

INTEGRATIVE MEDICINE AND CANCER CARE



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL



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Learning Objectives

- 1) Differentiate between integrative medicine and alternative medicine for cancer patients.
- 2) Describe three evidence-based strategies that may help improve quality of life for individuals affected by cancer.
- 3) Identify appropriate cancer patients/survivors who may benefit from an integrative and lifestyle medicine consultation.
- 4) State the process for making a referral through the Comprehensive Cancer Support Program (CCSP).

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What is the difference between integrative medicine for oncology patients and alternative medicine?

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CAM AND INTEGRATIVE MEDICINE DEFINED

<p>Complementary and Alternative Medicine</p> <p>"Complementary" practices typically refer to the use of non-mainstream approaches along with conventional medical approaches.</p> <p style="text-align: center;">versus</p> <p>"Alternative" practices which usually refers to using non-mainstream medical approaches instead of conventional medicine.</p> <p>Source: National Center for Complementary and Alternative Medicine http://nccam.nih.gov/health</p>	<p>Integrative Medicine</p> <p>"A healing-oriented practice that takes account of the whole person, including all aspects of lifestyle. It emphasizes the therapeutic relationship between practitioner and patient, is informed by evidence, and makes use of all appropriate therapies."</p> <p>Source: Arizona Center for Integrative Medicine http://integrativemedicine.arizona.edu/about/definition.html</p>
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INTEGRATIVE ONCOLOGY DEFINED

“Integrative oncology is a patient-centered, evidence-informed field of cancer care that utilizes mind and body practices, natural products, and/or lifestyle modifications from different traditions alongside conventional cancer treatments. Integrative oncology aims to optimize health, quality of life, and clinical outcomes across the cancer care continuum and to empower people to prevent cancer and become active participants before, during, and beyond cancer treatment.”

Society of Integrative Oncology (2017)

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CANCER SURVIVORS AND CAM USE

- *Studies vary widely in reports of CAM use among cancer survivors. One study reported up to 91% used at least one modality during treatment. Another reported up to 75% among those who were post-treatment.*
- *Most studies have been among individuals with breast and prostate cancers.*
- *Approximately 30% of patients don't share their use of CAM with their providers.*
- *Characteristics of individuals most frequently reporting use of CAM: females, younger vs. older adults, individuals with higher income and higher education.*

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COMMON REASONS FOR CAM USE AMONG CANCER SURVIVORS

- 1. To improve general well-being*
- 2. To treat side effects of the cancer or cancer treatments*
- 3. Prevent recurrence or spread of cancer*
- 4. Increase the body's ability to fight cancer*
- 5. Prevent other non-cancer diseases*

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- ▶ Acupuncture
- ▶ Energy Modalities
- ▶ Mind-Body Therapies
- ▶ Movement Therapies
- ▶ Nutrition and Supplements
- ▶ Spirituality

INTEGRATIVE MEDICINE APPROACHES

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ACUPUNCTURE

Review of the evidence for cancer symptom management

- ▶ Statistically significant findings for reduced cancer-related pain, fatigue, as well as nausea and vomiting. Improvements also found for quality of life (Lau et al., 2015).
- ▶ Therapeutic effects for cancer-related fatigue, nausea/vomiting and on leukopenia. Some evidence for hot flashes, quality of life, and hiccups (Wu et al., 2015).
- ▶ Menopausal symptoms significantly decreased in breast cancer patients, but no reduction in hot flashes (Chien et al., 2017).



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 **JAMA Oncology**
View Article ▶

JAMA Oncol. 2020 Feb; 6(2): 271-276. PMID: PMC6990758
Published online 2019 Dec 19. doi: 10.1001/jamaoncol.2019.5233. 10.1001/jamaoncol.2019.5233 PMID: 31855257

Clinical Evidence for Association of Acupuncture and Acupressure With Improved Cancer Pain
A Systematic Review and Meta-Analysis

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ACUPUNCTURE AT UNC

Two Medical Acupuncturists:

- 1) Wunian Chen, MD – Appointments can be made through the UNC Family Medicine Department at 984-974-0210.
- 2) Paul Thananopavarn, MD – Appointments can be made through the UNC Department of Physical Medicine and Rehabilitation at 984-974-9747.

Cost: \$105 first visit and \$80 for return visits

Some insurance companies may reimburse. Health care spending accounts available through some employers can be used to cover some of the costs.

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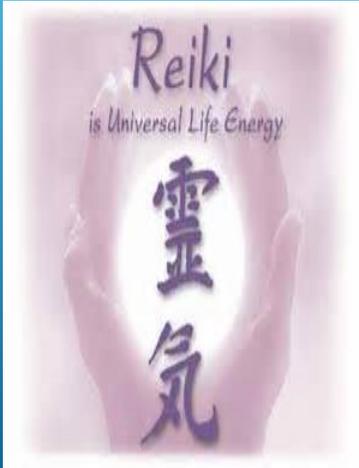
- ▶ Reiki – Originated in Japan in the early 1900s. Purpose is to 'increase health by accessing universal life energy that connects with an individual's own healing abilities'.
- ▶ Qigong – A 2,000 year old Chinese mind-body exercise. Qi means breathing and vital energy and Gong means power. It also involves the transfer of Qi energy from one person to another.
- ▶ Therapeutic Touch – Co-developed in the 1970s by an American nurse. Utilizes nontouch energy transfer to restore balance and healing capacity.



ENERGY THERAPIES

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REIKI THERAPY



Study Results

- ▶ Fleisher et al., (2014) found that among 213 cancer patients receiving Reiki, there was a greater than 50% reduction in self-reported distress, anxiety, depression, pain, and fatigue.
- ▶ An RCT of 110 presurgical breast cancer patients found a decrease in anxiety and improvements in mood in the Reiki group (Chirico et al., 2017).

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> J Pediatr Oncol Nurs. Sep/Oct 2019;36(5):361-368. doi: 10.1177/1043454219845879. Epub 2019 May 3.

The Power of Reiki: Feasibility and Efficacy of Reducing Pain in Children With Cancer Undergoing Hematopoietic Stem Cell Transplantation

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Affiliations [+ expand](#)

PMID: 31046557 DOI: 10.1177/1043454219845879

Abstract

Purpose: Reiki is a growing complementary therapy in pediatric oncology that needs evidence to become more credible among the health community. A within-subject design experiment was conducted to pilot testing the feasibility and efficacy of Reiki to provide pain relief among pediatric patients undergoing hematopoietic stem cell transplantation (HSCT). **Method:** Pediatric patients undergoing HSCT during the inpatient phase in the Stem Cell Transplantation Unit were eligible to participate to the pilot study. Short and medium effects were assessed investigating the increase or

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STRESS AND CANCER

- ▶ Both positive and negative thoughts affect our health.
- ▶ Chronic stress is associated with worse cancer outcomes.
- ▶ Approximately 10-15% of cancer survivors suffer from some type of clinical mood disorder such as depression and/or anxiety during or following treatment.
- ▶ Addressing stress through mental health counseling, meditation, and/or exercise such as yoga could be vital to well-being and longevity.



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MIND-BODY THERAPIES

- ▶ **Guided Imagery** – the use of a mental picture, thought or feeling of some desired outcome or of a place that typically provides a sense of calm and relaxation.
- ▶ **Hypnosis** – mental imagery and suggestive words are used to help create a state of deep relaxation.
- ▶ **Meditation** – involves very focused concentration on an image, a word, the breath, or an external object to distract the mind leading to a relaxed state.
- ▶ **Relaxation/breathing Techniques** – the use of abdominal breathing, muscle relaxation, and simple imagery.

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In a systematic review and meta-analysis by Hall et al. (2018), 19 studies, which were focused on fear of recurrence, found that many different forms of mind-body interventions significantly reduced distress among a wide range of cancer patient populations.

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THE POWER OF IMAGERY AND INDIVIDUALIZING THE SCENE

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Clinical Trial > PLoS One. 2016 Jun 24;11(6):e0156911. doi: 10.1371/journal.pone.0156911. eCollection 2016.

Guided Imagery And Progressive Muscle Relaxation as a Cluster of Symptoms Management Intervention in Patients Receiving Chemotherapy: A Randomized Control Trial

Andreas Charalambous ^{1,2}, Margarita Giannakopoulou ³, Evaggelos Bozas ³, Yiola Marcou ⁴, Petros Kitsios ⁴, Lefkios Paikousis ⁵

Affiliations + expand
 PMID: 27341675 PMCID: PMC4920431 DOI: 10.1371/journal.pone.0156911
[Free PMC article](#)

Abstract

Objective: Patients receiving chemotherapy often experience many different symptoms that can be difficult to alleviate and ultimately negatively influence their quality of life. Such symptoms include pain, fatigue, nausea, vomiting and retching, anxiety and depression. There is a gap in the relevant literature on the effectiveness of cognitive-behavioural and relaxation techniques in symptom clusters. The study reflects this gap in the literature and aimed to test the effectiveness of Guided Imagery (GI) and Progressive Muscle Relaxation (PMR) on a cluster of symptoms experienced by patients undergoing chemotherapy.

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MIND-BODY THERAPIES – FIVE KEY ASPECTS OF CARE WHEN USE OF THESE THERAPIES MAY BE BENEFICIAL

1. Following a cancer diagnosis, which is a time that often leads to high emotional distress.
2. Coping with and reduction of treatment-related side effects.
3. Aid in the stimulation of immunity and other healing responses.
4. Reduction of cancer-related pain.
5. May influence the outcome of disease.



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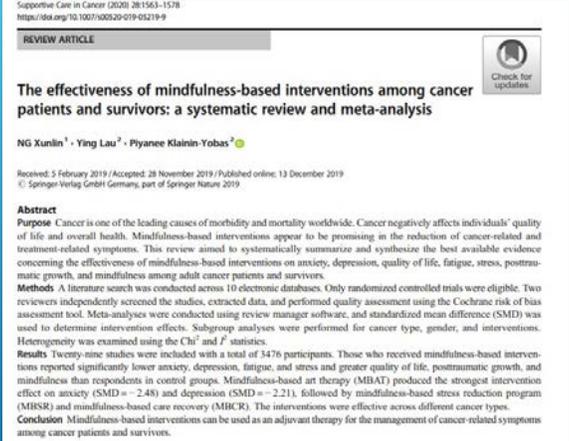
MIND-BODY THERAPIES

Mindfulness-Based Stress Reduction

- ▶ 2019 meta-analysis of 14 studies in breast cancer patients - **Results:** reduced anxiety, depression, stress, fatigue and improved cognitive function.
- ▶ 2017 review of 6 studies of mixed cancer types – **Results:** MBSR may have some effect on biomarkers of improved immune function recovery (decreased IL-6 and tumor necrosis factor [TNF]).
- ▶ 2014 study in breast cancer patients - **Results:** increase in telomerase activity (marker of cellular aging and psychological stress) following a 6-week MBSR intervention.



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Supportive Care in Cancer (2020) 28:1563–1578
<https://doi.org/10.1007/s00520-019-45219-9>

REVIEW ARTICLE

The effectiveness of mindfulness-based interventions among cancer patients and survivors: a systematic review and meta-analysis

NG Xunlin¹ · Ying Lau² · Piyanee Klainin-Yobas²

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Abstract Cancer is one of the leading causes of morbidity and mortality worldwide. Cancer negatively affects individuals' quality of life and overall health. Mindfulness-based interventions appear to be promising in the reduction of cancer-related and treatment-related symptoms. This review aimed to systematically summarize and synthesize the best available evidence concerning the effectiveness of mindfulness-based interventions on anxiety, depression, quality of life, fatigue, stress, posttraumatic growth, and mindfulness among adult cancer patients and survivors.

Methods A literature search was conducted across 10 electronic databases. Only randomized controlled trials were eligible. Two reviewers independently screened the studies, extracted data, and performed quality assessment using the Cochrane risk of bias assessment tool. Meta-analyses were conducted using review manager software, and standardized mean difference (SMD) was used to determine intervention effects. Subgroup analyses were performed for cancer type, gender, and interventions. Heterogeneity was examined using the Chi² and I² statistics.

Results Twenty-nine studies were included with a total of 3476 participants. Those who received mindfulness-based interventions reported significantly lower anxiety, depression, fatigue, and stress and greater quality of life, posttraumatic growth, and mindfulness than respondents in control groups. Mindfulness-based art therapy (MBAT) produced the strongest intervention effect on anxiety (SMD = -2.48) and depression (SMD = -2.21), followed by mindfulness-based stress reduction program (MBSR) and mindfulness-based care recovery (MBCR). The interventions were effective across different cancer types.

Conclusion Mindfulness-based interventions can be used as an adjuvant therapy for the management of cancer-related symptoms among cancer patients and survivors.

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MINDFUL MOMENTS THROUGH UNC'S CCSP

Cancer patients and survivors are provided individualized sessions to learn evidence-based mindfulness techniques (e.g., breathing practices, meditation, guided imagery) to help manage the symptoms of cancer and cancer treatment.

Potential uses:

- Improve patients' feelings of well-being and quality of life during and after treatment
- Decrease depression and anxiety
- Decrease fatigue and increase energy
- Improve sleep
- Provide a mental vacation
- Decrease nausea and pain

All sessions are provided virtually and are free of charge. To schedule, contact Carly Bailey at carly_bailey@med.unc.edu

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The screenshot shows a webpage with a forest background. The main heading is 'The Mindfulness Center at UNC | Mindfulness-Based Courses, Workshops, & Retreats'. Below it, it says 'Hosted by the Mindfulness Center at the UNC Program on Integrative Medicine'. The text describes the program as offering training in meditation and mind-body awareness to help patients slow down, set priorities, and stay calm. It also mentions that the program is based on Jon Kabat-Zinn's model of mindfulness.

RESOURCES

[Mindful Moments](#)
[UNC Integrative Medicine:](https://www.med.unc.edu/phyreh_ab/pim/mindfulness-program/mindfulness-course-schedule/)
https://www.med.unc.edu/phyreh_ab/pim/mindfulness-program/mindfulness-course-schedule/

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MOVEMENT THERAPIES

- Exercise – Review of 66 studies, conducted both during and post treatment **Results:** The majority revealed significant improvements in cardiorespiratory function, body strength, body weight, functional quality of life, anxiety, mood, self-esteem, and on general symptoms and side effects, such as pain and lymphedema.
- Resistance training – Review of 15 studies during and post-treatment. **Results:** Large improvements were found for muscular strength and endurance, physical function, fatigue and on other quality of life measures; smaller improvements seen in body composition (decrease body fat, increase lean muscle mass).



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Table 2:

2018 Physical Activity Guidelines Advisory Committee Evidence on Relationship Between Physical Activity and Mortality in Cancer Survivors

All-cause Mortality		
Cancer	Evidence Grade	Approximate % Relative Risk Reduction
Breast	Moderate	48%
Colorectal	Moderate	42%
Prostate	Limited	37-49%
Cancer-specific Mortality		
Breast	Moderate	38%
Colorectal	Moderate	38%
Prostate	Moderate	38%

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NUTRITION AND CANCER



FOOD AS MEDICINE

- A predominantly plant-based diet as been associated with lower rates of some cancers, such as breast and endometrial cancers.
- One study of a Mediterranean-style diet, high in fruits, vegetables, and whole grains, found a 40% reduction in the risk for a certain type of breast cancer among women who adhered to a Med diet compared to those who did not.

Van den Brandt, et al. (2017). Mediterranean diet adherence and risk of post menopausal breast cancer: results of a cohort study and meta-analysis. *International Journal of Cancer*, 140, 2220-2231.

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Review

Cancer and Mediterranean Diet: A Review

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Abstract: The Mediterranean diet is considered one of the most worldwide healthy dietary patterns thanks to a combination of foods rich mainly in antioxidants and anti-inflammatory nutrients. Many studies have demonstrated a strong and inverse relationship between a high level of Mediterranean diet adherence and some chronic diseases (such as cardiovascular diseases, diabetes, etc.) and cancer. Given its protective effects in reducing oxidative and inflammatory processes of cells and avoiding DNA damages, cell proliferation, and their survival, angiogenesis, inflammations and metastasis, the Mediterranean diet is considered a powerful and manageable method to fight cancer incidence. The aim of this narrative review was to determine the magnitude of interaction between the Mediterranean diet and more widespread types of cancer so as to give a first and useful overview on this relationship identifying, with a nutritional approach, those nutrients of Mediterranean diet able to reduce cancer incidence.

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Supplements

Most national cancer organizations do not support the use of dietary supplements. Exceptions such as in cases of known deficiencies, such as a low Vitamin D.



In cases of nutritional deficiencies, can consider the use of a high-quality multi-vitamin. Quality brands can be found on the consumerlab.com website, which is a 3rd party testing lab.

Many herbs/supplements have potential drug/herb interactions with certain cancer treatments, it is safest to avoid them unless advised by a medical professional on their safe use.



In some cases certain supplements may be suggested, such as Melatonin for sleep or American Ginseng for fatigue, but should be considered after careful review of potential interactions with other therapies.

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YOGA

- ▶ A recent review (2021) of 7 studies focused on yoga in women with breast cancer undergoing chemotherapy found improvements in QoL, sleep, anxiety, depression and fatigue.
- ▶ Overall conclusion, studies suggest that yoga can be beneficial for fatigue and other symptoms, but further research is needed with more rigorous studies and in more diverse samples.

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YOGA




- ▶ An ancient Eastern spiritual practice that includes asanas (physical postures), pranayama (regulated breathing exercises) and meditation with the goal of uniting mind, body and spirit for self-awareness and good health. Several different types exist. One of the most studied CAM practices in oncology.
- ▶ Research on yoga and cancer suggests that yoga has psychological and physical benefits, including:
 - Improving patients' feelings of well-being and quality of life during and after treatment
 - Decreasing depression and anxiety
 - Decreasing fatigue and increasing energy
 - Decreasing nausea and pain
 - May enhance immune function.
- ▶ Most practices involve three basic components: asanas (physical poses), pranayama (breath control), and dhyana (meditation).

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YOGA THROUGH UNC CCSP

Inpatient Yoga Therapy

Goal: Provide individualized yoga therapy to hospitalized patients to support their physical, emotional, and mental health by reducing cancer and treatment-related side-effects.

The therapist will work with patients using the range of yoga's tools, including movement/postures, meditation, visualization, relaxation, and breathing techniques. Instruction will be provided in the patient's room, unless otherwise requested, and can include standing, seated, or bedside activities.

Outpatient Yoga Program

Goal: Provide virtual group classes to patients and caregivers to support their physical, emotional, and mental health.

Please contact Carly Bailey at carly_bailey@med.unc.edu to gain access. Sessions are held over Zoom video Monday-Friday for a small fee.

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MOVEMENT THERAPIES CONT.

Ancient Healing Arts

- ▶ Qigong – An ancient Chinese healing art form that integrates meditation, controlled breathing, and gentle movements. The gentle, rhythmic movements of Qigong reduce stress, build stamina, increase vitality, and enhance the immune system. It has also been found to improve cardiovascular, respiratory, circulatory, lymphatic and digestive functions.
- ▶ Tai Chi – A form of Qigong that is characterized by slow circular movements and stretches with a focus on balance. Began as an ancient martial art form, but now often used to generate health, longevity, and internal strength.

Taiji Diagram



- ▶ Yang - Yin
- White - Black
- Exhale - Inhale
- Release - Store
- Expand - Contract
- Give - Receive
- Offense - Defense

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SPIRITUALITY



- ▶ Spirituality has been defined in a many ways and is generally related to religion, but is much broader than religiosity.
- ▶ Described as “a quality that goes beyond religious affiliation and that strives for inspiration, reverence, awe, meaning and purpose, even in those who don’t believe in God”.
- ▶ Others have described it as “a power, force, or energy that stimulates creativity, motivation, or a striving for inspiration”.
- ▶ Simply put by Pargament (1997), spirituality is the “search for the sacred”.

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SPIRITUALITY

Common Practices:

- ❖ Prayer
- ❖ Meditation
- ❖ Journaling
- ❖ Labyrinth walking
- ❖ Interacting with nature
- ❖ Music and art



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Spirituality and Health Outcomes

- ▶ While there may not be any scientific evidence that religion or spirituality impacts cancer progression or remission it has been shown to significantly improve adjustment to a cancer diagnosis, symptoms related to the disease and/or treatment, and to overall quality of life.
- ▶ Interestingly, one large review of 29 studies did reveal that individuals with cancer who scored higher on measures of spiritual/religious involvement compared to those with lower scores had higher odds of surviving their cancer.

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INTEGRATIVE AND LIFESTYLE MEDICINE CONSULTATIONS AT LINEBERGER COMPREHENSIVE CANCER CENTER

The Integrative and Lifestyle Medicine consult service helps individuals affected by cancer understand how complementary therapies, such as mind-body practices, dietary and natural supplements, and lifestyle changes may decrease side effects of conventional cancer treatments, as well as enhance quality of life and overall well-being during and beyond cancer treatment.

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- The individualized approach to care takes into consideration physical, emotional/mental, social, spiritual and environmental influences that affect a person’s health.
- Education offered on strategies that may reduce risk for recurrence, the development of new cancers or other chronic illnesses.



INTEGRATIVE AND LIFESTYLE CONSULTATIONS

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- Consultation visits are available for anyone affected by cancer (i.e., prior to treatments, during active treatments and/or following treatments).
- Consultative visits are typically one hour and are covered by insurance as a medical visit.
- For appointments, providers and patients can contact Robin Haring 919 966 3494.



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*“The health of my body,
mind, and spirit are related...*

*...and whomever cares for
my health should take that
into account.”*

Eisenberg DM, et al. Ann Intern Med,
2001;135:344-351; Astin JA, JAMA,
1998;279(19):1548-1553

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CASE STUDY – KM
45 YEAR OLD NEWLY DIAGNOSED WITH
EARLY STAGE WITH BREAST CANCER

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- ❖ KM underwent bilateral mastectomy, radiation therapy and combination chemotherapy. Was in the process of having reconstructive surgery and was taking hormonal therapy when we met.
- ❖ Additional medical history includes anxiety, depression, migraines and she was overweight.
- ❖ Married, husband with Stage IV cancer; Two children 12 and 15 years of age; financial and marital stress.
- ❖ Requested referral for symptom management and overall health and wellness.
- ❖ Presented with several symptoms, such as fatigue, bone and joint pain, hot flashes, insomnia, weight gain, depression, cognitive changes, constipation, neuropathy, etc.

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Recommendations:

- 1) A anti-inflammatory/Mediterranean Diet diet, with the addition of 1-2 tablespoons of ground flax/day. Recommended obtaining a Vitamin D level with next blood draw and if low supplement as appropriate.
- 2) In addition to a healthy diet encouraged regular exercise. Referral to Get REAL and HEEL exercise program at UNC.
- 3) Recommended yoga program through CCSP for stress management/mood/sleep, etc. Also recommended the use of aromatherapy with lavender essential oil for relaxation.
- 4) Referral for acupuncture for neuropathy.
- 5) Acupuncture for sleep, as well as stress reducing herbal teas, and Melatonin.
- 6) Continued counseling through CCSP for depression. Recommended counseling for family as well. Consider an in-person or online breast cancer support group. Additional suggestions were guided imagery, etc. For spiritual health – journaling, especially a gratitude journal, meditation, prayer.

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CASE STUDY – RT
72 YEAR OLD RECENTLY DIAGNOSED WITH
METASTATIC RENAL CELL CARCINOMA

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- RT on a randomized clinical trial (RCT) with two monoclonal antibodies.
- Requested a consult to discuss how he could improve his overall health and well-being through diet and supplements.
- Through the assessment it was also discovered that he was experiencing significant sleep disruption, as well as stress/anxiety around new diagnosis.

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Recommendations:

- 1) A predominantly plant-based, anti-inflammatory diet, as opposed to some of the dietary supplements. Okay to drink 1-2 cups of green tea/day.
- 2) Continue with multivitamin, but avoid use of other high dose supplements as they had the potential to interact with his treatment, which could cause an increase in drug levels. Recommended obtaining a Vitamin D level with next blood draw.
- 3) Regular exercise routine with progressive walking and some strengthening exercises 2-3 times/week to help prevent/reduce treatment-related fatigue.
- 4) Time-released Melatonin for sleep to help with early awakening, as well as other sleep hygiene strategies.
- 5) Counseling through CCSP for anxiety around new diagnosis and treatment.
- 6) Mindful Moments to learn stress management techniques.

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Resources

American Cancer Society – Stay Healthy
<https://www.cancer.org/healthy.html>

American Institute for Cancer Research (AICR)
<http://www.aicr.org>

LIVESTRONG MYPLATE Calorie Tracker
<http://www.livestrong.com/myplate>

Memorial Sloan Kettering Cancer Center: Herbs & Botanicals
<https://www.mskcc.org/cancer-care/diagnosis-treatment/symptom-management/integrative-medicine/herbs>

National Center for Complementary and Integrative Health
<https://www.nccih.nih.gov/>

Natural Medicines Database – subscription required
<https://naturalmedicines.therapeuticresearch.com/>

Society for Integrative Oncology – membership required
<https://integrativeonc.org/>

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COMMENTS/QUESTIONS



THANK YOU

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