ConMed

Knee Preservation System

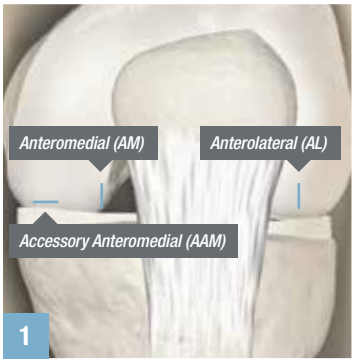
Anatomic Patellar Tendon ACL Reconstruction using the Bullseye® Cruciate System

SURGICAL TECHNIQUE

Anatomic Patellar Tendon ACL Reconstruction using the Bullseye® Cruciate System

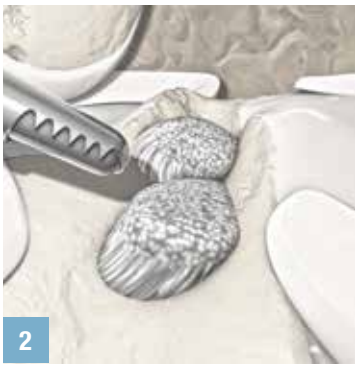
This surgical technique delivers an anatomical medial portal approach to ACL reconstruction. The Bullseye® Cruciate System instrumentation used in tandem with the unique biocomposite GENESYS™ Matryx® Interference Screw safely facilitates a more accurate and reproducible reconstruction that stimulates the patient's biological healing and restores the natural anatomy.

FEMORAL TUNNEL POSITIONING AND DRILLING



This surgical approach requires three portals. The standard anteromedial portal and anterolateral portal should be placed close to the patellar tendon. The accessory anteromedial portal should be just above the meniscus lower and more medial than the anteromedial portal.

With the surgical markings in place, incise the anteromedial and anterolateral portals.



Insert a ConMed Linvatec shaver and excise any remaining ACL tissue.

Create the AAM portal with the arthroscope placed in the anterolateral portal looking medially. With the knee flexed at 90 degrees, palpate the medial joint line.

Under direct visualization, insert a needle anterior to the medial femoral condyle and above the medial meniscus to avoid damage. The needle should be directed towards the intercondylar notch.

Advance the needle to confirm access to the femoral footprint of the ACL.

Incise the skin making sure to orient the blade away from the femoral condyle to prevent damaging the articular surface. Switch the arthroscope to the anteromedial portal. Mark the center of the femoral ACL footprint using a microfracture awl.

FEMORAL TUNNEL POSITIONING AND DRILLING (CONTINUED)

Use the Bullseye® Native Footprint Ruler to assess the footprint of the native ACL stump.

With the ACL footprint identified and the center marked, insert the Bullseye Femoral Footprint Guide into the AAM portal with the knee flexed at 90 degrees.

Place the guide at the center of the ACL footprint. Once the correct position is achieved, advance the XACTPIN™ Graft Passing Guide Pin a few millimeters to notch the bone.

Back the XACTPIN out to confirm that the location marked by the XACTPIN is the center of the footprint.

Using the guide to position the XACTPIN, hyperflex and elevate the knee then advance the XACTPIN through the lateral cortex and skin.

Manually pull back to hook the head of the XACTPIN™ guide pin on the external femoral cortex to determine the aperture to cortex length.

Advance the XACTPIN so that the necked down portion is outside of the skin laterally and the pin is tight in the femoral tunnel.

Use a twisting motion to remove the Femoral Footprint Guide from the joint.

Insert the mono-fluted Sentinel® Drill Bit over the guide pin through the AAM portal with the cutting edge facing away from the femoral condyle and advance the drill bit to the femoral ACL footprint.

Ensure that the knee is hyperflexed; use a piston-like back and forth motion to advance the Sentinel Drill Bit to the desired depth cautiously to prevent blow out of the lateral femoral cortex.

FEMORAL TUNNEL POSITIONING AND DRILLING CONTINUED

Keeping the hand off of the trigger, slide the Sentinel® Drill Bit past the medial femoral condyle and out of the portal, making sure to keep the blade oriented away from the condylar surface.

Place the two free ends of the #2 passing suture through the eyelet of the guide pin.

Then, pull the guide pin through the femur laterally, making sure to keep a finger in the suture loop to prevent it from being pulled into the knee joint.

Once the suture ends are retrieved laterally, pull the looped end of the suture to the entrance of the femoral tunnel.

TIBIAL TUNNEL POSITIONING AND DRILLING


15

Move the arthroscope to the anterolateral portal. Then insert the Lightwave® Ablator into the anteromedial portal to mark the center of the tibial ACL footprint.


16

Set the angle of the Bullseye® Tibial Footprint Guide to the desired settings. Insert the tip into the anteromedial portal, placing the tip of the guide into the center of the tibial ACL footprint.

Advance the external guide sleeve flush to the anterior tibial cortex.


17

Use the ConMed Linvatec M-Power®2 handpiece and pin driver attachment to advance the tibial guide pin until it meets the point of the guide arm.

Depress the guide lever to remove the Pin-Sleeve.

Remove the Bullseye Tibial Footprint Guide from the joint.

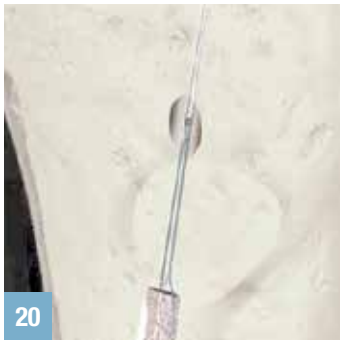

18

Place a curette over the point of the guide pin to protect against inadvertent advancement when drilling. Be sure to use the appropriate size Badger® or Sentinel® Drill Bit to drill the tibial tunnel.

GRAFT POSITIONING AND FIXATION


19

Use the Bullseye® Native Footprint Ruler to assess the footprint of the native ACL stump.


20

Load the suture limbs of the graft into the passing suture loop and pull the tails outside of the lateral cortex.

Pull the bone patellar tendon bone (BTB) graft into the joint while hyperflexing and elevating the knee to ease graft passage.


21

Position the graft appropriately in the femoral tunnel. Insert the BioScrew® Hyperflex® Guidewire through the AAM portal and into the femoral tunnel.


22

Advance the tap rotating clockwise to the appropriate depth marking to create threads in the femoral tunnel and BTB graft.

Remove the tap from the joint leaving the guidewire in place.


23

Load the GENESYS™ Matryx® Interference Screw onto the Tri-Lobe™ Driver, and slide onto the guidewire, and into the joint until flush with the aperture and graft.

Advance the screw anterior to the graft. Remove the driver and guidewire from the joint.


24

Position the graft appropriately in the tibal tunnel, and cycle the knee with distal tension on the graft to remove laxity.

Insert the guidewire. With the knee in 15 degrees of flexion, keep tension on the graft and apply posterior drawer force to the knee. Advance the tap rotating clockwise to the appropriate depth marking to create threads in the tibial tunnel and BTB graft.


25

Remove the tap leaving the guidewire in place and then insert the GENESYS Matryx Interference Screw anterior to the graft.

FINAL CONSTRUCT

Follow the normal procedures to close the incisions.

Note the anatomic position of the final graft placement. Performing an Anatomic Patellar Tendon ACL Reconstruction using the medial portal approach provides improved rotational stability compared to a non-anatomic reconstruction. When ranging the knee through flexion and extension, no graft impingement is observed. Additionally, with this technique a notchplasty is generally not needed except if an unnatural anatomy such as an "A" shaped intercondylar notch is present.

These are a few of the numerous advantages of using the ConMed Linvatec Bullseye® Cruciate System.

ORDERING INFORMATION

BULLSEYE®
FEMORAL FOOTPRINT GUIDES

5mm SB5000	9mm SB9000
6mm SB6000	10mm SB10000
7mm SB7000	11mm SB11000
8mm SB8000	

BULLSEYE®
FEMORAL FOOTPRINT RULER

Bullseye Femoral Footprint Ruler RL1000

PINN-ACL®
CRUCIATE GUIDE SYSTEM

(includes ACL Guide Arm and Pin-Sleeve) 8731

BULLSEYE®
TIBIAL FOOTPRINT GUIDES

5mm DB5TAM	7mm DB7TAM
6mm DB6TAM	8mm DB8TAM3

SENTINEL®
DRILL BITS

(STERILE, 4 PER BOX)

5.5mm x 9 in. S8555	9.5mm x 9 in. S8595
6.0mm x 9 in. S8560	10mm x 9 in. S8510
6.5mm x 9 in. S8565	10.5mm x 9 in. S85105
7.0mm x 9 in. S8570	11mm x 9 in. S8511
7.5mm x 9 in. S8575	11.5mm x 9 in. S85115
8.0mm x 9 in. S8580	12mm x 9 in S8512
8.5mm x 9 in. S8585	12.5mm x 9 in. S85125
9.0mm x 9 in. S8590	13mm x 9 in. S8513

ACCESSORIES

XACTPIN™ Graft Passing Guide Pin, 2.4mm. C8677
High Strength Guide Pin, 2.4mm. 9744
Graft Passing Guide Pin, 2.4mm. C8675
EL Depth Probe 21.1001EL

GENESYS™ MATRYX®
INTERFERENCE SCREWS

5.0 x 20mm 235020M5	6.5 x 15mm 236515M5
5.0 x 25mm 235025M5	6.5 x 20mm 236520M5
5.0 x 30mm 235030M5	6.5 x 25mm 236525M5
5.5 x 15mm 235515M5	6.5 x 30mm 236530M5
5.5 x 20mm 235520M5	7.0 x 20mm 237020M5
5.5 x 25mm 235525M5	7.0 x 25mm 237025M5
5.5 x 30mm 235530M5	7.0 x 30mm 237030M5
6.0 x 15mm 236015M5	8.0 x 20mm 238020M5
6.0 x 20mm 236020M5	8.0 x 25mm 238025M5
6.0 x 25mm 236025M5	8.0 x 30mm 238030M5
6.0 x 30mm 236030M5	8.0 x 35mm 238035M5

GENESYS™ MATRYX® CONTINUED
INTERFERENCE SCREWS

9.0 x 20mm 239020M5	10.0 x 30mm 231030M5
9.0 x 25mm 239025M5	10.0 x 35mm 231035M5
9.0 x 30mm 239030M5	11.0 x 20mm 231120M5
9.0 x 35mm 239035M5	11.0 x 25mm 231125M5
10.0 x 20mm 231020M5	11.0 x 30mm 231130M5
10.0 x 25mm 231025M5	11.0 x 35mm 231135M55

GENESYS™ MATRYX® INSTRUMENTATION
DRIVERS

Short Fixed Tri-Lobe Driver for
5.0mm Interference Screws. D8652
Short Modular Tri-Lobe Driver for
5.0mm Interference Screws. D8650
Extended Length Modular Tri-Lobe Driver for
5.0mm Interference Screws. D8660
Short Fixed Tri-Lobe Driver for
5.5 – 6.5mm Interference Screws D8653
Short Modular Tri-Lobe Driver for
5.5 – 6.5mm Interference Screws D8651
Extended Length Modular Tri-Lobe Driver for
5.5 – 6.5mm Interference Screws D8661
Short Fixed Tri-Lobe Driver for
7.0 – 11.0mm Interference Screws DFS70
Short Modular Tri-Lobe Driver for
7.0 – 11.0mm Interference Screws DMS70
Extended Length Modular Tri-Lobe Driver for
7.0 – 11.0mm Interference Screws C871

TAPS

7.0–8.0mm, GENESYS Matryx/Matryx
Interference Screw Tap, Short Fixed TFS70
7.0–8.0mm, GENESYS Matryx/Matryx
Interference Screw Tap, Short Modular TMS70
7.0–8.0mm GENESYS Matryx/Matryx
Interference Screw Tap, Extended Length Modular D8607
9.0–10.0mm, GENESYS Matryx/Matryx
Interference Screw Tap, Short Fixed TFS90
9.0–10.0mm, GENESYS Matryx/Matryx
Interference Screw Tap, Short Modular TMS90
9.0–10.0mm GENESYS Matryx/Matryx
Interference Screw Tap, Extended Length Modular D8609
11.0mm GENESYS Matryx/Matryx
Interference Screw Tap, Short Fixed TFS11
11.0mm GENESYS Matryx/Matryx
Interference Screw Tap, Short Modular TMS11
11.0mm GENESYS Matryx/Matryx
Interference Screw Tap, Extended Length Modular D8611

INSTRUMENTATION ACCESSORIES

Universal Driver, Modular Ratcheting Handle. D8640

Knee Preservation System

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