

Challenges and Transitions: The Implementation and Evaluation of an Innovative Breast Cancer Survivorship Program

Elwyn Zhang¹, Sarina Sadeghi¹, Sonal Gandhi¹, Andrea Eisen¹, Amanda Roberts², Katarzyna Jerzak¹, Helen MacKay¹, Karen Fleming³, Gregory Czarnota⁴, Rossanna Pezo¹, Anthony Lott¹, Muna Al-Khaifi¹

¹ Department of Medical Oncology & Hematology, Odette Cancer Centre, Sunnybrook Health Science Centre, University of Toronto, Canada ² Department of Surgical Oncology, Odette Cancer Centre, Sunnybrook Health Science Centre, University of Toronto, Toronto, Canada ³ Department of Family & Community Medicine, Odette Cancer Centre, Sunnybrook Health Science Centre, University of Toronto, Toronto, Canada ⁴ Department of Radiation Oncology, Odette Cancer Centre, Sunnybrook Health Science Centre, University of Toronto, Toronto, Canada

Introduction

- The number of breast cancer survivors is increasing due to improvements in care and an aging population
- The purpose of this retrospective chart review was to evaluate trends within the patient cohort and evaluate the preliminary efficacy of the program

Objectives

- To **describe** the clinic population
- To determine **prevalence** of long-term toxicities
- To **evaluate** Program success in providing evidence-based survivorship care according to best practices
- To **identify risk factors** for long-term toxicities

Methods

- A retrospective chart review of all patients at the Sunnybrook Breast Cancer Survivorship Program (N=435)
- Key variables extracted
 - Side Effects (e.g. depression, hot flashes, joint pain)
 - Demographic information
 - Disease & treatment information

Results

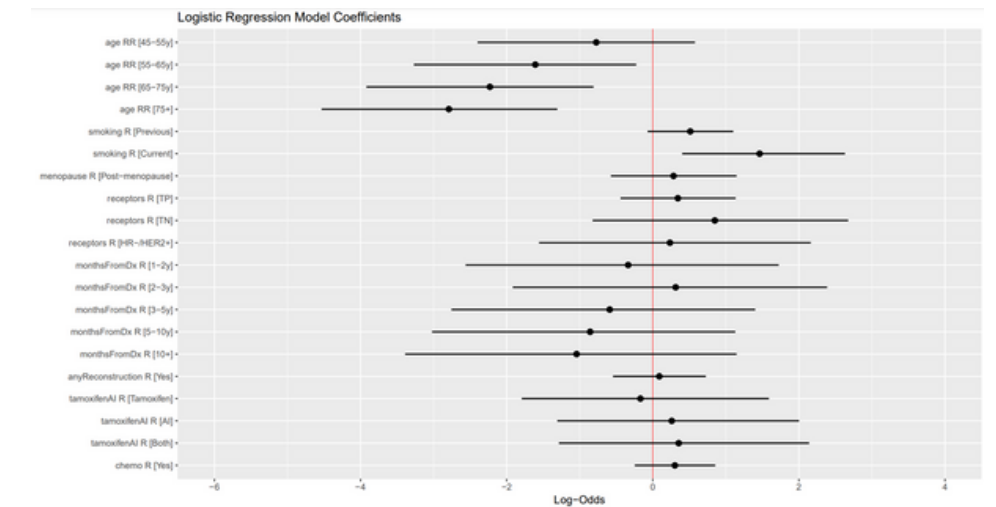
Table 1. Bivariate Analysis: Likelihood to Have 2 or More Side Effects

Characteristic	Bivariate	
	Odds Ratio	p-value
Age		
0-45y	Reference	
45-55y	0.35	0.1218
55-65y	0.21	0.0182
65-75y*	0.12	0.0019*
75+*	0.06	<0.001*
Smoking		
Never	Reference	
Previous	1.3	0.3078
Current*	4.01	0.0051*
Alcohol		
None	Reference	
≤2/wk	1.36	0.2158
>2/wk	0.98	0.9483
Menopause		
Pre-menopause	Reference	
Post-menopause*	0.48	0.0161*
Nodal Status		
No	Reference	
Yes	1.1	0.6376
Receptor Status		
HR+/HER2-	Reference	
TP	1.7	0.1003
TN*	2.76	0.0027*
HR-/HER2+	1.7	0.1943

Table 2. Patient Cohort Side Effects

Side Effect	Total (N=435)
At least one side effect	316 (72.6%)
One side effect	75 (17.2%)
2+ side effects	241 (55.4%)
Anxiety	128 (29.4%)
Chronic Pain	104 (23.9%)
Hot Flashes	93 (21.4%)
Fear of Recurrence	86 (19.8%)
Joint Pain	83 (19.1%)
Dry Vagina	81 (18.6%)
Lymphedema	59 (13.6%)
Depression	54 (12.4%)
Fatigue	41 (9.4%)
Issues Relating to Body Image	37 (8.5%)
Low Sex Drive	35 (8.0%)
Dyspareunia	34 (7.8%)
Neuropathy	32 (7.4%)
Skin Changes	29 (6.7%)
Work/Social/Family Issues	29 (6.7%)
Weight Gain	27 (6.2%)
Brain Fog	25 (5.7%)
Barrier to Physical Functioning	21 (4.8%)
Fertility Issues	5 (1.1%)
No side effects	119 (27.4%)

Figure 1. Most Parsimonious Multivariate Model - 2 or More Side Effects

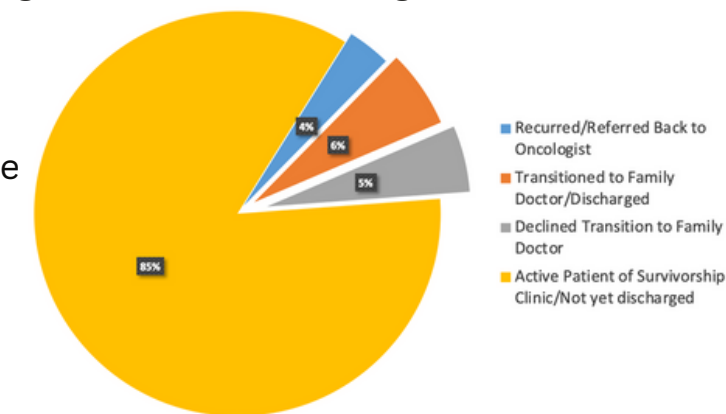


- Side effect burden was generally higher than that found in other literature
- Younger patients, current smokers, and those with triple-negative (TN) disease** were significantly likelier to have greater side effect burden
 - This effect applies to both physical and psychological SEs independently
- 46% of patients offered discharge declined, complicating care transitions

Conclusion and Future Directions

- Toxicities and side effects of breast cancer treatment continue to have significant impact on QoL for patients many years after initial diagnosis
- Younger patients, smokers, and TN patients are much likelier to experience high side effect burden.
- Future research should investigate the nature of the relationship between age and side effect burden for breast cancer survivors, as well as the driving factors underlying this difference.
- Further investigation into **why so many patients declined discharge** to primary care could offer insight into ways to address this barrier to proper care transitions.

Figure 2. Patient Discharge Status



Correspondence

Dr. Muna Alkhaifi, MD, MPH
 Department of Medical Oncology and Hematology
 Odette Cancer Centre,
 Sunnybrook Health Science Centre
 Toronto, Canada
muna.alkhaifi@sunnybrook.ca