

# Development of a Virtual Integrative Oncology Center



**I**ntegrative oncology is defined as “a patient-centered, evidence-informed field of comprehensive cancer care that uses lifestyle modifications, mind-body practice, and natural products from different traditions alongside conventional cancer treatments.”<sup>1</sup> It differs from alternative medicine, which the National Cancer Institute (NCI) defines as treatments that are used instead of standard treatments.<sup>2</sup> A 2017 publication by Lopez et al. reported a 30 percent to 60 percent use of at least one integrative oncology-based intervention, such as meditation, yoga, acupuncture, massage, exercise, and nutrition and natural products, among patients with cancer.<sup>3</sup> Despite its growing use, in many instances, patients use complementary health approaches without the guidance or knowledge of their medical providers. This underscores the importance of efforts to make integrative oncology resources more widely accessible to patients, particularly those undergoing cancer treatment, under the supervision of trained providers in a complementary and coordinated approach.

Research surrounding the use of integrative oncology-based modalities for symptom management and quality of life has continued to expand. This has led to the creation of a series of clinical practice guidelines (based upon a systematic review of the literature), as part of a collaborative effort between the Society for Integrative Oncology (SIO) and the American Society of Clinical Oncology (ASCO). One example is the SIO-ASCO Breast Cancer Guideline, published in 2018, which reviews integrative oncology-based modalities and the levels of evidence supporting their recommendation. This ranges from Grade A evidence, such as meditation for reducing anxiety and depression/mood distur-

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bance, to those with limited to no evidence.<sup>4</sup> SIO-ASCO have announced ongoing collaborations for three additional guidelines including: cancer-related pain management, fatigue in cancer survivors, and care of anxiety and depressive symptoms experienced by those with cancer. These guidelines will provide an ongoing evidence-based resource for providers to make informed recommendations on the incorporation of integrative oncology modalities into cancer care.<sup>5</sup>

At a national level, there has been significant growth in the area of integrative oncology. A web-based search of the 71 NCI-designated cancer centers identified that at least 22 have current integrative oncology programs. A study from Memorial Sloan Kettering Cancer Center in 2017 cited a 30 percent growth in integrative oncology modalities at NCI-designated cancer

centers from 2009 to 2016, and currently 6 out of 12 supportive care National Comprehensive Cancer Network (NCCN) Guidelines® include integrative oncology modalities as part of their recommendations.<sup>6</sup> Additionally, over 60 percent of NCI-designated cancer centers not only offer integrative oncology information and specific services, but provide physician consultation visits in integrative medicine.<sup>7</sup>

Despite this growing evidence and the standardization of integrative oncology recommendations with the more widespread inclusion in guideline recommendations, there remain ongoing barriers to access of integrative oncology resources by patients with cancer. Generally, these services are not reimbursed by payers, leading to financial constraints due to significant out-of-pocket expense thus creating a financial barrier. In regions where integrative oncology-based services are available, there may be additional limitations related to access to providers that have specialized oncology training. Patients living in more remote regions must often travel a significant distance to larger academic institutions offering integrative oncology-based care.

### **COVID-19 and the Shift to Telehealth**

The COVID-19 global pandemic saw a shift in the delivery of healthcare with more widespread adoption of telehealth services. This change was experienced throughout much of the medical community, resulting in the widespread development of virtual services and programs for patients. With this rapid response, academic medical centers determined that high-quality care could be delivered via telehealth. With video consultation appointments, individual assessments could be enhanced by seeing patients as they functioned among family within their own home environment and family. In addition, support persons living outside of a patient's state could now participate in follow-up visits and shared decision making.

With the shift of clinical care to a telemedicine-based format, integrative oncology centers also faced the same hurdle. As the common integrative oncology-based modalities are often dependent on face-to-face or touch interactions between patients and providers, this posed a challenge for most integrative oncology centers. The integrative oncology team at the Leonard P. Zakim Center for Integrative Therapies and Healthy Living at the Dana-Farber Cancer Institute recently published their experience during the COVID-19 pandemic. This experienced team concluded that virtual integrative oncology-based interventions were feasible to deliver to patients and detailed how ongoing research projects were converted into virtual recruitment and delivery formats, resulting in an increase in patient enrollment.<sup>8</sup>

### **Our Experience**

The Pluta Integrative Oncology & Wellness Center is part of the University of Rochester Medical Center, Wilmot Cancer Institute. Our center is the first of its kind in the Western New York Region, with a mission to provide compassionate, evidence-based, and symptom-directed care to patients with cancer—both during and beyond treatment. The center was established in 2018 and focuses on four core pillars: movement, touch, nutrition, and mindfulness.

Our leadership team consists of two co-medical directors and a program manager. Services include:

- Acupuncture
- Massage
- Meditation
- Nutrition, such as cooking for wellness classes and chef demonstrations
- Integrative oncology medical consults.

Additionally, we have group classes, like yoga, qi gong, tai chi, ReNEW (Recharge, Revive, Relax, Nutrition, Exercise, and Wellness Program for cancer survivors), art therapy, and an integrative oncology lecture series. All classes are available to patients and their care partners. We are unique in our care delivery in that our providers have received oncology-specific training, providing a level of understanding and care that sets our center and services apart from the local community.

The COVID-19 pandemic initially resulted in a complete suspension of services at the Pluta Integrative Oncology & Wellness Center. However, to minimize patient exposure and risk of possible infection, and to protect those receiving active chemotherapy treatments, telehealth visits—both telephone and video—rapidly became a significant part of how the Wilmot Cancer Institute provided care to patients. Soon our integrative oncology team was assessing how integrative oncology-based services could be delivered via telehealth.

### **Our Virtual Transition**

Within a week of COVID-19 being declared a public health emergency, and the subsequent halt to our integrative oncology program, our leadership team met to strategize ways to continue to support our patients as they navigated their cancer journey. In addition to feeling a lack of control over their cancer diagnosis and treatment, our patients were now dealing with the added stress of COVID-19. Support persons were no longer allowed at follow-up or treatment visits, and patients were feeling alone and isolated without their circle of support. Our initial approach was to create a video library of resources for patients, reflective of our four core modalities. Our integrative oncology providers taped home-based yoga sessions, cooking demonstrations with items one might already have in the home, brief exercise interventions, and meditation exercises. We posted these videos on our website and on social media platforms, including Facebook. At this time, our program manager developed and emailed to patients a series of Pluta Integrative Oncology & Wellness Center newsletters that focused on our integrative oncology pillars (i.e., eating the rainbow, yoga video, etc.). A total of 29 newsletters were sent out during the COVID-19 shut down; these are currently archived on our Virtual Integrative Oncology Center website. ([urmc.rochester.edu/cancer-institute/patientscaregivers/wellness/integrative-care/virtual\\_ioc\\_covid19.aspx](http://urmc.rochester.edu/cancer-institute/patientscaregivers/wellness/integrative-care/virtual_ioc_covid19.aspx)).

After positive response to our online videos, we evaluated each of our core programs as to the feasibility of offering them in a live Zoom session. We ultimately transitioned our entire in-person calendar of events to a fully virtual setting, using the

same flow of patients registering in advance for a class and then subsequently receiving a private Zoom link. These virtual sessions included yoga, meditation, and cooking for wellness demonstrations. As telehealth consultations grew, we began offering virtual integrative oncology consultation visits with our program manager and our co-medical directors.

Our ReNEW program, which involves individual exercise assessments, was another area of focus for virtual transition. Our exercise physiologist began performing virtual patient assessments live on Zoom and then developed a home-based exercise intervention plan for patients. When the summer months allowed for outside gatherings in a socially distanced manner, our team began to offer outdoor classes in-person.

Our art therapy program had launched a year prior to the COVID-19 pandemic, and it provided a unique challenge to our team. As we learned more about virtual delivery of services, in early 2021, our art therapist created an online program focused on projects and materials that patients would likely have available to them at home. She created online instructions for projects, including a detailed list of supplies. Throughout the COVID-19 pandemic, our art therapist also provided visual journaling prompts to help patients focus on coping, gratitude, and mindfulness. This was an excellent way for patients to record their personal experiences and feelings with cancer and the global pandemic.

Beyond the conversion of live classes to a virtual, Zoom-based format, our team adapted touch modalities to self-interventions; for example, the use of acupressure in place of acupuncture to target specific symptoms. Acupressure uses the same principles as traditional acupuncture, with administration of pressure by fingers, thumbs, or a device.<sup>9</sup> Our two acupuncturists created acupressure videos for neuropathy related to chemotherapy and for relaxation and stress management.

Table 1, page 42, is an overview of the integrative oncology services developed during our virtual transition. Since initiation of the Virtual Integrative Oncology Center, we have had more than 25,092 total visits on our YouTube video library. In our virtual format, our team was seeing more than 300 patients per month within the core modalities offered. An overview of our video library, as created under each of the four core pillars, is detailed in Figure 1, page 43.

In recognition that health and wellness are important not only for our patients, but also for the staff that tirelessly provides care to patients, our virtual transition provided much-needed support to our staff. All Wilmot Cancer Institute providers have access to our virtual integrative oncology offerings, allowing staff and clinicians to access the tools and resources needed to improve their overall health and wellness. We also created specific tools for staff that our team sent out during the second COVID-19 surge, which aligned with our four core pillars of movement, touch, nutrition, and mindfulness.

## Prehabilitation

At the time of their initial diagnosis, many patients with cancer frequently do not meet standard guidelines in the areas of exercise



**Pluta Integrative Oncology Team.** Team represents all four of the integrative oncology core pillars of movement, touch, nutrition, and mindfulness, along with our art therapist, program manager, and co-medical directors of the center. (Photo taken prior to the COVID-19 pandemic.) Source: University of Rochester.

and nutrition as put forth by the American Cancer Society. In response, many cancer programs now offer “prehabilitation” for patients at the time of diagnosis. Prehabilitation is defined as “a process on the continuum of care that occurs between the time of cancer diagnosis and the beginning of acute treatment; it includes physical and psychological assessments that establish a baseline functional level, identifies impairments, and provides targeted interventions that improve a patient’s health to reduce the incidence and severity of current and future impairments.”<sup>10</sup> This critical time between diagnosis and initiation of surgical treatment creates the opportunity to establish a baseline functional and nutritional status and identify areas of improvement, under the guidance of a nutritionist and exercise physiologist. Because many patients with cancer receive neoadjuvant chemotherapy prior to definitive surgery or have a several-week window of time before surgery is scheduled, prehabilitation can provide potential benefits to this subset of patients. Nutrition and movement (exercise) remain two important pillars at the Pluta Integrative Oncology & Wellness Center. Prehabilitation represents a unique opportunity to intervene with patients at the time of their cancer diagnosis with the goals of decreasing treatment-related morbidity, increasing cancer treatment options, and improving the physical and psychological health outcomes and general quality of life as patients embark on their treatment.

Prior to COVID-19, our center had been building the concept of a prehabilitation program. The pandemic allowed us to reinvent this program in a virtual format, based on our positive experience with our movement and nutrition programs. We transitioned our in-person concept to a virtual prehabilitation program for patients with cancer. Our prehab team started by overhauling our intake forms to best capture a patient’s current functional status and nutritional needs. The 90-minute virtual visit is broken down into three 30-minute consultations with one

**Table 1. Select Components of Our Virtual Integrative Oncology Center**

13 Live Zoom classes a week
35 YouTube videos created by staff on the four core pillars: movement, touch, nutrition, and mindfulness
2 virtual cooking/nutrition programs each month <ul style="list-style-type: none"> <li>• Launched <i>Nutrition During Chemo</i> (a two-part series showing how to use food to help manage the symptoms of chemotherapy, which is used at all Wilmot Cancer Institute clinics)</li> <li>• Launched <i>Virtual Knife Skills for Plant-Based Cooking</i></li> <li>• Hosted virtual guest chef experiences—one with a nationally renowned plant-based chef and one with a local executive director of a cancer support organization.</li> </ul>
Hosted a virtual <i>Celebrate the Journey</i> for 74 patients with cancer, focusing on integrative oncology modalities to improve quality of life.
Limited number of telehealth integrative oncology consultations.

of the integrative oncology co-medical directors, an exercise physiologist, and a nutritionist. This includes a baseline comprehensive assessment administered as part of the initial intake visit with subsequent individualized recommendations and two-week follow-up assessments to measure and track response to the interventions over an eight-week time frame. The initial intake has continued as a virtual option for patient convenience, with in-person exercises and nutrition assessment to follow. The prehabilitation program has been an important component of our virtual integrative oncology platform and has continued in its virtual format and overall growth.

**Regional Expansion**

Wilmot Cancer Institute encompasses a 27-county region within western and central New York that includes the Finger Lakes, Southern Tier, Central, and Mohawk Valley regions. This catchment area services 3 million people within 27 counties (see Figure 2, page 44). Within this region, 26 counties have a higher poverty level than the U.S. average, and the catchment area, as a whole, has higher rates of cancer than other regions. Specific disparities also exist within our regional clinics, including tobacco use, physical activity, and obesity.

Because integrative oncology providers are often located within larger urban locations and there can be substantial costs associated with the use of specific integrative oncology-based interventions (i.e., acupuncture, massage, exercise, or yoga), there remain significant barriers to accessing these services. Additionally, education about the benefits of integrative oncology-based modalities—including how they can alleviate symptoms during treatment—is important and is not always widely available in more rural communities. The growth of our virtual integrative oncology center has provided an opportunity to expand our services on a broader level throughout our regional cancer clinics, removing barriers by providing virtual access to integrative oncol-

ogy-based providers and classes. The ability to provide virtual integrative oncology consultation visits and Zoom-based classes also eliminates a financial barrier for patients. Studying regional disparities has highlighted areas, such as physical activity and obesity, for which virtual integrative oncology-based interventions can provide a significant impact. Expanding education through community outreach further helps by improving communication and understanding of how integrative oncology modalities can help patients improve their overall health and wellness and minimize symptoms throughout their cancer treatment.

**Future Directions**

As with so many in clinical practice, the transition to virtual care during the COVID-19 pandemic brought much uncertainty. How would patients respond to telehealth assessments or group Zoom classes? What would the level of provider and patient engagement be like? What we found: patients not only embraced the pivot to virtual care, but telehealth has allowed our patients more widespread access to integrative oncology modalities.

Future expansion of our virtual program involves a better understanding of the specific needs and barriers of the use of integrative oncology modalities by our patients. We will do so through an ongoing study assessing perceptions of and access to integrative oncology modalities within our regional clinic locations. Data from this study will enhance how we deliver our virtual integrative oncology care. Prior work assessing the use of complementary therapies among rural adults without cancer demonstrated that use is common; although, most patients sought care without the knowledge of their medical provider.<sup>11</sup> A virtual platform provides a mechanism for telehealth consultation visits with an integrative oncology-trained provider to guide and recommend appropriate use of integrative oncology-based modalities.

(Continued on page 45)

Figure 1. Virtual Teaching Video Library by Core Modality

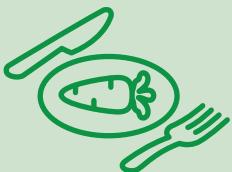
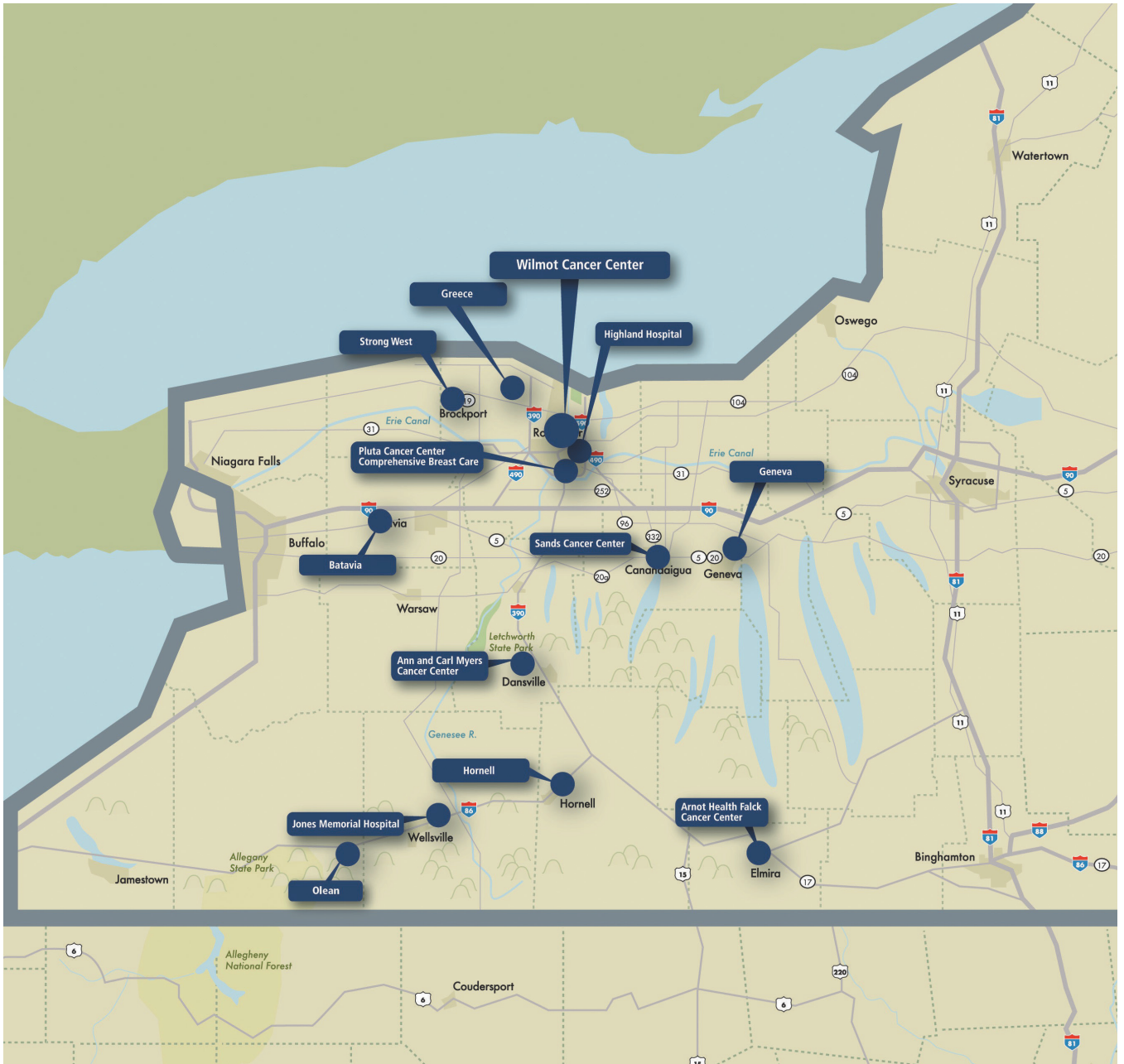
<p><b>MOVEMENT</b></p> 	<p>Exercise during and after treatment can help manage symptoms of nausea, fatigue, depression, and muscle wasting, and it boosts cognitive function.</p> <p><b>YOGA</b></p> <ul style="list-style-type: none"> <li>• Beginning yoga tools using breath and tuning into your body</li> <li>• Yoga in the outdoors, side stretches, warrior, and pyramid flows</li> <li>• Outdoor yoga meditation</li> <li>• Standing poses, arm punches, leg slapping, and mountain pose</li> <li>• Seated yoga stretches for your neck and back</li> <li>• Fun yoga moves for the whole family</li> <li>• Outdoor standing sun salutation</li> <li>• A message on your at-home integrative practice</li> </ul> <ul style="list-style-type: none"> <li>• Starting your morning with yoga</li> <li>• Dealing with a bad day using yoga</li> <li>• Handout yoga tools</li> </ul> <p><b>TAI CHI/QI GONG</b></p> <ul style="list-style-type: none"> <li>• Introduction to qi gong, finding your qi, palm qi, and relieving knee stress</li> <li>• Getting the qi moving and whole-body qi slapping</li> <li>• Introduction to tai chi moves in small spaces</li> <li>• Ancient tai chi to expand the lungs</li> <li>• Cloud hands part 1 for flexible hips and shoulders and to strengthen qi</li> </ul>
<p><b>TOUCH</b></p> 	<p>Therapeutic touch may help decrease symptoms, such as pain, fatigue, and nausea, in patients with cancer.</p> <ul style="list-style-type: none"> <li>• Acupressure: stomach 36, dan tian (body power station), and back points</li> <li>• Acupressure for chemotherapy induced peripheral neuropathy</li> <li>• Relaxation and stress relief through acupressure in the foot</li> </ul>
<p><b>NUTRITION</b></p> 	<p>Healthy eating habits and support from a registered oncology dietitian can be helpful in alleviating some of the side effects of cancer treatment.</p> <ul style="list-style-type: none"> <li>• Chef demo: making homemade granola-like anytime bars</li> <li>• Chef demo: making sweet potato chili</li> <li>• Recipe: sweet potato chili</li> <li>• Chef demo: Mediterranean lentil salad</li> <li>• Nutrition lecture: nutrition during chemotherapy part 1</li> <li>• Slide deck handout for nutrition during chemotherapy part 1</li> <li>• Nutrition lecture: nutrition during chemotherapy part 2</li> <li>• Slide deck handout for nutrition during chemotherapy part 2</li> <li>• Video: knife skills for plant-based cooking</li> <li>• Handout: knife types and cutting techniques</li> <li>• Find more recipes on our <a href="#">Cooking for Wellness blog</a></li> <li>• Handout: smart snacking strategies</li> </ul>
<p><b>MINDFULNESS</b></p> 	<p>Mindfulness refers to being intentionally present in the current moment, without judgment. It involves being aware of where you are and what you are doing.</p> <ul style="list-style-type: none"> <li>• Introduction to meditation, five finger meditation, and mantra</li> <li>• Introduction to mindfulness and focus on the breath</li> <li>• Alternate nostril breathing meditation to promote calming</li> <li>• Handout: meditation tools</li> </ul>

Figure 2. Wilmot Cancer Institute Regional Clinic Locations




(Continued from page 42)

Other future directions include expansion into a mobile application (app)-based platform, so that patients can navigate the virtual center more easily. An app would also provide real-time use during treatments; for example, using meditation prior to undergoing a re-staging scan or when waiting for a provider in the clinic.

A virtual format also allows the development of research interventions. For example, acupressure is more widely available than acupuncture, because it is a self-based intervention and instruction can be taught virtually. We are developing a trial to understand the impact of an acupressure-based intervention for patients with breast cancer experiencing side effects during treatment. This study has the potential for wider expansion, as the technique is ideal for virtual instruction as it is a self-administered modality. Additionally, we aim to improve education and understanding overall around the benefits of integrative oncology modalities for patients with cancer. Last spring, we hosted a virtual educational seminar for breast cancer survivors focusing on how our four core modalities can help support patients and their overall wellness throughout treatment and beyond. As part of the seminar, a provider from each core modality presented, demonstrating not only the modality itself but also speaking to how that modality could provide ongoing wellness support. We are also developing a virtual training program for staff to learn bedside integrative oncology techniques to use as they care for their patients.

Growing our virtual integrative oncology center will allow us to extend integrative oncology-based modalities to patients with cancer throughout our local community and especially within our regional clinic sites.

Telehealth and the virtual delivery of services represent a huge technological leap forward in the way we support patients with cancer throughout their course of care. The ability to create a fully virtual integrative oncology center allowed us to extend these services at a time when in-person evaluations were limited. A virtual platform has also helped us overcome social and economic barriers facing patients and to increase access to evidence-based, high-quality, and symptom-based interventions under the guidance and direction of trained integrative oncology healthcare providers. This care delivery model remains cost effective in its method of implementation, with the potential to impact more patients over time. 

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