

## **Impact of Surgeon and Surgical Team on Outcomes in Immediate Implant Based Breast Reconstruction**

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### **Background**

Outcome studies of immediate implant based breast reconstruction (IBR) have largely focused on patient factors, while the relative impact of the surgeon as a contributing variable is not known. In particular, when the procedure requires collaboration of both a surgical oncologist and plastic surgeon, the effect of the surgeon team interaction can have significant impact on outcome. This study examines outcomes in IBR and the association with patient characteristics, surgeon, and surgeon team familiarity.

### **Methods**

A retrospective review of 3,142 consecutive IBR mastectomy procedures at one institution was performed. Infection rate, skin necrosis and local recurrence were measured. Predictors of outcomes were identified by unadjusted logistic regression followed by multivariate logistic regression. Surgeon teams (oncologic plus reconstructive surgeon) were grouped according to number of cases performed together.

### **Results**

Patient characteristics remain the most important predictors for outcomes in IBR, with odds ratios above that of surgeon variables. We observed significant differences in rate of skin necrosis between surgical oncologists with approximately two-fold difference between surgeons with the highest and lowest rates (see Table 1). Surgeon teams that worked together on less than 150 procedures had higher rates of infection (OR=2.48,  $p<0.05$ ) (see Table 2).

### **Conclusion**

Patient characteristics are the most important predictors for surgical outcomes in IBR, but surgeons and surgeon teams are also important variables. High-volume surgeon teams achieve lower rates of infection. This study highlights the need to examine modifiable risk factors associated with optimum IBR outcomes, which include patient and provider characteristics as well as the surgical team treating the patient.

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