

# Virtual Care After Treatment



## How telemedicine can expand survivorship programs

According to the American Cancer Society, more than 15 million patients in the United States are considered cancer survivors, and that number is projected to rise 31 percent by 2026.<sup>1</sup> Cancer care providers have long known that the psychosocial and physical side effects of cancer do not end at the conclusion of treatment. The 2006 publication of *From Cancer Patient to Cancer Survivorship: Lost in Transition*, a call-to-action report from the National Academy of Medicine (then named the Institute of Medicine), brought national attention to the unmet needs of cancer survivors. The landmark report laid out 10 recommendations, including:<sup>2</sup>

*Recommendation 2. Patients completing primary treatment should be provided with a comprehensive care summary and follow-up plan that is clearly and effectively explained. This “Survivorship Care Plan” should be written by the principal provider(s) who coordinated oncology treatment. This service should be reimbursed by third-party payors of health care.*

But though the importance of post-cancer care is widely acknowledged, cancer programs and practices continue to struggle with the optimal approach for conducting dedicated survivorship visits. Challenges include a lack of trained providers, patient unwillingness to continue regular care, and limited availability to offer survivorship clinics in rural communities. As a result, many patients still go without survivorship care. Telemedicine—which has increased access to care in numerous specialties—may offer one solution to these challenges.

To evaluate the feasibility of using telemedicine to conduct survivorship visits (in lieu of in-person encounters), Tennessee

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Oncology designed a pilot program that offered virtual care to a specific patient population. The convenience of a telemedicine option proved attractive to the patients who participated in the pilot. Patients appreciated the ease of being evaluated near their homes rather than having to travel long distances to unfamiliar clinics.

## From Recommendation to Requirement

In 2012 and again in 2016, the Commission on Cancer (CoC) updated its Cancer Program Standards for accreditation by requiring cancer practices and programs to develop and distribute individualized survivorship care plans to the patient post-treatment. The recently released CoC update for 2020 regarding Standard 4.9 for survivorship:<sup>3</sup>

*Emphasizes the development of survivorship care programs that can provide management of toxicities of treatment, rehabilitation needs, psychological support, screening for recurrent and new cancers, and specific support programs that would be identified by the cancer committee. The delivery of survivorship care plans can be an important part of survivorship care, but they are not the only component and are no longer required to meet the revised version of the standard.<sup>3</sup>*

Tennessee Oncology participates in the Oncology Care Model (OCM), which outlines a survivorship plan as one of the 13 components in the National Academy of Medicine Care Management Plan. Additionally, one of the American Society of Clinical Oncology's Quality Oncology Practice Initiative (QOPI) core measures for certification requires practices and programs, such as Tennessee Oncology, to distribute chemotherapy treatment summaries to patients and providers. According to the National Comprehensive Cancer Network (NCCN) guidelines, the care of cancer survivors should include education about these six components:<sup>4</sup>

1. Prevention of new and recurrent cancers
2. Assessment of late psychosocial and physical effects of cancer and/or its treatment
3. Surveillance for cancer recurrence
4. Interventions for treatment-related side effects (such as symptoms, psychological distress, and financial and social concerns)
5. Coordination of care between primary care providers and oncologists
6. Survivorship care planning.

## A Survivorship Program Takes Shape

To address these aspects of survivorship care, to help our hospital partners obtain CoC accreditation, and to maintain our QOPI certification, in 2016 Tennessee Oncology decided that a designated survivorship visit was necessary for patients who have completed curative therapy (see Figure 1, right). Accordingly, we developed an integrated care model to educate patients about survivorship and provide them with care plans during a follow-up visit with an oncologist or an oncology-trained advanced practice provider (APP) after curative treatment has ended.

We created our patient survivorship care plan in the “Navigating Cancer Patient Engagement Portal” platform. However, the APP spent a significant amount of time manually entering the template's components, including patient's diagnosis, medical history, medications, treatment summary, follow-up recommendations, signs of recurrence, late effects of cancer treatment, and survivorship resources. Once the survivorship plan was entered

Figure 1. Components of the Survivorship Visit



in to the electronic health record (EHR), an oncologist or oncology-trained APP met with patients during the follow-up visit to review the plan. As part of this visit, the provider:

- Discussed potential chronic and late-stage side effects of cancer and/or its treatment
- Offered education on preventive health and healthy lifestyle behaviors
- Addressed symptom management, as well as surveillance for cancer recurrence or secondary cancers.

Shortly after providers began conducting these survivorship visits, they reported that the limited time frame for visits did not allow for meaningful discussion. Providers felt rushed when reviewing survivorship plans with patients and providing post-treatment education.

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To further improve our survivorship program, we recruited survivorship-trained APPs to develop survivorship care plans for the primary oncologist. This task was considerable, given that Tennessee Oncology consists of 33 clinics staffed by 90 physicians and 50 APPs. Four APPs volunteered to complete survivorship

care plans during their administrative time and electronically send them to the primary providers with a due date of the patients' next scheduled follow-up visits. Additionally, these APPs were trained to provide survivorship care via telemedicine. Before doing so, the APPs were required to:

- Complete two survivorship training modules
- Review NCCN guidelines on survivorship
- Demonstrate their understanding of telemedicine billing and documentation requirements.

To conduct in-person survivorship care visits, APPs would be driving significant distances between clinics, including long drives to reach several clinics located in rural communities. In September 2017 we implemented a telemedicine pilot to reduce this travel time.

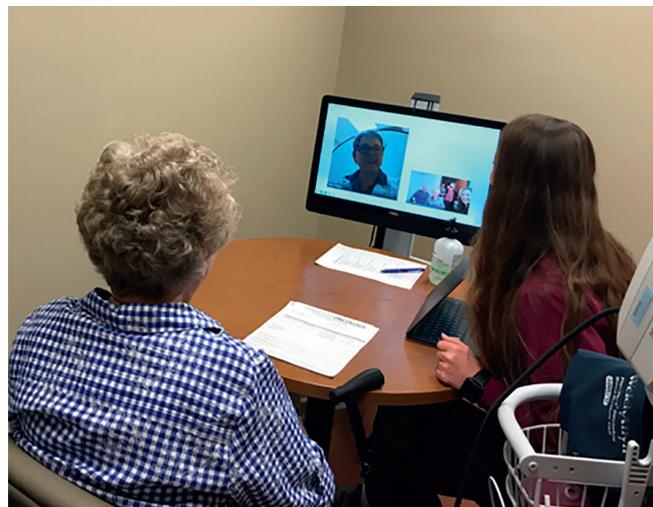
### Preparing for the Pilot

Tennessee Oncology's survivorship telemedicine team was composed of key stakeholders at the practice, including the director of enterprise project management, the East Tennessee project coordinator, the survivorship director, the front office director, the director of patient accounting, two physician leaders, four APPs, information technology, the manager of patient navigation, and regional operations managers. The first steps in the planning process included:

- Understanding the rules and regulations regarding telemedicine in the state of Tennessee
- Understanding the federal and state telemedicine reimbursement policies for Medicare, Medicaid, and commercial payers
- Determining technology requirements
- Identifying the patient population and clinic locations
- Assessing provider, staff, and patient willingness to participate.

Reimbursement for telemedicine services has lagged behind innovation in healthcare delivery. During our billing specialists' initial evaluation of our payment options, we identified several barriers to reimbursement for telemedicine services. For example, Medicare will only reimburse for telemedicine visits in rural locations and requires that the visits be conducted in a "facility." By the Centers for Medicare & Medicaid Services' definition, Tennessee Oncology has only four rural clinics. Commercial payers have their own requirements for telemedicine reimbursement. Blue Cross Blue Shield, for example, will not reimburse providers for telemedicine services unless there is an MD or APP in the room with the patient.

For these reasons, we limited the first phase of the pilot to patients enrolled in the OCM with a breast cancer diagnosis who had completed curative therapy within the past year. The OCM Monthly Enhanced Oncology Services payment helped offset the cost of providing the telemedicine visit for this subset of patients. We did not bill these patients for the phase one pilot's telemedicine services. Billing was factored in during phase two of the pilot, which added in insurance verification beyond the OCM population



Tennessee Oncology's Survivorship Advanced Practice Provider and patient participate in a telemedicine session.

to expand the pilot patient demographic to include private payers and self-pay, as well as all tumor types. We identified patients for the pilot by conducting a manual chart review of patients listed in the cancer registry database, through EHR applications, and through physician referrals.

Our IT department carefully defined and selected the technology requirements for the pilot and built a mobile cart that would carry and transport the hardware required for a telemedicine visit. We used Skype to communicate with patients. (Tennessee Oncology was already using Skype technology to conduct meetings via videoconference, accessing it through a secure, Health Insurance Portability and Accountability Act-compliant network.)

Pilot locations were selected based on their size and the availability of patient navigators. In phase one of the pilot, we chose our North Park clinic in East Tennessee, a small office consisting of one physician, two front office employees, and one medical assistant. In phase two of the pilot, we selected two Middle Tennessee locations in Murfreesboro and Shelbyville. The Murfreesboro clinic, considered an urban clinic, consists of 10 providers, six front office employees, and six medical assistants. The Shelbyville clinic, considered a rural clinic, consists of three providers, two front office employees, and one medical assistant.

Before beginning the pilot program, the survivorship team conducted employee training and developed quick reference guides. These guides offered instructions to the medical assistants on how to set up and use telemedicine carts. These guides also showed the medical assistants how to locate individual survivorship care plans in the EHR so that they could give the plan to the patient prior to the virtual meeting with the survivorship APP.

## Visit Workflow

To recruit patients for the survivorship telehealth pilot, front office staff in each location contacted eligible patients and described the pilot program. If patients agreed to participate, front office staff scheduled them for telemedicine visits and sent electronic calendar invitations to the designated APP, stakeholders, and managers. The calendar invitations included a link to Skype for Business that allowed the APP to join the meeting via laptop with a web camera. Patients joined the meeting from local clinics by using a telemedicine cart located in a designated private exam room.

We built three telemedicine carts for the pilot. Each cart holds a computer with a 27-inch screen supported by an eight-hour lithium-ion battery. The computer has a built-in microphone and camera that allow the patient to see and hear the provider during a visit. The cart's wireless connection enables it to move from one exam room to another if necessary.

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To expand the program into all clinics in 2019, we have budgeted for a telemedicine cart in each one, totaling approximately \$40,000. We also need to fund a more sophisticated platform to expand telemedicine services to all clinics.

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The survivorship-trained APPs who conducted the telemedicine visits were located in various locations in Middle Tennessee and at the Nashville headquarters. Before each telemedicine visit, APPs completed a personalized survivorship care plan based on cancer type and reviewed the medical record to familiarize themselves with the patients' treatment history. If any part of a patient's medical history or treatment summary was incomplete, the APP modified the record in the EHR for accuracy which automatically updated the survivorship care plan.

At the time of a visit, patients checked in at their local clinics. The APP in Nashville was notified of the patient's arrival via instant messaging. At the local clinic, a medical assistant then escorted the patient to the exam room to obtain vital signs, complete the visit note, and connect the patient to a Skype videoconference via the telemedicine cart.

During the 30-minute telemedicine survivorship visits, APPs discussed the survivorship care plan with the patient and provided an educational booklet titled "Facing Forward: Life After Cancer Treatment."<sup>6</sup> During the visit, the APP educated the patient on late and long-term side effects of the personalized treatment and signs of recurrence to report to the oncologist, discussed healthy lifestyle behaviors, and provided interventions and/or referrals for existing issues the patient was experiencing. The patient was

provided with a hard copy of the survivorship care plan and the document was sent electronically to the primary care physician. After the visit, medical assistants asked patients to complete satisfaction surveys before leaving the clinic. In Nashville, the APP completed the office visit note and billed for the visit. Our billing team monitored incoming charges for telemedicine visits and only submitted charges based on payer approval of telemedicine visits. Figure 2, right, outlines the workflow of the survivorship telemedicine visit.

## Outcomes

At the conclusion of the pilot—which ran from September 7, 2017 to July 31, 2018—we analyzed the data collected to identify potential issues in our workflow processes with an eye toward expanding the telemedicine program to additional clinics. During the pilot, we identified 99 patients eligible for the telemedicine program. Of these, 37 percent completed a survivorship telemedicine visit, and 23 patients declined the visit. The top three reasons patients gave for not participating were co-pay requirements, frequent doctor visits, and scheduling and/or transportation issues. We were unable to contact 19 percent of patients, and 21 percent of the patients who were scheduled for appointments did not show up (see Figure 3, page 38). We identified lack of follow-up with patients who did not show for their appointments as a concern during our evaluation of the pilot, resulting in survivorship care plans not being delivered. The primary oncologist/APP was notified that the patient did not show up for the visit and instructed to provide the completed survivorship care plan to the patient at the next scheduled follow-up appointment.

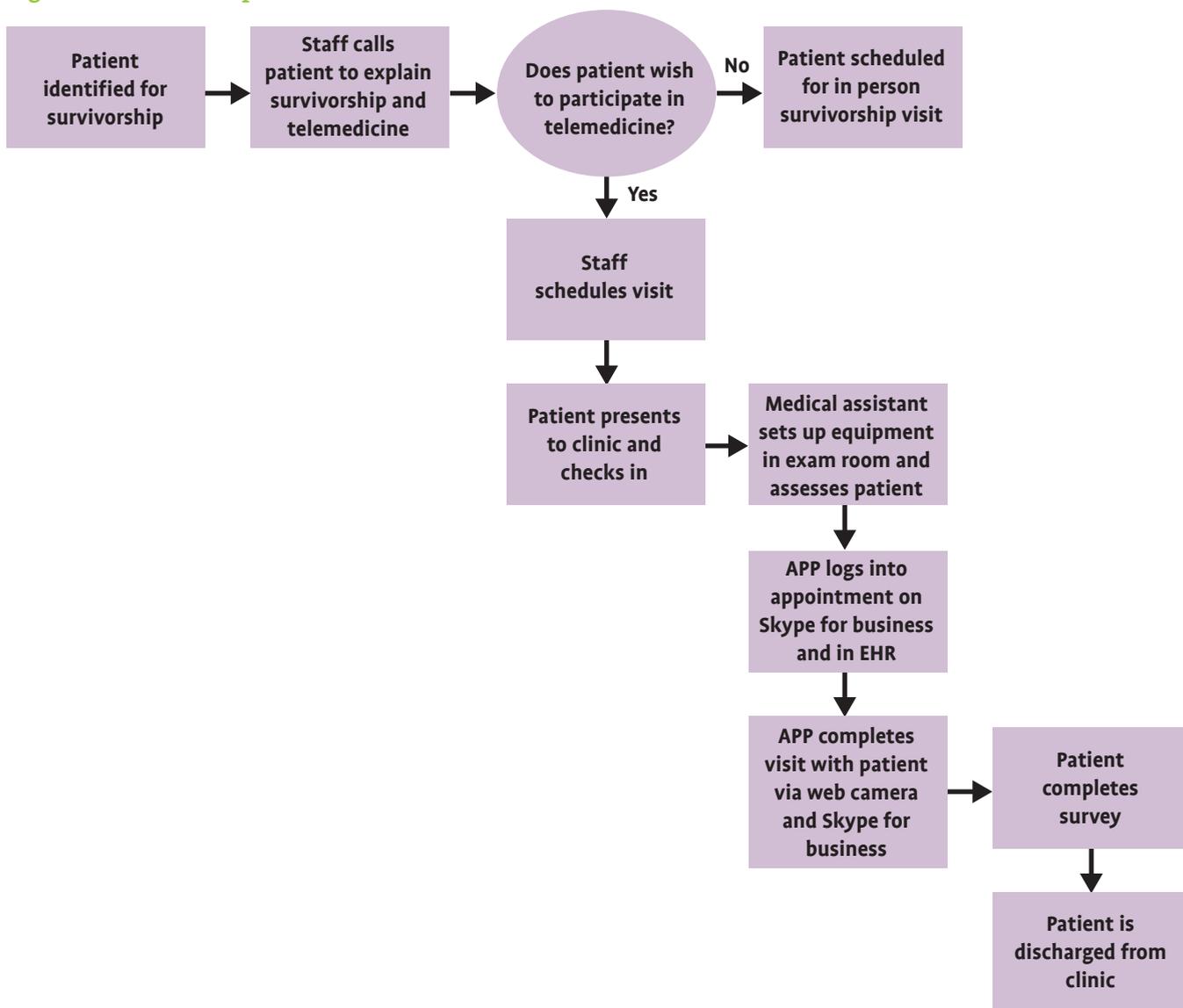
The total number of both in-person and virtual telemedicine survivorship visits completed by Tennessee Oncology from September 7, 2017 to July 31, 2018 was 1,216 (1,180 in-person visits, or 97 percent; 36 telemedicine visits, or 3 percent). All patients who took part in virtual survivorship visits indicated their satisfaction with the experience (Table 1, page 39). Both patients and APPs agreed that telemedicine visits were more productive than in-person visits because the visit allowed more time with the patient to focus solely on survivorship components, instead of our initial workflow of reviewing the survivorship care plan during the regularly scheduled follow-up with the primary oncologist or APP.

## Cost Concerns

Funding for a new pilot program in the community practice setting can be limited. The total cost for three telemedicine carts was \$7,406. To expand the program into all clinics in 2019, we have budgeted for a telemedicine cart in each one, totaling approximately \$40,000. We also need to fund a more sophisticated platform to expand telemedicine services to all clinics. Skype has the scalability we can manage now with three clinics, but as we expand across Tennessee Oncology, we need to improve scheduling capabilities and reliability.

Currently, our APPs volunteered to provide this service during their dedicated administrative time, while maintaining their regular oncology clinic schedule the other days of the week. Employing

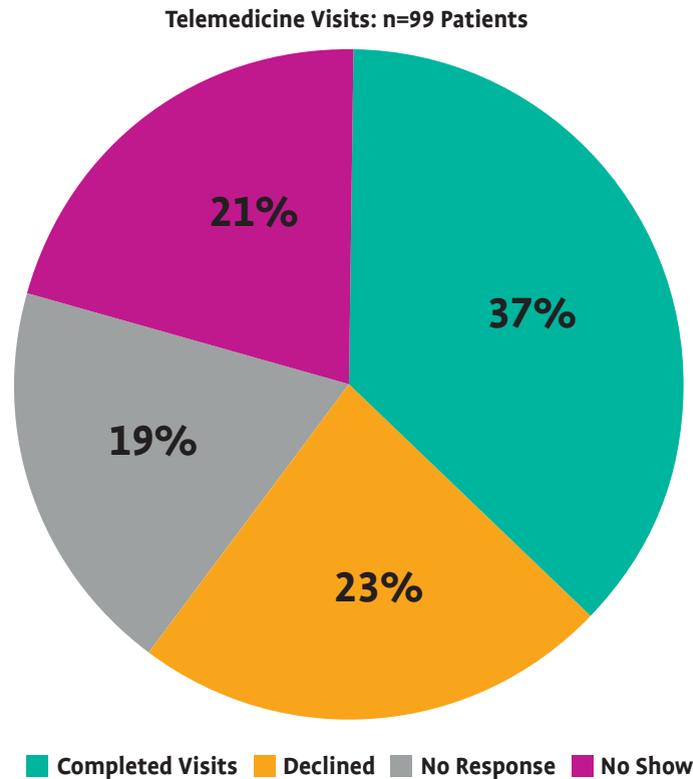
Figure 2. Survivorship Visit Workflow



an APP to support the program averages \$385 per day. Because APPs are not currently maintaining a full clinic schedule (approximately 15 visits per day) within the telemedicine pilot, our loss of revenue typically reaches \$1,231 per day. If the APPs were designated full-time employees to the survivorship care program, their time would not be reimbursed because they are not conducting an average of 15 telemedicine visits per day. Due to limitations on insurance reimbursement for telemedicine services, we currently have no way of generating income from a telemedicine survivorship program. We need to use revenue generated from in-person visits to balance out the costs of APP services for virtual visits.

Since we completed the pilot, Tennessee Oncology has continued to offer survivorship care plans via telemedicine in a limited number of locations, and to support these efforts we have implemented a prior authorization process for telemedicine visits. Insurance verification is noted on the patient's medical record as "eligible" or "ineligible" for telemedicine. Our goal is to employ dedicated survivorship APPs who travel to outlying clinics to conduct in-person survivorship visits when telemedicine services are not reimbursed. Currently, we have designated two slots weekly for in-person survivorship visits to be completed by a survivorship-trained APP at our Murfreesboro clinic for those that are ineligible for a telemedicine visit.

Figure 3. Telemedicine Visit Metrics



### Lessons Learned

As with most new survivorship programs, we faced many challenges in creating and implementing our telemedicine pilot. We discovered early on that success for a program such as ours depends on physician support and referrals. But our limited reporting capabilities in our EHR make it difficult to identify when a survivorship visit is needed. Our current method of identifying patients—manual chart review—is time-consuming. And without full-time support staff, oncologists are unable to easily place orders for a survivorship visit.

Ideally, we would like to use patient navigators to identify patients and initiate survivorship visits going forward. We could also increase patient participation by encouraging our physicians and APPs to discuss the importance and benefits of quality survivorship care with patients before they are contacted by navigators to schedule a visit.

During the pilot, we re-evaluated the patient call scripts used by navigators and schedulers to ensure that they were consistent and informative and made patients feel comfortable about coming in for a telemedicine visit. Several patients were displeased that they were not informed of the possibility of a co-pay requirement

at the time of their visit. Subsequently, we updated our method of providing this information when an eligible patient is contacted to schedule a telemedicine visit.

We also identified a lack of follow-up for cancelled visits, rescheduling errors, lags in scheduling, and insufficient data collection as causes for concern. Tennessee Oncology approved a designated survivorship coordinator position this year to further improve and expand our survivorship telemedicine program.

### Going Forward

The virtual survivorship visits we provided in this pilot resulted in outstanding patient satisfaction and improved provider engagement. Quality survivorship care helps patients adjust to the physical, emotional, and financial changes that can occur after cancer treatment. Including survivorship as part of the cancer continuum and directing efforts at improving quality of life after cancer treatment are now integral parts of the science and practice of oncology.<sup>6</sup> With the number of cancer survivors increasing, we will need more resources to provide survivorship care to the cancer community. Telemedicine can help make this possible for more patients.

**Table 1. Patient Satisfaction Survey After Survivorship Telehealth Visit**

n = 10	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I felt comfortable speaking with the staff through the telemedicine call.					10
The telemedicine call, as a whole, ran smoothly.					10
The telemedicine provider was prepared to speak with me about my care.					10
I was comfortable speaking with the telemedicine provider.					10
My telemedicine provider took time to answer my questions in a way I could understand.					10
While on the telemedicine call, my care provider was focused on my issues.					10
I was satisfied with my overall telemedicine experience.					10

Tennessee Oncology plans to continue to enhance its survivorship program by expanding telemedicine services to all eligible patients and clinics within the practice regardless of cancer type. Our goals for our program include implementing a full-time staff for the survivorship team and creating a dedicated IT platform for scheduling and data analytics. We hope to be able to conduct follow-up survivorship visits as we expand our telemedicine survivorship program. The future of full-spectrum cancer care is dependent on innovative approaches like these to expand services for a rapidly growing patient population. 

**References**

1. American Cancer Society. Cancer treatment & survivorship facts & figures 2016-2017. Available online at: [cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/cancer-treatment-and-survivorship-facts-and-figures/cancer-treatment-and-survivorship-facts-and-figures-2016-2017.pdf](https://cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/cancer-treatment-and-survivorship-facts-and-figures/cancer-treatment-and-survivorship-facts-and-figures-2016-2017.pdf). Last accessed June 11, 2019.

2. Hewitt M, Greenfield S, Stovall E. *From Cancer Patient to Cancer Survivor: Lost in Transition*. Washington, DC: National Academies Press; 2006. Available online at: [nationalacademies.org/hmd/~/media/Files/Report%20Files/2005/From-Cancer-Patient-to-Cancer-Survivor-Lost-in-Transition/recommendations.pdf](https://nationalacademies.org/hmd/~/media/Files/Report%20Files/2005/From-Cancer-Patient-to-Cancer-Survivor-Lost-in-Transition/recommendations.pdf). Last accessed June 11, 2019.

3. American College of Surgeons, Commission on Cancer. Draft revised standards. Available online at: [facs.org/~/media/files/~/coc/draft\\_coc\\_revised\\_standards\\_may2019.ashx](https://facs.org/~/media/files/~/coc/draft_coc_revised_standards_may2019.ashx). Last accessed June 30, 2019.

4. National Comprehensive Cancer Network. Survivorship. Version 2.2018. Available online at: [nccn.org/professionals/physician\\_gls/pdf\\_survivorship.pdf](https://www.nccn.org/professionals/physician_gls/pdf_survivorship.pdf). Last accessed December 10, 2018.

5. National Cancer Institute. Facing forward: life after cancer treatment. Available online at: [cancer.gov/publications/patient-education/facing-forward](https://cancer.gov/publications/patient-education/facing-forward). Last accessed June 11, 2019.

6. Parry C, Kent EE, Mariotto AB, et al. Cancer survivors: a booming population. *Cancer Epidemiol Biomarkers Prev*. 2011;20:1996-2005.