JRF ORTHO

KNEE CLINICAL SNAPSHOT:
KEY FINDINGS FROM RECENT LITERATURE

Is There a Difference Between Medial and Lateral Femoral Condyle Allografts? An Outcome and Survivorship Analysis

Orthop J Sports Med. 2026 May

Bourland BD, Kackman RM, Penn JK, Bugbee WD, Wang T

- The goal of this study was to compare patient reported outcomes between osteochondral allografts of the Lateral Femoral Condyle (LFC) and Medial Femoral Condyle (MFC).
- 10-year allograft survivorship for MFC was 88% and for LFC was 92.9%.
- Clinical outcomes, reoperation rate, and survivorship were similar between both cohorts.

JRF ORTHO TAKEAWAY:

Patients with MFC or LFC defects perform equally well following OCA transplantation. Survivorship and clinical outcomes remain high for both groups, indicating that defects on either condyle can be effectively treated with OCAs.

The Effect of Pressurized Carbon Dioxide Lavage on Osteochondral Allograft

Orthop J Sports Med. 2026 May

Atzmon R, Chang WT, Chan C, Lin K, Bryant SA, Seo A, Cole BJ, Abrams G, Sherman SL

- The purpose of this study was to determine whether adding pressurized CO_2 to standard pulse lavage improves the removal of marrow elements and enhances the absorption of biologics into osteochondral allografts.
- Supplementing pulse lavage with pressurized CO_2 resulted in a significantly greater reduction in residual marrow elements compared with pulse lavage alone.
- The addition of pressurized CO_2 also significantly increased graft uptake of dye, suggesting improved penetration and loading capacity for biologic agents.

JRF ORTHO TAKEAWAY:

As evidence continues to emerge supporting the use of biologic augmentation with osteochondral allografts, this study suggests that incorporating pressurized CO_2 into graft preparation may improve biologic uptake and optimize OCA preparation prior to implantation.

Arthroscopic Findings After Osteochondral Allografts of the Knee: Proposed Classification Scheme and Associations With Graft Failure

The American Journal of Sports Medicine. 2026

Oppenheim ZR, Moran TE, Phillips A, et al.

- The purpose of this study was to characterize the appearance of osteochondral allografts (OCAs) during second-look arthroscopy and develop a better understanding and classification of clinical OCA failure.
- Of 1,152 OCAs, 129 allografts (11.2%) underwent second-look arthroscopy for symptomatic patellofemoral pathology at a mean follow-up of 2.2 years.
- Structural failure was identified in 42 allografts (32.6% of second-look arthroscopies; 3.6% of all allografts), with allograft degeneration representing the most common finding.

JRF ORTHO TAKEAWAY:

Although the overall rate of allografts requiring subsequent surgery and demonstrating clinical failure was low, this study highlights the need for further research to identify patient populations, surgical indications, or allograft factors that may increase the risk of OCA failure.

Influence of Osteochondral Allograft Harvest Irrigation Technique and Graft Characteristics on Temperature-Related Viability Changes

Am J Sports Med. 2026 May

Smelley CC, Augustin E, Sachdev D, Acheampong KK, Oppenheim Z, Angotti M, Ackermann J, Yanke AB

- This study evaluated whether cold saline irrigation or cold saline submersion during osteochondral allograft (OCA) harvest could reduce heat generation and preserve chondrocyte viability.
- Cold saline submersion resulted in significantly lower peak internal allograft temperatures compared with dry harvest and cold saline irrigation.
- Reduced harvest temperatures translated into improved allograft viability, suggesting that minimizing thermal stress during harvest helps preserve chondrocyte health.

JRF ORTHO TAKEAWAY:

JRF Ortho remains committed to providing surgeons with the freshest osteochondral allografts, as the only provider with a 28-day expiration. This study reinforces that reducing thermal stress during allograft harvest helps preserve chondrocyte viability and ultimately protects the health and viability of the allograft.

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