Osteochondral Autograft Transfer System (OATS® Technique)

Surgical Technique for Canine and Equine

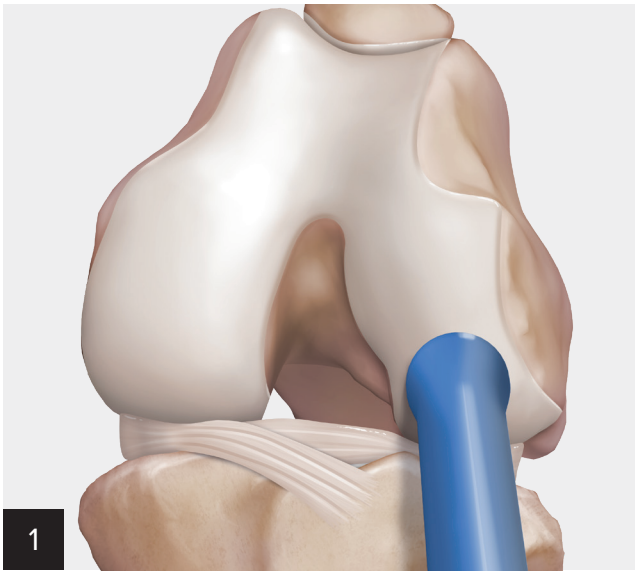
Arthrex® Vet Systems

Osteochondral Autograft Transfer System (OATS® Technique)

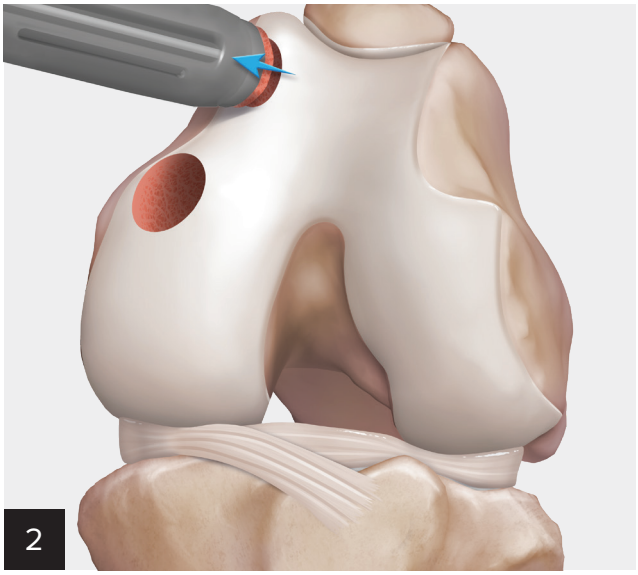
Osteochondral autografting has been reported successful in canine, equine, and human cases. Autografting has been used to treat osteochondrosis, trauma, cystic lesions, and other articular defects in a variety of joints. Without treatment, these conditions are typically associated with pain, lameness, decreased range of motion, and progressive osteoarthritis.

The OATS technique facilitates templating of the defect, harvesting of 6 mm, 8 mm, and/or 10 mm cylindrical osteochondral autografts, and preparation of the recipient socket(s) for press-fit fixation of one or more grafts. The cylindrical graft is harvested and then trimmed to its optimal depth (at least 8 mm). Recipient sockets are prepared with a guide pin and a size-matched cannulated reamer to the exact depth of the graft. The size-specific system includes a marking pen with a ruler, guide pin, cannulated headed reamer, dual-sided alignment rod, donor harvester with core extruder, clear graft delivery tube, oversized tamp, optional graft driver for tap-in insertion, and core extractor for removal and revision or replacement of the graft.

Two critical aspects of the OATS technique involve the careful harvest of the graft from the optimal donor sites and accurate recipient bed preparation. Donor site choice is based on availability of nonarticulating, nonweight-bearing hyaline cartilage with adequate thickness and surface contour.



Select the appropriate OATS set (6 mm, 8 mm or 10 mm) based on the size of the articular cartilage defect as measured with a sizer/tamp from the OATS sizer/tamp set. Alternatively, graft size can be determined preoperatively based on high-quality, calibrated CT or MRI images.

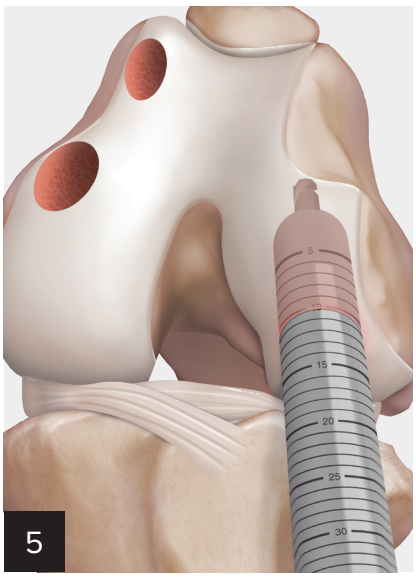


Using the donor harvester in the OATS set take the osteoarticular graft from the appropriate graft sites based on species, joint, and surgeon preference. Choose the size based on appearance, surface area, and contour of the articular cartilage.

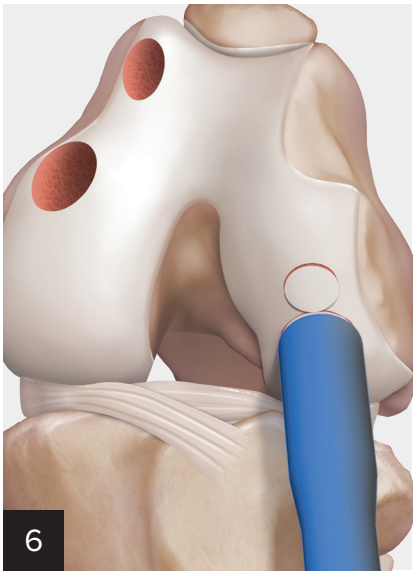
Advance the donor harvester through the cartilage and into bone to a depth of at least 8 mm as indicated by the laser marks on the outside of the metal tube. Twist the donor harvester clockwise 90˚ under pressure, back, and then a full clockwise revolution. Slightly and carefully toggle the harvester as it is withdrawn containing the graft.

The graft can be sized with the donor harvester using the metal tube, or the graft can be extruded, trimmed with blade, and measured with a ruler.

Drill the guide pin into the center of the defect at least 15 mm deep. Advance the reamer over the guide pin and remove the defect and any related subchondral cystic changes that matches the graft depth exactly.

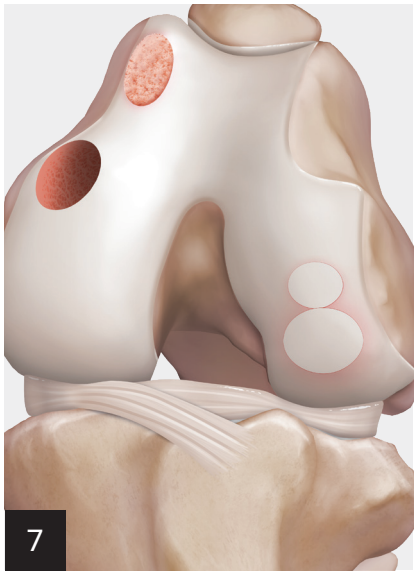


Insert the graduated cannulated OATS® Alignment Rod of appropriate diameter over the guide pin to measure recipient socket depth and assess alignment. Remove both the alignment rod and pin.

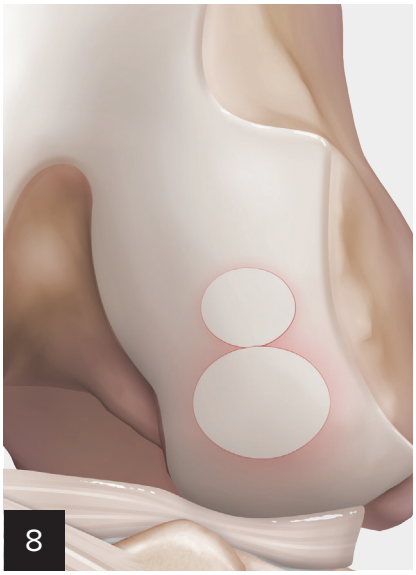


Insert the graft into the recipient socket in optimal orientation for articular congruity.

Using an oversized tamp with mallet, make sure the graft is flush with the articular surface.



Donor sites may be left untreated or filled with bone filler.



Flush the joint prior to routine closure.

Postoperative Care Suggestions

- Postoperative radiographs and a soft-padded bandage on the surgical site for 48-72 hours
- Administration of analgesic and nonsteroidal anti-inflammatory medications for a minimum of 10 days
- Strict cage/kennel rest and leash walking only for 6 weeks after surgery
- After 6- to 8-week re-examination, allow progressive return to full function over subsequent 8 weeks

Ordering Information

Product Description	Item Number
Small Joint OATS® Set, 6 mm	AR-**8981-06S**
Small Joint OATS Set, 8 mm	AR-**8981-08S**
Small Joint OATS Set, 10 mm	AR-**8981-10S**
OATS Sizer/Tamp Set, 6 mm, 8 mm, and 10 mm	AR-**1985S**

Products advertised in this technique guide may not be available in all countries. For information on availability, please contact Arthrex Customer Service or your local Arthrex representative.

References

1. Cook JL, Hudson CC, Kuroki K. Autogenous osteochondral grafting for treatment of stifle osteochondrosis in dogs. *Vet Surg*. 2008;37(4):311-21. doi:10.1111/j.1532-950X.2008.00383.
2. Glenn RE Jr, McCarty EC, Potter HG, Juliao SF, Gordon JD, Spindler KP. Comparison of fresh osteochondral autografts and allografts: a canine model. *Am J Sports Med*. 2006;34(7):1084-93 doi:10.1177/0363546505284846.
3. Bodo G, Hangody L, Modis L, Hurtig M. Autologous osteochondral grafting (mosaic arthroplasty) for treatment of subchondral cystic lesions in the equine stifle and fetlock joints. *Vet Surg*. 2004;33(6): 588-96. doi:10.1111/j.1532-950X.2004.04096.

Small Joint OATS Set
AR-**8981-10S**

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