

Introduction: Immediate expander-implant breast reconstruction has been associated with post-operative complications, including infection and wound-healing problems. In extreme cases, these issues can lead to expander-implant loss. Little is known about the long-term reconstructive outcomes for patients who develop major complications threatening their expander-implant reconstructions.

Methods: A retrospective review of patients who underwent mastectomy and immediate expander-implant reconstruction at UCSF from 2005-2007 was performed. A prospective database was queried for patients who developed a major post-operative complication related to infection or wound-healing problems requiring unplanned operative intervention. Only patients who had a minimum of three years' follow-up were included in the study.

Results: Twenty-nine patients were identified who met study criteria. Mean follow-up time was 46.2 months (range: 36-65.3 months). Six (20.7%) patients had received prior breast irradiation and 9 patients (31%) underwent post-operative radiation therapy. Reasons for unplanned return to the operating room included infection (n=11, 37.9%), expander-implant exposure (n=5, 17.2%), non-healing wounds without underlying exposure (n=3, 1.3%), or more than one of these indications (n=10, 34.5%). Unplanned operative intervention (such as wound debridement or expander-implant exchange or removal) was required once in 10 patients (34.5%), twice in 10 patients (34.5%), three times in 4 patients (13.8%), four times in 1 patient (3.4%), and five or greater times in 4 patients (13.8%). At the conclusion of all operative interventions, 15 patients (51.7%) had successful breast reconstruction using an expander-implant technique. Five additional patients (17%) went on to reconstruction with either a TRAM or DIEP flap. Nine patients (31%) did not have successful breast reconstruction. Of these, five abandoned reconstructive efforts after one unplanned return to the operating room for expander-implant removal, while the rest underwent at least one attempt at expander-implant salvage, making the overall rate of final successful reconstruction after salvage 83.3% (20 of 24 patients). Even patients requiring return to the operating room three or more times were able to achieve final successful expander-implant reconstruction rates equivalent to those patients returning to the operating room one or two times (44.4% vs. 55%, $p = 0.7$).

Conclusions: Even when unplanned operative intervention is required to address post-operative wound-healing or infectious complications after expander-implant reconstruction, the majority of patients can achieve successful reconstructive outcomes at long-term follow-up, including patients requiring multiple operative interventions for complications.