Sentara® Health Plans

Medicare

Tissue Transplantation of the Knee, Ankle and Talus, Surgical 39

Table of Content

Effective Date	10/1/2025
Next Review Date	7/2026
Coverage Policy	Surgical 39
Version	6

Member-specific benefits take precedence over medical policy and benefits may vary across plans. Refer to the individual's benefit plan for details*.

Description & Definitions:

Tissue transplantation by various methods (autologous chondrocyte/allograft/autograft) is used to replace or repair damaged cartilage in the knee, ankle or talus.

Criteria:

Tissue transplantation of the knee, ankle/talus are considered medically necessary with **1 or more** of the following:

- **Tissue transplantation of the knee** is considered medically necessary with **1 or more** of the following:
  - **Allograft Transplantations of the Anterior/Posterior Cruciate Ligament (ACL) or the Medial/Lateral Collateral Ligament (MCL/LCL)** are considered medically necessary for individuals with **1 or more** of the following:
    - Ligament deficiency who are not candidates for autogenous transplantation
    - Pathology such as chronic patellar tendonitis and hamstring injury
    - Any contraindications to using their own tissue such as collagen disease or generalized ligamentous laxity
  - **Autologous Chondrocyte Implantation (ACI) or Autologous Chondrocyte Transplantation (ACT)** is considered medically necessary for individuals with **ALL** of the following:
    - Age 15 – 60 years
    - Arthroscopic evidence of significant cartilaginous defect of the femoral condyle by photography oroperative report or MRI
    - Body mass index 35 or less
    - Disabling pain related to a full thickness focal chondral defect
    - Failure of conservative therapy including minimum of 2 months physical therapy and traditional surgical interventions
    - Individual has the potential to complete post operative rehabilitation
    - Individual will cooperate with post operative weight bearing and activity restrictions
    - Knee is stable with intact meniscus and normal joint space on x-ray
    - No active infection present
    - No active inflammation or other arthritis clinically or by x-ray
    - No history of cancer in affected limb

        - No known history of allergy to the antibiotic Gentamicin
        - No known sensitivities to bovine cultures
        - Physician letter listing any prior surgery for treatment of femoral condyle defect
        - Presence debilitating pain and/or knee locking for at least one year
        - Single focal articular cartilage defect down to but not through the subchondral bone on a load bearing surface
        - Total size of defect measures 2 – 10 centimeters
    - **Matrix-induced Autologous Chondrocyte Implantation (MACI)** is considered medically necessary for individuals with **ALL** of the following:
        - Adult patients
        - As an alternative to autologous cultured chondrocytes (e.g., Carticel) for knee joint only
        - Does not involve defects of the subchondral bone
        - Failed to respond to conservative treatment after 6 months
        - FDA-approved matrix-induced chondrocyte implantation (e.g., MACI (Vericel) autologous culturedchondrocytes on porcine collagen membrane)
        - Full-thickness cartilage defects of the knee (articular cartilage defect)
        - Isolated defect of the knee (grade III or IV)
        - No allergies to bovine material/cultures or gentamicin
        - Pain that interferes with ADLs or employment
        - Symptomatic
        - There has been an inadequate response to prior surgical therapy to correct the defect
    - **Osteochondral Allograft Transplantation including DeNovo products (DeNovo NT Natural Tissue Graft and the OCA Kit)** are considered medically necessary for individuals with **1 or more** of the following:
        - Avascular necrosis lesions of the femoral condyle
        - Non repairable stage 3 or 4 osteochondritis dissecans
        - Otherwise healthy, active, non-elderly individuals with **1 or more** of the following:
            - Failed arthroscopic procedures
            - Not a candidate due to **1 or more** of the following:
                - Size of lesion
                - Shape of lesion
                - Location of lesion
        - Treatment is for **ALL** of the following:
            - Isolated traumatic injury Tissue
            - Full thickness depth lesion (grade 4 down to or including the bone)
            - Lesion is surrounded by healthy cartilage
            - Opposing articular surface is generally free of disease or injury
    - **Osteochondral Autograft Transplantation (OATS) or Autologous Mosaicplasty** is considered medically necessary forindividuals with **ALL** of the following:
        - Age 15-50 years
        - An intact meniscus is present
        - Body mass index 35 or less
        - Condition of the knee includes a focal, full thickness (Grade III or IV) isolated defect of the knee involvingthe weight bearing surface of the medial or lateral femoral condyles or trochlear region caused by acuteor repetitive trauma
        - Individual is willing and able to comply with post operative weight-bearing restrictions and rehabilitation
        - Knee is stable with normal alignment (corrective procedure may be performed in combination/prior totransplantation)
        - MRI or arthroscopic examination results provided which detail the size, location, and type of the defect
        - No active infection is present
        - No history of cancer in the bones, cartilage, fat, or muscle of the affected limb

        - No inflammation or osteoarthritis is present in the joint
        - Normal joint space is present
        - Persistent symptoms of disabling localized knee pain for at least 6 months, which have failed to respondto conservative treatment
        - Size of the cartilage defect is between 1.0 to 2.5 centimeters squared in total area
        - The lesion is largely contained with near normal surrounding articular cartilage and articulating cartilage,(grades 0, 1, 2)
- **Tissue transplantation of the ankle/talus** is considered medically necessary with **1 or more** of the following:
    - **Osteochondral autograft or allograft for the ankle/talus** may be considered medically necessary for **1 or more** of the following:
        - Cystic lesions
        - Large diameter lesions >4cm
        - Osteochondral lesions that have failed previous surgical treatment.

Tissue transplantation of the knee, ankle/talus is considered **not medically necessary** for any use other than those indicated in clinical criteria, to include but not limited to:

- As initial or first line of surgical therapy
- Autologous cellular implant derived from adipose tissue (MFAT)
- Bioactive scaffolds (e.g., collagen meniscal implants)
- Bio-Gide (resorbable bilayer membrane made of porcine collagen)
- Bioresorbable porous polyurethane
- Cartilage defect associated with 1 or more of the following:
    - Osteoarthritis
    - Rheumatoid arthritis
    - Inflammatory diseases
    - Significant osteoarthritic or inflammatory process
- Collagen meniscus implants
- Combination of autologous transplant and transfer for repair
- Combined meniscal allograft and autologous chondrocyte implantation of the knee
- Decellularized osteochondral allograft plugs (e.g., Chondrofix®) or reduced osteochondral allograft discs (e.g., ProChondrix®, Cartiform®) to repair osteochondral defects of the knee or ankle
- Extracellular Matrix with BioCartilage (Arthrex) for Orthopedic Indications
- Growth plates have not closed
- Healing Response Technique
- Hybrid autologous chondrocyte implantation performed with osteochondral autograft transfer system (OATS) technique
- Kissing lesions with Osteochondral autograft transplantation
- Lesions of the tibia or patella
- Matrix-induced autologous chondrocyte implantation in joints other than the knee
- Meniscal prosthesis
- Non-autologous mosaicplasty using resorbable synthetic bone filler materials (including but not limited to plugs and granules) to repair osteochondral defects of the knee or ankle
- Osteochondritis dissecans
- Previous history of cancer in the bones, cartilage, fat or muscle of the treated limb
- Synthetic resorbable polymers (e.g., PolyGraft BGS, TruFit [cylindrical plug], TruGraft [granules]) for osteochondral articular cartilage defects
- Tissue-engineered menisci
- Transplantation indications for repair chondral defects of the elbow, shoulder or other joints except the knee and ankle
- Treatment of cartilage damage associated with generalized osteoarthritis
- Treatment of cartilage damage associated with osteoarthritis or degenerative joint disease

- Use of minced articular cartilage (whether synthetic, allograft or autograft) to repair osteochondral defects of the knee or ankle
- Xenografts

Document History:

Revised Dates:

- 2025: July – Implementation date of October 1, 2025. Full review, new format, alphabetized
- 2025: January – Procedure coding updated to align with changes in service authorization
- 2024: July – Expanded coverage to include osteochondral autograft or allograft of the talus
- 2022: July
- 2021: July
- 2020: January
- 2015: March, May
- 2013: August
- 2012: March, May, August
- 2011: May, December
- 2010: September
- 2009: December
- 2008: August
- 2001: August

Reviewed Dates:

- 2023: July
- 2020: July
- 2019: July
- 2018: June
- 2017: January, October
- 2015: August
- 2014: August
- 2011: August
- 2010: August
- 2009: August
- 2007: December
- 2005: October, December
- 2004: October
- 2003: March, October
- 2002: March
- 2001: February
- 2000: December
- 1999: November
- 1998: February

Origination Date: September 1997

Coding:

Medically necessary with criteria:

Coding	Description
27412	Autologous chondrocyte implantation, knee

27415	Osteochondral allograft, knee, open
27416	Osteochondral autograft(s), knee, open (eg, mosaicplasty) (includes harvesting of autograft[s])
28446	Open osteochondral autograft, talus (includes obtaining graft[s])
29866	Arthroscopy, knee, surgical; osteochondral autograft(s) (eg, mosaicplasty) (includes harvesting of the autograft[s])
29867	Arthroscopy, knee, surgical; osteochondral allograft (eg, mosaicplasty)
29868	Arthroscopy, knee, surgical; meniscal transplantation (includes arthrotomy for meniscal insertion), medial or lateral
29891	Arthroscopy, ankle, surgical, excision of osteochondral defect of talus and/or tibia, including drilling of the defect
J7330	Autologous cultured chondrocytes, implant
S2112	Arthroscopy, knee, surgical for harvesting of cartilage (chondrocyte cells)

Considered Not Medically Necessary:

Coding	Description
	None

The preceding codes are included above for informational purposes only and may not be all inclusive. Additionally, inclusion or exclusion of a treatment, procedure, or device code(s) does not constitute or imply member coverage or provider reimbursement.

Policy Approach and Special Notes: *

- Coverage:
  - See the appropriate benefit document for specific coverage determination. Individual specific benefits take precedence over medical policy.
- Application to products:
  - Policy is applicable to Sentara Health Plan Medicare products.
- Authorization requirements:
  - Pre-certification by the Plan is required.
- Special Notes:
  - This medical policy expresses Sentara Health Plan's determination of medically necessity of services, and they are based upon a review of currently available clinical information. Medical policies are not a substitute for clinical judgment or for any prior authorization requirements of the health plan. These policies are not an explanation of benefits.
  - Medical policies can be highly technical and complex and are provided here for informational purposes. These medical policies are intended for use by health care professionals. The medical policies do not constitute medical advice or medical care. Treating health care professionals are solely responsible for diagnosis, treatment and medical advice. Sentara Health Plan members should discuss the information in the medical policies with their treating health care professionals. Medical technology is constantly evolving and these medical policies are subject to change without notice, although Sentara Health Plan will notify providers as required in advance of changes that could have a negative impact on benefits.
  - Medicare Search - MCD Search

References:

References used include but are not limited to the following: Specialty Association Guidelines; Government Regulations; Winifred S. Hayes, Inc; Uptodate; Literature Review; Specialty Advisors; National Coverage Determination (NCD); Local Coverage Determination (LCD).

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Keywords:

Tissue Transplantation of the Knee, SHP Surgical 39, knee, tissue, transplant, transplantation, meniscus, meniscal, tendon, cruciate, ligament, cartilage, autologous, allograft, chondrocyte, DeNovo, autograft, Autologous Chondrocyte Transplantation, Denovo Cartilage Implant, Mosaicplasty, Osteoarticular Transfer System, OATS, Patellar Tendon Allograft, ACT, Bio-Gide, Meniscal Allograft Transplantation, femoral condyle, medial, lateral, trochlear, cartilaginous, Anterior Cruciate Ligament, ACL, Posterior Cruciate Ligament, PCL, Medial Collateral Ligament, MCL, Lateral Collateral Ligament, LCL