

# SCOPE THIS OUT

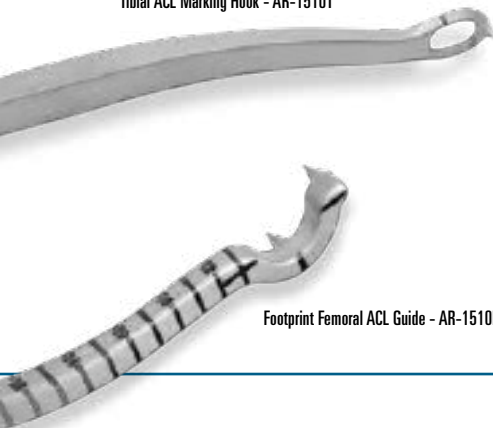
A Technical Pearls Newsletter for Arthroscopists.....

## NEW ACL ToolBox Reconstruction Set

The ACL ToolBox was designed to fit the needs of modern ACL reconstructions. The streamlined three-layer case contains all the reusable instruments needed to complete the majority of common ACL procedures and contains an additional “pin mat” area for customization. The ACL ToolBox *now* contains the RetroConstruction Guide System with commonly used ACL marking hooks such as the footprint guides for femoral ACL drilling. Variable drill sleeves are included for all techniques and can be used with standard 2.4 mm pins, 3 mm RetroDrill Pins and the 3.5 mm FlipCutters. Everything needed to complete an ACL reconstruction can be found in this case including graft harvesting, notch preparation, tunnel drilling, graft passing and fixation instruments.



Tibial ACL Marking Hook - AR-1510T



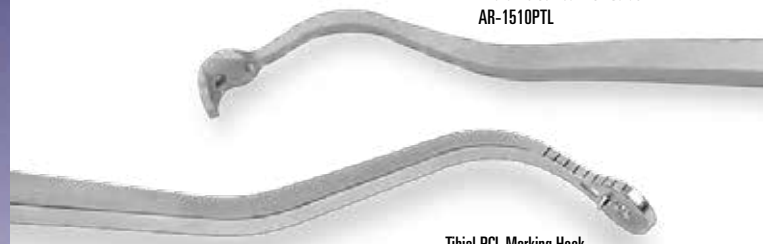
Footprint Femoral ACL Guide - AR-1510FL

## NEW PCL ToolBox Reconstruction Set

The PCL ToolBox provides all the necessary instruments to perform a variety of modern PCL reconstruction techniques all within one streamlined set. The set includes the RetroConstruction Drill Guide System with drill sleeves for use with FlipCutter, RetroDrill and standard 2.4 mm guide pins. Femoral and tibial RetroConstruction marking hooks allow reproducible and safe placement of pins and drills into the anatomic footprints. The set also provides Double Bundle Femoral Drill Guides, curved instruments for tibial preparation, Knee Obturator for safe and easy posterior portal placement, the “Worm” Curving Suture Passer, Tunnel Plugs, drills, screwdrivers, notchers and other accessories all in one location. The PCL ToolBox facilitates standard transtibial PCL reconstruction as well as modern techniques such as the arthroscopic inlay and GraftLink all-inside PCL.



Anatomic Contour PCL Guide  
AR-1510PTL



Tibial PCL Marking Hook  
AR-1510PT

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# PRODUCT INFO

## Upper Extremity

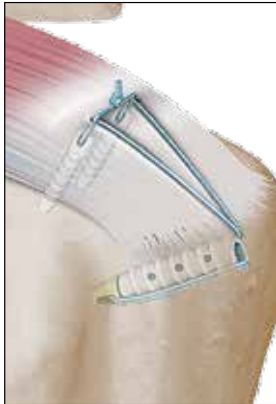
### #5 FiberWire Suture Kit

Managing multiple sutures during open arthroplasty procedures is made easier with three distinct suture colors. This suture offering includes a blue, white, and black/white #5 FiberWire, each with a 1/2" circle Conventional Cutting Needle attached to one end. The convenience pack helps to ensure suture management and procedure efficiency for all of your arthroplasty needs.



### PASTA Bridge Repair

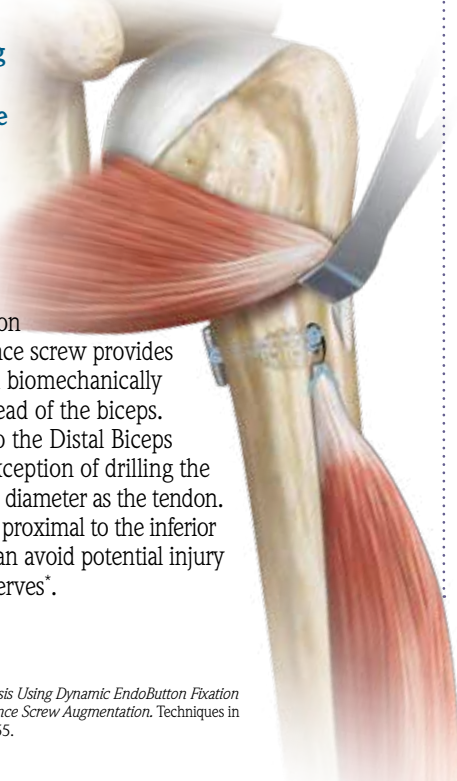
The PASTA Bridge technique simplifies PASTA repair while providing a secure bridging construct that enhances footprint compression to maximize contact between tendon and bone. The technique allows for percutaneous transtendon anchor insertion through a 3.25 mm incision with no arthroscopic suture passing or knot tying, creating a simple reproducible technique.



*PASTA Bridge Kit is now available.*

### Subpec Tenodesis Using the BicepsButton and Tension Slide Technique

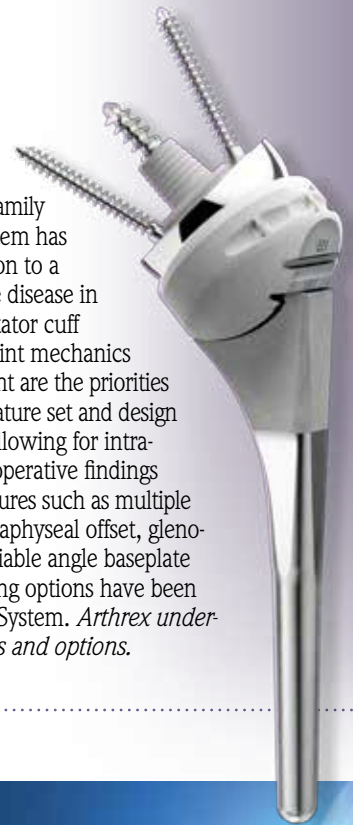
The BicepsButton and Tension Slide Technique is ideally suited for subpec proximal biceps tenodesis. Similar to distal biceps repair, cortical button fixation coupled with an interference screw provides a simple, reproducible and biomechanically stable repair of the long head of the biceps. The technique is similar to the Distal Biceps Repair System with the exception of drilling the unicortical tunnel the same diameter as the tendon. Drilling the tunnels 2-3 cm proximal to the inferior border of the pec tendon can avoid potential injury to the radial and axillary nerves\*.



\*Mithoefer K, *Subpectoral Biceps Tenodesis Using Dynamic EndoButton Fixation in a Humeral Bone Tunnel with Interference Screw Augmentation*. Techniques in Shoulder & Elbow Surgery. 2011; 12: 51-55.

### Univers Revers

The Univers Revers Shoulder System is an essential component and complement to the Arthrex family of shoulder arthroplasty. The system has been developed to restore function to a shoulder with advanced cartilage disease in the presence of an irreparable rotator cuff defect. Individually optimizing joint mechanics and deltoid tension for each patient are the priorities reflected in the Univers Revers feature set and design flexibility. Developing a system allowing for intraoperative choices based on intraoperative findings was key to the design group. Features such as multiple inclination angles, cup sizes, metaphyseal offset, glenosphere geometries, as well as variable angle baseplate screws and liner/spacer tensioning options have been employed in the Univers Revers System. *Arthrex understands surgery is about decisions and options.*



# PRODUCT INFO

## Knee and Hip

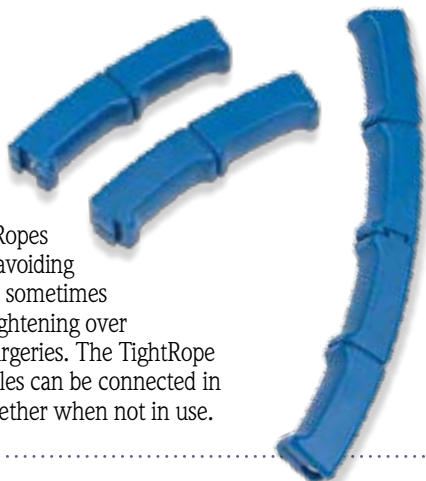
### iBalance PFJ – Patellofemoral Joint Arthroplasty System

The iBalance PFJ (patellofemoral joint) System is a complete partial knee resurfacing solution for patients with isolated patellofemoral joint degenerative changes. The system utilizes low profile, anatomic implants, with an open trochlear articulation that minimizes constraint and flexion problems common in traditional PFJ implant designs. A single tray of instrumentation provides a platform that allows for predictability and reproducibility in patellofemoral arthroplasty.



## TightRope Suture Tensioner Handles

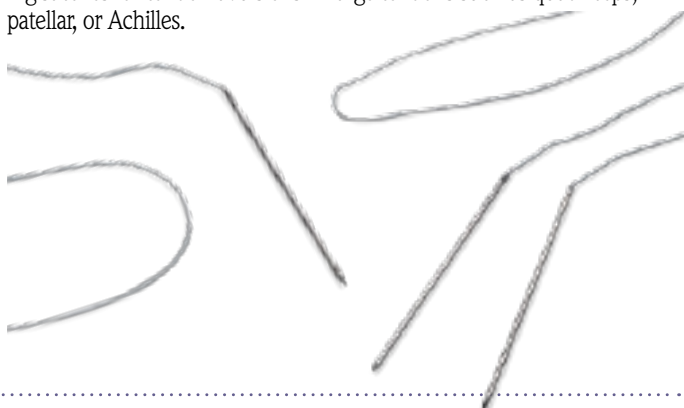
The TightRope Suture Tensioner Handles offer surgeons the ability to tension TightRopes more effectively, while avoiding the discomfort that can sometimes occur with repetitive tightening over the course of several surgeries. The TightRope Suture Tensioner Handles can be connected in order to keep them together when not in use.



## #2 FiberWire with Straight Needles

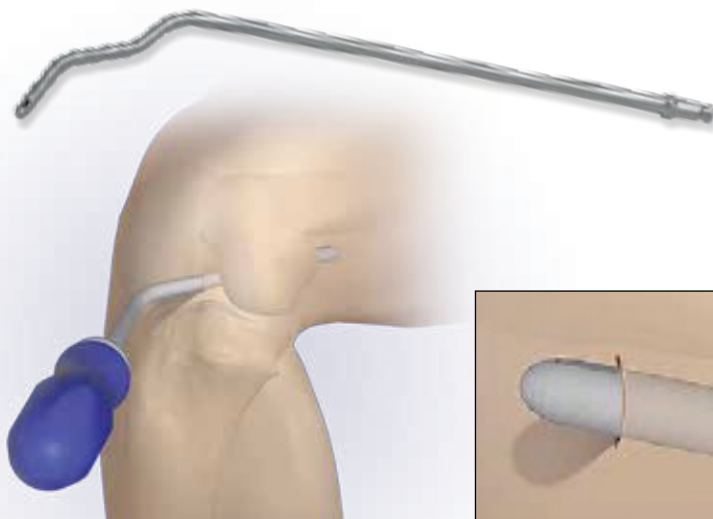
The new FiberWire with Straight Needle constructs include a 38" FiberWire with 64 mm needle on one end; and 38" FiberWire with a 64 mm needle on both ends.

These new products are ideal for quickly creating a variety of locking stitches for tendon avulsions in large tendons such as quadriceps, patellar, or Achilles.

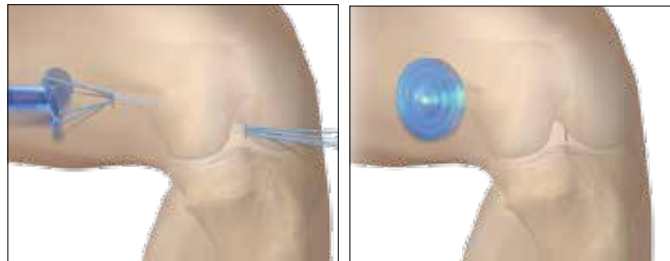


## Knee Obturator for Posterior Portals

The Knee Obturator has been specially designed to simplify the location and creation of posterior knee portals, as well as introduction of a cannula. Posterior portals are often necessary for several common procedures such as: loose body removal, PCL reconstruction, meniscal root avulsion repair and popliteal cyst debridement.



Current outside/in techniques can be time-consuming and put posterior structures at risk of damage with sharp spinal needles and scalpels. The Knee Obturator lets surgeons quickly create the portal from the inside/out. The unique curvature fits around the cruciate ligaments and around the back of the femoral condyles. The tapered eyelet tip facilitates insertion of a PassPort Button Cannula with a traction suture or acts as a switching stick for cannula insertion.



The PassPort sutures are placed into the Knee Obturator eyelet and pulled through the knee. The PassPort Button Cannula is pulled into place.

## InternalBrace Ligament Augmentation Repair for MCL

The *InternalBrace* Ligament Augmentation Repair for the MCL is a simple, safe, and reproducible technique designed to augment traditional MCL repair procedures. Utilizing the BioComposite SwiveLocks and FiberTape, the *InternalBrace* Ligament Augmentation Repair procedure allows the surgeon to repair medial knee instability through minimally invasive incisions.



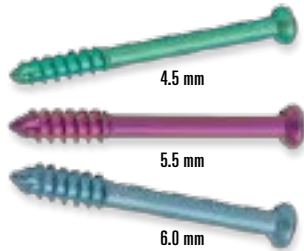
# Distal Extremities



## Fifth Metatarsal Fracture Set

The 5th Metatarsal Fracture System is a comprehensive, uniquely designed screw and plate system that gives surgeons a variety of options to efficiently and effectively treat complex 5th metatarsal fractures. The robust solid titanium 4.5 mm, 5.5 mm and 6.0 mm screws range in size from 40-65 mm, offering more options for the surgeon. The screws feature a small low profile head for less soft tissue irritation for the patient. Cannulated drills and taps are included for fast reproducible results. The ergonomic drill guides were also designed to get the “high and tight” position on the 5th metatarsal base.

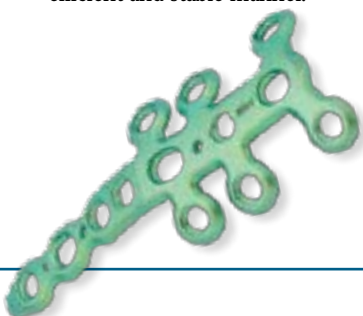
A second option is a low profile hook plate designed for the more comminuted proximal 5th metatarsal fracture. It features a compression hole and 2.4 mm locking, variable angle locking screw. The plate is appropriately sized and contoured for the 5th metatarsal offering another option for the surgeon for difficult revision cases where a screw may no longer be a good option.



## Medial Column Fusion Plate

The new Medial Column Contoured Plates are uniquely designed for the medial architecture of the foot. The plates can be used for the complicated Charcot arthropathy case or for the revision triple arthrodesis. It is also perfectly contoured for the patient needing an arthrodesis with extensive osteoarthritis of the midfoot including the naviculo-cuneiform joints and tarso-metatarsal joints. The dorsal and plantar tabs on the plate can be bent to form a cage-like structure for the medial column of the foot, or they can be resected if not necessary. Each tab includes the possibility of placing locking screws into a section of bone in multiple planes. This can be complemented by eccentric compression slots in the middle of the plate to individually compress each section of the arthrodesis individually.

The distal portion of the plate can also be resected if not necessary and the oblique compression slots can be used eccentrically or with an oblique compression screw, providing a lag effect. All the features of this plate combine to help the surgeon fuse multiple joints at once in a very efficient and stable manner.



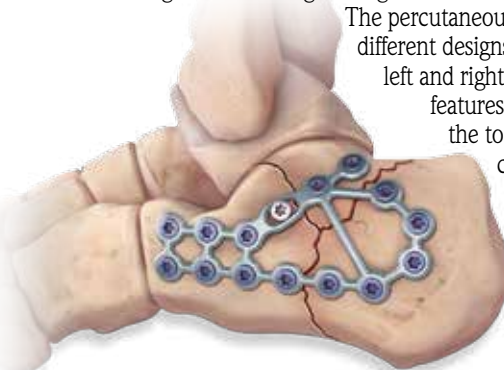
Designed in conjunction with Nicholas Abidi, M.D.

## Calcaneal Fracture System

The new Calcaneal Fracture System is the most comprehensive solution for calcaneal fracture fixation, featuring calcaneal fracture-specific instrumentation such as 5 mm Schanz pins, plate cutter, Keyless Chuck Handle, and sayer and key elevators. Implants include low profile 1.35 mm titanium locking plates that are designed to minimize soft tissue irritation.



The plates accept a full range of screws from 3.5 mm nonlocking, 3.5 mm locking, 3.5 mm variable angle locking (+/-15°), and 4.0 mm cancellous screws. The perimeter plates are available in x-small, small, medium and large in left and right designs.



The percutaneous plates include five different designs including specific left and right plates. All of these features give the surgeon the tools to address all classifications of calcaneal fractures.

# Imaging & Resection

## The Suctioner

The Suctioner is a high quality anti-fatigue surgical mat that provides the highest level of ergonomic comfort available, as well as quiet, continuous suction to remove fluids from the operative floor. The anti-fatigue memory foam provides relief even during the longest arthroscopic surgeries. The Suctioner features graduated slots that remove fluids via gravity to the active suction tubes along the sides of the mat. The Suctioner can be attached to any operating room vacuum system. The Suctioner also features a high quality anti-slip 36" x 56" absorbable mat to catch any fluids that may not be captured by suction and to securely maintain its position after the desired placement.



# IN THE Loop

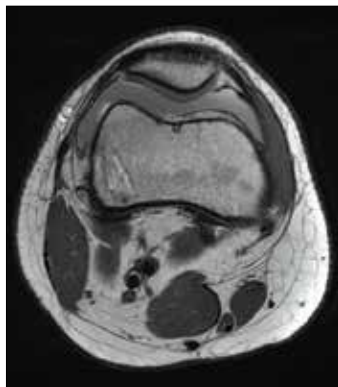
## BTB TightRope – Case Studies by James M. Paci, M.D.

Stony Brook University School of Medicine

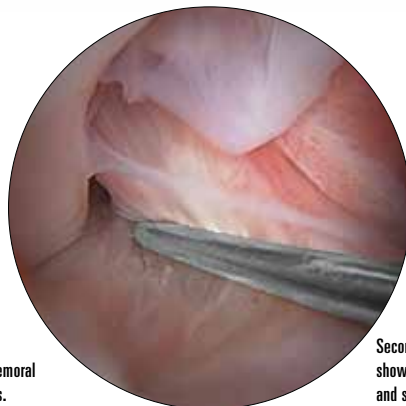
*“I have incorporated the BTB TightRope into regular use in my practice for a number of reasons. My goal during ACL reconstruction is consistent anatomic tunnel placement, with graft fixation strength allowing for accelerated rehabilitation. I prefer to use the FlipCutter technique for femoral tunnel preparation, as I have found it to be the most easily reproducible anatomic femoral tunnel preparation technique in my hands. By using the BTB TightRope, I am able to “flipcut” my femoral tunnel and not worry about interference screw divergence with my femoral bone block, potentially compromising my graft fixation. In fact, I am now getting superior fixation strength due to the cortical button fixation provided by the BTB TightRope.*

*In addition, I have found this technique to be more efficient than interference screw fixation. Also, with BTB TightRope, I am able to achieve compression fixation of the block within the tunnel – allowing for circumferential bone-to-bone graft healing. This has been backed up with follow-up MRIs in two of my patients at 4 and 7.5 months post-op. Overall, I have found this to be a reliable, efficient and reproducible technique for patella tendon ACL reconstruction.”*

### Case One 16-year old female soccer player, 7.5 months post-op from ACL reconstruction with BTB TightRope



MRI shows the bone block from patellar tendon graft well integrated into the femoral socket at 7.5 months.

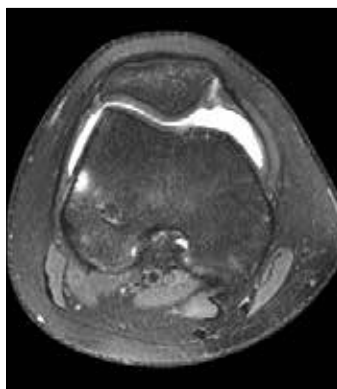


Second-look arthroscopy shows graft well incorporated and synovialized.

### Case Two 15-year old female soccer player 4 months post-op from ACL reconstruction with BTB TightRope



3-month x-rays show a TightRope button in place on the lateral cortex. The femoral socket is barely visible, suggesting good incorporation of the patella tendon graft.



4-month MRI shows good incorporation of the patella tendon bone block into the femoral socket.



Second-look arthroscopy demonstrates a well-fixed graft at 4 months.

# What's in My Bag?



*Featuring William T. Pennington, M.D.*

*The Orthopedic Institute of Wisconsin, Franklin, WI  
Midwest Orthopedic Specialty Hospital*



**Q. How has the implementation of Synergy<sup>HD3</sup> impacted your practice?**

A. Our hospital, the Midwest Orthopedic Specialty Hospital (MOSH), is a joint venture with 50/50 ownership between a physician investment group and Wheaton Franciscan Health Care. When creating our hospital, it was our mission to put the patient first and develop all of our care pathways with the thought of delivering the highest quality, state-of-the-art orthopaedic care to our patients that would ultimately lead to superior clinical results and patient satisfaction. Implementing the most current surgical methods, as well as remaining on the cusp of all developing technology, has certainly assisted us in our efforts to become a center of excellence in orthopaedic care. Our efforts focusing on quality delivery of patient care has been acknowledged by being awarded the prestigious Press Ganey Inpatient Summit Award in 2012. Since the implementation of Synergy<sup>HD3</sup> with the Physician App into our arthroscopic program, our Press Ganey outcome scores measuring patient satisfaction have improved 7% in mean score and 193% in percentile ranking. These measurements are representative of patients who have been queried about the information that was communicated to them regarding their surgery vs. our “pre-Synergy<sup>HD3</sup>” benchmarking scores. We have also recently begun utilizing Synergy<sup>HD3</sup> with the Physician App in our open procedures, as well with the same enthusiastic response from patients regarding their satisfaction with being informed as to what occurred in their surgical procedures.

**Q. MOSH no longer prints hard copy images following the procedure. Has the decision to move to digital images been a positive transition? What has been the reaction from your patients?**

A. The aspect of not having to print images is something that we, and our patients, have embraced. Images immediately exported to our hospital EMR, the practicing physician's EMR and to the patient via HIPAA secure methods has significantly improved our efficiency, while also decreasing the cost to our hospital and practices incurred from paper and ink purchases. In addition, personnel time and cost is no longer being required to scan images into the patient's record. Patients also have responded quite favorably to the immediate availability of their annotated surgical images.

**Q. When utilizing the patient App, what features have you and your partners found most valuable?**

A. We have utilized the App to not only provide patients with postoperative annotated images, but also have included links to postoperative instruction sheets pertaining to their particular procedure, YouTube videos of our therapists teaching them immediate exercises and educational technique videos through the OrthoIllustrated.com site. Again, these features have provided great satisfaction to our patients and helped their ability to navigate the peri-operative period with less stress.

**Q. Dan Mattes; CEO Wheaton Franciscan and MOSH on the impact of Synergy<sup>HD3</sup>:**

A. While developing our program at MOSH, we have set up a structure in which we evaluate all of our outcome scores of patient satisfaction diligently and proactively and react to deficiencies in our care delivery as reported by our patients. As stated previously, we were not performing to our standards on our postoperative surveys when it came to patients feeling that they were adequately informed as to what was done to them in the operating room. Since implementing Synergy<sup>HD3</sup>, we have noticed that our Press Ganey patient-satisfaction scores pertaining to these measures have improved drastically. Since the passage of the Affordable Health Care Act, patient reimbursement will be correlated with patient satisfaction. As an administrator, I feel the Synergy<sup>HD3</sup> investment has been quite valuable and will have an unlimited ceiling as we increase its implementation to more of our open procedures as well. Another aspect of the improved postoperative education that we are able to provide through our Synergy<sup>HD3</sup> reports is our ability to hopefully curb hospital readmissions by the inclusion of all of the postoperative educational links.

*continued on page 8*

# Research Corner

## InternalBrace Ligament Augmentation Repair and Brostrom Repair

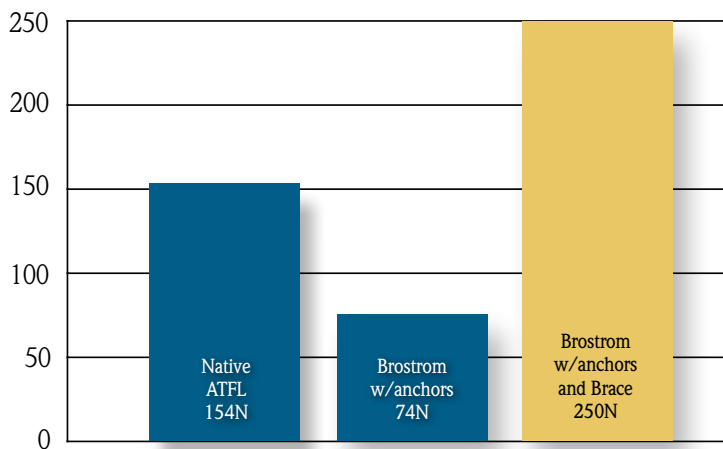
*InternalBrace* Ligament Augmentation Repair – Scientific Update: Recent poster presented at AOFAS (Hollywood, FL, July 2013 - Biomechanical Comparison of Augmented (*InternalBrace*) Brostrom Repair Techniques to the Intact Anterior Talofibular Ligament.

The poster showed promising results of ultimate failure with *InternalBrace* and Brostrom. The first line surgical option for lateral ankle instability is the Brostrom repair of ATFL. This repair relies on good quality native tissue and protected early rehabilitation. Waldrop et al, AJSM (2012) show that the Brostrom repair strength is less than 50% of the native intact ATFL (74N vs 154N). This study was performed on 18 nonpaired, fresh-frozen cadavers with no prior history of ankle injury or surgery. The ultimate failure was measured and resulted in a mean of 154 N for the Intact ATFL and a mean of 250N for the Brostrom with augmentation (*InternalBrace*) at time zero. It was concluded that the *InternalBrace* Ligament Augmentation Repair with Brostrom is as strong and stiff as the intact ATFL in a cadaveric model at time zero. It is on average 3.3X stronger in ultimate failure to the traditional Brostrom repair. This provides improved biomechanical properties at time zero compared to the standard Brostrom repair. Arthrex provides a single use kit (AR-1678-CP) with two SwiveLock implants (4.75 mm, 3.5 mm and FiberTape) and instruments needed to complete the surgical technique.

BioComposite SwiveLocks

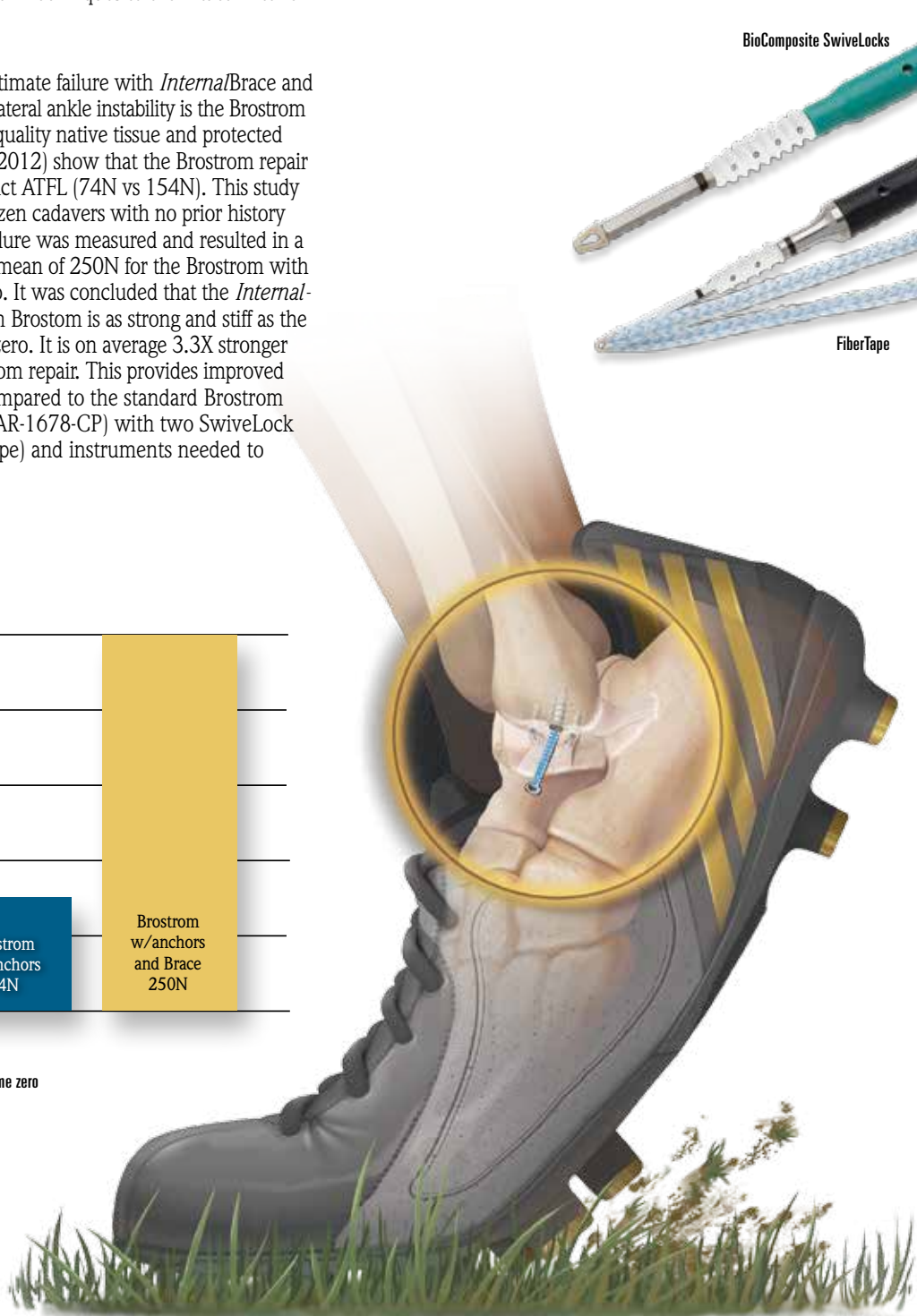
FiberTape

### Ultimate Failure (Newtons)\*



\*data on file

Biomechanical testing performed on fresh frozen cadavers at time zero



## Presutured Lateral Ankle Tendons

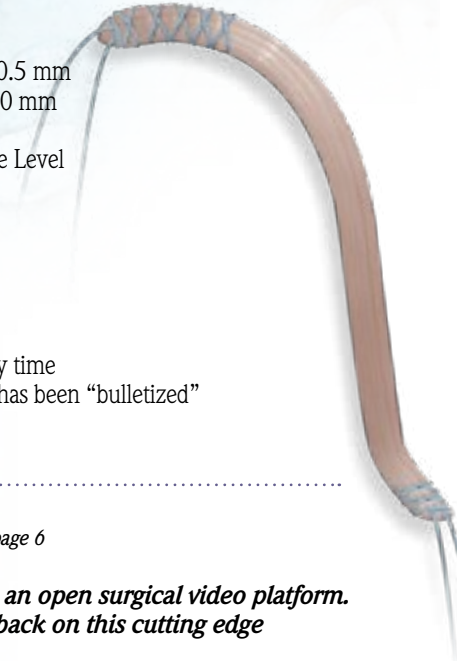
Arthrex Orthobiologics has recently released the Presutured Lateral Ankle Tendon as a quick and effective option for addressing lateral ankle instability. This presutured, presized, and sterile allograft is specifically designed for lateral ankle reconstruction procedures and for use with the Lateral Ankle Reconstruction Implantation System.

### Specifications:

- Tendon Diameter: 4.5 mm ± 0.5 mm
- Tendon Length: 150 mm – 160 mm
- #2 FiberWire
- Sterile: 10-6 Sterility Assurance Level
- Frozen

### Advantages:

- Significantly reduced OR time
- No autograft recover site
- No donor site morbidity
- Appropriately sized graft, every time
- Whipstitched end of the graft has been “bulletized”



“What’s In My Bag” continued from page 6

### Q. Arthrex recently released an open surgical video platform. Can you share some feedback on this cutting edge technology?

A. We have recently begun utilizing the Synergy<sup>HD3</sup> platform during open procedures (ie: Total Shoulder Arthroplasty). From a patient educational standpoint, it has been quite a success as we have been able to generate similar reports including images and video documenting preoperative motion, post-implantation motion and selected still photos and video clips for the patients. This gives the patient a better understanding as to what was done. We have also been able to include similar educational links to the patient reports, including YouTube videos of our therapists demonstrating home therapy programs and postoperative instruction sheets, with hopes of curbing hospital readmissions and achieving a higher level of patient satisfaction.

Prior to incorporating Synergy<sup>HD3</sup>, the anesthesiologists were not typically able to see deep into the surgical field, during a glenoid exposure, for example. Our anesthesiologists appreciate being able to directly view the surgical field, which allows them to respond to our needs in a proactive manner.



## STO Featured Product Information

ACL ToolBox Reconstruction Set.....	AR-1900S
PCL ToolBox Reconstruction Set.....	AR-1269S
#5 FiberWire Suture Kit, 1/2 circle Conventional Needle.....	AR-1712
PASTA Bridge Kit.....	AR-1934PRK
BicepsButton.....	AR-2261
Distal Biceps Kit.....	AR-2260
iBalance PFJ Instrument Set.....	AR-602-S
iBalance Patellofemoral Implants, Trochlear Components, left, sizes 1 – 4.....	AR-502-1L – 4L
iBalance Patellofemoral Implants, Trochlear Components, right, sizes 1 – 4.....	AR-502-1R – 4R
iBalance Patellar Implant Dome, 27 mm x 8 mm.....	AR-504-PSA8
iBalance Patellar Implant Dome, 30 mm x 8 mm.....	AR-504-PSB8
iBalance Patellar Implant Dome, 34 mm x 9 mm.....	AR-504-PSC9
iBalance Patellar Implant Dome, 37 mm x 10 mm.....	AR-504-PSD0
TightRope Suture Tensioner.....	AR-1588H
#2 FiberWire w/Straight Needle.....	AR-7246
#2 FiberWire w/two Straight Needles.....	AR-7246-02
Knee Obturator for Posterior Portals.....	AR-1266
InternaBrace Ligament Repair Augmentation Kit.....	AR-1678-CP
5th Metatarsal Fracture Set.....	AR-8956S
Jones Fracture Screws, 4.5 mm.....	AR-9045-xx-PT
Jones Fracture Screws, 5.5 mm.....	AR-9055-xx
Jones Fracture Screws, 6 mm.....	AR-9060-xx
5th Metatarsal Plate.....	AR-8956-01
Medial Column Plate, 3.5 mm, left, qty. 2.....	AR-8952MC-SL, ML, LL
Medial Column Plate, 3.5 mm, right, qty. 2.....	AR-8952MC-SR, ML, LL
<i>(small, medium and large)</i>	
Calcaneal Fracture System.....	AR-8954S
The Suctioner Surgical Mat, 36" x 56", qty. 8.....	USA-X10
BTB TightRope.....	AR-1588BTB
Synergy <sup>HD3</sup> Console.....	AR-3200 0001
Synergy <sup>HD3</sup> Camera Head.....	AR-3210 0001
Presutured Lateral Ankle Tendon, from JRF.....	LAT-01
Presutured Lateral Ankle Tendon, from LifeNet Health.....	FPSST

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.

For more information or comments regarding the content of this newsletter, contact us at our Corporate Headquarters:

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