Secondary Breast Reduction

Editor’s Note: My thanks to the moderator, Alan Matarasso, MD (board-certified plastic surgeon and ASAPS member, New York, NY); and to panelists Stanley A. Klatsky, MD (board-certified plastic surgeon and ASAPS member, Lutherville Timonium, MD); G. Patrick Maxwell, MD (board-certified plastic surgeon and ASAPS member, Nashville, TN); and Foad Nahai, MD (board-certified plastic surgeon and ASAPS member, Atlanta, GA), for sharing their opinions and clinical experience.

Dr. Matarasso: The need for secondary breast reduction is an uncommon but vexing problem. Indications for secondary breast reduction may include poor shape from previous surgery, unsightly scars, breast asymmetry, increase in breast volume, need for mastopexy, need to increase breast volume and, occasionally, need for reduction of one breast after having cancer in the opposite side. Our first patient is a 63-year-old woman who had a reduction mammoplasty 12 years ago with an inferior pedicle technique (Figure 1). She gained considerable weight over 10 years and complains that her breasts have become larger. Dr. Klatsky, what would be your treatment approach?

Dr. Klatsky: Her nipples seem symmetrical and in good position. At the same time, on the lateral view, it looks as though she may have some pseudoptosis. You indicate she has had an overall weight gain, and she does show lateral fullness of the breasts. Since the nipple-areola position is good, I would consider treating her with lipoplasty to reduce volume, accompanied by a mastopexy to provide better shape. In terms of repeating an inferior pedicle technique, since we know that is what she had, I can feel fairly secure about the perfusion. To determine the operative course, I would first perform the lipoplasty and then intraoperatively perform a “tailor-tack” mastopexy, rather than committing to a pattern for the skin resection. I would like to keep the inframammary distance no greater than 7 cm and, ideally, with her volume, 4.5 to 6 cm from the infraareolar margin.

Dr. Matarasso: Dr. Maxwell, would your approach be similar?

Dr. Maxwell: As I look at this woman, she does not really have much adiposity around her trunk; I do not know if she has had treatment there. Most of her weight gain is in the midaxillary area, the arm, and the breasts. Since she had an inferior pedicle, to achieve good proportion, her breasts need to be significantly reduced inferomedially and inferolaterally. I would plan a central mound reduction in a straightforward manner and would not expect any complications as far as blood supply.

Dr. Matarasso: Dr. Nahai, what is your opinion?

Dr. Nahai: We have had 2 reasonable suggestions. I would also consider the quality of her skin and whether that skin is adherent to the breast tissue. Depending on her goals, lipoplasty would certainly be a reasonable option. If she has adequate skin elasticity, lipoplasty may be all that she needs. It is a question of skin quality and whether with lipoplasty alone, there would be contraction or redraping of the skin. It might be necessary to adjust her skin envelope. The least invasive approach would be lipoplasty and, since it seems that the skin quality of her breasts may be fairly good, I would probably select that option.
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**Dr. Maxwell:** I would like to interject that in my view, lipoplasty alone would leave her quite flaccid, and she would not be happy with that.

**Dr. Klatsky:** I think she requires what I call the “4 S’s”: shaping, sizing, symmetry, and scars. She already has some scars from the prior reduction; I would use a similar type of pattern. If I were to consider lipoplasty alone, however, it would be important to understand during the consultation what results would satisfy her. She might have some skin shrinkage, but I don’t think it would be enough to make her happy.

**Dr. Matarasso:** The next patient is a 53-year-old woman who had a reduction mammaplasty 15 years ago by a different surgeon (Figure 2). There are no operative notes available. She complains about the sagging of her breasts and their large size. Dr. Nahai, how would you help this woman?

**Dr. Nahai:** I would approach her as if she were a patient undergoing a primary reduction. She appears to have a periareolar vertical component, and she probably has an inframammary scar as well. In this patient, in contrast to the patient in Figure 1, the skin is obviously poor and inelastic. The areolae are misshapen and she has breast asymmetry with significant ptosis. An important factor in her treatment is that we do not know what type of pedicle technique she had previously. I might assume that if she was operated on in the United States it was with an inferior or bipedicle technique, but in this patient, I would not assume that. I would plan to do a bipedicle. I would leave the superior, central, and inferior breast tissue more or less intact in the central mound. I would reopen her old incisions for access and resect tissue where it would not involve any of those 3 pedicles. I would remove skin as wedges, laterally and medially, to provide the opportunity to mold the breast into a conical and projecting shape. There is no way that excess, poor-quality skin could be managed through the periareolar or vertical approach. The best situation would be if she has had a previous inverted T, which would provide the best option for removing and redraping excess skin. If she had not had a previous T, I would limit her to a very short horizontal T, J, or L.

**Dr. Matarasso:** Dr. Maxwell, would your approach be different?

**Dr. Maxwell:** My approach would be somewhat similar to Dr. Nahai’s. Replanning a Wise pattern, I could incorporate the desired amount of tissue removal to tighten the soft tissue envelope. I would plan this as a vertical bipedicle, similar to a McKisseck, yet maintaining central mound connection. She has significant shoulder grooving, especially on the left. My goal would be a fairly substantial skin envelope reduction with volumetric reduction to the appropriate mound size. Her scars are fine; I would have no concern about the extent of Wise pattern scarring that would be necessary.

**Dr. Matarasso:** Dr. Klatsky, what is your view?

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*Figure 1.* This 63-year-old woman had an inferior pedicle reduction mammaplasty 12 years ago. She has gained considerable weight over the past 10 years and complains that her breasts have become larger.
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**Dr. Klatsky:** She does have what appears to be a fairly significant venous pattern. So I know her skin will be thin and have very inelastic qualities. For that reason, if I were to consider a pedicle technique, I would use the central mound bipedicle rather than the McKissick or the vertical bipedicle. Generally, I see more bottoming out with the heavier lower pedicle and inelastic skin, which is why I would be more inclined to use a central mound and reduce her areolae. On the other hand, I cannot be 100% sure that she did not have a free nipple graft previously. She has what appears to be prior sluffing of the left inferior portion of the areolae. Her nipple projection is very flattened, so in terms of safety and perfusion, I would be inclined to think of a free nipple graft for this patient rather than a pedicle procedure. If there were any doubt in my mind, rather than removing all the full thickness of skin immediately above, I would have a dermal bed ready upon which to put the nipple graft.

**Dr. Maxwell:** I just want to clarify that when I was referring to a McKisseck, I was referring to maintaining dermal pedicle superiorly and inferiorly in addition to as much glandular attachment as possible. I was not suggesting that central mound attachments be removed. The second comment is, as Dr. Klatsky pointed out, based on the venous appearance of the skin, I would attempt to minimize undermining as much as possible.

**Dr. Matarasso:** If you were aware that she had a free nipple graft in her primary procedure, would that change your approach?

**Dr. Nahai:** I would be tempted to leave it there. I would be concerned that removing the nipple a second time and replacing it as a free nipple graft would lead to further loss of color. I would treat it the way I have outlined—a pedicle type of flap that is attached centrally.

**Dr. Klatsky:** I have performed repeat full thickness areola graft transplants. But if I could leave it attached, and it had good perfusion, obviously that would avoid the potential problems associated with grafts plus the additional problem of depigmentation. In this particular patient, I would reduce the areolae to get rid of that area that appears to have sluffed on the intraareolar portion.

**Dr. Matarasso:** Dr. Maxwell, if you knew that she had a free nipple graft, would you change your approach?

**Dr. Maxwell:** Based on the apparent laxity of her tissue, the thinness of her skin, and if I knew it served her well for 15 years, I would plan this as a free nipple graft. I could do a vertical and transverse wedge with no flap, closing it simply after deep-ithelializing the nipple areola graft in a much smaller diameter and deep-ithelializing the new location. That is a straightforward, simple operation that would serve her well for another 15 (plus) years.

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**Figure 2.** This 53-year-old woman had a reduction mammaplasty (elsewhere) 15 years ago. She is now unhappy with her breasts’ sagging and large size.
Dr. Nahai: Dr. Maxwell, if you did that, would you have concerns about losing pigment if this was the second time you were transferring that tissue as a free nipple graft?

Dr. Maxwell: As you elevate it, it is essentially a deepithelialization. The deep dermal scarred tissue is avoided. I think loss of pigment would be a minimal possibility that is worth the risk.

Dr. Matarasso: The third patient is a 35-year-old woman who had a previous reduction mammaplasty (Figure 3). We do not know anything about her previous pedicle or the date of her previous surgery. She now complains that she is still too large and is unhappy with her breast asymmetry. She desires improvement in size, shape, and symmetry. Dr. Maxwell, how would you treat her?

Dr. Maxwell: This patient is a little different from the first two, who demonstrate long-term consequences. She most likely demonstrates a more recent result, but a result that was probably not symmetrical from the beginning. There is a sizable difference in the volume of each breast, as well as nipple areolae discrepancy. I would approach the patient cautiously, but her tissue quality looks good. I could do a fairly minimal procedure on her left breast in a circumvertical fashion, deepithelializing most of what is around the areola, taking out tissue inferiorly, and then elevating the nipple areolae slightly superiorly and laterally. On the right side, she needs a much more significant nipple areola elevation, also in the superior lateral direction, with a vertical resection and perhaps a transverse component. I would approach that also in a circumvertical fashion, basically deepithelializing all aspects around the areola. I would excise inferiorly or inferirolaterally on the table, tailor-tacking with the patient upright to make final adjustments and achieve symmetry.

Dr. Matarasso: Dr. Nahai, how would you proceed?

Dr. Nahai: She has asymmetry of size and shape. She looks like a younger woman with a full skin envelope that is firmly adherent to the breast and has normal elasticity. I would use a vertical approach. I would design the resection so that on her right breast, I would take more skin and parenchyma laterally. Both nipples are a little too high. But to achieve symmetry, reshaping the breast and bringing the medial and lateral pillars together, there would be an elevation of the nipple on the right side.

Dr. Matarasso: Dr. Klatsky, how would you approach this patient?

Dr. Klatsky: I agree with the approaches taken by both Drs. Maxwell and Nahai. The nipples are a little high on the lateral view. It appears that the nipple projection is a little high in relationship to the fold, creating an impression of ptosis. I estimate that the left breast would need removal of 150 g, a small amount of volume compared with a 250 to 300 g resection on the right side. I think she would need more skin removed as well as a glandular movement. The right breast would require more resection from the inferolateral area to reduce the width, and there would be more skin removed. I would perform a combination circumareolar and vertical skin resection on the right side and, perhaps, a limited skin resection.
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on the left. I would be a little concerned that with the purely vertical technique, the right nipple might not be high enough.

**Dr. Matarasso:** With the nipples too high, would any of the panelists consider a lower wedge resection (a sort of fleur de lis) as an option for this patient?

**Dr. Klatsky:** The inferior wedge alone, in a patient such as this, will make the breasts look wider. I think that, besides an inferior component, you need to have a vertical component in order to reduce breast width.

**Dr. Maxwell:** We do not have the advantage of examining the patient. But, in the frontal view, the right nipple–areolar complex (NAC) is definitely too low. And the lateral views are a little confusing, especially on the right side. I would say without a doubt (based on the right anterior-posterior photograph), that the right NAC needs to be moved superiolaterally. It appears to be a good centimeter and a half below the left, even though in the lateral view it does not look bad. I think we can be fooled by the lateral view; there is so much excessive tissue inferiolaterally that it makes her look better. You have to refer to the frontal view in which the right NAC is too low.

**Dr. Nahai:** I would not do anything other than reshape the breasts. If I brought the medial and lateral pillars together, I anticipate that the nipples would be positioned appropriately. I agree that the right NAC should be moved up and the left could remain as is. By reshaping and bringing more breast tissue behind the right NAC, it would appear to be in the correct place without actually shifting it.

**Dr. Maxwell:** One final comment. We do not know anything about her original surgery; this information would be interesting because she has so much inferior and lateral tissue, and we do not see a scar. I wonder if a lack of inferior and lateral tissue resection with or without a scar was the original problem.

**Dr. Matarasso:** The next patient is a 50-year-old woman whom we are seeing 10 years after reduction mammaplasty (Figure 4). We do not know what pedicle she had. She now wants to be smaller and have “perky” breasts. Dr. Klatsky, how would you help her achieve her goals?

**Dr. Klatsky:** In my view her breasts are reasonably sized, although she wants to be smaller. So, in this case there would be an issue of communication—specifically, making sure that I understand what the patient wants. Although I do not see her as particularly large in volume, I do see that she has some ptosis. The breast shape is good. She could benefit from looking “perkier,” which could be achieved with a small vertical and, maybe, inferior segment mastopexy. After talking with her at greater length, if she still wanted volume removed, then I would be inclined to take tissue from the inferior pole on both sides, preserving a central pedicle.

**Dr. Matarasso:** So, you would not circumscribe the areolae?
**Dr. Klatsky:** If I did not have to, I would not. I would perform a “tailor tack” intraoperatively, assessing if it was necessary to circumscribe the areolae. If her nipple projection on the lateral view looked good to me, and if we elevated the volume of the breast tissue (elevated the breast mound by tightening the skin envelope), I think I could raise the nipple a bit and hopefully not reduce it. If I had to, I would go through her old periareolar incisions, remove a small crescent, and perform a small skin resection. But, I would not want to raise the nipples significantly in this particular patient.

**Dr. Matarasso:** Dr. Maxwell, what are your thoughts?

**Dr. Maxwell:** From her lateral views, especially her left lateral, my main concern is that she has no tissue in the upper breast pole. Virtually, all of the tissue is in the lower pole. So my goal would be to shift the tissue from the inferior to superior pole, working as conservatively as possible. That would probably require that the NAC be elevated about a centimeter or so. I would use a periareolar approach to the NAC. I think that would be very safe. And then inferiorly, take out something similar to the small crescent that Dr. Klatsky described. I would do a little bit of tailortacking to determine how much skin resection to do vertically and transversely.

**Dr. Klatsky:** I agree with Dr. Maxwell’s comments. In my view, if I were going to shift the areolae, I would have to reduce them a bit. When I shift the breast volume superiorly and reduce the areolae, I do not want it to be too tight for fear of flattening it in the transverse dimension. Removing a lot of skin yields a flatter look in profile, with less projection.

**Dr. Maxwell:** For the nipple-areolae to be elevated, the outer diameter must be tightened to match the inner diameter. Otherwise, it will just stretch. Looking at her in the left lateral view, she definitely needs the tightening plus a bit of parenchymal resection, or parenchymal tightening, to shift everything superiorly.

**Dr. Nahai:** I agree with Dr. Maxwell that this young lady has depletion of the upper pole on each side, with far more fullness below the nipple/areolae. My approach would be a vertical reduction. I would make a full periareolar incision and extend it through the vertical portion of her previous procedure. I would resect some lower breast tissue, and then by bringing the resulting medial and lateral pillars together, I would be able to elevate her nipples and provide upper pole fullness. I would also concur with Dr. Maxwell that stretching the areolae and widening the periareolar scar is best prevented, as he pointed out, by matching the final inner diameter of the outer circle with that of the areolae. I know that attempts are made with various suturing techniques to minimize this drift, but in my opinion, it is best to avoid it through the original design.

**Dr. Matarasso:** Dr. Klatsky, what is your opinion?

**Dr. Klatsky:** I think she has a very difficult problem. I agree with all the comments that Dr. Maxwell made regarding the height of the NAC. Lowering an NAC is very, very difficult. On occasion, I have performed a free nipple graft, telling patients that they must be willing to accept the scar above to get the lower position. She is also wide. I would perform some contouring with lipoplasty. My perception is that the inferolateral portion is extending more toward the lateral chest wall than toward the center. Laterally, I could improve the shape by a slight resection. To keep it reasonably simple, I would perform an inferior edge resection that would be more skin than breast tissue. It looks to me like the infraareolar to the infra-
mammary fold distance is much longer than what we would desire.

**Dr. Maxwell:** I agree with Dr. Klatsky’s comments about lipoplasty contouring, and I think that would be especially helpful as a first step in determining what needs to be done for improvement in the breast mounds, in terms of shape and nipple areola positioning.

**Dr. Matarasso:** Dr. Nahai, what are your thoughts?

**Dr. Nahai:** Dr. Maxwell started this discussion by commenting that this patient has a right to complain. I agree. Unfortunately, this is typical of a poorly executed Wise-pattern breast reduction. We have all seen the bottoming out, the flat upper pole, and unfortunately, the scars that extend to the midaxillary line with, in her case, a dog-ear on her right side. In terms of her NAC, I believe they are appropriately placed; the problem is that she has bottomed out. My approach would be to reopen her previous scars (they obviously need revision) and to excise that dog-ear on the right side. Once the incision was open, I would reshape her breast by coning the lower half. This would effectively elevate the breast tissue and provide some upper pole fullness, projection behind the nipple, and resolve the bottoming out.

**Dr. Matarasso:** I think this patient underscores the importance of preoperative planning. What guidelines would you use to determine nipple position in a Wise-pattern patient and in a vertical-type breast reduction patient?

**Dr. Klatsky:** I think we have learned over the years that any pedicle can be used to achieve a good breast reduction. What we really need to look at is shape and the scar pattern, independent from the pedicle design. In my opinion, we have been “pushing the envelope” by trying to achieve minimal scars. The appearance of scars may be better with the vertical resections, but the incidence of secondary surgery seems to be higher. It goes back to the individual assessment of each patient in terms of skin excess and elasticity. One has more predictable results with predetermined, premeasured patterns than with cut-as-you-go techniques. In 40 years of performing surgery, the Wise pattern or other types of geometrical designs have produced excellent results for me.

**Dr. Matarasso:** What would be the new nipple-areolar position in those 2 different scenarios?

**Dr. Klatsky:** Concerning nipple placement, I usually look for an equilateral triangle 8.5 inches from the sternal notch to a point corresponding to the inframammary fold projected to the anterior surface of the breast. In most patients, this is about 8.5 to 9 inches, which is about 22 cm. In terms of how the mound looks on the chest wall after surgery, it will appear different when the patient is erect compared with leaning over, which displaces the tissues away from the chest wall. A patient with chest wall asymmetry or scoliosis may have rotation and more projection of the ribs on one side. I call that to the patient’s attention before surgery (whether augmentation or reduction) and show them, with positioning, how the displacement affects the look of the breast. I think this becomes important during times of intimacy when a woman may notice her breast volume from a different dimension. I mark the patient using a Wise-type pattern (if I am using it) with about 8.5 inches or 22 cm and guidelines for nipple placement and the inframammary fold.

**Figure 5.** This 46-year-old woman had a reduction mammaplasty elsewhere one and a half years ago. She is unhappy with her breast shape.
Dr. Matarasso: In a vertical reduction, no matter what the pedicle is (superior, medial), do you change that dimension at all?

Dr. Kiatsky: I do not. Further, I prefer not to perform a vertical reduction. I am interested in Dr. Maxwell’s comments, as a master breast surgeon, on the following issue. For years, we made a point of maintaining an infraareolar to inframammary fold distance of from 4.5 cm to no more than 6 to 6.5 cm. The vertical reductions attempt to minimize the horizontal inframammary component. The actual measurement from infraareolar margin to inframammary fold is ignored. Yet, when revisions are necessary, of course we resect in a horizontal component. I would be interested in Dr. Maxwell’s comments about that.

Dr. Maxwell: In general, my approach to breast surgery, especially this type of reduction mastopexy, is to preoperatively mark a plan based on my overall assessment, and then intraoperatively sit the patient upright on the table and tailor-tack and adjust marks based on intraoperative findings in conjunction with preoperative planning. If I am using a more classic approach—for example, a transverse inframammary incision—I will place the nipple at about the level of the inframammary fold. If it is a vertical approach, I place the nipple just lower than the fold. And, importantly, if it is an augmentation mastopexy, which we have not discussed here, I place it just higher than the fold.

In general, there has been a tendency to minimize scars, and the result has been a greater number of early revisions than we are accustomed to. I think that frequently, the problem with the vertical reduction is that the nipples are not elevated quite high enough. We must be well versed in the various techniques and not rule out a transverse component, if and when it is needed.

Dr. Kiatsky: In breast contouring surgery or any other cosmetic surgery, we have to realize that the results are not static. Changes in the individual, resulting from age, weight gain, or weight loss will influence operative results over time. A good operative design should serve the patient well as he or she continues to age normally. With a procedure such as the Wise pattern, the scars will only improve with time.

Dr. Matarasso: I would like to ask the panelists to briefly comment on four issues: first, your thoughts on breast reduction operations in smokers; second, your thoughts on postoperative brassiere use; third, routinely using drains in breast surgery, and finally, combining breast reduction surgery with other body contouring procedures.

Dr. Maxwell: First of all, I assume you are still talking about secondary breast reduction, which is an elective procedure. If the patient wants the procedure to go safely, she should stop smoking; the risk-benefit ratio is not appropriate if the patient will not stop smoking. In terms of drains, I am never opposed to inserting a drain in a breast reduction. I do not think drains prevent hematomas, but especially in a procedure like this, when we want everything to go in our favor, I am never opposed to putting a drain in for 24 or 48 hours. In relation to combined surgery, abdominal procedures are most frequently combined with breast reduction. To a great degree, patients with combined surgeries tend to be higher risk patients. But if one has a safe and efficient operative environment, is skilled in combining breast and abdominal procedures, and has assessed risk in terms of the patient’s health and difficulty of the procedures, I would say that combined surgery is not unreasonable. In terms of a postoperative brassiere, I am much more focused on using circumferential wrap garments early on until I am happy with healing. I think some patients, especially those with numbness in the tissue inferiorly, cannot feel what is going on. I would be very cautious about using postoperative dressings in postoperative garments or brassieres until there is good primary healing.

Dr. Kiatsky: I agree with all of Dr. Maxwell’s comments. Additionally, one fact we have to be aware of is that patients may tell us they are not smoking, but in fact they are. Regarding drains, like Dr. Maxwell, I would not routinely drain in a breast reduction patient, but there could be postoperative oozing. Draining will not prevent hematoma. If drains are used, I take them out on the third postoperative day. I prefer a Penrose drain to suction; if the breast is fatty, I have seen some suction drains get clogged. I am also concerned that when you remove the suction and pull out the suction drain, you could conceivably cause a hematoma. I do not like any constricted garment; I think a significant number of these patients get edema with a constricted garment. I like to use a very soft dressing and have a minimal amount of skin that creases. In other words, I use a very minimal amount of paper tape to hold the dressing in place to avoid producing pressure. With
respect to combining surgery, I have many patients requesting lipoplasty at the same time as a breast reduction. And again, with combined surgery, you need to judge how long it will take, the age of the patient, and the volume you will remove. Ninety-eight percent of the patients I operate on are ambulatory; they walk out of my operating room. So, I think the wisdom of combined surgery depends on the age and health of the patient and other considerations that would enter into performing outpatient surgery.

**Dr. Nahai:** I perform breast reduction in smokers only if the NAC has to be moved up a very short distance of 3 to 5 cm. Beyond that, I would consider other options. I do insist that all smokers stop smoking at least 3 weeks before the operation and for at least 3 weeks following the operation.

I put all of my patients, whether undergoing primary or secondary breast reduction, into a soft elastic support bra without any stays or underwires. I routinely put drains in, which I remove the next morning.

I do combine breast reduction with other body contouring procedures. My decision is based on the patient’s general health, and probably equally important to me as general health would be the patient’s body mass index. I would not hesitate to combine a breast reduction with lipoplasty of the abdomen (or elsewhere) or with a small aesthetic facial procedure, such as blepharoplasty or brow lift, but I would not combine breast reduction with a full face lift.