

02-20000-25

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Reviewed 06/27/19

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## Subject: Meniscal Allograft Transplantation

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

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### **DESCRIPTION:**

Meniscal allografts and other meniscal implants (eg, collagen or polyurethane) are intended to improve symptoms and reduce joint degeneration in those who have had a total or partial resection of the meniscus. Many years ago, torn and damaged menisci were routinely excised. Surgical principles of treating torn or damaged menisci have evolved to favor repair and preservation whenever possible.

Meniscal allograft transplantation (MAT) is a surgical procedure used to restore knee function in individuals with destroyed or irreparable menisci. Menisci are responsible for articular cartilage stress reduction by increasing the contact area across the joint, shock absorption, joint stability, joint lubrication, and nutrition of the chondrocytes. Meniscus allografts can be cryopreserved, fresh-frozen or deep frozen, fresh, lyophilized, or freeze-dried. Appropriate graft sizing is crucial to promote tissue healing and restore the chondro-protective role of the meniscus. Graft size can be determined using a plain radiography, magnetic resonance imaging (MRI), or computed tomography (CT). Most often, graft width is determined as the distance from the peak of the tibial eminence to the tibial metaphyseal margin on the anteroposterior (AP) radiograph. Lateral meniscus graft length is determined as 70% and medial meniscus graft length as 80% of the sagittal length of the tibial plateau, which is measured on the lateral radiograph. MAT can be performed with either an open or arthroscopic approach, but the latter is more widely used.

### **POSITION STATEMENT:**

Meniscal allograft transplantation **meets the definition of medical necessity** when **ALL** of the following are met:

- Less than age 40
- No evidence of arthritic changes

- Symptomatic meniscal deficiency confirmed by MRI results that show a meniscal deficient compartment, **OR** previous arthroscopy photographs or video showing subtotal or total meniscectomy
- Failure of at least 6 weeks of non-operative treatment, including at least 2 of the following:
  - Rest or activity modifications/limitations
  - Ice/heat
  - Protected weight bearing
  - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics, tramadol
  - Brace/orthosis
  - Physical therapy modalities
  - Supervised home exercise
  - Weight optimization
  - Corticosteroid injection

**Absolute contraindications for meniscal transplant:**

- Uncorrected (staged or simultaneous) ligamentous insufficiency (ACL, PCL, MCL, LCL, PMC, PLC)
- Uncorrected (staged or simultaneous) malalignment greater than 5 degrees varus or 5 degrees valgus
- Uncorrected (staged or simultaneous) full-thickness articular cartilage isolated defects (International Cartilage Research Society\* grade 3 or 4; Outerbridge\*\* grade IV)
- Kellgren-Lawrence\*\*\* grade 3 or 4 osteoarthritis

The use of meniscal implants incorporating materials such as collagen are considered **experimental or investigational**. Data in published medical literature are inadequate to permit scientific conclusions on long-term and net health outcomes.

**\*The International Cartilage Research Society (ICRS) Grading System**

Grade 0: Normal cartilage

Grade I: Nearly normal. Superficial lesions.

- A. Soft indentation
- B. And/or superficial fissures and cracks

Grade II: Abnormal. Lesions extending down to <50% of cartilage depth

Grade III: Severely abnormal

- A. Cartilage defects extending down >50% of cartilage depth
- B. And down to calcified layer
- C. And down to, but not through the subchondral bone

D. And blisters

Grade IV: Severely abnormal (through the subchondral bone)

A. Penetration of subchondral bone but not across entire diameter of defect

B. Penetration of subchondral bone across the full diameter of the defect

**\*\*Outerbridge Arthroscopic Grading System**

Grade 0: Normal cartilage

Grade I: Softening and swelling/blistering

Grade II: Partial thickness defect, fissures < 1.5cm diameter/wide

Grade III: Fissures /defects down to subchondral bone with intact calcified cartilage layer, diameter > 1.5cm

Grade IV: Exposed subchondral bone

**\*\*\*Kellgren-Lawrence Grading System**

Grade 0: No radiographic features of osteoarthritis

Grade 1: Doubtful joint space narrowing and possible osteophytic lipping

Grade 2: Definite osteophyte formation with possible joint space narrowing on anteroposterior weight-bearing radiograph

Grade 3: Multiple osteophytes, definite narrowing of joint space, some sclerosis and possible bony deformity

Grade 4: Large osteophytes, marked narrowing of joint space, severe sclerosis and definite bony deformity

**BILLING/CODING INFORMATION:**

**CPT Coding:**

29868	Arthroscopy, knee, surgical; meniscal transplantation (includes arthrotomy for meniscal insertion), medial or lateral
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**HCPCS Coding**

G0428	Collagen meniscus implant procedure for filling meniscal defects (e.g., CMI, collagen scaffold, Menaflex) ( <b>investigational</b> )
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**REIMBURSEMENT INFORMATION:**

Refer to section entitled **POSITION STATEMENT**.

## **PROGRAM EXCEPTIONS:**

**Federal Employee Program (FEP):** Follow FEP guidelines.

**State Account Organization (SAO):** Follow SAO guidelines.

### **Medicare Advantage products:**

The following National Coverage Determination (NCD) was reviewed on the last guideline reviewed date: National Coverage Determination (NCD) for Collagen MENISCUS Implant (150.12), located at cms.gov.

The following Local Coverage Determination (LCD) was reviewed on the last guideline reviewed date: Noncovered Services (L33777) located at fcso.com.

## **DEFINITIONS:**

**Allograft:** tissue obtained from a donor.

**Meniscus:** a crescent-shaped fibrocartilaginous structure that cushions and stabilizes the joint.

## **RELATED GUIDELINES:**

**[Autologous Chondrocyte Implantation \(ACI\), 02-20000-17](#)**

## **OTHER:**

**Note:** The use of specific product names is illustrative only. It is not intended to be a recommendation of one product over another, and is not intended to represent a complete listing of all products available.

ReGen Collagen Scaffold collagen meniscus implant

MenaFlex™ CMI collagen meniscus implant

CMI® collagen meniscus implant

Actifit® polyurethane meniscal implant

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### **COMMITTEE APPROVAL:**

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy & Coverage Committee on 06/27/19.

### **GUIDELINE UPDATE INFORMATION:**

08/15/03	New Medical Coverage Guideline. Separate MCG developed with meniscal allograft information pulled from MCG 02-20000-10 (Autologous Chondrocyte Implantation).
06/15/04	Review and revision to guideline consisting of updated references.
01/01/05	Annual HCPCS update; consisting of deletion of 0014T and addition of 29868.
08/15/05	Review and revision of guideline consisting of the addition of coverage criteria.
07/15/06	Review and revision of guideline consisting of updated references.
08/15/07	Review and revision of guideline consisting of updated references and reformatted

	guideline.
07/15/09	Scheduled review; no change in position statement. Update references.
05/15/11	Scheduled review; position statement maintained and references updated.
05/11/14	Revision: Program Exceptions section updated.
03/15/15	Scheduled review. Revised description, position statement and definitions. Updated references and reformatted guideline.
05/15/18	Revision: added coverage statement regarding use of meniscal implants incorporating materials such as collagen and polyurethane (E/I). Revised program exceptions section, index terms, and HCPCS coding (added code G0428). Updated references. Formatted guideline.
07/15/18	Scheduled review. Revised description section and criteria for meniscal allograft transplantation. Added International Cartilage Research Society (ICRS) Grading System and Kellgren-Lawrence Grading System. Updated references.
07/15/19	Scheduled review. Revised absolute contraindications. Updated references.