

Postoperative Outcomes After Staged vs. Coordinated Mastectomy and Bilateral Salpingo-oophorectomy

Background/Objective: Individuals with high-risk gene mutations for breast and ovarian cancer or a breast cancer diagnosis are often given the option to undergo prophylactic bilateral salpingo-oophorectomy (BSO) in addition to mastectomy. The objective of this study was to compare postoperative complication rates as well as total healthcare costs between patients who underwent coordinated versus staged breast surgery and BSO.

Methods: Billing data from the MarketScan® database were used to identify adult female patients who underwent both mastectomy and BSO between 2010 and 2015 in the United States. Patients were placed in the coordinated group if a breast operation and BSO were performed simultaneously and were placed in the staged group if both operations were performed separately. The primary outcomes were (1) incidence of postoperative complications within 90 days of each operation and (2) aggregate healthcare charges over the 2-year period from the date of the first surgery. Univariate analyses by chi-squared and Wilcoxon Rank-Sum tests were performed along with multivariable logistic and negative binomial regressions to adjust for risk.

Results: A total of 2,736 patients in the database underwent both mastectomy and BSO in the study period, 400 (14.6%) in the coordinated group and 2336 (85.4%) in the staged group. Incidence of postoperative complications was higher in the staged group (27.2% vs. 22.3%; $p=0.04$). Risk-adjusted odds of postoperative complications were higher in the staged group (OR 1.35 [95% CI 1.04-1.76; $p=0.02$]). Median healthcare charges over 2 years were higher in the staged group (\$109,055 vs. \$92,003; $p<0.01$).

After risk-adjustment, charges remained higher in the staged group (Beta=0.14; 95% CI 0.05-0.23; $p < 0.01$).

Conclusions: Coordinating breast surgery with BSO is both safe and cost-effective when compared to performing these operations separately.

Keywords: Risk-reducing surgery; mastectomy; salpingo-oophorectomy; coordinated surgery