

Policy #: 110

**Original policy date: 8/97
Revised date: 8/5/09**

Page: 1 of 4

Title

Meniscal Allograft Transplantation

Description

The meniscus plays a crucial role in the well-being of the knee, including load bearing, shock absorption, joint stability, lubrication and nutrition. Meniscal injuries or total loss of menisci (i.e., from meniscectomy) can lead to joint instability, functional impairment and early destructive changes resulting in degenerative osteoarthritis and irreversible joint damage. Preservation of the meniscus has been shown to have a significant impact on the prevention of degenerative changes in the knee.

The current standard of care for patients with meniscal tears is open or arthroscopic meniscal repair. The nature and severity of meniscal injuries may render many patients unsuitable candidates for surgery. Nonsurgical management of pain and swelling typically involves the use of nonsteroidal anti-inflammatory medications and intra-articular steroid injections. These non-surgical treatments only provide temporary relief and do not prevent the progression of degenerative changes.

Meniscal allograft transplantation is a surgical procedure that replaces the meniscus with cadaver allograft tissue. The transplant may be performed in patients with irreparable meniscal tears, or in patients who have undergone previous meniscectomy. The procedure is performed either arthroscopically or by open technique and involves grafting a donor meniscus into the knee of the patient. The goals of meniscal allograft transplantation are to restore knee function and to prevent further joint degeneration by replacing the damaged or destroyed meniscus with allograft tissue having similar properties.

When services are covered for commercial products and Medicare HMO Blue, Medicare PPO Blue and Blue Medicare PFFS PlusRx

We cover **meniscal allograft transplantation** in patients who have had a prior meniscectomy and have symptoms related to the affected side, when all of the following criteria are met: ¹

- 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)
- Disabling knee pain with activity lasting at least 6 months that is refractory to conservative treatment (i.e., physical therapy and analgesic medications)
- Absence or near absence (more than 50%) of the meniscus, established by imaging or prior surgery
- Documented minimal to absent degenerative changes in the surrounding articular cartilage (Outerbridge grade II or less)*
- Normal knee biomechanics, or alignment and stability achieved concurrently with meniscal transplantation.

* **Note:** The Outerbridge classification is a grading system for joint cartilage breakdown.

- Grade 0 – normal
- Grade I – cartilage with softening and swelling

- Grade II – a partial-thickness defect with fissures on the surface that do not reach subchondral bone or exceed 1.5 cm in diameter

When services are not covered for commercial products or for Medicare HMO Blue, Medicare PPO Blue and Blue Medicare PFFS PlusRx

We do not cover **meniscal allograft transplantation when performed in combination, either concurrently or sequentially, with autologous chondrocyte implantation or osteochondral allografting,**¹ because it is considered investigational as it does not meet our Medical Technology Assessment Guidelines, #350.

Additional Policy Guidelines

Uncorrected misalignment and instability of the joint are contraindications. Therefore, additional procedures such as repair of ligaments or tendons or creation of an osteotomy for realignment of the joint may be performed at the same time.¹

Severe obesity, e.g., body mass index (BMI) greater than 35 kg/m², may affect outcomes due to the increased stress on weight bearing surfaces of the joint. Meniscal allograft transplantation is typically recommended for young active patients who are too young for total knee arthroplasty.¹

Individual consideration

All our medical policies are written for the majority of people with a given condition. Each policy is based on medical science. For many of our medical policies, each individual’s unique clinical circumstances may be considered in light of current scientific literature. For consideration of an individual patient, physicians may send relevant clinical information to:

For services already billed

Blue Cross Blue Shield of Massachusetts
 Provider Appeals
 PO Box 986065
 Boston, MA 02298

Prior to performance of service

Blue Cross Blue Shield of Massachusetts
 Case Creation/Medical Policy
 One Enterprise Drive
 Quincy, MA 02171
 Tel: 1-800-327-6716
 Fax: 1-888-641-5330

Managed care guidelines

- Authorizations are required.
- For all other Managed Care Plans, any specialist visits requires a referral.
- Medicare Advantage: Authorizations are required.
- Medicare HMO Blue requires a referral for any specialist visits.

Indemnity and PPO guidelines

- Authorizations are required.

Other information

For our Medical Technology Assessment Guidelines, see document #350.

Coding information

Procedure codes are from current CPT, HCPCS Level II, Revenue Code, and/or ICD-9-CM manuals, as recommended by the American Medical Association, Centers for Medicare and Medicaid Services and American Hospital Associations. Blue Cross Blue Shield Association national codes may be developed when appropriate.

The following codes are included below for informational purposes. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract

benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

CPT code:

- **29868:** arthroscopy, knee, surgical; meniscal transplantation (includes arthrotomy for meniscal insertion), medial or lateral

Facility coding

ICD-9 CM procedure code:

- **81.47:** other repair of knee

Policy update history

Reviewed 8/97 to exclude coverage for meniscal allograft, and to maintain exclusion for autologous chondrocyte implantation. Updated 5/05 to include the rationale/references on meniscal allograft transplantation from the 2005 BCBSA national policy. 5/2006 BCBSA National medical policy reviewed, non-coverage for meniscal allograft transplantation unchanged, references updated- see footnote (3). Updated 6/07 after review of BCBSA policy 7.01.15 issued 4/07 without change in coverage exclusion of meniscal allograft transplantation; rationale and references 10-16 were added under footnote 3. Updated 6/09 to add coverage of meniscal allograft transplantation for identified indications for all products, effective 7/1/09. New policy, effective 7/1/09. Reviewed 7/09 MPG - Orthopedics, Rehabilitation Medicine, and Rheumatology, no changes in coverage were made.

References

References for footnote 1:

1. 1997 TEC Assessments; Tab 14.
2. Johnson DL, Bealle D. Meniscal allograft transplantation. Clin Sports Med 1999; 18(1):93-108.
3. CryoLife Web site: www.cryolife.com
4. Rath E, Richmond JC, Yassir W et al. Meniscal allograft transplantation. Two- to eight-year results. Am J Sports Med 2001; 29(4):410-4.
5. Wirth CJ, Peters G, Milachowski KA et al. Long-term results of meniscal allograft transplantation. Am J Sports Med 2002; 30(2):174-81.
6. Noyes FR, Barber-Westin SD, Rankin M. Meniscal transplantation in symptomatic patients less than fifty years old. J Bone Joint Surg Am 2004; 86-A(7):1392-404.
7. Noyes FR, Barber-Westin SD, Rankin M. Meniscal transplantation in symptomatic patients less than fifty years old. J Bone Joint Surg Am 2005; 87 Suppl 1(pt 2):149-65.
8. Sekiya JK, Giffin JR, Irrgang JJ et al. Clinical outcomes after combined meniscal allograft transplantation and anterior cruciate ligament reconstruction. Am J Sports Med 2003; 31(6):896-906.
9. Yoldas EA, Sekiya JK, Irrgang JJ et al. Arthroscopically assisted meniscal allograft transplantation with and without combined anterior cruciate ligament reconstruction. Knee Surg Sports Traumatol Arthrosc 2003; 11(3):173-82.
10. Verdonk PC, Demurie A, Almqvist KF et al. Transplantation of viable meniscal allograft. Survivorship analysis and clinical outcome of one hundred cases. J Bone Joint Surg Am 2005; 87(4):715-24.
11. Verdonk PC, Verstraete KL, Almqvist KF et al. Meniscal allograft transplantation: long-term clinical results with radiological and magnetic resonance imaging correlations. Knee Surg Sports Traumatol Arthrosc 2006; 14(8):694-706.
12. Sekiya JK, West RV, Groff YJ, et al. Clinical outcomes following isolated lateral meniscal allograft transplantation. Arthroscopy 2006; 22(7):771-80.
13. Sekiya JK, Ellingson CI. Meniscal allograft transplantation. J Am Acad Orthop Surg. 2006; 14(3):164-74.
14. Cole BJ, Dennis MG, Lee SJ, et al. Prospective evaluation of allograft meniscus transplantation: a minimum 2-year follow-up. Am J Sports Med 2006; 34(6):919-27.
15. Heckmann TP, Barber-Westin SD, Noyes FR. Meniscal repair and transplantation: indications, techniques, rehabilitation, and clinical outcome. J Orthop Sports Phys Ther 2006 Oct;36(10):795-814.

16. Eriksson E. Meniscus transplantation. *Knee Surg Sports Traumatol Arthrosc* 2006; 14(8):693.
17. Matava MJ. Meniscal allograft transplantation: a systematic review. *Clin Orthop Relat Res* 2007; 455:142-57.
18. Hommen JP, Applegate GR, Del Pizzo W. Meniscus allograft transplantation: ten-year results of cryopreserved allografts. *Arthroscopy* 2007; 23(4):388-93.
19. von Lewinski G, Milachowski KA, Weismeier K et al. Twenty-year results of combined meniscal allograft transplantation, anterior cruciate ligament reconstruction and advancement of the medial collateral ligament. *Knee Surg Sports Traumatol Arthrosc* 2007; 15(9):1072-82.
20. Farr J, Rawal A, Marberry KM. Concomitant meniscal allograft transplantation and autologous chondrocyte implantation: minimum 2-year follow-up. *Am J Sports Med* 2007; 35(9):1459-66.
21. Rue JP, Yanke AB, Busam ML, et al. Prospective evaluation of concurrent meniscus transplantation and articular cartilage repair: minimum 2-year follow-up. *Am J Sports Med* 2008; 36(9):1770-8.
22. Amendola A. Knee osteotomy and meniscal transplantation: indications, technical considerations, and results. *Sports Med Arthrosc* 2007; 15(1):32-8.
23. Lubowitz JH, Verdonk PC, Reid JB 3rd et al. Meniscus allograft transplantation: a current concepts review. *Knee Surg Sports Traumatol Arthrosc* 2007; 15(5):476-92.

This document is designed for informational purposes only and is not an authorization, or an explanation of benefits, or a contract. Receipt of benefits is subject to satisfaction of all terms and conditions of the coverage. Medical technology is constantly changing, and we reserve the right to review and update our policies periodically.

©2009 Blue Cross and Blue Shield of Massachusetts, Inc. All rights reserved. Blue Cross and Blue Shield of Massachusetts, Inc. is an Independent Licensee of the Blue Cross and Blue Shield Association.

Footnotes

¹ Based on BCBSA national policy 7.01.15 Meniscal Allograft Transplantation issued 11/08.