Equivalent Survival with Breast Conservation Therapy or Mastectomy in the Management of YoungWomen with Early stage Breast Cancer

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Purpose/Objective(s): Young women with breast cancer treated with breast conservation therapy (BCT) experience higher local recurrence rates compared to older women. Whether such women are better treated with mastectomy is unclear. The purpose of this study was to evaluate survival outcomes of young women with early stage breast cancer treated with BCT or mastectomy using a large, population-based database.

Materials/Methods: Using the Surveillance, Epidemiology, and End Results (SEER) database, data was obtained for all fiale patients age 20 to 39 years old diagnosed with T1-2 N0-1 M0 breast cancer between 1990 and 2007 who underwent either BCT (lumpectomy and radiation treatment) or mastectomy. Univariate Kaplan-Meier and multivariable Cox regression analyses were performed to determine predictors of overall survival (OS) and cause-specific survival (CSS). Matched pair analysis of BCT and mastectomy patients was performed with the resulting groups compared via Kaplan-Meier analysis for OS and CSS using the logrank test.

Results: A total of 14,760 women were identified of which 45% received BCTand 55% received mastectomy. Median follow-up was 5.7 years (range, 0.5 to 17.9 years). A total of 8318 (56%), 3386 (23%), and 1019 patients (7%) had follow-up at 5, 10, and 15 years, respectively. Multivariable analysis found that year of diagnosis, age, race/ethnicity, grade, progesterone receptor status, tumor size, number of positive lymph nodes, and number of lymph nodes examined were independent predictors of OS and CSS while estrogen receptor status was of borderline significance. After accounting for all patient and tumor characteristics, BCT resulted in similar OS (HR, 0.93; CI, 0.83 – 1.04; p = 0.16) and CSS (HR, 0.93; CI, 0.83 – 1.05; p = 0.26) as compared to mastectomy. Matched pair analysis, including 4644 BCT and mastectomy patients, confirmed no difference in OS or CSS: the 5/10/15-year OS for BCT and mastectomy were 92.5%/83.5%/77.0% and 91.9%/83.6%/79.1%, respectively, (p = 0.99) and the 5/10/15-year CSS for BCT and mastectomy were 93.3%/85.5%/79.9% and 92.5%/85.5%/81.9%, respectively (p = 0.88).

Conclusions: Young women with early stage breast cancer have equivalent outcomes whether treated with BCT or mastectomy. These patients should be counseled appropriately regarding the equivalence of these two treatment strategies, and should not choose a mastectomy based on the assumption of improved survival. Further study of this unique patient population is warranted.