

Safety of Using Alternate Incision for Tissue Expander Exchange to Implant in Breast Reconstruction



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Introduction

Plastic surgeons are often trained that the use of an alternate incision (AI) to the initial mastectomy incision at the time of staged tissue expander exchange for implant-based reconstruction (IBR) increases risk of ischemic complications due to interruptions of blood flow to the mastectomy flap. However, there is a lack of data qualifying this assumption. Our study seeks to demonstrate that the use of an alternate incision in staged reconstruction is safe.

Methodology

A retrospective review of patients undergoing staged IBR from 2018-2024 at Rush University Medical Center by a single surgeon (DS) was completed. Patients were stratified into three groups based on incision used for expander exchange to permanent silicone gel implant also known as Stage 2. Information regarding patient comorbidities, surgical details, complications, and revisional procedures were collected.

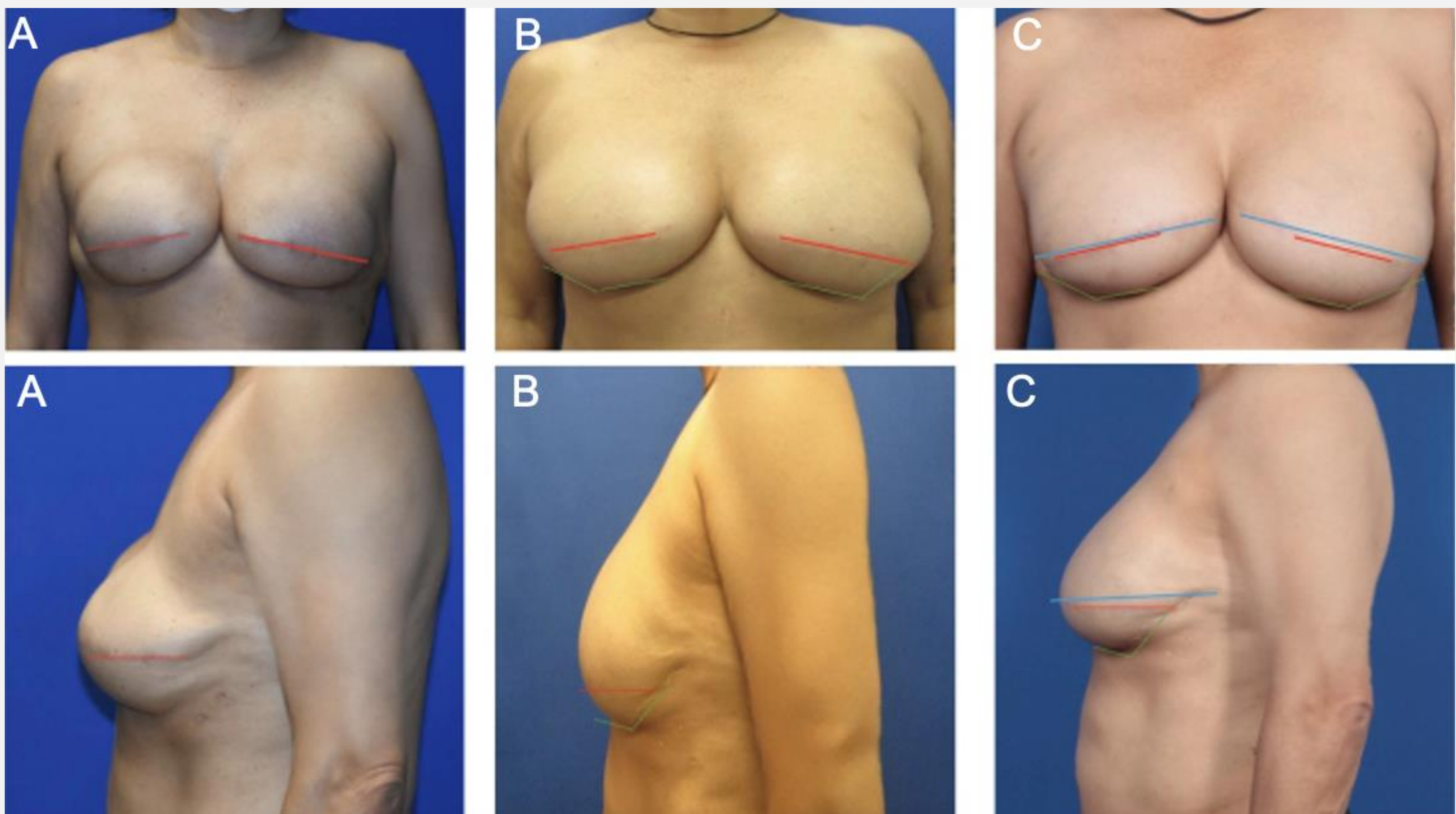


Figure 1. Patient who underwent staged reconstruction with initial transverse mastectomy incision, Stage 2 alternate inframammary fold incision, and several revisional procedures.

A) post tissue expander reconstruction with transverse incision (red line)
B) post Stage 2 reconstruction with IMF incision (green line)
C) post revision surgery requiring additional incisions (blue line)

Variable	All (283)	Alternate Incision (117)	Same Incision (166)		P value
			Nipple Sparing (81)	Goldilocks Wise (85)	
Complications	8 (2.8%)	4 (3.4%)	2 (2.5%)	2 (2.4%)	1.0
Acute Complications	6 (2.1%)	2 (1.7%)	2 (2.5%)	2 (2.4%)	1.0
Chronic Complications	2 (0.07%)	2 (1.7%)	0 (0%)	0 (0%)	0.340
Ischemic Complications	0 (0%)	-	-	-	-
Revisions					
Fat grafting	69	28	30	11	0.001
Nipple Recon	17	14	0	13	-
Skin excision	1	1	0	0	-
Capsulectomy/	12	6	5	1	0.230
Capsulorrhaphy					
Implant Exchange	16	8	5	3	.507
Autologous	1	1	0	0	-

Table 1. Surgical Complications and Revisional Procedures.

Results

A total of 153 patients and 283 breasts undergoing Stage 2 breast reconstruction were included in the review with 117 breasts utilizing an alternate incision and 166 utilizing the same incision (SI), further subdivided into nipple sparing mastectomy (NSM) with 81, and goldilocks wise pattern (GWP) with 85. Total complications occurred in 4 (3.4%) AI breasts, 2 (2.5%) NSM and 2 (2.4%) GWP (p=1.0). These included infection (2 AI), implant malposition (2 AI), hematoma (2 NSM) and wound dehiscence (2 GWP). No ischemic complications were noted in any group (Table 1).

Conclusion

There is not an increased risk of complications, in particular ischemic complications, when AI is used for staged reconstruction. Furthermore, breast projection was preserved and aesthetic outcomes improved with this technique.

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