

The Lazy Lateral Incision: An innovative approach to the skin-sparing mastectomy.

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ABSTRACT

The skin-sparing mastectomy has many advantages over a simple mastectomy, including preservation of the native breast skin, inframammary fold, and improved aesthetics for immediate reconstruction. The traditional transverse elliptical access incision is anterior on the breast mound, requires a second incision for previous biopsy sites, and provides restricted access to the axilla. We describe a novel mastectomy incision that improves scar appearance, improves access to the axillary contents, and reduces skin flap retraction. This incision starts at the nipple-areolar complex and extends laterally in a curvilinear fashion toward the axilla incorporating the biopsy scar along the way. This simple sinusoidal design results in an aesthetically superior alternative to the traditional linear mastectomy incision.

INTRODUCTION

Breast cancer surgery involves both the traumatic experience of managing a potentially fatal disease as well as a radical alteration of the conventional feminine body image. The patient is presented with multiple treatment and reconstructive options, and one third of women diagnosed with breast cancer elect for mastectomy. The final reconstructive appearance is influenced by the amount of skin excised at the time of the mastectomy as well as the exact location and appearance of the skin incision. Skin-sparing mastectomy (SSM) allows the surgeon to perform a complete mastectomy while preserving adequate breast skin for immediate reconstruction. Traditionally, SSM is performed using a transverse incision at the apex of the breast mound.^{1, 2, 3} (Figure 1).



Figure 1. (*left*) Pre-operative picture, note previous biopsy scar on left breast (*right*) Post-operative result for a traditional transverse incision with immediate allograft sling breast reconstruction. Note separate biopsy scar present on left breast

This technique increases the viable skin for breast reconstruction, preserves the inframammary fold, and facilitates immediate fluid placement into a tissue expander. However the dissection can be difficult through a standard elipical incision which leaves an unnatural linear scar and usually requires a separate incision for sentinel lymph node biopsy. We present an alternative approach termed the “Lazy Lateral Incision” which we believe offers novel advantages in comparison with the traditional mastectomy incision.

TECHNIQUE AND CASES

The Lazy Lateral mastectomy incision starts at the nipple-areolar complex (NAC), and is designed by the oncologic or reconstructive surgeon to incorporate existing biopsy sites in the outer quadrants of the breast. This is accomplished by using a sinusoidal design that allows the surgeon to utilize a superior or inferior takeoff from the NAC to incorporate the biopsy site. From there, the incision is then reflected in the opposite direction and taken toward the axilla (Figure 2).

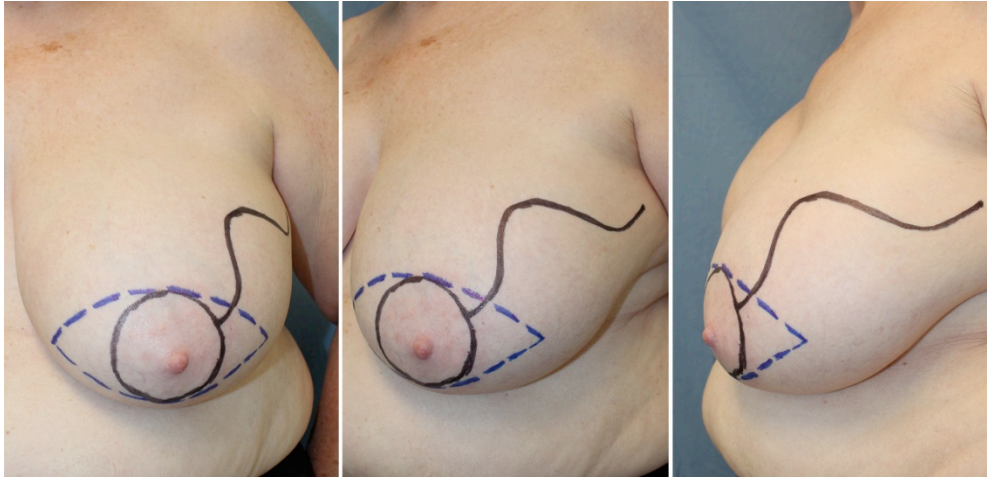


Figure 2. (Left to Right) Anterior/Posterior, Oblique, and Lateral view depicting design of Lazy Lateral Incision (*solid line*) compared with traditional elliptical transverse mastectomy incision (*dashed line*) The Sinusoidal wave may originate anywhere from the 12 o'clock to the 6 o'clock NAC position and have a variety of frequencies and amplitudes. Excess tissue may be worked laterally into the curve and away from midline in order to improve aesthetics.

We present 4 skin sparing mastectomies performed using the Lazy Lateral Incision for mastectomy with immediate reconstruction. 2 breasts were unilateral mastectomies, and 2 utilized the Lazy Lateral incision on the side of the primary cancer while a traditional transverse incision was utilized on the contralateral breast (Figures 3-6). The incision was designed by a single plastic surgeon prior to the mastectomy. Previous biopsy sites in the outer quadrants were incorporated into the incision, and the tail was extended toward the axilla. Sentinel lymph node biopsy was performed in each case. Immediate reconstruction was performed on all patients utilizing an infero-lateral allograft sling and a tissue expander.

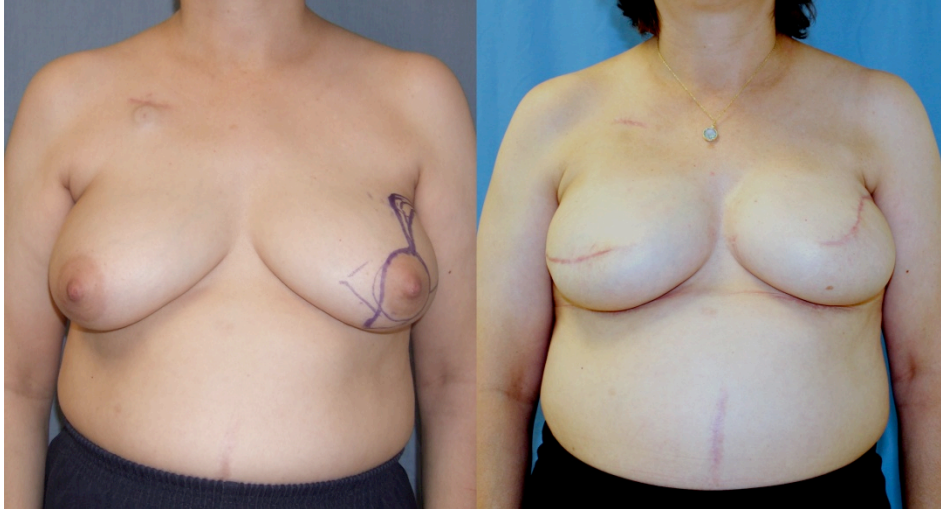


Figure 3. Pre-operative and post-operative photos depicting side by side comparison of traditional transverse incision (right breast) and Lazy Lateral incision (left breast) result



Figure 4. Pre-operative and post-operative photos depicting side by side comparison of traditional transverse incision (right breast) and Lazy Lateral incision (left breast) result. Note this patient received radiation on left breast

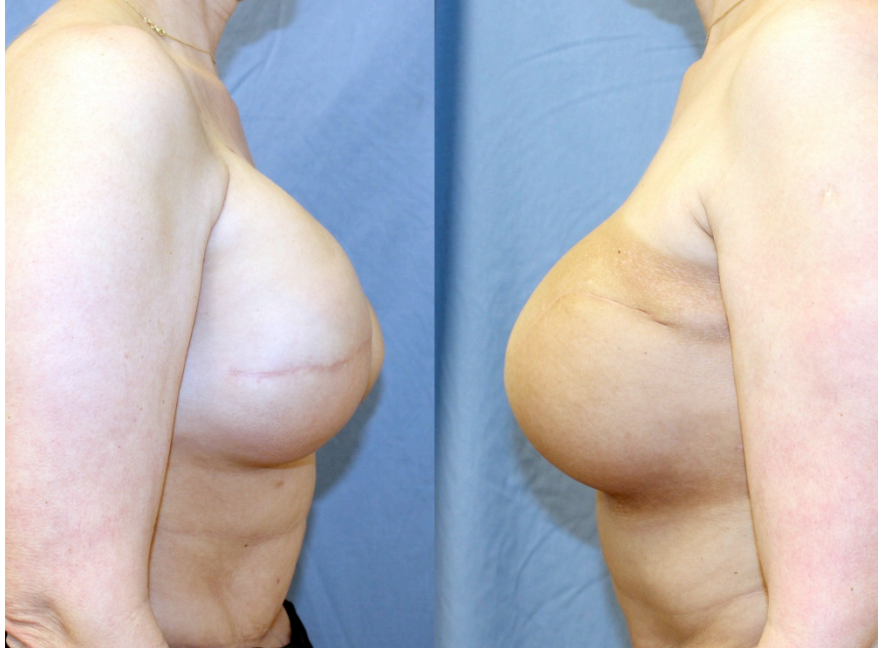


Figure 5. (*left*) Lateral view of post-operative result with traditional transverse incision. (*right*) Lateral view of post-operative result with Lazy Lateral incision. Note increased anterior projection and more natural tear drop contour of left breast (*right*)



Figure 6. (*left*) Pre-operative and (*right*) 3 week post-operative result of the Lazy Lateral incision. Note that 2 cm of the medial scar will eventually be camouflaged by an areola tattoo even further enhancing this natural appearing immediate breast reconstruction.

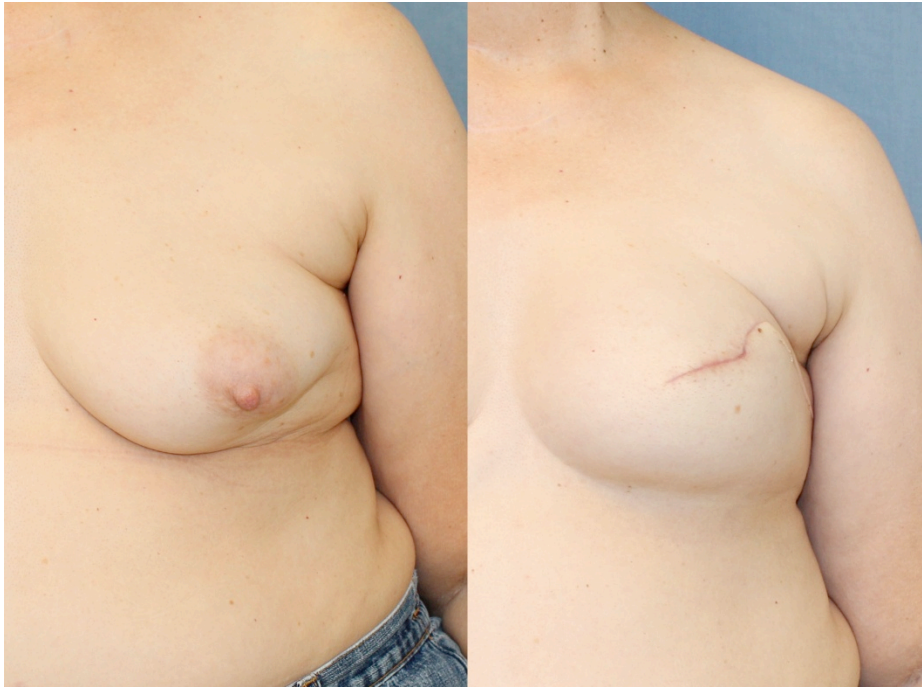


Figure 7. (*left*) Pre-operative and (*right*) 4 week post-operative result of the Lazy Lateral incision. Note how the inframammary fold and lateral breast shape can be enhanced by working the reconstructed tissue superior and lateral.

DISCUSSION

The cases reported above outline the perceived advantages of the Lazy Lateral incision. One advantage evidenced by our results is the capability of the Lazy Lateral technique to include the excision of the biopsy scar in the natural flow of the primary incision. The sinusoidal shaped incision can be designed superiorly or inferiorly with a multitude of amplitudes or frequencies to encompass various prior biopsy sites in the outer breast quadrants. However, the incision design is operator dependent and has limitations in covering the medial portion of the breast. If a biopsy scar was present medial to the mid-breast meridian, an additional incision would be required.

The curvilinear path of the Lazy Lateral incision also serves to distract the eye during aesthetic inspection in comparison with the traditional transverse incision. Straight lines are not naturally occurring on the breast, and therefore the incision provides a more natural and aesthetically pleasing appearance. The distracting quality of a naturally curving incision coupled with the excellent camouflage by areola tattooing for the medial portion of the incision make the postoperative scar significantly less visible from the anterolateral vantage point when compared with traditional mastectomy scars.

The Lazy lateral incision allows for the elevation and manipulation of excess tissue laterally rather than having to cross the midline breast meridian to work with tissue. This enables lateral tailor tacking of excess skin by the reconstructive surgeon and helps to maintain the natural lateral contour and anterior projection of the reconstructed breast.

Another advantage of the Lazy Lateral Incision is the unparalleled access to axillary contents and the tail of spence for resection.⁴ Traditional transverse mastectomy incisions often necessitate separate incisions and are known to provide insufficient axillary access.

Finally, the enhanced access to the entire breast provided by the Lazy Lateral incision reduces the necessary flap retraction during the mastectomy. While the Lazy Lateral incision is longer than the traditional transverse incision, the increased access greatly decreases the mechanical stress placed on the sub-dermal plexus of the preserved native skin which may improve skin flap health and viability. The surgeon is able to manipulate the skin flaps in a gentle manner, reducing the retraction force on the native skin flap while maintaining excellent surgical access. Therefore, through the reduction of retractive force on the skin flap, the Lazy Lateral incision may decrease the rate of skin flap necrosis and reduce the risk of vascular supply complications in SSM.

CONCLUSION

Skin-sparing mastectomy with immediate reconstruction has become a mainstream intervention for breast cancer. Alternative mastectomy incisions have been described in the past, however, the sinusoidal design of the Lazy lateral incision is the first to encompass all of the named advantages described. The Lateral Lazy incision addresses some acknowledged weaknesses of the traditional elliptical incision by improving access to breast contents while providing superior aesthetics. This technique provides an alternative and innovative advancement for SSM and deserves future investigation.

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