana (bcbsla.com).
4. Mesoblast.Chronic Low Back Pain Due to Disc Degeneration. 2022. https://www.mesoblast.com/product-candidates/spine-orthopedic-disorders/chronic-discogenic-low-back-pain
5. Amirdelfan K, Bae H, McJunkin T, et al. Allogeneic mesenchymal precursor cells treatment for chronic low back pain associated with degenerative disc disease: a prospective randomized, placebo-controlled 36-month study of safety and efficacy. Spine J. Feb 2021; 21(2): 212-230. PMID 33045417
6. Mesoblast. Single Dose of Mesoblast's Allogeneic Cell Therapy Provides Durable Pain Reduction for At Least Three Years in Patients with Degenerative Disc Disease: Global Newswire. January 11, 2022. https://www.globenewswire.com/news-release/2022/01/12/2365313/0/en/Single-Dose-of-Mesoblast-s-Allogeneic-Cell-Therapy-Provides-Durable-Pain-Reduction-for-at-Least-Three-Years-in-Patients-With-Degenerative-Disc-Disease.html

7. Qaseem A, Wilt TJ, McLean RM, et al. Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline From the American College of Physicians. Ann Intern Med. Apr 04 2017; 166(7): 514-530. PMID 28192789

Coding

The five character codes included in this medical policy are obtained from Current Procedural Terminology (CPT®)‡, copyright 2024 by the American Medical Association (AMA).

Codes used to identify services associated with this policy may include (but may not be limited to) the following:

Code Type	Code
CPT	0627T, 0628T, 0629T, 0630T
HCPCS	No codes
ICD-10 Diagnosis	All related diagnoses

*Investigational – A medical treatment, procedure, drug, device, or biological product is Investigational if the effectiveness has not been clearly tested and it has not been incorporated into standard medical practice. Any determination we make that a medical treatment, procedure, drug, device, or biological product is Investigational will be based on a consideration of the following:

A. Whether the medical treatment, procedure, drug, device, or biological product can be lawfully marketed without approval of the U.S. Food and Drug Administration (FDA) and whether such approval has been granted at the time the medical treatment, procedure, drug, device, or biological product is sought to be furnished; or

B. Whether the medical treatment, procedure, drug, device, or biological product requires further studies or clinical trials to determine its maximum tolerated dose, toxicity, safety, effectiveness, or effectiveness as compared with the standard means of treatment or diagnosis, must improve health outcomes, according to the consensus of opinion among experts as shown by reliable evidence, including:

    1. Consultation with technology evaluation center(s);
    2. Credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community; or
    3. Reference to federal regulations.

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