

Autologous Chondrocyte Implantation, Osteochondral Allograft Transplantation, Osteochondral Autograft Transfer System (OATS)

Policy Number: **M20260922049**

Effective Date: **11/1/2026**

Sponsoring Department: **Health Care Services**

Impacted Department(s): **Health Care Services**

Type of Policy: ☒ Internal ☒ External

Data Classification: ☐ Confidential ☐ Restricted ☒ Public

Applies to (Line of Business):

- ☐ Corporate (All)
- ✦ State Products, if yes which plan(s): ☒ MediSource; ☒ MediSource Connect; ☒ Child Health Plus; ☒ Essential Plan
- ✦ Medicare, if yes, which plan(s): ☒ MAPD; ☒ PDP; ☒ ISNP; ☒ CSNP
- ✦ Commercial, if yes, which type: ☒ Large Group; ☒ Small Group; ☒ Individual
- ☒ Self-Funded Services *(Refer to specific Summary Plan Descriptions (SPDs) to determine any pre-authorization or pre-certification requirements and coverage limitations. In the event of any conflict between this policy and the SPD of a Self-Funded Plan, the SPD shall supersede the policy.)*

Excluded Products within the Selected Lines of Business (LOB)

N/A

Applicable to Vendors? Yes ☐ No ☒

Purpose and Applicability:

To set forth the medical necessity criteria for autologous chondrocyte implantation, osteochondral allograft transplantation, and osteochondral autograft transfer system (OATS).

Policy:

Background

Autologous Chondrocyte Implantation (ACI) is a two-step procedure utilizing the patient's own cartilage cells to repair traumatic damage to the articular cartilage of the femoral condyle of the knee caused by acute or repetitive trauma. An arthroscopy is performed to harvest healthy cartilage cells from the patient. The cells are then prepared for culturing through a washing technique in a buffered solution and then placed in a medium for cultivation over a 3- to 5-week period. At a second operative procedure, an arthrotomy is performed and a periosteal flap is surgically created at the site

of the defect. The cultured cartilage is implanted beneath the flap before closure where it proliferates and repairs the defect.

Osteochondral Allograft Transplantation involves transferring a piece of articular cartilage and subchondral bone cartilage from a cadaver donor to a damaged region of the articular surface of a joint. An allograft is typically larger than an autograft. It can be shaped to fit the exact contour of the defect and then pressed into place.

Osteochondral Autograft Transfer System (OATS) is a type of osteochondral autografting. Cartilage is transferred from one part of the joint to another joint. A cartilage tissue graft is taken from an area of the bone that does not carry weight (non-weight bearing). The graft is taken as a cylindrical plug of cartilage and subchondral bone. It is then matched to the surface area of the defect and impacted into place. This leaves a smooth cartilage surface in the joint. Typically, a single plug of cartilage is used.

Mosaicplasty is a type of osteochondral autografting. This procedure is similar to the osteochondral autograft transfer system (OATS) procedure; however, it involves the use of multiple small osteochondral cylinders.

The Modified Outerbridge Classification is a system that has been developed for judging articular cartilage injury to the knee. This system allows delineation of varying areas of chondral pathology, based on the qualitative appearance of the cartilage surface, and can assist in identifying those injuries that are suitable for repair techniques. The characterization of cartilage in this system is as follows:

- Grade I - Softening with swelling
- Grade II - Fragmentation and fissuring less than one square centimeter (1 cm²)
- Grade III - Fragmentation and fissuring greater than one square centimeter (1 cm²)
- Grade IV - Subchondral bone exposed.

MediSource, MediSource Connect, Child Health Plus and Essential Plan:

MediSource, MediSource Connect, Child Health Plus and Essential Plan do not cover ACL.

Commercial, Self-Funded and Medicare Advantage: cover autologous chondrocyte implantation of the knee utilizing the criteria below.

Clinical Indications

Osteochondral allograft, osteochondral autografts (osteochondral autograft transfer system (OATS) or mosaicplasty) are considered medically necessary when **ALL** of the following are met:

- **1 or more** the following:
 - Osteochondral autograft transplants and mosaicplasty is considered medically necessary in an individual with ≤ 2.5 cm² chondral defects with normal appearing hyaline cartilage surrounding the border of the defect
 - Osteochondral allograft transplants is considered medically necessary in an individual with ≤ 10.0 cm² chondral defects normal appearing hyaline cartilage surrounding the border of the defect
- The member has disabling symptoms limiting the ability to perform activities of daily living (ADLs) that has not been relieved by 3 months of conventional medical treatment (physical therapy and /or bracing)
- The member is skeletally mature with documented closure of growth plates (e.g., 15 years or older)
- The member has focal, full thickness (Modified Outerbridge Scale as Grade III or IV) unipolar lesions on the weight bearing surface of the femoral condyles (medial or lateral) or trochlea
- Previous arthroscopic or other traditional surgical procedure (i.e., microfracture, drilling, abrasion,) which has resulted in an inadequate response
- The member has normal alignment or correctable varus or valgus deformities
- The member is not considered a candidate for total knee replacement (i.e., customer is under 55 years of age)

Autologous chondrocyte implantation is considered medically necessary when **ALL** of the following criteria are met:

- Treatment of a single symptomatic articular cartilage defect of the femoral condyle of the knee (medial, lateral or trochlear) caused by acute or repetitive trauma
- Age 15–55 years
- Body mass index (BMI) of ≤ 35
- The member has disabling knee pain which interferes with the ability to perform activities of daily living (ADLs) that has not been relieved by 3 months of conventional medical treatment
- Failure of surgical interventions (i.e., microfraction, drilling, abrasion, or osteochondral autograft)
- Femoral condyle defect size of 1–10 cm² in an area that affects a weight-bearing surface of the femoral condyle, as demonstrated by magnetic resonance imaging (MRI) or arthroscopy
- Articular cartilage defect classified as Modified Outerbridge Scale grade III or IV (full thickness) that involves only cartilage
- Knee is stable with intact, fully functional ligaments ACL or PCL), has normal joint space, and normal alignment
- Member is willing and able to comply with post-operative physical rehabilitation program
- No corresponding tibial or patellar lesion (“kissing” lesion) with a Modified Outerbridge Scale grade III or IV chondromalacia or exposed bone chondromalacia
- No osteoarthritis of the knee
- Normal articular cartilage at lesion border

Exclusions

NOT COVERED for **ANY** of the following:

- Any indication not listed in the Clinical Indications section
- Osteochondral autografts (OATS, mosaicplasty) of other joints (ankle, elbow, hip, patella, shoulder)

Pre-Authorization Required? Yes ☒ No ☐

Definitions

N/A

References

Related Policies, Processes and Other Documents

N/A

Non-Regulatory References

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Version Control

Signature / Approval on File? Yes ☒ No ☐

Revision Date	Policy Author / Owner	Notes
11/1/2026	Health Care Services	New Policy