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# Integrating Yoga Therapy into Oncology Care

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*Imagine walking into a busy chemotherapy infusion center. Amidst the sound of pump alarms and nurses scurrying from one patient to another, you notice a yoga therapist leading a patient through guided imagery. Another patient practices breathing techniques and gently lifts and lowers her head and shoulders in a movement series to alleviate stress. A third patient practices relaxation techniques while listening to soft music. Appreciative family members watch and sometimes participate in the activity. There is a small island of peaceful Zen within the infusion center. The yoga therapist provides tools to help empower patients and families along their cancer journey.*

**I**ntegrating a yoga therapy program into oncology care was our goal at The Christ Hospital Health Network, a 550-bed, tertiary care, academic, comprehensive cancer center in Cincinnati, Ohio, accredited by the American College of Surgeons. This article outlines the process for designing and implementing a yoga therapy program for patients with cancer, including:

- An evidence-based literature examination.
- Program planning: identifying funding sources, evaluating the competency of yoga therapists, and specifying types of yoga therapy to be provided (e.g., breathing practices, relaxation techniques, yoga nidra, guided imagery).
- Program implementation: identifying the cancer patient population (e.g., patients in various settings: outpatient, inpatient, palliative care); engaging the oncology team; and creating an educational program for staff, providers, and patients to inform them of the program.
- Outcomes evaluation.

### **Evidenced-Based Support for Implementing a Yoga Therapy Program**

More than a quarter of all cancer patients visit complementary and alternative medicine providers during treatment to manage common cancer-related symptoms and side effects.<sup>1</sup> Mind-body practices are a type of complementary and alternative medicine.

Multiple studies have demonstrated the effectiveness of yoga therapy for symptom management in patients with cancer, including its potential to decrease fatigue, pain, anxiety, depression, and insomnia and improve flexibility, balance, mood, and overall quality of life.

These practices include acupuncture, massage therapy, meditation, relaxation techniques, spinal manipulation, and yoga.<sup>2</sup>

Yoga, an integrative practice that originated in ancient India, links the physical, emotional, spiritual, and mental health domains. Yoga practices include physical postures focused on movement and stretching, breathing techniques, deep relaxation, guided imagery, and meditation.<sup>3</sup> Philosophically, the goal of yoga is to increase mastery of the body and breath to achieve mastery of the mind, with the final goal of cultivating deeper spiritual awareness and connection.<sup>4</sup>



(Top) The Christ Hospital nurses enjoying the Masquerade Ball Gala, which raised money for integrative services for oncology patients. (Center) Tina Walter, C-IAYT 500, Certified Yoga Therapist, guides a patient with cancer in movement practices. (Bottom) Awareness Practice: Patient performs a mental inventory of their body.

Yoga therapy can be highly adaptable for persons with cancer. In fact, yoga therapy can help persons with limited mobility, as well as active individuals.<sup>5</sup> It is important to differentiate between yoga and yoga therapy. A general public yoga class can certainly ease everyday aches, pains, and mood complaints; however, a yoga therapy session is tailored to the individual or patient population and addresses physical, mental, and emotional needs.<sup>5</sup> Yoga therapists provide services to cancer patients in a variety of settings—from outpatient to inpatient—including patients at end of life.

Multiple studies have demonstrated the effectiveness of yoga therapy for symptom management in patients with cancer, including its potential to decrease fatigue, pain, anxiety, depression, and insomnia and improve flexibility, balance, mood, and overall quality of life.<sup>3,6-8</sup> Evidence suggests that chronic stress can promote cancer growth and progression.<sup>9,10</sup> The underlying mechanisms for the effects of chronic stress are complex and involve chronic activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis.<sup>11</sup> Hormones (e.g., norepinephrine, cortisol) are constantly released in differing levels from these pathways and can result in many different effects, including the stimulation of cancer invasion, angiogenesis, and inflammation, which can reduce the efficacy of chemotherapy drugs.<sup>10,11</sup> Multiple studies have demonstrated a correlation between yoga therapy and decreased stress in cancer patients.<sup>8</sup> Yoga therapy has also been associated with decreased inflammation and reduction of many of the common symptoms found in the cancer patient population.<sup>8</sup>

### Launching a Yoga Therapy Program

Our integrative therapy program was launched in 2009 when a patient's family member made a donation for the development of a massage therapy program specifically tailored for cancer patients. A certified oncology massage therapist was hired, and an interventional research study was designed to evaluate the impact of massage therapy on cancer patients' symptoms. Results of this initial study indicated that episodic massage therapy was associated with decreased pain, fatigue, anxiety, peripheral neuropathy, and nausea, as well as increased overall satisfaction among cancer patients.<sup>12</sup>

Based on five years of a successful massage therapy program, our facility was receptive to adding a yoga therapy program as an additional integrative service. We identified a therapist who was certified in yoga therapy for cancer patients. We modified the research instruments used in the massage therapy study and initiated a new study to measure cancer patients' symptoms of pain, fatigue, nausea, anxiety, and distress before and after a yoga intervention. For cancer programs looking to add yoga to their cancer service line, Table 1, right, outlines key interview questions to consider when hiring a yoga therapist.

### Identifying Funding Sources

We considered variety of sources to fund our new integrative therapy program, including:

- **Foundations.** Foundations are part of many healthcare organizations and raise money for various initiatives, including

**Table 1. Interview Questions to Consider When Hiring a Yoga Therapist**

What basic yoga training program did you complete?
What yoga certification do you hold?
Did you complete yoga therapy training that is specific to yoga for cancer patients?
Do you have a certification in providing yoga for cancer patients?
Do you have a mentor who is a yoga therapist and resource for you?
How long have you been a yoga therapy instructor?
How long have you been working with patients with cancer?
Do you have indemnity/personal liability insurance?

Sources: International Association of Yoga Therapists<sup>18</sup> and Cancer Research UK.<sup>19</sup>

integrative therapy. We obtained financial and administrative support prior to launching the integrative therapy program, which was essential for the success of this program. The Christ Hospital Health Network Foundation continually raises money to support integrative therapies for cancer patients. In November 2018, nearly 1,000 people attended a Masquerade Ball Gala sponsored by the Foundation, which raised more than \$350,000 to improve oncology care and increase patient access to various services, including integrative therapies such as yoga and massage therapy.

- **Donations.** We received multiple unsolicited donations from patients and/or families.
- **Research grants.** We received a research grant for \$5,000 from the Daisy Foundation for our massage therapy program.

### Identifying Experience and Credentials of Yoga Therapists

Specialized cancer training helps yoga therapists identify and work with the initial and long-term side effects triggered by cancer and its treatments. Yoga therapists need to be familiar with evidence-based practice recommendations related to various yoga therapy interventions, including improvement in quality of life and reduction of symptoms.<sup>8</sup> Therapists also need to understand the rationale for the yoga therapy interventions in the cancer patient population. For example:

- **Movement/postures.** Yoga movement and postures stimulate the lymphatic system to move lymph fluid. Movements of the wrists, arms, and/or ankles and simple inversions (e.g., lying

**A yoga therapist who specializes in oncology receives specific training and supervised experiences leading to certification. This training allows them to provide safe, effective methods of adaptive yoga for patients with cancer.**

flat with legs up a wall) are techniques that encourage the lymph system to move fluid from extremities toward the heart. Simple movements, such as turning the head from one side to another, provide improved circulation and range of motion over time.<sup>8</sup>

- **Breathing.** Diaphragmatic breathing (also known as “slow abdominal breathing”) involves contraction of the diaphragm, expansion of the belly, and deepening of inhalation and exhalation, which consequently decreases the respiration frequency and maximizes the amount of blood gases. Psychological studies have revealed breathing practice to be an effective non-pharmacological intervention for emotion enhancement, including a reduction in anxiety, depression, and stress.<sup>13</sup> A yoga therapist may use breathing practices to help minimize the experience of anxiety in patients undergoing their first chemotherapy treatment.

**Table 2. Types of Yoga Therapy Interventions**

A variety of yoga interventions may be used while the oncology patient is sitting in a chair or resting in bed. Below is a brief explanation of yoga interventions:

**Awareness practice.** Mental inventory of patient's own body (see bottom photo, page 28). The patient is encouraged to allow him- or herself to feel and sense the present moment without changing anything.<sup>20</sup>

**Breath practice (three parts).** Three parts of the breath practice include the abdomen, diaphragm, and chest. Patients are instructed to completely fill their lungs with air, as though breathing into their belly, rib cage, and upper chest, and then exhale completely, reversing the flow (see top photo, page 31).<sup>21</sup>

**Movement: head and neck series.** Patients move their head and neck through its range of motion: turning the head side to side, dropping ear to shoulder, dropping chin to chest, and rolling shoulders forward and back (see center photo, page 31).<sup>20</sup>

**Movement: seated cat-cow.** In the cat posture, the spine is rounded like an angry cat. In the cow part of the posture, the spine bends downward, opening the chest and stretching the abdomen (see bottom photo, page 31). The gentle movement and stretching, coordinated with the breath, relieves stress and tension by calming the senses.<sup>22</sup> (A contraindication of these postures would include bone metastasis.)

**Yoga nidra.** Also known as "yogic sleep," yoga nidra is a deep relaxation technique and a form of meditation. The body is completely relaxed and the practitioner turns his or her awareness inward by listening to a set of instructions, much like a guided meditation.<sup>23</sup>

**Guided imagery.** A mind-body intervention in which a trained practitioner helps a participant to evoke and generate mental images that simulate or re-create the sensory perception of sights, sounds, tastes, smells, movements, and images.<sup>14</sup>

- **Yoga nidra.** Yoga nidra practice results in deep relaxation and expands the individual's self-awareness.<sup>14</sup>
- **Guided imagery.** Patients are guided to engage all senses as they imagine a person, place, or time that made them feel relaxed, peaceful, and happy.<sup>14</sup> Documented benefits for patients with cancer include decreased cancer pain, chemotherapy-induced nausea/vomiting, fatigue, anxiety, and increased quality of life.<sup>15</sup> A brief explanation of the different types of yoga therapy interventions can be found in Table 2, above.
- **Yoga therapy for cancer patients, and prepare instructors to teach patients in a hospital or clinical setting.**
- **Formal certification as a yoga therapist (C-IAYT) can be obtained from the International Association of Yoga Therapists (IAYT) after the completion of an IAYT accredited yoga therapy training program. These are competency based, well-integrated programs that must be at least 800 hours, with a duration of at least 2 years, and after at least a basic 200 hour teacher training program.<sup>18</sup>**

Teaching yoga to cancer patients and survivors differs from teaching yoga to persons in a typical class. A yoga therapist who specializes in oncology receives specific training and supervised experiences leading to certification. This training allows them to provide safe, effective methods of adaptive yoga to patients with cancer. Recommended education and credentials for a yoga therapist to work with oncology patients include:

- First, the person must complete 200 hours of basic yoga training to become a yoga instructor.
- A yoga instructor may choose to obtain specialized certification, such as providing yoga therapy to oncology patients. Examples of two programs for certification in yoga therapy for oncology patients and survivors are Yoga Therapy in Cancer and Chronic Illness<sup>16</sup> and Yoga of the Heart.<sup>17</sup> These programs require participants to complete a basic yoga training program, provide both didactic and experiential learning of

### Identifying Patient Populations for Yoga Therapy

In 2015 we implemented the yoga therapy program in our outpatient chemotherapy infusion center. Medical oncology patients began receiving chairside yoga therapy while concurrently receiving infusion services for cancer care (e.g., chemotherapy, biotherapy, hydration fluids, and blood transfusions). A brief patient case study can be found on page 35.

In 2018 we expanded the yoga therapy program to include the inpatient oncology unit. Patients with cancer or sickle cell diagnoses, or patients on palliative care, receive yoga therapy while cancer treatments are being provided. Patients often are resting in bed, and treatments include chemotherapy, biotherapy, pain management, and/or supportive therapy for symptom management or end-of-life care. Select patient testimonials about the benefits of the yoga therapy program can be found on page 35.

## Individualizing and Prioritizing Yoga Interventions with the Oncology Team

In order to maximize benefit to the individual cancer patient, yoga therapists need to personalize the yoga intervention to the patient. Therapists need skills to identify specific patient limitations or challenges so that the yoga intervention can be modified accordingly. For example, if patients have lines, ports, or pumps, therapists may need to make adaptations to various yoga poses. Even gentle pressure may not be advised if there is interference with any in-body apparatus.<sup>15</sup>

For cancer patients experiencing multiple symptoms, the yoga therapist needs to prioritize interventions based on these symptoms. For example, the yoga therapist may choose an intervention that helps decrease anxiety and build energy for a patient with high levels of anxiety and fatigue (e.g., a breathing practice incorporating meditation techniques). The yoga therapist also needs to be flexible and consider staff and patient needs while providing yoga interventions. Gigi Robison, MSN, APRN-CNS, AOCN states: “Flexibility is paramount for the yoga therapist. The healthcare environment is very busy and there are multiple interruptions, such as medication dispensation, treatment administration, and family member presence.”

Integrative therapy programs require collaboration between medical and nursing healthcare providers and the integrative yoga therapist. We established goals to maximize this collaboration and enhance communication. Our first goal was to increase awareness and understanding of the yoga program among physicians, nurses, and patients and families. Our second goal was to increase oncology staff engagement in referring patients to the yoga therapy program.

We developed an informal referral process that allowed the yoga therapist to receive referrals from nursing staff, social work, and palliative care services through face-to-face discussions, emails, or texts. On the inpatient oncology unit, the therapist worked with the charge nurse or nurse case manager to obtain a list of patients with hematology and oncology diagnoses. In the outpatient area, the therapist visited each infusion bay, described her role, and asked patients whether they were interested in participating. Criteria for participation in the yoga therapy program included patients with oncology and hematology diagnoses and patients with cancer at end of life.

The yoga therapist visited patients in both inpatient and outpatient settings. She commonly visited inpatients resting in bed. For some patients who were not cognitively aware, the yoga therapist held the patient’s hand or provided a supportive yoga intervention to family (e.g., relaxation techniques and guided imagery related to end of life). She visited outpatients sitting in infusion bay chairs in our chemotherapy infusion center. In both settings, the yoga therapist introduced herself to patients and families, described her role as yoga therapist, and offered to provide a complimentary yoga therapy intervention to help improve their comfort and decrease their symptoms.

Multiple members of the healthcare team were engaged in implementing the yoga therapy program:



(Top) Breathing practice. (Center) Head and neck series. (Bottom) Seated Cat-Cow.



(Top) The Christ Hospital hosted a morning Yoga Therapy Program for cancer survivors, and invited cancer survivors, their families, and oncology staff to attend. (Bottom) This program provided training for new yoga therapy instructors in Level 3 “Yoga Therapy in Cancer and Chronic Illness” (Y-Cat).

- Staff nurses have evolved in their understanding of the practices, goals, and potential benefits of yoga therapy. They have identified patients who may benefit from a yoga therapy intervention and have communicated the benefits of this therapy to patients. This has resulted in increased patient referrals to the yoga therapist.
- An oncology social worker provided oversight to the group yoga therapy classes in the cancer center, referred patients with high symptom levels to the yoga therapist, managed administrative tasks, such as invoicing, and coordinated survivorship and outreach workshops. For example, in September 2018, the social worker coordinated a Community Yoga Education program, in which international yoga teachers provided a half-day yoga workshop for patients with cancer and their families.
- The oncology clinical nurse specialist (CNS) was the principal investigator for the yoga research studies. She assisted with review of literature and instrument development and refine-

ment and coordinated efforts to implement the yoga therapy program in outpatient and inpatient units. The CNS served as liaison between nursing administration and the yoga program and provided coaching and technical support as needed.

- The director of nursing research assisted with research design and development of the institutional review board (IRB) application. She provided support for data analysis, interpretation, reporting, and dissemination of outcomes.

### Outcome: Successful Implementation of a Yoga Therapy Program

Over the past three years, we have accomplished the following during our yoga therapy program implementation:

- Partnered with the clinical director of the oncology service line and obtained administrative support for the yoga therapy program.
- Obtained funding for the yoga therapy program from The Christ Hospital Health Network Foundation.
- Collaborated with an oncology clinical nurse specialist to create a research tool to measure outcomes (e.g., pain, fatigue, anxiety, and distress) of the yoga therapy program and to develop an IRB-approved research study for measuring the effectiveness of this program. When comparing the pre-yoga versus post-yoga interventions results, a statistically significant improvement was observed in patients’ ratings of pain, fatigue, anxiety, and distress. Study results will be available in a future publication.
- Worked closely with the director of nursing research to collect, analyze, and evaluate outcomes data.
- Provided education to staff nurses regarding an overview of the yoga therapy program, the yoga therapist’s role and qualifications to implement the yoga therapy program, and descriptions of yoga therapy interventions that would be used.
- Provided education to new oncology nurses during oncology nurse residency, including demonstrations of multiple yoga therapy interventions to nursing staff (e.g., yoga nidra). This was a valuable practice to allow the staff to personally experience the benefits of yoga.
- Offered a yoga therapy class to several advanced nurse practitioners who work closely with medical oncologists at our facility.
- Discussed the yoga therapy program with nursing staff and physicians on a one-to-one basis.
- Distributed flyers to patients and families that provided information related to dates and times of yoga therapy classes in the cancer center.
- Provided patients and families with written handouts that described various yoga techniques practiced during the yoga therapy session.

Successful implementation of a yoga therapy program was contingent on addressing systemic barriers and maintaining a patient-centric focus. Table 3, right, identifies some of the barriers that we encountered and solutions we implemented to overcome these barriers.

(continued on page 34)

**Table 3. Barriers and Solutions to Implementation of a Yoga Therapy Program**

<p>The process of inviting patients to participate in yoga therapy may seem like a “cold call,” and patients may not want to participate</p>	<p>During introduction, build therapeutic relationship with patients by discussing their challenges and identifying their physical and emotional needs. Describe yoga therapy as a “stress reduction strategy” to open doors. Wear name badge so that patients can identify the yoga therapist as a valid member of the team.</p>
<p>Patients or families may misunderstand the purpose of yoga therapy interventions</p>	<p>Discuss with patients their perceptions of yoga and correct misconceptions (e.g., yoga will be physically taxing, will be difficult, will be a religious practice). Create patient education related to yoga therapy interventions.</p>
<p>Nurses may be hesitant to support patients’ participation in yoga therapy</p>	<p>Provide multiple opportunities for staff to learn about yoga, including demonstrations and yoga practices.</p>
<p>Logistics may be difficult in implementing the yoga therapy program</p>	<p>The yoga therapist needs to work with administration before the yoga therapy program is initiated to agree upon how this program will be implemented. For example, the best time to be in the outpatient department may be 10:00 am to 2:00 pm, and the best time to be in the inpatient unit may be 3:00 pm to 6:00 pm (due to reduced testing and procedures during that time).</p>
<p>Interruptions occur during yoga therapy sessions</p>	<p>The therapist needs to be aware that the following may occur and be flexible:</p> <ul style="list-style-type: none"> <li>• <b><i>Distracting noises.</i></b> Bring a small boom box with soothing music to chairside or bedside.</li> <li>• <b><i>Family members present in the room.</i></b> Include family members in the yoga therapy session and teach them techniques to use at home with their loved one.</li> <li>• <b><i>Medications arriving during yoga therapy sessions.</i></b> Need to have open communication with nurses.</li> <li>• <b><i>Nursing needs to interrupt session.</i></b> Need to be flexible and able to work around staff. Communication with physician or other member of healthcare team is important, and the therapist needs to know when to leave the room and provide patient privacy.</li> </ul>



(continued from page 32)

## Final Thoughts and a Look Ahead

The prevalence of integrative medicine approaches has transformed patient care in many specialties, especially oncology. Yoga therapy, a mind-body practice, may help cancer patients decrease physical and emotional symptoms. Through our years of experience and research providing yoga therapy interventions at The Christ Hospital, we have found that cancer patients in active treatment, as well as survivors, can significantly benefit from incorporating yoga practice into their daily lives.

During the process of implementing the yoga therapy program, we noted several steps that were key in the success of our program. We conducted a thorough review of the literature to identify potential outcomes of yoga therapy, which was helpful to develop an evaluation tool to measure effectiveness of the program. We obtained financial support from administration and funding through our facility's foundation, which was critical to support the yoga therapy program. We hired a therapist, certified in providing yoga therapy for oncology patients, who used evidenced-based yoga interventions.

Additional factors that contributed to the success of our yoga therapy program were related to multidisciplinary collaboration, staff engagement, and patient education. Our yoga therapist collaborated with the oncology CNS and director of nursing research to conduct an IRB-approved study to measure the effectiveness of the yoga therapy interventions. We provided staff education to increase awareness and understanding of the practices and benefits of chairside and bedside yoga, which increased staff buy-in of the yoga therapy program. The yoga therapist provided patient education that included both the "how" and "why" of practicing yoga interventions, which empowered patients to continue these practices at home.

Our future goals are to improve our referral pathway to the yoga therapist, to create a process for electronically documenting the yoga therapist's interventions and outcomes, and to collaborate with multiple hospital systems to conduct a multisite research study for evaluating the effectiveness of the yoga therapy program.



*Gigi Robison, MSN, APRN-CNS, AOCN, is an oncology clinical nurse specialist at The Christ Hospital, Cincinnati, Ohio. Tina Walter, C-IAYT 500, is an integrative yoga therapist providing yoga therapy interventions at Cincinnati and northern Kentucky hospitals for patients receiving chemotherapy. Judi Godsey, PhD, RN, was director of nursing research at The Christ Hospital, Cincinnati, Ohio.*

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### Case Study: Amidst the Beeps and Alarms

MK, a 34-year-old woman, was diagnosed with triple-positive, stage 2 invasive ductal carcinoma of the left breast. The patient was readmitted to the inpatient oncology unit for hematuria and abdominal pain and had a total abdominal hysterectomy and bilateral Salpingo-oophorectomy for pelvic mass during this admission. Post-operatively, she had a fever of 102.4°F.

Tina, the yoga therapist, visited the patient post-op. MK reported that she was feeling anxious, and she was wringing her hands. Through tears, she told Tina that she had much fear and anger. MK said that she was worried about “what’s going to happen to her.” She rated her anxiety as a “10” on a 0 to 10 scale (10 being the worst possible) and rated her pain as a “4” on a 0 to 10 scale (10 being the worst possible). Pain location was in the abdomen.

Tina guided MK through a yoga nidra practice. First, Tina instructed MK to gently relax the breath and watch its three-part flow and then to systematically relax her body, especially the abdomen. Tina used imagery to help MK soften the abdominal pain. MK looked comfortable and relaxed throughout the 25-minute yoga nidra practice. When evaluating outcomes of the yoga therapy intervention, MK’s anxiety rating decreased from 10 to 0 and her pain rating decreased from 4 to 0.

Tina encouraged MK to practice yoga therapy techniques on her own and provided education on her classes. MK thanked Tina and said that she would try these practices at home.

### Provider Testimonial

“The use of yoga and other complementary therapies remain vastly underused as a means to augment and enhance traditional medical treatments. Tina Walter’s sincere and compassionate approach to yoga instruction introduces a promising option for those suffering with chronic and debilitating conditions. Her experience with yoga in the oncology patient population spans three hospitals, in two states, over several years, with early outcomes suggesting yoga’s potential to enhance symptom relief and improve overall patient satisfaction.”

—Judi Godsey, PhD, MSN, RN, former director of nursing research, The Christ Hospital

### Patient Testimonials

- “In my mind, yoga was only downward dog. I did not realize that it included breathing and gentle movement. When you have cancer, movement can be really intimidating. But this is so much more. It has helped me tremendously.”
- “I slept better last night after the yoga session with you yesterday than I have in ages.”
- “I was about to quit chemotherapy and treatment. This yoga therapy helped me get through it. I can power through it now; I have the tools now. I can make it through this because of what Tina has given me.”
- “I don’t feel anxious at all. I feel pretty calm. I think it’s because my mind stopped.”
- “I am using these practices at home. After the yoga session, I was so relaxed. It felt really good.”