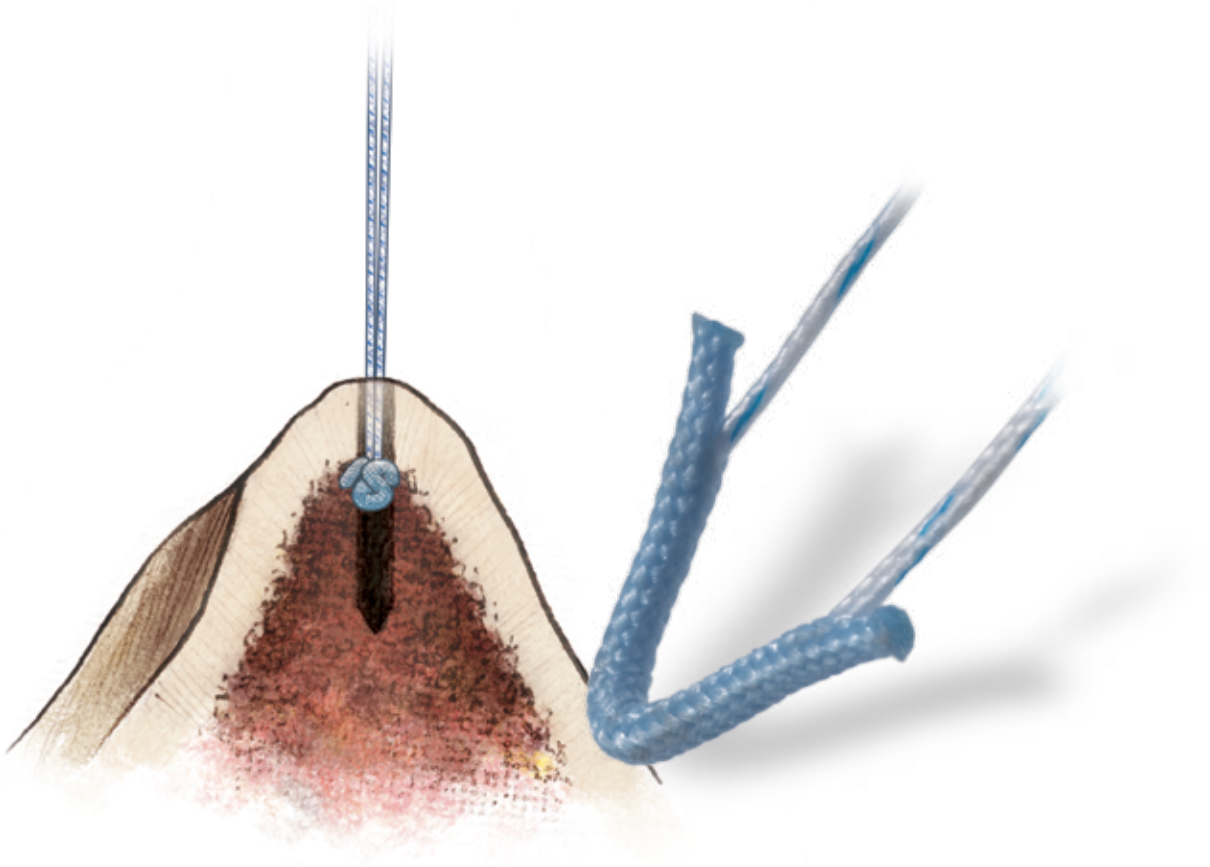
Labral Repair

with the JuggerKnot® Soft Anchor - 1.4 mm

Surgical Technique
by Nicholas Sgaglione, M.D.



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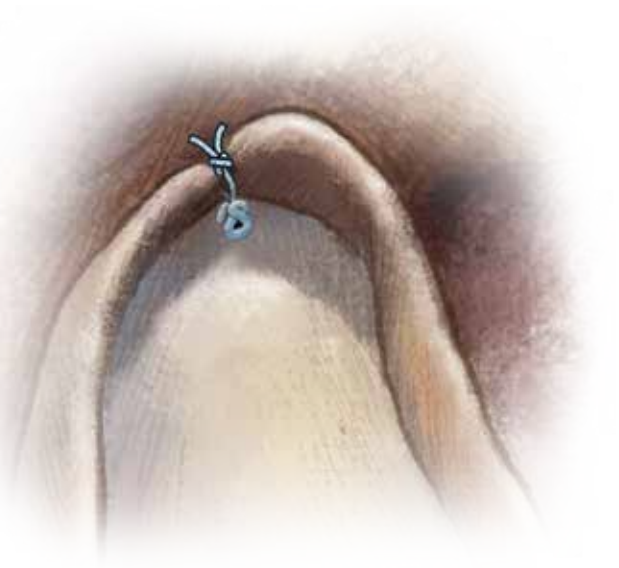
It's small. It's strong. And it's all suture.

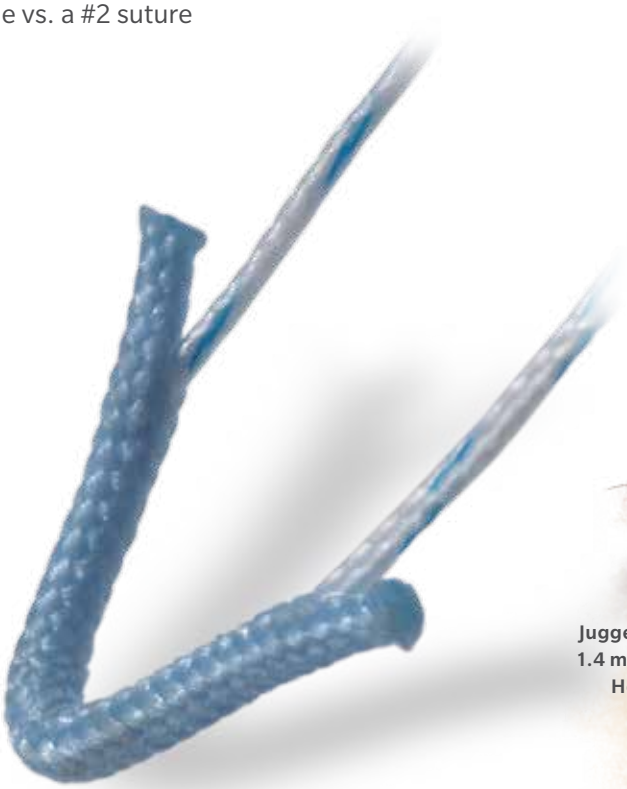
The JuggerKnot Soft Anchor represents the next generation of suture anchor technology. The 1.4 mm deployable anchor design is a completely suture-based system, and is the first of its kind.



JuggerKnot Soft Anchor

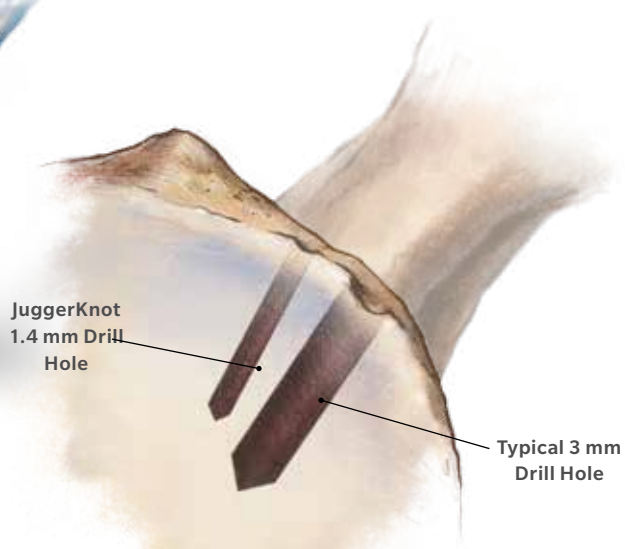
Suture Configuration

- Loaded with #1 MaxBraid™ Suture—leaves a lower knot profile vs. a #2 suture



Minimal Size

- Smaller drill guide is less invasive to surrounding tissue
- Smaller anchor diameter allows multiple anchors to be placed
- Reduces likelihood of intersecting anchors when placing multiple anchors



Soft Material

- Soft anchor deployment system—completely suture based implant
- Implant made from #5 polyester suture
- Eliminates the possibility of rigid material loose bodies in the joint

Reduced Bone Removal

- The volume of bone that is removed with a 3.0 mm drill is equivalent to four JuggerKnot device drill holes

Surgical Technique

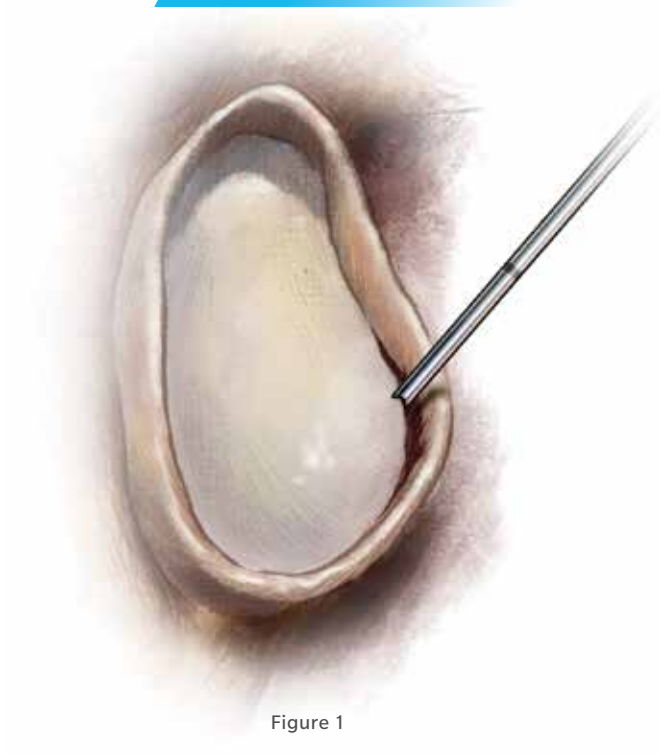


Figure 1

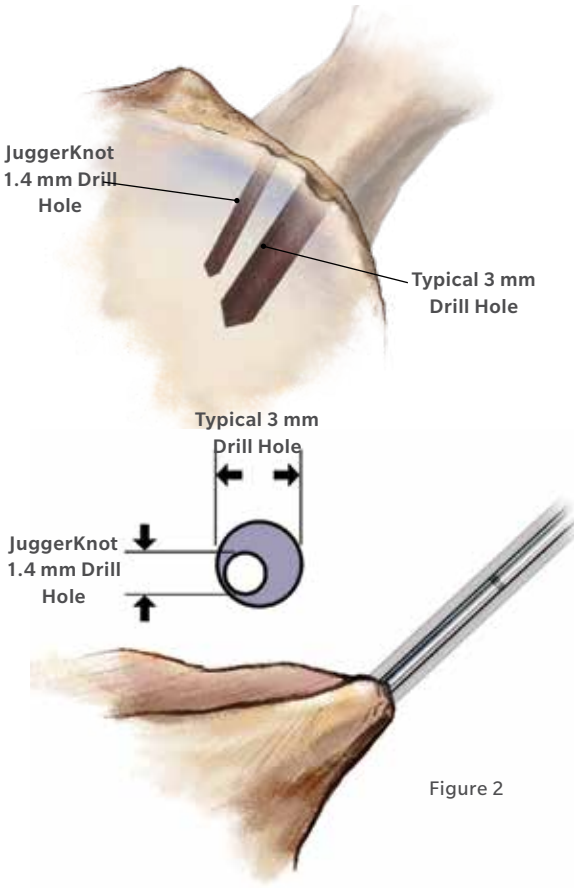


Figure 2

Patient Positioning

Beach chair or lateral decubitus depending on surgeon preference.

Portal Placement

Access labral pathology to carry out arthroscopic shoulder stabilization utilizing a flexible 5 mm AquaLoc Cannula. Placement of the cannula should be just superior to the subscapularis tendon using an anterior/inferior portal.

Note: A spinal needle can be used to localize and ensure proper angle and cannula placement.

Standard posterior placement is utilized for diagnostic purposes. A standard anterior portal located superior to the subscapularis tendon may be created using a Wissinger Rod for inside-out placement or with a spinal needle for outside-in placement. If a Bankart labral tear is encountered, an anterior-superior portal may be placed for arthroscopic viewing with instrumentation through the anterior portal. If a SLAP labral tear is encountered a superior portal may be placed for viewing and instrumentation.

Prepare Surface

A bleeding bone surface is prepared with the desired rasp/elevator.

A 15˚ or 30˚ Zimmer Biomet Sports Medicine tissue elevator may help free significant tissue scarring off the scapular neck. A shaver may need to be introduced to remove any fibrous adhesions, and a bur is used to abrade the scapular neck.

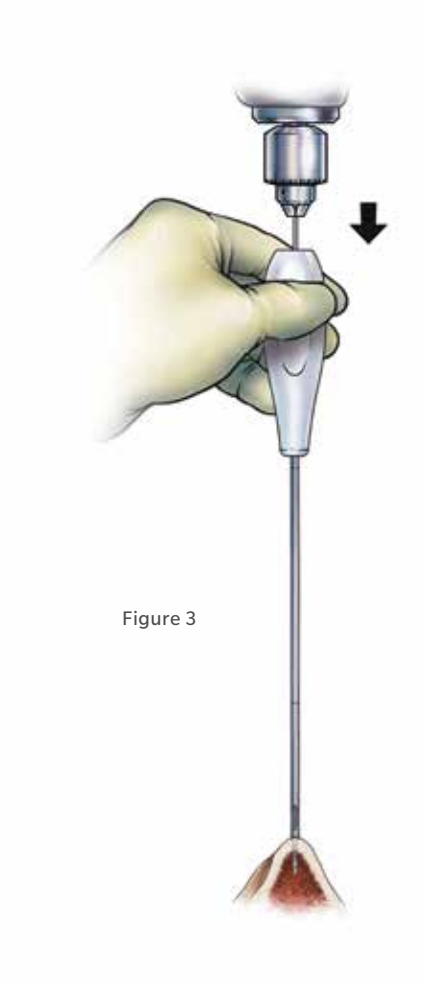


Figure 3

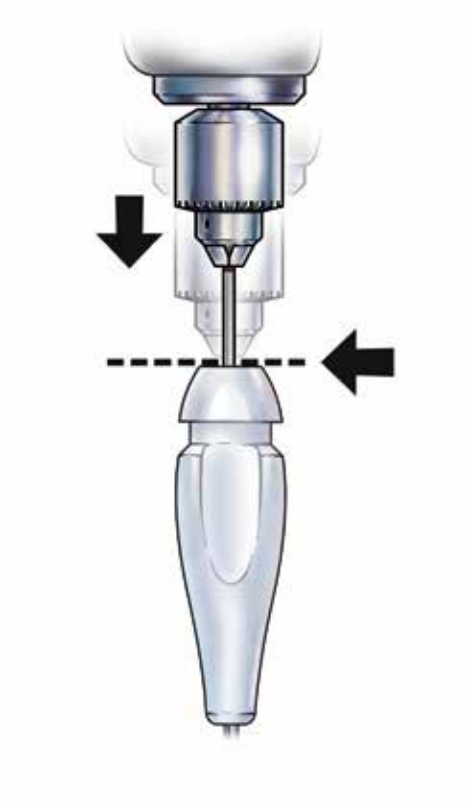


Figure 4

Placement of the JuggerKnot Guide

The small diameter of the JuggerKnot guide allows easy access to the lower 4–6 o'clock positions for anatomical attachment of the labral tissue. The guide is passed through the flexible anterior/inferior 5 or 7 mm AquaLoc® Cannula at the lower position of the glenoid (Figures 1 & 2). The guide can also be inserted percutaneously utilizing the JuggerKnot trocar through a small incision.

Position the JuggerKnot guide to desired location on glenoid bone via cannula or percutaneous portal.

Note: A spinal needle can be used to localize and ensure proper angle and cannula placement.

Drill Pilot Hole

Insert the JuggerKnot drill bit into power drill to proximal laser-etch line to ensure appropriate depth as the collar of the drill contacts that back of the guide. Insert the JuggerKnot drill into the drill guide (Figures 3 & 4). Advance drill until contact is made with the guide.

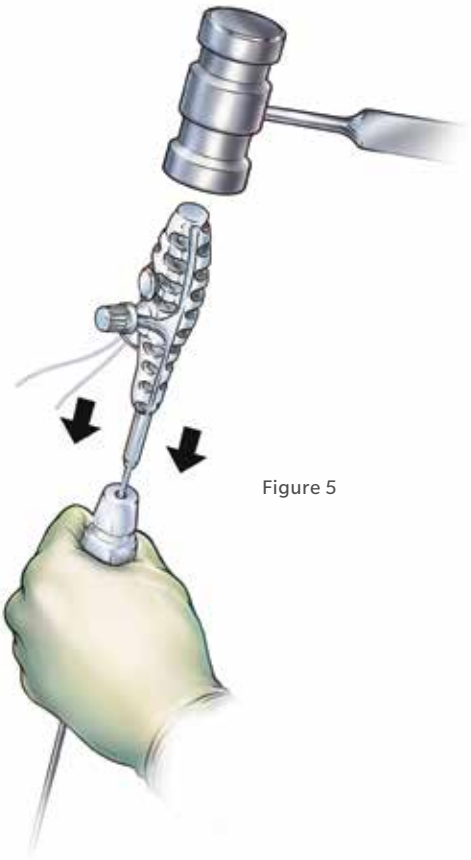


Figure 5

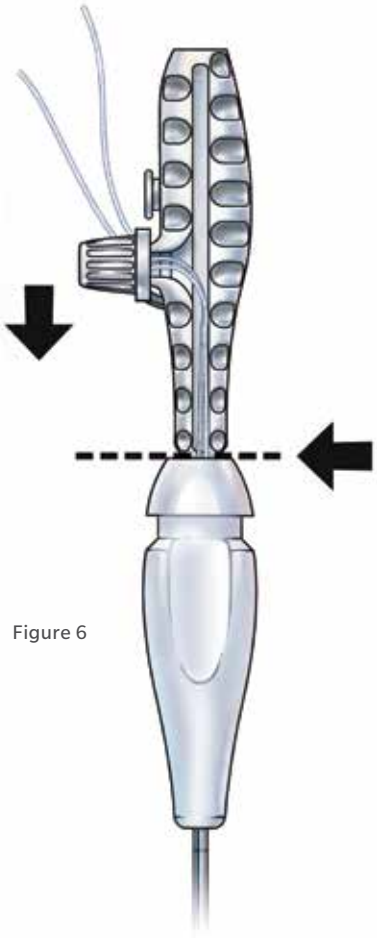


Figure 6

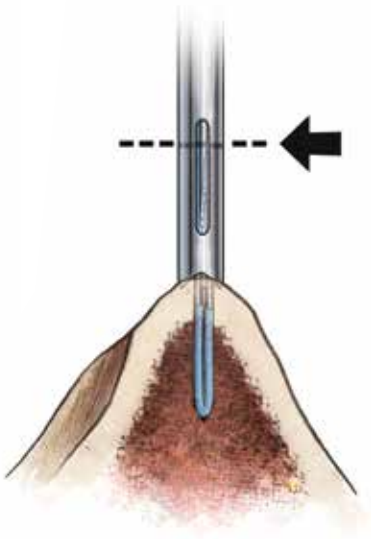


Figure 7

Insert Anchor

Remove the drill.

Note: Caution must be taken to maintain precise guide position over the pilot hole during removal.

While maintaining the guide position firmly against the bone, insert the JuggerKnot Soft Anchor through the guide and into the pilot hole. Lightly mallet to fully seat the anchor into bone (Figures 5 & 6). Align the laser etch marks to ensure anchor is inserted to appropriate depth (Figure 7).

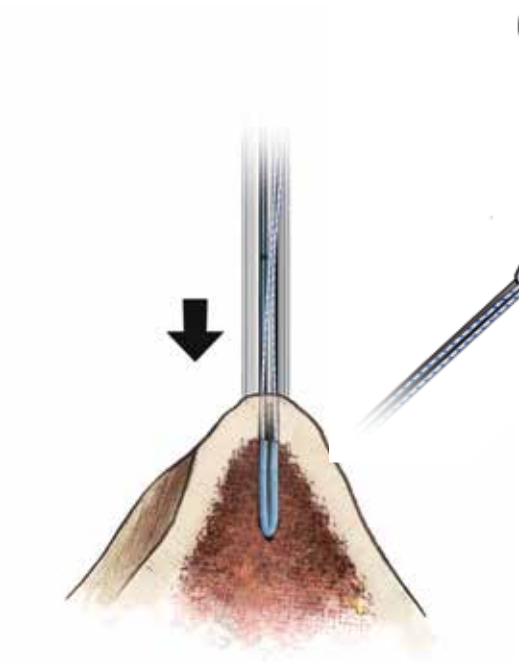


Figure 8

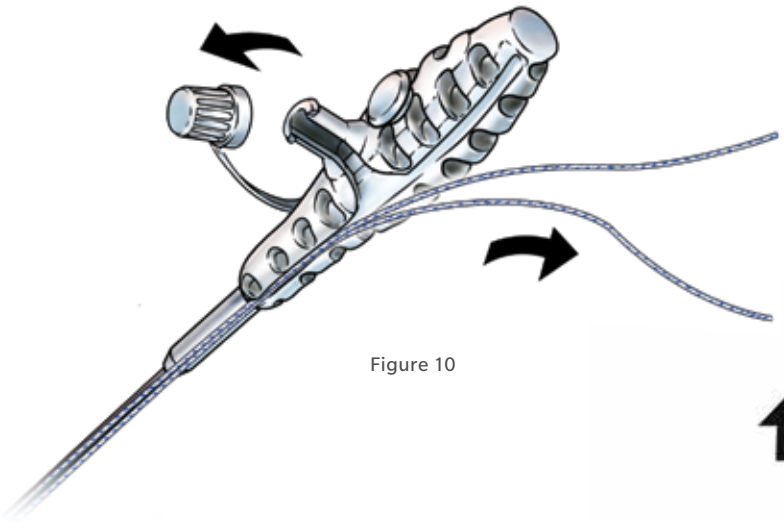


Figure 10

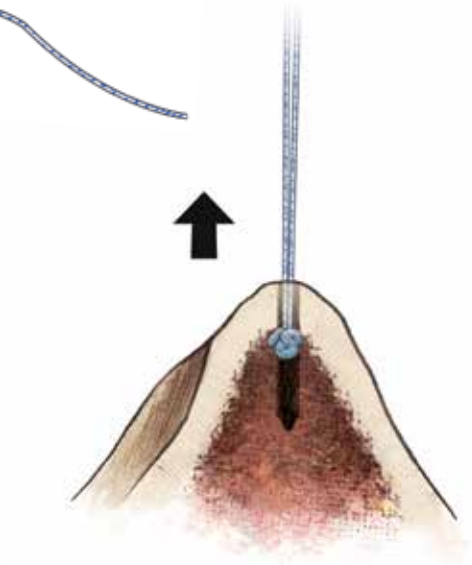


Figure 11

Deploy Anchor

Once anchor has been fully seated into glenoid bone (Figure 8), lightly pull back on anchor inserter handle to set the anchor (Figure 9).

Release the suture from the handle by unscrewing suture retention feature (Figure 10). Pull anchor inserter handle directly back from the guide. Lightly pull on both sutures to set the anchor and verify the sutures slide (Figure 11).

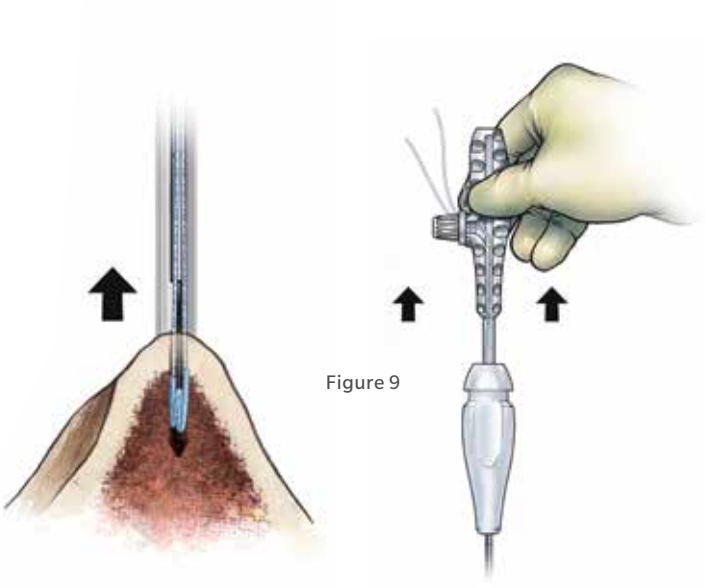


Figure 9

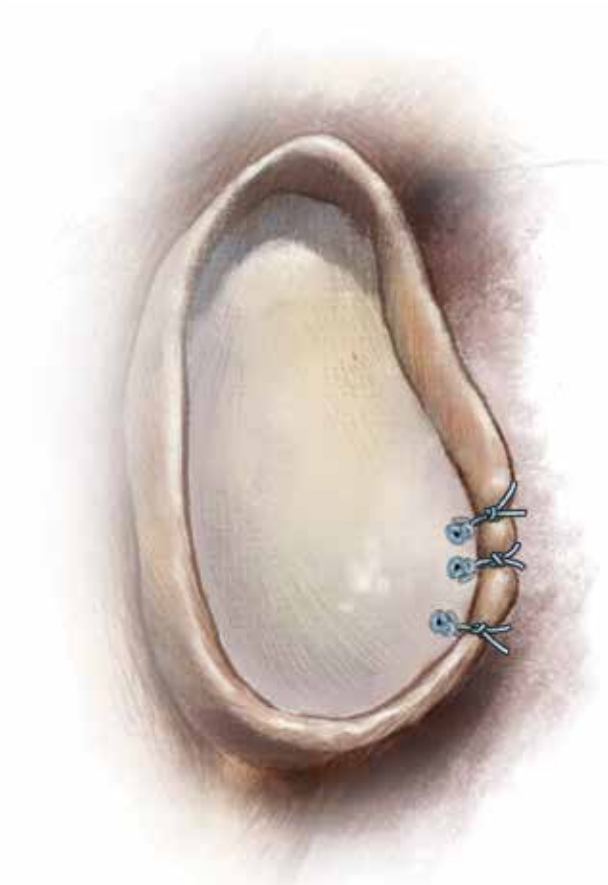


Figure 12

Retrieve Suture

A Suture Grasper is used to transfer a single suture limb closest to bone to the posterior portal. The tip of the instrument can be used to separate the suture strands to retrieve desired limb of suture.

The SpeedPass™ Suture Lariat 25˚ is inserted into the anterior/inferior cannula and passed through labral tissue inferior to anchor position. Once the tip of the SpeedPass Lariat penetrates the tissue, the Nitinol wire can be manually advanced into the joint. Through the posterior portal the suture grasper is used to retrieve the Nitinol wire loop, and the SpeedPass Lariat inserter is removed.

Outside the posterior portal, 5 cm of suture from the suture limb is passed through the Nitinol wire loop, and the wire extending out the anterior cannula is pulled out the cannula. The suture will then shuttle through the labral tissue and out the posterior portal cannula.

Desired arthorscopic knots are then tied with an open or closed knot pusher (Figure 12).

The slotted MaxCutter™ can be used to cut the MaxBraid suture.

Ordering Information

Implants

Part Number	Size	Description
912030	1.4 mm	JuggerKnot Soft Anchor, Single Loaded
912010	1.4 mm	JuggerKnot Soft Anchor, Package of 10
912000	1.4 mm	JuggerKnot Soft Anchor, Two Implants with Instruments

Instrumentation

Part Number	Description
912040	Guide, Drill and Obturator
912038	Reusable Trocar
912040C	Curved Guide, Drill and Obturator
912038C	Flexible Curved Trocar
912039C	Flexible Curved Obturator
912040	Percutaneous Guide, Drill and Guide Pin
912038P	Percutaneous Reusable Trocar

INDICATIONS FOR USE

The JuggerKnot Soft Anchors are intended for soft tissue to bone fixation for the following indications:

Shoulder
Bankart lesion repair
SLAP lesion repair
Acromio-clavicular repair
Capsular shift / capsulolabral reconstruction
Deltoid repair
Rotator cuff tear repair
Biceps tenodesis

Foot and Ankle
Medial / lateral repair and reconstruction
Mid- and forefoot repair
Hallux valgus reconstruction
Metatarsal ligament/tendon repair or reconstruction
Achilles Tendon Repair

Elbow
Ulnar or radial collateral ligament reconstruction
Lateral epicondylitis repair
Biceps tendon reattachment

Knee
Extra-capsular repair
MCL, LCL, and posterior oblique ligament
Iliotibial band tenodesis
Patellar tendon repair
VMO advancement
Joint capsule closure

Hand and Wrist
Collateral ligament repair
Scapholunate ligament reconstruction
Tendon transfers in phalanx
Volar plate reconstruction

Hip
Acetabular labral repair

CONTRAINDICATIONS

1. Infection.
2. Patient conditions including blood supply limitations and insufficient quantity or quality of bone or soft tissue.
3. Patients with mental or neurologic conditions who are unwilling or incapable of following postoperative care instructions or patients who are otherwise unwilling or incapable of doing so.
4. Foreign body sensitivity. Where material sensitivity is suspected, testing is to be completed prior to implantation of the device.

Notes

Notes

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