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The development and implementation of the After Cancer Treatment Transition (ACTT) Program for survivors of cancer

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ABSTRACT

Background: The After Cancer Treatment Transition (ACTT) program at Women's College Hospital (Toronto) is a transitional follow-up program for patients, their families, and healthcare providers to address the broad range of post-cancer treatment and survivorship needs. This publication describes the systematic development and implementation of the ACTT program, with a focus on the advanced practice nursing (APN) role.

Program Development: ACTT development required the collaboration of an APN, a general practitioner in oncology (GPO), and an inter-professional team. ACTT developers proposed a clinic structure in an ambulatory setting, linking healthcare professionals to provide post-treatment follow-up and ongoing survivorship care. Post-treatment guidelines were developed based on expert oncologist consensus, cancer site group input, and evidence-informed guidelines or best practice recommendations.

Program Implementation: Initial challenges and concerns were rooted in the requirements that post-cancer treatment care was maintained and survivor needs were addressed. Cancer site groups and the inter-professional teams provided continuous feedback on processes and protocols. ACTT established a standard approach to transition patients safely and effectively out of tertiary care and, ultimately, to primary care.

Current ACTT Program: ACTT delivers comprehensive post-treatment and survivorship care through close collaboration between the GPO and APN. Both roles specialize in managing late or persistent effects, cancer surveillance and prevention, and addressing psychosocial needs prior to discharge to primary care. The survivorship care plan provided by ACTT is an informative tool for both patient and primary care provider to continue post-treatment follow-ups.

Future Directions: Next steps for ACTT include expanding to other cancer specialties, exploring new ways to deliver care, optimizing the transition of care, and conducting comprehensive evaluations of patient reported outcomes.

INTRODUCTION

Although one in two Canadians will develop cancer in their lifetime, there continues to be an overall decline in mortality rate (Canadian Cancer Statistics Advisory Committee, 2019). The overall five-year survival for people diagnosed with cancer is 63% and may be higher depending on cancer type (Canadian Cancer Statistics Advisory Committee, 2019). In 2017, the Canadian Cancer Society reported that, as of January 2009, just over 810,000 Canadians (2.4% of Canadian population) had been diagnosed with cancer during the previous 10 years and were still alive (Canadian Cancer Statistics Advisory Committee, 2017). As cancer survivorship becomes more prevalent, evidence-based recommendations suggest that survivors of cancer should have access to specialized care to address the broad range of their physical, psychosocial, supportive, informational, and rehabilitative needs (Howell et al., 2011; Institute of Medicine & National Research Council, 2006; Rowland, 2008). There is ongoing need to develop and update post-cancer treatment and survivorship guidelines, especially to assist healthcare providers and organizations in program planning and development.

As the strain continues on tertiary cancer centres and acute oncology care resources, there is growing evidence that early-stage post-cancer treatment care can be provided outside of regional cancer centres (Grunfeld, 2006; Shulman et al., 2009). The transitional model of care remains an ongoing development; however much of what is known about cancer survivorship and transitioning care comes from breast and colorectal cancer (Baravelli et al., 2009; Grunfeld et al., 1996; Grunfeld et al., 2006; Kantsiper et al., 2009; Virgo et al., 2013). Previous studies in breast cancer have shown that primary care provider (PCP) follow-up is not associated with any delay in diagnosing recurrence or an increased rate of serious clinical events, and PCPs are well experienced in the management of

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comorbidities such as dyslipidemia and depression (Grunfeld et al., 1996; Grunfeld et al., 2006; Madarnas et al., 2011; Pascoe et al., 2004). Quality of life for survivors of breast cancer even improved when PCPs assumed greater responsibility for their ongoing care (Grunfeld et al., 1999; Sisler et al., 2004). In breast cancer, there continues to be substantial variability in adherence to post-treatment recommendations, including overuse of imaging for metastatic disease and underuse of annual mammogram (Grunfeld et al., 2010). However, optimizing the coordination of care between oncologists and PCPs may reduce duplication of care and reduce unnecessary or inadequate testing (Grunfeld et al., 2010).

Based on cancer survivorship statistics and evidence supporting the transition of post-treatment and survivorship care to PCPs, Princess Margaret Cancer Centre (PM) and Women's College Hospital (WCH) in Toronto, collaborated in 2010 to develop the After Cancer Treatment Transition (ACTT) program. At that time, there was pressure to reduce the volumes and heavy demands of cancer clinics which, over time, would affect the care of survivors. However, research and recommendations were limited on standard approaches for transitioning survivors out of tertiary cancer centres to primary care. Standard guidelines on post-treatment follow-up and survivorship care were also not well established or updated across all types of cancer. Furthermore, studies indicated that there can be anxiety, reluctance, lack of confidence, and other concerns among patients and, at times, even among oncologists and PCPs regarding the transition of care (Janmohamed et al., 2021; Kantsiper et al., 2009).

Thus, there was a clear need to develop an intermediate clinic for our setting to receive patients after cancer treatment, establish a standard approach to post-treatment follow-up care, address the survivorship needs of patients, and effectively coordinate the transition of care to PCPs. In addition to these primary goals, an ACTT program also had the potential to serve a secondary need of generating cancer survivorship research and promoting inter-professional training in survivorship care.

The purpose of this publication is to describe the systematic development and implementation of the After Cancer Treatment Transition program, now established at Women's College Hospital since 2010, with a focus on the advanced practice nursing (APN) role in providing post-treatment and cancer survivorship care.

DEVELOPMENT OF THE AFTER CANCER TREATMENT TRANSITION (ACTT) PROGRAM

Suitability of APN and GPO Roles for ACTT

During early discussions, it was determined that the APN role and the general practitioner in oncology (GPO) role could be valuable in the ACTT development and operation. Based on the Canadian Nurses Association's (CNA's) advanced practice framework, there are two types of APN roles in Canada: a clinical nurse specialist (CNS) and a nurse practitioner (NP) (Bryant-Lukosius & DiCenso, 2004). A well-designed APN role includes the provision of coordinated, integrated, holistic, patient-centred care; and the provision of services that optimize health, quality of life, and functional capacity

(Bryant-Lukosius & DiCenso, 2004). In general, research has demonstrated the impact of the APN role on patients, providers, and the healthcare system. Meta-analyses have shown that NPs and physicians working in primary care provide equivalent care (Brown & Grimes, 1995; Horrocks et al., 2002). In acute care, studies demonstrated that when APNs provided continuous care between hospital and home, patients experienced reduced length of stay in hospital, low re-admission rates, decreased healthcare costs and increased health promotion behaviours (Brooten et al., 2002). Nurse-led care, when introduced in oncology ambulatory clinics, provided follow-up and supportive care interventions for complex patient populations and realized higher patient satisfaction, decreased symptom distress, fewer medical interventions, and equivalent cost-effectiveness (Bredin et al., 1999; Corner et al., 1996; McCorkle et al., 2000; Moore et al., 2002).

For developing ACTT, it was determined that the APN role would require experience in program planning and the capability of navigating two complex healthcare systems (tertiary care and primary care) and these qualities aligned with the skills and training of the CNS. The CNS is a Masters' degree-prepared, advanced practice level, nursing role that is actualized through experience, education, and the development of specialty knowledge, and is recognized for its positive impact on direct patient care and enhancing nursing practice (Advanced Practice Nursing Framework Revision Advisory Committee, 2019; Kilpatrick et al., 2014; Moore & McQuestion, 2012; Oncology Nursing Program, 2018a).

Since the 1960s, CNSs have evolved as leaders in practice, education, research, and consultation. Since the 2000s, the role has evolved further to focus more on the execution of evidence-based practice (Virani et al., 2012). In oncology, vital functions of the CNS include enhancing the coordination and continuity of care for the patient and their caregivers and maintaining communication with the inter-professional team (Cook et al., 2019; Dempsey et al., 2016; Oncology Nursing Program, 2018a). The CNS has often addressed gaps in healthcare for defined patient populations, and has increased patient and family caregiver satisfaction (Cook et al., 2019; Mitchell et al., 2017; Moore & McQuestion, 2012; Pollard et al., 2010). Furthermore, the CNS has expertly identified and addressed patient and family psychosocial distresses, reduced feelings of uncertainty for both patient and family members, and connected them to appropriate resources (Cook et al., 2015; Kerr et al., 2021; Oncology Nursing Program, 2018b). As cancer survivorship has been increasingly recognized as a distinct phase of cancer care, this has presented an opportunity to develop the APN role in the planning and delivery of cancer survivorship care (Sun et al., 2015; Thom et al., 2019).

GPOs have also been working in ambulatory and inpatient cancer settings for several decades in Canada (Sisler et al., 2013). GPO training and experience enable them to practice independently in their own clinics, with oncologist telephone support from regional cancer centres. Alternatively, GPOs may provide care in regional cancer centres, including inpatient hospital care, ambulatory care (i.e., clinics), and procedural services (Sisler et al., 2013; Blouin, 2012). Their scope of

practice, in collaboration with oncologists, may include supervision of chemotherapy and radiation treatment, assessment of new patients, monitoring patients in clinical trials, and providing palliative care (Sisler et al., 2013; Blouin, 2012).

ACTT Program Planning

The development of ACTT began in 2010 under the leadership of an oncology APN and GPO, and in collaboration with inter-professional team members at PM and WCH. PM is a large regional tertiary cancer centre with over 3,400 in staff (including 187 oncologists) and more than 260 patient beds (www.uhn.ca/PrincessMargaret). WCH is a fully ambulatory, outpatient community hospital with more than 60 clinical programs in the departments of surgery, gynecology, medical imaging, specialized medicine, primary care, and mental health (www.womenscollegehospital.ca).

There was agreement to establish the ACTT program at WCH, as various specialized programs and clinics were already available for cancer surveillance and management of late or persistent effects, including a lymphedema clinic, bone health program, specialized dermatology programs, gastroenterology, neurology, gynecology, a women's cardiovascular health initiative, and mental health services. Other benefits in the collaboration between PM and WCH included a joint medical imaging department, cross-appointed medical personnel, and close proximity between locations for patients to have convenient access to services. The pilot ACTT Clinic was supported by a successful funding proposal submitted to the Ontario Academic Health Sciences Centre Alternate Funding Plan Innovation Fund.

ACTT developers proposed a clinic structure of collaborative inter-professional care, linking healthcare professionals at PM and WCH to provide post-cancer treatment follow-up and ongoing survivorship care. From the literature reviewed, a key resource for program planning was "*From Cancer Patient to Cancer Survivor – Lost in Transition*," which was used alongside the Logic Model (Institute of Medicine & National Research Council, 2006; Weiss, 1972; Wholey, 1979). ACTT developers also made it a priority that the APN and GPO engage and exchange information with the PCP of each patient, laying the foundation for the ultimate transition of patients to primary care. The APN led the following activities to further develop ACTT:

1. ACTT defined cancer survivorship as a phase within the cancer continuum and adopted the 2004 National Cancer Institute (NCI) definition, which described a person as a survivor of cancer from the time of diagnosis and focused on optimizing health after cancer treatment (Institute of Medicine & National Research Council, 2006).
2. An environmental scan of similar APN-led survivorship clinics in North America, including a site visit to Memorial Sloan Kettering Cancer Center (New York City) to assess their cancer survivorship program established in early 2000.
3. Initial cancer site groups, seen as early adopters of ACTT, were engaged in the development of post-cancer treatment and survivorship guidelines, along with the development of a process for transitioning their patients' follow-up care

from PM to ACTT. These guidelines were developed on the basis of evidence-informed recommendations from the National Comprehensive Cancer Network (NCCN) and the Institute of Medicine, and also involved the expertise and consensus of collaborating oncologists. Collaboration with cancer site group leaders was essential to ensure transition practice uptake. For each cancer site group, it was imperative to define the parameters and requirements of follow-up visits, surveillance, and re-referrals.

4. A quality-of-life conceptual model was selected as a framework to address post-treatment psychosocial concerns (Ganz et al., 2002; Institute of Medicine & National Research Council, 2006). A key suggestion was the use of a screening tool to recognize psychosocial distress, prevalent in 20–35% of patients with cancer, so healthcare providers can determine whether a patient requires further assessment or referral to supportive care services (Howell et al., 2009; Zabora et al., 2001). Patients assessed with moderate to high levels of distress were referred to psychosocial services available at PM and WCH. Additional literature review was conducted to better understand triggers of fear of recurrence.
5. A post-treatment summary, which included past cancer treatment and information regarding signs and symptoms suggestive of recurrent disease, was developed for the patient health records and shared with PCPs.

IMPLEMENTATION OF ACTT: CHALLENGES AND ACHIEVEMENTS

In 2010, the formal referral process to transition post-cancer treatment care from PM to WCH was initiated. ACTT was a stand-alone clinic that prepared to receive patients properly and complete clinical assessments by ensuring that administrative personnel, clinical facilities, supplies, and equipment were in place. In the first year, it was essential that there was collaboration and ongoing feedback from cancer site groups, inter-professional teams, and patients to address the challenges and concerns related to providing safe and effective post-treatment and survivorship care outside of a tertiary cancer centre.

Challenges and concerns during the initial implementation of ACTT, identified by the inter-professional teams, were related to the transition process from PM to WCH. Key concerns were rooted in the requirement that post-cancer treatment care was maintained, and survivorship needs of patients and their families were addressed. Initially, cancer site groups were unfamiliar with services available at WCH, especially to address late or long-term effects in post-treatment care and to provide appropriate surveillance care. Sharing and updating medical information and clinical databases between PM and WCH required appropriate protocols to protect patient privacy. Other considerations included maintaining effective communication between the patient's oncology team and the ACTT team and ensuring that patients participating in clinical trials were followed appropriately. To address each concern, systematic processes or protocols were developed and implemented, with opportunities for the cancer site groups to provide continuous feedback about how these processes were working.

Over time, confidence was built between referring oncologists and the ACTT care team. For example, referrals of breast cancer patients to ACTT have increased substantially since 2010 (Figure 1), an indication that the referral process was effective and the transition of patients from a tertiary cancer centre was optimized despite initial concerns. Early on, a small sample of patients were surveyed, and unpublished findings suggested that there was some anxiety and stress related to the transition of care from PM to WCH (Watson, 2010). However, once the transition process was explained and completed, most patients became comfortable with receiving care from the ACTT program (Watson, 2010). The ACTT team has also made efforts to standardize post-treatment follow-up and developed a set of guidelines that are consistent with the literature, including recent Cancer Care Ontario recommendations (Sisler et al., 2016; Sussman et al., 2019). Furthermore, the ACTT program delivers care effectively through a combination of specific components that are described in other publications as key components of a well-designed survivorship program (Downs-Holmes et al., 2014; Glaser et al., 2019). They include the following: collaborating with an inter-professional team, incorporating highly regarded survivorship guidelines (i.e., NCCN), establishing the instrumental APN role, and providing integrated care to address survivorship and psychosocial needs (Downs-Holmes et al., 2014; Glaser et al., 2019).

Overall, three important primary outcomes were achieved by establishing ACTT:

1. It enabled the development of standardized post-treatment follow-up guidelines that are based on NCCN recommendations, shared with specific cancer site groups, and included in the discharge plans and recommendations for PCPs.

2. It created a standard approach for safely and effectively transitioning patients from an active cancer treatment environment, that involved the engagement of inter-professional teams, PCPs, patients, and their families.
3. It ensured that survivors of cancer were connected to a wide range of accessible support services or resources, including those to address psychosocial needs, and made it a priority to address overall survivorship needs on a long-term basis.

POST-TREATMENT AND CANCER SURVIVORSHIP CARE CURRENTLY PROVIDED IN ACTT

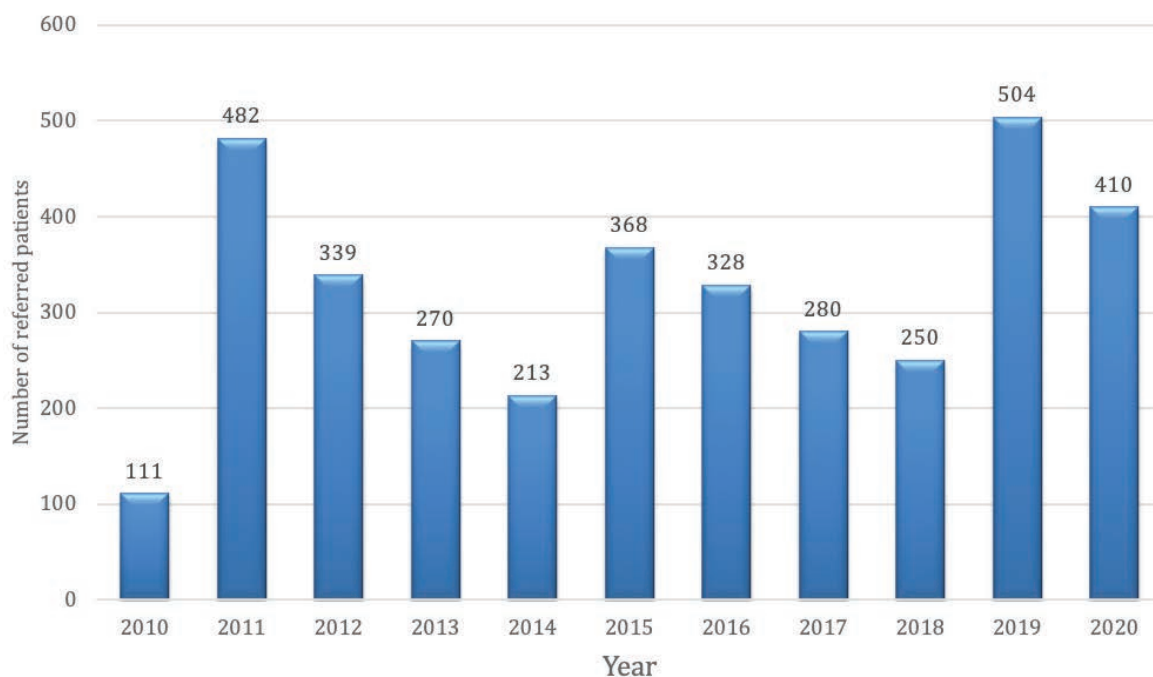
Collaboration of APN and GPO Roles

One of the unique characteristics of the ACTT clinic is the comprehensive survivorship care delivered through close collaboration between a GPO and an APN. The APN role aligns with the CNS scope of practice and competencies, as defined by the CNA (Advanced Practice Nursing Framework Revision Advisory Committee, 2019). These competencies include optimizing the health system and its outcomes, leadership, consultation and collaboration, education, research, and evaluation. All of these competencies were essential in the development and implementation of a new clinic or model of care, especially in the initial phases.

The APN role has evolved with the growth of the ACTT patient population. In contrast to the clinic inception phase, there is now more emphasis on the APN to provide direct clinical care. Nonetheless, the APN role continues to embody all the main CNS competencies, particularly to optimize the health system delivery of care for ACTT patients and to advance nursing practice. As ACTT patients progress further

Figure 1

Number of patients with breast cancer referred to the ACTT program by year



in their survivorship, the APN has become more specialized in cancer survivorship care, including the management of late and persisting effects from cancer treatment and the provision of supportive resources for psychosocial needs.

To strengthen the comprehensive survivorship care and position the clinic to successfully transition patients from specialist to primary care, a GPO role was considered best suited to lead the ACTT clinic. The GPO sees every patient scheduled for a visit to ensure that essential issues are discussed at each consult, questions and concerns from patients and their families are addressed, and more complex issues are assessed and included in the follow-up and survivorship care. The GPO also communicates directly with oncologists or PCPs when patient care requires immediate attention such as re-referral due to cancer recurrence.

Transition to ACTT

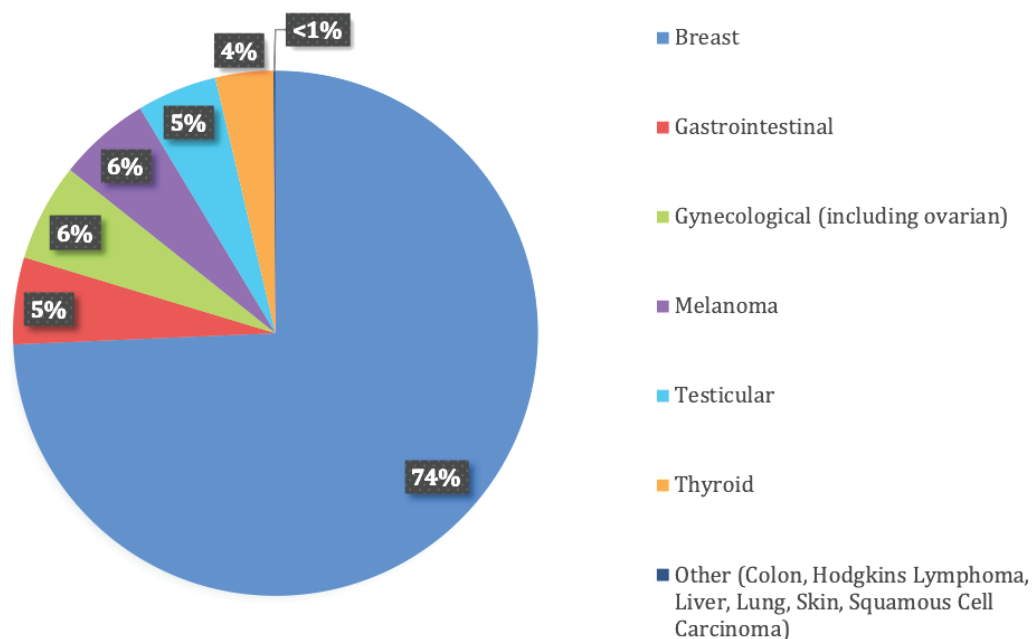
To initiate the transition of a patient from the tertiary cancer centre, the referring oncologist introduces the ACTT clinic to eligible patients and provides a brochure, which explains the role of ACTT, what to expect, who the ACTT team members are, and the relevant contact information. This same information is available on the ACTT website (www.women-collegehospital.ca/care-programs/after-cancer-treatment-transition-clinic/). The oncologist then officially makes the referral to ACTT. In some cases, there is a shared-care model of transition utilized when patients who are referred to ACTT have completed cancer treatment, but may require or request that follow-up continue with the oncology team. In those cases, the follow-up visits alternate between ACTT and the oncology team on a six-month basis until patients are fully discharged to ACTT.

The APN from the ACTT triages the referrals, coordinates the patient's care such as booking the required surveillance tests, and communicates with patients and their families via telephone to ensure their expectations and needs are addressed prior to the initial ACTT visit. These activities are intended to alleviate the anxiety and worry that are known to be associated with the transition points in the cancer continuum. In preparation for the initial visit, the APN gathers the medical history of new patients from the electronic health records, which are shared with the cancer centre, thus ensuring that the patient's health records are updated accurately and are consistent with patient reports. Once at the ACTT, the direct clinical care provided by the APN involves physical assessment, screening, management of late and persisting effects of treatment, health promotion, and teaching on cancer prevention and surveillance, all of which occurs during joint consults with the GPO. The APN also serves as a point of contact for current and discharged ACTT patients when they seek support for issues between clinic visits, coordination of care, or re-entry to the cancer care system due to recurrence.

To date, approximately 4,500 patients have been referred to the ACTT program, 74% of whom were diagnosed with breast cancer (Figure 2). This distribution reflects the prevalence of breast cancer survivors, but it also indicates that patients with other types of cancer may not commonly transition to a post-treatment or survivorship program. That may be because there lacks a consensus among specialists of other cancer types regarding follow-up care and there are no established guidelines for transitioning patients to primary care. Thus, we anticipate the majority of patients referred to ACTT will likely continue to be patients with breast cancer in the near future.

Figure 2

Distribution of cancer patients (n = 4,528) referred to ACTT by cancer type



Transition to Primary Care

ACTT is one of the few post-cancer treatment programs with a defined goal of safely and effectively transitioning survivors of cancer to primary care. The advantages of integrating primary care into post-cancer treatment programs have been well documented and include continuity of care, educating PCPs regarding survivorship needs, and a sustainable approach for follow-up care (Nekhlyudov, 2014).

As noted earlier, it is common for patients to feel reluctant and unsure about transitioning to primary care. To address these concerns, the expectation of transition to primary care is integrated at the first ACTT visit when the role of the clinic and the estimated timeline for discharge are discussed, as part of the survivorship care plan. Early on, patients are introduced to the discharge plans, which are reviewed and revised (if needed) at follow-up visits. By engaging in this discussion, patients can feel more comfortable and reassured regarding the transition of care. It is also important to address patients' concerns or misconceptions related to their previous cancer diagnosis and treatment experiences, to discuss the re-entry process to the cancer care system in the case of recurrence or new malignancy, and to provide clear information on how to contact the ACTT team after discharge. It is common for patients to shift their focus at the end of cancer treatment from coping through the treatment to now managing late or persistent effects, cancer surveillance and prevention, and achieving a healthy lifestyle. ACTT follow-up visits are designed to offer patients ample time to reflect on and discuss their survivorship concerns prior to discharge. This, in turn, can reduce the anxiety and build confidence in the transition to primary care.

To date, among breast cancer patients referred to ACTT, approximately 65% remain as current patients in the program and 27% have been discharged to primary care for ongoing follow-up (Figure 3). The most common length of time in the ACTT program is five years, as most patients with breast cancer are followed until completion of endocrine therapy. It is standard practice for a patient with hormone receptor positive breast cancer to take a maintenance endocrine regimen, such as Tamoxifen or Aromatase Inhibitors, to reduce the risk of recurrence. However, in some cases, patients taking endocrine therapy may request to be discharged to their PCP. In those instances, a shared-care model of transition may be applied to discharge patients safely from ACTT. Other reasons for patients continuing to receive care in ACTT include ongoing post-treatment effects, pain, anxiety, or other unresolved and complex issues.

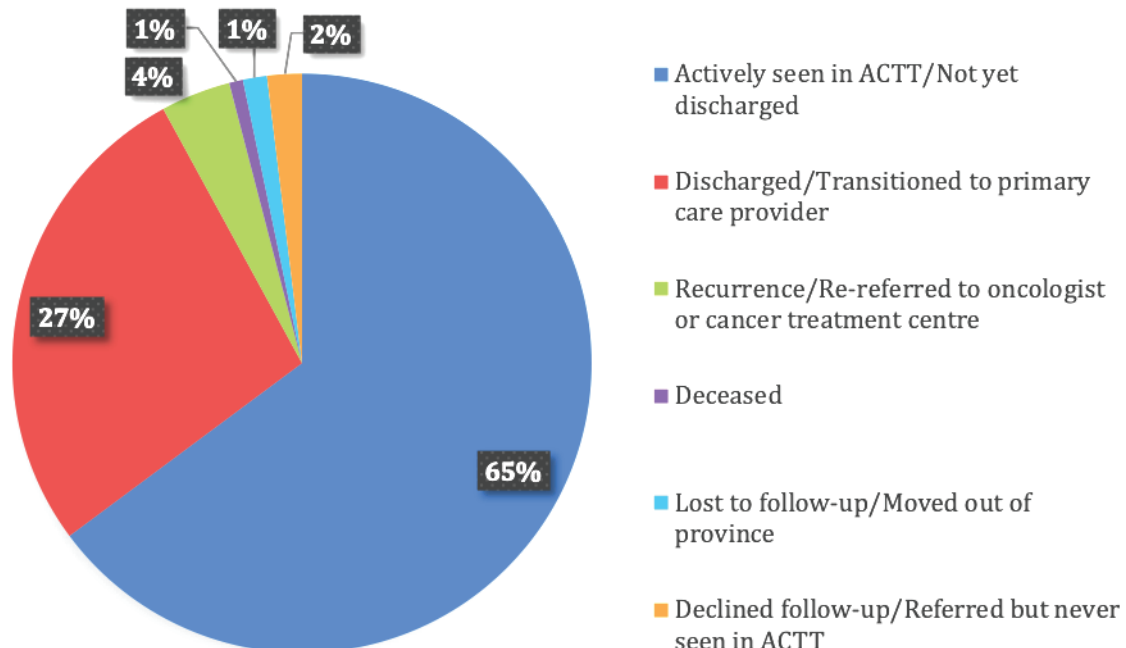
In addition to preparing patients for the transition process, ACTT also ensures that PCPs are prepared to receive patients and continue post-treatment follow-up. The APN and GPO make it a priority to engage and communicate with the patient's PCP in order to establish a strong link for transitioning care. This communication includes, for example, providing notes to the PCP each time the patient completes a follow-up visit in ACTT. The ACTT team has made efforts to standardize post-treatment follow-up by developing a set of guidelines, which give PCPs clear, accurate, and evidence-based information to continue the follow-up and survivorship care of survivors.

Survivorship Care Plan (SCP)

The survivorship care plan (SCP) is often described as an important "map" or "mechanism" for transitioning patients to

Figure 3

Follow-up status of patients with breast cancer ($n = 3,358$) in ACTT program



primary care, particularly as it can strengthen communication between healthcare providers and empower survivors of cancer (Downs-Holmes et al., 2014; Goldenberg et al., 2020; Glaser et al., 2019; Nekhlyudov, 2014; Madarnas et al., 2011). Currently, ACTT provides a generic SCP to discharged patients and their PCPs. The generic SCP describes the purpose of the care plan, signs and symptoms of recurrence, surveillance plan including type and frequency of tests, common side effects from endocrine therapy (breast cancer), most common late and persisting effects, general health screening, and resources to promote a healthy lifestyle and self-management. The APN initially generates the SCP and then discusses it with the patient during ACTT visits before a final version is provided electronically or in print to the patient and their PCP. PCPs will also receive a discharge letter with additional details including cancer history, the oncology team involved in the patient's care, the patient's health status, surveillance recommendations, and information for re-referral if needed.

Barriers to the implementation of SCPs have been identified in the literature including a lack of clarity regarding who is responsible for the update and delivery of the SCP, the allocation of resources or support to generate SCPs, the technological limitations to efficiently auto-generate SCPs, and the incompatibility of health record systems used by various healthcare providers to generate or update SCPs. From the beginning, one of the goals for ACTT was the ability to generate a personalized SCP for each patient. However, there have been various challenges including limited resources such as APN time to elaborate on the content of the SCP, and the lack of a computerized system to support auto-generated SCPs for high volumes of patients.

FUTURE DIRECTIONS AND OPPORTUNITIES FOR ACTT

ACTT is one example of how tertiary cancer centres may consider establishing a post-cancer treatment program. The ACTT program will continue to evolve, as its patient population grows and changes, as cancer survivorship guidelines are updated, and as more cancer specialties adopt the practice of transitioning survivors to primary care. Future opportunities for the ACTT program include the following: expanding into other cancer specialties, exploring new ways to provide patient care, optimizing the transition to primary care, and comprehensively evaluating patient outcomes.

Potential areas of expansion for ACTT include providing post-treatment care to survivors of genitourinary cancers, sarcoma, or hematologic cancers, as these cancer types have high survival rates and there is a high proportion of these patient populations at PM. Efforts are required to engage and collaborate with these new cancer site groups. ACTT may also explore developing partnerships with other Local Health Integration Networks (LHINs), which can link ACTT to additional transitional care services and, in turn, provide the needed support and resources to patients who live in communities beyond Toronto. Partnering with other LHINs also can provide the leadership and education to implement ACTT programs in other regional cancer centres.

Provision of care has been shifting toward a virtual format due to technology advancements, ongoing efforts toward cost-effective approaches, and the need to reduce inefficient processes. In current times, the risk and impact of widespread infections has prompted hospitals and healthcare providers to explore various virtual approaches to delivering care. Thus, the ACTT program will also need to adapt and consider these virtual approaches. It is worth noting that the ultimate goal for ACTT is to transition survivors of cancer safely to primary care and, in doing so, this can minimize patient time in hospitals or regional cancer centres and, in turn, potentially reduce further spread of infections. Optimizing the transition of care continues to be important, but will require educational resources, updated standardized post-treatment guidelines, auto-generated and personalized SCPs, and effective communication and support for PCPs. Implementation of new ways to provide cancer care should be systematically evaluated, including the satisfaction of patients and healthcare providers.

Studies evaluating patient outcomes of post-cancer treatment and survivorship programs have generally focused on psychosocial measures, patient satisfaction, quality of life, self-efficacy, and patient adherence to recommendations (Dietrich et al., 2016; Glaser et al., 2019). However, the literature lacks research on other patient outcomes such as recurrence rates, prevalence of new cancer diagnoses, average length of time in post-treatment program, and rate of transitioning patients to primary care. A 2017 *Lancet Oncology* review suggested that more comprehensive and high-quality evaluations of survivorship programs are needed, including a broader set of performance measures and long-term outcomes (Halpern & Argenbright, 2017). In-depth analysis of ACTT patient outcomes has been lacking, as electronic medical records were not available at WCH when ACTT was initiated and retrieval of data on the ACTT patient population was inefficient and labour-intensive. However, there may be future opportunities for more extensive reporting and comprehensive analyses of patient outcomes, as electronic medical records are now available at WCH, along with more feasible data retrieval and technical support. Furthermore, the ACTT program has the potential to explore and develop various research opportunities, including studies on survivorship care, health services, models of care, psychosocial needs and support, and patient and healthcare provider perceptions.

DECLARATIONS OF INTEREST

The authors declare that they have no conflicts of interest.

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