



Techniques & Procedures

A Novel Approach to Soft Tissue Approximation



Techniques and Procedures

For more detailed information, please refer to the
Instructions for Use included with your Quill™ SRS.

To obtain the **Instructions for Use** please visit
www.AngioEduPRO.com or call
1 (877) 991-1110 (USA and Canada)
001 (732) 626-6466 (International)

**Quill™
SRS**



**Quill™ SRS
PDO (Polydioxanone)**
Dyed (violet) Barbed Monofilament
Absorbable

Table of Contents

Editor	Malcolm D. Paul, MD Clinical Professor of Surgery Aesthetic and Plastic Surgery Institute University of California, Irvine, CA	8 Preface 10 Quill™ SRS Anatomy 12 Summary of Potential Advantages 13 Comparison with Traditional Suture
Co-Editor	Rui Avelar, MD Chief Medical Officer Angiotech Pharmaceuticals, Inc. Vancouver, BC	Section 1 Basic Techniques 16 Deep Subcuticular Closure 18 Dual Layer Closure 20 Deep Layer Closure 22 High Tension Closure
Contributing Authors	Jon Einarsson, MD Brigham and Women's / Faulkner Hospital Boston, MA Jim Greenberg, MD Brigham and Women's / Faulkner Hospital Boston, MA	Section 2 Soft Tissue Approximation in Laparoscopic and Gynecologic Procedures 26 Quill™ SRS Advantages in Laparoscopic and Robotic Surgery 28 Deep Myomectomy Defect Closure 30 Broad or Shallow Myomectomy Defect Closure 32 Vaginal Cuff Closure
Medical Illustrators	Sara Constantine Constantine Studios Lexington, KY Hayato Tanaka Angiotech Pharmaceuticals, Inc. Vancouver, BC	Section 3 Soft Tissue Approximation in Plastic Surgery Procedures 36 Brow Lift 38 SMAS Plication and Lateral SMASectomy 40 MACS Lift 42 Open Neck Platysmaplasty 44 Mastopexy and Reduction Mammoplasty
Graphic Designer	Hayato Tanaka	Section 4 Editors, References and DVD 48 About the Editors 50 References 51 Procedural Videos (DVD)
Publisher	Angiotech Pharmaceuticals, Inc. © 2007 - 2010 Angiotech Pharmaceuticals, Inc. © 2007 - 2010 Surgical Specialties Corporation. All Rights Reserved Fourth Edition 2010, Printed in the United States WCG-PM-388R5 01/10 Quill™ SRS is a trademark of Quill Medical, Inc.	

Preface

Quill™ SRS is a novel surgical wound closure system that eliminates a tedious, time-consuming step in soft tissue approximation – the tying of knots to secure the closure.

Standard closure requires the tying of suture knots that can place ischemic demands on the approximated tissue. Compared with individual suture loops, the Quill™ SRS technology allows for more even distribution of tension on the soft tissues as they are approximated, with tension distributed along the entire length of the wound. The placement of Quill™ SRS is therefore less traumatic on tissues. In addition, since no knot tying is required, the closure is faster, a third hand is not needed, and less material may be required than is typically used in traditional methods of soft tissue approximation.

This emerging technology has created an entirely new way of approximating soft tissues. Applications include aesthetic plastic surgical procedures, incision and wound closures of many varieties, and incision closures after general, gynecologic, urologic and orthopedic surgical procedures.

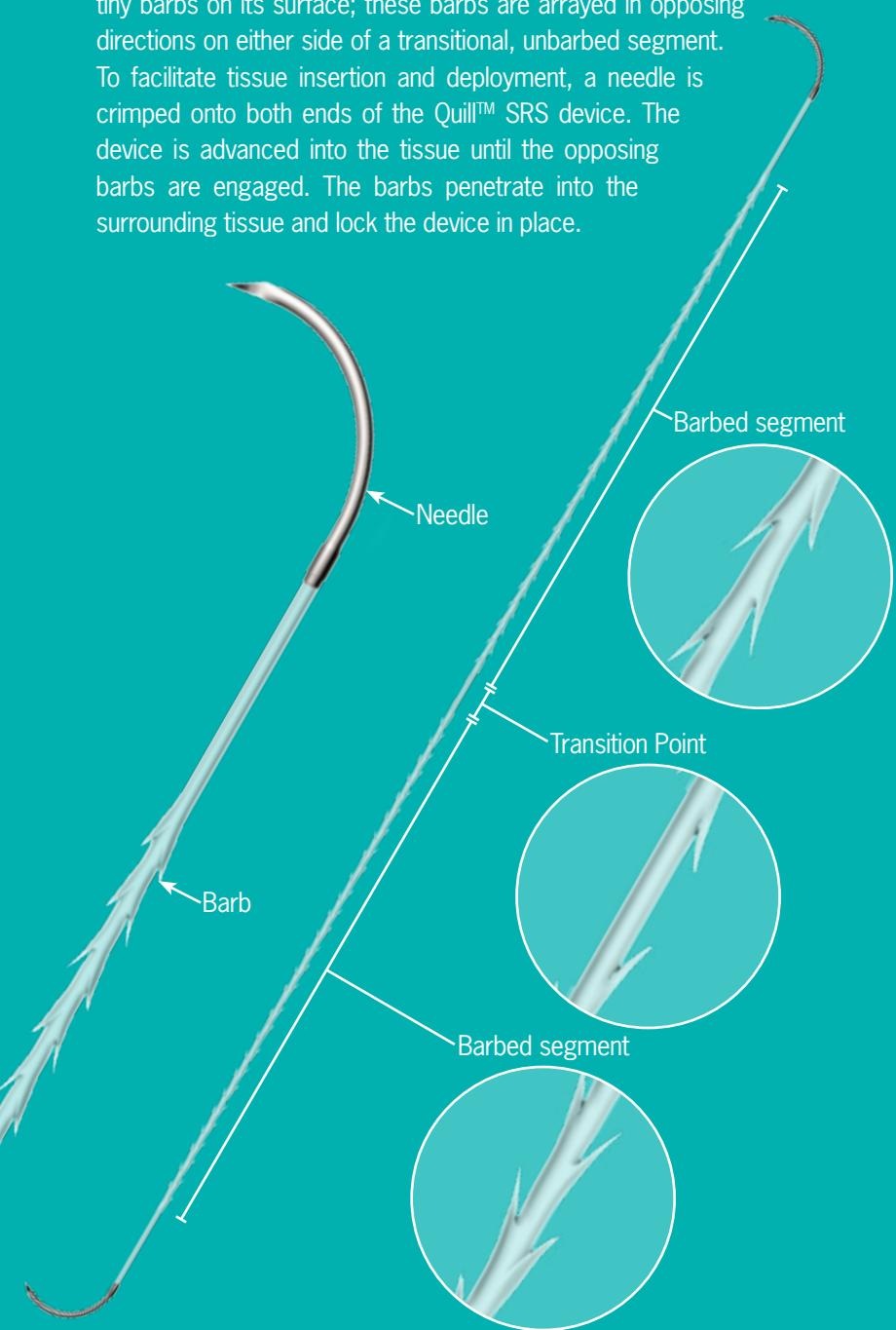


Photo by NPS

Quill™ SRS Anatomy

Quill™ SRS is a knotless surgical wound closure device that has tiny barbs on its surface; these barbs are arrayed in opposing directions on either side of a transitional, unbarbed segment.

To facilitate tissue insertion and deployment, a needle is crimped onto both ends of the Quill™ SRS device. The device is advanced into the tissue until the opposing barbs are engaged. The barbs penetrate into the surrounding tissue and lock the device in place.



MONODERM™ (PGA-PCL)

Undyed (clear) Barbed Monofilament
Absorbable



PDO (Polydioxanone)

Dyed (violet) Barbed Monofilament
Absorbable



Nylon

Dyed (blue) Barbed Monofilament
Non-absorbable



Polypropylene

Undyed (clear) Barbed Monofilament
Non-absorbable



Summary of Potential Advantages

Potential for time and cost savings:

- No knot
- No 3rd hand required
- Less OR time
- Less material required
- Multi-layer closure possible

Potential for better patient outcomes:

- Tension more evenly distributed instead of single point fixation
- Better scar potential because of soft tissue support
- Avoids knot complications
 - No knot spitting
 - No knot pain
 - No knot visibility

Potential to enable new techniques:

- New possibilities for tissue approximation during:
 - Laparoscopic procedures
 - Endoscopic procedures
 - Arthroscopic procedures
- Alternative to purse string closure
- Bring together mismatched diameters
- Work in tight difficult places

Comparison with Traditional Suture*

*Closure of wounds that include the full thickness of the skin and the subcutaneous fat

	Traditional Suture	Quill™ SRS
Devices Required	2	1
Technique	Close one layer at a time <ul style="list-style-type: none">• Subcutaneous• Deep Dermal• Subcuticular	Close multiple layers at the same time
3rd Hand	May be required	Not required
Knot Required	Yes	No, self locks
		
Potential Knot Issues	Extrusion, pain, palpable	None
Hold	Single point fixation	Distributed tension
Wound Length	No change	May shorten due to accordion effect
Time	Slower	Faster (no knot, multiple layers closed simultaneously)
Allows Coaptation	Yes	Yes

Section
1
Basic Techniques

Deep Subcuticular Closure

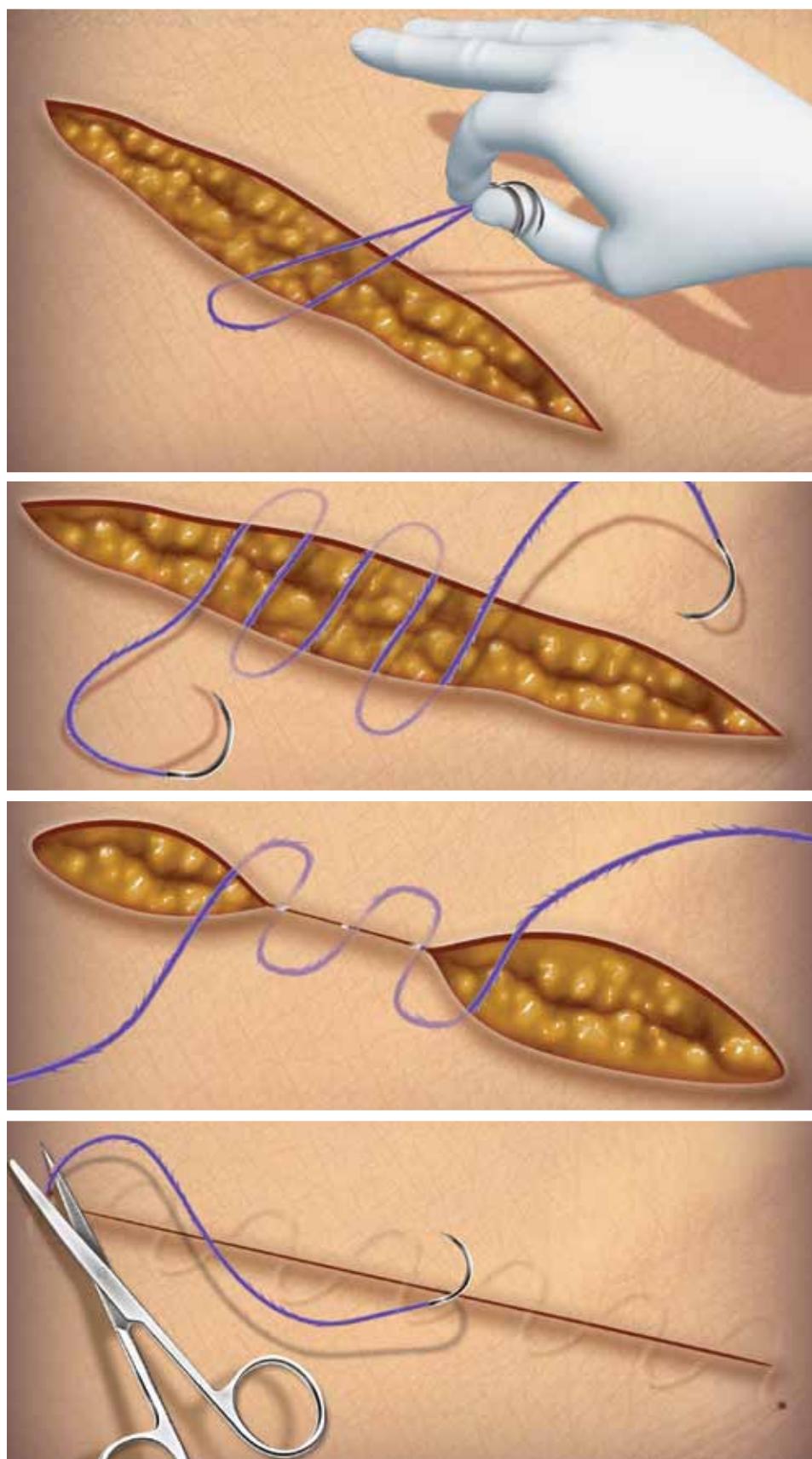
Closure of wounds where the depth is limited to the full thickness of the skin.

Technique

- 1 Start by taking one end of the Quill™ SRS and pulling it through until the transition point has reached the tissue. Estimation of the center of the device can be aided by taking a single bite of tissue, then aligning the two needles until both ends of the Quill™ SRS are of roughly equal length.
- 2 Taking one arm of the Quill™ SRS, complete at least two loose arcs through the tissue, then take a few tissue bites with the other arm of the device.
- 3 Once at least two arcs per side have been deployed, each of the strands can then be grasped and the tissue approximated to the desired tension. Continue the bites sinusoidally until the end of the wound is reached.
- 4 Take the last bite 2 cm beyond the end of the wound, exiting through the skin. Repeat the technique on the opposite side. Push down on the tissue and cut the device and needle flush with the skin.

Advantage

- Avoids knot tying and palpable knots.



Dual Layer Closure

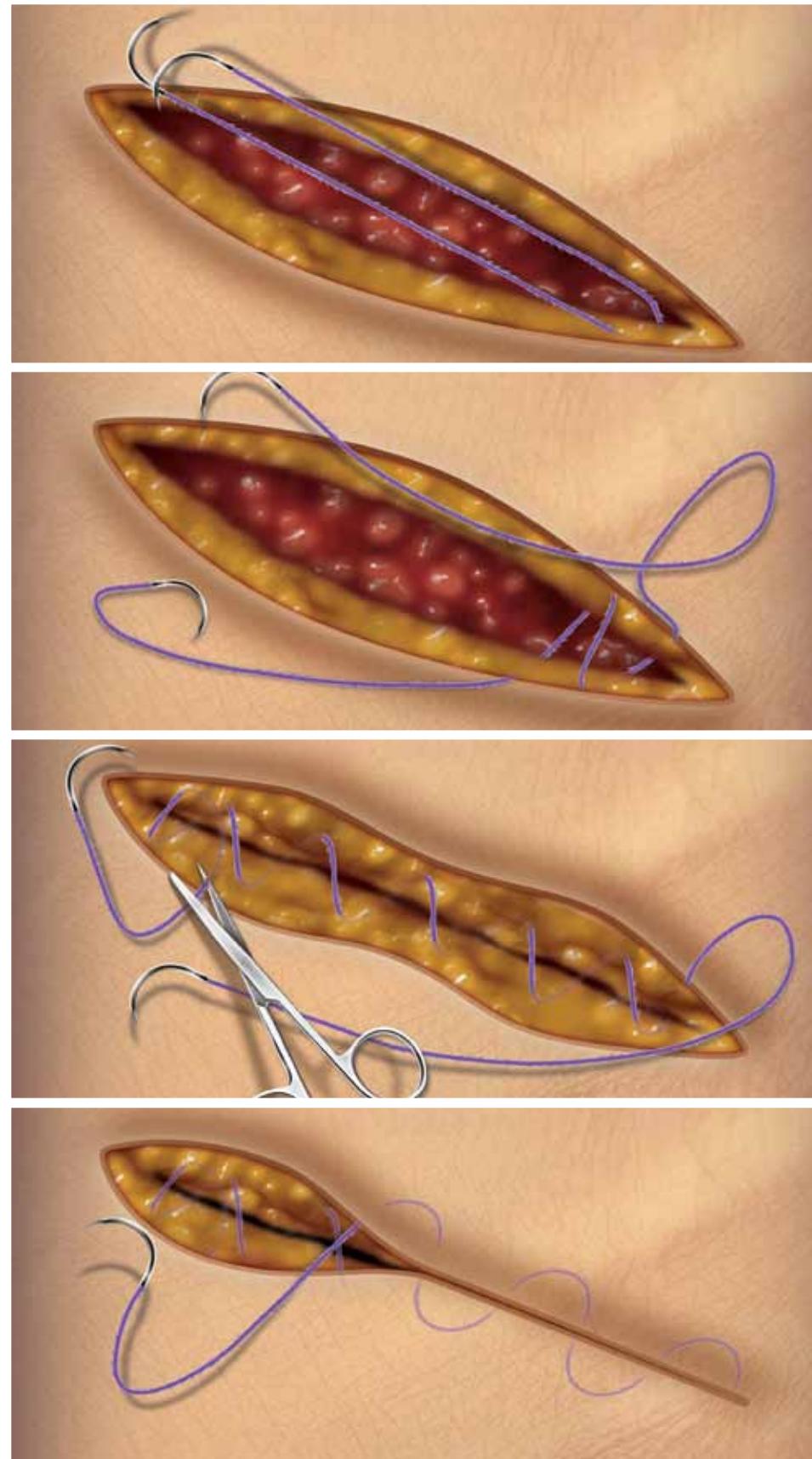
Closure of wounds that include the full thickness of the skin and the subcutaneous fat.

Technique

- 1 Pass the first needle through the tissue until the transition point is reached. The transition point can be approximated by roughly aligning the needles together as illustrated. Do not pass the first needle beyond the transition point.
- 2 Take at least 1 more pass with the first needle, followed by at least 2 loose passes with the second needle. Once each needle has been loosely passed at least twice, secure the transition point by cinching Quill™ SRS.
- 3 Close the deeper layer using a helical suturing technique. After the last pass in deep tissue, use a backstitch to secure Quill™ SRS. Cut the excess.
- 4 Use the second needle to close the superficial layer. Beginning at the edge of the incision, suture subcuticularly, using a deep subcuticular suturing technique. At the end of the incision, exit through the skin lateral to the wound incision or use a backstitch to secure Quill™ SRS. Push down on the tissue and cut the excess.

Advantages

- Single device is used to close the subcutaneous tissue, deep dermis, and subcuticular layer.
- Avoids knot tying and palpable knots, and possibly uncomfortable or extruding knots.



Deep Layer Closure

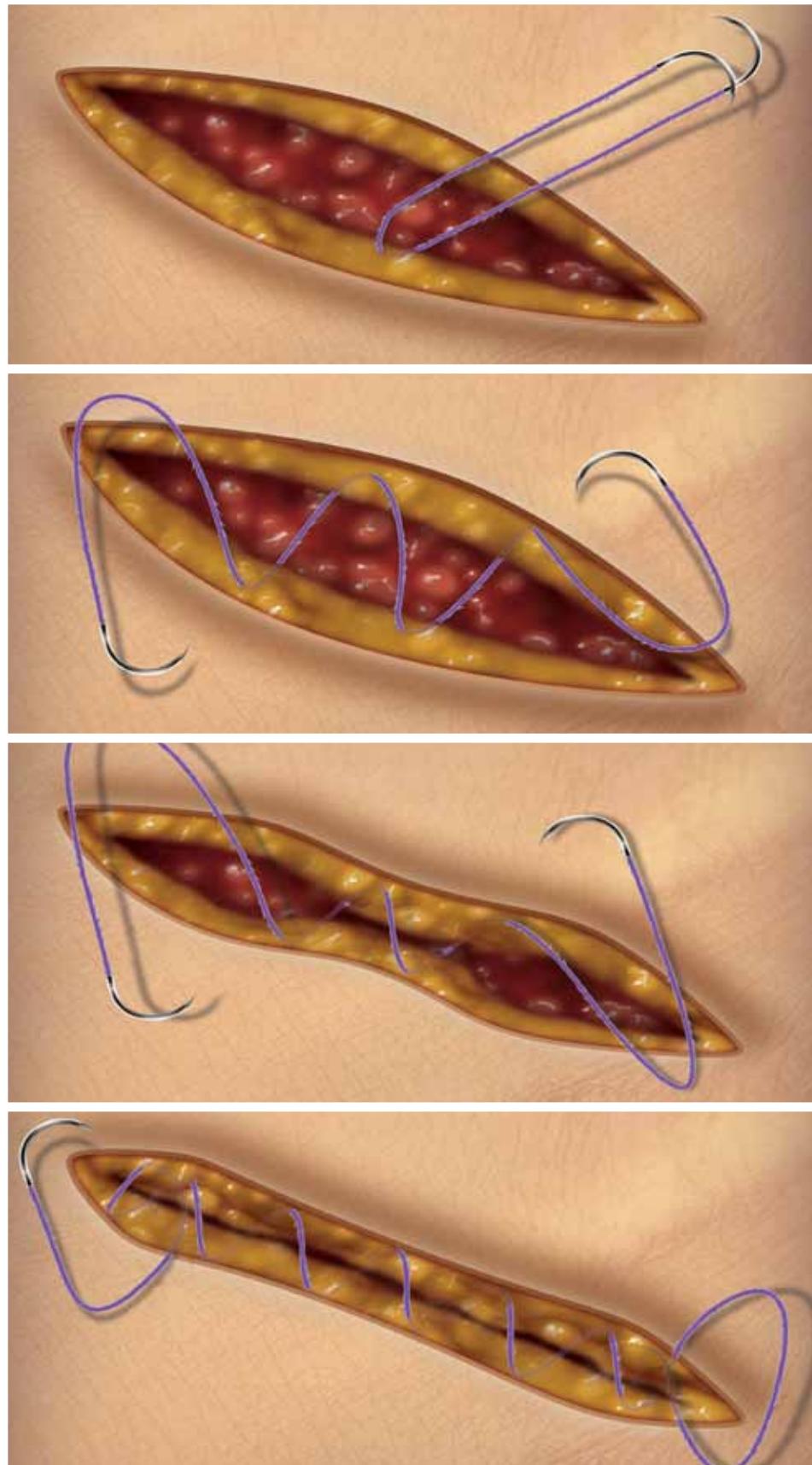
Closure of incisions that include the SFS and deep fat. Multiple layer closures can be performed using a helical suturing technique.

Technique

- 1 Start at the transition point of the layer to be approximated. Using a helical technique, pass the first needle through the tissue until the transition point of the Quill™ SRS is reached. The transition point of the Quill™ SRS can be approximated by roughly aligning the needles together as illustrated. Do not pass the first needle beyond the transition point.
- 2 Take at least 1 more pass with the first needle, followed by at least 2 loose passes with the second needle.
- 3 Once each needle has been loosely passed at least twice, approximate the wound by pulling on both ends of Quill™ SRS. Based on surgeon experience and the particular configuration used, some surgeons may find it unnecessary to loosely pass both needles twice before approximating the wound.
- 4 Continue closing the deep layer with each needle, securing the ends by employing a backstitch within the wound margin. When approximation is complete, simply cut off the excess without the need to tie knots.

Advantage

- Faster closure with less material required and no knot tying.



High Tension Closure

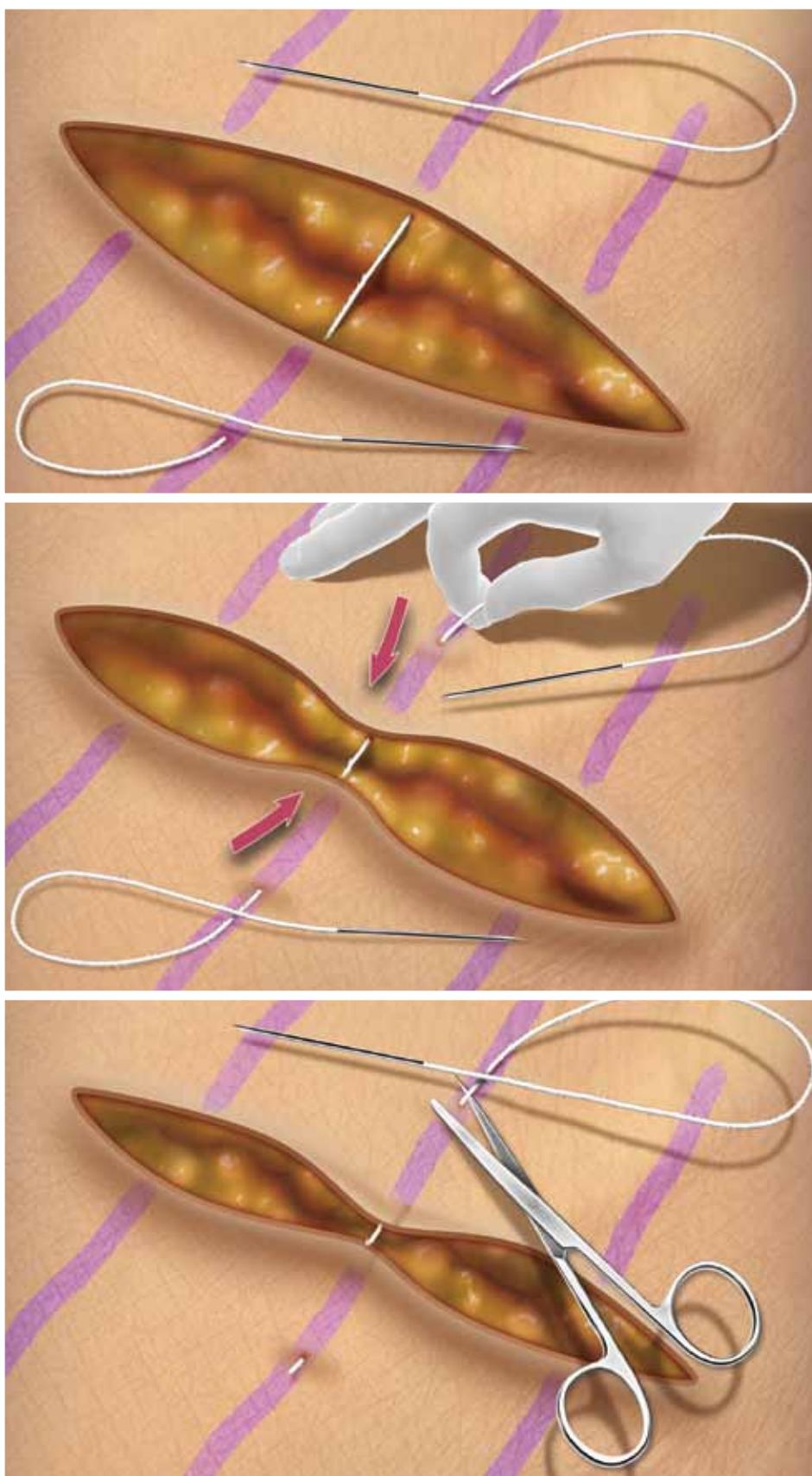
Aid in wound approximation with an additional 90 degree angle of tension control.

Technique

- 1 Mark the vector lines of the Quill™ SRS at 5 cm intervals. Insert the needle from either side of the wound through the full thickness of the wound, exiting the skin at least 3 cm from the border of the wound.
- 2 Hold tension on the device and push the wound edges close together.
- 3 Repeat the procedure until the wound is an optimal size for closure. Close the wound in layers. Cut and discard the ends of the Quill™ SRS and the attached needles.

Advantage

- Allows distribution of tension at right angles to the wound, for increased support to discourage scar widening.



Section 2

Soft Tissue Approximation in Laparoscopic and Gynecologic Procedures

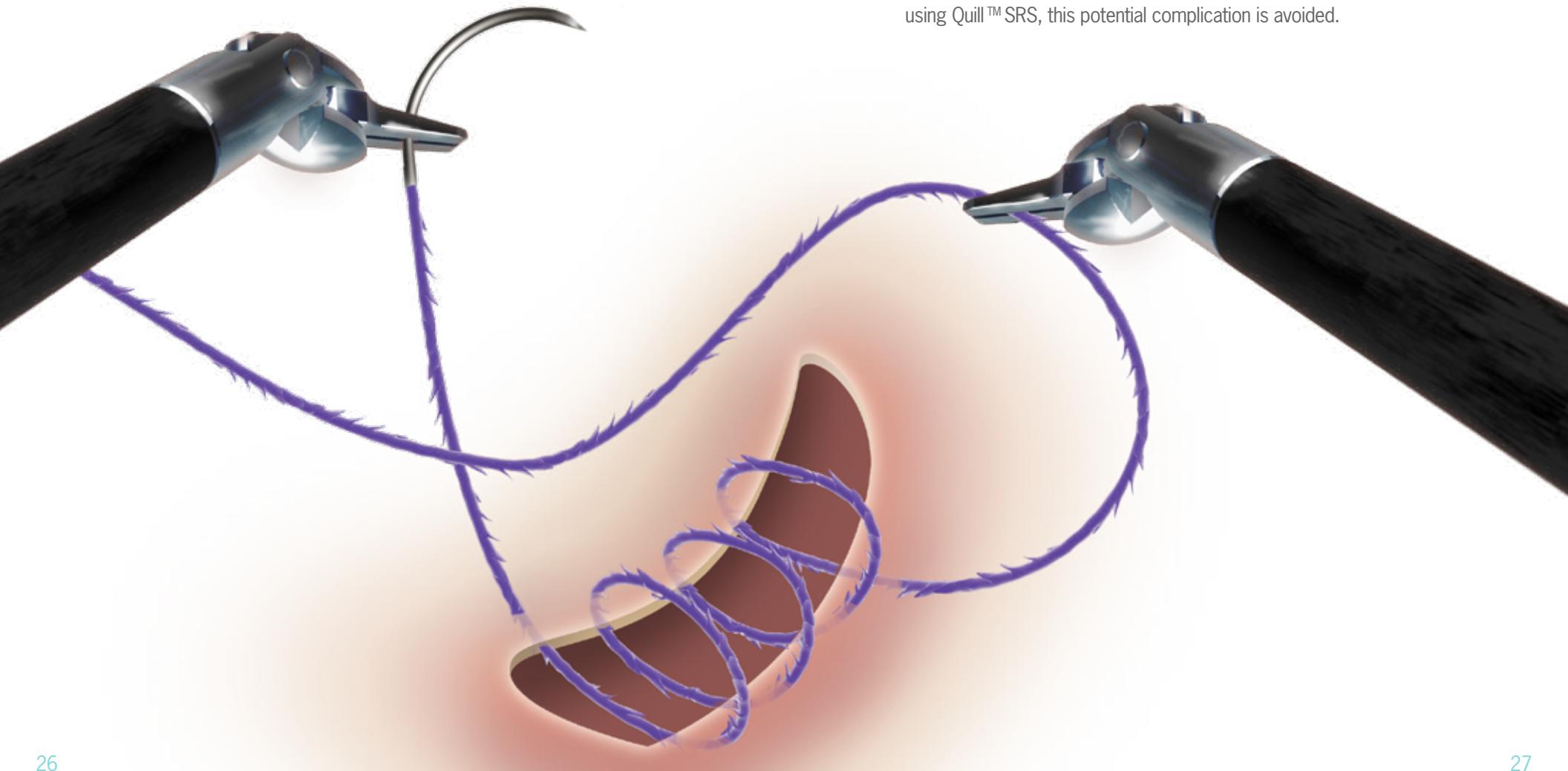
Authors

Jon Einarsson, MD Brigham and Women's /
Faulkner Hospital, Boston, MA

Jim Greenberg, MD Brigham and Women's /
Faulkner Hospital, Boston, MA

Quill™ SRS Advantages in Laparoscopic and Robotic Surgery

- Eliminates the need for tying knots.
- Delivery of the device through the portal is unchanged.
- No need for a third hand, the tissue is held in place while the Quill™ SRS is deployed, eliminating or minimizing tissue recoil.
- Tension that is set during soft tissue approximation is often sufficient to achieve hemostasis, minimizing the need for figure eight or locking sutures.
- Overcomes the lack of haptic feedback (in robotic surgery) which occasionally leads to suture breakage during knot tying. Since there is no knot to tie while using Quill™ SRS, this potential complication is avoided.



Deep Myomectomy Defect Closure

Jon Einarsson, MD and Jim Greenberg, MD

Technique

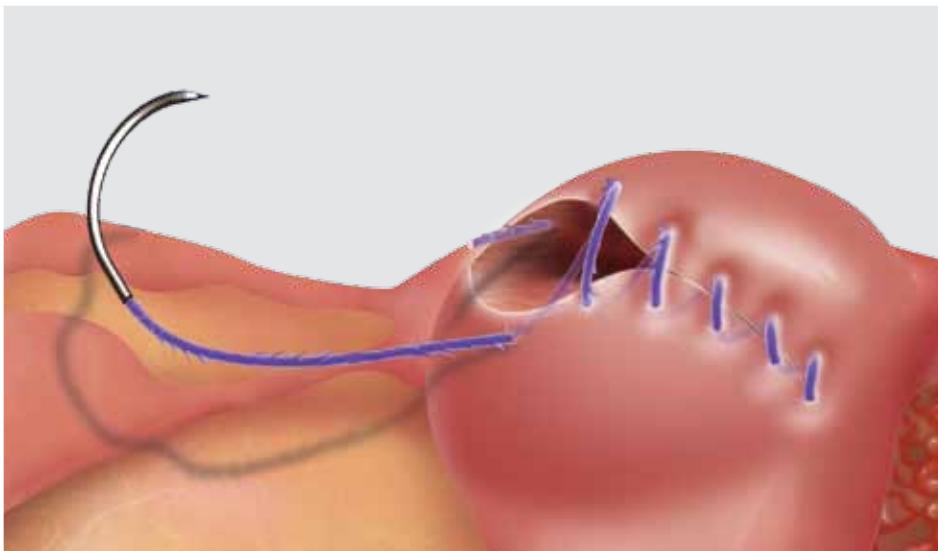
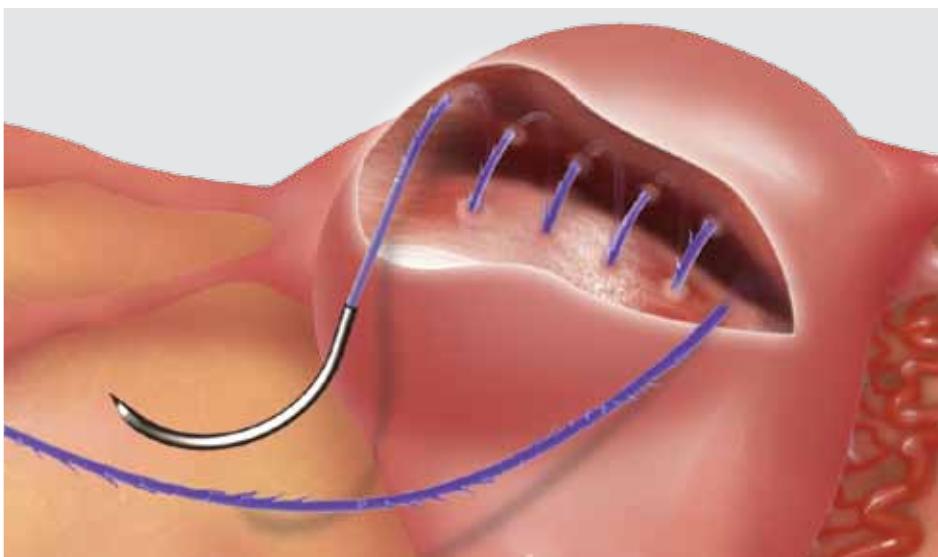
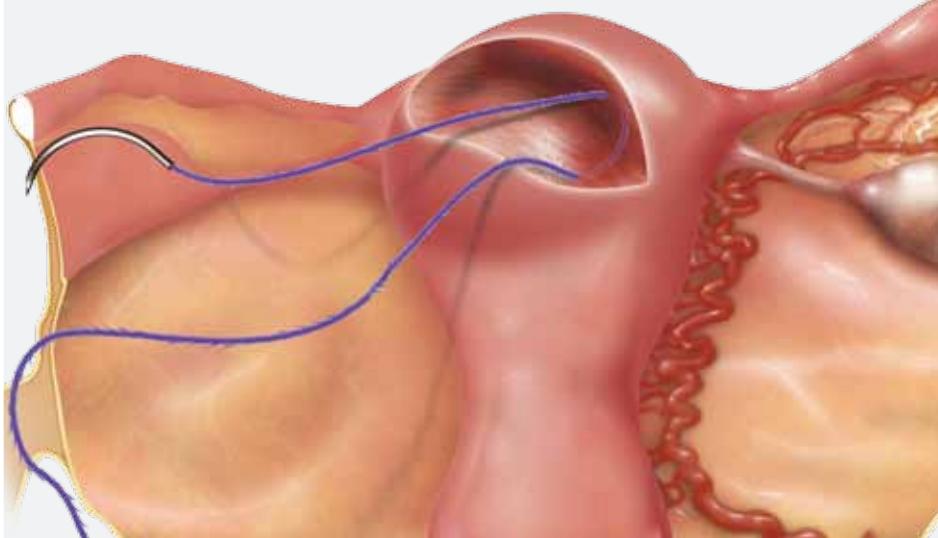
- 1 Take the first bite at the distal portion of the hysterotomy – it is easier to sew towards yourself.
- 2 Using an atraumatic grasper, pull one arm of the Quill™ SRS through the tissue until you reach the transition point of the suture. You will feel resistance once the transition point of the suture engages the tissue.
- 3 Take a series of bites with the first suture arm in a continuous helical fashion to close the deep myometrial layer.
- 4 Once the deep layer is closed, cut the suture end. If desired, double back with extra bites for security before cutting the suture.
- 5 With the second needle, close the remaining superficial defect, approximating the serosal layer and making sure adequate tension is applied to ensure appropriate approximation and hemostasis.
- 6 Once the defect is closed, cut the remaining suture or take a few extra back bites for added security.

Advantages

- Time saving.
- No knots required.
- Minimal or no hemostatic sutures required (eg. locking or figure eight sutures).
- No third hand required, as the barbs hold the tissue and there is minimal tissue recoil.

Recommended Quill™ SRS

- PDO size 0 (14 cm x 14 cm, 36 mm half-circle needle)
- PDO size 0 (24 cm x 24 cm, 36 mm half-circle needle)
for hysterotomy defects greater than 8 cm



Broad or Shallow Myomectomy Defect Closure

Jon Einarsson MD, Jim Greenberg MD

Technique

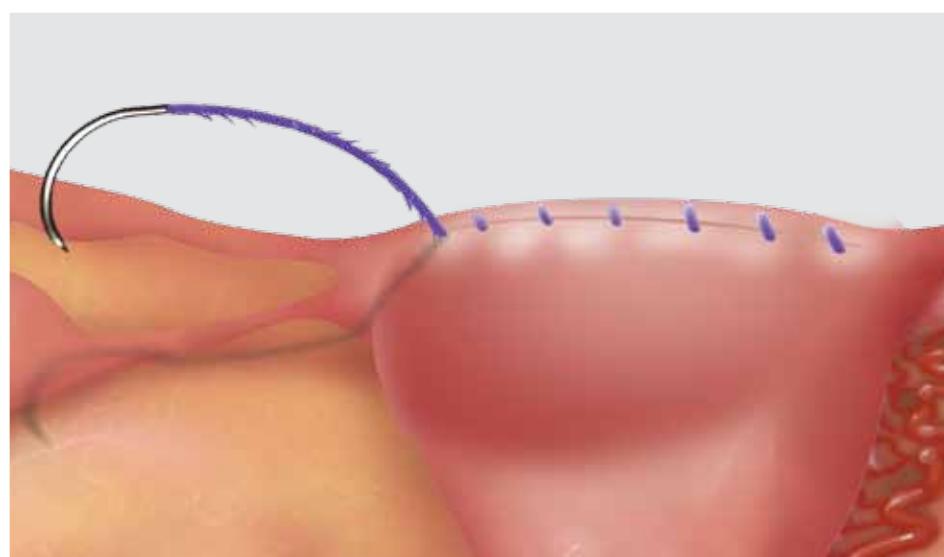
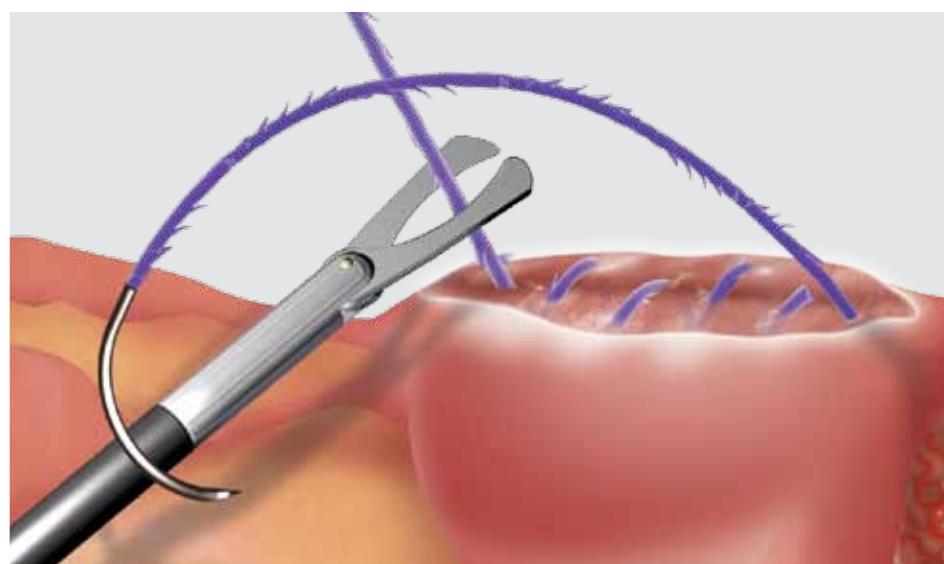
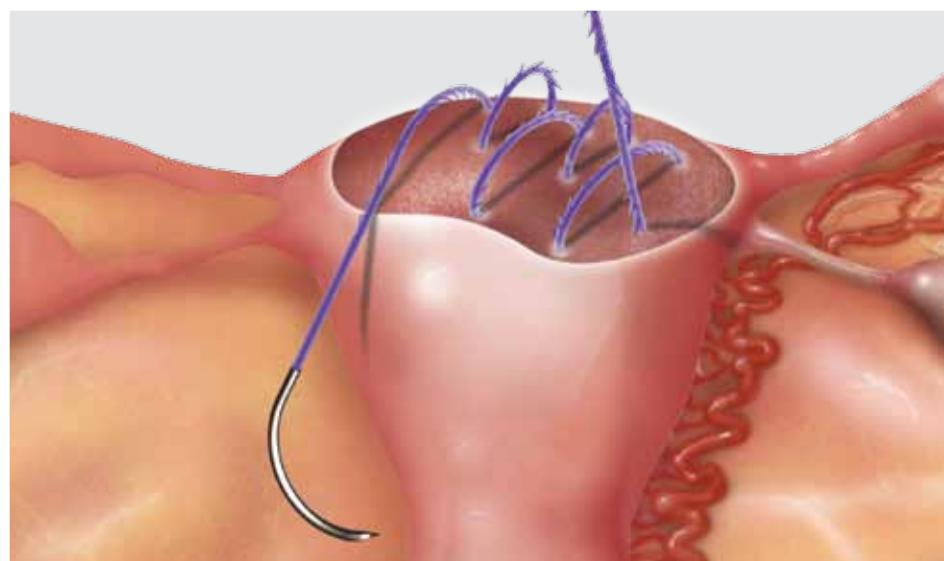
- 1 Essentially the same as the deep myomectomy defect closure - take the first bite at the distal portion of the hysterotomy. It is easier to sew towards yourself.
- 2 Using an atraumatic grasper, pull one arm of the Quill™ SRS through the tissue until you reach the transition point of the suture. You will feel resistance once the transition point of the suture engages the tissue.
- 3 Take a series of staggered bites with the first suture arm in a continuous helical fashion to close the deep myometrial layer. Leave the arm of the suture long, so that you have the option of pulling on the suture after the approximation is complete. This will allow re-tensioning of the myometrial tissue with the suture, in the case that the defect contracts during the procedure and you wish to take up slack.
- 4 Once the deep layer is closed, cut the suture end. If desired, double back with extra bites for security before cutting the suture.
- 5 With the second needle, close the remaining superficial defect, approximating the serosal layer and making sure adequate tension is applied to ensure appropriate approximation and hemostasis.
- 6 Once the defect is closed, cut the remaining suture or take a few extra back bites for added security.

Advantages

- Time saving.
- No knots required.
- Minimal ,if any, hemostatic sutures required (eg. locking or figure eight sutures).
- No third hand required, as the barbs hold the tissue and there is minimal tissue recoil.

Recommended Quill™ SRS

- PDO size 0 (14 cm x 14 cm, 36 mm half-circle needle)
- PDO size 0 (24 cm x 24 cm, 36 mm half-circle needle)
for hysterotomy defects greater than 8 cm



Vaginal Cuff Closure

Jon Einarsson MD, Jim Greenberg MD

Technique

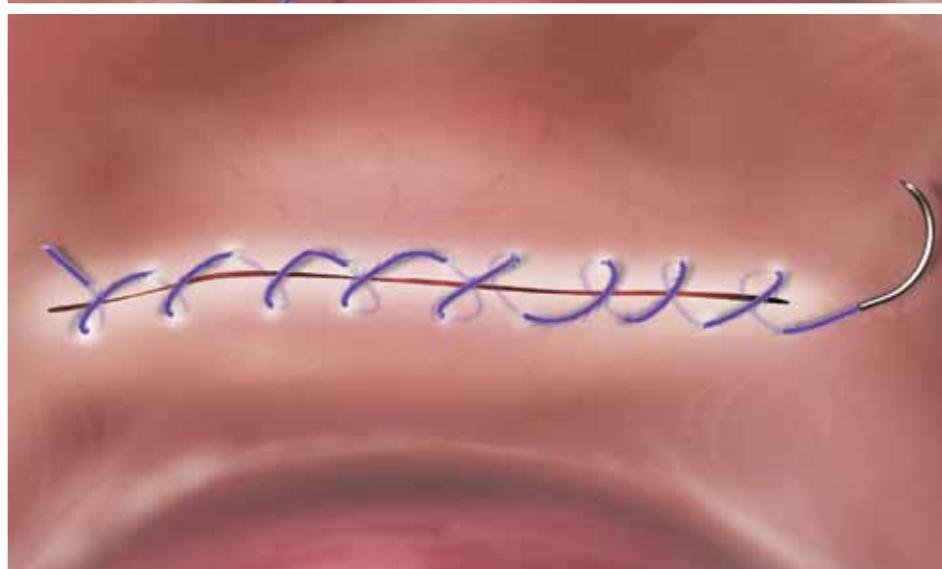
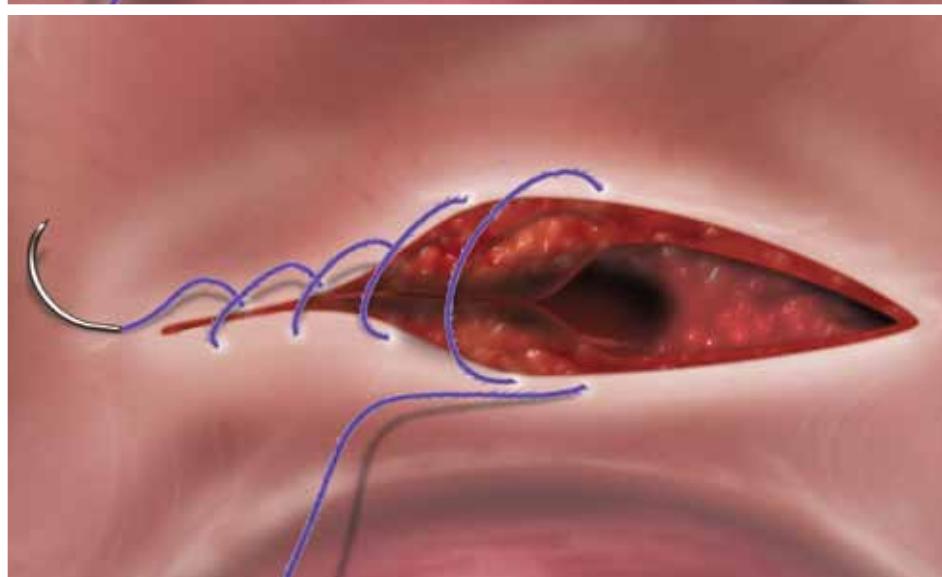
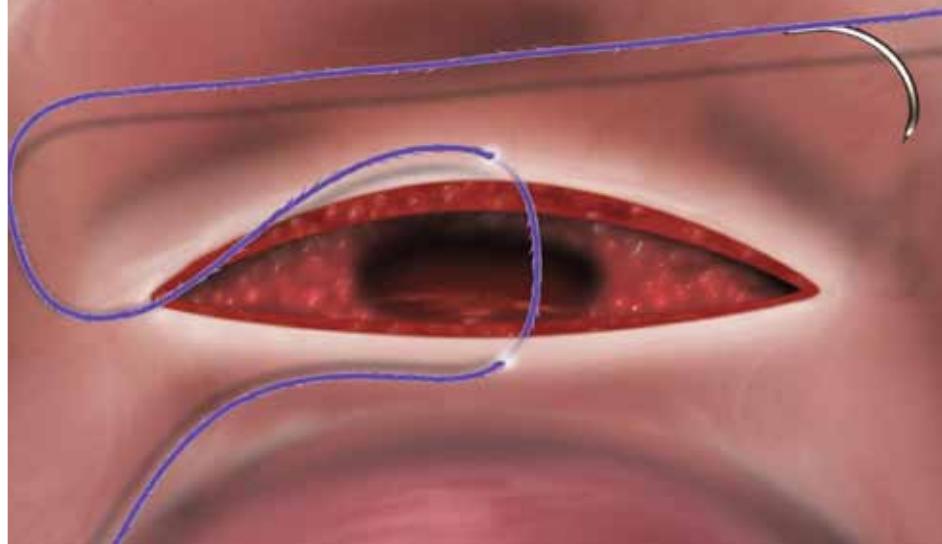
- 1 At the transition point of the vaginal cuff, take a bite of the tissue, incorporating the peritoneum, rectovaginal fascia and vaginal epithelium posteriorly, pubocervical fascia and vaginal epithelium anteriorly. Pull the Quill™ SRS until it reaches the transition point and you feel the opposing barbs engage.
- 2 With one arm of the suture, close one half of the defect with a helical stitch, ensuring approximation of the appropriate tissues. Once the end is reached, cut the suture or double back if added security is desired.
- 3 With the second arm, close the remaining half of the defect. Again, once the end is reached, cut the suture end or double-back if extra security is desired.
- 4 Make sure to take a bite of at least 1 cm into the vaginal epithelium. Be aware of the magnification of the laparoscope where inadequate bites can appear larger than they actually are.

Advantages

- Time saving.

Recommended Quill™ SRS

- PDO size 0 (7 cm x 7 cm 36 mm, half-circle needle) if starting from middle



Section 3

Soft Tissue Approximation in Plastic Surgery Procedures

Author

Malcolm D. Paul, MD, FACS Aesthetic and Plastic Surgery Institute,
University of California, Irvine, CA

Brow Lift

Corrects the sagging of eyebrows and hooding of the upper eyelids.

Technique

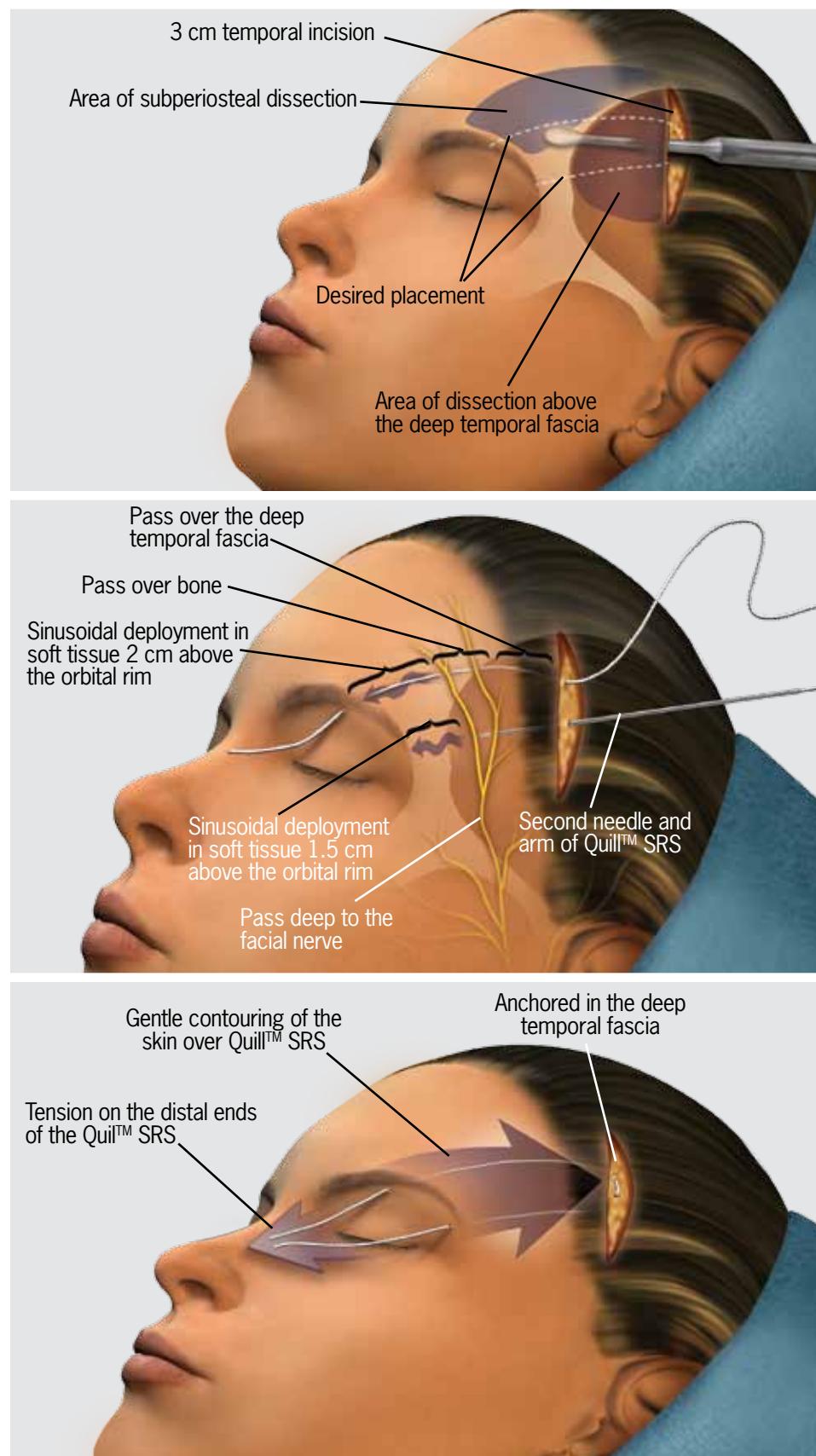
- 1 Create a 3 cm temporal incision, dissecting a plane which lies above deep temporal fascia posterior to the anterior temporal crest. Create a subperiosteal dissection in the area of the brow anterior to the anterior temporal crest. The orbital ligament is divided to permit adequate release and elevation of the lateral brow.
- 2 Pass the Quill™ SRS through the temporal fascia horizontally for anchoring. The medial Quill™ SRS enters the flap at 2 cm above the rim, passing over fascia and bone. The lateral Quill™ SRS enters the flap 1.5 cm above the rim, passing over the fascia. Entering the flap at these levels minimizes any chance of disturbing the frontal branch of the facial nerve. Both devices exit the skin just distal to the eyebrow.
- 3 The free ends of the Quill™ SRS are held as the soft tissue is contoured upward to lift the brow. An absorbable Quill™ SRS is placed between the superficial and deep temporal fascias within 2 cm of the temporal incision to further control the lateral brow and smooth the area of dissection over the deep temporal fascia.

Advantages

- Direct control of brow elevation and shape, as the barbs allow correction at the brow level rather than from a distance.
- Option to leave the distal ends extruding through the skin for a few days, covered with an antibacterial ointment and a non-adherent dressing. The final brow position may then be adjusted in the office for correction of asymmetries and to insure proper correction of brow ptosis.
- The barbed device is made of an absorbable polymer with degradation and absorption completed by six months.

Recommended Quill™ SRS

- PDO size 2-0 or 0



SMAS^{*}Plication and Lateral SMASectomy

*Superficial Musculo Aponeurotic System

Advancing the mobile to the non-mobile SMAS with or without a lateral SMASectomy
(original procedure first described by Baker DC, 2008)

Technique

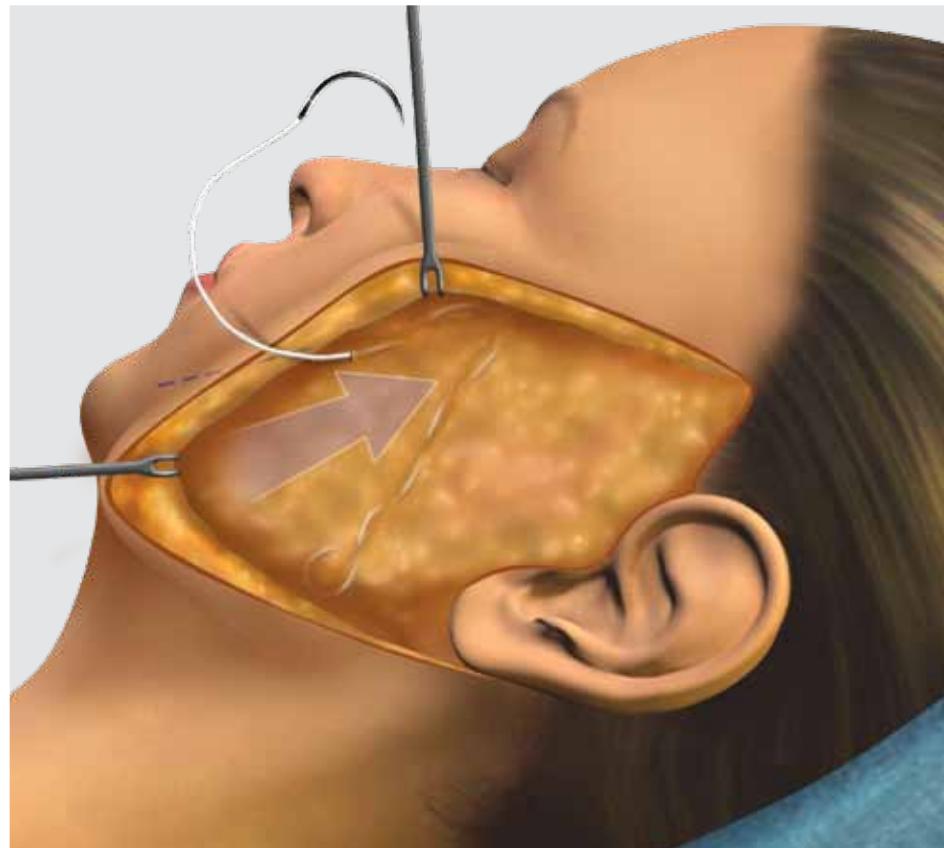
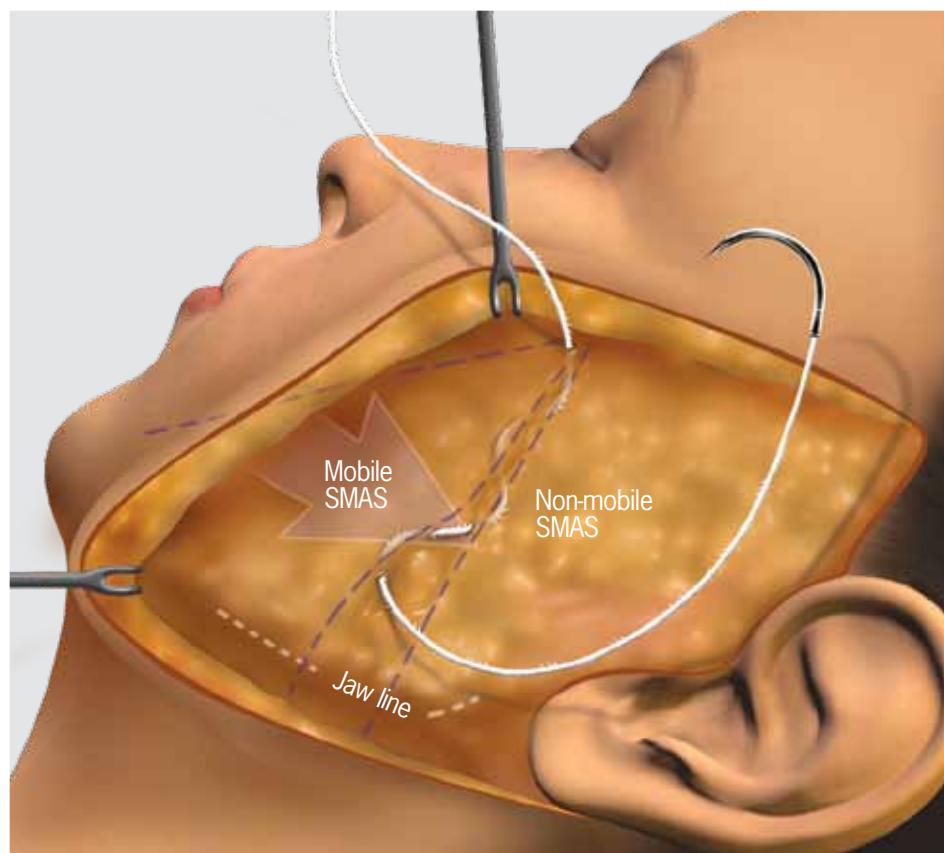
- 1 Begin the Quill™ SRS placement at the most superior point of desired correction, engaging the non-mobile SMAS, and advancing the device until the opposing barbs engage.
- 2 Pass the Quill™ SRS from the non-mobile to the mobile SMAS, and continue to the lowest point of desired elevation, ending with a J-hoop.
- 3 Repeat with the second half of the Quill™ SRS.

Advantages

- Faster device placement, while producing an even distribution of tension.
- Avoids knot tying and palpable knots.

Recommended Quill™ SRS

- MONODERM™ (for skin closure)
- PDO size 0 or 2-0



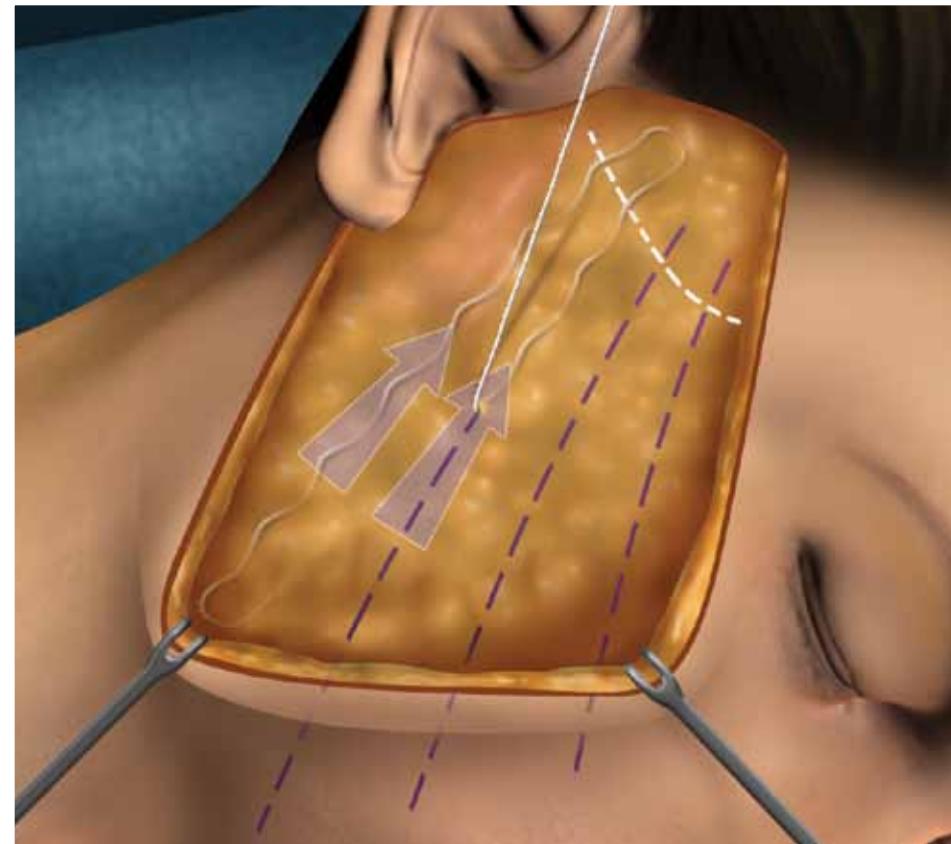
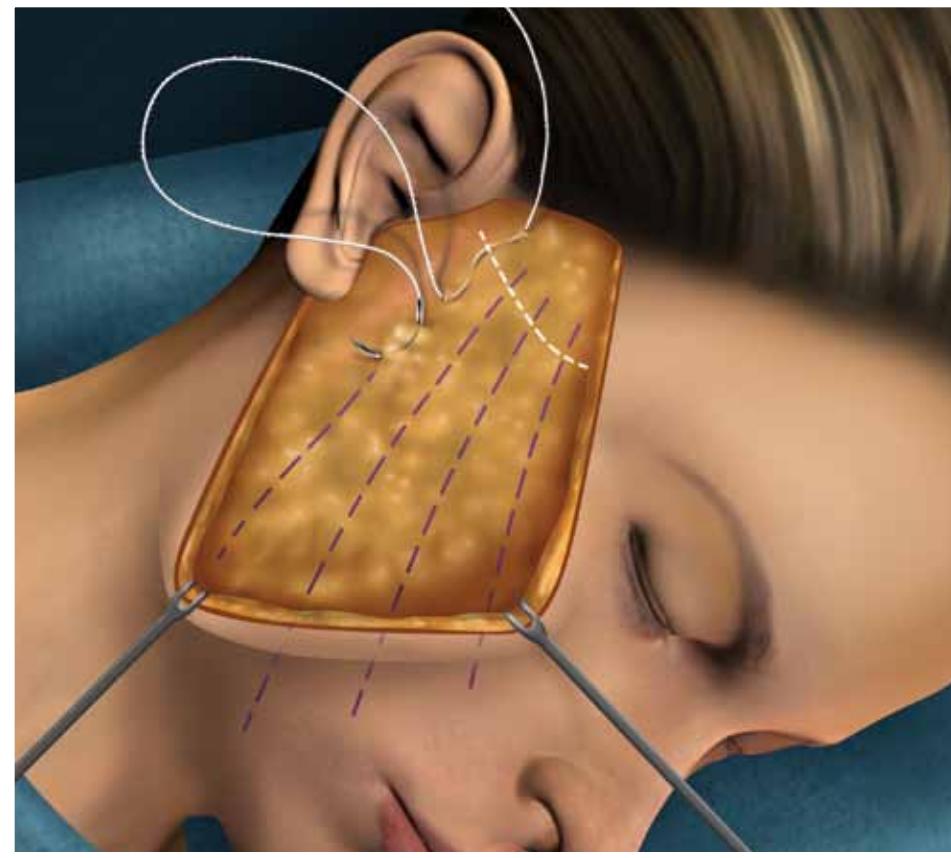
MACS Lift

(Minimal Access Cranial Suspension Lift)

Utilizing the Quill™ SRS to suspend the SMAS and platysma muscle from the deep temporal fascia (original procedure first described by Tonnard P, Verpaele A, et al., 2002)

Technique

- 1 With the first end of the Quill™ SRS, begin in deep temporal fascia above the zygomatic arch. Advance the device until the opposing barbs engage. Pick up the soft tissue of the face, sequentially elevating and fixating tissue to the previously elevated segment. The device will hold this tissue during the critical healing period. When the lowest point of fixation has been reached, perform a J-loop or backstitch, and then simply cut the excess device.
- 2 With the second end of the Quill™ SRS, begin at the deep temporal fascia above the zygomatic arch. Continue obliquely to first half of the device over the central part of the face, adding the J-loop or backstitch before cutting off the remaining device and needle. Elevation will be oblique and superior with slight posterior rotation. Continue down to the jaw line to get the desired correction of the jowl and of the subjowl soft tissue. A second Quill™ SRS can be used to elevate the malar fat pad.



Advantages

- Avoids knot tying and palpable knots.
- Avoids tissue gathering that is frequently seen with a traditional purse string type device thereby avoiding the need to place interrupted devices to smooth over the cheek.

Recommended Quill™ SRS

- MONODERM™ for skin closure
- Nylon size 1 or 0
- PDO size 1 or 0

Open Neck Platysmaplasty

A midline platysmaplasty procedure, contouring the neck from the mastoid area to the anterior platysma bands.

Technique

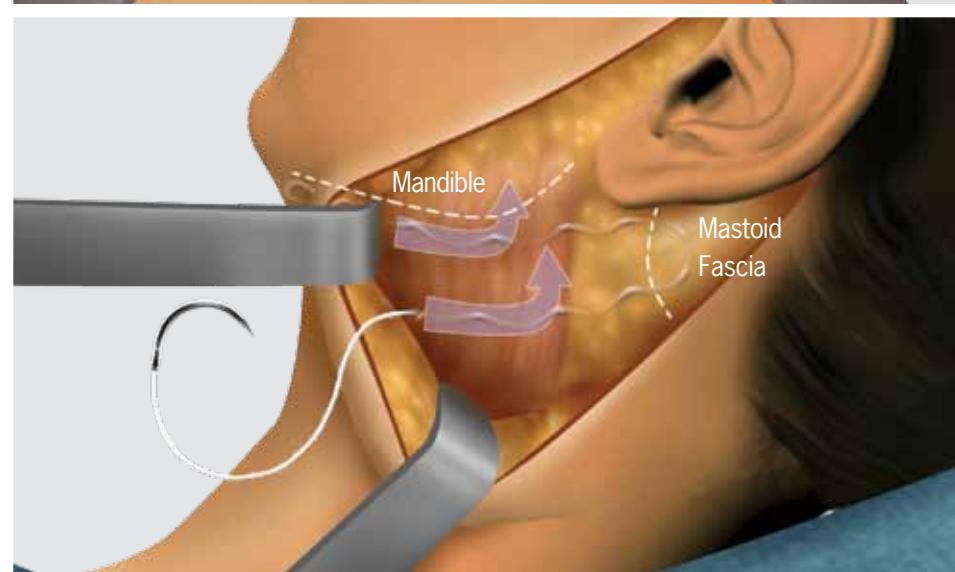
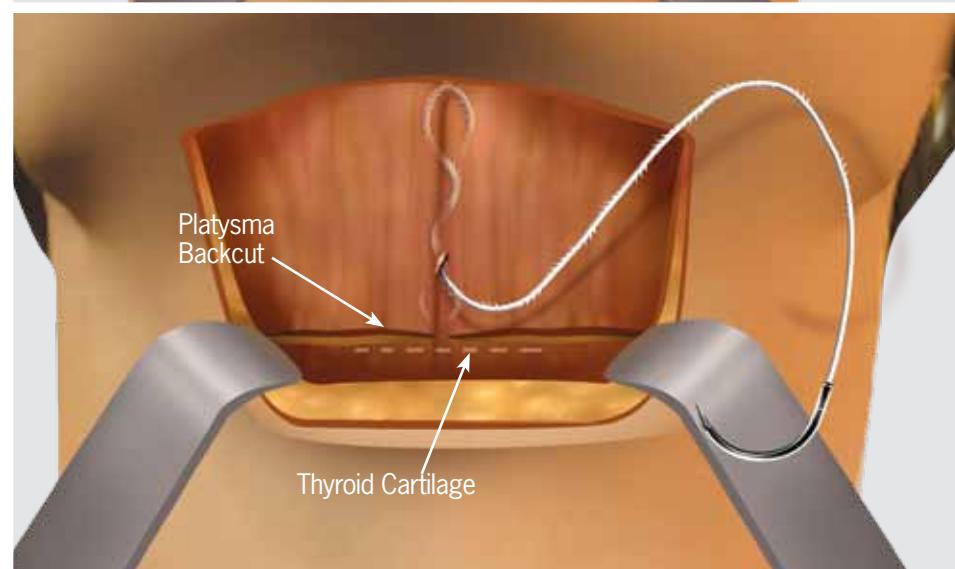
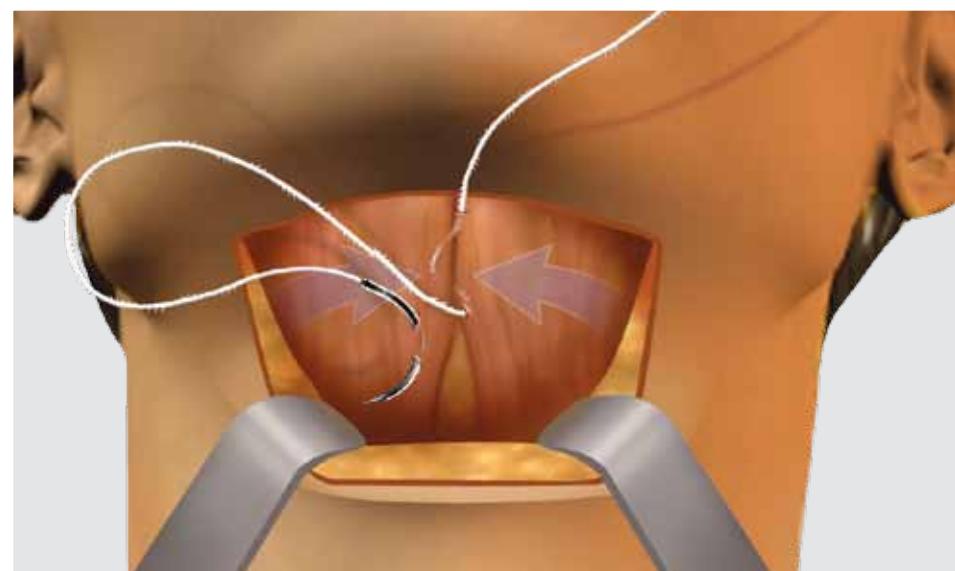
- 1 Begin approximating the platysma muscles in the midline by passing one end of the Quill™ SRS through the edge of one muscle, advancing until the opposing barbs engage. Pass the needle across to the other muscle edge and continue to the lowest point of approximation, adding a J-loop or backstitch before cutting off the remaining device and needle.
- 2 Repeat this procedure with the other half of the Quill™ SRS.
- 3 After the neck has been contoured, anchor another Quill™ SRS to the mastoid fascia and run one end of the device to the anterior, most-desired, correction point, following the mandibular border, ending with a J-loop or backstitch.
- 4 Repeat this process with the second half of the Quill™ SRS, about 1 cm below and parallel to the first device, ending at the same point with another J-loop or backstitch.

Advantages

- Avoids knot tying and palpable knots.
- Rapid midline plication without soft tissue gathering.
- Neck contouring in the midline and along the jaw line with support of the submaxillary gland.

Recommended Quill™ SRS

- MONODERM™ (for skin closure)
- PDO
 - size 2-0 for the midline platysmaplasty
 - size 0 for the jaw line and sub-jaw line suspension



Mastopexy and Reduction Mammoplasty

Shaping the breast pillars while enhancing upper pole projection.

Closing the areola and short scar, or closing with a traditional (Wise pattern) technique.

Technique

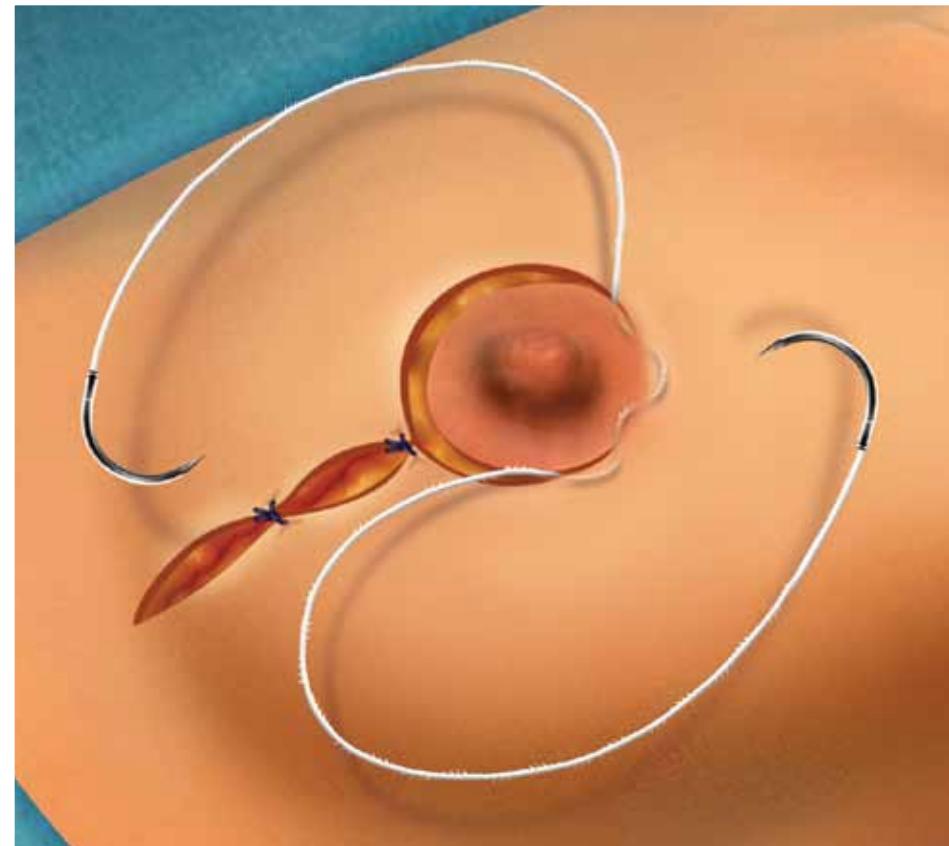
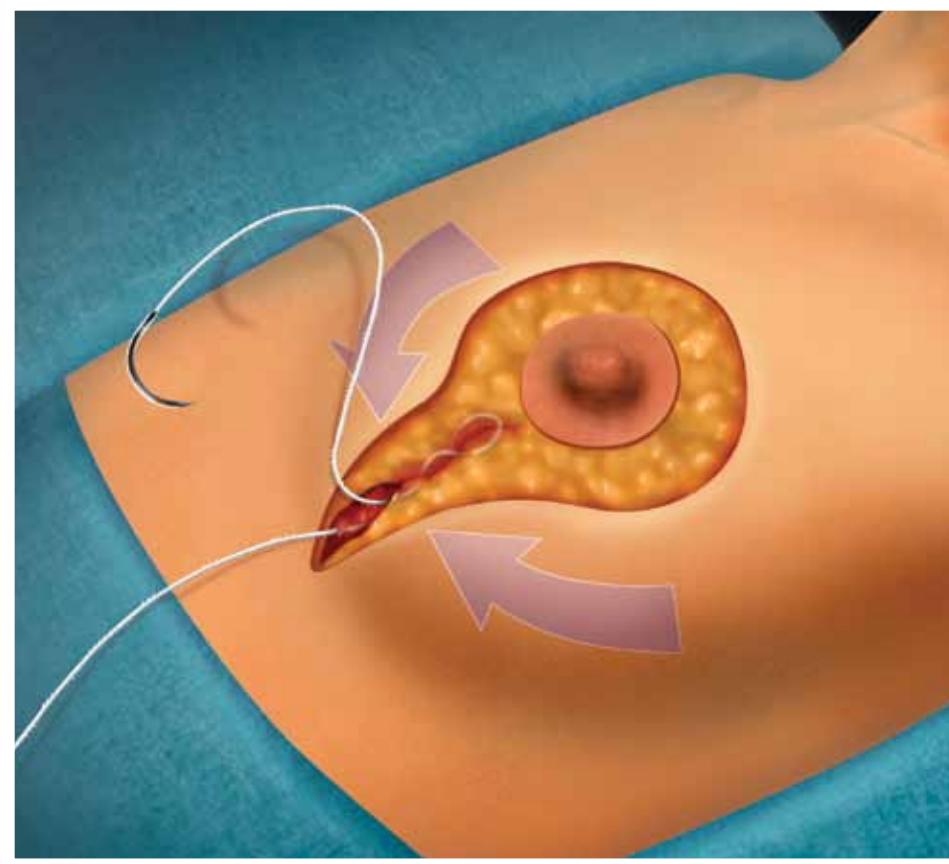
- 1 Begin at the apex of the pillars (adjacent to the lower border of the areola), engaging the Quill™ SRS in the breast parenchyma until the opposing barbs engage. Run one end of the device from one pillar to the other. This will approximate the pillars and produce upper pole fullness as the imbrication evolves. End with a J-loop or backstitch. Repeat with the other end of the device.
- 2 Begin the areola closure at the 12 o'clock position, passing through the deep dermis and advancing the Quill™ SRS until the opposing barbs engage. Continue advancing one end of the device counterclockwise until the 6 o'clock position is reached. Repeat with the other half of the device, passing clockwise from the 12 o'clock to the 6 o'clock position.
- 3 Continue down the short vertical incision with the remaining barbed segment of either Quill™ SRS. Add another device, if needed, to complete the repair. If a horizontal, inframammary incision is required, close the incision as described in the dual-layer closure technique.

Advantages

- Potential for better breast mound shaping.
- May result in improved areola appearance by avoiding the purse string closure, producing a more natural periareolar scar while avoiding the "noose-like" appearance of the areola.
- Faster wound closure with less material required.
- Avoids knot tying, palpable knots, and knot extrusions.

Recommended Quill™ SRS

- MONODERM™ for skin closure or PDO size 2-0 or 3-0 for skin closure
- PDO
 - size 1 or 0 for the pillars
 - size 2-0 for the areola and short scar closures
 - size 0 and 2-0 for the inframammary incision closure



Section

4

Editors, References and DVD

About the Editors

Malcolm D. Paul, MD, FACS.

Clinical Professor of Surgery, Aesthetic and Plastic Surgery Institute,
University of California, Irvine, CA

Dr Malcolm Paul is a board-certified plastic surgeon based in Newport Beach, CA, specializing in cosmetic plastic surgery procedures. Dr Paul is a member of several professional societies and he has held various offices. Dr Paul has been selected for, and included in, Best Doctors in America®, Orange County Top Doctors, and Guide to Top Doctors. He has also authored numerous publications. Dr Paul received his medical degree from the University of Maryland, and holds a BSc in Psychology from the same institute. He received his postgraduate training in General Surgery at The Mount Sinai Hospital, NY, NY, and post graduate training in General Surgery and in Plastic Surgery at The George Washington University Medical Center, Washington DC. Dr Paul received his certification from the American Board of Plastic Surgery in 1976, and is a fellow of the American College of Surgeons.



Rui Avelar, MD, CCFP, DIP SPORT MED.

Team Physician, Vancouver Canucks, NHL
Chief Medical Officer, Angiotech Pharmaceuticals, Inc., Vancouver, BC

Dr Avelar completed his medical school and residence training at the University of Toronto and received his Sports Medicine certification in 1994. He went on to open a private sports medicine practice in Vancouver, British Columbia, and eventually was named Best Sports Medicine Doctor in Vancouver by *Go Magazine* Vancouver. Dr Avelar now serves as the Chief Medical Officer for Angiotech Pharmaceuticals, Inc. based in Vancouver, and remains active as the doctor for the Vancouver Canucks NHL Hockey team. Along with being a lecturer at various clinical and CME events, Dr Avelar has acted as a consultant to various national sports teams, and has served as Vice President, Section of Sports Medicine BCMA and as a Clinical Instructor at the Faculty of Medicine of British Columbia.

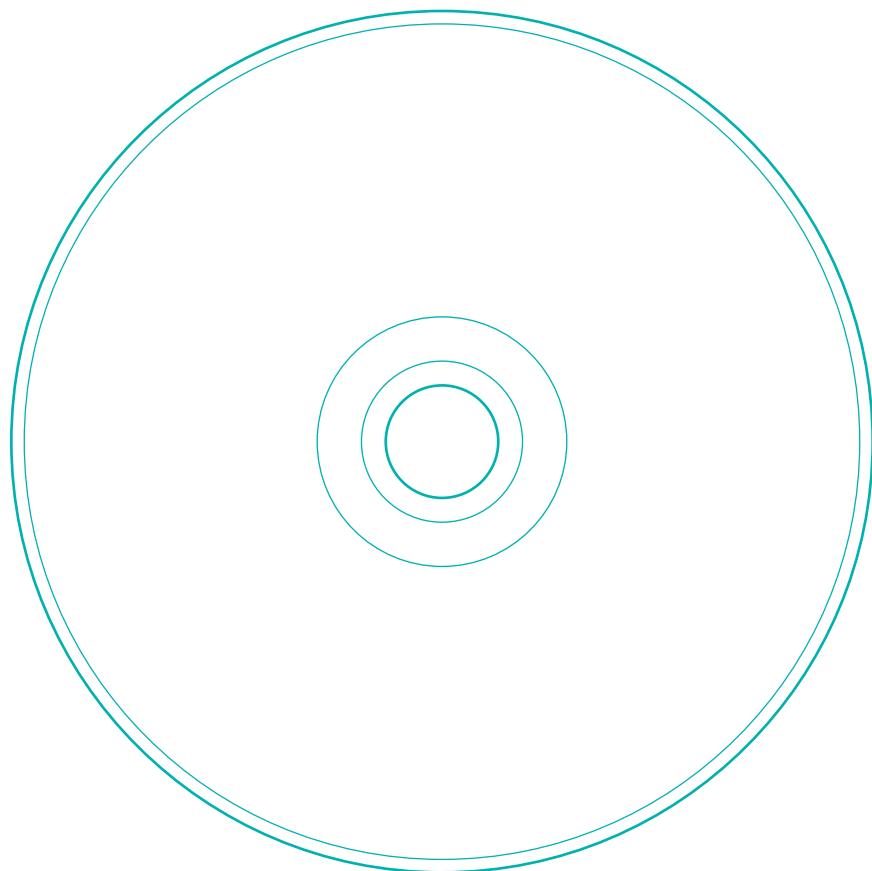


References

1. **Baker DC.** Lateral SMASeotomy, plication and short scar facelifts: indications and techniques. *Clin Plast Surg* 2008;35:533-550, vi.
2. **Einarsson JI, Suzuki Y.** Total laparoscopic hysterectomy: 10 steps toward a successful procedure. *Reviews in Obstetrics and Gynecology* 2009;2(1):57-64.
3. **Greenberg JA, Clark RM.** Advances in suture material for obstetric and gynecologic surgery. *Reviews in Obstetrics and Gynecology* 2009;2(3):146-158.
4. **Greenberg JA, Einarsson JI.** The use of bidirectional barbed suture in laparoscopic myomectomy and total laparoscopic hysterectomy. *J Minim Invas Gynecol* 2008;15:621-623.
5. **Murtha AP, Kaplan AL, Paglia MJ, Mills BB, Feldstein ML, Ruff GL.** Evaluation of a novel technique for wound closure using a barbed suture. *Plastic and Reconstructive Surgery* 2006;117:1769-1780.
6. **Paul M.** Barbed sutures for aesthetic facial plastic surgery: Indications and techniques. *Clin Plastic Surg* 2008;35:451-461.
7. **Paul, M.** Bidirectional barbed sutures for wound closure: Evolution and applications. *Journal of the American College of Certified Wound Specialists* 2009;1(2):51-57.
8. **Paul M.** Using barbed sutures in open/subperiosteal midface lift. *Aesthetic Surgery Journal* 2006;26:725-732.
9. **Ruff G.** Technique and uses for absorbable barbed sutures. *Aesthetic Surgery Journal* 2006;26:620-628.
10. **Tonnard P, Verpaele A, et al.** Minimal access cranial suspension lift: a modified S-lift. *Plast Reconstr Surg* 2002;109:2074-2086. Comments in: *Plast Reconstr Surg* 2003;111:1774-1775. *Plast Reconstr Surg* 2007;119:2317-2320.

Procedural Videos (DVD)

Watch and study the procedures covered in this manual in digital video format (DVD). Simply insert this disc into your DVD player.

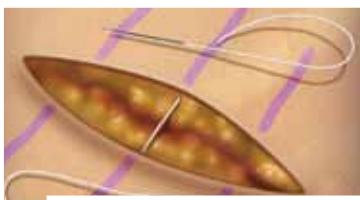


For further information please visit the Quill™ SRS Website for Healthcare Professionals. The website is frequently updated and videos are also available in alternate formats.

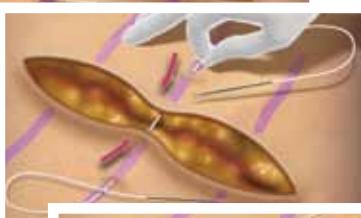
Visit www.AngioEduPRO.com.

Why Knot?™

This manual is intended to guide the surgeon in applying this novel method of soft tissue approximation in a safe and effective manner.



Written in a user-friendly, step-by-step format, this manual illustrates how this revolutionary new technology can be applied. In Section 1, four basic tissue closure techniques using the Quill™ SRS are explained; in Sections 2 and 3, these techniques are utilized in eight common surgical procedures.



Accompanying this manual is a DVD, a valuable tool to review before utilizing this technology in multiple clinical applications.

Visit www.AngioEduPRO.com for more information.

Angiotech Pharmaceuticals, Inc.

© 2007 - 2010 Angiotech Pharmaceuticals, Inc.
© 2007 - 2010 Surgical Specialties Corporation.
All Rights Reserved.

Fourth Edition 2010, Printed in the United States

Quill™ SRS is a trademark of
Quill Medical, Inc.

WCG-PM-388R5 01/10
Quill™ SRS Techniques & Procedures

