Special Topic

Sientra High-Strength Cohesive Textured Round Implant Technique: Roundtable Discussion

W. Grant Stevens, MD; M. Bradley Calobrace, MD; Robert Cohen, MD; Michael A. Fiorillo, MD; and Bill G. Kortesis, MD

Abstract

A panel of board-certified plastic surgeons chaired by Dr Grant Stevens convened to discuss their respective experiences with the Sientra High-Strength Cohesive (HSC) Textured Round silicone gel breast implants. The authors have implanted a combined total of approximately 2100 patients. Surgical pearls, complication avoidance, and practice integration tips are among the topics reviewed. The surgeons also present challenging cases and describe how the HSC textured implants helped them achieve a successful outcome.

Level of Evidence: 5

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A panel of plastic surgeons convened via electronic and telephone communication in November and December 2014 to discuss their experience with Sientra textured round High-Strength Cohesive (HSC) Silicone Gel breast implants (Sientra Inc., Santa Barbara, CA). The moderator of the panel is one of the most experienced Sientra implant users in the United States, with extensive pre- and post-approval experience spanning the past 12 years. The panel consists of surgeons who have gained substantial experience with the Sientra textured round implants, with a combined total of approximately 2100 patients. The surgeons share their expertise with the Sientra textured round implant and share their most challenging cases.

PANEL

M. Bradley Calobrace, MD: Dr Calobrace is located in Louisville, Kentucky and has been in practice for 18 years. Dr Calobrace uses the Sientra textured round implant in approximately 90% of his primary and revision augmentation cases, totaling over 400 cases in the last 2 years.

Robert Cohen, MD: Dr Cohen has been in practice for 10 years in Paradise Valley, Arizona. Dr Cohen has used the

MODERATOR

W. Grant Stevens, MD: Dr Stevens has experience with Sientra implants for over 12 years and is participating as an Investigator in the Sientra Core as well as Post Approval Study. Dr Stevens has been in practice in Marina del Rey, California for 28 years and selects Sientra textured round implants for the majority of his augmentation and revision cases, totaling over 900 cases to date.

Dr Stevens is Clinical Professor of Surgery, Division of Plastic Surgery, University of Southern California School of Medicine, and Director of the University of Southern California–Marina del Rey Aesthetic Surgery Fellowship Program, Los Angeles, California. Dr Calobrace is a plastic surgeon in private practice in Louisville, Kentucky. Dr Cohen is a plastic surgeon in private practice in Paradise Valley, Arizona. Dr Fiorillo is a plastic surgeon in private practice in Pearl River, New York. Dr Kortesis is a plastic surgeon in private practice in Charlotte, North Carolina.

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Sientra textured implants in the majority of his primary and revision breast augmentation cases totaling approximately 400 cases in the last 3 years.

Michael Fiorillo, MD: Dr Fiorillo is located in Pearl River, New York and has been in practice for 17 years. Dr Fiorillo’s cases are mostly primary and revision augmentation and he uses the Sientra textured round implant in 75% of his surgeries totaling over 300 cases in the past 3 years.

Bill Kortesis, MD: Dr Kortesis has been in practice in Charlotte, North Carolina for the past 5 years. Dr Kortesis uses the Sientra textured round implant in 90% of his primary and secondary surgeries totaling over 200 cases in past 2 years.

BACKGROUND

In contrast to our European colleagues, the US market was a late adopter of textured silicone gel devices. Dissatisfaction with textured saline devices, particularly deflation and wrinkling,1-3 led surgeons to use the smooth saline implant. Already familiar and comfortable with the smooth surface of the saline implant, the transition to smooth gel implants was natural.

The European markets were accustomed to the benefits attributed to textured implants, including the protective effect against capsular contracture,4-11 the predictability of placement, and the increased pocket control. In the past two years there has been rapid advancement in available options in the United States led by Sientra’s approval in 2012.12 With more options available, it is important that surgeons increase their experiential knowledge of these new products.

The Sientra implants are the only round implants filled with fifth generation gel2 with a textured line that features Silimed’s TRUE Texture™ (Sientra Inc.) technology, a proprietary texturing method designed to promote tissue ingrowth that does not use sodium chloride, sugar, soap/scrub, or pressure-stamping methods.10 This panel of board certified plastic surgeons was selected to discuss their experiences and techniques, benefits and challenges, and surgical pearls for integrating the Sientra True Texture HSC Round implants in their practices.

What prompted you to start using the Sientra True Texture round implant? Also, considering other textured products now available in the US, what are the benefits of Sientra’s implant?

GRANT STEVENS: I started using the Sientra implant in 2002 and was attracted to the textured round because I had been using textured devices in 1991. In 1991 I was using another manufacturer’s textured device because I had lower capsular contracture occurrence with these implants and polyurethane had been taken off the market. I considered the smooth round implant to be under-filled. I had good experience with texturing, and it was a natural transition. My impression of the three types of texturing:

1. Mentor Worldwide LLC (Santa Barbara, CA): SiltexTM has the least integrated texturing. While capsular contracture is lower with Siltex than smooth, there is no integration and is the least effective in limiting mobility and providing pocket control.

2. Allergan (Irvine, CA): Biocell® (similar to a “velcro”-like effect) has more integration, which limits implant mobility, which is sometimes good, sometimes bad. This results in pseudo-capsule formation, which can progress to hardening, seroma formation, hematoma (if it tears), and increased revision rate.

3. Sientra: Utilizes True Texture technology and has the lowest capsular contracture rate, even lower than Siltex. There is no pseudo-capsule formation.

BRAD CALOBRACE: My dissatisfaction with the available textured implants in the US led me to use mostly smooth silicone implants since 2006. Based on my knowledge of the rest of the world, I became increasingly interested in incorporating textured implants. When I first incorporated Sientra implants in my practice two years ago, I was immediately impressed with the uniqueness of the texturing as compared to the others available in the US. The texturing grips the tissue to create adherence without incorporation of the implant to the capsule. This limits but does not eliminate implant movement, giving a more natural, softer, mobile feel. Additionally, the increased fifth generation cohesive gel with a unique gel-to-shell interface provides an implant that holds its projection and maintains its upper pole volume, even under the pressure of the overlying pectoralis muscle, to provide a rounded, youthful look. They now have become my implant of choice for primary and secondary breast augmentation as well as with augmentation mastopexies.

ROB COHEN: I was fortunate to be a fellow with Dr Grant Stevens in 2004-2005, when he was one of the investigators in the Sientra Core study. During that time, I had the chance to be involved with hundreds of breast augmentations using these implants, and I really appreciated the softness of the implant combined with a supple textured shell that had a nice degree of friction with the tissues. When Sientra entered the marketplace in 2012, I was very eager to use this implant based on the very positive experience during my fellowship. In my opinion, the feature that most distinguishes these implants is the textured shell which has the feel of a thinner, smooth implant combined with the stability and lower capsular contracture rate associated with textured implants. The aggressiveness of the texture is halfway between Siltex and Biocell and the shell-to-gel
adherence is strong so I have never seen a delamination. I continue to use all three brands of breast implants, but because of the positive features of Sientra’s True Texture, their implants represent the majority of the devices I use.

MIKE FIORILLO: From the first time I felt the Sientra implants years ago, I was intrigued especially since my international colleagues raved about them. These fifth generation devices were long overdue in the US and the texturing in my opinion is the best on the market. I didn’t like how the smooth implants would drop or lateralize. The Sientra HSC textured implant provides the best tissue adherence and leads to better predictability while is not too aggressive that it creates too much incorporation (Figure 1). The increased fill ratio also leads to minimal rippling. I have only had one patient complain of rippling out of 300 cases.

BILL KORTESIS: The data surrounding the Sientra HSC textured fifth generation implants is notable, specifically the lower capsular contracture rates, higher fill volume, and potential longevity of the implants. This data impressed me as it appears that the long-term complication rates with this newer generation of implant are superior to previous generations. I have found a lower incidence of capsular contracture, and have not detected any seromas with the Sientra textured round implants. When analyzing my photographs at follow-up, it appears that upper pole fullness is maintained better than with other round devices I have used (Figure 2).

PATIENT SELECTION

Describe your preferred or target patient for the textured round implant. What is your consultation process?

BRAD CALOBRACE: I counsel all my patients on the differences between smooth and textured breast implants. I believe textured implants are most beneficial in patients with any chest wall abnormality or asymmetry since the texturing provides long-term stability of the implant with a lower incidence of malposition or lateral drift. Textured implants are very helpful in secondary cases, especially when treating capsular contracture to lower the risk of recurrence, and implant malposition to stabilize implant in the repaired pocket.

ROB COHEN: When using a Sientra textured round implant, it is important to remember that these implants will have a higher fill ratio and more relative projection than a smooth round gel implant. As a result, the Sientra textured round MP implants will fall between a moderate plus and high profile Mentor MemoryGel® (Santa Barbara, CA) and between an Allergan Natrelle® Style 15 and Style 20 implant (Irvine, CA). I use the round textured Sientra implants on patients who prefer a fuller, more augmented look with a fair amount of upper pole volume.

BILL KORTESIS: The patient consultation process involves a full discussion of all the implant types available including demonstration of stability and feel. I provide my patients data on manufacturer complication rates and warranties. Sizing is accomplished through discussion of the desired result (many times patients will bring in photos of their ideal result), trying on tester implants, and reviewing 3D imaging.

MIKE FIORILLO: My preferred patient is anyone who desires the full round look, for example, a post-partum patient or a weight-loss patient who wants to regain superior pole fullness. I use a combination of 3D imaging and have the patient try the implants on in the office and review before and after photos for available options.

When would you not use a textured round implant?

GRANT STEVENS: Consensus by the authors is that most patients would benefit from a textured round implant with the following exceptions:

(1) Thin, tight-chested patients who may present with wrinkling postoperatively.
(2) Implant exchange cases with a pre-existing smooth implant as long as there is no capsular contracture and the replacement implant is the same size or smaller, so as not to impact the capsule.
(3) Patients that prefer a softer transition in the upper pole of the breast and a natural appearance in which case a shaped implant would provide better result.
(4) Patients with a long thoracic chest to avoid the convexity that can sometimes be present with round implants.

CONSIDERATIONS

Have you seen a reduction in any postoperative complications using this implant?

GRANT STEVENS: The general consensus of the panel is that in using these implants we have observed a decrease in the complication rates of:

(1) capsular contracture
(2) bottoming out
(3) malposition and lateral migration
(4) less asymmetry in cases of chest wall abnormalities

Over the years, the panel has found capsular contractures to be the most challenging and disheartening postoperative complication to manage. The low incidence observed with the Sientra textured round implants is a welcome improvement in outcomes.
What types of postoperative complications and initial challenges have you encountered using this implant? How have you mitigated them?

BRAD CALOBRACE: At first I experienced a few implants that sat too high or dropped less than smooth devices as the texture and increased gel cohesivity tend to hold the implants in position and create less stretch of the lower pole over time. The correction was simple: create a pocket that is perfectly situated for the implant in all dimensions, position the implant at the base of the pocket, and close the incision without displacing the implant upward into the pocket. Inframammary fold lowering may be required in some patients to position the implant correctly as opposed to leaving the distance short and relying on the implant to stretch the lower pole over time, as is seen with smooth implants (Figure 3).

The most significant challenge was to make sure my clinical staff understood the unique differences with the textured implants and changes in our postoperative protocols with our textured implant patients. The staff needed to become accustomed to confirming which implant was used [smooth or textured] when providing instructions to patients. We currently have a “pop-up” that is activated when opening the patient’s chart in EMR to notify the provider of what type of implant was used in the patient.

GRANT STEVENS: There is some suggestion that textured implants may be more prone to develop seromas. I have had very minimal occurrence of this complication and my guidance on avoidance is: use electro-cautery for a bloodless dissection, maintain precise hemostasis, and control pocket size (less friction). I never use drains on primaries since I do not close the patient until complete hemostasis is achieved.

Figure 1. Dr Fiorillo’s challenging case. (A, C) This 25-year-old woman with a constricted pole and minimal breast tissue underwent bilateral dual plane augmentation with Sientra textured round high profile 440 cc implants. The inframammary fold was lowered and suturing was performed on the superior and inferior fascia down to the chest wall. (B, D) Photographs obtained 12 months postoperatively show an improved pole with controlled tissue expansion.
BILL KORTESIS: There is a small learning curve when switching from smooth to textured implants. Initially I had patients with implants that were higher than preferred, despite patients being satisfied. The recognition that the textured implants do not settle like smooth implants changed my placement to a lower position and set the fold by suturing the pocket down to the chest fascia or periosteum with fantastic results.

Figure 2. Dr Kortesis’ challenging case. (A, C, E) This 37-year-old woman with previous submuscular saline augmentation 2 years prior presented with bottoming out in the right breast and capsular contracture in the left breast. The patient desired larger, symmetric, soft breasts. She underwent bilateral submuscular revision with Sientra textured round moderate profile implants (485 cc implant in the right breast, 525 cc implant in the left breast). Inferior capsulorrhaphy and superior capsulotomy was performed on the right breast and a complete capsulectomy was performed on the left breast. (B, D, F) Photographs obtained 6 months postoperatively demonstrate that the textured implants prevented repeat capsular contracture and maintained implant position. A large, soft, symmetric result was achieved.
ROB COHEN: I have had very few complications with Sientra implants. During a simple implant exchange my first year, I placed textured implants in a smooth pocket. The implants did not settle properly and I eventually performed a complete capsulectomy and repositioned the original implants. Having more knowledge now, I believe that placing textured implants in a smooth pocket requires more pocket adjustment.

Figure 3. Dr Calobrace’s challenging case. (A, C, E) This 27-year-old woman presented with tuberous breast deformity and narrow breasts on a wide chest with associated ptosis. She underwent bilateral submuscular dual plane 3 augmentation with Sientra textured round moderate profile implants (525 cc implant in the right breast, 485 cc implant in the left breast). (B, D, F) Photographs obtained 8 months postoperatively. The dual plane 3 procedure, textured surface, and stability and cohesiveness of the gel provided resistance to the constricted tissues in the lower pole. The inframammary fold was lowered and radial scoring performed to expand the lower pole for the implant.
The biggest challenge is to simply understand how the shapes and profiles will affect the breast over time compared to a softer, less form stable smooth implant. I think once a surgeon has a solid understanding of how these implants interact with tissues, the relatively minor technique adjustments are fairly straightforward.

Figure 4. Dr Cohen’s challenging case. (A, C, E). This 37-year-old woman presented with 15-year-old 600 cc submuscular saline implants with superior malposition, ptosis, and an unnatural appearance. She underwent an implant exchange with Sientra textured round moderate profile 435 cc implants. An anterior/medial capsulectomy was performed as well as placement of ADM and an inverted T-scar mastopexy. (B, D, F) Photographs obtained 6 months postoperatively. Down-sizing and release of the pectoralis muscle allowed for proper positioning of the implant. Lower pole tissue removal was performed for re-draping of tissue over the implant. The textured implant stabilized the position and a “popcorn technique” reduced the size of the pocket perimeter. The ADM stabilized the muscle and limited lower pole stretch and animation deformity. The mastopexy reduced the skin envelope.
Sientra HSC Textured Round Surgical Pearls

- Utilize a slightly larger incision.
- Precise pocket to match implant base width, do not over-dissect.
- Place at the base of the pocket with adequate space. May require lowering of the inframammary fold.
- Place them where you want them. They will not settle as much as smooth implants.
- Use textured round implants when the patient desires upper pole fullness. They will better maintain the upper pole of the breast when placed under the muscle or dual plane in contrast to smooth devices.
- Perform immediate ROM (shoulder rolls and lateral arm elevation) to stretch muscle and tissue without displacement.
- Don’t massage or use a band as this can lead to seroma formation.

**Figure 5.** This figure represents a compilation of the authors’ surgical pearls for the Sientra textured round breast implant.

**MIKE FIORILLO:** The implant will tend to stay where it is placed. So you have to make sure that it is precisely placed in the right size pocket. They don’t drop months later like a smooth implant does.

**GRANT STEVENS:** The textured round implants are particularly effective in revision cases for implant malposition and capsular contracture. The round textured implant is the solution to the problem of capsular contracture, and malposition cases especially benefit from texture as the new pocket location is preserved.

**What is your experience and impression of the textured round implant in revision cases?**

**BILL KORTESIS:** Revision surgery comprises over a third of my breast practice. I prefer using textured round implants in revision cases because I can control the pocket and feel comfortable this implant will stay where I place it. I have also noted a significant decrease in capsular contracture rates when a smooth implant is removed along with a capsulectomy and replaced with a Sientra HSC textured round implant.

**MIKE FIORILLO:** These implants are great in revision cases. They provide better control of placement and better cleavage. I also feel more confident using them in capsular contracture cases.

**ROB COHEN:** Revision is often about regaining control of a situation where some degree of control has been lost due to poor elasticity, tissue changes, prior over-dissection, implant migration, etc. (Figure 4). To gain more control over the pocket, I will often use a neosubpectoral pocket in conjunction with textured implants to increase my confidence that the device will stay where I place it. If keeping the original smooth implant pocket mostly intact, I will generally replace the implant with a new smooth silicone implant. However, when the pocket has fresh tissue that will be in contact with the implant, having a textured device adds an important layer of predictability.

**BRAD CALOBRACE:** I use these implants almost exclusively in revision cases due to the implant’s textured surface providing control in secondary cases. The more stable implant places less tension and pressure against the repair and holds its position better when pockets are less controlled. The textured device is mandatory when switching the implant to the subglandular position or when treating a capsular contracture due to the protective effect on future capsular contractures.
Figure 6. Dr Stevens’ challenging case. (A, C, E) This 32-year-old woman presented with small breasts, and asymmetry and contour deformity of the lower pole in the right breast. She underwent bilateral submuscular augmentation with Sientra textured round high profile implants (300 cc implant in the right breast, 255 cc implant in the left breast). Fat grafting was also performed in the right breast to address contour deformity. An electro-cautery bloodless dissection was performed to create a controlled pocket. Sizers were utilized to determine optimal implant size. (B, D, F) Photographs obtained 6 months postoperatively. The new infra-mammary fold allowed for controlled tissue expansion of the lower pockets.
SURGICAL TECHNIQUE

What is your operative technique with this implant?

Have you modified any of your operative techniques with this implant (Figure 5)?

ROB COHEN: Overall, my pocket dissection is more precise with textured implants. I generally use an inframammary incision but could also use a periareolar incision in most. I like to check patients in the supine and seated position prior to closure to ensure the best symmetry as the implants will hold their position much more than smooth implants. I am also more inclined to use dual plane 2 and 3 techniques to expand a constricted lower pole or fill mild glandular ptosis as the implants will settle less than smooth implants.

MIKE FIORILLO: I only place them through the inframammary fold so I have better control. I lower the inframammary fold in almost every case for inframammary positioning. Once I have them in the proper position, I lower the inframammary fold with sutures to fascia to fascia of chest wall.

BILL KORTESIS: With an inframammary approach, pockets are either subfascial or dual-plane depending on the amount of overlying breast parenchyma. I use monopolar electrocautery for a bloodless field. To minimize bacterial colonization, a touchless technique with the assistance of a funnel is used. I set the inframammary fold with sutures placed to the chest wall fascia or rib periosteeum to maintain the position of the incision at the level of the fold and to control the final position of the implant.

What are your top tips for new Sientra textured round users?

GRANT STEVENS: The panel recommends:

1. Do not be afraid to try these implants. They will improve your precision and allow for more long-term predictability. Technique is not significantly different between smooth and textured implants.
2. Observe a few cases with a surgeon that has experience with these implants.
3. Start with cases that are more straightforward. This will allow you to become comfortable with the handling the nuances of pocket dissection and placement before moving to complex revisions.
   - Try these implants on primary augmentation cases where you would normally consider a higher profile type implant and you will be pleasantly surprised by the shape and relative ease of the transition to texture (Figure 6).
4. Select patients that will not need inframammary fold lowering as this may complicate one’s ability to fairly evaluate the results.
5. These implants will take longer to reach their final result, inform your patients of this ahead of time.

CLOSING THOUGHTS

GRANT STEVENS: I would like to thank the panelists for sharing their experience and knowledge. As discussed and demonstrated by this group of surgeons with experience in approximately 2100 patients, the Sientra True Texture HSC silicone gel implant has great utility in almost all cases. The presentation of challenging primary and revision cases provides evidence of the versatile application and enhanced aesthetic outcomes with these implants. This panel has found that the Sientra HSC round fifth generation gel fill and True Texture surface provides an evolved implant with better pocket and surgical control, predictability of outcomes and an increased safety profile. Transitioning to this implant has been relatively straightforward and widely beneficial for the surgeons on this panel.

Disclosures

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