

How to Do a US-guided Preoperative Planning to Choose the Proper Location for Mastectomy Incision (with video)

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Abstract

Mastectomy remains a prevalent procedure in oncologic surgery, driven by the high incidence of breast cancer and the crucial role of surgical intervention. Over the last two decades, mastectomy techniques have significantly evolved, with conservative approaches such as skin-sparing and nipple-sparing mastectomies gaining widespread adoption. This shift aligns with patients' contemporary demands for improved aesthetic outcomes and quality of life. Concurrently, reconstructive techniques, particularly the pre-pectoral approach, have advanced, focusing on reducing complications like cutaneous necrosis while optimizing cosmetic results. Our study emphasizes the importance of preoperative vascular mapping using Ultrasound Doppler to identify key blood vessels supplying the breast skin and nipple. This technique allows for precise incision placement, preserving vital vessels and minimizing the risk of necrosis. The results demonstrate that US-guided preoperative mapping is a cost-effective method that enhances surgical outcomes and patient satisfaction in breast reconstruction following mastectomy.

Key words: mastectomy, breast reconstruction, pre-pectoral reconstruction, ultrasound Doppler, vascular mapping, cutaneous necrosis