Meniscal Cinch™ II Implant

The Meniscal Cinch II implant delivery system — with its linear deployment system, ergonomic handling, and simplicity — provides an efficient and reproducible method for all-inside meniscal repair.

- Low-profile implants expelled from the tip of the needle reduce the penetration depth beyond the meniscus.
- Low-profile cannula allows flexibility in tight spaces in the knee.
- 1 mm × 5 mm PEEK implants are secured by coreless 2-0 FiberWire® suture with a pretied, sliding knot that tensions easily and facilitates secure, low-profile vertical and horizontal suture repairs.
- An adjustable depth stop controls needle penetration.
- 2 mm depth markings on the needle facilitate intraoperative measuring and visual feedback on needle depth.

ZoneNavigator™ System

The ZoneNavigator System allows precise placement and passing of horizontal and vertical suture constructs for inside-out meniscus repair. The multiple cannula system is interchangeable and optimized for specific suture placement.

- Single-handed inside-out meniscal repair technique
- 2-0 Mini SutureTape with meniscal repair needles
- Ergonomic handle for controlled suture placement

1.8 mm Knotless FiberTak® Suture Anchor

The 1.8 mm Knotless FiberTak suture anchor is a tensionable suture anchor that combines the benefits of soft anchors with knotless soft-tissue fixation.

- 48 lb, secure, low-profile knotless suture fixation
- No risk of knot impingement or loosening
- 1.8 mm drill to minimize bone removal
- Curved and straight spear delivery systems available for full access around the glenoid
- Simple, reproducible insertion and passing techniques similar to knot-tying anchors
- Suture tension is controlled for knotless soft-tissue fixation and adjusted under direct visualization

Reference
3.9 mm SwiveLock® Anchor

The 3.9 mm SwiveLock anchor is the latest addition to the SwiveLock suture anchor family. This anchor combines small size with the benefit of a larger eyelet for use with FiberTape® suture or multiple limbs of #2 FiberWire® suture or Suture Tape.

• Threaded tip design and does not contain the #2 FiberWire tip retention stitch
• Comes with a hexalobe driver for high insertional torque
• Small size and large eyelet design make it a great choice for procedures requiring more anchors such as larger rotator cuff repairs, and other applications where small, strong anchors are required, including InternalBrace™ ligament augmentation and ACL backup fixation.
• Available in PEEK with a biocomposite, vented option coming soon

PassPort Button™ Cannula Inserter

Streamline cannula insertion with the PassPort Button cannula inserter.

• Simplifies loading and insertion (straight shaft, "bulletized" tip)
• One device for measuring length and cannula insertion
• Loading slots are optimized to fit each cannula’s diameter
• Atraumatic cannulas facilitate safe access into the joint space

Apollo® MP50 and H50 Probes

The Apollo® probe product line continues to add several versatile probes to optimize surgery in knee and hip procedures. The MP50 probe was designed and tested to support surgeons in a variety of knee procedures including ACL reconstruction, meniscectomy, chondroplasty, and notchplasty procedures.

• Apollo® MP50 and H50 probe tips are shaped to easily reach confined and complex anatomy of the knee or hip
• Both probes have 360° edge control for precise ablation
• Multiple suction ports for reduced clogging
• Flat electrode face for smooth contouring of tissue and a lower ablation default setting for reduced energy delivery
• H50 probe is 25 mm longer than our standard probe (MP50)
• Robust H50 probe includes handle, shaft, and outer insulation enhancements for arthroscopic hip procedures


In this biomechanical study, investigators confirmed that adjustable-loop devices perform comparably to fixed-loop devices with regard to biomechanical fixation strength and elongation.

Adjustable-loop devices offer several clinical advantages when compared to fixed-loop devices, including increased bone-tendon interface and operative simplicity and efficiency.

There were differences observed between the various adjustable-loop devices tested. The ACL TightRope RT implant demonstrated the smallest initial elongation and the greatest ultimate failure load compared with other devices.

The ACL TightRope RT implant was the only adjustable-loop device that could be effectively retensioned after cycling the graft.


Investigators evaluated 3 common ACLR techniques using suspensory femoral fixation and interference screw tibial fixation. The groups were: adjustable loop (ALD) and screw, preconditioned adjustable loop (ALD) and screw, and a continuous loop (CLD) and screw.

Surgical placement of an interference screw imparted a time-zero laxity of 0.53 mm and 62% loss in construct tension.

The operating characteristics of the TightRope implant allowed for restoration of screw-induced graft slackening and optimizing tension. This is not possible with fixed-loop devices.

ACLR with femoral TightRope RT fixation and intraoperative preconditioning allows for the restoration of time-zero screw-imparted slack and leads to significantly reduced cyclic elongation in accordance with native ACL function.

NEW peer-reviewed publications confirm the advantages of ACL TightRope® implants, such as the ability to retension and improved biomechanical performance when compared to fixed-loop devices.

For more research about ACL TightRope implants: https://arthrex.info/Implant

FastThread™ BioComposite Interference Screws

FastThread biocomposite interference screws are designed to optimize interference screw performance.

• Faster insertion with prominent leading and large thread pitch facilitates screw engagement and advancement.
• Optimized screw threads improve pullout strength compared to longer screws of the same diameter.
• Vented sidewalls and screw geometry decrease material by 22% without losing insertion or fixation strength when compared to longer, previous-generation screws.
• Arthrex’s proprietary biocomposite material has withstood the test of time with more than a decade of clinical use and millions of implantations.
• Rounded thread form and screw head design may reduce damage to graft on insertion and cycling.
• Reduced number of screw threads decreases number of turns and possible graft abrasion and twisting.

References

Hip FiberTak® Soft Anchors

The 1.8 mm Knotless Hip FiberTak soft anchor provides adjustable labral tensioning to limit labral eversion away from the femoral head, while the 16 mm hip FiberTak soft anchors are available with a coreless #2 FiberWire suture or SutureTape to create a low-profile, knotted-repair construct.

• FiberTak anchors are compatible with hip-specific instrumentation designed for the unique hip joint anatomy.
• Anchors require minimal bone removal prior to implantation.
• The bone sockets can be prepared with a straight or curved drill guide to allow surgeons the ability to insert anchors into difficult positions on the acetabular rim and angle them away from articular surfaces.

References

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References
The suction-activated GraftNet device is designed to collect autologous tissue for a multitude of applications. When connected to an arthroscopic shaver, the GraftNet device may be used to remove tissue debris from a surgical site. This recovered autologous tissue is collected in an easily accessed, sterile filtered chamber. The GraftNet autologous tissue collector makes gaining access to autograft tissue as simple as Resect and Collect™.

- Universal adapters make for easy assembly
- Collect autologous bone or cartilage particulate
- Quickly access recovered tissue volume
- Control the particulate size when using a shaver device

DynaNite® Nitinol Compression Staple

The DynaNite Nitinol staple provides low-profile compressive fixation specifically engineered for foot and ankle osteotomies and fusions with continuous compression.

- Low-profile, 1.0 mm bridge height
- Greater compression than competitor staples
- Staple is preloaded and is also reloadable for simple insertion
- Single-use disposable instrumentation
- Available in 14 sizes

Minimally Invasive Surgery (MIS) System

The MIS product portfolio provides surgeons with all the tools necessary to perform minimally invasive or percutaneous surgery of the foot. The dedicated, high-quality power unit provides the ideal performance parameters for MIS surgery.

- AR-200 MIS power system – a corded, high-torque, and low-velocity drill with built-in fluid irrigation
- Minimally invasive burrs and Compression FT screws – headless screws with diameters 2.5 mm to 7.0 mm and lengths 8 mm to 140 mm
- MIS Instrument Set – small, reusable set containing common MIS instruments

Thrombinator™ System

The Thrombinator system for use with the Angel® concentrated platelet-rich plasma (cPRP) system is designed to produce autologous serum at the point of care. This autologous serum helps improve the handling of bone grafts hydrated with platelet-rich plasma or bone marrow aspirate by activating platelets to produce a gel that serves as a binding agent for bone graft material. The Thrombinator process applies the principles of the clotting cascade to produce autologous serum without the use of harsh chemical reagents.

- Rapid preparation, less than 20 minutes
- Prepare from whole blood or platelet-poor plasma
- Produces a clot in as little as 15 seconds
- Centrifugation not required
- Heating step not required

Reference
The Loop ‘N’ Tack knotless biceps tenodesis technique is a simple approach to arthroscopic biceps tenodesis using SutureTape FiberLink suture and a SwiveLock anchor. This technique can be performed through one anterior portal with no need to externalize the biceps tendon. The Loop ‘N’ Tack suture configuration has been shown in testing to be equivalent to a standard Krackow stitch with no significant difference in ultimate load, cyclical displacement, or stiffness. The Loop ‘N’ Tack technique has a high rate of patient satisfaction with significant improvement in shoulder outcome scores. Patients who receive a biceps tenodesis have shown a low incidence of post-op pain and cosmetic “Popeye” deformity, which are often associated with tenotomy. The Loop ‘N’ Tack knotless biceps tenodesis technique is an option for surgeons who wish to perform a simplified intra-articular technique or for surgeons who wish to transition from tenotomy to tenodesis.

Using a KingFisher® suture retriever, introduce the tail end of the SutureTape FiberLink suture over the top of the proximal biceps tendon. Retrieve the tail end of the suture from under the biceps tendon and through the anterior portal.

Create a cinch stitch by placing the tail through the loop of the SutureTape FiberLink suture. Advance the cinch stitch through the cannula into the joint and around the desired location of the proximal biceps tendon. The tip of the cannula may be used to direct the cinch stitch to its final location.

To complete the Loop ‘N’ Tack suture configuration, use the grasping BirdBeak® suture passer to drop a folded-over portion of the suture tail into the joint and under the biceps tendon. Introduce the suture passer through the biceps tendon just distal to the location of the cinch stitch to retrieve the suture back through the biceps tendon and out of the anterior portal.

Cut the biceps tendon with a curved scissor at its insertion point on the superior labrum. Care should be taken to avoid cutting the biceps tendon too close to the Loop ‘N’ Tack suture configuration.

Insert the tail end of the SutureTape FiberLink suture through the eyelet of a SwiveLock or PushLock® anchor and fix superior to the subscapularis tendon at the articular margin.

Excess tendon may be trimmed with a shaver or ApolloRF® probe to complete the repair.

References
A: So far, so good. The last thing in the world that I want to do
Q: At Arthrex, we can certainly confirm that there are many
surgeons who have started to perform ACL repairs for well-selected patients. How have your results been?

A: Well, it seems that the ice is starting to break as more and
more surgeons are warming up to the idea that there may be a middle ground with regards to the treatment of ACL injuries. In other words, repairing appropriately selected tear patterns could be an effective treatment option to complement the current binary approach that includes nonoperative treatment and reconstruction as the only options.

Thanks to an incredibly productive 2 years of research led by my research fellow, Dr. Jelle van der List, we have a lot more to talk about with regards to all facets of the discussion surrounding ACL repair. After struggling to get our research even accepted to meetings, it seems as if the worldwide orthopedic community is realizing that “less may be more,” since we now have had posters, presentations, and scientific exhibits at nearly every major meeting and have published over 20 papers and book chapters.

Q: What is the latest news with primary ACL repair?

A: This is really the crux of the repair argument. In a nutshell, the
Q: Speaking in rough numbers, some may say that the failure rate is likely the same or possibly even higher than with ACL reconstruction. Why would a surgeon want to learn a new technique to repair the ligament rather than what they already know, that is, to reconstruct it?

A: This is really the crux of the repair argument. In a nutshell, the recovery from an ACL repair surgery is dramatically quicker and easier on the patient than a reconstruction. The majority of my patients are off narcotic pain medications within 1 to 2 days postoperatively, have full ROM within 7 to 10 days, and can run in a straight line at 4 to 6 weeks post-op. In general, their knees feel relatively normal afterwards, because they are relatively normal, except that the ACL is scarred to the femoral wall rather than having the native taken off. By repairing the native ACL there are no grafts, no tunnels, and you save the nerve endings and blood supply to the ligament. In May 2017, we published an article in The Knee to illustrate to practitioners that ACL repair patients have a much easier go of it than ACL reconstruction patients. We compared 52 ACL primary repair patients to 90 ACL reconstruction patients for the first 3 months post-op. We showed that the repair patients have significantly more ROM at the first post-op visit, and achieve full ROM months faster than the reconstruction patients. In addition, it is a safe operation with very few complications and reoperations, as compared to reconstruction. We also have preliminary data regarding narcotic usage and are seeing that the repair patients are using half as many pills as the reconstruction patients. Close to 25% of the repair patients use no narcotic pills at all after surgery!

We realized that the numbers are small, but also understand that you have to start somewhere. We are now amassing the data on a much larger cohort. We recently presented the results of my first 56 patients at both ESSKA and AOSSM showing 90% successful outcomes at an average follow-up of 3 years. This paper has been accepted and published online. Currently, I have performed over 200 arthroscopic ACL primary repairs and to date have had 14 patients reinjure their ACL that I am aware of. I say reinjure because, aside from the patient that was reported in the first 11 patients who failed his repair at 3 months post-op without a significant trauma, the other patients all reinjured their repaired ACL between 9 months and 2 years post-repair when they experienced another significant injury, usually while playing sports.
It really comes down to the simple question: would you rather have a smaller operation with a quicker recovery and a slightly higher failure rate, or a larger operation with a much longer recovery and a slightly lower failure rate? Certainly the answer to this question will be individual to each surgeon and patient, and it will depend entirely upon the numbers. Based upon my work, with the right tear type and tissue quality, you know what my answer is.

Q: For ACL primary repair, what are your thoughts on using InternalBrace™ ligament augmentation? The InternalBrace technique is used throughout the body for ligament repairs by augmenting with a FiberTape® suture. Does InternalBrace ligament augmentation have a role in ACL primary repair?

A: When the InternalBrace implant first came out, I used it with my suture anchor technique. Gordon Mackay attaches it to the ACL TightRope® implant (Figure 1). I attach it to one of the upper anchors in the femur (Figure 2). It serves as a safety belt. It gives me a sense of calm when I put the InternalBrace implant in a patient, especially high-risk patients such as younger patients and patients with knee laxity. I know the InternalBrace augmentation will back me up so they don’t fail in the case of a fall. The InternalBrace implant will catch so the ACL does not take the full load.

References
All-Inside Meniscal Repair

Purpose
To report the clinical outcomes of pain, function, and quality of life for patients who underwent a meniscal repair with an all-inside technique.

<table>
<thead>
<tr>
<th>Time Point</th>
<th>All-Inside Meniscal Repair Patients/ Total # Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presurgery</td>
<td>797/1209</td>
</tr>
<tr>
<td>6 months</td>
<td>536/1022</td>
</tr>
<tr>
<td>1 year</td>
<td>357/805</td>
</tr>
<tr>
<td>2 years</td>
<td>175/430</td>
</tr>
</tbody>
</table>

Trend Conclusion
Based on these results, there appears to be a decrease in patient pain and an increase in patient function and quality of life. However, further statistical analysis would be needed to determine if these findings have statistical significance.

Reference

Top 10 Most-Viewed Videos of the Year
In keeping with Arthrex’s position as a leader in medical education, we’re delivering exclusive access to our premier surgical technique videos and related science for our emerging technology and techniques through our weekly What’s New email and daily What’s New features on Arthrex.com. Stay connected by signing up to receive:

What’s New emails: https://arthrex.info/WNSTO

Top 10 videos of the year playlist: https://arthrex.info/STOtop10
Click on the title to watch each individual video.

1. Subscapularis Conundra
2. PASTA Repair Using the 3.9 mm Knotless Corkscrew® Anchor
3. Lateral Epicondylitis Debridement and Repair
4. Minimally Invasive Quadriceps Tendon Harvest for ACL Reconstruction
5. Asheesh Bedi, MD – ACL Graft Fixation and the Next Generation
7. Paul C. Brady, MD – Labral Repair: Tips and Tricks
8. Evan S. Lederman, MD – FiberTape® Cerclage System for Shoulder Revision Arthroplasty
9. Patrick Smith, MD – ACL Reconstruction With Patella Tendon Graft Using BTB TightRope® Fixation System and InternalBrace® Ligament Augmentation
10. Laurence D. Higgins, MD, MBA – Cerclage Technique for Proximal Humerus Fractures

Scope This Out is an informational newsletter designed to educate orthopedic surgeons on new products, state-of-the-art surgical procedures, and "pearls" to assist in improving surgical skills.

Arthrex’s Corporate Headquarters is located in Naples, Florida. Additional locations include a global division in Munich, Germany as well as several subsidiaries and distribution centers throughout the world.

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