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Mastopexy

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The goal of mastopexy is to lift and reshape the breast. The nipple-areola complex (NAC) is repositioned and upper pole fullness is restored to create a more youthful and aesthetically pleasing appearance. Although often discussed in the context of reduction mammaplasty, mastopexy reshapes the breast without substantially changing breast volume. This is particularly true when ptosis is corrected in women with small to medium-sized breasts. Unlike reduction mammaplasty, mastopexy can be a purely cosmetic procedure. As such, scarring is less well tolerated. Periareolar or vertical techniques are preferred whenever possible, particularly in Asian women and others prone to hypertrophic or equally unacceptable scarring. In women who want an increase in their breast size, in addition to correction of minimal ptosis, augmentation alone or in conjunction with mastopexy can address both of these issues. In modern mastopexy, restoration of upper pole fullness with possible parenchymal rearrangement can be an essential part of the procedure, even without implant augmentation.

Anatomy and Pathophysiology

In 1976 Regnault[1] developed the most common grading system for breast ptosis (Fig. 56-1). In a breast with grade 1 ptosis, the NAC has dropped to the level of the inframammary fold (IMF). In a breast with grade 2 ptosis, the NAC falls below the IMF. In grade 3 or severe ptosis, the NAC is the most dependent aspect of the breast. Pseudoptosis occurs when glandular tissue of the inferior pole of the breast falls below the level of the IMF, creating the illusion of ptosis despite the NAC remaining in a normal position (above the IMF).

The shape of the breast parenchyma is defined by a ligamentous sling that emerges from the thoracic wall as a condensation of Cooper's ligaments. Ptosis occurs as these ligaments lose their strength, allowing the breast to drop and flatten. Although some degree of breast ptosis occurs with normal aging, multiparity, significant weight loss, and smoking predispose women to developing more significant ptosis.[2] Successful mastopexy repositions the NAC to an aesthetically correct position above the IMF and restores upper pole fullness.

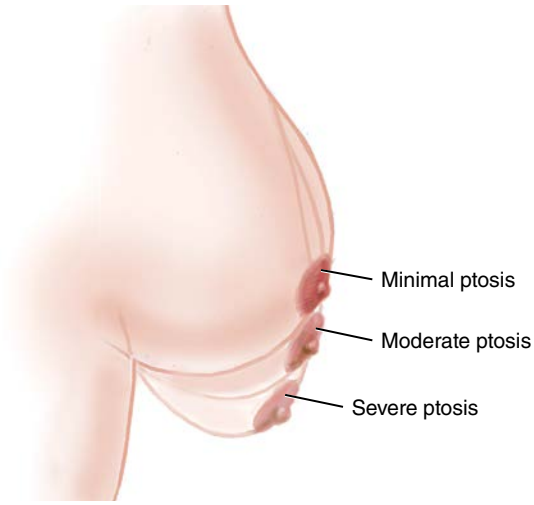

Fig. 56-1 Regnault's classification for three grades of ptosis.

Breast anatomy has been well described previously.[3] The arterial supply to the breast and subdermal NAC is provided by vessels off of the lateral thoracic, thoracoacromial, internal thoracic, and anterior intercostal arteries. Preservation of adequate vascularity is essential in any procedure that repositions the nipple. Any of these four blood supplies can provide sufficient inflow to safely transpose the NAC, allowing the surgeon to choose between a lateral, superior, medial, or inferior pedicle. However, because mastopexy requires little or no parenchymal resection, it is not always necessary to develop a true dermoglandular pedicle under the NAC. Nevertheless, familiarity with these vascular pedicles is necessary when performing mastopexy techniques that rely on reshaping the breast by means of parenchymal pillars.

Indication and Selection of a Procedure

Periareolar Mastopexy

Women with minor skin redundancy and mild ptosis often achieve excellent results with periareolar mastopexy. Periareolar mastopexy is a useful technique when the nipple needs to be elevated less than 2 to 3 cm (Fig. 56-2). The main advantage of this technique is scar location, which can be well hidden around the areola. This technique tends to flatten the breast anteriorly from a more conical breast shape and can also cause skin pleating around the incision. Benelli's "round block" technique can improve breast projection. However, if too much skin is resected through this technique, the areola will stretch, even if a permanent periareolar suture is placed. Most patients who qualify for this technique want augmentation, which can also correct pseudoptosis but may avoid a mastopexy.

Vertical Mastopexy

Vertical mastopexy is often preferred for women with moderate ptosis and moderate-sized breasts (Fig. 56-3). The real advantage of this technique is the ability to move and shape breast parenchyma. Vertical mastopexy allows the surgeon to narrow the breast diameter and increase the projection. Medial, lateral, or superior pedicles can be incorporated with this incision for a more extensive mastopexy procedure; the specific technique depends on the degree of ptosis and the absolute distance the NAC must be elevated. We prefer the superior pedicle technique when the NAC needs elevation of only 3 to 4 cm, and we use the Hall-Findlay medial pedicle technique[4] if the NAC needs more substantial elevation.

Inverted-T Mastopexy

For the rare Asian woman with severe ptosis or for a patient with extremely poor skin quality especially from massive weight loss, inverted-T incisions may be required (Fig. 56-4). This is a relatively easier technique for reducing and reshaping the breast if the patient is willing to accept the scars. The advantage is the ease of the technique and the ability to lift and shape significantly ptotic breasts. In patients with a long sternal notch-to-nipple distance (greater than 30 cm) and a short nipple-to-IMF distance, we prefer to use an inferior pedicle. This allows a shorter pedicle length and better venous drainage. In most patients who require inverted-T incisions, we prefer to use a medial pedicle, as described later. The pedicle is extremely reliable and easily dissected, and thus the operation can be completed safely and efficiently.

Fig. 56-2 A typical candidate for a periareolar mastopexy.

Fig. 56-3 A typical candidate for a vertical mastopexy.

Fig. 56-4 A typical candidate for an inverted-T mastopexy.

Fig. 56-5 A typical candidate for a no vertical scar mastopexy.

No Vertical Scar Mastopexy

Another option for Asian women with moderate to severe ptosis who want less scarring is the no vertical scar mastopexy (Fig. 56-5). This procedure can be used to reduce and reshape the breast as an inverted-T mastopexy without the vertical scar. For a patient with grade 2 or 3 breast ptosis without excessive base width, this technique produces excellent results with less scarring than with the inverted-T mastopexy. The technique uses a superiorly based skin flap overlying a medial, lateral, inferior, or superior NAC pedicle. There is much flexibility in pedicle positioning and shaping. Natural, rounded breasts can also be formed with lateral subcutaneous tissue recontouring, which avoids the boxy appearance that can be inherent in this technique. Although this technique is ideal for larger, more pendulous breasts, smaller breasts can also be lifted. The one caveat is that the patient must be comfortable with leaving some areolar tissue in the IMF as a trade-off for avoiding the vertical scar. Many Asian women prefer this minimal scar technique, because it can deliver a mastopexy with minimal visible scars in the frontal view.

Preoperative Assessment

To determine the ideal procedure to correct the ptosis, the surgeon must have an in-depth conversation with the patient regarding her goals and concerns, along with a careful physical examination. Any personal and/or family history of breast diseases and recent mammogram results are essential to discuss and document. Bra size, childbirths, and breast-feeding history are documented. In general, the degree of ptosis and the patient's desire for any change in breast volume dictate the indicated procedure. Parenchymal ptosis, nipple-areola position, breast volume, skin elasticity, and any asymmetries must be examined and addressed in the formulation of the surgical plan. Any previous scars and chest wall deformity need careful examination. Tuberous breasts or asymmetry must be measured and incorporated into the surgical planning. A patient with spinal scoliosis with significant breast asymmetry will need mastopexy with two different techniques. Other concerns include the patient's inherent scar-forming tendencies and comorbidities that may compromise postoperative outcomes, particularly smoking. We require any woman who smokes to stop smoking at least 4 weeks before surgery, and she is strongly encouraged to abstain for a minimum of 4 weeks after surgery to avoid wound healing complications.

Most Asian women seeking mastopexy have smaller breasts with mild to moderate ptosis. The rates of hypertrophic scarring and keloid formation are higher in this population than in whites, which further underscore the need to minimize the length of the incisions and to plan carefully to ensure that scars are as hidden as possible. In addition to scarring, the surgeon must discuss and inform patients regarding the potential loss or alteration in nipple sensation, the inability or difficulty to breast-feed, postoperative asymmetry, recurrent ptosis, and potential nipple necrosis.

Surgical Technique

Periareolar Mastopexy

Markings

The patient is marked in the standing position. It is crucial to pay careful attention to preoperative marking, particularly in women who tend to have poor scarring. The midline is marked first, followed by the breast meridians. These are drawn along the volumetric center of each breast, starting from a point on the clavicle 5 to 6 cm lateral to the midline. In many women this line travels through the NAC. However, it may fall medial or lateral to the nipple if the ptotic breast has drifted laterally or medially. Next, the new nipple position is marked by placing the index finger at the IMF and the thumb over the breast mound. A point 2 cm above the new nipple position is marked for the new superior areolar border, and the skin for excision is marked next as an eccentric ellipse that includes both the original NAC and the new nipple position. This outside diameter should not exceed 7 to 8 cm to prevent flattening of the breast parenchyma resulting from the overresection of skin. The new superior border of the NAC should not be more than 2 cm superior to its preoperative location (Fig. 56-6, *A*). In general, the ratio of the outside diameter of the skin resection to the inside diameter (areolar border) should not exceed 2:1.[5]

Technique

The patient is placed in the supine position on the operating table with the arms abducted. The arms are secured with a Kerlix gauze wrapping to ensure that they do not fall when the table is flexed intraoperatively to place the patient in an upright sitting position. General anesthesia is induced either with a laryngeal mask airway or an endotracheal tube. The skin is prepared from the neck to the umbilicus with chlorhexidine, and the planned incisions are then injected with 40 ml of a solution containing equal parts of 1% lidocaine and injectable normal saline solution, which is mixed with epinephrine diluted to 1:200,000. Care is taken not to infiltrate the parenchyma underlying the NAC, which may compromise the surgeon's ability to assess nipple viability intraoperatively. The skin is then prepared again with a second chlorhexidine preparation stick, and the patient is draped, leaving the breasts, clavicles, axillas, and epigastric area exposed.

Gentle circumferential pressure is used to put the areola under tension, and the periareolar incision is marked with a 38 to 45 mm cookie cutter, depending on the desired diameter of the areola. The surgeon should err on the side of placing the periareolar incision just within the areola rather than allowing it to fall even a fraction of a millimeter beyond the border. This is particularly important for patients with darkly pigmented areolas. If any of the surrounding lighter skin is incorporated into the NAC and transposed, a "double-ring" scar can result, effectively highlighting rather than hiding the periareolar scar.

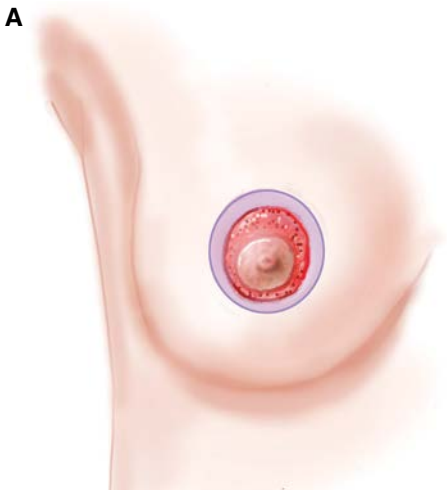

Fig. 56-6 **A,** Pattern for periareolar mastopexy.
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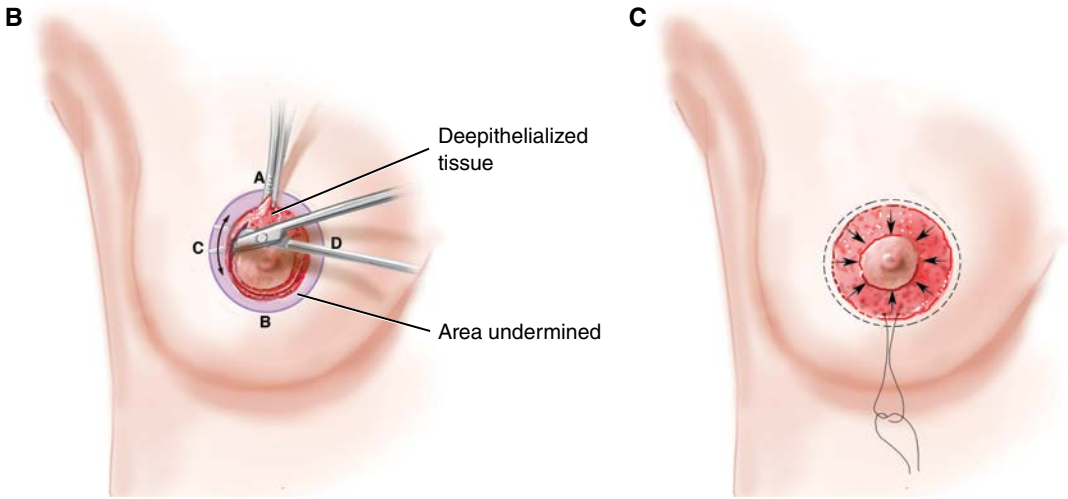

Fig. 56-6, cont'd **B,** The extent of surgical dissection. **C,** A round clock technique for periareolar closure.

An incision is made along the periareolar and elliptical circumareolar lines, and the intervening skin is deepithelialized. The deepithelialized dermis is incised to create a sewing edge to oppose to the areolar border (Fig. 56-6, *B*). To close, a 3-0 purse-string Gore-Tex or 3-0 Mersilene suture is run along the circumference of the outside ellipse in the deep dermis; this is then tightened to bring this skin in to meet the edge of the areolar border (Fig. 56-6, *C*). A cookie cutter can facilitate this process, making the outer circumference match the areola circumference. The skin is closed with interrupted 3-0 Vicryl sutures followed by a running 4-0 Monocryl subcuticular suture.

Vertical Mastopexy

Markings

The patient is marked in the upright position. First, the midline is identified with a line from the suprasternal notch to the xiphoid. The breast meridian is then drawn from a point on the clavicle 5 to 6 cm lateral to the midline, extending down to the NAC. This is transposed down onto the chest wall, and the preoperative IMF is also marked. The new nipple position is identified by transposing the level of the IMF anteriorly onto the meridian line on each breast. The sternal notch-to-nipple distance is confirmed to be symmetrical and is adjusted as needed. The design of the circumareolar incision depends on the preoperative location and size of the patient's NAC. It can be designed to elevate the nipple, reduce areolar size, or both.[6] In most patients the upper border of the circumareolar incision, which becomes the nipple-areolar position, should be marked approximately 2 cm above the new nipple position on the breast meridian. To mark the medial and lateral limbs, the breast is gently displaced laterally and medially. Two vertical lines are drawn in the lower pole of the breast lining up with the breast meridian line drawn on the chest wall. Gently curving lines are then drawn from the medial and lateral limbs, bringing them to meet inferiorly approximately 1 to 3 cm above the preoperative IMF (Fig. 56-7, *A*). These vertical limbs should not extend beyond 1 to 3 cm above the preoperative IMF, because the new IMF will fall 1 to 3 cm above the old IMF depending on the degree of elevation needed for the breast mound. Postoperatively the IMF rises; if the vertical scar is extended down to the preoperative IMF, it will ultimately end up on the chest wall. A gentle dome is drawn around the new nipple position starting from the nipple-areolar border and connecting with the medial and lateral limbs.

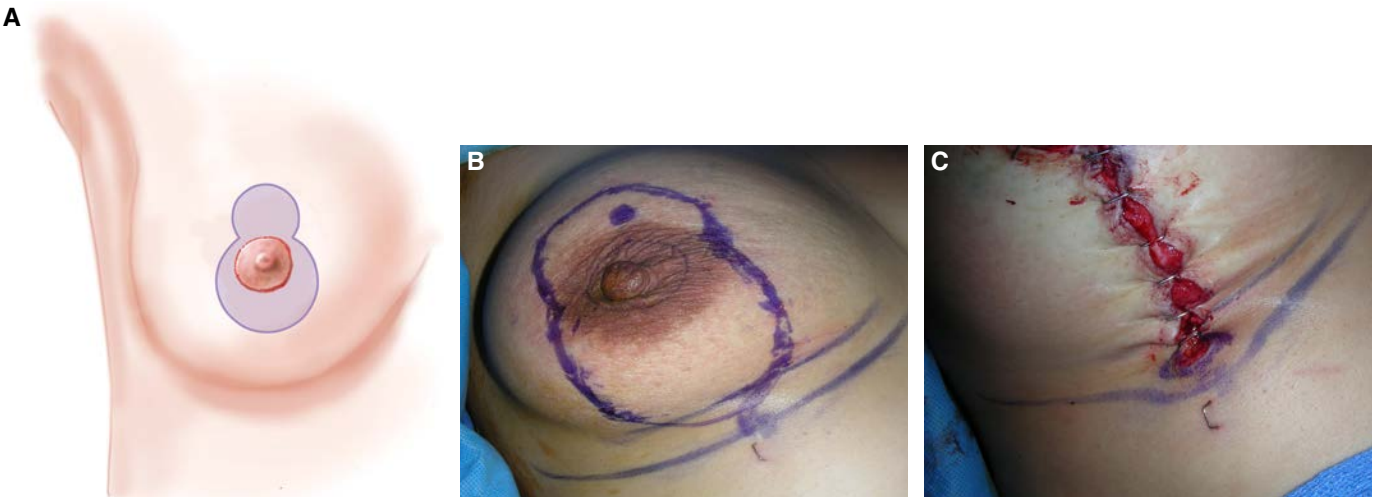

Fig. 56-7 **A,** Pattern for a vertical mastopexy. **B,** Intraoperative markings for vertical mastopexy. **C,** Note the excess tissue in the bottom portion of the vertical closure.

Technique

The patient is positioned, anesthesia is induced, the skin is prepared, and the incision is injected as previously described. The surgeon must be careful to avoid injecting the parenchyma that will form the NAC pedicle. The skin is prepared again, and the patient is draped in the standard fashion. The periareolar incision is marked with a 42 mm cookie cutter while the NAC is held in gentle stretch (Fig. 56-7, *B*). Frequently the excess tissue at the bottom of the vertical incision must be properly managed to achieve an optimal contour (Fig. 56-7, *C*). Techniques for the use of the skin-only and medial pedicle procedures will be described and are the ones we most commonly use.

Skin-Only Reshaping Technique Once the new nipple position and the skin marking of a vertical pattern are decided, the NAC is outlined with a cookie cutter. Incisions are made along the periareolar circle and the marked circumvertical incision. The skin within the vertical pattern is deepithelialized and the breast skin elevated accordingly along the circumvertical incision for a tension-free closure. The proposed NAC skin circle is approximated with a 3-0 PDS suture, and the NAC is then moved to the new location and approximated with a 3-0 Monocryl suture in an interrupted fashion for deep dermal closure. New vertical closure is initially approximated with skin staples and then closed with interrupted 3-0 PDS sutures for deep dermal closure. The NAC skin closure is then performed with a 5-0 chromic suture in a simple running fashion. The vertical skin closure is performed with a 4-0 Monocryl suture in running subcuticular fashion. The excess tissue in the lower pole of the breast, if any, can be marked and defatted first with scissors. This is followed by placement of a 3-0 Monocryl purse string suture to evenly fold the excess skin together.

Medial Pedicle

For women who require a more extensive lift, a medial NAC pedicle is used, as described by Hall-Findlay.[7] This is marked as a 6 to 7 cm wide pedicle with half of its base falling in the areolar opening and the other half underlying the vertical limb of the medial skin incision. This allows the pedicle to rotate superiorly during inset of the NAC into its new position. Periareolar and circumvertical incisions are made, and the intervening skin is deepithelialized. The pedicle is then divided from the surrounding breast parenchyma and carried down to the pectoral fascia. Care is taken to dissect along the pectoral fascia only as far medially as necessary to allow easy rotation of the NAC while still preserving sensory nerves entering the breast medially through the pectoralis muscle. The pedicle is then rotated up into the new position and tacked in place to secure the new areolar position.

Care is taken to thin the inferior flaps to minimize the need for horizontal excision. The lateral border of the pedicle becomes the medial pillar; this is closed to the lateral pillar, which is drawn medially, thereby narrowing the breast base. The skin is redraped and closed with staples, symmetry is confirmed and adjusted with the patient sitting, and skin closure proceeds as previously described.

Inverted-T Mastopexy

Markings

Incisions for an inverted-T mastopexy are similar to those described by McKissock[8] for a reduction mammaplasty. The patient is marked in the upright position, identifying the midline and breast meridians, as described previously. The meridian is transposed and extended down onto the chest wall on each side, and the preoperative IMF is marked. The new nipple position is identified on the meridian at or just above the level of the IMF depending on the patient's anatomy and goals of surgery. A keyhole incision is then designed around the new nipple location, which is centered along the meridian line. The angle of divergence for the vertical limbs varies from 45 to 90 degrees depending on the size of the breast, degree of ptosis, and amount of skin laxity. The larger the breast and greater the skin laxity, the wider the angle will need to be (Fig. 56-8, *A*). The vertical limbs should be 7 cm long for most patients, but longer limbs may be needed in patients who want larger breast sizes (cup size D or above). The vertical limbs and their medial and lateral extensions are confirmed and adjusted as needed after the patient is supine on the operating table. The inferior incision is also drawn with the patient on the table.

Technique

The patient is positioned, prepared, and draped as previously described. Again, care is taken not to infiltrate the planned pedicle with the solution of local anesthetic and epinephrine. After the vertical limbs and their medial and lateral extensions are confirmed, the inferior incision is marked. Postoperatively the IMF will rise; therefore this lower incision should be placed on the breast mound 1 to 2 cm above the preoperative IMF. In addition, we often create a small inverted V at the meridian on the inferior incision to minimize tension at this point. The chosen pedicle is drawn on the skin, and the periareolar incision is marked as previously described. Again, care should be taken to ensure that this incision falls just within the more darkly pigmented areola, so that no lighter skin is incorporated into the transposed NAC. An incision is made around the areola and keyhole incisions, and the skin overlying the pedicle is deepithelialized. The pedicle is then divided from the remaining breast parenchyma down to the pectoral fascia.

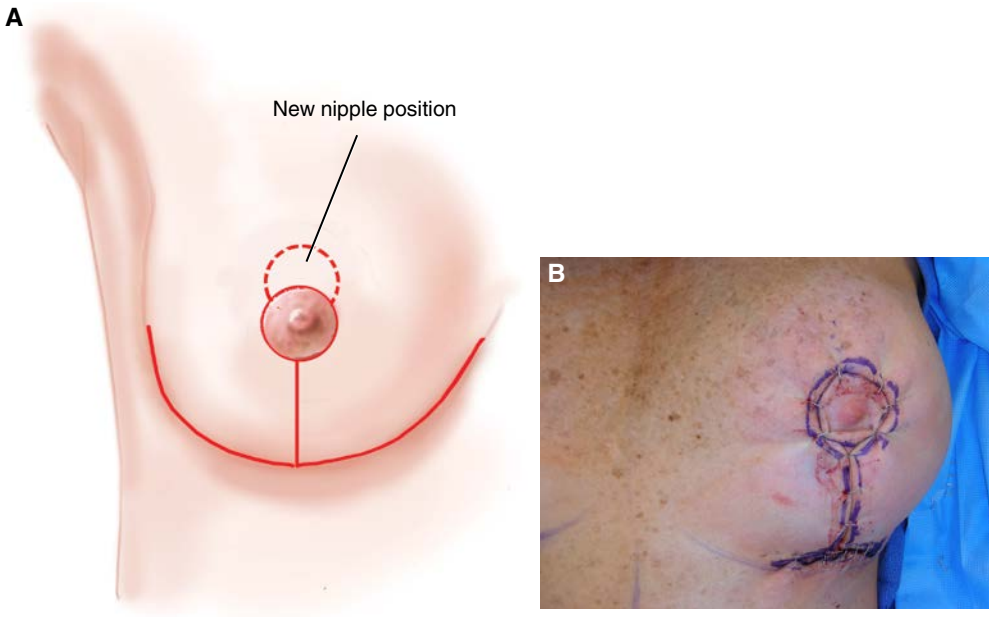

Fig. 56-8 **A,** Pattern for an inverted-T mastopexy. **B,** Intraoperative markings for the inverted-T mastopexy.

The use of a medial pedicle can be combined with autologous augmentation. To accomplish this, the surgeon should dissect an inferior parenchymal pillar at least 5 cm in width. This parenchyma can then be transposed superiorly and tacked to the pectoral fascia. The NAC pedicle is then draped over this parenchyma and tacked in place. The keyhole areolar incision is secured to the periareolar dermis at four points around its circumference. The medial and lateral pillars are closed over the inferior pillar and secured in place, creating a parenchymal sling for the NAC pedicle. The skin is then redraped over the newly projecting breast mound. We prefer to use skin staples to close from outside toward the central T point to avoid a dog-ear formation; excess skin can then be safely resected as needed. The patient is repositioned into an upright sitting position to evaluate symmetry, as described previously. The skin is closed with 3-0 Vicryl dermal sutures and a running 3-0 Monocryl subcuticular suture. A 4-0 Monocryl suture is used around the areola (Fig. 56-8, *B*).

No Vertical Scar Mastopexy

Markings

In essence, a no vertical scar mastopexy is an inverted-T mastopexy without the vertical scar (Fig. 56-9, *A*).The patient is marked in the upright position, identifying the midline and breast meridians as previously described. The preoperative IMF is marked as the meridian is extended onto the chest wall bilaterally. The new nipple position is identified on the meridian at or just above the level of the IMF. Alternatively, the new nipple-areolar position can be determined by a set distance from the sternal notch, ranging from 19 to 21 cm. The inferior incision is demarcated 5 to 6 cm below the new nipple-areolar position, sweeping superiorly in its medial and lateral extent.

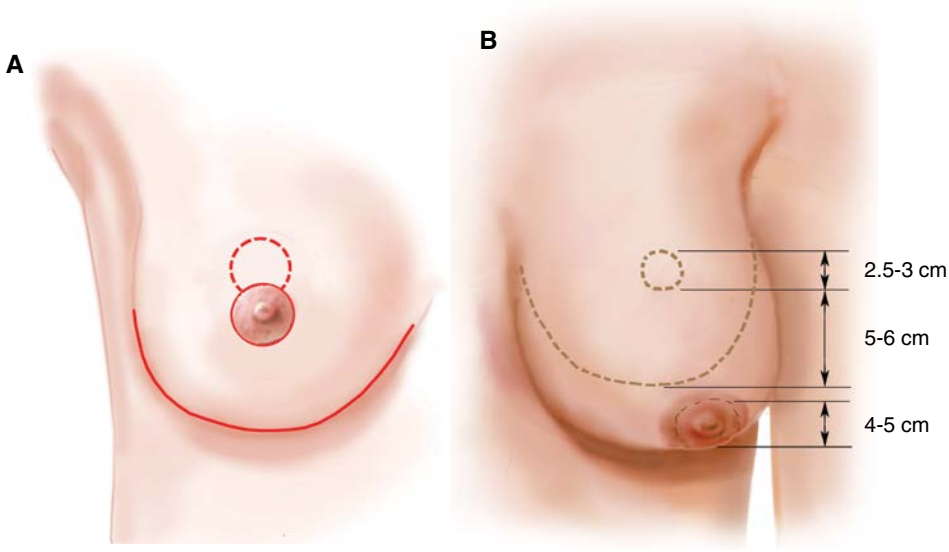

Fig. 56-9 **A,** No vertical scar mastopexy. **B,** The intraoperative plan for surgical resection.

Technique

The patient is positioned, prepared, and draped, as previously described. Again, one must avoid infiltrating the planned pedicle with the solution of local anesthetic and epinephrine, although tumescent solution is helpful for hemostasis. The chosen pedicle is drawn on the skin, and the periareolar incision is marked with a circular stent. The areola is then incised, and the skin overlying the pedicle is deepithelialized (Fig. 56-9, *B*). The pedicle is then divided from the remaining breast parenchyma down to the pectoral fascia. This parenchyma can then be shaped, transposed, and tacked to the pectoral fascia. The NAC pedicle is then draped over this parenchyma and tacked in place. A superiorly based skin flap 1 to 2 cm in thickness is developed and redraped over the newly projecting breast mound. The inframammary incision is closed in a layered fashion with deep and subcuticular 3-0 Monocryl sutures. The patient is repositioned into an upright sitting position to evaluate symmetry and nipple-areolar position, as described previously. The native NAC is then transposed to the flap surface with 3-0 and 4-0 Monocryl sutures.

Results

The clinical outcomes in patients undergoing mastopexy who have had the appropriate preoperative evaluation and detailed operative planning have been excellent. In fact, these patients are often some of the most satisfied clients who walk through a plastic surgeon's office door. Although the scar can occasionally be an issue, most patients are happy about the new shape of their breasts, and the scar can also be minimized with several methods. In some patients, minor revisions, especially for a widened periareolar scar, may be needed to improve the outcome.

Periareolar Mastopexy

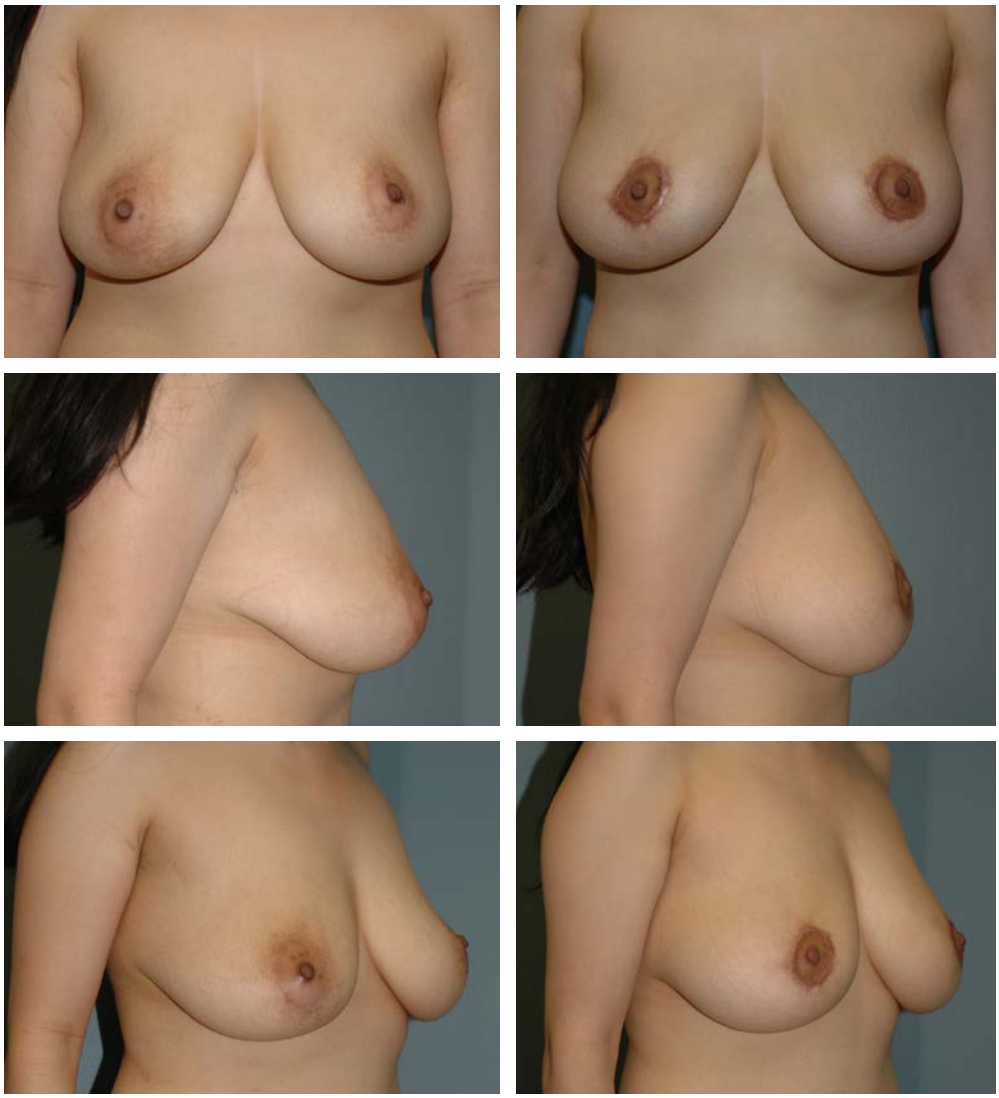

Fig. 56-10

This 27-year-old Asian patient with grade 1 ptosis and minimal upper pole fullness with breast involution wanted to lift her breasts. She wanted no vertical scar after her mastopexy. She underwent a periareolar concentric mastopexy. A Gore-Tex suture was used to control the areolar circle and prevent spreading. At 10-month follow-up, she had symmetrical breasts with improved shape and contour match.

Vertical Mastopexy

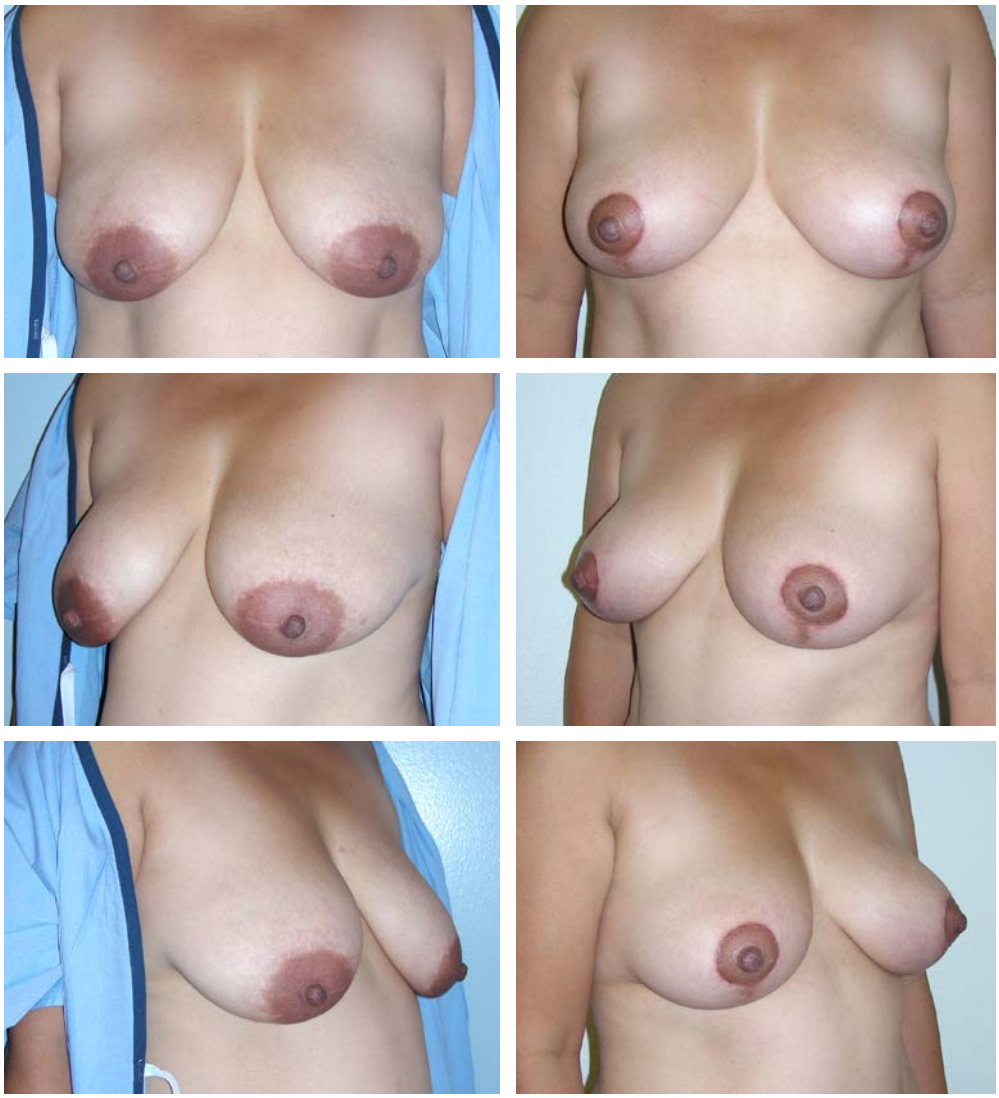

Fig. 56-11

This 40-year-old Asian patient with grade 2 ptosis and minimal upper pole fullness wanted to improve the shape of her breasts. She underwent bilateral vertical mastopexy with the skin-only reshaping technique. Only the excess skin was removed from each side of the breasts. She did well after surgery and did not have any problems. All of her incisions healed primarily. At 4-month follow-up, a pleasing breast shape was achieved and well maintained. Scarring after vertical mastopexy was not an issue for this patient.

Inverted-T Mastopexy

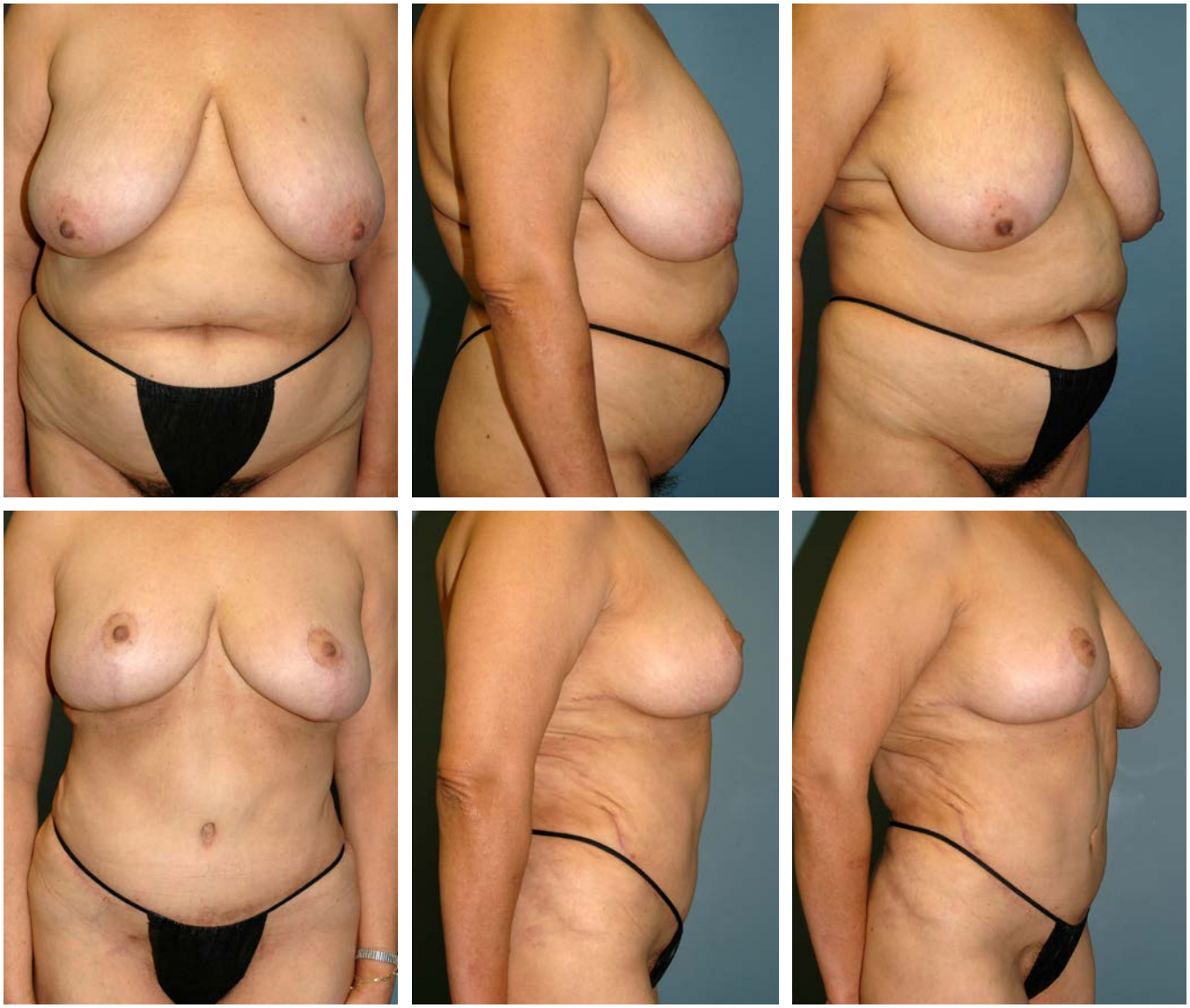

Fig. 56-12

This 49-year-old Asian patient with grade 3 ptosis associated with pendulous breasts wanted to have her breasts lifted. She also wanted abdominal recontouring. She underwent an inverted-T mastopexy with a concurrent abdominoplasty. Fifteen months after surgery, she is extremely pleased with the elevation and shape of her breasts.

No Vertical Scar Mastopexy

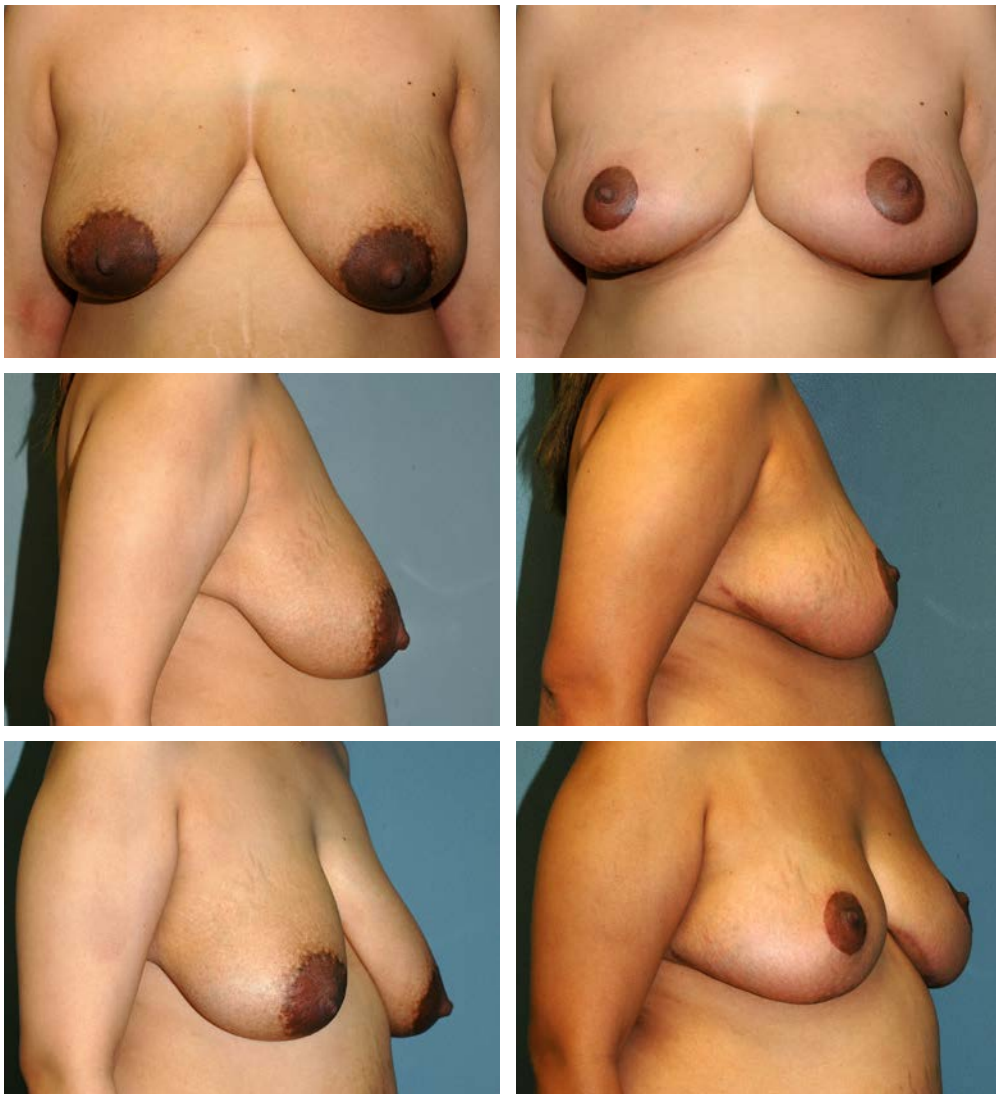

Fig. 56-13

This 33-year-old Asian patient with grade 2 ptosis and minimal upper pole fullness wanted to improve the shape of her breasts and areolas. She underwent bilateral no vertical scar mastopexy with skin and parenchymal reshaping. Her postoperative course was uneventful. All incisions healed well. At 6-month follow-up, she had a pleasing shape of the breast mound and areolas with minimal scarring.

Discussion

During the past 50 years, mastopexy has evolved from skin-only resections to the addition of parenchymal remodeling. There have been significant improvements in both aesthetic outcomes and durable correction of ptosis. Several postoperative considerations merit further discussion, because they can pose challenges for plastic surgeons and their patients.

Chest Wall Irregularities and Asymmetry

It is crucial to pay careful attention to preoperative asymmetries to ensure the ultimate success of the mastopexy. Many women have slight discrepancies in breast volume, the degree of ptosis, and the positioning of their IMFs and NACs. Often patients are unaware of these differences; however, most women will be substantially more perceptive and thus more critical of asymmetries after surgery. All of these differences must be considered when patients are marked preoperatively and on the operating room table. Care should be taken not to extend the incisions either too close to the IMF or too near the midline to avoid postoperative scarring in unacceptable areas. Rather than extending the incisions to correct dog-ear deformities, the corners can be modestly defatted subdermally to reduce contour irregularities.

Sitting the patient upright intraoperatively is the key to ensuring that the breasts appear symmetrical when the effects of gravity alter the positioning of breast parenchyma on the chest wall. A symmetrical NAC position relative to the sternal notch and midline should be confirmed before final inset. This can easily be accomplished with a length of suture with a clamp on either end. In some patients postoperative asymmetries may require operative revisions. However, most revisions can be avoided with careful preoperative planning and intraoperative correction.

Scarring

The use of silicone sheeting or gel is routinely recommended to patients, because these decrease hypertrophic scarring in Asian patients.[9] If the patient experiences undesirable scar formation, a dilute solution of triamcinolone (5 mg/ml) can be injected intradermally as early as the fourth postoperative week. Steroid injections can be repeated every 3 months if the scarring persists or does not sufficiently improve. In our experience, little improvement is seen after more than three injections. However, the steroid concentration can be increased to as much as 20 mg/ml if the response to the initial injection is poor. This is in contrast to white patients, in whom high-dose injections often result in dermal thinning and depigmentation. The recalcitrant hypertrophic scar may require more than three injections.

Recurrent Ptosis

After mastopexy there is an inevitable settling of the breast parenchyma as postoperative healing occurs. A certain degree of relaxation of both the skin envelope and underlying parenchyma must be expected and planned for in the weeks after surgery. Care must be taken during preoperative planning and marking not to reposition the NAC into too superior a position, because postoperative settling of the parenchyma can result in high-riding nipples. Bottoming out of the breast mound can be mitigated by both autologous augmentation of the superior pole as previously described and by tacking the repositioned breast tissue to the underlying pectoral fascia. A supportive bra should be worn at all times for 4 weeks after surgery to help maintain the desired breast shape and projection. Modest overcorrection of ptosis during mastopexy procedures can minimize postoperative bottoming out. However, all patients must be counseled before surgery that breast ptosis will inevitably recur to some degree as the patient ages in the years after mastopexy.

Pearls for Success

- The periareolar incision must lie within the dark areolar border to avoid the creation of a double-ring scar.
- The patient should be positioned upright before the surgery is completed to assess volume, shape, symmetry, and NAC position.
- The stent used to mark the native NAC should be larger than the one used to mark the new NAC position.
- In the periareolar technique, a permanent suture is used for the periareolar purse-string closure.
- In the vertical technique, the excess tissue in the low pole is defatted to minimize dog-ear formationand to improve the breast shape.
- In the inverted-T technique, the surgeon uses an inverted-V closure for the three-point suture to minimize tension and skin loss.
- In the no vertical scar technique, lateral pole debulking of the breasts can often improve breast shape.

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