

SynACART[®] Joint Resurfacing

Surgical Technique




Arthrex[®]
Vet Systems

Place the dog in dorsal recumbency with the stifle undergoing surgery isolated in a standard 4-point drape fashion. Strict adherence to aseptic technique for patient preparation and surgery is critical to success. An assistant is required to position the limb during surgery.

For lesions affecting the lateral femoral condyle, outline the proposed skin incision by first identifying the patella and lateral trochlear ridge. Make a curved parapatellar incision from the tibial tuberosity to the level of the patella and continue proximally for an equal distance. Continue the approach with an incision through the fascia lata, along the cranial border of the biceps femoris muscle, and extending distally through the lateral retinacular fascia, making sure to allow adequate remaining fascia to allow closure of the approach. Incise the joint capsule; the patella may need to be luxated medially from the trochlear groove. The assistant positions the stifle in hyperflexion, optimizing exposure of the articular surface of the lateral femoral condyle. Strategically placed small Gelpi retractors can help improve visibility.

For lesions affecting the medial femoral condyle, make an incision from the tibial tuberosity to the patella and then continue proximally for an equivalent distance. Make a stab incision into the joint at the level of the patella and extend distally through the medial fascia, the vastus medialis, and the joint capsule, parallel to the straight patellar tendon. Take care not to cause iatrogenic damage to the articular cartilage of the medial condyle. Extend the incision to the distal portion of the sartorius muscle. Luxate the patella laterally. The assistant will hyperflex the joint to allow adequate visibility of the articular surface of the medial femoral condyle. Using strategically placed small Gelpi retractors can help improve visibility.



MRI scan of osteochondritis dissecans lesion of the medial condyle of the canine stifle. The pervasive subchondral bone marrow lesion is often underestimated on standard radiography.



CT scan of osteochondritis dissecans lesion of the medial condyle of the canine stifle; documentation of the geographic extent of the lesion assists preoperative planning.



CT scan postoperatively after placement of the SynACART implant. Note the metallic base for osseous ingrowth and the reconstruction of the articular surface topography.



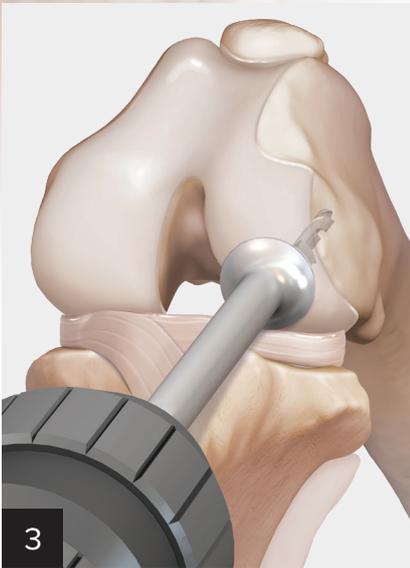
1

Inspect the articular surface and debride the damaged surface with a scalpel or curette. It is important that the lesion is clearly defined by a circumferential marginal collar of viable hyaline cartilage. If the lesion is caudally disposed, this may require extreme hyperflexion.



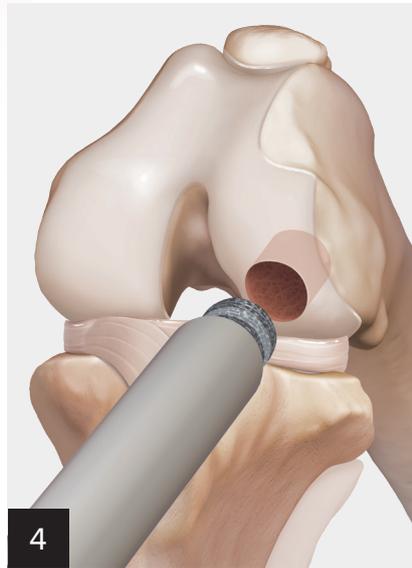
2

Measure the diameter of the lesion using the concave end of the SynACART® guide to determine the most appropriate implant size. Once selected, place the guide perpendicular to the defect and advance the 2.4 mm guide pin through the cannulation of the guide. Drill at least 2 cm into the bone.



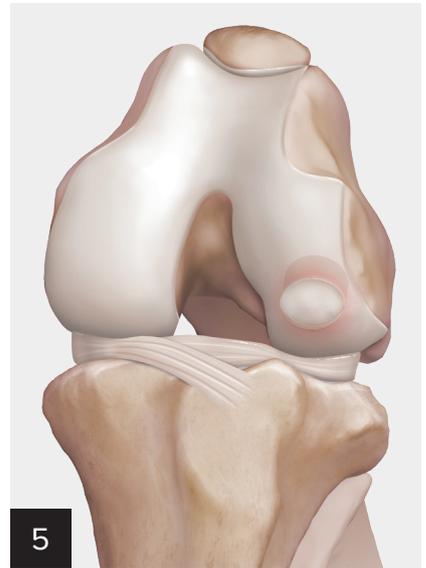
3

Remove the guide and place the appropriately sized SynACART cannulated drill over the guide pin. Advance the drill until the recipient bed is prepared to a stop-limited depth of 8 mm. Vigorously flush the recipient bed to remove all debris that may prevent correct implant seating.



4

Introduce the implant into the recipient bed by hand or using the SynACART implant holder. Using the concave end of the SynACART guide, tamp the implant so that it is firmly seated to ensure accurate restoration of the articular topography.



5

Flush the joint prior to routine closure.

Recommended Postoperative Management

- Analgesia is provided in the form of nonsteroidal anti-inflammatory medication for 10 to 14 days postsurgery
- Restrict to kennel rest for the first 14 days postsurgery when unobserved
- Toileting and muscle-building walks are allowed 3 to 4 times daily, lasting a maximum of 5 to 10 minutes
- Further confinement of the patient is recommended between weeks 3 and 6. Exercise breaks can be increased by 5 minutes per week, resulting in lead-controlled walks of 30 minutes 3 to 4 times daily by 6 weeks postsurgery.
- Recheck examination at 6 weeks. Radiographic imaging or CT scan of joint is recommended.
- If the patient is progressing as expected, lead-controlled exercise can be gradually increased week by week until 12 weeks postsurgery, when the patient can resume off-lead activity
- The success of this intervention relies upon a controlled return to a normal exercise pattern. The patient must remain under lead control when not confined and must be prevented from running, jumping, or slipping on the operated limb until the appropriate recovery period has elapsed.

Ordering Information

Implants

Product Description	Item Number
SynACART® Resurfacing Core, 8 mm × 8 mm	VAR-2500-08
SynACART Resurfacing Core, 10 mm × 8 mm	VAR-2500-10
SynACART Resurfacing Core, 15 mm × 8 mm	VAR-2500-15
SynACART Resurfacing Core, 20 mm × 8 mm	VAR-2500-20

Disposable

Product Description	Item Number
Drill Tip Guide Pin, 2.4 mm	VAR-1250L

Instruments

Product Description	Item Number
SynACART Instrument Case	VAR-2500C
SynACART Drill, cannulated, 8 mm	VAR-2502-08DC
SynACART Drill, cannulated, 10 mm	VAR-2502-10DC
SynACART Drill, cannulated, 15 mm	VAR-2502-15DC
SynACART Drill, cannulated, 20 mm	VAR-2502-20DC
SynACART Guide, 8 mm	VAR-2503-08
SynACART Guide, 10 mm	VAR-2503-10
SynACART Guide, 15 mm	VAR-2503-15
SynACART Guide, 20 mm	VAR-2503-20
SynACART Implant Holder, 8 mm	VAR-2504-08
SynACART Implant Holder, 10 mm	VAR-2504-10
SynACART Implant Holder, 15 mm	VAR-2504-15
SynACART Implant Holder, 20 mm	VAR-2504-20

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