

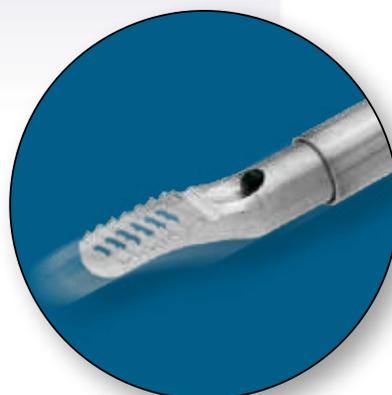
SCOPE THIS OUT

A Technical Pearls Newsletter for Arthroscopists.....

Synergy^{HD3}

Arthrex will be introducing the future of visualization systems at the AAOS in San Francisco, February 2012. The Synergy^{HD3} system combines a state-of-the-art 1080p HD video processor, a high output LED light source and full-image management capabilities in one intuitive, simple-to-use console.

Synergy^{HD3} can be activated, preferences set, controlled and viewed remotely via computer or tablet device. Authorized users can remotely view live procedures from any computer in the world. Used in conjunction with the Synergy iPad Surgeon APP, images and video are seamlessly streamed and accessed via the surgeon's personal iPad or iPhone. Images and videos can be viewed, edited and annotated as desired. The APP also enables the surgeon to create a quick slideshow for the patient's family immediately post-op. Simply by entering an email address, the slideshow and any other selected information, including links to surgeon's practice, physical therapy or various instructions, can be immediately sent to the patient providing them all pertinent information in one email document.



PowerRasp

Maintain precise control during bone debridement procedures with the reciprocating PowerRasp. Available in 4 mm and 5.5 mm widths to accommodate a variety of joint spaces and anatomy, the PowerRasp easily connects to any APS Shaver Handpiece for fast and convenient transitions from shaver to rasp function. The PowerRasp quickly creates

a smooth, flat surface that is ideal for subacromial decompressions, notchplasties or ankle fusions. Perforations in the rasp surface and aspiration through the shaft keep the rasp surface and your field-of-view clear of bone debris.

While the aggressive rasp surface reciprocates 1.5 mm, only the tissue and bone that you want to debride is affected because the smooth sides and rounded tip protect against damage to surrounding tissue during operation.

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PRODUCT INFO

Upper Extremity

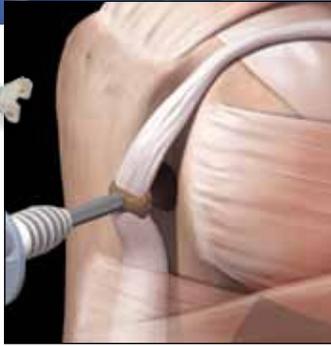
SwiveLock Tenodesis

The SwiveLock Tenodesis implants are designed for all-arthroscopic proximal biceps tenodesis. This efficient system was designed to save steps and minimize the length of the procedure.

The implants feature a unique, PEEK forked tip that is used to steer the biceps tendon to the bottom of the bone socket without the need to externalize or whipstitch the tendon. There is no need to predetermine tendon length, as position and tension are easily set and visualized prior to final anchor insertion. Strong fixation is obtained by simply advancing the preloaded SwiveLock Tenodesis Screw.

The system also features Piloted Headed Reamers with built-in guide tips that eliminate the need to ream over a guide pin. The reamers are packaged sterile and are available in .5 mm increments. The forked tip SwiveLock Tenodesis implants are available in BioComposite and PEEK materials and in 7, 8 and 9 mm diameters.

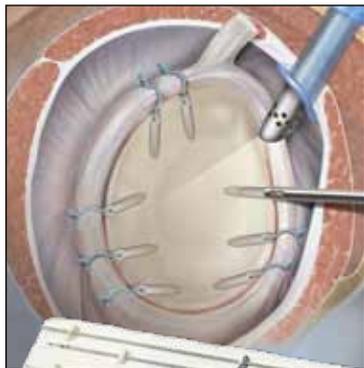
For surgeons who prefer a traditional whipstitching approach, the BioComposite SwiveLock Tenodesis Screws are also available with a PEEK closed-eyelet. In 6.25, 7, 8 and 9 mm diameters.



3 mm SutureTak Percutaneous Kit

A Percutaneous Insertion Kit for the 3 mm SutureTak family is now available. Like the existing kit for the 2.4 mm SutureTaks, the new kit allows the 3 mm SutureTak to be placed at the perfect angle for every anchor position around the glenoid. The kit conveniently

packages all necessary components: A spinal needle is used to precisely localize the portal. A blunt, 1.1 mm pin is placed through the spinal needle and is followed by a portal dilator and drill guide allowing for easy percutaneous anchor placement.



2 mm SutureTak

The new 2 mm SutureTak is the smallest suture anchor available on the market. SutureTaks have a great clinical history with over 1,200,000 anchors implanted worldwide. This new 2 mm anchor has 29 lb's pull-out strength in a 1.5 mm drill hole. It comes loaded with a #1 FiberWire providing great strength and low profile knot stacks. This proven anchor design is available in both BioComposite and PEEK materials and should provide superior bone integration characteristics when compared to competitive anchors.¹



2.4 mm BioComposite SutureTak

- 2.7 mm mean bone tunnel diameter (a)
- Outer surface is closely apposed to trabecular bone
- No evidence of inflammatory/foreign body response

JuggerKnot

- 6.3 mm mean bone tunnel diameter (b)
- Cystic cavity lined w/thin rim of cortical bone
- Cavity filled w/fibrous tissue and suture

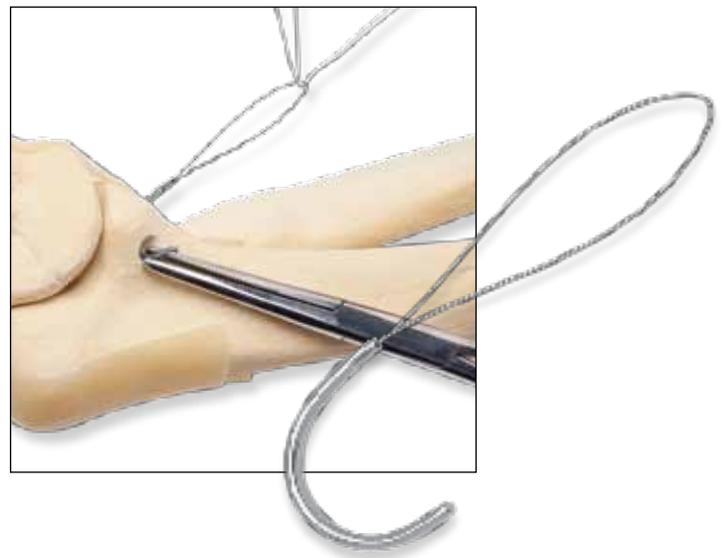


1. J. Cook, *Histological Analysis of the 2.4 mm BioComposite SutureTak and JuggerKnot Suture Anchor*, Arthrex white paper

Ulnar Collateral Ligament Reconstruction

The Arthrex disposable kit, used with the Ulnar Collateral Ligament reconstruction (Tommy John procedure) instrument set, will be updated to include a blunt tip, curved needle with loop used to pass the graft and suture through a bone tunnel in the sublime tubercle.

After using the V-Guide and drill to make precise intersection tunnels in the sublime tubercle, the disposable kit currently has a twisted wire with a curve on one end and is very useful for passing a suture graft. The addition of a blunt tip curved needle with loop will provide an alternative method for graft passing. Look for this new addition to the disposables kit in the first quarter of 2012.





Transosseous Suture Passer

The Transosseous Suture Passer features a malleable shaft, a durable Nitinol capture loop, comfortable handle, and is made available sterile. The Nitinol loop is a robust design resulting in a reliable instrument allowing for multiple suture passes without failure. The applications for this instrument are well established and include any passing of grafts or suture through bony sockets and tunnels. This device is an attractive and economically-minded alternative to the Hewson Suture Passer.

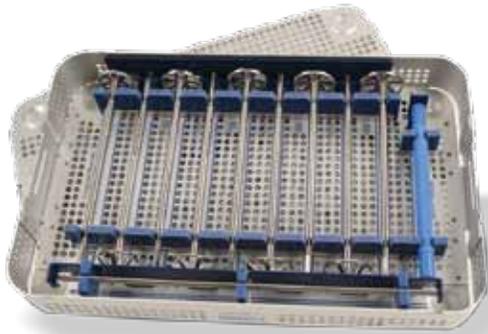
Implant Additions to the Univers II System

Arthrex is pleased to introduce 56 mm Humeral Heads to the Univers II System. The Univers II System now offers surgeons the most comprehensive head selection of any anatomic system on the market. The system includes nine Humeral Head diameters in 2 mm increments, as well as two heights for most diameters. In addition, extra large Keeled and Pegged Glenoids are now available.



Univers II Congruent Glenoid Reamer Set

In a study by Lynch et al,* a series of patients undergoing humeral hemi-arthroplasty with concentric glenoid reaming demonstrated improvement in self-assessed shoulder comfort and function. The Congruent Glenoid Reamer Set was developed for use in Univers II hemi-arthroplasty cases when concentric glenoid reaming is desired.

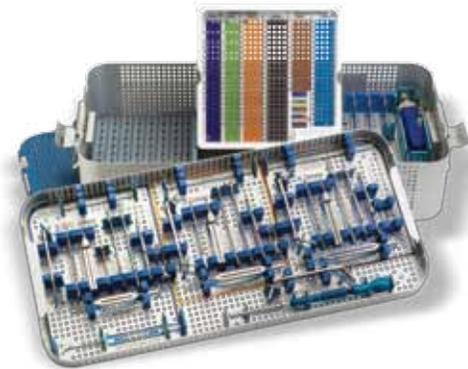


*JR Lynch, AK Franta, WH Montgomery, Jr, TR Lenters, D Mounce and FA Matsen, III, *Self-Assessed Outcome at Two to Four Years After Shoulder Hemi-arthroplasty with Concentric Glenoid Reaming*, J Bone Joint Surg Am, 2007;89:1284-1292.



Achilles SpeedBridge Update

The Achilles SpeedBridge has quickly become the gold standard for insertional Achilles repairs. With over 2,000 implanted in less than a year, the Achilles SpeedBridge has proven to be a high quality repair in a sensitive operative area. The SpeedBridge doubles the strength over the standard two-anchor repair and the SwiveLocks allow for a true knotless construct. The great strength of FiberTape and its larger footprint maximizes contact and compression between the Achilles tendon and the calcaneus and can possibly lead to early return to activity. The SwiveLock-C anchor is the only bioabsorbable knotless anchor on the market and the 2 mm FiberTape provides broad compression and tissue cut-through resistance. These characteristics have made the Achilles SpeedBridge the go-to procedure for insertional Achilles repairs.



QuickFix Cannulated Screw System Update

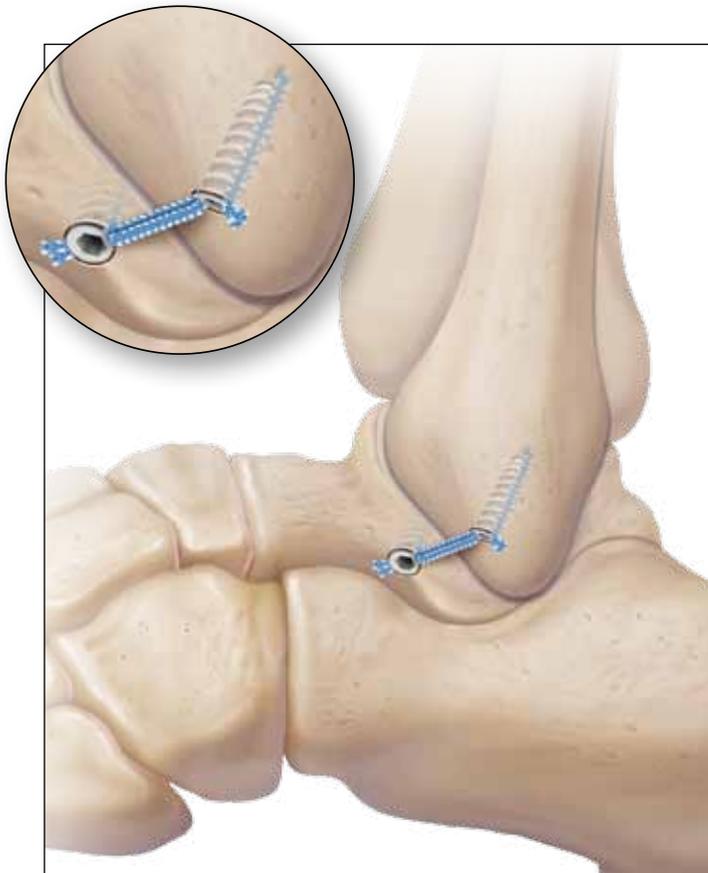
The QuickFix Cannulated Screw System is ideal for indications such as fractures of the phalanges, metacarpals, carpals and distal radius. In addition, it provides stabilization for joint fusions, corrective osteotomies and arthrodesis of the hand and other distal extremity applications. This comprehensive system is designed to address most clinical situations and to place multiple, intraoperative solutions in the surgeon's hands. The instrumentation offers some unique options to simplify and save procedure time – **separating this set from the competition:**

- Complete set - Full range of partially threaded titanium, self-drilling & tapping
- Cannulated screw options in 2, 2.4, 3 and 4 mm diameters
- Long lasting - Type II anodized titanium
- Easy to use - Color-coded implant and instrument tray saving OR time
- Hexalobe drive - Superior driver engagement providing less potential for screw stripping

InternalBrace - Ligament Repair Augmentation Kit *Double the fixation strength of your lateral ankle ligament repair*

This simple, safe and reproducible procedure can augment the standard lateral ankle ligament repair procedure. Whether suture repair alone, or with the addition of a tendon graft, the *InternalBrace* can support the primary repair using two anchors (SwiveLock) in combination with FiberTape, a uniquely blended form of UHMW polyethylene suture. After predrilling the fibula 1 cm from the tip proximally, an initial 3.5 mm SwiveLock preloaded with FiberTape is placed axially in the fibular neck. After loading the talar anchor (4.75 mm SwiveLock) with the other end of the FiberTape, a second hole is drilled at the site of the normal anatomic attachment of the ATF on the talus. The 4.75 mm anchor is placed and the thumbpad is held steady until the anchor is flush with the talus. A small hemostat can be placed under the FiberTape at the fibular/talar connection, thereby preventing over-tightening of the construct.

The *InternalBrace* offers the surgeon and patient many benefits. After the procedure, no cast is needed and early mobilization can start which will improve patient comfort. The potential for earlier recovery exists as the FiberTape bridge between the fibula and talus parallels the ATF ligament, adding much needed support for the ligaments to heal in the normal anatomic position. The implant kit construct, which includes a 3.5 mm and 4.75 mm SwiveLock, anchors the construct with the robust FiberTape bridge. The strength of this construct may allow the surgeon the option of leaving the peroneal brevis tendon intact, assuming they would use a portion of this for another augmentation procedure. This construct may also offer resistance against future injury, while providing some joint protection against instability and associated arthritis.

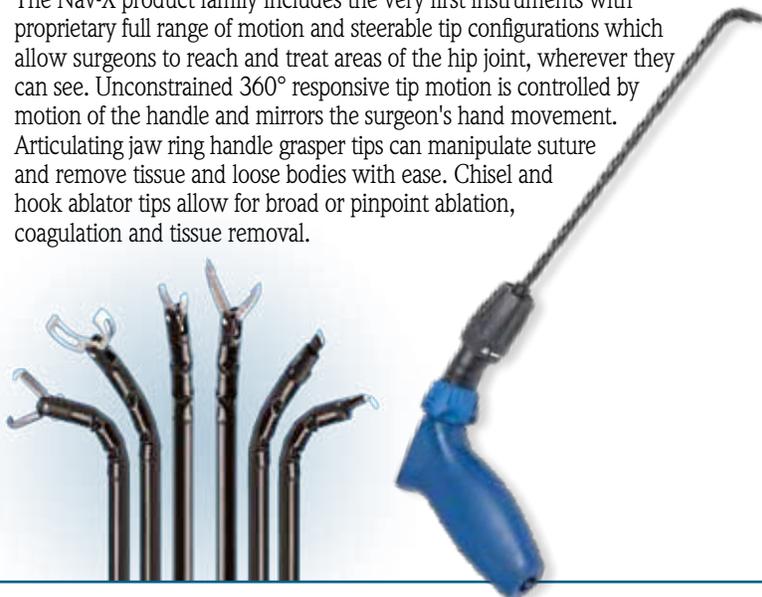


NEW Hip Distraction System

The Hip Distraction System is a safe, secure and easy-to-use supine limb positioning and hip joint distraction device for hip arthroscopy procedures. It can easily be assembled and attached to standard OR beds and also stored away in its own compact storage cart when not in use. The system, including lightweight and rigid carbon-fiber leg spars, prevents unnecessary intra-operative motion. The leg spars are identical, facilitating balance traction on both lower extremities and correct pelvic positioning. The traction and limb position controls are clearly labeled and intuitive for the OR staff. The next generation secure foot holders provide the ultimate protection, while eliminating foot slip-out and can be detached intraoperatively from the carriage to allow for ROM cycling of the hip. The system also includes a multi-layered foam perineal post pad with a disposable hygienic soft cover to reduce sheer forces across the patient's skin. *Available Spring 2012.*

Nav-X Steerable Monopolar Ablators and Ring Handle Graspers

The Nav-X product family includes the very first instruments with proprietary full range of motion and steerable tip configurations which allow surgeons to reach and treat areas of the hip joint, wherever they can see. Unconstrained 360° responsive tip motion is controlled by motion of the handle and mirrors the surgeon's hand movement. Articulating jaw ring handle grasper tips can manipulate suture and remove tissue and loose bodies with ease. Chisel and hook ablator tips allow for broad or pinpoint ablation, coagulation and tissue removal.



Pointers & Pearls

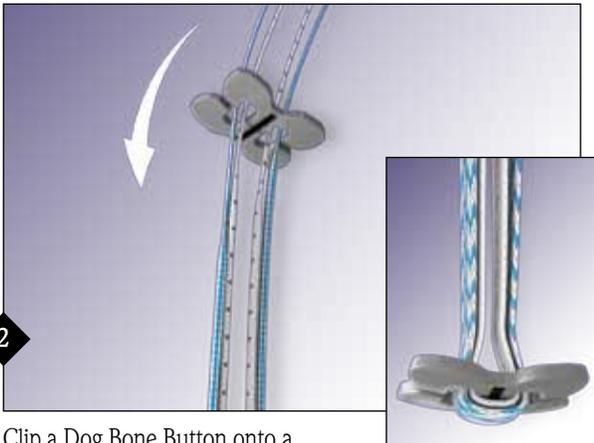


1

Drill the clavicle and coracoid tunnels and retrieve a Nitinol wire from the pin.

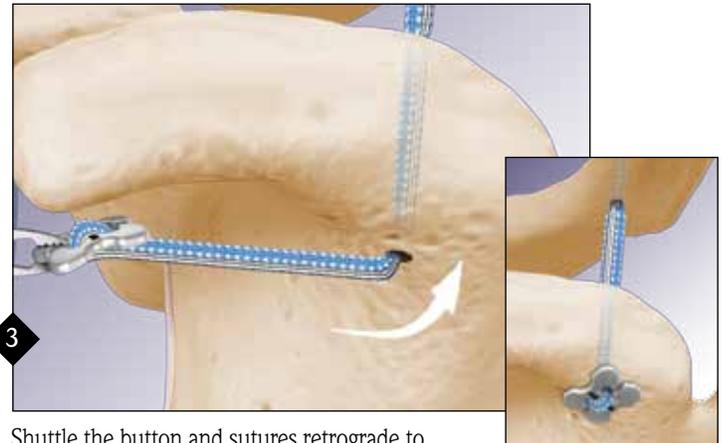
Dog Bone Button for AC Joint Repair

The Dog Bone Button is a precontoured button that allows the use of multiple FiberTapes for AC joint reduction, providing a construct that is twice as strong as existing AC joint repair devices. Since the buttons are attached to the FiberTapes independently, only suture material is passed through the clavicle and coracoid tunnels, allowing the repair to be completed through 3 mm tunnels. Tunnel drilling is made easier with new AC guide arms and a 3 mm Cannulated Drill. The guide arms feature angled tips and two posts to help seat the guide firmly against the base of the coracoid and the 3 mm Cannulated Drill allows for one-step tunnel drilling, eliminating the need to drill over a guide pin.



2

Clip a Dog Bone Button onto a FiberTape and TigerTape.



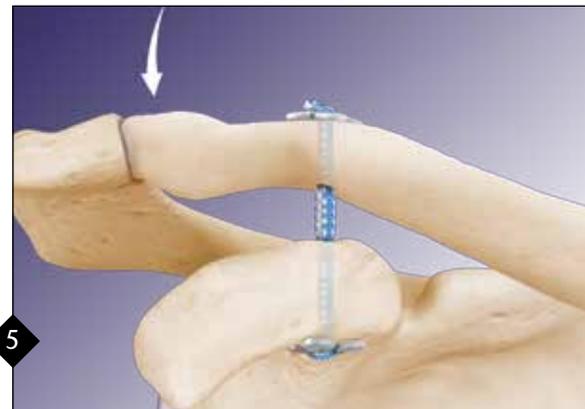
3

Shuttle the button and sutures retrograde to seat the button at the base of the coracoid.



4

Clip a second Dog Bone Button onto the suture limbs exiting the clavicle.



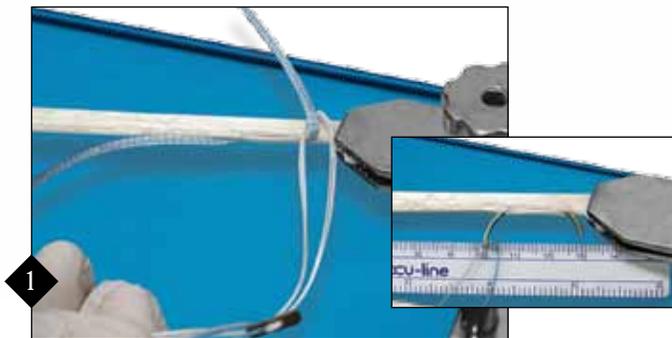
5

Reduce and tie like FiberTape limbs over the button.

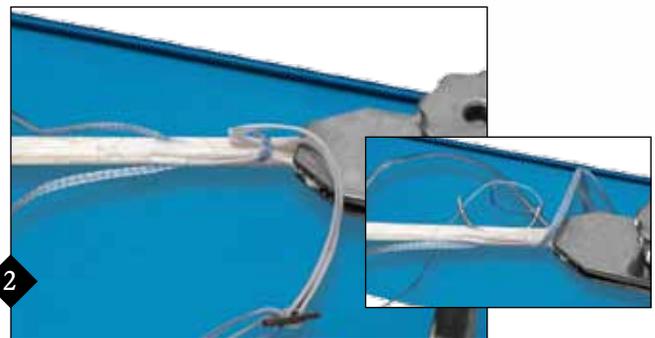
IN THE Loop

FiberTape Reinforced Whipstitch Technique for Single-Strand Fixation on a Knotless TightRope

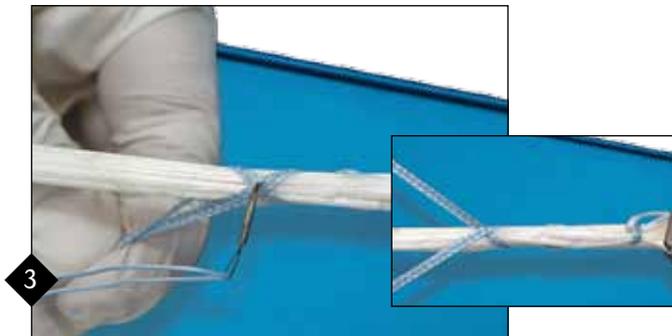
This new technique was developed to reinforce the traditional tendon whipstitch with FiberTape. In initial testing, it reduced displacement allowing single-strand tendon repair with a knotless TightRope, particularly in distal biceps repair.



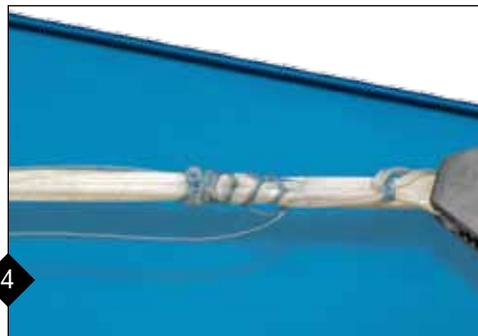
1 Using a curved free needle, pass the end of a FiberTape through 20 mm of the distal end of the tendon. Pull the FiberTape fully into the tendon and pass the loops of a Knotless TightRope over the distal end of the FiberTape.



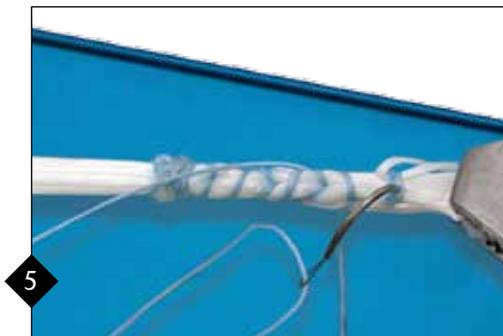
2 Pass the FiberTape up the other side of the tendon. Pull the FiberTape to create a small loop near the distal end of the tendon which has trapped the loops of the Knotless TightRope.



3 Cross the free ends of the FiberTape over each other. Make the first pass of the FiberLoop whipstitch pass directly through both FiberTape strands. Cut the loose ends of the FiberTape.



4 Continue whipstitching towards the distal end, attempting to pass through the FiberTape strands as often as possible.



5 At the distal end, pass the needle directly through the FiberTape loop, being careful not to pierce the Knotless TightRope loops.



6 Pass a locking stitch proximal to the previous two stitches.



7 Tie a six-throw surgeon's knot using the free ends of the FiberLoop to complete the construct.

A tendon is secured to a graft prep station to represent a torn distal biceps tendon. Materials used include a free curved needle, FiberTape, FiberLoop and an ACL TightRope.

What's in My Bag?

Featuring: David M. Caborn, M.D.
*Clinical Professor of Orthopaedic Surgery
and Team Physician for University of Louisville, KY*

Anatomic, Single-Socket, Double Bundle GraftLink Technique

Q. What is your goal when approaching ACL Reconstruction?

A. To reestablish the biophysiometry of the native ACL through anatomic reconstruction. This is accomplished by filling the native ACL footprints, obtaining proper graft orientation and tensioning, maximizing fixation with aperture compression and cortical suspension, achieving balanced double bundle load sharing throughout the construct and minimizing mid-bundle bulkiness.

Q. How are you addressing these goals in your technique?

A. The FlipCutter allows unconstrained placement of anatomically located sockets. Additionally, because of the flexibility in drilling the angle, I can create oval sockets, instead of round, which are analogous to the native ACL shape. The TightRope DB allows controlled aperture-bundle orientation, tensioning and compression which more closely reproduces ACL physiometry.

Adequate, consistent construct strength is achieved with cortical fixation of the button, while the wedge increases stiffness through aperture compression. This all is accomplished without graft damage and slippage seen with interference screw fixation. Interlinkage of all components within the construct creates a balanced system and specific bundle orientation minimizes midgraft diameter and potential impingement.

Q. What are some of the technical pearls to this technique?

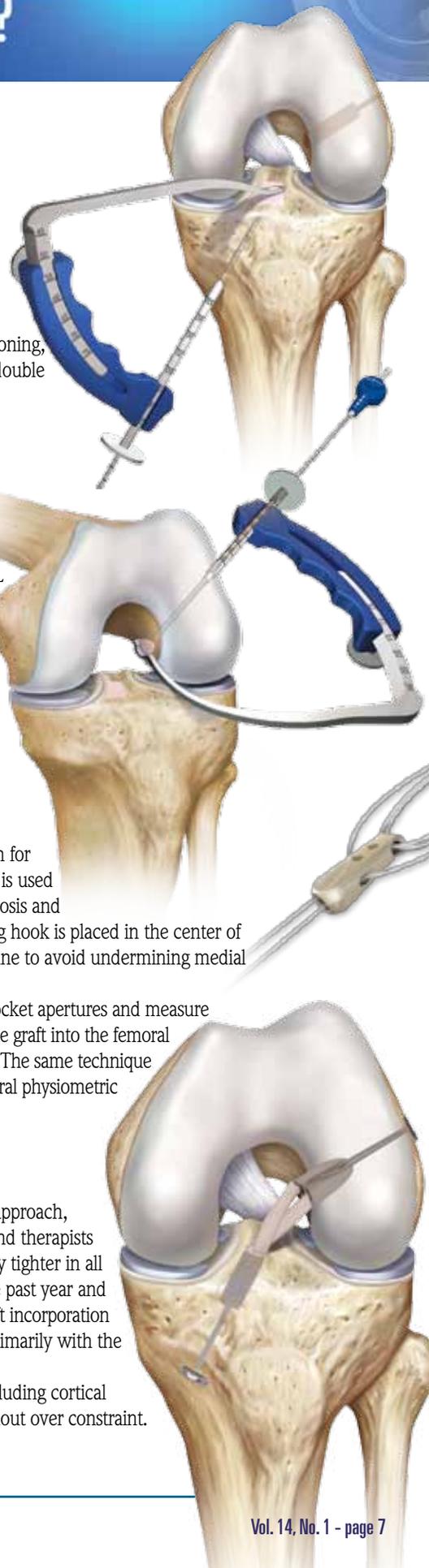
A. Allograft or autograft soft tissue may be used and is folded around femoral and tibial ACL TightRope DB implants and clamped on the graft prep workstation. I mark the graft at 20 mm for the femur, 25-27 mm for intraarticular length and 20 mm for the tibia. A #2 or #0 TigerLoop is used to sew the wedges to the graft. Graft diameter at each end is routinely 11 mm for semitendinosus and 11.5 mm for tibialis. The femoral guide is set to 110-115° parallel to the floor and the marking hook is placed in the center of the footprint. The femur is drilled to 27 mm. The tibial guide is set to 55° more towards midline to avoid undermining medial subchondral bone.

The tibial socket is also drilled to 27 mm. I make sure and clear the soft tissue around the socket apertures and measure the depth on both sides, especially anterior on the femur and posterior on the tibia. I advance the graft into the femoral socket first, using a blunt trocar to control graft rotation, while lightly tensioning the TightRope. The same technique is performed on the tibial side. I then range the knee to allow bundles to assume their final natural physiometric orientation and fix at 20° of flexion with final tensioning.

Q. Have you seen a difference in patient outcomes?

A. Minimally invasive FlipCutter incisions cause less periosteal irritation and pain. An all-inside approach, with complete socket fill, causes less swelling and earlier functional muscle return. Patients and therapists reestablish range of motion early and report normal gait patterns. The knees seem functionally tighter in all three planes without evidence of over constraint. I have now followed over 80 cases over the past year and have only had one revision. This was a midsubstance graft failure and it demonstrated good graft incorporation on arthroscopic inspection without evidence of osteolysis. The construct was easily revised primarily with the same technique.

I feel that this is the only system to combine all desired features of ACL reconstruction including cortical fixation, aperture compression, bundle orientation, selective tensioning, and load sharing, without over constraint. This can all be accomplished with a technique that is simple, versatile and reproducible.



What's New at SOS?

Featured Article

Lubowitz JH, Smith PA, *Current Concepts in Clinical Research: Web-Based, Automated, Arthroscopic Surgery Prospective Database Registry* [published online ahead of print November 22, 2011]. *Arthroscopy*. 2011 In this article Drs. Lubowitz and Smith compare and contrast the major web-based outcome registries currently available to orthopaedic surgeons. Characteristics, advantages, and drawbacks of each system are defined for easy comparison.

Studies available now: Knee Arthroscopy, Shoulder Arthroscopy and Arthroplasty, and Foot & Ankle

Program Improvement:

- Patient surveys useable on touchscreen devices such as iPads

Features of Version 2 (expected spring 2012):

- New studies: Knee Arthroplasty, Hip Arthroscopy, and Hand & Wrist
- Ability to customize the data to be collected
- Attach images/files
- Create printable notes for patient cases
- Translations to patient surveys: German, Spanish, Portuguese, Dutch, and French

Testimonials:

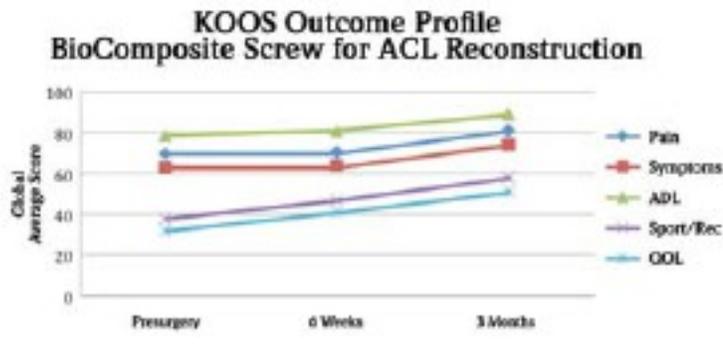
"SOS is an outstanding system that allows the clinical surgeon to perform dynamic outcome studies with state-of-the-art psychometric tools and online survey mechanisms. Having these tools at our disposal allows us to do large scale collaborative multi-center and global studies in our respective areas of specialization. SOS is a major innovation that will have tremendous impact to clinical science and patient care."

Bert Mandelbaum, M.D. - Santa Monica Orthopedic Group, CA

"Orthoillustrated SOS allows validated post-surgical patient outcome data collection using automated web-based technology with minimal surgeon effort and cost. In addition to research benefits, this data may become essential to support arthroscopic, financial compensation under health care reform."

James H. Lubowitz, M.D. - Taos Orthopedic Institute, NM

Global Average Trend Report



STO Featured Product Information

Synergy ³ Console.....	AR-3200 0001
Synergy ³ Camera Head.....	AR-3210 0001
PoweRasp, 4 mm x 13 cm.....	AR-8400PR
PoweRasp, 5.5 mm x 13 cm.....	AR-8550PR
BioComposite SwiveLock Tenodesis, forked eyelet, 7-9 mm.....	AR-1662BC-7 - 9
PEEK SwiveLock Tenodesis, 7-9 mm.....	AR-1662PLS-7 - 9
BioComposite SwiveLock Tenodesis, closed eyelet, 6.25 mm.....	AR-1662BC
BioComposite SwiveLock Tenodesis, closed eyelet, 7-9 mm.....	AR-1662BCC-7 - 9
Piloted Headed Reamers, 6-10, .5 increments.....	AR-1450-1458
SutureTak Percutaneous Kit, 3 mm.....	AR-1934PI-30
BioComposite SutureTak, 2 mm.....	AR-1934BCF-20
PEEK SutureTak, 2 mm.....	AR-1934PF-20
UCL Suture Passing Disposables Kit.....	AR-7715-4.5
Transosseous Suture Passer.....	AR-1000
Humeral Head, 56 mm x 22 mm.....	AR-9156-22P
Humeral Head, 56 mm x 24 mm.....	AR-9156-24P
Keeled Glenoids, small, medium & large.....	AR-9104-01, 02, & 03
Pegged Glenoids, small, medium & large.....	AR-9105-01, 02, & 03
Univers II Congruent Reamer Set.....	AR-9200RRS
Achilles SpeedBridge.....	AR-8928BC-CP
QuickFix Cannulated Screw System Instrument Set.....	AR-8737S
InternalBrace Ligament Repair Augmentation Kit.....	AR-1678-CP
Hip Distraction System.....	AR-6529S
Nav-X Steerable Grasper, Alligator Hook.....	AR-6528-03
Nav-X Steerable Grasper, Loose Body.....	AR-6528-04
Nav-X Steerable Suture Retriever.....	AR-6528-05
Nav-X Steerable Grasper, KingFisher.....	AR-6528-06
Dog Bone Button, two required.....	AR-2270
FiberTape, 7 inches (blue).....	AR-7237-7
TigerTape, 7 inches (blue).....	AR-7237-7T
AC Joint Reconstruction Master Set.....	AR-2255MS
Drill, cannulated for AC Repair, 3 mm.....	AR-2257D-30
FiberLoop.....	AR-7234
ACL TightRope.....	AR-1588T
ACL TightRope DB, 7 mm wedge.....	AR-1588TDB-7
ACL TightRope DB, 9 mm wedge.....	AR-1588TDB-9

For more information or to order, contact your Arthrex representative or call Customer Service at 800-934-4404.



Scope This Out is an informational newsletter designed to educate orthopaedic surgeons on state-of-the-art surgical procedures and "pearls" to assist in improving surgical skills. This newsletter is published quarterly by Arthrex, Inc., exclusively for the orthopaedic surgeon community.

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