Medical Coverage Policy

Autologous Chondrocyte Transplantation--PREAUTH

☐ Device/Equipment ☐ Drug ☐ Medical ☑ Surgery ☐ Test ☐ Other

| Effective Date: | 11/21/2003 | Policy Last Updated: | 3/20/2012 |

☐ Prospective review is recommended/required. Please check the member agreement for preauthorization guidelines.

☑ Prospective review is not required.

Description:
Damaged articular cartilage typically fails to heal on its own and can be associated with pain, loss of function and disability, and may lead to debilitating osteoarthritis over time. Conventional treatment alternatives to autologous chondrocyte transplantation are debridement, subchondral drilling, microfracture, and abrasion arthroplasty which may produce symptomatic relief. In contrast, autologous chondrocyte transplantation attempts to regenerate hyaline-like cartilage and thereby restore function.

Autologous chondrocyte transplantation is a surgical treatment for patients who have clinically significant, symptomatic defects or damage to the cartilage of the knee caused by acute or repetitive trauma. A small portion of healthy femoral articular cartilage is removed via an arthroscopic procedure. The cartilage piece is used as the source for the chondrocytes, which are cultured under controlled conditions. Carticel™ (autologous cultured chondrocyte) is used to stimulate growth of the patient's cartilage cells. The cultured cartilage cells are then reimplanted into the patient's knee. Carticel™ is a U.S. Food and Drug Administration (FDA) approved biologic agent.

The autologous chondrocyte transplantation procedure involves four steps:
1. Initial arthroscopy and the harvesting of normal cartilage;
2. Culturing of the chondrocytes;
3. A separate arthrotomy to create a periosteal flap and implantation of the chondrocytes; and

Although long-term studies are lacking, evidence indicates that ACI can improve symptoms in some patients with lesions of the articular cartilage of the knee who have failed prior surgical treatment. These patients, who are too young for total knee replacement, have limited options. Therefore, based on the clinical input, highly suggestive evidence from randomized controlled trials and prospective observational studies, combined with contextual factors, it is concluded that ACI may be considered...
an option for disabling full-thickness chondral lesions of the knee caused by acute or repetitive trauma, in patients who have had an inadequate response to a prior marrow stimulation procedure. Evidence is currently insufficient to evaluate the efficacy of ACI in comparison with other surgical repair procedures as a primary treatment of large lesions, or to evaluate the efficacy of ACI for joints other than the knee.

**Medical Criteria:**
Autologous chondrocyte implantation may be considered **medically necessary** for the treatment of disabling full-thickness articular cartilage defects of the knee caused by acute or repetitive trauma, in patients who have had an inadequate response to a prior surgical procedure, when all of the following criteria are met:

- Adolescent patients should be skeletally mature with documented closure of growth plates (e.g., 15 years or older). Adult patients should be too young to be considered an appropriate candidate for total knee arthroplasty or other reconstructive knee surgery (e.g., younger than 55 years)
- Focal, full-thickness (grade III or IV) unipolar lesions on the weight bearing surface of the femoral condyles or trochlea at least 1.5 cm² in size
- Documented minimal to absent degenerative changes in the surrounding articular cartilage (Outerbridge Grade II or less), and normal-appearing hyaline cartilage surrounding the border of the defect
- Normal knee biomechanics, or alignment and stability achieved concurrently with autologous chondrocyte implantation
- Absence of meniscal pathology

Autologous chondrocyte implantation for all other joints, including patellar and talar, and any indications other than those listed above is considered **not medically necessary**.

**Policy:**
Autologous chondrocyte transplantation for the treatment of cartilage defects of the knee is **considered medically necessary** when the above-noted medical criteria are met.

**Preauthorization is required for BlueCHiP for Medicare members and recommended for all other product lines.**

**Coverage:**
Benefits may vary between groups/contracts. Please refer to the appropriate Evidence of Coverage, Subscriber Agreement, or Benefit Booklet for the applicable surgery benefits/coverage.

**Coding:**
CPT code for Carticel™ implantation: 27412
HCPCS supply code:
J7330  Autologous cultured chondrocytes, implant

Also Known As:
Autologous Chondrocyte Implantation (ACI)
Carticel™

Related Topics:
Not applicable

Published:
Policy Update, January 2007
Provider Update, October 2008
Provider Update, September 2009
Provider Update, July 2011
Provider Update, May 2012

References:


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