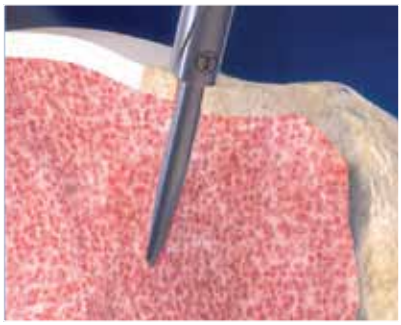
ArthroTunneler®
TunnelPro™ System

TRANSOSSEOUS ROTATOR CUFF REPAIR

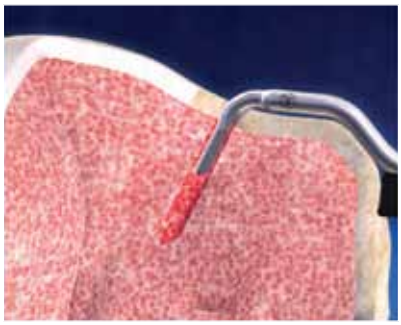
TORNIER

ArthroTunneler® SURGICAL TECHNIQUE



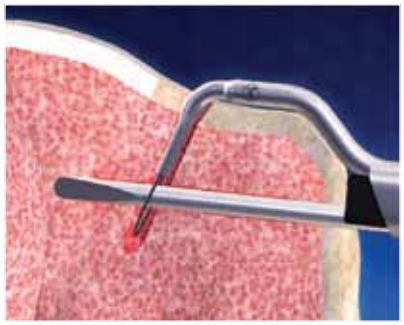
Step 1.

Drill medial tunnel(s) to a positive stop using the Drill Guide and 2.9 mm Drill - M. Drill additional tunnel(s) at this time depending on the size of tear and type of final repair construct desired.



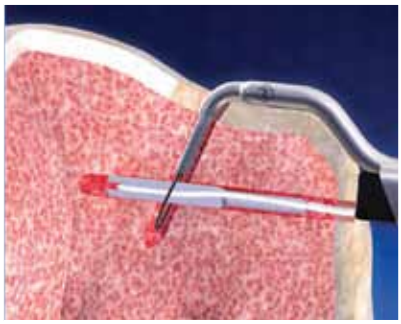
Step 2.

Insert tip of the Hook into the medial tunnel until the top bar of the Hook is flush and parallel with the footprint.



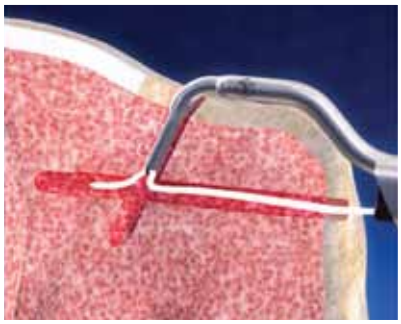
Step 3.

Deploy the nitinol Loop into the medial tunnel. Insert the 2.5 mm Drill - L through the device and drill through the Loop to a positive stop.



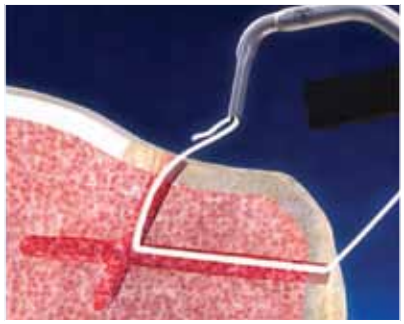
Step 4.

Remove the 2.5 mm Drill - L, then replace it with a loaded Suture Inserter.



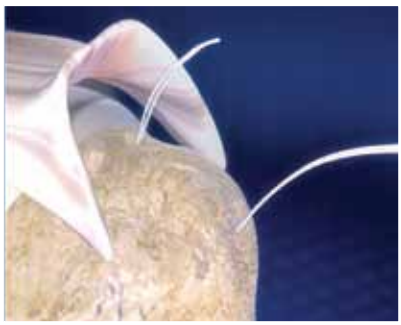
Step 5.

Remove the Suture Inserter, then retrieve the nitinol Loop to capture the suture loop.



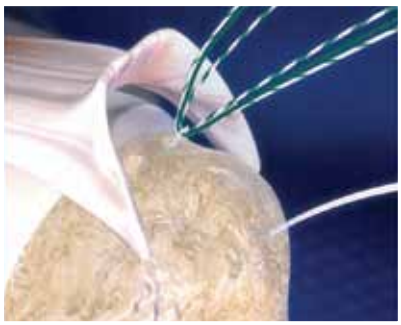
Step 6.

Retract the Anvil and remove the ArthroTunneler with the attached suture loop from the repair site.



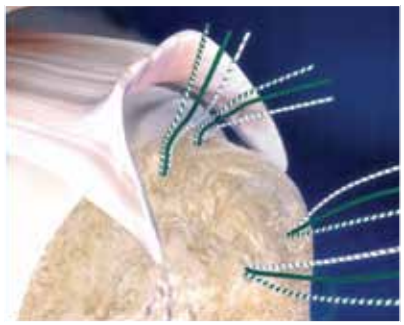
Step 7.

Remove the suture loop from the ArthroTunneler by deploying the nitinol Loop and pulling the device away from the suture.



Step 8.

Pass the suture loop through the cuff and use it as a definitive repair suture, or, use the suture loop as a shuttle to pass multiple sutures through the intersecting bone tunnels.



Step 9.

Repeat steps #2 through #8 for each additional tunnel. Pass sutures through tendon(s) using desired technique that is applicable to the patient's anatomy. Tie and cut sutures to complete the repair.

"The 'gold standard' principles of open transosseous Rotator Cuff repair as described by Dr. Neer allow surgeons to restore Rotator Cuff footprint contact and compression, while enhancing biological healing with bone tunnel marrow elements.

The ArthroTunneler allows surgeons to perform this same open transosseous repair technique in a minimally invasive all-arthroscopic fashion."

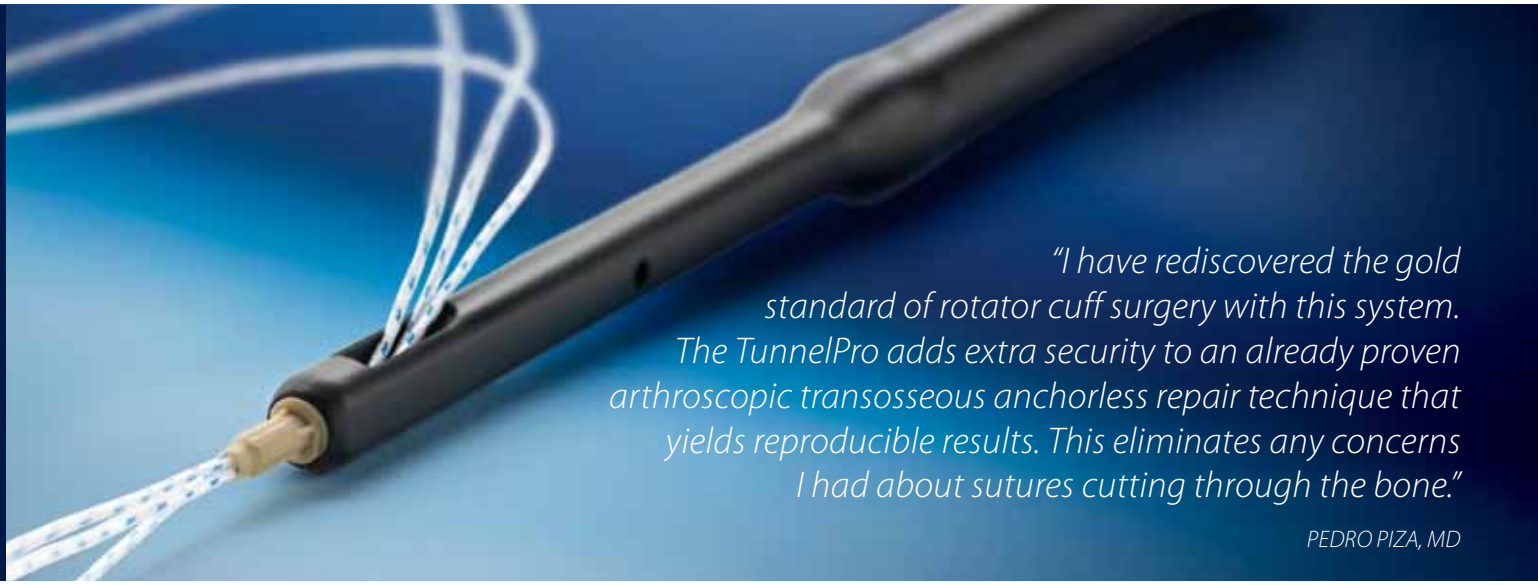
SUMANT G. "BUTCH" KRISHNAN , M.D.

ArthroTunneler® Arthroscopic Transosseous Tunneling Device

The ArthroTunneler is the first device that allows surgeons to **apply "gold standard" principles** of transosseous rotator cuff repair in an all-arthroscopic fashion – **without anchors.**

- **True transosseous** fixation
- **Anatomic** footprint contact and compression
- **Highly adaptable** for revision cases requiring navigation around existing anchors
- **Biologic enhancement** with bone tunnel marrow elements

Two TunnelPro™ Lateral Implants now included in ArthroTunneler TunnelPro System



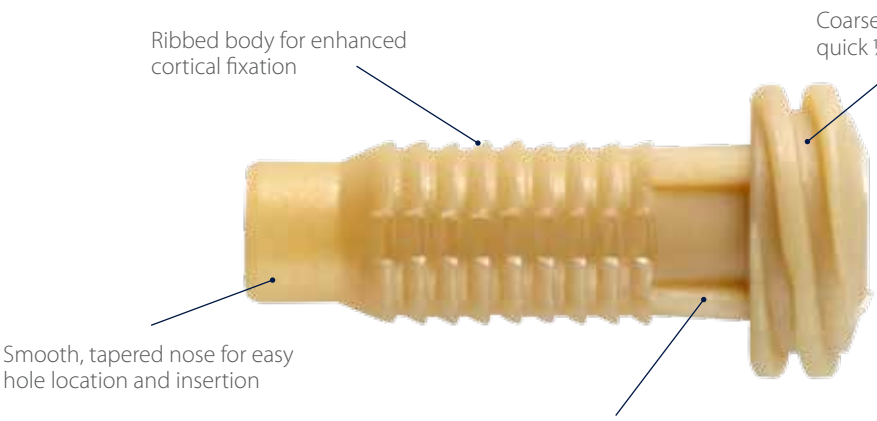
"I have rediscovered the gold standard of rotator cuff surgery with this system. The TunnelPro adds extra security to an already proven arthroscopic transosseous anchorless repair technique that yields reproducible results. This eliminates any concerns I had about sutures cutting through the bone."

PEDRO PIZA, MD

TunnelPro™ Lateral Implants:

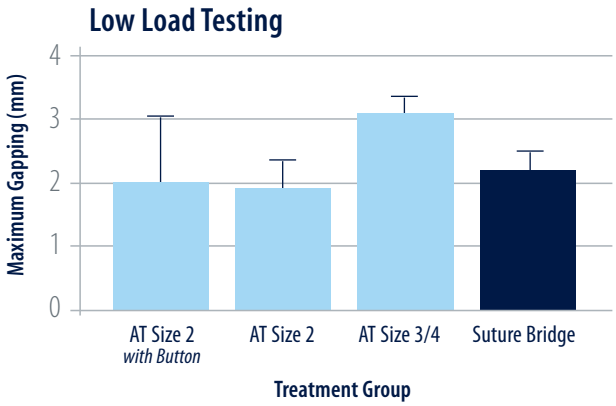
- **Protect** suture-bone interface
- **Reduce** possibility of suture migration
- **Distribute stress** over greater area compared to suture alone
- **Increase** functional area of bone bridge
- **Reduce** bone abrasion leading to suture breakage
- Made from **radiolucent PEEK-Optima™** material

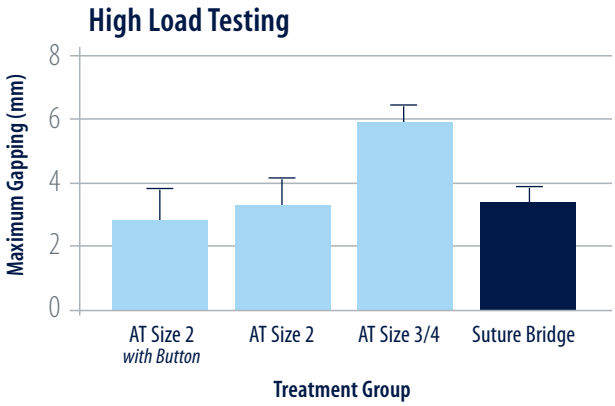
TunnelPro™ Implant in Situ



"ArthroTunneler® transosseous suture repair construct is statistically equivalent to Suture Bridge techniques for gap formation."

A GREEN ET AL; AM J SPORTS MEDICINE, JAN 2012, 40(1) PP. 133-140.





"TunnelPro provides a biomechanical, cost-effective alternative for secure rotator cuff repair through a transosseous technique with no need for anchors."

JON JP WARNER, MD

TunnelPro™ LATERAL AUGMENTATION TECHNIQUE

Step 1.

Thread ForceFiber® sutures exiting the lateral tunnel into the tip of the inserter

Step 2.

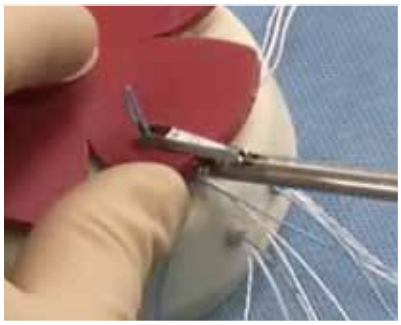
Slide TunnelPro down sutures

Step 3.

Insert into bone [with hand pressure or with a few mallet taps]

Step 4.

Twist ½ turn counterclockwise and remove stick



Step 5.

Pass sutures through cuff

Step 6.

Final construct shown with knots pushed laterally over the TunnelPro implants

TunnelPro™ System, Individual Implants & Instruments

Product Item No.	Description
SMB100101	ArthroTunneler® TunnelPro™ System – *Includes: (1) ArthroTunneler plus (2) TunnelPro Lateral Implants*
SMB100201	(1) TunnelPro Lateral Implant
SMB000201	Drill/Punch Guide
SMB000301	Obturator
SMB000401	2.9 Drill - M
SMB000501	ArthroTunneler - 2.9 Punch - M
SMB000601	2.5 Drill - L
SMB000701	Suture Inserter
SMB000801	Tray Base
SMB000901	Tray Lid
SMB00105	ArthroTunneler Instruments and Tray - Complete

Force Fiber® Suture

CAT#	Size	Length	Color	Tipped	Needle
SMK100101	Size 2	36"	White/Blue	No	N/A
SMK100201	Size 2	36"	White/Black	No	N/A
SMK100401	Size 2	36"	Blue	No	N/A
SMS100101	Size 2	36"	White/Blue	N/A	K-Point
SMS100201	Size 2	36"	White/Black	N/A	K-Point
SMS100301	Size 3-4	36"	White/Blue	N/A	Diamond-Point
SMS100401	Size 3-4	36"	White/Black	N/A	Diamond-Point
SMS100501	Size 2	36"	White/Blue	N/A	Tapered
SMS100601	Size 2	36"	White/Black	N/A	Tapered
SMS100701	Size 3-4	36"	White/Blue	N/A	Tapered
SMS100801	Size 3-4	36"	White/Black	N/A	Tapered
SMS100901	Size 2	36"	White/Blue	Yes	N/A
SMS101001	Size 2	36"	White/Black	Yes	N/A
SMS101101	Size 3-4	36"	White/Blue	Yes	N/A
SMS101201	Size 3-4	36"	White/Black	Yes	N/A
SMS101501	Size 3-4	36"	White	Yes	N/A
SMS101601	Size 5	36"	White/Blue	N/A	K-60
SMS101701	Size 5	36"	White/Black	N/A	K-60
SMS101801	Size 5	36"	White	N/A	K-60

Indications:
The ArthroTunneler TunnelPro System is intended to be used for Rotator Cuff repair procedures.
The TunnelPro is intended to protect the suture/bone during transosseous fixation procedures.
The ArthroTunneler is intended for transosseous fixation of tendons to bone in the following applications: Rotator Cuff repair.

Contraindications:
The ArthroTunneler TunnelPro System is NOT intended for use in:
- Pathological conditions of the soft tissue to be repaired or reconstructed which would adversely affect suture fixation.
- Insufficient quantity and/or quality or cortical bone integrity that would impair the ability to securely fix the TunnelPro implants.
- Compromised bone surface that would not allow secure fixation of the TunnelPro.
- Patients with an active infection.
- Physical conditions that would retard healing, such as blood supply limitation and infection.
- Conditions which tend to limit the patient's ability or willingness to follow instructions during the healing period.

TORNIER

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Prior to using any Tornier device, please review the instructions for use and surgical technique for a complete listing of indications, contraindications, warnings, precautions, potential adverse events, and directions for use.