# Surgical Techniques

## Z-Plasty Reductional Labiaplasty

Andrew T. Goldstein, MD,*† and Lauri J. Romanzi, MD‡

*Center For Vulvovaginal Disorders, Washington, DC, USA; †Division of Gynecologic Specialties, Department of Gynecology and Obstetrics, Johns Hopkins Medicine, Baltimore, MD, USA; ‡Department of Obstetrics and Gynecology, Weill Medical College, Cornell University, New York, USA

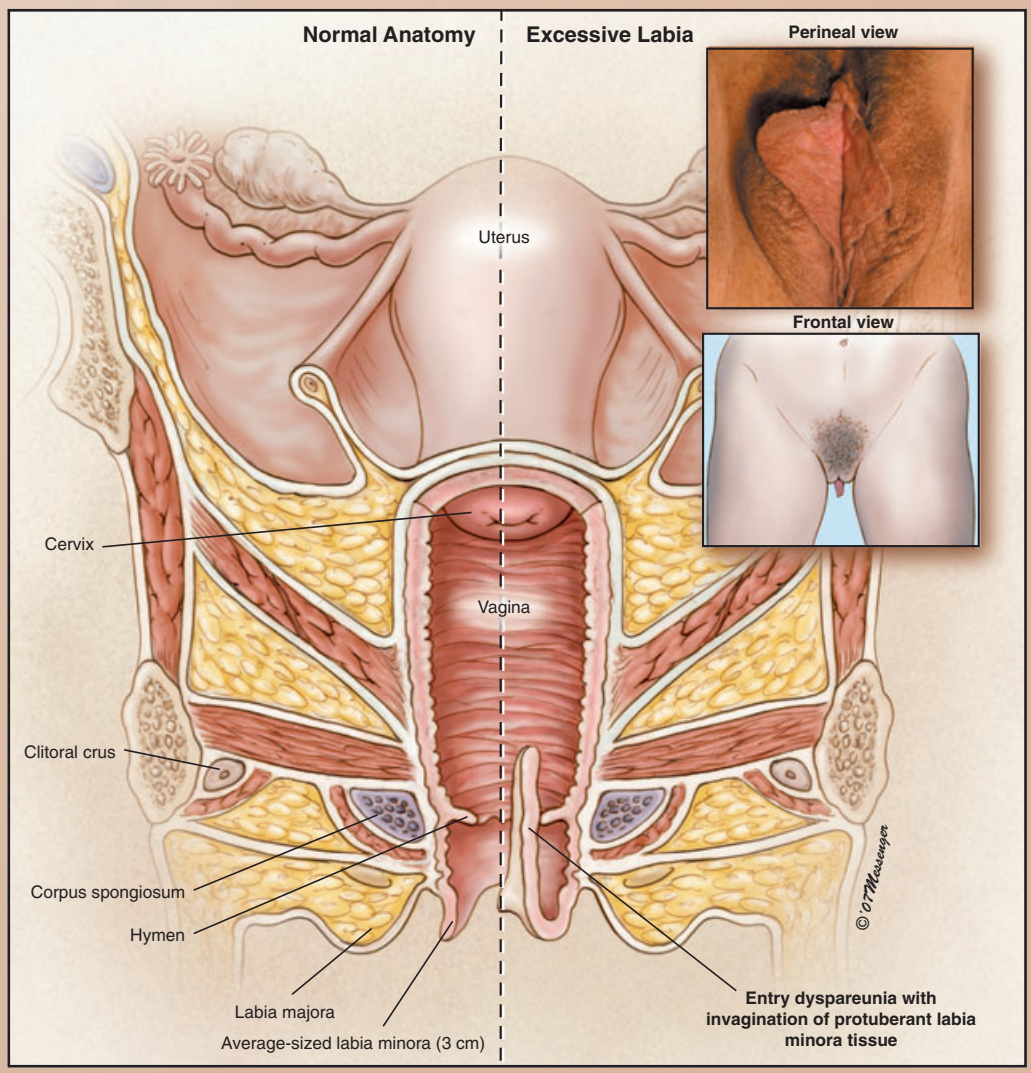


**FIGURE 1**

The labia minora are bilateral mucosal-cutaneous refolds located between the labia majora and vulvar vestibule. While there is a wide range of normal anatomic variants, in general, the labia minora are semicircular with a 3-cm long base and a free edge extending from the clitoris to the posterior commissure. The medial mucosal surface is derived from the primitive urogenital sinus and is shiny and pink. The free edge and the lateral cutaneous surface are derived from the urethral folds and are more deeply pigmented. Enlargement of the labia minora can occur by several factors, including: congenital enlargement, mechanical irritation, multiple pregnancies, stretching with weights, and vulvar lymphedema. Women may desire labiaplasty for aesthetic dissatisfaction, discomfort in clothing, discomfort when walking or participating in exercise, and entry dyspareunia caused by invagination of the protuberant tissue.

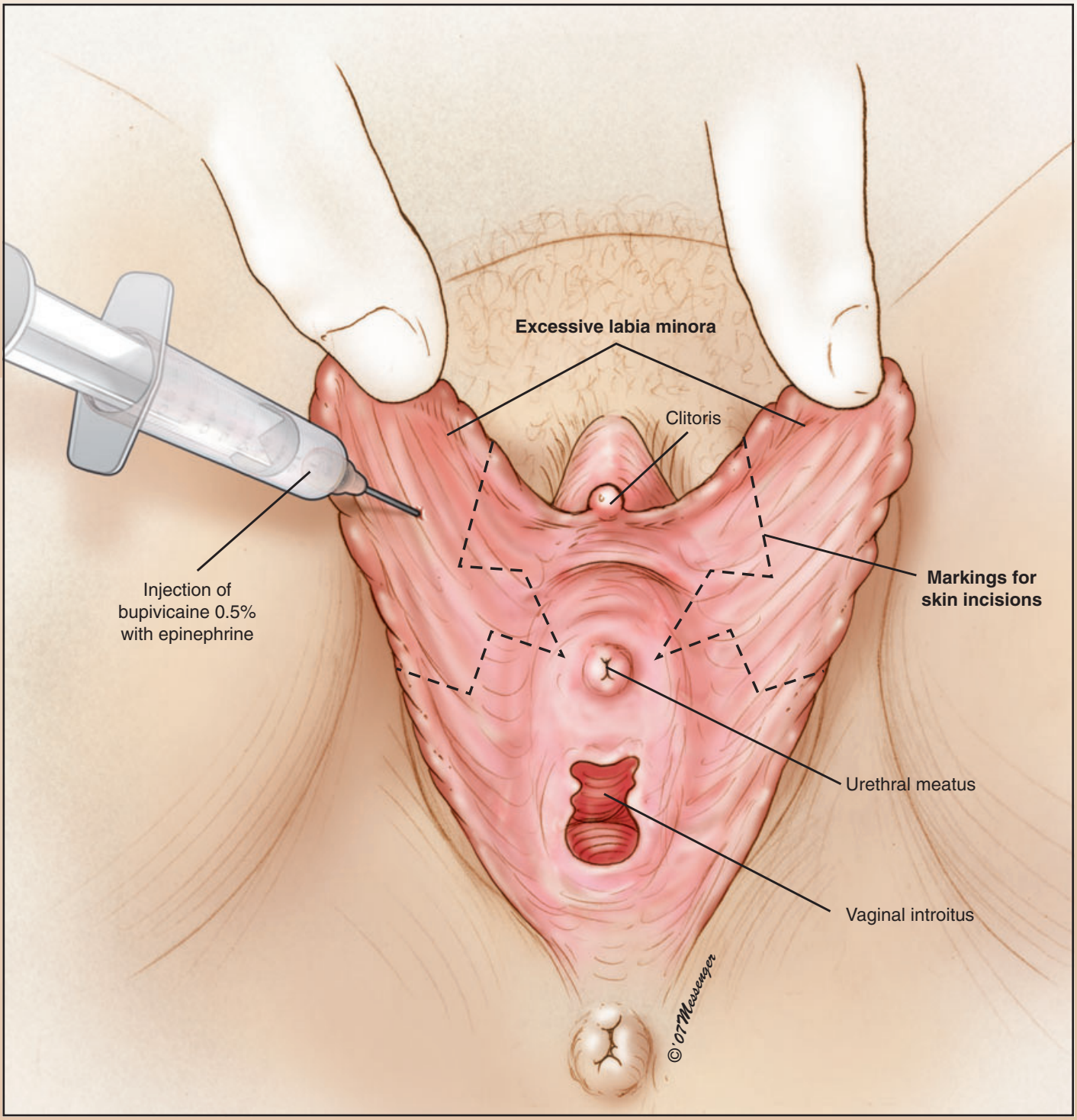


**FIGURE 2**

There have been several different techniques reported for reductional labiaplasty. The earliest studies suggested simple excision of the protuberant tissue with oversewing of the labia edge. The major disadvantage to simple excision is that it removes the natural contour and darkly pigmented labial edge, and it is replaced by an irregular suture line of more lightly colored tissue. Later authors suggested that wedge resection can remove the excess tissue while preserving the natural contour and coloration of the labia. Some authors have suggested that disadvantages to wedge resection are that it may be prone to dehiscence, it may tighten the introitus, and a straight scar may be visible. More recently, a Z-plasty technique has been used to reduce the tension on the suture line, thereby limiting the risk of dehiscence. In addition, Z-plasty does not alter the morphology or coloration of the free edge.

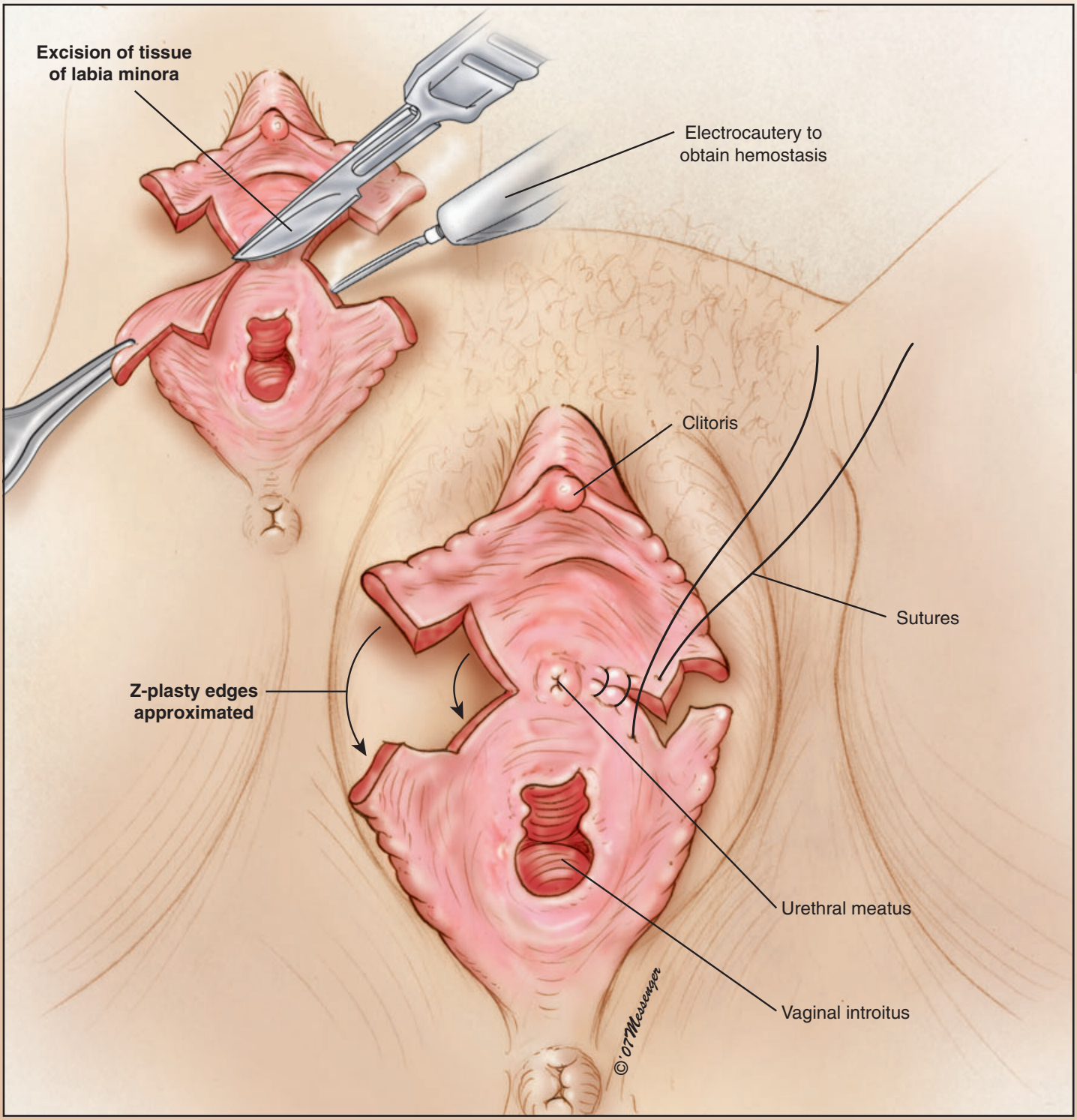


**FIGURE 3**

Surgery can be performed under general, regional, or local anesthesia. The patient is placed in the dorsal lithotomy position, and each labia is gently grasped with two Allis clamps. Then 90-degree Z-plasties are drawn on the medial surfaces of the upper third of the labia (step 2). The two "Zs" converge toward the urethral meatus. The labia are then injected with bupivicaine 0.5% with epinephrine 1:50,000 for intraoperative hemostasis. Using a scalpel, the excess tissue is excised, and needle-point electrocautery is used to obtain hemostasis. The inferior and superior portions of the labia are then rotated toward each other, and the edges are approximated using interrupted or running stitches of 4-0 vicryl.

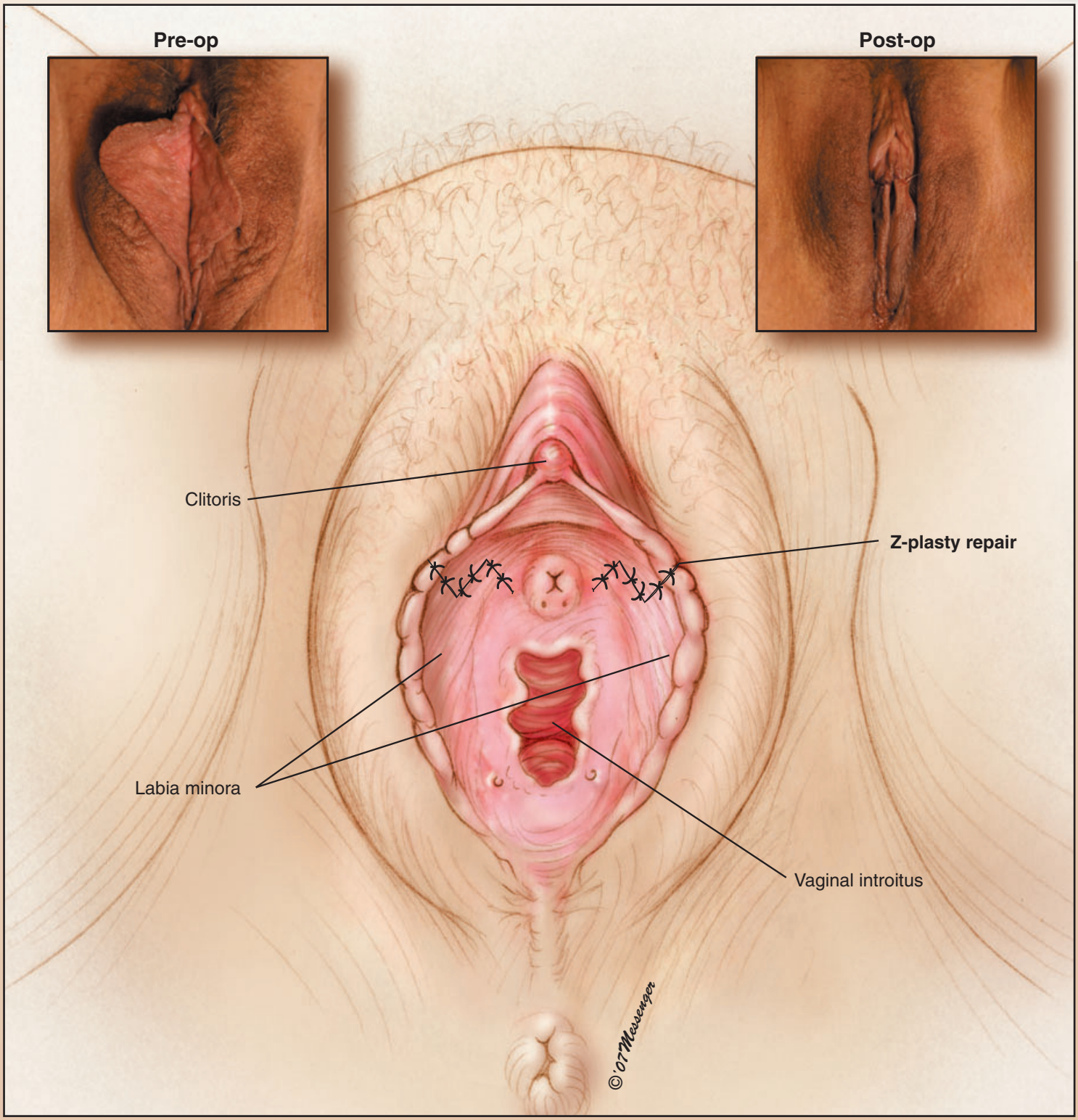


**FIGURE 4**

The incisions heal in approximately 6 weeks. The patient should refrain from coital sexual activity until the incisions have completely healed.