



Prepectoral Direct-to-Implant versus Staged Tissue Expander Reconstruction: Comparison of Complications

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BACKGROUND

- Direct-to-implant (DTI) reconstruction has multiple advantages over a staged tissue expander (TE) approach.
- Prepectoral DTI may be less frequently employed due to limited comparative studies in the literature.
- This study compares postoperative outcomes for DTI versus TE reconstruction in the prepectoral plane.

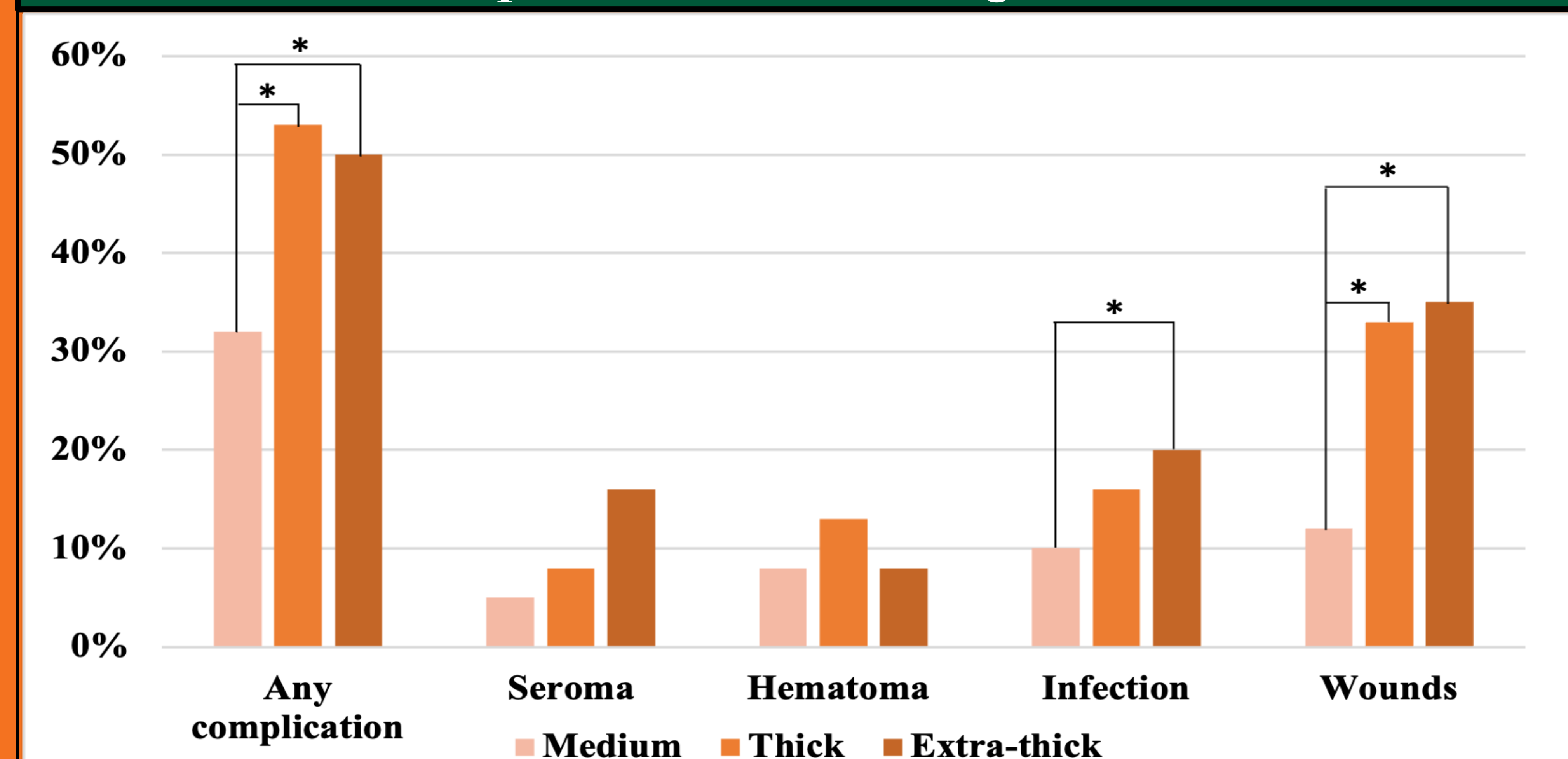
METHODS

- Retrospective review of 348 patients that received immediate prepectoral breast reconstruction.
- Risk factors and the rate of six separate complications were compared between patients that received DTI versus TE reconstruction up to one postoperative year.

TABLE 1. Incidence of Complications

Complications	All Patients (n=348)	Reconstructive Method		
		DTI (n=201)	TE (n=147)	
All complications	141 (41%)	100 (50%)	41 (28%)	$p<0.0001^*$
Hematoma	18 (5%)	9 (4%)	9 (6%)	$p=0.4938$
Seroma	25 (7%)	17 (8%)	8 (5%)	$p=0.2819$
Infection	57 (16%)	34 (17%)	23 (16%)	$p=0.7520$
Major infection	40 (12%)	24 (12%)	16 (11%)	$p=0.7603$
Minor infection	25 (7%)	12 (6%)	13 (9%)	$p=0.3052$
Postoperative wounds	91 (26%)	68 (34%)	23 (16%)	$p<0.0001^*$
Major wounds	61 (17.5%)	45 (22%)	16 (11%)	$p<0.0053^*$
Minor wounds	39 (11%)	32 (16%)	7 (5%)	$p<0.0011^*$

FIGURE 1. Complications According to ADM Thickness



RESULTS

- The incidence of **any complication** and **postoperative wounds** (both major and minor) was significantly greater in patients that received DTI reconstruction (**Table 1**).
- In the DTI cohort only, patients with **any complication** (711g vs 596g; $p<0.0077$) and **postoperative wounds** (739g vs 601g; $p<0.0058$) had significantly greater mastectomy resection weights than the patients without these specific complications.
- Final implant volume did *not* have a significant impact on the incidence of complications, apart from infection in the DTI cohort ($p<0.0413$).
- Compared to extra-thick ADM, medium-thickness ADM was associated with significantly fewer **overall complications** ($p<0.0011$), **infectious complications** ($p<0.0408$), and **wound healing complications** ($p<0.0001$) (**Figure 1**).
 - Medium-thickness ADM also had fewer **overall** ($p<0.0013$) and **wound healing complications** ($p<0.0011$) than thick ADM.

CONCLUSIONS

- Rates of most major complications are comparable between patients that received prepectoral DTI and staged TE breast reconstruction.
- The authors encourage prepectoral DTI reconstruction with medium or thick ADM over a staged TE approach in patients with moderate to low mastectomy resection weights that are to receive comparable or smaller sizes of implants.