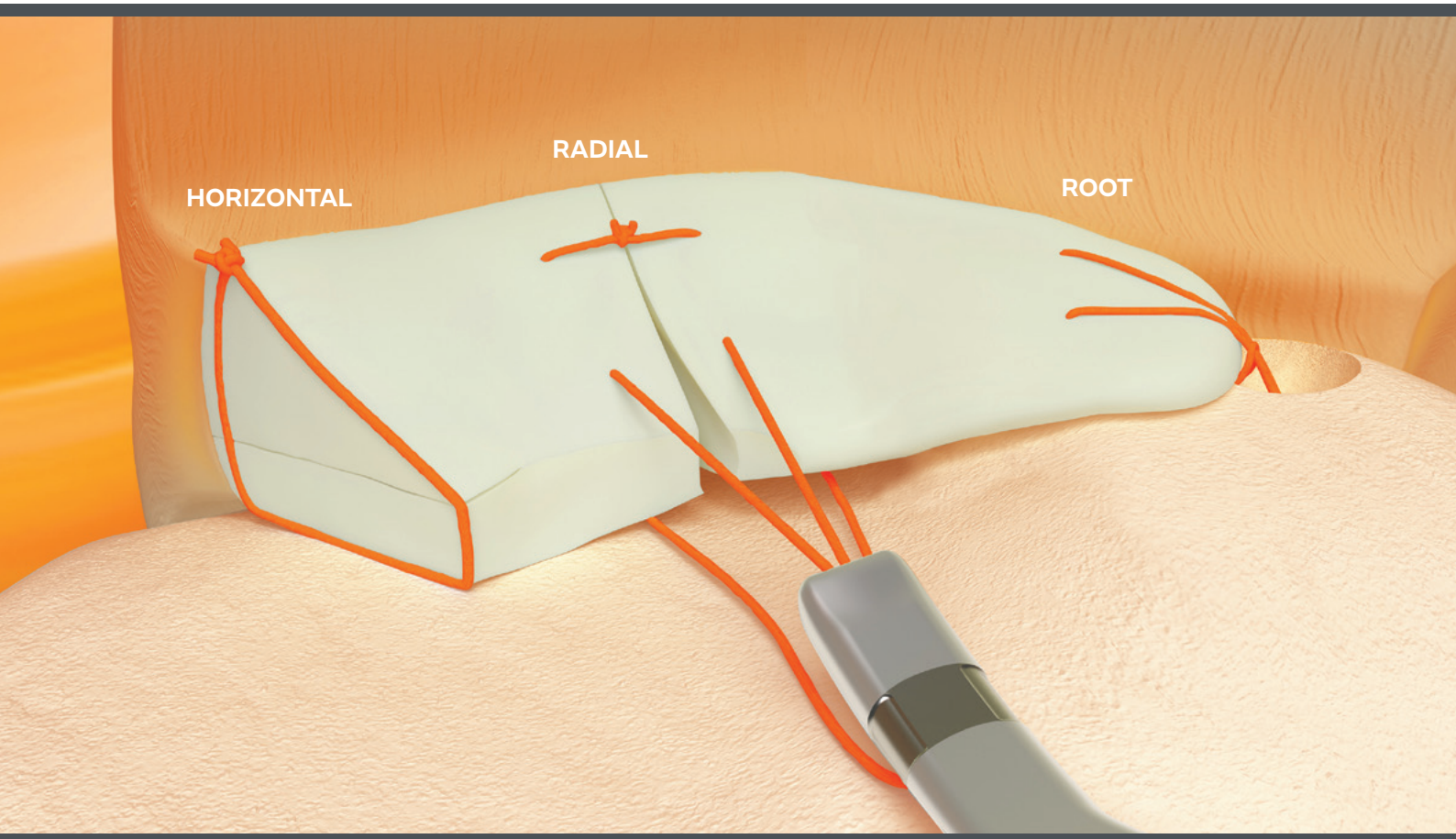
Smith+Nephew

NOVOSTITCH◊ PRO
Meniscal Repair System

Clinical Background



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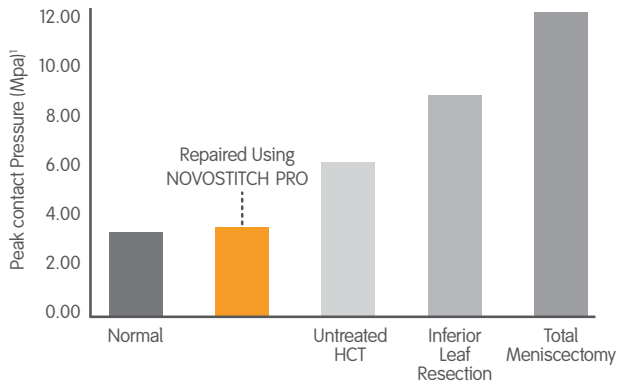
Statements in this brochure are based upon data sourced from select articles and studies and may not reflect the whole body of evidence available.

Horizontal Cleavage Tears (HCT)

Contact Pressures Increased by HCT

- Based on *in vitro* data, pressure from untreated tear increases contact pressures by 70%[1]
- Studies have shown unfavorable results in leaflet resection improving contact pressures[1]
- HCT repair normalizes contact pressures[1]

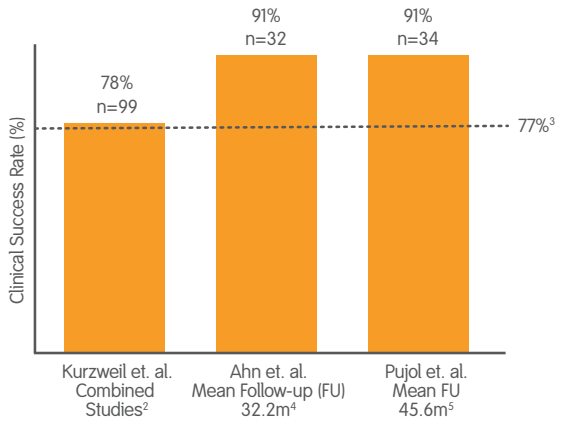
Contact Pressures of HCT Tears[1]



Successful HCT Repair is Possible

- 78% clinical success rate of HCT repair upon systematic review[2], similar to other tear types[3]
- 91% success rate in broad age range of patients (14-56) confirmed with 2nd look follow up[4]
- 91% success rate with MRI follow up[5]

Success of HCT Repair



Note: Clinical success rates were calculated for different techniques including: inside-out (IO), IO with bioabsorbabale and Biofix arrow anchors and open procedures. MRI follow-up success rate based on independent surgeon interpretations.

Circumferential Stitches Enable HCT Repair

- Technique articles from leading centers highlight NOVOSTITCH Meniscal Repair System proprietary Circumferential Compression Stitches (CCS) to repair HCTs[6,7,8]
- Use of CCS eliminates posterior incision and minimizes risk of neurovascular injury[6]

NOVOSTITCH PRO Meniscal Repair System Designed for HCT Repair

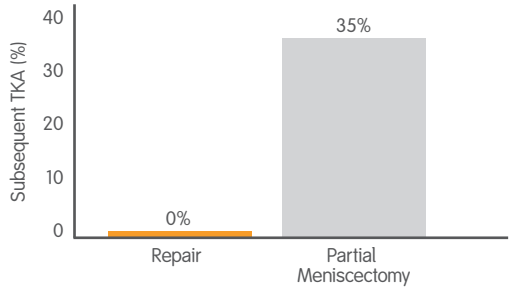
- Low profile (1.6mm) and retractable lower jaw facilitate access to peripheral meniscus[9]
- Curved upper jaw and retractable lower jaw enhance maneuverability for HCT repair vs. other repair methods[9]

Root Tears

Meniscectomy for Root Tears Increases Osteoarthritis (OA)

- 35% of meniscectomy patients in root tear study advanced to total knee arthroplasty (TKA) within 5 years[10]
- Meniscectomy to treat meniscal root avulsions leads to significant joint space narrowing within 5 years[11]

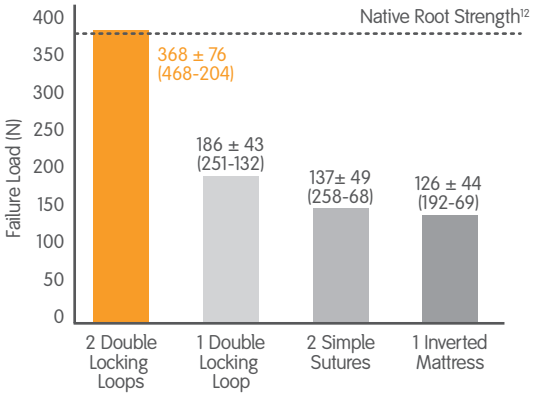
TKA after Root Tear Treatment [10]



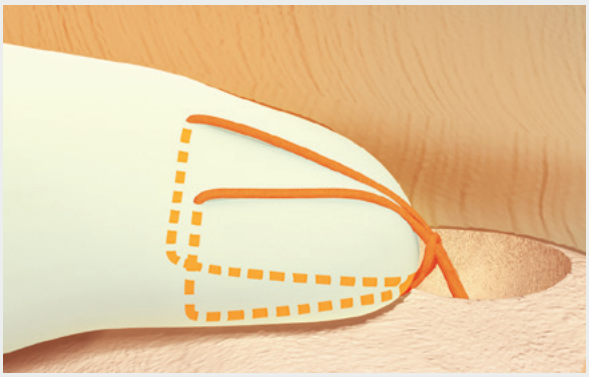
Stitch Construct Impacts Root Repair Strength

- Most often root repairs fail due to suture pulling through tissue[12]
- One stitch with cross-fiber purchase and multiple points of fixation is stronger than two stitches without [12,13]
- Placing stitches 5-7mm from the edge of the meniscus generates stitches that are 38-78% stronger[14]

Root – Load to Failure [13]



Note: Study data based on ex vivo analysis with cadaveric knees



Successful Root Repair Possible

- 0% of root repair patients advanced to TKA within 5 years, compared to 35% for meniscectomy[10]
- Root repair patients had greater function, less pain, and greater joint space compared to patients who received meniscectomy[11]

NOVOSTITCH PRO Meniscal Repair System Enables Strong Root Construct

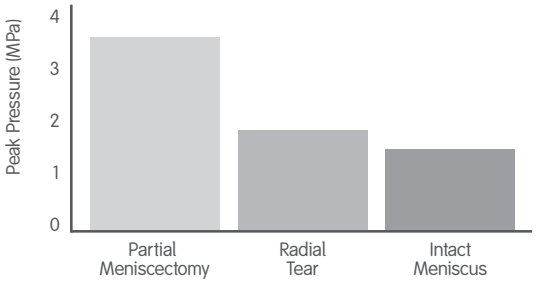
- Cartridges with size 0 suture enable stitches with two points of fixation to create a double modified locking loop without removing the device from the joint
- Curved upper jaw and retractable lower jaw enhance maneuverability for root repair

Radial Tears

Meniscectomy of Radial Tears Increases Contact Pressure

- Radial tears increase contact pressures within the knee[15], and full-thickness radial tears render the meniscus nonfunctional[16]
- Meniscectomy of radial tears increases contact pressures by more than 100% over baseline[15]

Contact Pressures of Radial Tears [15]

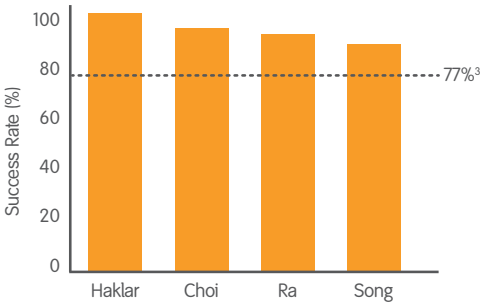


Note: Study data acquired from cadaver knees.

Robust Radial Repairs Possible

- 71-100% radial repair clinical success rates upon systematic review[17] of follow-up results from included studies, similar to other tear patters[3]
- Outcomes of full-thickness radial repairs comparable to bucket handle repairs[16]

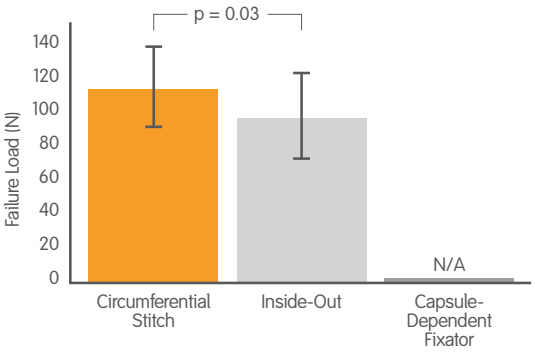
Success of Radial Repairs [17]

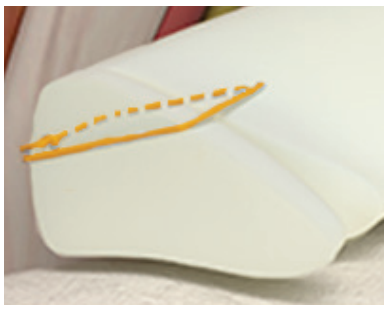


Strong Radial Repair with Circumferential Compression

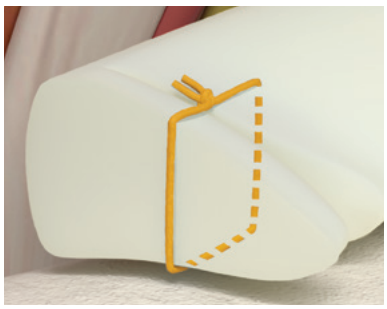
- Based on *in vitro* data, Circumferential Compression Stitches (CCS) stronger than inside-out for radial repairs[18]
- CCSs have less gap formation than inside-out repair for radial tears[18]
- The CCS improves repair vectors for radial repairs by creating a stitch straight across the radial tear

Radial – Load to Failure [18]





Inside-Out Repair



Circumferential Compression Stitch

NOVOSTITCH PRO Meniscal Repair System Designed for Radial Repair

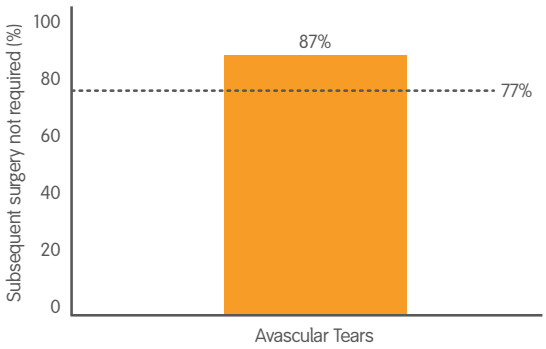
- Low profile (1.6mm) and retractable lower jaw facilitate access to peripheral meniscus[9]
- Curved upper jaw and retractable lower jaw enhance maneuverability for radial repair vs. other repair methods[9]
- Cartridges enable placement of complete stitches without removing the device from the joint

Avascular Tears

Repair of Avascular Tears Possible

- 87% of repaired tears extending into avascular zone were asymptomatic upon follow-up[19]
- Patients in the Noyes study were all 40+ years of age[19]

***Outcomes in Avascular Tears*[19]**

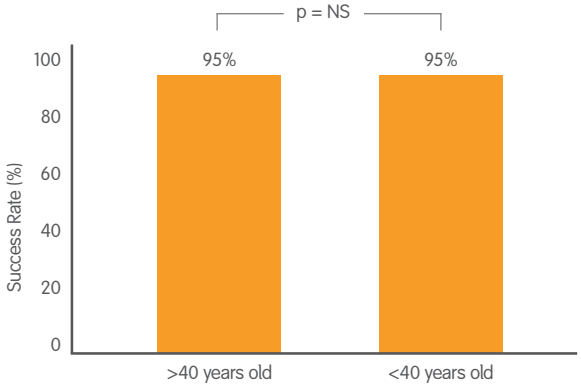


Older Patients

Age Doesn't Matter

- Two systematic reviews found no difference in repair success between patients over and under 40 years of age[20,21]
- Case review showed no difference in repair success in patients over and under 40 years of age[22]
- Steadman also demonstrated a 94.7% success rate of repair in patients over 40[22]

***Repair Success Rates by Age*[22]**

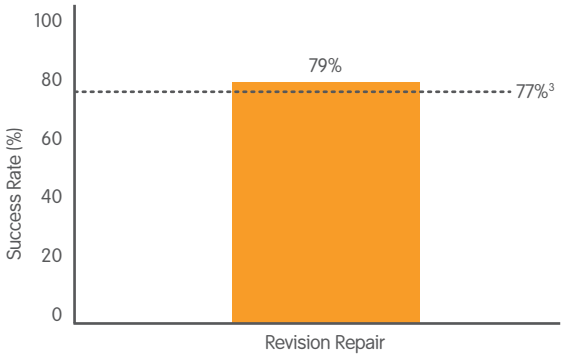


Revision Repairs

Successful Revision Repair Possible

- 79% of revision meniscus repairs were pain-free at a mean of 6 years follow-up[23]
- Failure of repair still resulted in more tissue preservation and less tissue removal during secondary meniscectomy procedures[23,24]

***Repair Success in Revision Surgery*[23]**



Notes

Ordering information

Reference #	Description
CTX-A003	NOVOSTITCH™ PRO Meniscal Repair System (2-0)
CTX-A004	NOVOSTITCH PRO Meniscal Repair System (0)
CTX-R001	NOVOSTITCH Cartridge (2-0)
CTX-R002	NOVOSTITCH Cartridge (0)
CTX-C001	NOVOCUT Suture Manager

NOVOSTICH PRO Meniscal Repair System is available in New Zealand only.

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www.smith-nephew.com/new-zealand

Please consult product labels and inserts for any indications, contraindications, hazards, warnings, cautions and instructions for use.

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