

Triangle Resection with Crescent Mastopexy: An Oncoplastic Breast Surgical Technique for Managing Inferior Pole Lesions

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ABSTRACT Resection of inferior pole breast cancers commonly produces inferior cosmetic results, particularly when resection of skin is required. The triangle resection with mastopexy is one of several oncoplastic breast surgical techniques that enable resection of inferior pole lesions with preservation if not improvement of breast cosmesis. This procedure may be combined with unilateral or bilateral mastopexy to further improve breast cosmesis in patients with mild to moderate ptosis.

Excision of a breast malignancy from the lower half of the breast has significant potential to cause breast disfigurement. The standard lumpectomy performed in this location may produce a “bird beak” deformity created when the nipple–areolar complex or central breast overhangs a concavity in the inferior breast (Fig. 1). The triangle resection with crescent mastopexy contains components of the Wise-pattern reduction mammoplasty, including resection of breast tissue and skin from the inferior breast, advancement flap wound closure, and optional repositioning of the nipple–areolar complex. As such, the triangle resection with crescent mastopexy offers an oncoplastic solution to the “bird beak” deformity while achieving wide resection of lesions in the 5–7 o'clock region of the breast, particularly when resection of the overlying skin is required.

To perform the triangle resection, an isosceles triangular or wedge-shaped incision is drawn on the skin overlying the breast lesion. The base of the triangle should intersect the inframammary skin fold and the apex of the triangle should extend to the inferior areolar margin. Dissection is begun by incising the triangular area of skin and dividing the underlying glandular tissue down to the chest wall. Resection of the specimen is completed by extending the plane of dissection posterior to the specimen at the level of the muscular fascia. Special attention should be paid to maintaining a glandular dissection plane that is relatively perpendicular to the skin surface to avoid inadvertent narrowing of the surgical margins or removal of excessive normal glandular tissue (Fig. 2).

For wound closure, the remaining lower outer and lower inner quadrants are brought together to allow full-thickness approximation. This is accomplished by extending the inframammary fold incision toward the medial and lateral edges of the breast, undermining the lower half of the breast to create lower outer quadrant and lower inner quadrant dermoglandular flaps, and suturing the dermoglandular flaps together using multiple layers of 2-0 or 3-0 absorbable sutures. The resulting length discrepancy between the skin of the breast and inframammary fold can be resolved by temporary approximation of the skin edges with skin staples and redistribution of the shorter skin edge along the longer skin edge. To avoid excessive tension on the breast skin edges, the inframammary fold incision may be extended medially and laterally to allow wider mobilization of the dermoglandular flaps. In addition, excess skin may be resected from the lower outer quadrants to bring the nipple to its “ideal” position 5–7 cm from the inframammary skin fold. To complete wound closure, the inframammary fold is closed in multiple layers using 2-0 or 3-0 interrupted absorbable sutures, followed by closure of the skin with a smaller gauge suture.

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FIG. 1 “Bird beak” deformity created when the nipple–areolar complex or central breast overhangs a concavity in the inferior breast

From a tissue viability perspective, the most vulnerable parts of the breast dermoglandular flaps are the distal corners of the medial and lateral flaps adjacent to the inframammary fold. Limited collateral blood flow at these corners makes them susceptible to ischemia, leading to

FIG. 2 Maintaining a glandular dissection plane that is relatively perpendicular to the skin surface avoids inadvertent narrowing of the surgical margins (*left*) or removal of excessive normal glandular tissue (*right*)

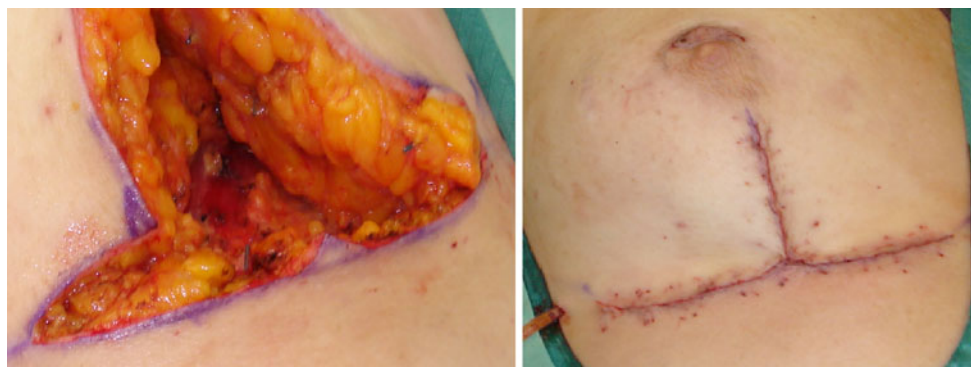
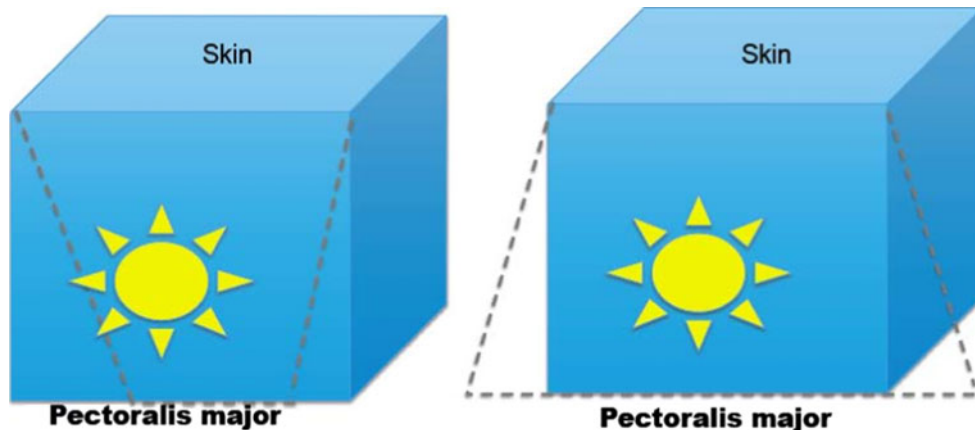


FIG. 3 Retention of a *triangular area* of skin at the midpoint of the inframammary skin fold permits excision of the vulnerable corners of skin at the edge of the *lower inner* and *lower outer* quadrants

partial or full-thickness necrosis. Tissue viability can be improved by delicate tissue handling, tension-free wound closure, and avoiding the use of retracting instruments on these delicate corners. An additional strategy is to simply “round off” these corners to reduce the risk of tissue ischemia. The resulting “skin defect” can be filled by preserving a comparable area of skin at the midpoint of the inframammary fold (Fig. 3).

For patients with mild to moderate ptosis, the crescent mastopexy provides a simplified means of elevating the nipple to its “ideal” position—the level of the inframammary skin fold—determined by projecting the inframammary skin fold onto the surface of the breast assessed in the upright position. The crescent mastopexy incision is designed by drawing two semi-parallel “C” shaped lines superior and adjacent to the areola. The distance between the midpoints of each “C” shaped line is determined by the distance between the original and “ideal” nipple position. A partial thickness skin incision is then performed followed by diepithelization of the skin of the crescent. Alternatively, full-thickness excision of the crescent may be performed, but this might compromise sensation of the nipple areolar complex. Closure of the

wound is accomplished by approximation of the superior and inferior edges of the crescent incision using small gauge absorbable sutures placed in an interrupted fashion. A technical limitation to the crescent-shaped incision is the significant skin length discrepancy between the upper (longer) and lower (shorter) margins of the crescent. However, this discrepancy can be partly overcome by taking larger horizontal suture bites along the longer skin margin and shorter vertical suture bites along the shorter margin. Skin closure is completed with a subcuticular suture. The final result is a larger diameter areola, which

may be balanced by performing the identical crescent mastopexy on the contralateral breast.

It is important to document the appropriate CPT codes for the triangle resection and crescent mastopexy. The triangle resection may be coded as partial mastectomy (19301) or wire-localized lumpectomy (19125). Wound closure should be coded as adjacent tissue transfer or rearrangement of the trunk (defect 10.1–30.0 cm²) (14001). Crescent mastopexy should be coded as 14301. Contralateral mastopexy for symmetry should be coded as 19316 using ICD-9 code 612.1.