

Beaumont Health

Beaumont Health Scholarly Works and Archives

Conference Presentation Abstracts

General Surgery

2022

National Trends and Survival Outcomes of Performing Immediate Breast Reconstruction for Male Breast Cancer Patients

Neha Sarvepalli

Nayana Dekhne

Mohamad Sebai

Patrick Karabon

Follow this and additional works at: https://scholarlyworks.beaumont.org/surgery_confabstract



Part of the [Surgery Commons](#)

gives rise to uncontrolled proliferation and genome instability in murine models of Triple Negative Breast Cancer (TNBC). However, the mechanism by which Mre11 regulates these two processes remains unknown. **METHODS:** In this study, we perform a CRISPR based in-vivo murine DDR screen to first identify critical DDR genes that restrain tumor proliferation in a c-Myc driven murine model of TNBC. We utilized live-cell microscopy and quantitative image based cytometry in conjunction with a TNBC mammary cell system to assess single-cell fate and cell cycle dynamics of mammary epithelium during oncogene induction in early neoplasia. **RESULTS:** Through these studies, we show that Mre11 mediates a post-mitotic cell cycle exit that maintains genome stability. We characterize a unique nuclear phenotype associated with Mre11: micronuclei formation. Mre11 deficient cells are unable to process double strand breaks into micronuclei and are characterized by a functional defect in interferon signaling through the cGAS-STING pathway to activate immune cells. **CONCLUSIONS:** To date, this is the first in-vivo CRISPR DDR screen identifying critical DDR genes in breast tumorigenesis in a TNBC model. Our work highlights the importance of Mre11 in early cell cycle checkpoint responses in pre-neoplasia and defines a novel p53 tumor suppressor-independent role for Mre11 in innate immune activation.

E33

National Trends and Survival Outcomes of Performing Immediate Breast Reconstruction for Male Breast Cancer Patients

Neha Sarvepalli, M.D. (Presenter; Submitter; Author) - William Beaumont Hospital; Nayana Dekhne, M.D. (Author) - William Beaumont Breast Center; Mohamad Sebai, M.D. (Author) - William Beaumont Breast Center; Patrick Karabon, M.S. (Author) - William Beaumont Breast Center

INTRODUCTION: Immediate breast reconstruction after a mastectomy was reported in 43.3% of female patients in 2014; and has been associated with improved quality of life and adherence to adjuvant therapies. While there are many studies regarding immediate breast reconstruction in women, little has been reported about reconstruction rates and outcomes in male breast cancer. The purpose of this study is to examine the trends and outcomes of performing Immediate Breast Reconstruction (IBR) in male breast cancer (MBC) patients following a mastectomy. **METHODS:** The National Cancer Database (NCDB) registry from 2004 to 2014 was used to identify non-metastatic MBC patients who had a mastectomy with or without an IBR. Patients' demographics, readmission, and long-term overall mortality (OM) were compared between IBR and no-IBR patients. Univariate, multivariate, and propensity score weighted analyses were used to compare study groups and outcomes. **RESULTS:** 370 (3.35%) IBR and 10,677 (96.65%) no-IBR patients were identified. Median follow-up was 59.63 months. Compared to no-IBR patients, IBR patients were more likely to be younger (Mean:52, SD:11.7 vs. Mean:65.8, SD:12.8), be Hispanic, live in a metropolitan county, and have private insurance, less comorbidities and higher income ($P < 0.05$). Rates of IBR increased significantly from 1.56% in 2004 to 4.15% in 2014 ($P < 0.05$). IBR types were 130 (35%) tissue-based, 96 (26%) implant-based, 42 (11%) combined tissue/implant, and 102 (28%) were non specified. IBR was not associated with 30-Day readmission or 90-Day mortality. In the adjusted propensity score weighted analysis, IBR was not associated with OM for stage I (HR:0.45, $P=0.23$), stage II (HR:0.95, $P=0.92$), or stage III (HR:1.48, $P=0.34$) cancer cases. **CONCLUSIONS:** Our data suggest that IBR in MBC patients has been increasing over the years, with the tissue-based IBR as the most common type. There was no association between IBR and 30-Day readmission rates or overall mortality when compared to MBC patients who did not receive an IBR.

E34

Omission of Surgery for Ductal Carcinoma in Situ: A National Cancer Database Analysis (NCDB)

Elizabeth C. Poli, MD (Presenter; Submitter; Author) - MD Anderson Cancer Center; Wenli Dong, MS (Author) - MD Anderson; Yu Shen, PhD (Author) - MD Anderson; Nina Tamirisa, MD (Author) - MD Anderson Department of Breast Surgical Oncology; Shaitelman Simona, MD (Author) - MD Anderson Department of Radiation Oncology; Isabelle Bedrosian, MD (Author) - MD Anderson Department of Breast Surgical Oncology

INTRODUCTION: Surgery remains standard of care for DCIS. We sought to understand the factors associated with omission of surgery. We hypothesized that clinical and biologic factors would most likely influence non-operative treatment, and that DCIS patients with favorable biologic factors and who did not undergo surgery have excellent long-term outcomes. **METHODS:** The NCDB was queried from 2004-2017 for women diagnosed with DCIS.

Cochran-Armitage test was used to assess the trend of surgery omission over year of diagnosis. Multivariable logistic regression was used to determine characteristics associated with no surgery. Biologically favorable DCIS was defined as age ≥ 40 years with grade I/II and hormone receptor (HR) positive disease. Kaplan-Meier curves were estimated to show overall survival (OS) in this favorable group that did not have surgery, stratified by Charleson-Deyo score (CDS). **RESULTS:** Of the 200,731 women with DCIS, 7,577 (3.77%) did not have surgery. There was no difference over time in the proportion of patients who omitted surgery. Older age, black race and uninsured status were associated with omission of surgery (OR 1.02 [95% CI 1.02-1.02] per year increase in age, OR 1.57 [95% CI 1.47-1.68] vs white race and OR 2.48 [95% CI 2.16-2.85] vs those with private insurance respectively). There was no consistent association between lesion size and omission of surgery; lesions ≥ 5 cm were more likely to not have surgery as compared to those < 1 cm (OR 1.59, 95% CI 1.35 to 1.86). A consistent trend was lacking for the association of increasing CDS with omission of surgery. Lower grade and HR positive DCIS were not associated with omission of surgery. In patients with biologically favorable DCIS who did not have surgery, the 5-year OS was 97% in patients with CDS of 0 vs 82% in patients with a CDS of 3+ ($p < 0.01$). **CONCLUSIONS:** The proportion of patients with DCIS not treated with surgery has remained stable over time. Disparities, such as race and insurance status, appeared to be more strongly associated with omission of surgery compared to clinical or biologic factors. In a population of biologically favorable DCIS not treated with surgery, those with few comorbidities have excellent 5-year OS.

E35

Omitting Sentinel Node Biopsy in Postmenopausal Hormone Receptor Positive Stage I Breast Cancer has no Adverse Impact on Outcomes or Regional Recurrence Despite Current Predictors of Nodal Positivity

Vincent Wu, MD (Presenter; Submitter; Author) - Columbia University; MacAlistair Colquhoun, BS (Author) - Columbia University; Sarah Fuzesi, MD (Author) - Summit Health; Luona Sun, MD (Author) - Columbia University; Stacy Ugras, MD (Author) - Columbia University; Lisa Wiechmann, MD (Author) - Columbia University; Roshni Rao, MD (Author) - Columbia University; Bret Taback, MD (Author) - Columbia University

INTRODUCTION: It has been suggested that sentinel lymph node biopsy (SLNB) can be omitted in elderly women with clinically lymph node-negative, hormone receptor positive (HR+) breast cancer. These recommendations are based on retrospective studies of women who underwent SLNB. To date these guidelines are not frequently followed. The aim of this study was to assess the long-term outcomes of breast cancer patients where SLNB was omitted. **METHODS:** Single institution retrospective review of patients with clinically lymph node-negative invasive breast cancer undergoing surgery as primary initial therapy without SLNB from 1998-2015. Patient and tumor characteristics, including treatment and recurrence data, were collected. **RESULTS:** We identified 128 patients of whom the mean age was 78.8 years (range: 37 to 98), mean tumor size was 1.6 cm, and 92 (72%) were invasive ductal type. HR+ tumors accounted for 94.6%. Breast conserving surgery was performed in 95.3% of patients and mastectomy in 4.7%. Final pathology revealed multifocal disease in 26 (20%) cases, and lymphovascular invasion was present in 32 (25%) cases. Adjuvant administered therapy was 3.8% chemotherapy, 73.3% hormonal therapy, and 51.9% radiation. Using a well-known online nomogram for predicting SLN positivity, we calculated an expected 25.1% rate for this cohort. At a median follow-up of 5.6 years, there were 13 (10%) recurrences of which only 4 (3%) occurred in the axilla (including 2 with synchronous relapses elsewhere). Mean time to axillary recurrence was 3.5 years. There was no statistically significant difference in overall recurrence or axillary-specific recurrence for ages 50-69 ($n=12$) vs ≥ 70 ($n=110$); ($p=0.61$ and $p=0.34$, respectively). **CONCLUSIONS:** These findings demonstrate that SLNB can be safely omitted in patients as young as 50 with < 2 cm, HR+, clinically lymph node-negative breast cancers without untoward patient outcomes, despite predictors that may suggest the presence of nodal metastasis.