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Breast and colorectal cancer survivors' experience with transition to primary care provider follow-up care: A qualitative study on cancer type and sex

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ABSTRACT

As of 2024, 64% of cancer survivors live five years or longer after their treatment. However, this growing population, with its specific follow-up care needs, has struggled with the transition from active cancer treatment to follow-up in primary care. More information is required on what facilitates or hinders this transition. Potential factors that influence how cancer survivors experience this transition include sex and cancer type. Using secondary thematic and content analysis of 30 colorectal and breast cancer survivors interviews, we examined the impact of sex and cancer type on survivorship experiences. Themes extracted showed that sex and cancer type influenced survivors' experience of transition both intersectionally and separately. Colorectal cancer survivors reported more late and long-term side effects than breast cancer survivors, with differently described and experienced quality of life (QOL) and unmet needs. Males relied more on their wives to manage their follow-up

care and were more distant with their healthcare providers, while females took charge of their own follow-up care and reported closeness to their healthcare providers, which favorably impacted their follow-up care transition.

Keywords: survivorship, qualitative methods, follow-up care, sociodemographic characteristics, cancer type, sex and sex-based analysis

BACKGROUND

Due to improved treatment plans and better medical knowledge, there is a growing number of cancer survivors who live beyond five years after their diagnosis (Canadian Cancer Society, 2023). As of 2024, in Canada, 64% of survivors were expected to live five years or longer post-treatment, an important improvement from the 55% survivorship rate recorded in the 1990s (Canadian Cancer Society, 2023). However, combined with an aging population, the burden and strain placed on the Canadian healthcare system is increasing (Gibbard, 2018) and survivorship care can no longer be solely provided by oncologists. As a result, transitioning survivors to survivorship care offered through alternative care models outside of the cancer center becomes a relevant practical issue (Jefford et al., 2008). One such possible model of care includes discharge to primary care providers (PCP).

However, the transition to follow-up care has been described by some PCPs as stressful because survivors have a variety of needs specific to their illness with which PCPs may not have had experience (Fitch, 2018). Survivors have also expressed concerns about the competence of PCPs to address cancer-specific concerns. Survivors may perceive PCPs as ill-equipped in detecting a cancer recurrence early (Franco et al., 2016) or caring for late and long-term treatment side effects. Understanding survivors' experience with the transition from active care with an oncologist to follow-up care with PCPs and factors that facilitate this transition may help ensure that survivors' needs are adequately met and increase PCPs' comfort with providing care for this growing population. The role of sex and cancer type on the transition to follow-up care have been largely unexplored in the literature, yet there are several ways sex and cancer type could shape this experience.

Previous research has investigated sex influences on the navigation of healthcare systems and help-seeking behaviour. Similar effects may be relevant when considering the transition experience. Proper examination of sex differences is a recurring problem in the literature. Most studies investigate sex differences by looking at sex-specific cancers (Simard et al., 2013; Hawkins-Taylor et al., 2019). Others have investigated sex

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differences by looking at males and females with different cancer types, which could confound the influence attributed to sex as opposed to cancer type (Harrison et al., 2012; Jefford et al., 2008; Handberg, Nielson, & Lomborg, 2013).

Cancer type has been shown to influence quality of life (QOL) and adjustment after treatment for cancer survivors (Fitch, 2018; Franco et al., 2016; Götze et al., 2018; Firkins et al., 2020; Jansen et al., 2010). A meta-analysis of QOL in long-term cancer survivorship studies by Firkins et al. (2020) indicated that QOL is impacted significantly during long-term survivorship (2–26 years), especially physical and mental health aspects. Moreover, a potential moderator of this finding was treatment type. In this meta-analysis, four studies investigated QOL according to treatment type. Three out of these four studies found that survivors treated with radiotherapy alone reported lower QOL and poorer global health compared to survivors treated with surgery alone. Cancer type and stage influence treatment choices (Jefford et al., 2008; National Cancer Institute, 2017); for example, early disease stage and absence of recurrence positively impact QOL, potentially because the treatments required are less harsh (Fitch, 2018). Thus, different cancer types imply different experiences post-treatment (i.e., various long-term symptoms or problems) due to the wide range of treatments given to patients (National Cancer Institute, 2017).

To better examine the importance of sex-related and cancer type-related factors in the experience of transitioning from the cancer center to primary care, this study investigated differences in care transitions across and within cancer type and sex using qualitative analysis of interviews with female breast cancer survivors, female colorectal cancer survivors, and male colorectal cancer survivors.

METHODS

This research project is part of a larger study exploring implementation recommendations for use of survivorship care plans (SCP) across Canada. It is based on interviews with breast and colorectal survivors and primary care providers (CIHR Operating Grant FRN 16370). SCPs are documents given to survivors to help facilitate the transition from active to follow-up care (Howell et al., 2011). In the context of the larger study, SCPs were given by oncology nurses. The SCPs received by participants in this study included a summary of treatment, expected late and long-term side effects, recommendations for follow-up testing, and information regarding psychosocial needs, although this content may differ between organizations (Howell et al., 2011).

This article reports on a sub-analysis of the qualitative data from the larger study focusing on the research question: Are there sex and/or cancer type differences in the transition experience from active treatment to follow-up care for survivors? To explore this question, participants took part in a semi-structured interview on their experience with transition and SCPs. Answers were analyzed using qualitative and thematic analysis as described below. Because this was a secondary data analysis, recruitment, procedures, and data collection were done specifically for the larger study. This secondary data analysis diverged in terms of data analysis to answer its specific research question.

Participants

Participants in the larger study were breast and colorectal cancer survivors. Inclusion criteria were a) having been discharged from the Wellness Beyond Cancer Program, the survivorship program of The Ottawa Hospital at least 12 months before the interview, b) being able to speak and understand English or French, and c) to have agreed to participate in a 30-45-minute interview. Efforts were made to have a balanced sample between males and females and between cancer types. Because participants were asked about their sex, we could not infer gender. This informed the use of a sex-based analysis. In the present study, sex is viewed as a specific set of biological attributes (Government of Canada, 2023). This secondary analysis used the same sample of participants as for the larger study.

Procedure

For the larger study, participants were recruited through lists generated by The Ottawa Hospital based on eligibility criteria (i.e., cancer type, consent to be contacted, discharged within time-frame and identified PCP at time of discharge) and were mailed an invitation letter on behalf of the clinic staff. Interested participants were asked to phone or email the research coordinator who subsequently explained the study. Verbal informed consent was obtained over the telephone and a copy of the consent form was mailed or emailed to participants who indicated interest. Participants were compensated for their time in the form of a \$50 gift card. The interview guide was built for the larger study according to the larger study's use of the Theoretical Domains Framework v2 (TDF-v2). The TDF-2 breaks down the various cognitive, social, and environmental influences that effect behavior into 14 domains (Atkins et al., 2017). These domains include knowledge, skills, social/professional role and identity, intentions, goals, and others. The interview guides were based on this framework to facilitate asking participants more systematically about barriers and facilitators to SCP use. Interviews were conducted by B.M., a senior PhD candidate in clinical psychology with qualitative interviewing and survivorship research experience. The interviewer had no previous relationship with the participants. The interviews were audio-recorded, and transcribed verbatim. For a copy of the interview guides, please contact the corresponding author. For this secondary data analysis, we used the data collected (i.e., all interview transcripts) during the larger study to investigate our research question.

Qualitative analysis

For this secondary data analysis, all transcribed interviews were analyzed using thematic and content analysis, as these methods provide useful ways to investigate social processes through inductive approaches (Braun & Clarke, 2012). The analysis was performed by L.G., D.B., B.M., and S.L. using NVivo 12. The data analysis process was modeled after Roberts et al.'s (2019) recommendations for code creation and testing. First, the research team read through the transcripts to uncover initial codes. Once code saturation was achieved, codes relevant to the research question were selected while others were discarded. A codebook was built, and each code was defined (Roberts, Dowell, & Nie, 2019; Castleberry & Nolen, 2018).

To ensure reliability of the codebook and interpretations, L.G., B.M., and D.B. independently coded 20% of the interviews ($n = 6$) to assess intercoder reliability (O'Connor & Joffe, 2020). Results were then compared, and discrepancies were discussed until consensus was reached. Necessary refinements were made to the codebook to increase accuracy of coding. Three more interviews were double coded until agreement reached 80% or higher. This cut-off has previously been shown to be sufficient in thematic analysis (Joffe, 2012).

Finally, conclusions were drawn based on the codebook and interpretations made of the themes. Five overall themes emerged which were subsequently reviewed and discussed by the research team to identify the differences which were most representative of the according to cancer type and sex during the transition process. These final themes will be described below.

RESULTS

Participants

The sample for this study consisted of 30 participants. Eleven participants were female breast cancer survivors, five were female colorectal cancer survivors, and 14 were male colorectal cancer survivors. Of these survivors, the majority of participants (18/30) lived in urban settings (based on postal code). Ages ranged between 49 and 87 years old, with an average of 68. All interviews were conducted in English except for one that was conducted in French. The study controlled for sex-specific cancers by having one cancer type majorly affecting women, and represented only by women within our sample, and one non-sex-specific cancer type, thus allowing for between and within cancer type comparisons.

Themes

Five overall themes emerged on differences between cancer types and sex: 1) Survivors' Medical Team (level of confidence in PCP, oncologist, and oncology nurse providing the SCP); 2) Unmet Needs (late and long-term side effects); 3) Transition to PCP (survivors' experience, positive or negative, during their transition from active treatment to follow-up care); 4) Current Quality of Life (survivors' reported QOL at transition); and 5) Social Support (family support, peer support, community support and a sense of belonging to the cancer survivor community). Interestingly, these themes interacted with each other and statements from a survivor's interview could have been coded in more than one theme (i.e., themes were not mutually exclusive). Across these five overall themes, the representative themes of differences based on cancer type and sex differences are summarized as: 1) breast cancer survivors: returning back to near-normal; 2) male colorectal cancer survivors: living with cancer and its side effects is our new normal; and, 3) female colorectal cancer survivors: transitioning quietly to the new normal (at the intersection of sex and cancer type). Figure 1 demonstrates how each of the five themes are united. However, they are arranged differently according to sex and cancer type.

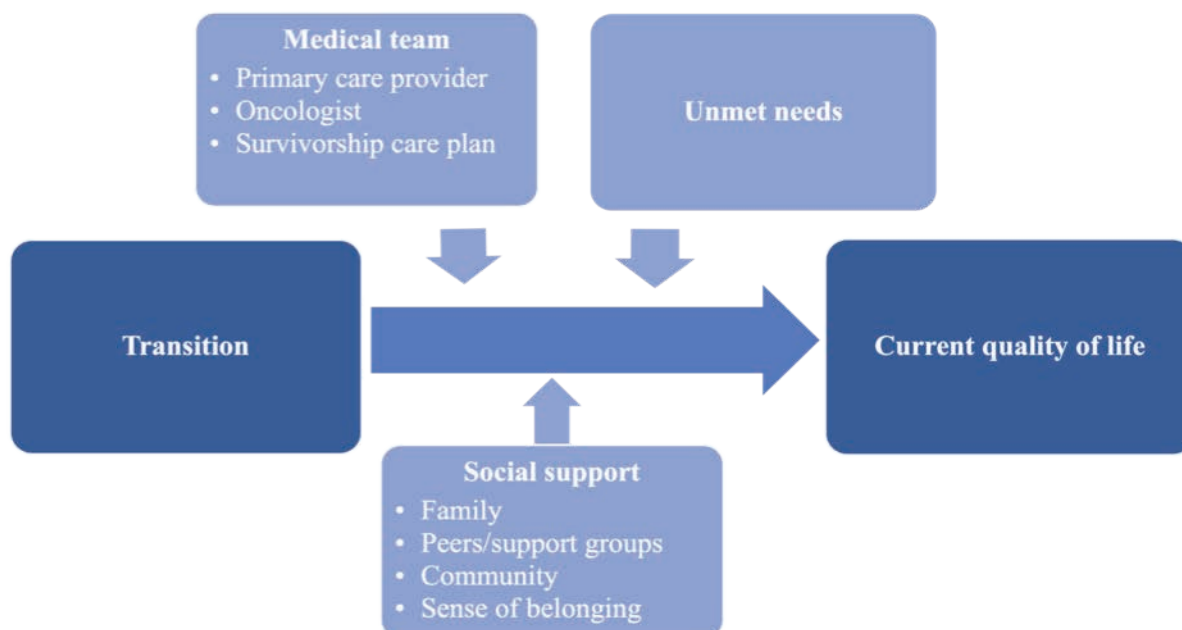
Breast cancer survivors: Returning back to near-normal

For breast cancer survivors the transition was reported as being difficult and challenging at first:

"It's not a comforting feeling when you're released, it's not at all (laughs). It should be, but as I said, it's not." (Breast cancer survivor)

Figure 1

How Medical Team, Unmet Needs, and Social Support Impact the Transition Experience and Resulting Quality of Life for this Sample of Cancer Survivors



However, most participants described returning to a good QOL (i.e., back to normal):

“At a point, [...] it brings back a more normal kind of life and thinking that yes, there’s something after cancer” (Breast cancer survivor)

Survivors within this sample described uncertainty about being ready to leave the cancer centre and a feeling of being abandoned as they embarked on their transition journey. These were important challenges as the cancer centre and the oncologists represented a safety net in case the cancer came back:

“It feels like there’s no more net, safety net, but [...] you’re kind of glad not having to go back there.” (Breast cancer survivor)

Specifically, breast cancer survivors’ main concern, when transitioned to the care of their primary care provider (PCP), was whether their PCPs could provide sufficient care to detect a potential recurrence. They felt a great sense of relief once they realized that their PCP was as qualified as their oncologist for follow-up care:

“You know, you feel like “oh I’m losing all that”, but then I was able to re-establish something with my family doctor through that um, cancer plan- program.” (Breast cancer survivor)

This realization was facilitated by a sense of trust in PCPs, which stemmed from an often longstanding and strong relationship where the PCP was described as supportive and able to answer the survivors’ questions. Some of the breast cancer survivors experienced the retirement of their PCPs and reported feeling alone and unprepared:

“I said, they – they honestly were absolutely amazing and I – I was just broken-hearted when they, when they decided to retire.” (Breast cancer survivor)

Breast cancer survivors who reported trust in their PCP used their SCPs less frequently. They used their SCP to double-check the surveillance test schedule to ensure it was being followed. Additionally, breast cancer survivors typically had a straightforward follow-up care schedule, which also contributed to infrequent use of their SCPs:

“I sort of looked, ‘okay, I’m supposed to see my doctor every 3–6 months, for an examination, and have a mammogram uh... a year – you know, after treatment’ [...] That’s about it. Not an awful lot more than I can do about it.” (Breast cancer survivor)

Furthermore, breast cancer survivors reported their late and long-term effects were easy to manage and, therefore, felt empowered and capable of caring for their own health independently.

“So, I think if you put it the other way in that, yeah, like - I think it’s good that I haven’t had to use it [SCP] that much except for reference, but, yeah. [...] Like, for example, I know people have all kinds of issues after and all kinds of side-effects and mental health issues, and what have you, but like I said, a lot of people don’t. A lot of people are healthy and thriving and back to, you know, exercising and doing all kinds of things.” (Breast cancer survivor)

Lastly, breast cancer survivors reported they received support from peers, friends, and people in their community (particularly if they lived in a rural area), which helped with the transition and their current QOL. They frequently mentioned feeling connected and accepted. Many wanted to give back by offering their own support to recently diagnosed cancer patients or recently discharged cancer survivors:

“[...] we decided that after the classes we wanted to join – to become a support group for one another. [...] we still meet every once in a while and have met over that 16-17-18 years.” (Breast cancer survivor)

In conclusion, breast cancer survivors in this sample were able to return to a near-normal lifestyle once the anxiety of the transition from the oncologist to the PCP decreased. The reduction in anxiety was facilitated by a strong trust in the PCP, uncomplicated follow-up care, few late and long-term effects and, importantly, support from their peers.

Male colorectal cancer survivors: Living with cancer and its side effects is our new normal

Male colorectal cancer survivors reported a different experience transitioning from active treatment to follow-up care in contrast to the breast cancer survivors. Although their transition had stressful beginnings, male colorectal cancer survivors’ were more likely to report a decrease in their QOL as a consequence of their cancer. Despite a sense of relief for being alive, male colorectal survivors reported making ongoing sacrifices and important lifestyle changes:

“I have to be very grateful for the fact that I’m still alive and still functioning and still able to live 95% of my life as normal, within certain limitations, and you have to be very grateful for that, but in the same token, a lot of things have changed” (Male colorectal cancer survivor)

Male colorectal cancer survivors reported more gaps in their care when compared to the breast cancer survivor participants and expressed frustration over the lack of medical resources and support. At discharge, male colorectal cancer survivors reported not knowing where to access appropriate support. Many survivors perceived a lack of expertise from their PCP and a general difficulty connecting with them. While they described their PCP as being available, they also perceived them as unable to provide the care they needed:

“I just feel that there are times, it’s very difficult for me to be able to turn to my, you know, to my doctor.” (Male colorectal cancer survivor)

“My GP just says, ‘Well, I’m just not sure, you better get back to find somebody in the cancer centre’” (Male colorectal cancer survivor)

This reported lack of involvement from their PCP resulted in male colorectal cancer survivors using their SCP more often to schedule surveillance tests and keep track of their follow-up care. Compared to breast cancer survivors, male colorectal cancer survivors also had more late and long-term effects to monitor and reported being more greatly affected by the consequences of their cancer treatments. These included dealing

with an ostomy bag, incontinence, and/or diet issues. They described having difficulties adjusting to a new lifestyle:

“So, it prepared me for the continuing problems I have been facing since the operation and since the end of the chemo and all that, more than three years ago. But I still have, I think, chronic fatigue and insomnia and all sorts of other things, so, it prepared me for that. And I remember that the nurse giving the education session talked about ‘a new normal’, she said ‘Don’t expect yourself to rebound, the effects of chemotherapy are not just during the chemotherapy, they’re for several years and possibly for life. There is some permanent damage to the body.’” (Male colorectal cancer survivor)

Additionally, they reported feeling uncomfortable about asking questions because they were afraid of being a burden to others. Because of their fear of becoming a burden or taking up resources for somebody who “really” needed it, male colorectal participants made do with what they had and started changing activities, foods, and lifestyles:

“I’m sort of just laid back now, I say, ‘Well this is the way life is, get on with it’, um, I would have really like to have been able to call somebody who had access to my file without a feeling that I was demanding or complaining, or saying that you guys screwed me all up or something, which is not the case at all, you know, and say, ‘this is the problem I’m having, is there anything I can do or do I just live and bear it?’” (Male colorectal cancer survivor)

“And you kind of live with the guilt where, I’m stage two, you know, I mean, you know, I’m doing OK. I think I’m getting better. So and as you get stronger, you’re like, ‘OK, I better leave those resources for people that people that really need those resources’. So, you often left with that feeling.” (Male colorectal cancer survivor)

In addition, their symptoms (i.e., ostomy bag, incontinence, etc.) were reported as a source of embarrassment for participants:

“A lot of people have vanity issues too, you know, with these things, with the bag, they don’t want people to know, you know?” (Male colorectal cancer survivor)

“It’s interesting, I must admit, it’s been very interesting, and certainly it affects your social life in a sense, because you’re going to say, you know, can I go there, and that’s what I have to do to make sure I’m not going to embarrass myself or the people there.” (Male colorectal cancer survivor)

Finally, male colorectal cancer survivors described wanting and needing peer support, but being unable to find a relevant group or if they found one, they felt they were unsatisfactory. This may be due to the large variation in treatments and tumour site among colorectal cancer patients, which lead survivors to compare themselves and second-guess their treatment and healthcare professionals.

“I was discussing with two of the people that went, I said ‘I think I should go to your group’ and they asked me, they said, ‘Well, all of our guys have bags,’ they said, and I said, ‘Well, I know that, I’m different, I’m supposed to eat a

different kind of food and stuff [...] it’s an entirely different issue, so the dietitians treat me differently, and they said, one of them came back to one time and they said, ‘Oh, there was three guys here, a year or two ago, that were like you, but they all died,’ so, I didn’t bother attending any of their meetings.” (Male colorectal cancer survivor)

Participants also revealed the importance of societal expectations of being “tough” because of their sex, which may have affected the presence of support groups that suited them.

“And as you start to get stronger, you start to feel more confident about talking to your doctor about it, because we’re being a male, you know, speaking with my doctor, it’s not something we normally do, you know? I grew up in an environment where being a man, you kind of take it. You got to be tough in [specific profession]. You go through a lot of adversity. And, you know, [had a specific profession]. So, yeah, you know, you go through a lot of different emotion, and you deal with a lot of the [mental health concern].” (Male colorectal cancer survivor)

On the other hand, male colorectal cancer survivors reported they received important support from their families and spouses.

“My wife is on top of it all the time, she keeps notes and journals and writes it on the calendar, but if I was alone, (laughs) I probably wouldn’t keep on to all of this stuff.” (Male colorectal cancer survivor)

To summarize, male colorectal cancer survivors had difficulties adapting to their new normals, which required many adjustments to late and long-term effects of their treatments. Their PCPs were reported as being available but inadequate, and male colorectal cancer survivors were uncomfortable asking questions about their long-term effects. Resultantly, they reported that support came mostly from their families.

Female colorectal cancer survivors: Transitioning quietly to the new normal (at the intersection of sex and cancer type)

Finally, similar to breast cancer survivors, the transition for female colorectal cancer survivors was initially difficult and stressful, but became more manageable over time. These survivors reported limitations and their QOL appeared to have slightly decreased compared to before their cancer diagnosis, similarly to what male colorectal cancer survivors described:

“My knees are bad, and still, they’re worse now than they were before. And the fatigue, I was fatigue, because I used to have all kinds of energy and I was fit at one time, and then fatigue, the body changes and the trouble swallowing and skin care issues and osteoporosis.” (Female colorectal cancer survivor)

Because of these long-term effects and the potential seriousness of their disease, leaving their oncologist was also a source of anxiety for these participants. They were uncertain of how well their PCP would take care of them. However, like breast cancer survivors, they were reassured when they experienced their follow-up care proceeding smoothly. Female colorectal

cancer survivors reported that the transition was facilitated by their relationship with their PCP who they describe as being close and supportive, similarly to breast cancer survivors:

“I got one doctor, I had him for, I’m sure, 20 years, when he retired, I think we were such good friends, I used to visit him at home, but he referred me to this other, much younger doctor, and I’ve had him almost, well, a good 15 years. So, I’ve had only these two physicians, you know, forever.” (Female colorectal cancer survivor)

Whereas breast cancer survivors were reassured by the competence of their PCP, female colorectal cancer survivors were reassured by the continued presence and collaboration with their oncologist. Aligned with the experience of male colorectal cancer survivors, female colorectal cancer survivors described their PCPs were available, but not adequate in providing the care they needed, unless their oncologist was involved:

“You’re not certain that you’ll be taken care as well by your family doctor because your doctor is not aware of the cancer problem that might arise with, because it’s not their specialty. So, when you’re let go from the cancer clinic, I mean, I was worried, but I was... [...] after meeting my doctor and she was communicating with my oncologist, and everything was under control [...] It was like a triangle, my oncologist, my family doctor, myself. So, it was great. It was really... it put my mind at ease. It took a few months, but I think that’s normal.” (Female colorectal cancer survivor)

Therefore, instead of feeling alone as did male colorectal cancer survivors, or feeling cared for by their PCPs like breast cancer survivors, they spoke of a collaboration where all parties contributed to care.

“And they made you feel very secure, like, you know, even if I had another pain or whatever, I would talk to [her PCP]. And she you know, if I don’t have an answer, she said, we’ll call Dr. [oncologist] and see what he says, you know, so.” (Female colorectal cancer survivor)

Interestingly, female colorectal cancer survivors used their SCP more often than breast cancer survivors but less often than male colorectal cancer survivors. Specifically, survivors still took charge of their care, setting up appointments and overseeing the schedule of surveillance tests, perhaps because they could not rely 100% on their PCP, unlike breast cancer survivors. Nonetheless, like male colorectal cancer survivors, some participants reported a feeling of inadequacy on the PCP’s part as well as their own when it came to overseeing their care:

“So, at the beginning I was referring to my care plan more often, because I didn’t want my family doctor to slip on anything and to forget to schedule something, but it never happened. So, really, we were just – I was double-checking to make sure that everything was on track.” (Female colorectal cancer survivor)

“But I kept going for blood tests, because he [PCP] insisted that I get blood tests every three months, and but he’s very, very busy, I know that, I’ve been looking after my blood, and

I have to go again, and, but he hasn’t really taken, I guess, a leadership role in making sure that I’ve done all this sort of thing, no. And I’m not blaming him because I think it was my responsibility, really, but I didn’t really understand the whole thing.” (Female colorectal cancer survivor)

Female colorectal cancer survivors avoided talking about late and long-term effects, which was different from the two other groups. Although some late long-term effects would be expected from having colorectal cancer, they were barely addressed, except for the occasional effect from treatment:

“I was having some burning sensation in my... where I had my surgery” (Female colorectal cancer survivor)

This contrasted with male colorectal cancer survivors who described the numerous adjustments they had made to adapt to these long-term effects. Furthermore, female colorectal cancer survivors made no mention of having support from family or peers, feeling connected with their peers, or having unmet needs in terms of social support.

In summary, female colorectal cancer survivors shared some aspects with their peers of the same sex and some aspects of the same cancer type (i.e., breast cancer survivors and male colorectal cancer survivors). Indeed, the progression of their transition was like breast cancer survivors’, while the challenges they encountered were more similar to male colorectal cancer survivors’ experience.

DISCUSSION

The aim of this study was to use qualitative interviews and content and thematic analysis to explore sex and cancer type differences of female breast cancer survivors and male and female colorectal cancer survivors experiences transitioning from the cancer center oncologist care to the care of their primary care provider. The results offer interesting insights on how cancer type and sex may influence the transition to survivorship care. Five themes, which were arranged and presented differently between groups, emerged from this analysis: survivors’ current QOL, the transition experience itself, survivors’ relationship with their medical team, survivors’ unmet needs, and the social support the survivors received. While breast cancer survivors and male colorectal cancer survivors had reported different experiences during their transition from active treatment to follow-up care, female colorectal cancer survivors shared characteristics with both groups. Thus, the intersectionality of sex and cancer type is important to consider during this transition.

These results are a novel way of exploring the survivorship experience. Previously, research has focused on the separate influence of demographic and medical characteristics on the transition from specialized to primary care (Franco et al., 2016, Götze et al., 2018, Firkins et al., 2020, National Cancer Institute, 2017). However, based on our results, survivors experience of their survivorship care is dependent on multiple factors. For example, survivors’ needs post-treatment, which are affected by sex and cancer type, influence the relationship that they have with their medical team. Survivors with greater late and long-term secondary effects from treatments

demonstrated needing more specialized care, had a different level of reliance on their SCP, and their PCP (Franco et al., 2016). For example, the colorectal cancer survivor participants needed more specialized care to help manage their late and long-term effects from treatment and were not confident their PCP would be able to provide this care, resulting in greater unmet needs. In addition, colorectal survivors seemed to be aware of PCPs' feelings of inadequacy in providing the necessary care to their particular cancer type (Zapka et al., 2015; Gore et al., 2023). On the other hand, breast cancer survivors in this sample did not report many late and long-term side effects, which could make PCPs more comfortable in providing care. PCPs were therefore described as more present and survivors indicated that they viewed them as the main person responsible for their care, demonstrating a trust and involvement that was not present for colorectal cancer survivors (Boekhout et al., 2015). In contrast, female colorectal cancer survivors interviewed for the present study infrequently addressed possible long-term effects stemming from colorectal cancer treatments. Perhaps they felt their long-term effects were embarrassing (Jansen et al., 2010, Consedine et al., 2011) and this was their way of preserving their dignity or "femininity". Alternatively, this finding may be due to an absence of long-term effects among our four participants, and is suggested for investigation in future studies.

Another notable difference amongst the study participants was in the area of social support. While breast cancer survivors reported finding comfort in social support from peers, colorectal cancer survivors did not. For males, the male sex role of being "tough" and the stigma around showing weaknesses was mentioned as a reason for survivors' struggling to find support outside of their family. In addition, in the male colorectal cancer survivors' experience, support groups were more likely to discriminate based on the type of treatment they received or the late and long-term effects they encountered. Of note, gender-based expectations may have influenced what participants believed was acceptable to report in terms of struggle. However, male participants expressed wanting more support while women with colorectal cancer did not express any need, suggesting there was more than gender at play. Considering male colorectal cancer survivors' experience with social support, female colorectal cancer survivors might not have mentioned peer or family support because of the intersectional effect of both their sex and cancer type. It is possible that the variety of treatments of their cancer type keeps them from finding peers with similar experiences, thus making peer support less accessible to them while their sex makes it so that they would prefer this type of social support (i.e., the "tend-and-befriend" reaction to stress; (Taylor et al., 2000) rather than family support, thus creating a gap in suitable social support sources).

Clinical implications

The intersectionality of cancer type and sex is important when considering the transition experience. Survivorship programs should therefore be viewed through a sex and disease-specific lens to help ensure that survivors' needs are

better met and that transition recommendations are personalized to the survivors' individualized physical and psychosocial late and long-term effects and resultant needs. The model of follow-up care for the participants in this study is led by primary care providers (Jefford et al., 2022), and was sufficient for breast cancer survivors who reported feeling empowered by this model of care. However, our results indicated that colorectal cancer survivors need a more personalized approach of follow-up care to better facilitate their transition and improve their QOL when transitioning. A model of care that allows for more contact with professionals who are familiar with the issues particular to colorectal cancer could be beneficial for these individuals (Jefford et al., 2022). A nurse-led survivorship model of care may therefore be appropriate for male colorectal cancer survivors to provide more specialized care regarding late and long-term side effects. On the other hand, this study indicates that female colorectal survivors experience greater isolation and are perhaps less willing to share their difficulties. Although they had good relationships with their PCP, these participants searched for professionals with more experience caring for colorectal cancer survivors. Based on these results, a shared model of care where primary care providers and oncologists or oncology nurses collaborate to support the survivor may help address female colorectal cancer survivors' transition experience. Finally, the transition experience and the survivorship period vary according to factors such as sex and cancer type and therefore support and tools should be individualized and not considered as one-size-fits-all (Jefford et al., 2022).

Limitations

Although the researchers attempted to balance the sex-specific cancers being investigated, the small sample limits generalization, particularly due to the small number of female colorectal cancer survivors. Meaningful generalizations also could not be made to survivors of different age, ethnicity, and socioeconomic status. Furthermore, this study was a secondary data analysis, which did not explicitly ask participants to reflect on how their sex and cancer type influenced their experience of the transition.

Future directions

Future studies could look at the differences between specific sex and cancer types in the transition from active treatment to follow-up care using an interview guide that reflects this research question. Recent efforts to address the needs of survivors have proposed survivorship care plans (SCPs), documents that were intended to make the transition easier to manage for survivors (Howell et al., 2011). The effects of SCPs are currently unclear, perhaps due to discrepancies in the way they have been implemented, formatted, constructed, and delivered (LaGrandeur et al., 2018). One possible limiting factor is that SCPs may not address the unmet needs specific to sex and cancer type (Institute of Medicine and National Research Council, 2005). As seen in this study, survivors varied in their use of SCPs and reported having differing views regarding their value. To clarify these differences, the physical and psychosocial long-term effects of female colorectal cancer survivors should also be investigated further. That is, female

colorectal cancer survivors were the only ones who did not talk about physical and psychosocial long-term effects which indicates either an absence of effects or a reluctance from those survivors to express themselves on such issues. Investigating this could open the door to better communication of female colorectal cancer survivors' needs after treatment and modified SCPs that include information that would be pertinent to these survivors. It would also be interesting to study the experience of male cancer survivors with a sex-specific cancer such as prostate or testicular cancer in addition to the cancer types that were represented in the present study. This would help further tease out differences in terms of sex-specific cancers and cancers where both sexes are affected.

CONCLUSION

In conclusion, breast cancer survivors in this study were satisfied with follow-up care provided by their PCP, while colorectal cancer survivors reported experiencing greater barriers to satisfactory follow-up care, particularly regarding their relationship with PCPs, the monitoring of late and long-term side effects and the impact these had on their quality of life, and obtaining the right social support. Males described amplified challenges during their survivorship journey. Therefore, the intersectionality of both factors was of considerable importance in modulating the experience of transitioning from an oncology centre to primary care.

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CONSENT TO PARTICIPATE AND PUBLISH

Verbal informed consent was obtained from all participants in this study, both to participate and to publish the qualitative data presented (i.e., quotes pulled from interviews).

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COMPETING INTERESTS

The authors have no conflict of interest to disclose.

AUTHOR CONTRIBUTIONS

All authors contributed to the study conception and design. Preparation and data collection were performed by Brittany Mutsaers, Tori Langmuir, Dr. Cheryl Harris and Dr Sophie Lebel. Data analysis was led by Lauriane Giguère and Dina Babiker, assisted by Dr Sophie Lebel, Brittany Mutsaers, and Tori Langmuir. The first draft of the manuscript was written by Lauriane Giguère and all authors provided feedback and modifications. All authors read and approved the final manuscript.

DATA AVAILABILITY

The data used and analysed in this study as well as the codebook are available upon reasonable request.

COMPLIANCE WITH ETHICAL STANDARDS

This study was performed in accordance with the Declaration of Helsinki's ethical standards. This study was approved by the Ottawa Health Sciences Network Research Ethics Board (OHSN-REB# 20200152-01H).

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