

Overview of Technique

- A lateral para patellar incision is made.
- The tensor fascia lata is dissected free from the joint capsule and the tibial tubercle. The joint capsule is incised and the patella dislocated medially.
- The meniscae are examined using both a stifle retractor (J240W) and Gelpi retractor (J240).
- The joint capsule is closed using Safil (PGA) suture.
- The lateral fabella is exposed using a Hohman retractor (J235B)
- A small eyed graft passer (J236SE) is passed between the lateral fabella and femur. The nylon suture and crimp tube pack is opened.
- The nylon is passed through the eye of the graft passer and pulled through.
- The nylon passes deep to the femuro fabella ligament.
- A hole is drilled through the proximal tibial tubercle using a bone tunnel borer (2.8 mm), (J712).
- The nylon is passed latero-medially through the hole.
- The nylon is passed back medio-laterally under the distal patellar ligament using the same graft passer.
- The free ends of the nylon are passed through the crimp tube from opposite ends.
- The initial crimp with the crimping forceps (J710) is made in the middle of the tube. The walls of the tube grip the nylon while still allowing it to be tensioned.
- The free ends are pulled through the crimp tube to place appropriate tension on the nylon loop. If the initial crimp is correct, the tension will be maintained by the crimp tube.
- The initial crimp is completed by firm crimps on either side of the first.
- The free ends are removed.
- The tensa fascia lata, sub cutaneous tissues and skin are closed in layers.

CCL Update

Position of crimp

It is currently the view of most users that the crimp tube should be placed on the more distal strand of the loop over the Tibialis Cranialis muscle. (See drawing). At the final closure the crimp and nylon are covered by the fascia of the Biceps Femoris. Thus, once again the line has been passed behind the fabella, the top strand passes under the distal straight patellar ligament back through the hole in the tibial tubercle and joined to the lower strand.

Soft tissues

Any soft tissue included in the loop (usually around the fabella) will become necrotic and give way under the tensioned nylon resulting in loss of tension.

Position of Tibial anchor point

The position of the end of the loop is critical. If the anchor point is too far distal, extension of the stifle may be restricted. It is recommended that the hole in the proximal tibia passes through the tibial tubercle at the level of the insertion of the straight patellar ligament. If two holes are used both must be through the tibial tubercle. Some surgeons countersink the hole to minimize abrasion of the nylon at the kink point.

Tension of loop

There is little published data on appropriate tension. The current advice is that the tension should be sufficient to eliminate anterior drawer motion but not enough to cause outward rotation of the tibia. Over tensioning will create difficulties particularly if the hole in the proximal tibia is incorrectly positioned.

Size of nylon c.f. size of dog

Very little data has been published. It would seem wise to error on the side of caution.

11kg	25lb	50lb line
18kg	40lb	80lb line
45kg	100lb	2x80lb line

These guidelines are only for a lateral suture. Boisterous heavy dogs may benefit from a medial suture also. Some surgeons are protecting their "over the top" repairs with a lateral suture. The immediate post operative strength gives the graft time to consolidate.

Simple loop or figure of 8

Most surgeons use a simple loop which does not cross over. There may be advantages in a figure of 8. Some surgeons use 2 loops one of each.

For more information please contact:



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CCL Lateral Suture System

Treatment of Cranial Cruciate Ligament rupture by placement of a lateral nylon suture is rapidly gaining popularity among veterinary surgeons.

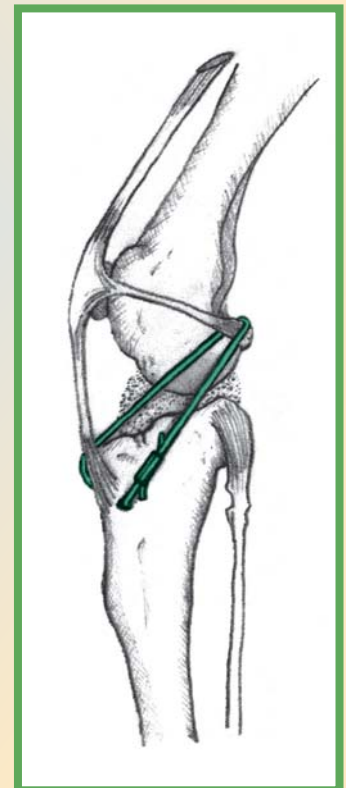
- ▶ It is a relatively quick procedure
- ▶ Results are comparable with other techniques
- ▶ Post operative strength of the repair is immediate and good
- ▶ Risks to intra-articular structures are minimal

Technique Summary

Heavy monofilament nylon is placed on the lateral side of the stifle. The large knot normally required for this suture is replaced by a metal crimp tube. The appropriate tension is placed on the suture, then a crimping instrument. The lateral nylon is placed behind the lateral fabella bone and then through the tibial tubercle.

Additional features include:

- ▶ A special graft passer for proper anatomical placement of the nylon suture.
- ▶ A bone tunnel borer for drilling hole through proximal tibial tubercle.
- ▶ A stifle retractor (J240W) for proper examination of the meniscus and intra-articular structures.



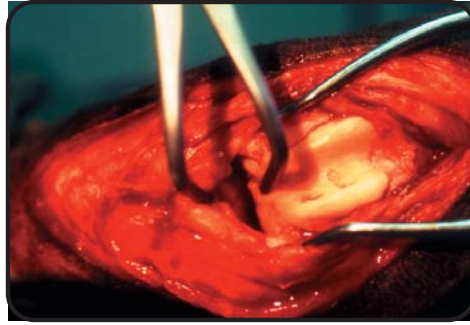
JorVet™



CCL Lateral Suture System

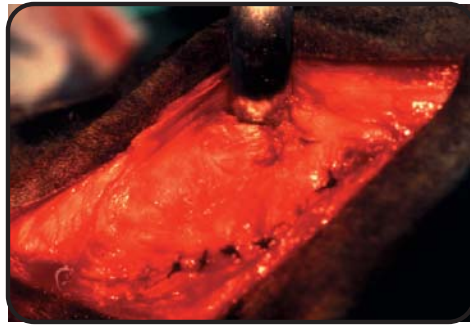
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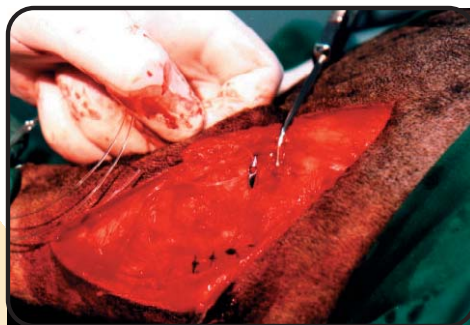
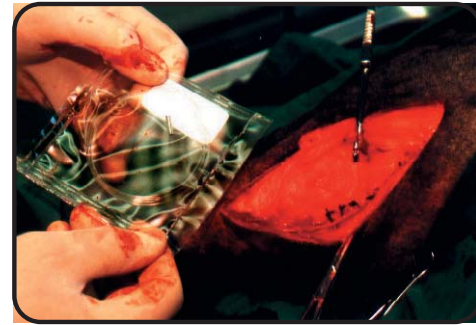
3 The meniscus are examined using a combination of Gelpi's and a stifle distractor.

The joint capsule is closed using Safil.



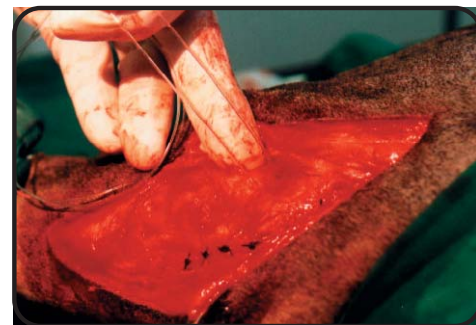
5 The lateral fabella is exposed using a Hohman retractor.

A small eyed graft passer (3 cm) is passed between the lateral fabella and femur. The nylon plus crimp tube package is opened.



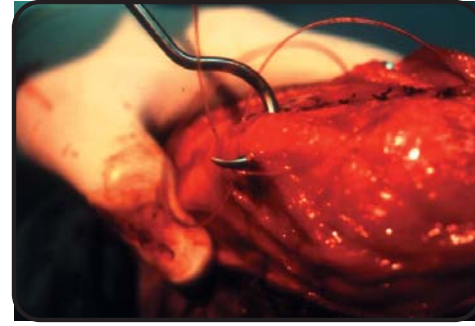
7 The nylon is passed through the eye of the graft passer and pulled through.

The nylon passes deep to the femuro fabella ligament.



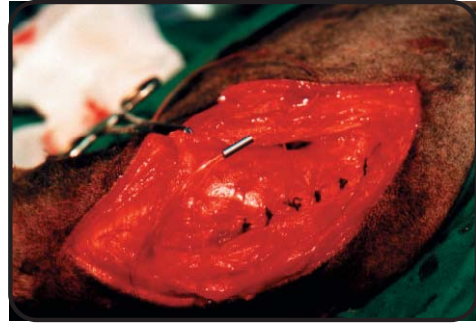
9 A hole is drilled through the proximal tibial tubercle using a bone tunnel borer, (2.8 mm).

The nylon is passed latero-medially through the hole.

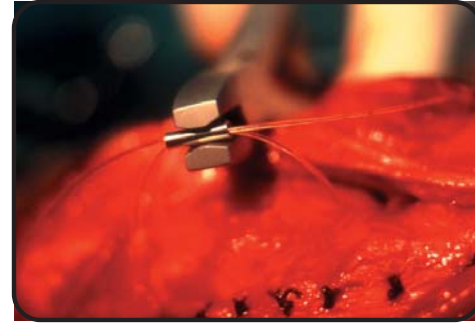


11 The nylon is passed back medio-laterally under the distal patellar ligament using the same graft passer.

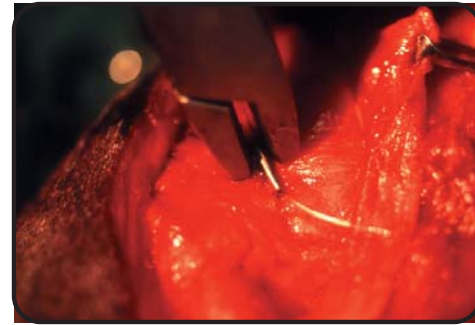
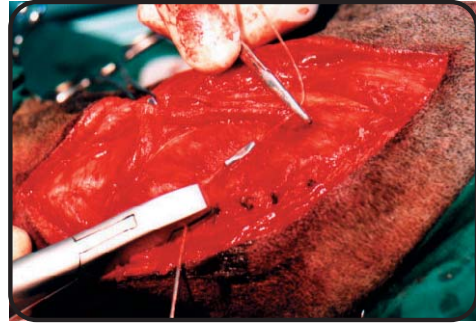
The free ends of the nylon are passed through the crimp tube from opposite ends



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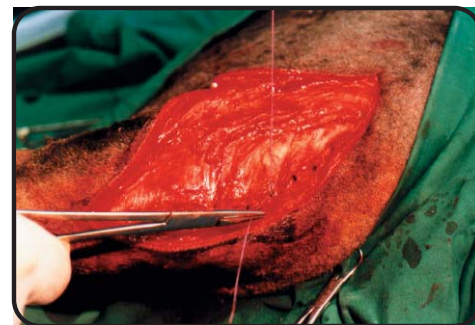
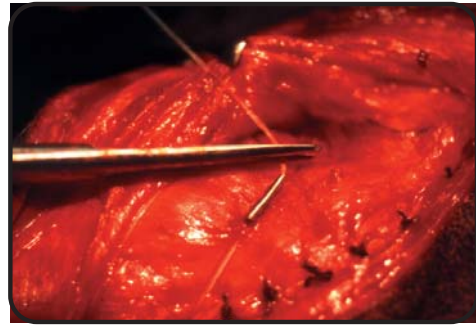


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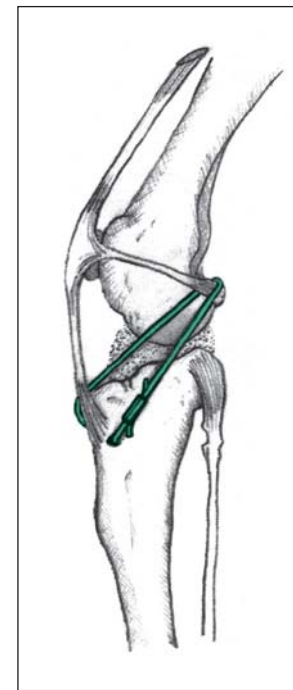


15 The initial crimp is completed by firm crimps on either side of the first.

The free ends are removed.



17 The tensor fascia lata, subcutaneous tissues and skin are closed in layers.



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JORGENSEN LABORATORIES New Cruciate Repair Items

- J710 Crimping Forceps
 - J710A 12 mm Tube Crimp for 80 lb. line (non-sterile)
 - J710B 10 mm Tube Crimp for 50 lb. line (non-sterile)
 - J710C 12 mm Tube Crimp plus 800 mm 80 lb. nylon—Sterile Packed
 - J710D 10 mm Tube Crimp plus 500 mm 50 lb. nylon—Sterile Packed
 - J710E 800 mm x 80 lb. Nylon line Sterile Pack
 - J710F 500 mm x 50 lb. Nylon line Sterile Pack
 - J710S Starter kit—Crimping Forceps and five of each size Crimp Tube and Suture
 - Graft passer with small eye
 - Bone tunnel borer
- Note: Nylon line is Ande brand

Additional Instruments Used in the Procedure

- J235b Hohman Retractor 18 mm
- J236SE 3 cm Graft Passer with small eye
- J240W Stifle Distractor
- J236T Bone Tunnel Borer 2.8 mm

Also Available:

J710V – Cruciate Repair CD/ROM. Complete procedure available at nominal cost.

Cruciate Suture Needles

These suture needles are especially designed for use with heavy nylon in the lateral suture repair method for cranial cruciate ruptures. The needles have a special curved design along with a heavier body. This makes passage around the femur/fabella area much easier.

The stainless steel needles come in three sizes and are packaged 6/pkg.

Needles

- J710x Small
- J710y Medium
- J710z Large

J710SA – CCL STARTER KIT includes:

- Crimping Forceps
- 2 packages of each different sized cruciate needles swaged onto nylon line including crimp tubes. Sterile, 6 packages total.
- Procedure instructions on CD/ROM.

CRUCIATE NEEDLES with swaged on nylon suture, including crimp tubes. Packaged sterile.

- J710K – 15mm x-small Cruciate Needle. Swaged onto 50lb. nylon leader line with 10mm crimp tube. 500mm length.
- J710M – 20mm small Cruciate Needle. Swaged onto 80lb. nylon leader line with 12mm crimp tube. 800mm length.
- J710P – 25mm medium Cruciate Needle. Swaged onto 100lb. nylon leader line with 12mm crimp tube. 800mm length.
- J710KD – 50lb. Double Strand with needle.
- J710KE – 50lb. Double Strand nylon with needle and 2 crimps.
- J710MD – 80lb. Double Strand nylon with needle.
- J710ME – 80lb. Double Strand nylon with needle and 2 crimps.
- J710PD – 100lb. Double Strand nylon with needle.
- J710PE – 100lb. Double Strand nylon with needle and 2 crimps.

BULK NYLON LINE. Non-sterile.

- J710EB – 80lb. Nylon Leader Line, 50 yard reel.
- J710FB – 50lb. Nylon Leader Line, 50 yard reel.
- J710GB – 100lb. Nylon Leader Line, 50 yard reel.
- J236M – Meniscus Knife, a specially designed knife for use in the canine stifle.
- J236C – Ligament Meniscus Clamp is used for removing torn meniscus pieces. The micro-serrations on the clamp makes it easier to grasp the slippery tissue.
- J236TC – 2.7 Bone Tunnel Borer with Countersink reduces any possible sharp edges left from drilling into tibial crest that could fray nylon line.

J710Q – Heavy Duty Needle Driver with tungsten carbide jaws. Especially designed to grip cruciate needle and ease passage around tough fabella tissue. 7" length.

J710R – Tensioning Clamps – These small economical stainless steel clamps feature knurled knobs that lock onto the nylon suture. Using a standard Gelpi or Weitlaner retractor, you attach the knobs on each side and apply desired tension. Eliminates the need to purchase an expensive tensioning instrument, or throw away crimp tubes.

J240WA – Small Stifle/Joint Retractor 5" The small overlapping tips allow atraumatic entry into small arthrotomies and small stifles.

J240WM – Stifle Retractor 7" Designed for medium and large dogs. Once inserted atraumatically into the stifle, the longer tips allow for maximum grip. This instrument is best to examine the caudal horn of the medial meniscus.

J240WB – X-tra Small Stifle Distractor Tips only have a 3mm profile vs. 6mm profile of J240WA.