

# The Supra-Inframammary Fold Approach to Breast Augmentation: Avoiding a Double Bubble

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**Background:** The inframammary incision for breast augmentation is commonly made at or below the existing inframammary fold (IMF) in an effort to keep the scar in the crease. In recent studies, surgeons inferiorly relocate the IMF, center the implant at nipple level, and attempt to secure the new IMF with sutures. The fascial attachments (also called ligaments) holding the IMF are released, risking a bottoming-out deformity or a double bubble.

**Methods:** This retrospective study evaluated 160 consecutive women undergoing primary subpectoral breast augmentation. An incision was made 0.5–1.0 cm above the IMF. Dissection proceeded directly to the pectoralis margin, preserving IMF fascial attachments. The pectoralis origin was released from the lower sternum. Surveys were administered to obtain patient-reported outcome data. Ninety-eight patients (61%) participated.

**Results:** Implants often appear high on the chest at early follow-up appointments but gradually settle. One patient (0.6%) developed a double bubble. No reoperations were needed for implant malposition. One patient had a mild animation deformity. There were no cases of symmastia. The mean result rating was 9.1/10. Four percent of surveyed patients found their implants too high; 8% found them too low. Ninety-two patients (94%) reported that their scars were well-hidden. Ninety-six women (98%) said that they would redo the surgery.

**Conclusions:** A supra-IMF approach anticipates the normal descent of implants after augmentation. Scars remain hidden both in standing and supine positions. This method reduces the short-term risk of reoperation for implant malposition or a double bubble. (*Plast Reconstr Surg Glob Open* 2017;5:e1411; doi: 10.1097/GOX.0000000000001411; Published online 5 July 2017.)

## INTRODUCTION

The most common incision for a breast augmentation is the inframammary approach, preferred by 83.9% of surveyed plastic surgeons.<sup>1</sup> Its advantages include direct visualization of the breast pocket with minimal glandular dissection,<sup>2</sup> a scar that is hidden on the frontal view of the breasts, and reuse of the same incision in secondary surgery.

The traditional recommendation is to locate the incision at the anticipated level of the postoperative inframammary fold (IMF) so that the scar remains concealed in the fold.<sup>2</sup> Hidalgo and Spector<sup>2,3</sup> suggest that a scar

located above the IMF is subject to greater tissue tension from the weight of the implant, causing the scar to spread or hypertrophy. Montemurro cautions that an incision above the existing IMF could result in a scar that is visible on the lower breast pole.<sup>4</sup>

The double-bubble deformity has received attention recently in the plastic surgery literature.<sup>1,2,5–12</sup> This deformity is characterized by a second crease running across the lower pole of the breast.<sup>5</sup> Both bottoming out and the double-bubble deformity may result from a dissection inferior to the existing IMF.<sup>2,5,6</sup> In this study, the author evaluates a modification of the inframammary approach to reduce the risk of these problems.

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## PATIENTS AND METHODS

### Patients

This retrospective study consists of a chart review, photographic evaluation, and patient surveys conducted among 160 consecutive women undergoing primary breast augmentation between July 2012 and December 2016. Patients treated with unilateral operations, secondary procedures, or simultaneous mastopexies were excluded. Breast reconstruction patients were excluded. Photographs were taken at all follow-up appointments at least 1 month after surgery and evaluated for bottoming out, a double bubble, and animation deformity (photographs were taken with the patient flexing the pectoral muscles). Surveys were administered to obtain patient-reported outcome data, with specific interest in implant size, position, and scar quality. A minimum 3-month follow-up time was used for surveys. Institutional review board approval was obtained from Chesapeake Institutional Review Board Services.

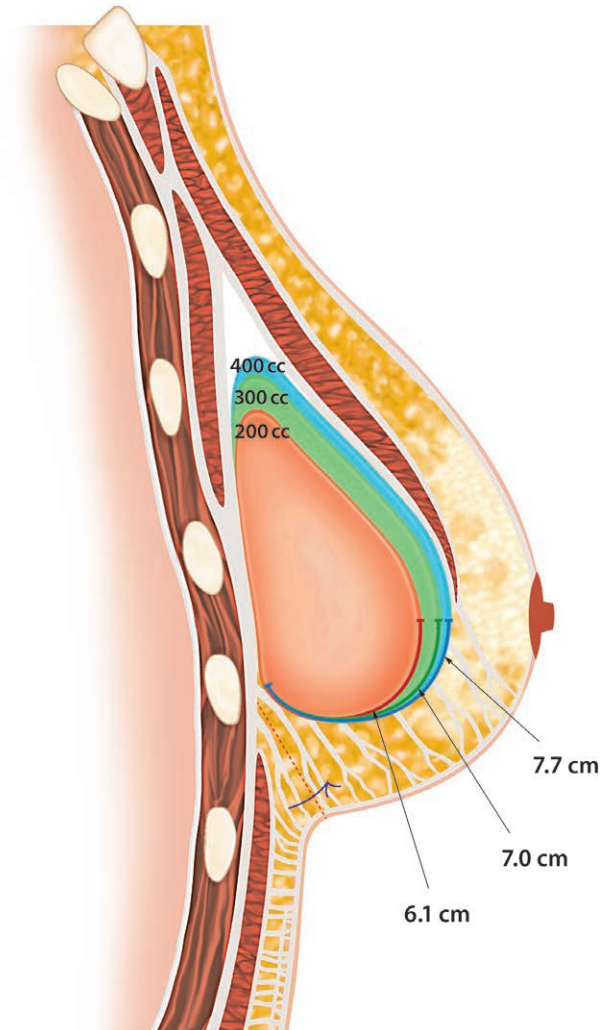
### Surgery

All surgery was performed by the author at a state-licensed ambulatory surgery center. No preoperative sizing method based on tissue measurements or bra inserts was used.<sup>13</sup> Patients were treated under total intravenous anesthesia using a laryngeal mask airway, propofol infusion, and no muscle relaxation. Upper extremities were abducted and kept out of the operative field. Starting in 2013, all patients underwent ultrasound surveillance for deep venous thromboses.<sup>14</sup>

An incision was made 0.5–1 cm cephalad to the existing inframammary crease (Fig. 1), marked in a standing position. The length of the incision was 3–4 cm for women treated with saline-filled implants and 5–6 cm for women treated with silicone gel devices. Dissection proceeded directly to the inferior margin of the pectoralis muscle (see video, **Supplemental Digital Content 1**, which demonstrates the supra-IMF approach, <http://links.lww.com/PRSGO/A478>). No attempt was made to dissect around the pectoralis border as described by Tebbets<sup>15</sup> in his dual-plane approach. The muscle was released from its origin above the IMF and along the lower sternum. The medial dissection stopped immediately after release of the muscle fibers with no medial continuation so as to avoid symmastia.

The implant pocket was developed superiorly, superomedially, and laterally, using blunt finger dissection. No electrodissection was used. Care was taken laterally to preserve sensory nerve branches, including the deep branch of the lateral branch of the fourth intercostal nerve, which can often be identified by palpation and visualized. Only saline was used for pocket irrigation. No nipple shields or funnels were used.

The implant was inserted subpectorally in all women (Fig. 1). Most women (72.5%) chose saline implants; 27.5% chose silicone gel devices. All implants were smooth and round. A sports bra was applied immediately after surgery and patients were advised to wear a bra day and night for 1 month.



**Fig. 1.** The implant has been inserted deep to the pectoralis major. The red hatched line indicates the oblique dissection plane. The fascial connections to the IMF are preserved. The deep fascia is repaired using two 3-0 Vicryl sutures placed side by side (1 suture is illustrated). The skin is closed using 4-0 Vicryl (Ethicon, Somerville, N.J.) dermal sutures and a 5-0 Prolene intradermal suture (not illustrated). Three different implant volumes are represented, 200 cc (red), 300 cc (green), and 400 cc (blue). The distance along the partial circumference, from the IMF to the most projecting point on the implant increases linearly with the radius of the implant. Area increases as the square of the radius ( $r^2$ ) and volume increases as the cube of the radius ( $r^3$ ). Consequently, a 100% increase in volume increases the area 41% and the circumference (or any portion of the circumference) 26%, or 1.6 cm when comparing a 200 cc implant with a 400 cc implant.

## RESULTS

The mean patient age was 31 years (range, 18–61 years), and the mean follow-up time was 9.7 months (Table 1). In 94 patients, the follow-up was < 6 months, in 19 women the follow-up period was 6–12 months, and in 47 patients the follow-up exceeded 12 months. Long-term results are shown in Fig. 2. Complications and reoperations are presented in Table 2. There were no hospital admissions or emergency department visits. There were no cases of deep venous throm-



**Video Graphic 1.** See video, Supplemental Digital Content 1, which demonstrates the supra-IMF approach in a 33-year-old woman undergoing a breast augmentation using 350 cc smooth, round silicone gel implants (Mentor Moderate Plus profile, Mentor Corp., Santa Barbara, Calif.). This video is available in the “Related Videos” section of the Full-Text article on PRSGlobalOpen.com or available at <http://links.lww.com/PRSGO/A478>.

**Table 1. Patient Data**

Parameters	(%)
n	160
Age (y)	
Mean	31.1
SD	9.0
Range	18.2–60.8
Follow-up time (mo)	
Mean	9.7
SD	12.1
Range	0.1–48.8
Follow-up time (mo)	
< 6	94
6–12	19
> 12	47
Right implant volume (cc)	
Mean	419
SD	76
Range	330–750
Left implant volume (cc)	
Mean	419
SD	74
Range	320–750
Implant style	
Saline*	116 (72.5)
Silicone gel†	44 (27.5)

\*Mentor (Mentor Corp., Santa Barbara, Calif.) Style 2000 smooth, round, Moderate Plus Profile saline implant (n = 17); Allergan (Allergan, Inc., Irvine, Calif.) Natrelle Style 68, smooth, round, Moderate profile saline implant (n = 99).

†Mentor Style 1000 MemoryGel silicone gel implant (n = 8); Allergan Style 15 silicone gel implant (n = 28); Sientra (Sientra Inc., Santa Barbara Calif.) High-Strength Cohesive smooth, round, Moderate Plus Projection silicone gel implant (n = 8).

basis detected clinically or by ultrasound examination. There were no cases of symmastia. Two patients developed cellulitis that responded to antibiotics. Two patients developed hematomas that required evacuation. One patient developed a unilateral capsular contracture but did not schedule surgical treatment. One patient (Fig. 3) developed a mild bilateral double-bubble deformity; the patient was satisfied nevertheless and declined treatment. One patient demonstrated an animation deformity. No patient underwent implant repositioning. In one patient with partially hypertrophic scars, portions of the scars were revised in the office.

Ninety-eight women (response rate, 61.3%) completed the survey (Table 3; see survey, Supplemental Digital Content 2, which displays the patient survey questions, <http://links.lww.com/PRSGO/A479>). The mean result rating was 9.1 on a scale of 1 (worst) to 10 (best), with a range of 4–10. Ninety-two patients (93.9%) reported that their scars were well-hidden. Four women (4.1%) rated their implants too high; 8 women (8.2%) felt their implants were too low. Twenty women (20.4%) would have preferred larger implants, despite a mean implant volume of 419 cc. Patient-reported data were also collected regarding implant wrinkling, which is the subject of another study in progress.

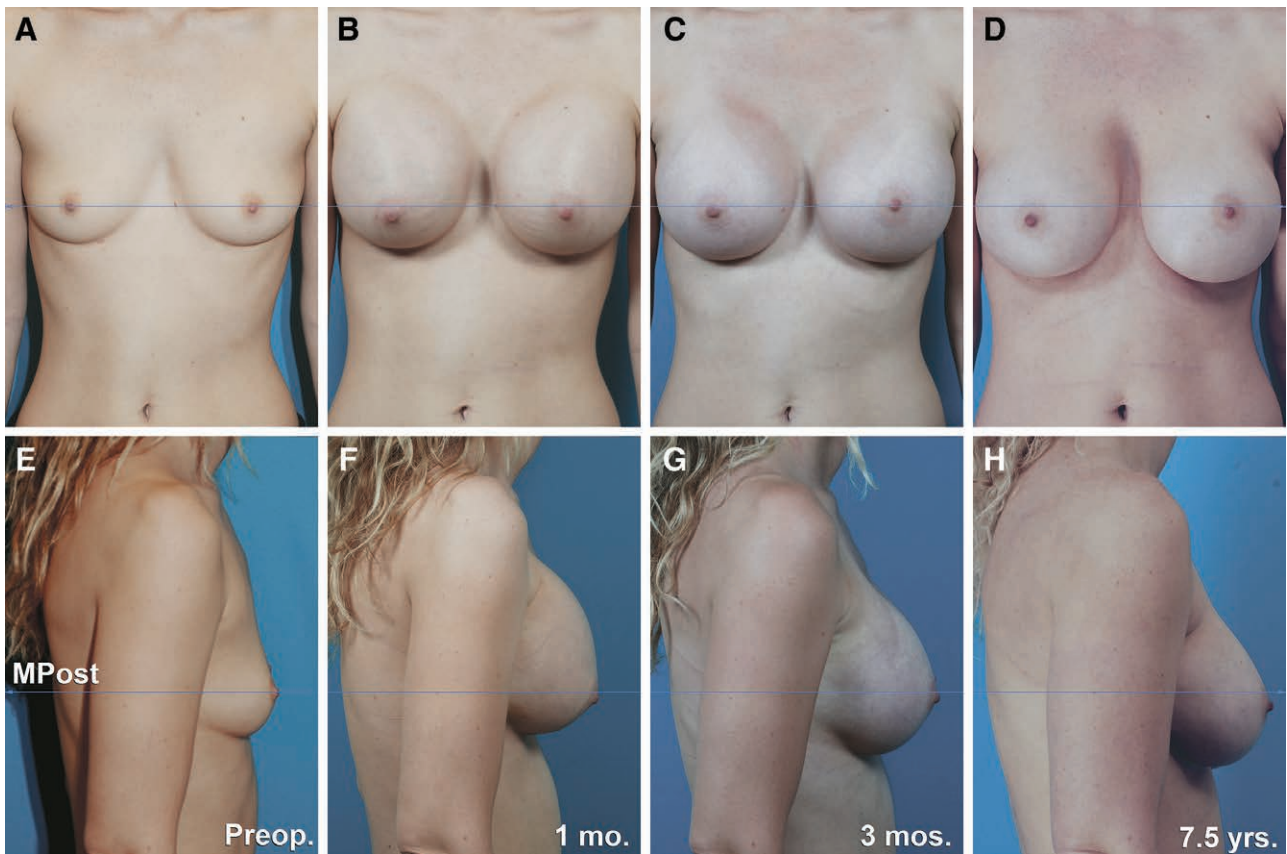
## DISCUSSION

The inframammary ligament is a controversial structure.<sup>7,8,16–18</sup> An inframammary crease ligament was identified in cadavers by Bayati and Seckel<sup>16</sup>, originating from the 5th rib periosteum medially and the fascia between the fifth and sixth ribs laterally and inserting into the deep dermis of the IMF. Some investigators dispute the existence of a ligament and argue that the IMF represents a dermal structure held in place by adherence to the superficial fascial system.<sup>17,18</sup> Boutros et al.<sup>17</sup> recommend preservation of this structure in any breast procedure for natural aesthetic results. Nanigian et al.<sup>19</sup> found that the IMF was located about 2 cm caudal to the inferior pectoralis origin. In a recent cadaveric study, Matousek et al.<sup>8</sup> identified a dense “triangular fascial condensation” running from the fifth rib and pectoralis fascia to the skin. Just below this level, horizontal ligaments connect the deep fascia to the skin without an intervening capsule that is present more superiorly in the breast (Fig. 1). The common definition of a ligament is “a band of fibrous tissue connecting bones or cartilages,”<sup>20</sup> so that these fascial bands do not, strictly speaking, fit the definition of a ligament. Regardless, connective tissue bands, whether they are called fascial condensations or ligaments, exist and define the IMF.

Placement of the incision above the inframammary crease is not a new idea.<sup>21</sup> However, the relationship of the incision to the IMF attachments and the risk of bottoming out and a double-bubble deformity have not been previously evaluated. The traditional recommendation is to make the incision below the IMF, anticipating skin recruitment onto the lower pole.<sup>3,11,22–29</sup> Tebbetts and Adams<sup>25</sup> locate the IMF 7.0 below the nipple for a 200 cc implant and 9.5 cm below the nipple for a 400 cc implant. Hidalgo and Spector<sup>3</sup> make the incision 6 cm below the nipple, a distance slightly less than the implant radius, in a patient treated with a 300 cc implant. Aboelatta et al.<sup>26</sup> locate the incision 1 cm below the IMF when using implants < 300 cc, 1.5 cm for implants 300–400 cc, and 2 cm for implants > 400 cc. Bouwer et al.<sup>27</sup> use the Pythagorean theorem to locate the incision but concede that the scar may occasionally require revision to elevate it into the fold.

A problem for any method that relates the incision location to implant volume,<sup>25,26</sup> such as the High Five system,<sup>25</sup> is that that any linear surface dimension, includ-





**Fig. 2.** This nulliparous 30-year-old is seen before (A, E), 1 month after surgery (B, F), 3 months after surgery (C, G), and 7.5 years after surgery (D, H). She was treated with smooth, round, saline implants inflated to 450 cc (Moderate Plus Profile, Mentor Corp., Santa Barbara, Calif.), inserted using the supra-IMF approach. At the 1-month visit, the implants are sitting high (B, F). By 3 months after surgery (C, G), they have descended into position. At long-term follow-up (D, H), the breasts have settled further, and the slight asymmetry evident shortly after surgery is more noticeable, although not a concern to the patient. She had no pregnancies, breast surgery, or major weight fluctuations. This patient’s surgery preceded the study period, but she is shown here to illustrate long-term (7.5 years) results (D, H). *MPost*, level of maximum breast projection at 3-month follow-up.

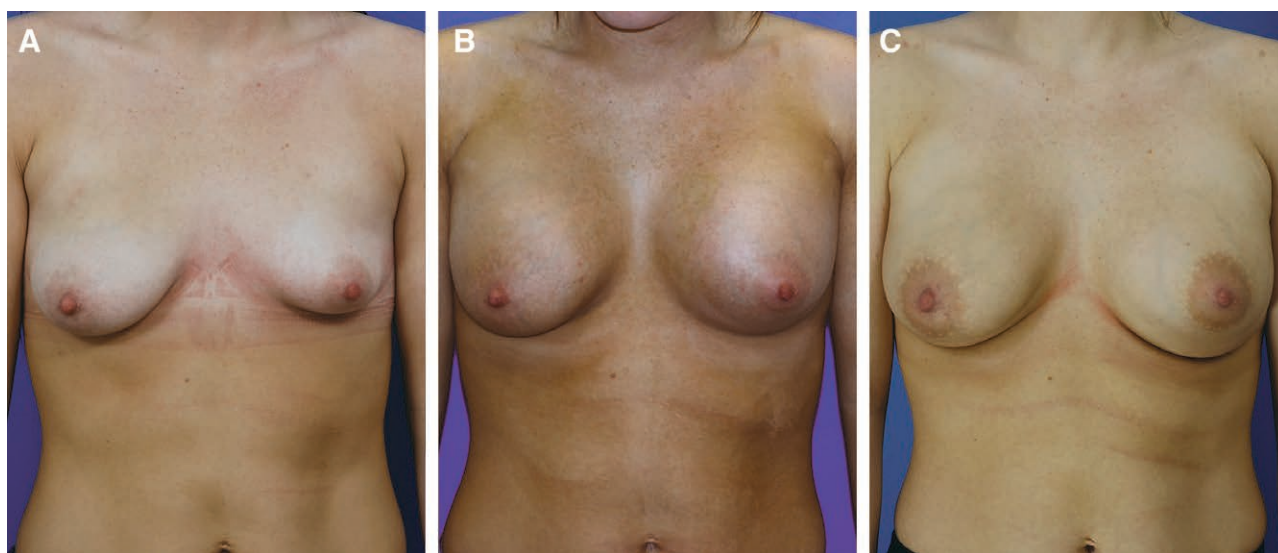
**Table 2. Complications and Reoperations**

Adverse Events	(%)
n	160
Complications*	
No	140 (87.5)
Yes	20 (12.5)
Wrinkling	9
Size asymmetry	3
Cellulitis/infection	2
Allergic reaction	2
Hematoma	2
Capsular contracture	1
Animation deformity	1
Double bubble	1
Hypertrophic scar	1
Seroma	0
Implant deflation	0
Symmastia	0
Delayed wound healing	0
Deep venous thrombosis	0
Total	22
Reoperations	
Evacuation of hematoma	2
Scar revision	1
Total	3

\*Two patients had 2 complications.

ing circumference, is not linearly related to volume. The nipple-IMF distance, measured in centimeters, represents a portion of circumference. Volume, expressed in  $\text{cm}^3$ , increases exponentially (to the third power) relative to implant base width or projection. Doubling the implant volume from 200 to 400 cc increases the radius only 1.2–1.5 cm, depending on the implant profile. The circumference, or any portion of the circumference, increases only 26% when the implant volume is doubled (Fig. 1). Linear equations that do not take into account the exponential relationship between implant circumference and volume overestimate skin recruitment and site the incision too low, especially for larger implant volumes.

Hidalgo and Spector<sup>2,3</sup> center the implant behind the nipple. Mallucci and Branford<sup>29</sup> recommend centering round implants deep to the nipple using a 45:55 ratio. These methods require a dissection through the existing IMF fascial attachments to accommodate an implant positioned at or below the nipple level (Fig. 4).<sup>2,3,8,29</sup> A double-bubble deformity may, in some patients, be created by inferior displacement of the implant relative to the original IMF (Fig. 3).<sup>6,8</sup>



**Fig. 3.** This 22-year-old woman with asymmetry and a constricted left breast underwent a subpectoral breast augmentation using silicone gel implants (Natrell Style 15, Allergan Inc., Irvine, Calif.) with volumes 371 cc on the right and 421 cc on the left. She is seen before surgery (A), 1 month after surgery (B), and 20 months after surgery (C). Despite a supra-IMF approach, she developed a mild double-bubble deformity.

Some operators believe that using large sutures, 3-point suture placement, or additional suture layers secures the IMF, at the risk of more discomfort and trauma to the implant or a hematoma.<sup>11,28</sup> The author previously used the same supra-IMF approach in patients who received textured round implants. These patients also demonstrated implant settling over time (Fig. 5). This finding is notable because textured implants are designed to resist movement.

Most surveyed plastic surgeons (55.7%) treat a double-bubble or bottoming-out deformity with a capsulorrhaphy alone.<sup>1</sup> Handel<sup>5</sup> believes that failure to release the skin attachments from the pectoralis fascia, while simultaneously dissecting the pocket too far inferiorly, produces a double bubble. He recommends release of the dermis from the underlying fascial attachments at the level of the IMF so as to disrupt the original structure.<sup>5</sup> For treatment of a double-bubble deformity, Handel<sup>5</sup> recommends an implant site change from subpectoral to subglandular or a neo-subpectoral pocket. In failed repairs, he uses acellular dermal matrix.<sup>5</sup>

An understandable concern is whether a supra-IMF scar may become visible postoperatively on the lower pole.<sup>4,27</sup> Skin expansion lengthens the distance from the nipple to the IMF. The inframammary crease, visible on the frontal view of a hypoplastic breast, becomes a hidden skin-touching-skin inflection (Fig. 2). Because the supra-IMF scar is located close to the original IMF (Fig. 1), its location is minimally affected by skin expansion. Methods that determine the incision site based on measurements of the implant radius,<sup>2,3</sup> or projection and height,<sup>29</sup> do not account for skin expansion of the lower pole.

An advantage of the supra-IMF incision is the position of the scar when a woman is supine. In this position, the breast shifts cephalad as the force of gravity is redistributed.<sup>23</sup> Raising the arm position can similarly affect breast position. A scar positioned above the original IMF will stay hidden

slightly above the IMF in a supine position. This point is relevant when a woman is lying on a beach in a bikini, or topless in a recumbent position. The bra is unlikely to rub against the scar, optimizing healing and reducing discomfort. Patient surveys support the supra-IMF approach. Only 6 patients (6.1%) reported that their scars were not well-hidden, comparing favorably with other studies reporting unwanted inframammary scar visibility in the range of 10–11%.<sup>30–32</sup> Although some surgeons believe scars above the IMF are prone to hypertrophy,<sup>2,3,22</sup> only 1 patient (0.6%) developed hypertrophic scars that were revised in the office.

Excessive upper pole fullness shortly after surgery may appear unnatural, especially in nulliparous women. Fortunately, the implants gradually settle, so that by 3 months the lower pole has filled out (Fig. 2). My practice is to show early postoperative photographs to reassure patients that this overly perky appearance shortly after surgery is normal and temporary. Implant position over time may not be exactly the same for both breasts: there may be more settling on 1 side than the other (Fig. 2). It is not clear that attempts to control the IMF level and secure the implant position are successful.<sup>12</sup>

A need for implant repositioning is unusual, as demonstrated both in this study (no implant repositioning) and a previous one (implant repositioning in 1% of patients<sup>33</sup>). By contrast, photographs of patients treated with a low inframammary approach often show implants that eventually sit too low on the chest. The nipple-IMF distance appears unnaturally long. This is an operated-on look, and an appearance that tends to worsen over time.

Follow-up times are often short in published studies (e.g., < 6 months<sup>29</sup>). Campbell et al.<sup>28</sup> recognize the need for longer follow-up to determine whether IMF fixation is effective. Photographs taken more than 1 year postoperatively (Figs. 2, 5) are required to assess long-term results. None of the referenced publications advocating incision

**Table 3. Survey Data**

Survey Questions	(%)
No. surveys	98
Age (y)	
Mean	30.9
SD	9.3
Range	18.2–60.8
Follow-up time (mo)	
Mean	14.1
SD	13.4
Range	3.0–48.8
Follow-up time (mo)	
3–6	40
6–12	15
> 12	43
Implant type (smooth, round)	
Saline*	70 (71.4)
Silicone gel†	28 (28.6)
Result score (1–10)‡	
Mean	9.1
SD	1.4
Range	4–10
Visible wrinkling	
Yes	23 (23.5)
No	75 (76.5)
Palpable wrinkling	
Yes	41 (41.8)
No	57 (58.2)
Wrinkling bother you?	
Yes	11 (11.1)
A little	12 (12.2)
No	15 (15.3)
No wrinkling	60 (61.2)
Breast firmness	
Just right	80 (81.6)
Too firm	14 (14.3)
Too soft	4 (4.1)
Look natural?	
Yes	89 (90.8)
No	3 (3.1)
No, but I wanted a fake look	6 (6.1)
Size	
Just right	75 (76.5)
Prefer larger	20 (20.4)
Prefer smaller	3 (3.1)
Scars well-hidden	
Yes	92 (93.9)
No	6 (6.1)
Implants at right level?	
Yes	86 (87.8)
Too high	4 (4.1)
Too low	8 (8.2)
Deflation?	
Yes	0 (0)
No	98 (100.0)
Redo surgery?	
Yes	96 (98.0)
No	2 (2.0)
Same choice in implant type?	
Yes	85 (86.7)
No (silicone instead)	13 (13.3)

\*Mentor (Mentor Corp., Santa Barbara, Calif.) Style 2000 smooth, round, Moderate Plus Profile saline implant (n = 18); Allergan (Allergan, Inc., Irvine, Calif.) Natrelle Style 68, smooth, round, Moderate profile saline implant (n = 52).

†Mentor Style 1000 MemoryGel silicone gel implant (n = 5); Allergan Style 15 silicone gel implant (n = 17); Sientra (Sientra Inc., Santa Barbara, Calif.) High-Strength Cohesive smooth, round, Moderate Plus Projection silicone gel implant (n = 6).

‡Patients were asked to rate their result on a scale of 1 (worst) to 10 (best).

placement below the IMF includes photographs taken over 14 months after surgery, and none includes patient-reported outcomes.<sup>2,11,22–29</sup>

It is impossible to prevent all cases of a double bubble because some women are morphologically pre-



**Video Graphic 2.** See video, Supplemental Digital Content 3, which demonstrates preoperative marking, local anesthesia, pocket dissection, implant insertion, wound closure, and 24-hour postoperative photographs. This video is available in the “Related Videos” section of the Full-Text article on PRSGlobalOpen.com or available at <http://links.lww.com/PRSGO/A480>.

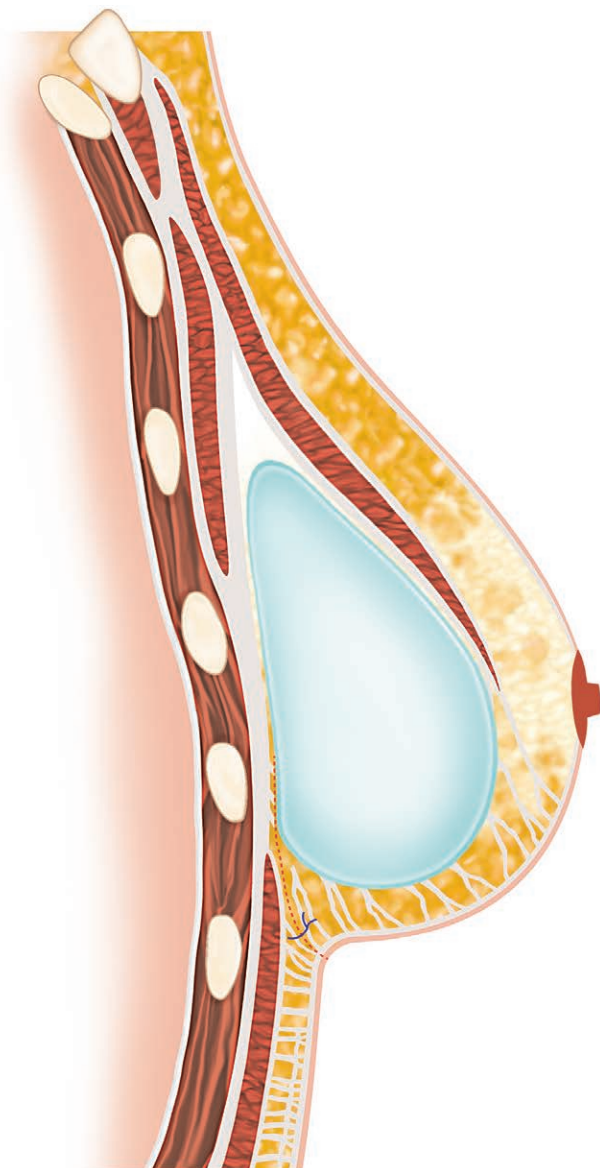
disposed (Fig. 3),<sup>6</sup> especially those with constricted or tuberous breasts. In such cases, the approach may be adjusted slightly lower, while still preserving the IMF ligaments. The incidence of a double bubble in this series was 1/158 women (0.6%), a rate that compares favorably with methods that release and then repair the IMF structures.<sup>11</sup> Moreover, this problem was not seen in a previously published series of 522 consecutive breast augmentation patients who were treated with the same method.<sup>33</sup>

When a low incision is reused at the time of redo surgery to elevate fallen implants, the scar may now be conspicuous on the upper abdomen below the new, elevated IMF. When these patients are treated with a vertical mastopexy, the old scar is likely to be located below the new IMF, which may be elevated several centimeters.<sup>33</sup> This problem may be managed with an inverted-T modification of the vertical mastopexy incision so as to eliminate any previous scar located below the new IMF.<sup>33</sup> This problem was a nonissue before general adoption of the vertical mammoplasty, which can elevate the IMF.<sup>33</sup>

The majority (92.2%) of surveyed plastic surgeons prefer a submuscular plane for implant placement.<sup>1</sup> Only 5.4% of surgeons report that they most commonly use a subglandular pocket. A subfascial dissection<sup>34</sup> remains unpopular.<sup>1</sup> The fascia is much thinner than the pectoralis muscle, providing little additional soft-tissue coverage of the implant. Most plastic surgeons partially (and cautiously, to avoid symmastia<sup>2</sup>) release the lower sternal origin of the pectoralis muscle.

Sanchez et al.<sup>35</sup> found that the width of the pectoralis muscle at its origin is variable and narrow, and its medial border is typically < 1 cm from the midline, leaving little margin for error when releasing the muscle. These investigators recommend preserving the sternal fibers and releasing the inferior portion of the origin instead, as recommended by Tebbetts.<sup>15</sup> However, failure to release the muscle from the sternum may result in a wide intermammary space.<sup>36</sup> Precise muscle release avoids symmastia, which was not detected in any of the study patients.





**Fig. 4.** The implant is centered on the nipple. The deep fascia has been repaired, approximating the fascial attachments that were released.

Spear et al.<sup>37</sup> report that distortion of the breast during pectoralis muscle contraction is common after a subpectoral breast augmentation (77.5% of patients) but is rarely severe. Releasing the lower sternal origin may reduce any animation deformity caused by muscle contraction. In this study, only 1 patient experienced this problem, but she remained satisfied. Prepectoral implant placement avoids an animation deformity but has disadvantages. The subpectoral plane provides additional tissue cover, making the implant margins and any potential folds less visible<sup>2,6</sup> and reducing the capsular contracture rate.<sup>6,38</sup> Nine patients demonstrated wrinkling on postoperative photographs, compared with 23 women (23.5%) who reported visible wrinkling on their survey, indicating that wrinkling may occur in

positions that are usually not photographed, such as with the patient leaning forward. Although 12 (12.2%) patients rated their breast implants too high or too low, these were subjective assessments; none represented a clinical malposition that might be an indication for surgical repositioning. This rate is likely affected by coexisting breast ptosis, which might in some cases make the implants appear too high or too low.

Only smooth, round implants are used by the author. The disadvantages of textured implants have become evident in recent years,<sup>39,40</sup> including anaplastic large cell lymphoma.<sup>40</sup> Deva et al.<sup>41</sup> recommend a 14-point plan to reduce both the risk of capsular contracture and anaplastic large cell lymphoma, including triple antibiotic irrigation and nipple shields. However, there is little scientific justification for these preferences.<sup>42</sup> Although a recent historical-control multi-site retrospective study<sup>43</sup> concludes that a Keller funnel (Keller Medical, Stuart, Fla.) reduces the capsular contracture rate, there were confounding variables and a short (12-month) follow-up period.

The time period of the study does not allow for an accurate estimation of such long-term risks as capsular contracture, implant deflation, and a double bubble that develops as a late complication. The survey response rate, 61.3%, is less than ideal but not unusual for cosmetic surgery patients, who may not be motivated to return in long-term follow-up for research purposes.<sup>44</sup> Bias is likely to affect surveys administered by office staff. This study evaluates only patients treated with a supra-IMF approach. There is no comparative cohort of patients treated with an IMF or sub-IMF incision. Consecutive patients are studied using the same method by the same surgeon, so that selection bias and confounding factors are avoided. Patient-reported data are included.

## CONCLUSIONS

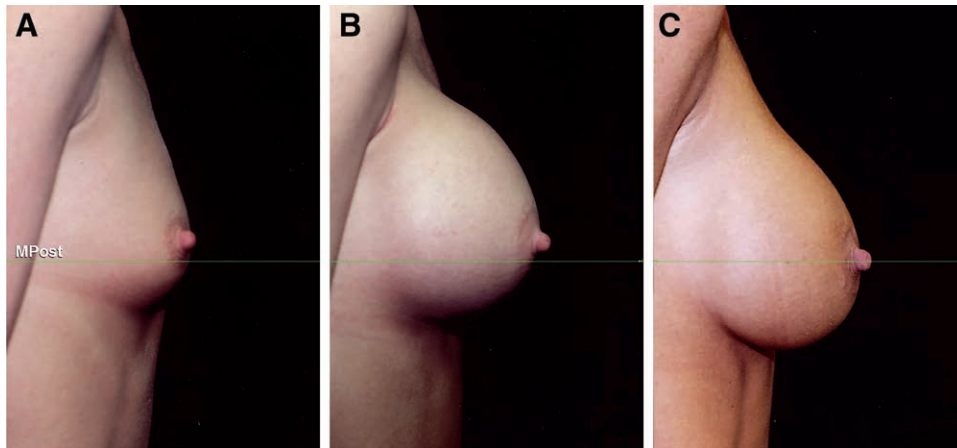
A supra-IMF approach reduces the risk of bottoming out or a double-bubble deformity in the short term. Reoperation for malposition is unusual. The scar remains hidden on frontal views and above the IMF in the supine position. (see video, **Supplemental Digital Content 3**, which demonstrates preoperative marking, local anesthesia, supra-IMF approach, pocket dissection, implant insertion, wound closure, and 24-hour postoperative photographs, <http://links.lww.com/PRSGO/A480>).

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**Fig. 5.** This 26-year-old woman underwent a subpectoral breast augmentation using the supra-IMF approach. She was treated with textured, round 400 cc saline-filled implants (McGhan, now Allergan Inc., Irvine, Calif.) in the mid-1990's, when the author was still using textured implants. She is seen before surgery (A), 6 weeks after surgery (B), and 6 years after surgery (C). Despite surface texturing, the implants have settled. She had 1 child before her breast augmentation and 1 child after her surgery and before the 6-year follow-up photographs were taken. *MPost*, level of maximum breast projection at 6-year follow-up.

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