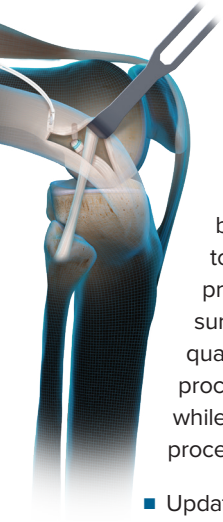
Volume 26, Number 02

SCOPE THIS OUT

A Technical Pearls Newsletter for Orthopedists



Advancements in Quad Tendon ACL Reconstruction

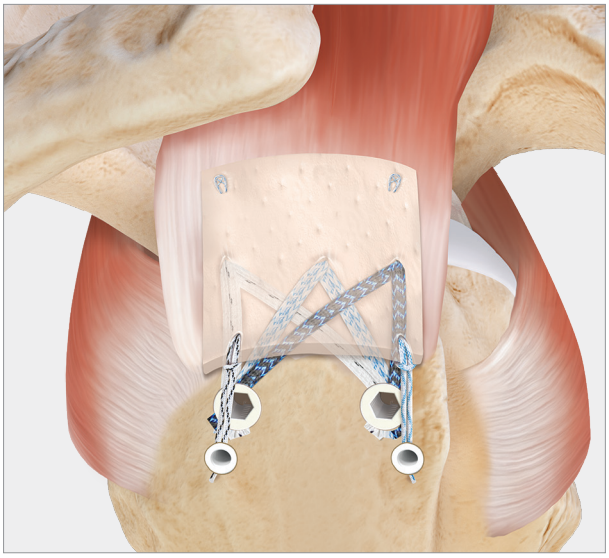
Recently, quadriceps grafts for ACL reconstruction (ACLR) have grown in popularity based on a growing body of evidence supporting lower morbidity and a better stiffness profile.[1] In response, Arthrex continues to enhance its established quad ACLR products, prioritizing positive clinical outcomes while improving surgical efficiency. Innovations include minimally invasive quad harvest and evidence-backed augmentation procedures that help protect the ACL during rehabilitation while reducing retear rates, such as lateral extra-articular procedures (LEAPs)[2,3] and the *Internal*Brace™ technique.[4-8]

- Updated QuadLink™ implant systems are convenient options for all tibial tunnel drilling preferences. All kits include the latest FiberTag® TightRope® II implants, along with LoopLink™ suture and an HD Scorpion™ needle for streamlined closure of quad tendon (QT) defects.
- LoopLink suture facilitates a strong and efficient closure[9,10] of QT, patellar tendon, and iliotibial band defects. Closure with LoopLink suture can be performed with the swaged-on curved needle or through a minimally invasive incision using the FastPass Scorpion™ suture passer.
- Sliding, reusable graft clamps for the GraftPro™ system streamline graft preparation and maximize efficiency by eliminating the need to hold a clamp or lift the post during SpeedWhip™ suturing. Available in tenaculum and soft-tissue options, these clamps feature a sliding trap-door mechanism for simplified suture passage.

References

1. Arthrex, Inc. LA1-00100-EN_K. Naples, FL; 2021. **2.** Sonnery-Cottet B, et al. *Arthroscopy.* Published online June 20, 2025. doi:10.1016/j.arthro.2025.06.012 **3.** Sonnery-Cottet B, et al. *Arthroscopy.* Published online June 20, 2025. doi:10.1016/j.arthro.2025.06.013 **4.** Daniel AV, et al. Orthop *J Sports Med.* 2023;11(7):23259671231178026. doi:10.1177/23259671231178026 **5.** Daniel AV, et al. *Arthroscopy.* 2025;41(1):95-105. doi:10.1016/j.arthro.2024.02.047 **6.** Wilson WT, et al. *Am J Sports Med.* 2023;51(14):3658-3664. doi:10.1177/03635465231207623 **7.** Bodendorfer BM, et al. *Arthroscopy.* 2019;35(7):2114-2122. doi:10.1016/j.arthro.2019.01.054 **8.** Daniel AV, et al. *Arthroscopy.* 2024;40(9):2455-2464. doi:10.1016/j.arthro.2024.01.019 **9.** Arthrex, Inc. LA1-00038-EN_B. Naples, FL; 2017. **10.** Arthrex, Inc. Data on file (Suture strength). Naples, FL; 2020.

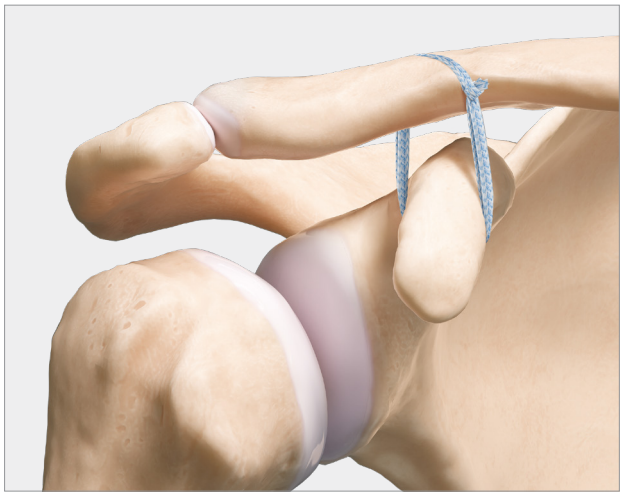
Medial CuffMend™ RCR Augmentation Fixation With the Knotless FiberStitch™ RC Simple



The FiberStitch RC has been a valuable addition to the CuffMend rotator cuff augmentation procedure, providing quick, secure, all-suture fixation of the graft to the tendon. A number of surgeons have adopted the technique of “sandwiching” the graft to the tendon by placing one FiberStitch implant underneath the tendon and another on top of the graft. This method creates a simple and efficient stitch, providing a quicker option for medial fixation of the ArthroFlex dermal allograft. Based on feedback from surgeons, we have developed a new version of FiberStitch RC that has been optimized for this technique. The new FiberStitch RC Simple makes it easy to deploy a single implant under the cuff, then remove the inserter, leaving the second implant above the graft for quick tensioning of the construct.

Upper Extremities

AC FiberTape® Cerclage Implant System



The AC FiberTape Cerclage implant system delivers a streamlined, tunnel-less solution for acromioclavicular (AC) joint repair and reconstruction. By eliminating the need to drill through the coracoid or clavicle, it supports minimally invasive techniques while preserving critical bone structures. The system is designed for versatility across multiple AC repair methods.

Each system is packaged as a complete kit featuring two FiberTape Cerclage sutures, a clavicle drill for the Dog Bone™ button, a single-use tensioner, and a variety of clavicle- and coracoid-passing instruments to facilitate efficient and reproducible surgical workflows. The broad, low-profile configuration of the cerclage sutures promotes optimal compression and secure stabilization of the joint.

Regulatory Roundup

NEW

Each issue, Regulatory Roundup spotlights recent noteworthy regulatory approvals, keeping you informed on Arthrex products and innovations that meet the highest global standards of safety and efficacy.

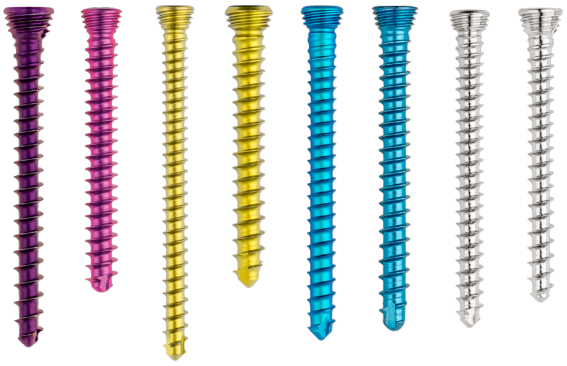
Europe

- FiberStitch™ 1.5 All-Inside Meniscus Repair System
- Knee FiberTak® Suture Anchors
- Univers Revers™ Augmented Modular Glenoid System
- Univers Revers Apex Humeral Stems
- Trochanteric Nail System
- Spine Endoscopes

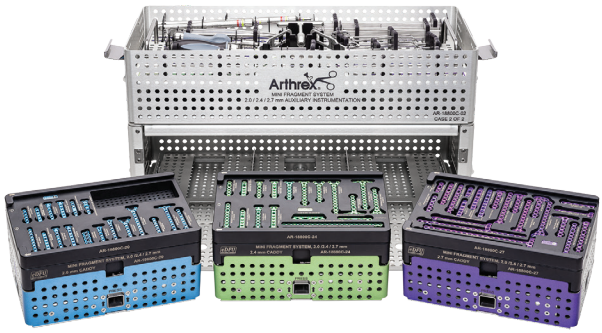
Australia and Japan

- Univers Revers Total Shoulder System

VAL KreuLock™ Locking Compression Screws

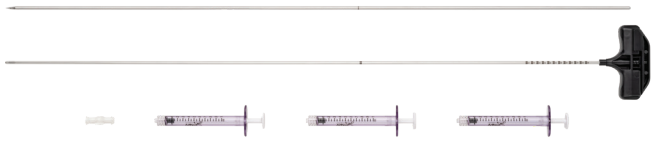


Arthrex has expanded the variable-angle locking (VAL) KreuLock portfolio with several key additions across our plating lines. KreuLock locking compression and variable-angle technology are now available in titanium 2.0, 2.7, and 3.5 mm screws and in stainless steel 2.7 and 3.5 mm screws. With a 30° variable-angle cone and the ability to provide interfragmentary compression across the length of the screw, the patented KreuLock locking compression screws allow surgeons to treat fractures like never before. Arthrex now offers VAL KreuLock technology in every plating system, including market leaders like our stainless steel and titanium Ankle Fracture and Trauma Mini Fragment Systems.



Arthrex Trochanteric Nail Augmentation System

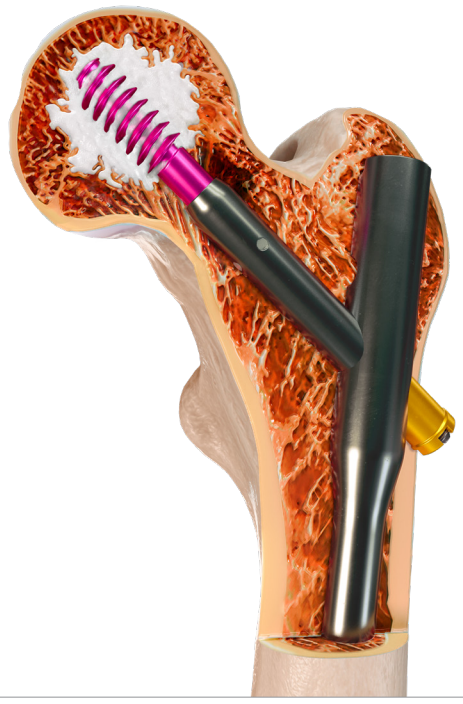
The Trochanteric Nail Augmentation System allows for streamlined and uniform delivery of bone graft to the bone surrounding the lag screw.



The augmentation system features:

- All necessary instrumentation for delivery in one kit, including: a 3.2 mm guidewire, a 3.2 mm delivery cannula, 1 cc syringes, and a female-to-female Luer
- Flexibility in graft selection, with multiple Arthrex flowable bone grafts available, such as Quickset™ calcium phosphate cement, BoneSync™ calcium phosphate cement, and AlloSync™ Pure demineralized bone matrix
- Delivery components uniquely designed for compatibility with lag screw insertion steps and instrumentation

For cases involving revision or patients with poor-quality bone, the augmentation system efficiently integrates into the trochanteric nail case workflow, providing a readily available method for incorporating the benefits of biologics into intertrochanteric fracture treatment.



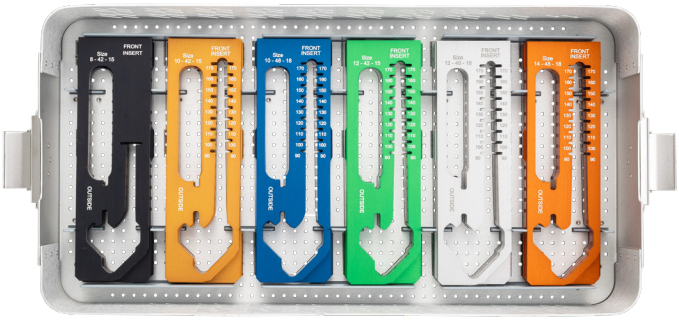
CeMend™ Shoulder Spacer Molds and Arthrex Bone Cement

The combined use of CeMend shoulder spacer molds and Arthrex Bone Cement MV+G enables complete customization to create a monoblock spacer with antibiotic dilution for complex 2-stage revision cases.

CeMend Shoulder Spacer Molds: Disposable cement spacer molds with metal reinforcement stem are indicated for molding a temporary hemi-shoulder replacement in skeletally mature patients undergoing a 2-stage revision procedure due to a septic process.

Disposable Mold for Spacer Realization: Six molds are available, distinguished by the combination of stem and head offset:

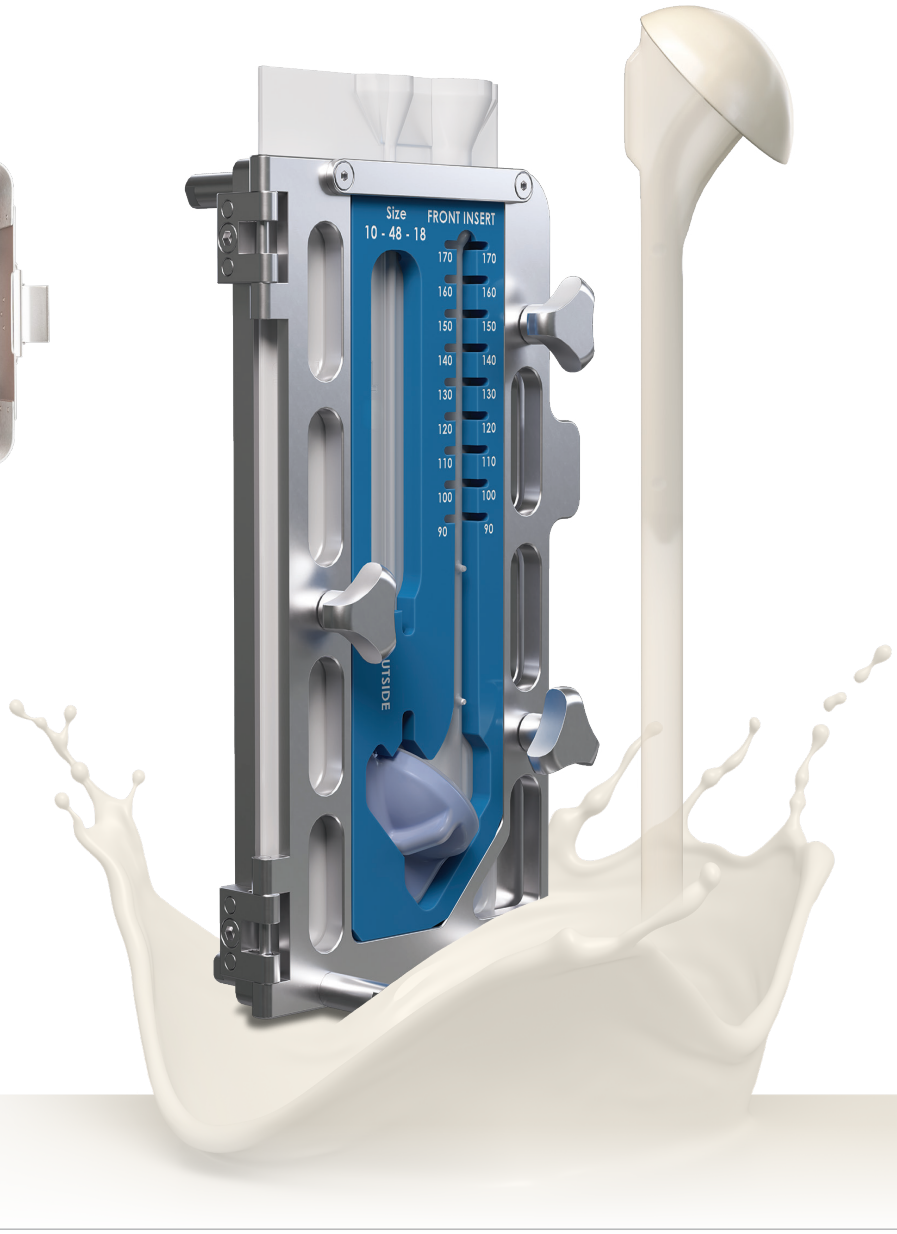
- Stem Ø: 8 mm; head offset: 42-15
- Stem Ø: 10 mm; head offset: 42-15
- Stem Ø: 10 mm; head offset: 48-18
- Stem Ø: 12 mm; head offset: 42-15
- Stem Ø: 12 mm; head offset: 48-18
- Stem Ø: 14 mm; head offset: 48-18



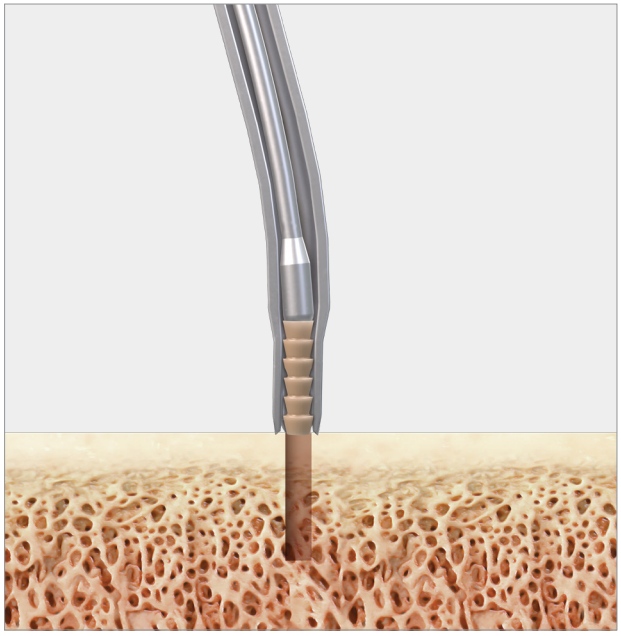
Two metal core extensions can be added for longer molds:

- Use the short extension for stem lengths between 135 and 160 mm.
- Use the longer extension for a 170 mm stem.
- The core extensions provide a higher distal resistance, but their use is not mandatory.

Arthrex Bone Cement is available in 4 options, including high viscosity (HV) and medium viscosity (MV); each is available with or without gentamicin (G). For creating spacer molds, Arthrex MV+G cement is recommended. Use HV cement for more dough-like handling characteristics. CeMend shoulder spacer molds (G21s SpaceFlex) are cleared for use with Arthrex MV+G cement only (K202338). To review indications for additional bone cements, refer to 100923_IFU and 100927_IFU.



Updated 2.4 mm Knotless Hip SutureTak® Anchor Design



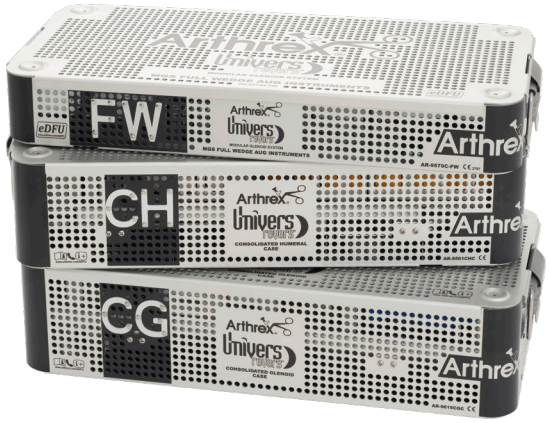
The 2.4 mm Knotless Hip SutureTak anchor recently underwent a valuable design update to reconfigure the interface of the inserter and anchor to a ball-and-socket style. This new feature is designed to reduce edge-loading during anchor insertion, as the convexity of the inserter and concavity of the anchor allow for an even dispersion of force.

Insert the PEEK self-locking knotless implant through straight or curved drill guides and tension incrementally for precise soft-tissue control and positioning during acetabular labral repair.

Watch how to incorporate Knotless Hip SutureTak anchors here.

Univers Revers™ Consolidated Instrument Sets

As the incidence of shoulder arthroplasty in ambulatory surgery centers (ASCs) rises, so does the need to provide surgeons with surgical solutions that align with these evolving care environments. Univers Revers consolidated instrument sets are designed to meet this demand by reducing the overall instrument load. This streamlined system will help to decrease the burden on the back table and in hospital storage, while lowering sterilization costs for each procedure.



Standard Reverse = 2 Trays
Augmented Glenoid = 1 Additional Single-Level Tray

The new sets optimize workflow while maintaining the modularity and implant options inherent to the Univers Revers system and the Modular Glenoid System, both of which are backed by years of peer-reviewed literature.[1] While this new launch does not replace existing instrument sets, it offers a consolidated version for facilities seeking a reduced footprint in routine cases.

Reference

1. Arthrex, Inc. DOC1-000506-en-US. Naples, FL; 2024.

New Innovations in Spine Biologics

Arthrex Spine continues to push boundaries with the launch of the breakthrough **Graft Gun** and **GraftNet™ XL devices**, which are designed to enhance graft delivery and collection during spine procedures.

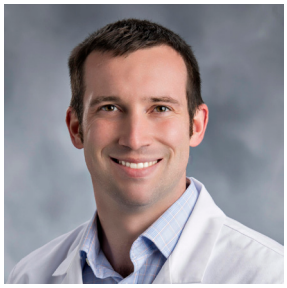
The **Graft Gun** is an ideal delivery solution for spine fusions and is compatible with 100% autograft.[1] The graft gun simplifies graft placement and allows for quicker loading with any type of desired bone graft. Its ergonomic design, enhanced visualization, and controlled delivery promote consistency and confidence, particularly during minimally invasive spine fusions.

Complementing the graft gun is the **GraftNet XL device**, engineered for efficient autograft harvesting during spinal decompression. With a larger collection reservoir and streamlined integration into suction systems, it collects ample graft material effortlessly, maximizing biologic potential without disrupting workflow.

Together, these devices simplify graft management and selection and amplify surgical value—offering surgeons speed, accuracy, and biologic versatility in every case.

Reference

1. Arthrex, Inc. Data on file (APT-1022220). Naples, FL; 2025.



My First 100 Cases

Ryan Sauber, MD
Pittsburgh, PA

As an orthopedic surgery resident, I avoided arthroscopy and gravitated toward spine. Through different channels, I learned about endoscopic spine surgery and realized that if I had a disc herniation, I would need to find an endoscopic surgeon. I could no longer justify performing open or minimally invasive techniques that I would not want for myself.

Endoscopic spine surgery with Arthrex has revolutionized my practice within the first 100 cases. My clinic days have changed, my operating days have changed, my patients have changed, and the way I look at pathology has changed. My journey began just over a year ago and, as expected, has brought both challenges and highlights along the way.

After establishing a good business plan and mission statement, I found support for endoscopic surgery to be high among my orthopedic colleagues and hospital administration. Within the first month of performing this new type of surgery, I was invited to discuss endoscopic spine surgery on a local television network. Referral patterns changed quickly, and I began seeing more second-opinion patients who had been previously advised to undergo open surgery by other surgeons. Eventually, my spine surgery colleagues were referring cases they believed were best suited for endoscopic techniques.

My first two cases went as well as could be imagined. It quickly became the norm for my patients to have essentially no postoperative pain or need for narcotics. I remember looking at my resident and saying, “It can’t be this easy.” Then came some difficult cases. I took some bad trajectories, and had my first case of temporary postoperative radiculitis. It took about 30 cases for me to feel competent and about 50 cases to develop efficiency similar to open or minimally invasive techniques. From that point, I moved on to lateral recess decompressions and performed my first cervical foraminotomy and discectomy.

I am looking forward to performing more and more complex cases in the next year. Arthrex has been instrumental in providing an educational pathway and technical support for cases, as well as mentors to guide me along the way.

A Surgeon's Perspective: Hands-On With the Synergy Power™ System

David Backstein, MD
Naples, FL

As one of the early adopters of the Synergy Power system, David Backstein, MD, from the Hospital for Special Surgery at Naples Comprehensive Health, offers insight into how the system performs in the most demanding procedures.

One of the first features that stood out to Dr. Backstein was the system's intuitive design; he noted that the handpieces feel natural in his hand. "I like the ergonomics," he said. "It's not big or bulky. So I can hit little corners of bone more precisely because I'm not fighting the tool."

Efficiency is another key benefit of the system. With a unique twist mechanism on the drill, it is easy to connect and remove attachments as needed. "There's not a lot of time lost switching between attachments," Dr. Backstein noted. "It's easy, and it doesn't get in the way of the operation."

In arthroplasty, where power tools are pushed to their limits, the Synergy Power system further met Dr. Backstein's expectations. "For me, the instruments really get put to the test, especially when removing implants or working against cement or metal," Dr. Backstein explained. "I've used other systems where the blades break midcase. I haven't had that happen with the Synergy Power system."

Dr. Backstein recalls recent cases involving unusually dense, sclerotic bone. "It was like cutting through rock, but the Synergy Power system handled it well."

When asked what advice he would give to other surgeons considering the Synergy Power system, Dr. Backstein praised its compact footprint. "Most ORs have space constraints. This is a nice, sleek system. Even the batteries and chargers are small."

He added, "The best thing about this system is that it's not going to be the focus of the case. You'll be able to spend your time on what matters—managing the complexity of the procedure."

For Dr. Backstein, it all comes down to the Synergy Power system being a well-designed, reliable system that supports surgical efficiency. "The engineers really listened," he says. "It just works."

The Evolution of Nano Visualization

Chad D. Lavender, MD
Scott Depot, WV

Chad D. Lavender, MD, a nationally and internationally recognized innovator in orthopedic sports medicine, has played an active role in the development of the Nano arthroscopy portfolio since its launch in 2019. Dr. Lavender recently sat down with the Nano Product Management team to discuss the evolution of Nano arthroscopy and its future.

As someone who has been at the forefront of Nano arthroscopy's evolution, what do you consider the most significant advancements and how have they impacted your clinical practice?
In my opinion, the two most significant advances are having the ability to use the NanoNeedle™ and Pano™ scopes to view a picture-in-picture display on a single screen and being able to access multiple viewing angles. In the future, it will be the ability to display images on the main OR screen.

What advice would you give to surgeons who have yet to incorporate the NanoNeedle scope into their practice?
I always tell surgeons to begin their NanoNeedle system experience with a simple case. After that, make sure not to schedule a heavy day and really focus on learning the nuances of performing needle arthroscopy.

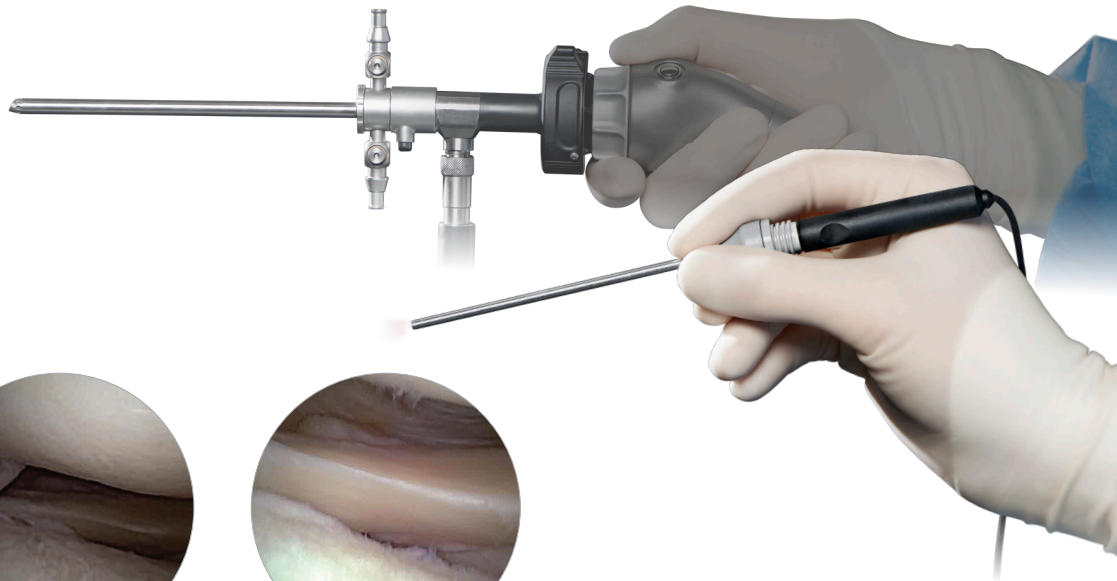
Is there one procedure in which the NanoNeedle scope functions better than a traditional arthroscope?
It's hard to pick one procedure, but I believe that the NanoNeedle scope is perfect for a standard partial meniscectomy knee arthroscopy case, which has been studied in depth. It helps with postoperative narcotic use[1] as well as subjective scores up to 6 weeks out in clinical trials.[2]

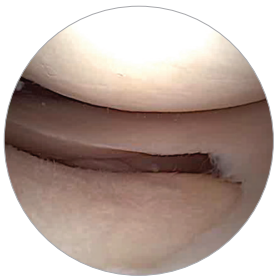
Are there any misconceptions about using Nano arthroscopy in orthopedic surgery?
The biggest misconception I run into is that people believe Nano arthroscopy can be used only in an outpatient setting, such as an office, which is incorrect. I use it primarily in the operating room as a device to help me treat my patients better and safer.

What future advancements or improvements would you like to see in NanoNeedle scope technology?
I believe that in the not-so-distant future, we will see an angled NanoNeedle scope that provides similar angulation to the 30° scope we use in the OR. As visualization continues to improve, we will have the capabilities to leverage multiple screens and views during the same case.

References

1. Bradsell H, Lencioni A, Shinsako K, Frank RM. In-office diagnostic needle arthroscopy using the NanoScope™ arthroscopy system. *Arthrosc Tech.* 2022;11(11):e1923-e1927. doi:10.1016/j.eats.2022.07.006
2. Schaver AL, Lash JG, MacAskill ML, et al. Partial meniscectomy using needle arthroscopy associated with significantly less pain and improved patient reported outcomes at two weeks after surgery: a comparison to standard knee arthroscopy. *J Orthop.* 2023;41:63-66. doi:10.1016/j.jor.2023.06.003





Standard 4K Diagnostic Scope

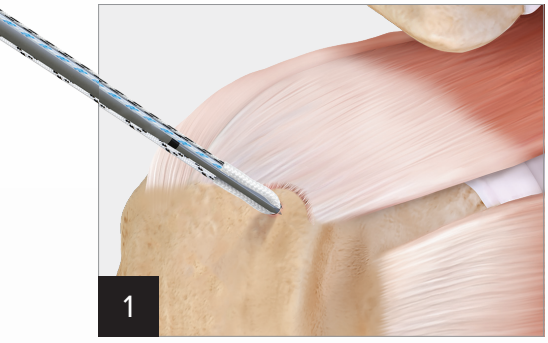
NanoNeedle Scope 1.0

NanoNeedle Scope 2.0

IN THE Loop...

Double-Loaded Tensionable Knotless Anchor Technology

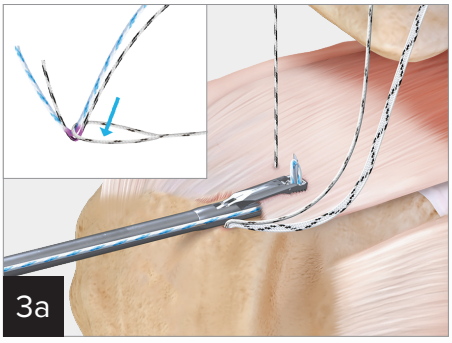
Double-loaded tensionable knotless technology enhances rotator cuff repair by giving surgeons precise control over tensioning with two independent sutures. These sutures are passed separately through the cuff, shuttled together through the knotless anchor, and tensioned individually for optimal fixation. This efficient technique is ideal for small rotator cuff or upper-border subscapularis tears, allowing two suture passes to be secured at a single fixation point.



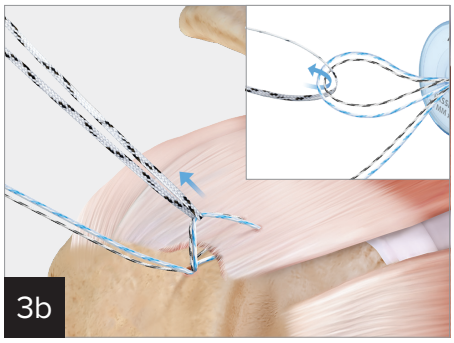
Using a standard viewing portal, assess the size and mobility of the cuff tear. Use standard techniques to prepare the soft tissue and footprint.

Align the anchor perpendicular to the bone. Use a mallet to insert the self-punching anchor, stopping at the laser insertion zone marked on the inserter shaft.

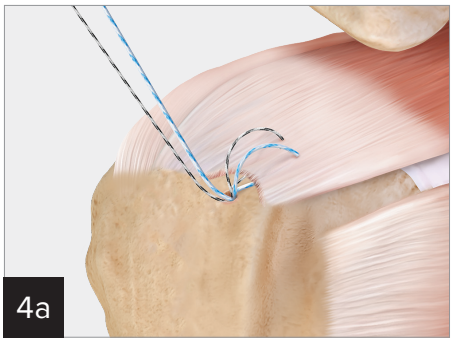
Once the anchor has reached the laser insertion zone, remove the suture retention ring from the inserter handle and remove the inserter from bone. To set the anchor, grab all of the suture limbs and slowly pull back until resistance is met.



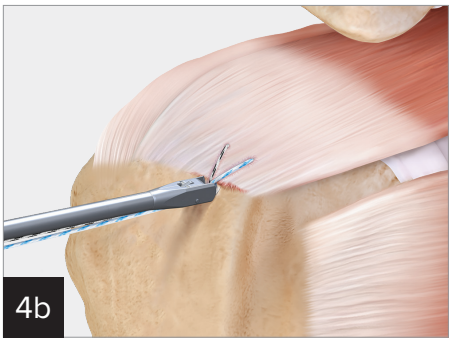
Pass each repair suture separately through the rotator cuff using a Scorpion™ suture passer. Once both sutures are passed, load them through the loop and convert the anchor.



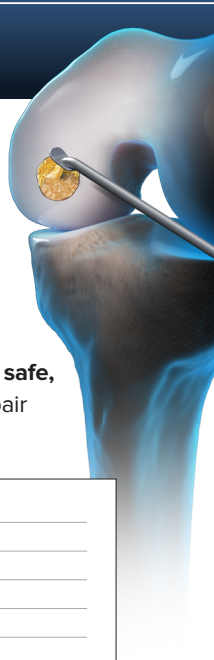
Optional: After the anchor has been converted, load the shuttle link through the loops of the repair sutures, outside of the lateral cannula, to use as a counter-tension to provide more control while reducing the repair sutures to help prevent any suture tangles.



Once the repair sutures have been tensioned down and are both within the arthroscopic scope view, remove the shuttle link. Tension can then be applied to each repair suture individually.



After final tension has been achieved on each repair suture individually, cut the two repair sutures.



AutoCart™ Procedure: 2-Year Clinical Outcomes vs MACI and Other Procedures

The AutoCart procedure is a **single-stage autologous cartilage repair technique** that allows surgeons to treat focal cartilage defects using the patient's own viable cartilage fragments, collected intraoperatively with the **GraftNet™ autologous tissue collector**.

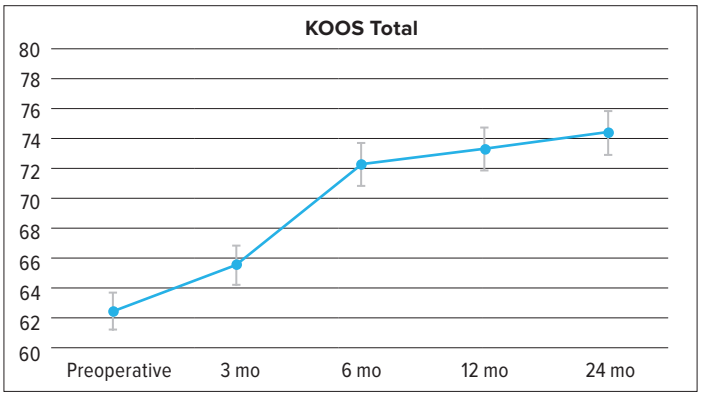
This approach builds on principles of autologous chondrocyte implantation (ACI) but eliminates the need for a staged procedure. Two recent articles highlight the procedure's positive long-term outcomes.

Study 1: 2-Year Clinical Outcomes Following the AutoCart Procedure

This prospective case series published in the *Orthopaedic Journal of Sports Medicine* followed 62 patients up to 2 years postsurgery (34 male, 28 female; mean age 38.8 ± 10.8 years).[1]

Outcomes

- **KOOS total:** Improved from 62.4 ± 13.1 to 74.4 ± 15.9 ($P < .001$)
- **Secondary outcomes:** VAS, WOMAC, and SANE all improved significantly at 2 years



Takeaway

Patients treated with the AutoCart technique showed **excellent clinical and radiological outcomes**, comparable to other widely used cartilage repair techniques, reinforcing its safety and effectiveness.

Study 2: AutoCart Technique vs MACI vs AMIC

This retrospective matched-pair analysis published in the *Journal of Clinical Medicine* compared 2-year patient outcomes following three different autologous cartilage repair techniques: the AutoCart technique, MACI (matrix-induced autologous chondrocyte implantation), and AMIC (autologous matrix-induced chondrogenesis).[2]

Outcomes

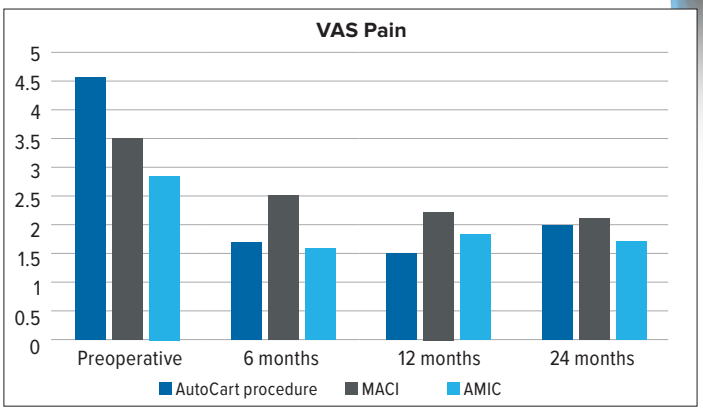
- All 3 resulted in significant pain and function improvement
- AutoCart technique showed greatest improvement in VAS pain, KOOS pain, KOOS ADL, and KOOS QOL scores

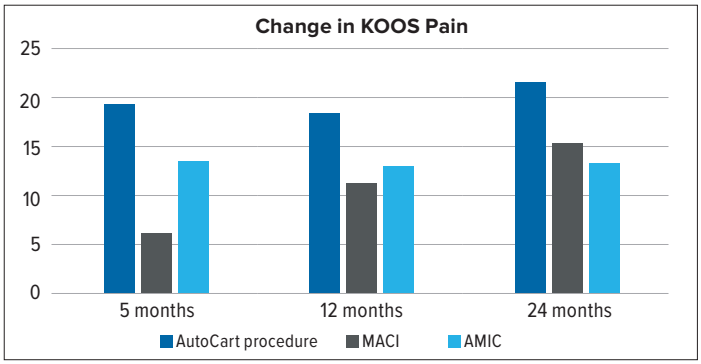
Takeaway

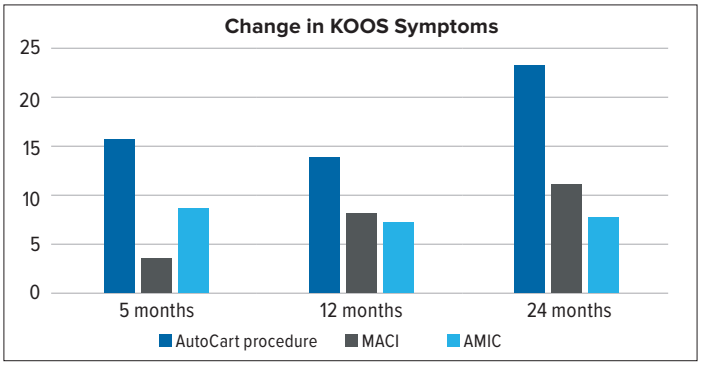
While all three techniques are viable, **the AutoCart technique had the highest magnitude of improvement**, suggesting **faster recovery** and **greater potential for success** in treating focal cartilage lesions.

Summary

Growing evidence supports the AutoCart technique as a **safe, efficient, and highly effective** approach for cartilage repair that uses autologous tissue with no cell culture required.







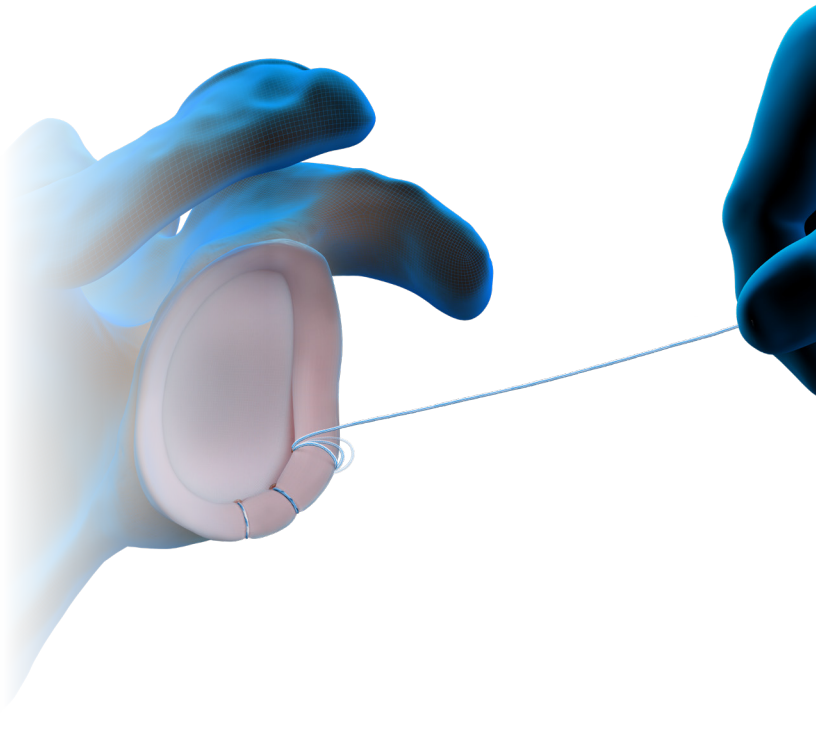
Reference

1. Schneider S, Ossendorff R, Walter SG, et al. Arthroscopic autologous minced cartilage implantation of cartilage defects in the knee: a 2-year follow-up of 62 patients. *Orthop J Sports Med*. 2024;12(12):23259671241297970. doi:10.1177/2325967124129797
2. Schneider S, Linnhoff D, Ilg A, Salzmann GM, Ossendorff R, Holz J. Comparison of three different techniques for the treatment of cartilage lesions-matrix-induced autologous chondrocyte implantation (MACI) versus autologous matrix-induced chondrogenesis (AMIC) and arthroscopic minced cartilage-a 2-year follow-up on patient-reported pain and functional outcomes. *J Clin Med*. 2025;14(7):2194. doi:10.3390/jcm14072194

Research Corner

95% Return-to-Sport Outcome Using FiberTak® Soft Anchors for Glenoid Labral Repair

This study by Loeb et al (2025)[1] investigated the clinical outcomes of arthroscopic glenoid labral repair using FiberTak all-suture anchors, a technique that offers several theoretical advantages such as reduced bone removal, minimized anchor migration, and decreased risk of synovitis or chondral injury. In a cohort of 529 patients, 372 had follow-up data, and among those, 28 (8%) required further ipsilateral shoulder surgery for recurrent instability.



Patients who did not require further surgery showed significant improvements in patient-reported outcomes, with ASES scores rising from 62.1 to 92.7 and WOSI scores from 47.5 to 85.4 over an average follow-up of 3.3 years. Factors such as younger age, competitive athletic status, and inferior labral tear location were associated with better outcomes, while concomitant biceps tenodesis was linked to lower scores.

Importantly, the study highlights a high rate of return to sport among competitive athletes, with 95% of those attempting to return reaching their preinjury level. This suggests that all-suture anchor repairs not only provide strong clinical outcomes but also support athletic performance recovery. The low rate of revision surgery and meaningful improvements in shoulder function underscore the technique's effectiveness and durability over time and support the use of FiberTak all-suture anchors as a viable option for labral repair, especially in younger, active populations.

Reference

1. Loeb AE, Moore Z, Ithurburn MP, et al. Outcomes of glenoid labral repair using all-suture anchors. *Orthop J Sports Med*. 2025;13(5):23259671251338802. doi:10.1177/23259671251338802

Outcomes of Glenoid Labral Repair Using All-Suture Anchors

Arthrex®

arthrex.com

SCOPE THIS OUT

Scope This Out is an educational newsletter designed to inform orthopedic surgeons about innovative products, cutting-edge surgical techniques, and practical tips ("pearls") to enhance their surgical expertise.

Arthrex global 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.