



BlueCross BlueShield  
of Alabama

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**Name of Blue Advantage Policy:**

**Allograft Injection for Degenerative Disc Disease**

Policy #: 741

Latest Review Date: May 2022

Category: Surgery

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**BACKGROUND:**

*Blue Advantage medical policy does not conflict with Local Coverage Determinations (LCDs), Local Medical Review Policies (LMRPs) or National Coverage Determinations (NCDs) or with coverage provisions in Medicare manuals, instructions or operational policy letters. In order to be covered by Blue Advantage the service shall be reasonable and necessary under Title XVIII of the Social Security Act, Section 1862(a)(1)(A). The service is considered reasonable and necessary if it is determined that the service is:*

1. *Safe and effective;*
2. *Not experimental or investigational\*;*
3. *Appropriate, including duration and frequency that is considered appropriate for the service, in terms of whether it is:*
  - *Furnished in accordance with accepted standards of medical practice for the diagnosis or treatment of the patient's condition or to improve the function of a malformed body member;*
  - *Furnished in a setting appropriate to the patient's medical needs and condition;*
  - *Ordered and furnished by qualified personnel;*
  - *One that meets, but does not exceed, the patient's medical need; and*
  - *At least as beneficial as an existing and available medically appropriate alternative.*

*\*Routine costs of qualifying clinical trial services with dates of service on or after September 19, 2000 which meet the requirements of the Clinical Trials NCD are considered reasonable and necessary by Medicare. Providers should bill **Original Medicare** for covered services that are related to **clinical trials** that meet Medicare requirements (Refer to Medicare National Coverage Determinations Manual, Chapter 1, Section 310 and Medicare Claims Processing Manual Chapter 32, Sections 69.0-69.11).*

## **POLICY:**

**Blue Advantage** will treat injection of allograft into the intervertebral disc for the treatment of degenerative disc disease as a **non-covered benefit** and as **investigational**.

*Blue Advantage does not approve or deny procedures, services, testing, or equipment for our members. Our decisions concern coverage only. The decision of whether or not to have a certain test, treatment or procedure is one made between the physician and his/her patient. Blue Advantage administers benefits based on the members' contract and medical policies. Physicians should always exercise their best medical judgment in providing the care they feel is most appropriate for their patients. Needed care should not be delayed or refused because of a coverage determination.*

## **DESCRIPTION OF PROCEDURE OR SERVICE:**

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 mesenchymal 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.

### **Degenerative Disc Disease**

Back pain is a common condition in adults. Most episodes of back pain are self-limited and will resolve within 1 month, but a small percentage will persist and become chronic. Chronic back pain can arise from a variety of etiologies including musculoskeletal pain, vertebral compression fractures, spinal stenosis, disc herniation, or other degenerative changes to the disc that compress the nerve roots and lead to radiculopathy. Age-related degeneration of the intervertebral discs is common and includes numerous biochemical and morphologic changes; the most common of which is loss of glycosaminoglycan and associated loss in water content. Pro-inflammatory molecules increase, while endplate calcification impairs, nutrient flow. Together, these lead to an increase in cell death in the nucleus pulposus. Although degenerative changes to the disc are frequently observed on imaging, their contribution to back pain in the absence of radiculopathy is uncertain. Spine imaging, such as magnetic resonance imaging, computed tomography, or plain radiography, shows that lumbar disc degeneration is widespread, but for most people does not cause symptoms. Because many degenerative changes of the disc that are seen on imaging are asymptomatic, identifying the source of the back pain is challenging.

### **Treatment**

Conservative management of back pain is the first-line treatment for most patients. Nonsteroidal anti-inflammatory drugs or other analgesics are used for symptom relief. Duloxetine or tramadol are recommended second-line pharmacologic therapies by the American College of Physicians. Additionally, modification of activity in conjunction with some form of exercise therapy is frequently prescribed early in the course of symptoms. For patients with persistent nonradicular back pain, guidelines recommend interdisciplinary rehabilitation, which is defined

as an integrated approach using physical rehabilitation in conjunction with a psychological or psychosocial intervention.<sup>1</sup> Opioids may also be prescribed. Although spinal fusion surgery is frequently performed for non-specific back pain with degenerative changes to the disc, surgery has not been shown to be more effective than comprehensive conservative treatment. Cell therapy is being explored as a method to regenerate the intervertebral disc by rehydration, height restoration, and repopulating native cells.

## **KEY POINTS**

This evidence review was created in May 2021 with a search of the PubMed database. The most recent literature update was performed through February 14, 2022.

### **Summary of Evidence**

For individuals with degenerative disc disease who receive a viable allograft injection, the evidence includes 12-month results from an 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.

### **Practice Guidelines and Position Statements**

#### **American College of Physicians**

In 2017, the American College of Physicians recommended that "For patients with chronic low back pain, clinicians and patients should initially select nonpharmacologic treatment with exercise, multidisciplinary rehabilitation, acupuncture, mindfulness-based stress reduction (moderate-quality evidence), tai chi, yoga, motor control exercise, progressive relaxation, electromyography biofeedback, low-level laser therapy, operant therapy, cognitive behavioral therapy, or spinal manipulation. (Grade: strong recommendation, low-quality evidence).

In patients with chronic low back pain who have had an inadequate response to nonpharmacologic therapy, clinicians and patients should 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 as an option in patients who have failed the aforementioned treatments and only if the potential benefits outweigh the risks for individual patients and after a discussion of known risks and realistic benefits with patients. (Grade: weak recommendation, moderate-quality evidence)."

#### **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.

### **U.S. Preventive Services Task Force Recommendations**

Not applicable.

### **KEY WORDS:**

Degenerative Disc Disease, DDD, allograft injections, VIA Disc Matrix, rexlemestrocil-L, mesenchymal precursor cell (MPC) therapy

### **APPROVED BY GOVERNING BODIES:**

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 X10<sup>6</sup> 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 a 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:
  - a. 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
  - b. The HCT/P has a systemic effect or is dependent upon the metabolic activity of living cells for its primary function, and:
    - i. Is for autologous use;
    - ii. Is for allogeneic use in a first-degree or second-degree blood relative; or
    - iii. 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.

**BENEFIT APPLICATION:**

Coverage is subject to member’s specific benefits. Group specific policy will supersede this policy when applicable.

**CURRENT CODING:**

**CPT codes**

0627T	Percutaneous injection of allogeneic cellular and/or tissue-based product, intervertebral disc, unilateral or bilateral injection, with fluoroscopic guidance, lumbar; first level
0628T	Percutaneous injection of allogeneic cellular and/or tissue-based product, intervertebral disc, unilateral or bilateral injection, with fluoroscopic guidance, lumbar; each additional level (List separately in addition to code for primary procedure)
0629T	Percutaneous injection of allogeneic cellular and/or tissue-based product, intervertebral disc, unilateral or bilateral injection, with fluoroscopic guidance, lumbar; each additional level (List separately in addition to code for primary procedure)

0630T

Percutaneous injection of allogeneic cellular and/or tissue-based product, intervertebral disc, unilateral or bilateral injection, with CT guidance, lumbar; each additional level (List separately in addition to code for primary procedure)

## REFERENCES:

1. Beall DP, Wilson GL, Bishop R, et al. VAST Clinical Trial: Safely Supplementing Tissue Lost to Degenerative Disc Disease. *Int J Spine Surg*. Apr 2020; 14(2): 239-253.
2. Katz NP, Paillard FC, Ekman E. Determining the clinical importance of treatment benefits for interventions for painful orthopedic conditions. *J Orthop Surg Res*. Feb 03 2015; 10: 24.
3. 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>.
4. Parker SL, Mendenhall SK, Shau DN, et al. Minimum clinically important difference in pain, disability, and quality of life after neural decompression and fusion for same-level recurrent lumbar stenosis: understanding clinical versus statistical significance. *J Neurosurg Spine*. May 2012; 16(5): 471-8.
5. 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.
6. 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>

## POLICY HISTORY:

Adopted for Blue Advantage, July 2021

Medical Policy Group, July 2021

Medical Policy Group, May 2022

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*This medical policy is not an authorization, certification, explanation of benefits, or a contract. Eligibility and benefits are determined on a case-by-case basis according to the terms of the member's plan in effect as of the date services are rendered. All medical policies are based on (i) research of current medical literature and (ii) review of common medical practices in the treatment and diagnosis of disease as of the date hereof. Physicians and other providers are solely responsible for all aspects of medical care and treatment, including the type, quality, and levels of care and treatment.*

*This policy is intended to be used for adjudication of claims (including pre-admission certification, pre-determinations, and pre-procedure review) in Blue Cross and Blue Shield's administration of plan contracts.*