



Patient Factors That Affect Pre-operative Patient Reported Outcomes in Women Undergoing Breast Cancer Surgery

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INTRODUCTION

- Breast Conservation Surgery with Radiation (BCS), Mastectomy (M), or Mastectomy with Breast Reconstruction (BR) for the surgical treatment of breast cancer has been shown to have comparable oncologic outcomes and survival rates
- Hence, evaluations of health-related quality of life (HRQOL) outcomes and satisfaction in women who have had these treatments are needed to facilitate surgical decision making and to optimize long term health of those facing a new breast cancer diagnosis
- Understanding the impact of patient, disease, and treatment factors on pre-operative patient reported outcomes (PROs) is important to guide surgical decision-making with breast cancer

METHODS

- This prospective cohort study evaluates PROs in women undergoing breast cancer treatment at a metropolitan health care system
- All patients with a breast cancer diagnosis undergo tumor board discussion and same-day consultations with various specialties
- Women choose to complete pre- and post-operative Breast-Q[®] for BCS, M, or R modules and demographic surveys
- Individual associations to pre-operative Breast-Q survey scores were assessed using linear regression models (one for each Breast-Q survey type)
- Variables significant for at least one survey were included in multiple linear regression models

UNIVARIATE REGRESSION ANALYSIS

Table 1. Patient Factors and Pre-Operative Health Related Quality of Life Satisfaction

Variable	Breast Satisfaction p-value	Psychosocial p-value	Physical Chest p-value	Sexual p-value
Age	0.2269	0.0057*	0.0184*	0.9464
BMI	0.0146*	0.0018*	0.0123*	0.0004*
Income	0.8868	0.0851	0.0484*	0.0433*
Prior Breast Cancer	0.7061	0.0422*	0.1071	0.0483
Clinical Stage	0.0174*	0.0964	0.1756	0.6866

- Procedure type, race, martial status, work status, neoadjuvant chemotherapy, history of radiation and/or chemotherapy were not significantly different between groups. * indicates significant difference between groups (p<0.05)

MULTIVARIATE REGRESSION ANALYSIS

- When accounting for age, BMI, procedure type, race, income, marital status, work status, prior history of breast cancer, neoadjuvant chemotherapy, history of radiation and chemotherapy, and clinical stage; we found the following variables to be significant.

Table 2. Satisfaction with Breasts

Variable	Estimate	p-value
BMI	-0.367	0.045
Stage 2 Disease (vs. Stage 0)	-11.0	0.008

Table 3. Psychosocial Well-Being

Variable	Estimate	p-value
Age	0.271	0.002
BMI	-0.367	0.014
Income – \$35k to \$100k (vs. <\$35k)	5.66	0.026
Income – \$100k to \$200k (vs. <\$35k)	6.30	0.040

Table 4. Physical Well-Being - Chest

Variable	Estimate	p-value
Age	0.207	0.012
BMI	-0.285	0.039
Income \$200k+ (vs. <\$35k+)	8.89	0.036

Table 5. Sexual Well-Being

Variable	Estimate	p-value
BMI	-0.545	0.004
Income – \$35k to \$100k (vs. <\$35k)	7.11	0.028
Income – \$100k to \$200k (vs. <\$35k)	8.42	0.029

RESULTS

- 375 women completed the pre-operative surveys (BCS=244, M=39, BR=92)
- Breast Satisfaction is inversely related to BMI and decreased in patients with Stage 2 disease (vs. Stage 0)
- Psychosocial well-being is inversely related to BMI and positively associated with increasing age and those who had an income between \$35k and \$200k
- Physical Chest well-being is inversely related to BMI and positively associated with increasing age and those who made >\$200k (Vs. <\$35k)
- Sexual well-being is inversely related to BMI and positively associated with those who had an income between \$35k and \$200k

CONCLUSIONS

- Patients with lower income (<\$35k), younger age, and higher BMI may benefit from psychosocial and physical interventions to assist them through the treatment process