



Impact of a novel breast cancer survivorship program on patient-centered outcomes: A single institutional study

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Cancer survivorship care plans (SCPs) have emerged as an essential part of cancer care.^{1,2} They identify and address survivorship issues during and after cancer treatment. They aim to improve quality of life and return survivors to baseline functionality. Prominent cancer organizations and guidelines recommend using SCPs.³ Despite this, they are not universally implemented, mainly due to lack of resources and time limitations.^{4,5} Prevention of morbidity and mortality in survivors is challenging, encompassing a broad range of biopsychosocial issues.^{2,3} SCPs have become the cornerstone for managing survivors' health.^{1,6}

We conducted a study to explore the feasibility and acceptability of a novel SCP. Our hypothesis was that a checklist-facilitated, face-to-face method was the most efficient approach to address common survivorship issues and formalized a process performed in standard practice. The content was based on existing survivorship guidelines.³ Our SCP meets the four essential components of survivorship care: prevention, surveillance, intervention, and coordination.²

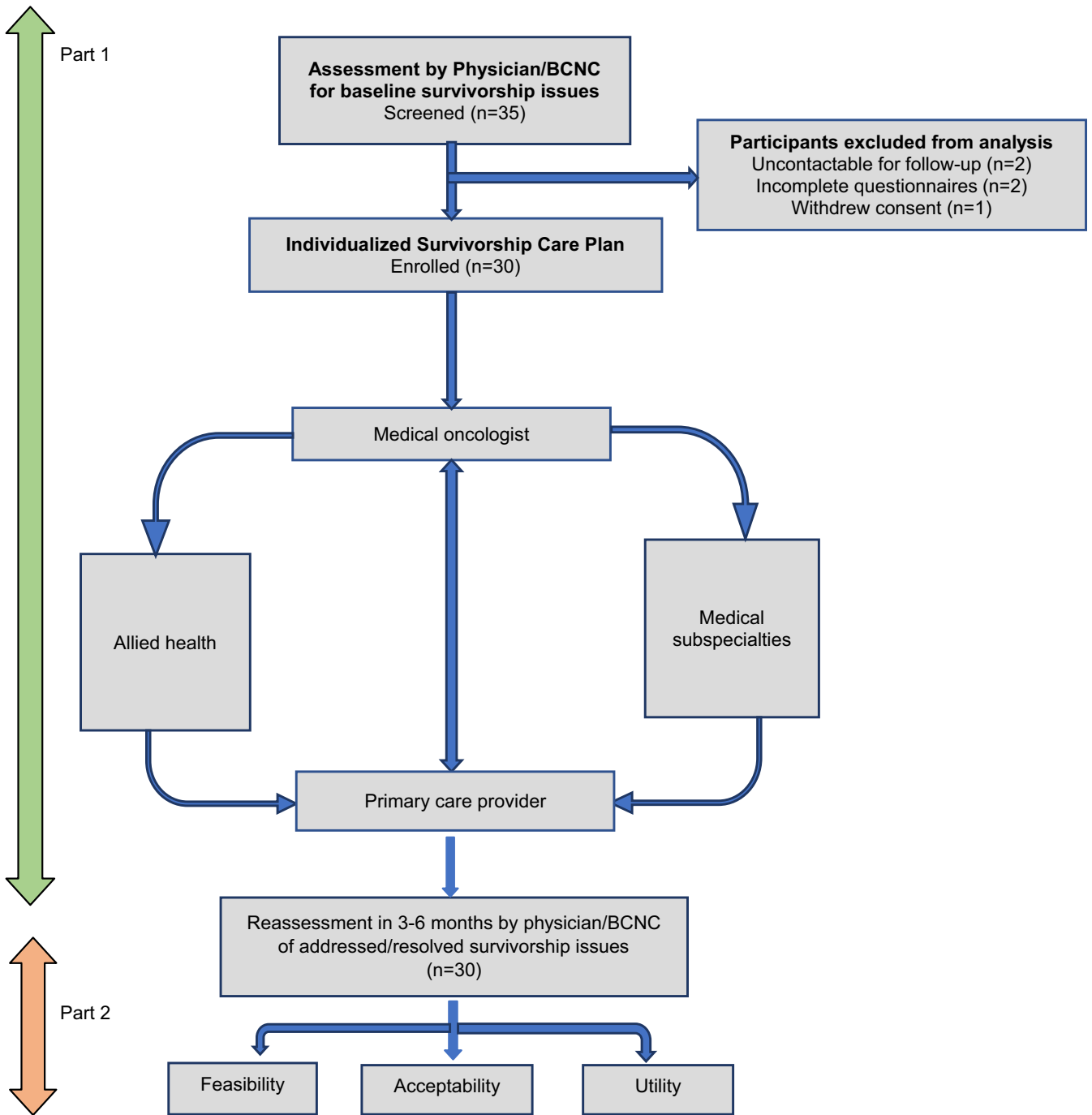
We enrolled breast cancer survivors aged 18 years and over following curative treatment at our institution between August 10 and October 5, 2017 (ethics: X17-0081/LH17.020/LNR/17/RPAH/122). We documented baseline and follow-up survivorship issues using a nurse/physician-led SCP (Supporting information 1-3). We referred participants to prespecified medical and allied health specialists (Figure 1). We evaluated the SCP after 3-6 months (Supporting information 4-6). We defined feasibility as at least 25% reduction in the mean number of survivorship issues and acceptability as more than 75% satisfaction in more than 75% of participants.

Thirty of 35 patients were eligible for analysis (Figure 1). Baseline characteristics are summarized in Table 1. The mean time taken for the assessment was 40 minutes. The most common issues identified at baseline were gynecological, arthralgias, and mood disturbance (Table 2). The most common issues addressed during the intervention were screening (90%), bone health (87%), and vision assessment (63%). There was a significant reduction in the mean number of issues after the survivorship intervention (5.8 vs 0.5 issues, $P < .0001$; Figure 2A). Our SCP met prespecified criteria for patient satisfaction and utility (Figure 2).

The optimal model for survivorship has not been defined.^{1,6,7} Some systematic reviews conclude there is weak evidence for SCPs to improve health.^{4,8} However, higher levels of survivor satisfaction, increased survivor knowledge, and better compliance with surveillance plans are reported.^{4,9}

Our study demonstrated that survivorship issues can be identified in a short time frame. Further follow-up would assess the durability and capture fluctuation of these issues while evaluating for longer term health benefits. Despite this SCP being straightforward and manageable, it required dedicated resources which are needed to incorporate this into routine practice. Other institutions have faced similar challenges.^{4,10}

A checklist-facilitated, face-to-face SCP is feasible and acceptable to breast cancer survivors. Barriers to implementation are time and resource requirements. This is an important intervention for breast cancer survivors and should be implemented as part of standard follow-up.



BCNC=breast clinical nurse consultant

FIGURE 1 Study schema

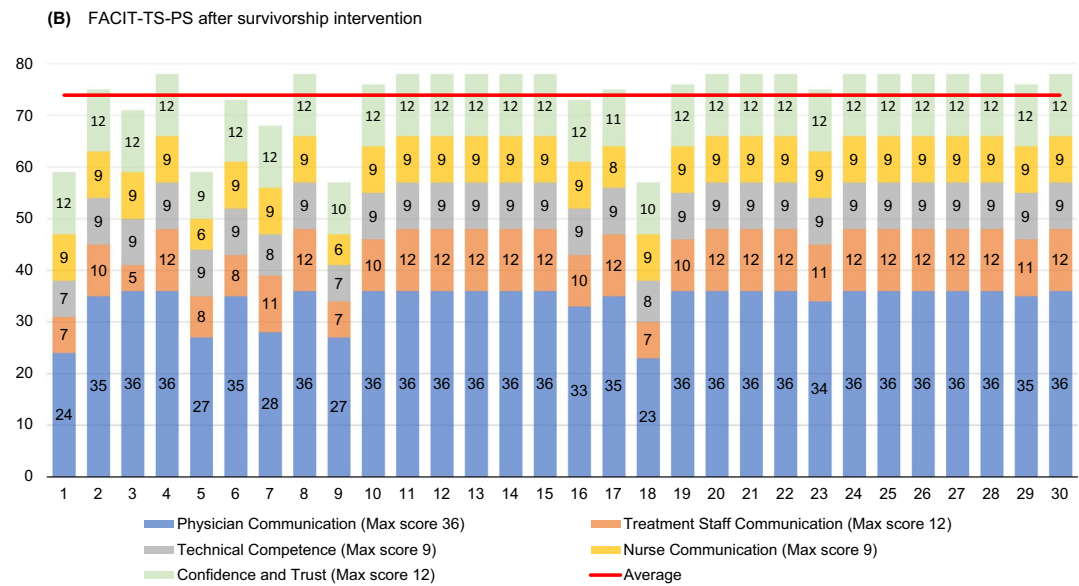
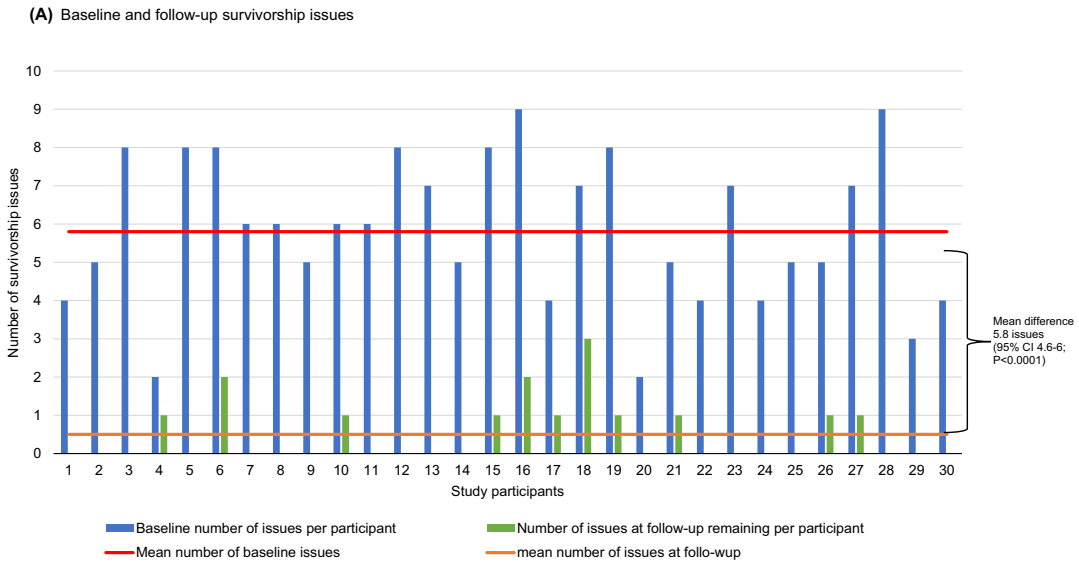
TABLE 1 Baseline characteristics

	No	%
Age		
Mean	54 y	
Menopausal status		
Premenopausal	8	27
Postmenopausal	20	67
Peri-menopausal	2	7
Histology		
Ductal carcinoma	22	73
Lobular carcinoma	4	13
Other	4	13
Size (cm)		
≤2	12	40
2.1-5	13	43
>5	5	17
Grade		
1	8	27
2	10	33
3	12	40
Cancer subtype		
Estrogen receptor positive	24	80
Progesterone receptor positive	23	77
Human Epidermal Growth Factor Receptor-2 positive	2	7
Triple negative	5	17
Lymph node positive	14	47
Surgery		
Mastectomy	13	43
Breast conserving	17	57
Sentinel lymph node biopsy	21	70
Axillary nodal dissection	9	30
Adjuvant therapy		
Chemotherapy	17	57
Radiation	25	83
Endocrine	22	73

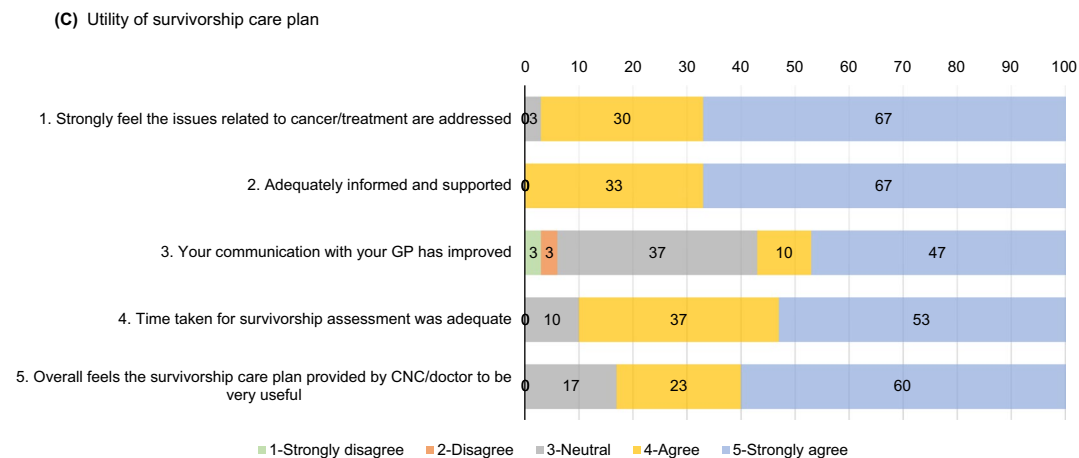
TABLE 2 Survivorship issues

Domain	Baseline		Follow-up		Action taken	No	
	No	%	No	%		No	%
1. Screening	4	13	27	90	Imaging/clinical appointment	26	87
2. Metabolic							
>10% weight gain in 12 m	6	20	18	60	Exercise physiologist	15	50
weight, exercise, diet	3	10			Dietician	15	50
3. Lifestyle							
Smoking	0	0	2	7	General practitioner	3	10
Alcohol	3	10					
4. Cardiovascular							
Blood pressure, lipids, yearly cardiac examination	2	7	15	50	Investigation	4	13
5. Gynecological							
Vaginal dryness	12	40	8	27	Gynecology	4	13
Reduced libido	12	40					
Vaginismus	6	20					
Reduced sex	7	23					
Gynecological health concerns	2	7					
6. Psychological							
Mood swings	9	30	13	43	Psycho-oncologist	8	27
Depression	6	20					
Psychiatric/psychological concerns	4	13					
7. Postsurgical							
Lymphedema	3	10	14	47	Lymphedema practitioner	12	40
reduced arm mobility/cording	1	3					
8. Vision							
Visual changes	8	27	19	63	Optometrist/Ophthalmologist	25	83
Visual assessment	4	13					
9. Musculoskeletal							
Joint pain	10	33	14	47	Physiotherapist, exercise physiologist	3	10
Bone health	3	10	26	87	Calcium/Vitamin D/antiresorptive	9	30
10. Function							
Return to work	15	50	15	50			

Abbreviations: BCNC, breast clinical nurse consultant.



FACIT-TS-PS=Functional assessment of chronic illness therapy treatment satisfaction and patient satisfaction



GP=general practitioner, CNC=clinical nurse consultant

FIGURE 2 A, Baseline and follow-up survivorship issues. Mean difference 5.8 issues (95% CI: 4.6-6; $P < .0001$). B, FACIT-TS-PS after survivorship intervention. FACIT-TS-PS = Functional assessment of chronic illness therapy treatment satisfaction and patient satisfaction. C, Utility of survivorship care plan. GP = general practitioner, CNC = clinical nurse consultant

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section. **How to cite this article:** Strach MC, Prasanna T, Carrigy MA, et al. Impact of a novel breast cancer survivorship program on patient-centered outcomes: A single institutional study. *Breast J*. 2020;00:1–6. <https://doi.org/10.1111/tbj.13790>