

Integrative Oncology Care of Symptoms of Anxiety and Depression in Adults with Cancer

SIO-ASCO Guideline

Carlson et al.

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Background & Methodology

Introduction

- Among the expanding cohort of cancer survivors, mental health concerns are significant
 - The 12-month prevalence rates for mental disorders are higher in people with cancer compared to the general population (odds ratio [OR] 1.28; 95% CI, 1.14 to 1.45).¹
 - A systematic review reported the mean prevalence of clinical depression as 21.2%, across all types of cancers.²
 - Rates of anxiety symptoms are similar, with a meta-analysis in over 50,000 longer-term cancer survivors reporting a 17.9% prevalence of self-reported elevated anxiety symptoms.³
- Rates of anxiety and distress tend to be even higher around the time of diagnosis, as patients are experiencing the initial shock and implications of their diagnosis, decreasing somewhat as they move into active treatment.⁴
- Despite their ubiquity, psychological symptoms among people with cancer often remain undertreated.⁴
- Research shows that people with mental health conditions who have a concurrent medical condition (including cancer), have increased risk of death and shorter life expectancy than the general population.⁵

Introduction

- A recent ASCO guideline addressed the recommended psychosocial, behavioral, and psychopharmacologic treatment approaches for the management of anxiety and/or depression.⁶
- This SIO-ASCO guideline addresses which integrative therapies are also recommended. Together, these guidelines provide a comprehensive set of recommendations for assessing and treating anxiety and depression in adults with cancer.
- Integrative oncology is defined by SIO as:
 - “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.”⁷
- This guideline reviews current evidence and provides recommendations on integrative therapy use for treating anxiety & depression symptoms in people with cancer across the disease trajectory.

Guideline Development Methodology

- The SIO and ASCO guideline process includes:
 - a systematic literature review by guidelines staff with health research methodology expertise
 - a critical review and evidence interpretation by an expert panel to inform guideline recommendations
 - final guideline approval by the SIO Clinical Practice Guidelines Committee and the ASCO Evidence Based Medicine Committee
- The SIO Guidelines Methodology Manual can be found at:
<https://integrativeonc.org/practice-guidelines/sio-guidelines-guidelines-methodology>
- The ASCO Guideline methodology manual can be found at:
www.asco.org/guideline-methodology

Quality of Evidence Rating Definitions

Quality of Evidence	Definition
High	High confidence that the available evidence reflects the true magnitude and direction of the net effect (e.g., balance of benefits versus harms) and further research is very unlikely to change either the magnitude or direction of this net effect.
Intermediate	Intermediate confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research is unlikely to alter the direction of the net effect, however it might alter the magnitude of the net effect.
Low	Low confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research may change the magnitude and/or direction of this net effect.
Insufficient	Evidence is insufficient to discern the true magnitude and direction of the net effect. Further research may better inform the topic. Reliance on consensus opinion of experts may be reasonable to provide guidance on the topic until better evidence is available.

Strength of Recommendation Rating Definitions

Strength of Recommendation	Definition
<p style="text-align: center;">Strong</p>	<p>There is high confidence that the recommendation reflects best practice. This is based on:</p> <ul style="list-style-type: none"> a) strong evidence for a true net effect (e.g., benefits exceed harms). b) consistent results, with no or minor exceptions. c) minor or no concerns about study quality; and/or d) the extent of panelists' agreement. <p>Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a strong recommendation.</p>
<p style="text-align: center;">Moderate</p>	<p>There is moderate confidence that the recommendation reflects best practice. This is based on:</p> <ul style="list-style-type: none"> a) good evidence for a true net effect (e.g., benefits exceed harms).consistent results with minor and/or few exceptions. b) minor and/or few concerns about study quality; and/or c) the extent of panelists' agreement. <p>Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a moderate recommendation.</p>
<p style="text-align: center;">Weak</p>	<p>There is some confidence that the recommendation offers the best current guidance for practice. This is based on:</p> <ul style="list-style-type: none"> a) limited evidence for a true net effect (e.g., benefits exceed harms). b) consistent results, but with important exceptions. c) concerns about study quality; and/or d) the extent of panelists' agreement. <p>Other considerations (discussed in the guideline's literature review and analyses) may also warrant a weak recommendation.</p>

Clinical Questions

This clinical practice guideline addresses four clinical questions:

1. What integrative therapies are recommended for managing symptoms of anxiety experienced after diagnosis or during active treatment in adults with cancer?
2. What integrative therapies are recommended in managing symptoms of anxiety experienced post treatment in adults with cancer?
3. What integrative therapies are recommended for managing symptoms of depression experienced after diagnosis or during active treatment in adults with cancer?
4. What integrative therapies are recommended in managing symptoms of depression experienced post treatment in adults with cancer?

Target Population and Audience

Target Population

- Adults with cancer experiencing symptoms of anxiety and/or depression.

Target Audience

- Clinicians who provide care to people with cancer, people with cancer, their family members, and other informal caregivers.

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Summary of Recommendations

Summary of Anxiety Recommendations

Clinical Question 1

- What integrative therapies are recommended for managing symptoms of anxiety experienced after diagnosis or during active treatment in adults with cancer?

Recommendation 1.1

- Mindfulness-based interventions (MBIs) should be offered to people with cancer to improve anxiety symptoms during active treatment.

Evidence-based benefits outweigh harms	
Evidence Quality	Strength of Recommendation
High	Strong

Summary of Anxiety Recommendations

Recommendation 1.2

- Yoga may be offered to people with breast cancer to improve anxiety symptoms during active treatment.

Qualifying statement: For people with cancer types other than breast, the quality of evidence is low, and the strength of recommendation is weak.

Evidence-based
benefits outweigh harms

Evidence Quality
Intermediate

Strength of Recommendation
Moderate

Recommendation 1.3

- Hypnosis may be offered to people with cancer to improve anxiety symptoms during cancer-related diagnostic and treatment procedures.

Evidence-based
benefits outweigh harms

Evidence Quality
Intermediate

Strength of Recommendation
Moderate

Summary of Anxiety Recommendations

Recommendation 1.4

- Relaxation therapies may be offered to people with cancer to improve anxiety symptoms during active treatment.

Evidence-based benefits outweigh harms	
Evidence Quality	Strength of Recommendation
Intermediate	Moderate

Recommendation 1.5

- Music therapy or music-based interventions may be offered to people with cancer to improve anxiety symptoms during active treatment.

Evidence-based benefits outweigh harms	
Evidence Quality	Strength of Recommendation
Low	Moderate

Summary of Anxiety Recommendations

Recommendation 1.6

- Reflexology may be offered to people with cancer to improve anxiety symptoms during active treatment.

Evidence-based benefits outweigh harms	
Evidence Quality	Strength of Recommendation
Low	Weak

Recommendation 1.7

- Lavender essential oil inhalation may be offered to people with cancer to improve anxiety symptoms during cancer-related diagnostic and treatment procedures.

Evidence-based benefits outweigh harms	
Evidence Quality	Strength of Recommendation
Low	Weak

Summary of Anxiety Recommendations

Clinical Question 2

- What integrative therapies are recommended in managing symptoms of anxiety experienced post treatment in adults with cancer?

Recommendation 2.1

- Mindfulness-based interventions should be offered to people with cancer to improve anxiety symptoms post treatment.

Evidence-based benefits outweigh harms	
Evidence Quality	Strength of Recommendation
High	Strong

Summary of Anxiety Recommendations

Recommendation 2.2

- Yoga may be offered to people with breast cancer to improve anxiety symptoms post treatment.

Qualifying statement: For people with cancer types other than breast the quality of evidence is low, and the strength of recommendation is weak.

Evidence-based
benefits outweigh harms

Evidence Quality
Intermediate

Strength of Recommendation
Moderate

Recommendation 1.3

- Acupuncture may be offered to women with breast cancer to improve anxiety symptoms post treatment.

Evidence-based
benefits outweigh harms

Evidence Quality
Intermediate

Strength of Recommendation
Weak

Summary of Anxiety Recommendations

Recommendation 2.4

- Tai chi and/or qigong may be offered to women with breast cancer to improve anxiety symptoms post treatment.

Evidence-based
benefits outweigh harms

Evidence Quality
Intermediate

Strength of Recommendation
Weak

Recommendation 2.5

- Reflexology may be offered to people with cancer to improve anxiety symptoms post treatment.

Evidence-based
benefits outweigh harms

Evidence Quality
Low

Strength of Recommendation
Weak

Summary of Anxiety Recommendations

Inconclusive

- There is inconclusive evidence to make recommendations for or against music therapy, and music-based interventions to improve anxiety symptoms in people with cancer who are post treatment. There is also inconclusive evidence for nutritional interventions, light therapy, psilocybin, massage, dance/movement therapy, laughter therapy, healing touch, expressive writing, acupressure, biofeedback, autogenic training, energy healing, melatonin, or other natural products and supplements to improve anxiety symptoms in people with cancer, regardless of when in the course of care the intervention is provided.

Summary of Depression Recommendations

Clinical Question 3

- What integrative therapies are recommended for managing symptoms of depression experienced after diagnosis or during active treatment in adults with cancer?

Recommendation 3.1

- Mindfulness-based interventions should be offered to people with cancer to improve depression symptoms during active treatment.

Evidence-based benefits outweigh harms	
Evidence Quality	Strength of Recommendation
High	Strong

Summary of Depression Recommendations

Recommendation 3.2

- Yoga may be offered to people with breast cancer to improve depression symptoms during active treatment.

Qualifying statement: For people with other cancers the quality of evidence is low, and the strength of recommendation is weak.

Evidence-based benefits outweigh harms	
Evidence Quality	Strength of Recommendation
Intermediate	Moderate

Recommendation 3.3

- Music therapy or music-based interventions may be offered to people with cancer to improve depression symptoms during active treatment.

Evidence-based benefits outweigh harms	
Evidence Quality	Strength of Recommendation
Low	Moderate

Summary of Depression Recommendations

Recommendation 3.4

- Relaxation therapies may be offered to people with cancer to improve depression symptoms during active treatment

Evidence-based benefits outweigh harms	
Evidence Quality	Strength of Recommendation
Low	Weak

Recommendation 3.5

- Reflexology may be offered to people with cancer to improve depression symptoms during active treatment.

Evidence-based benefits outweigh harms	
Evidence Quality	Strength of Recommendation
Low	Weak

Summary of Depression Recommendations

Clinical Question 4

- What integrative therapies are recommended in managing symptoms of depression experienced post treatment in adults with cancer?

Recommendation 4.1

- Mindfulness-based interventions should be offered to people with cancer to improve depression symptoms post treatment.

Evidence-based benefits outweigh harms	
Evidence Quality	Strength of Recommendation
High	Strong

Summary of Depression Recommendations

Recommendation 4.2

- Yoga may be offered to people with breast cancer to improve depression symptoms post treatment.

Qualifying statement: For people with other cancers the quality of evidence is low, and the strength of recommendation is weak.

Evidence-based
benefits outweigh harms

Evidence Quality
Intermediate

Strength of Recommendation
Moderate

Recommendation 4.3

- Tai chi and/or qigong may be offered to people with breast cancer to improve depression symptoms post treatment.

Evidence-based
benefits outweigh harms

Evidence Quality
Intermediate

Strength of Recommendation
Weak

Summary of Depression Recommendations

Recommendation 4.4

- Expressive writing should not be offered to people with cancer to improve depression symptoms at any point in the course of care.

Evidence-based no net benefit	
Evidence Quality	Strength of Recommendation
Intermediate	Moderate

Summary of Depression Recommendations

Inconclusive

- There is inconclusive evidence to make recommendations for or against reflexology to improve depression symptoms in people with cancer who are post treatment. There is also inconclusive evidence for nutritional interventions, light therapy, psilocybin, massage therapy, biofeedback, autogenic training, energy healing, melatonin, and other natural products and supplements to improve depression symptoms in people with cancer, regardless of when in the course of care these therapies are provided.

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Discussion

Patient and Clinician Communication

- These guidelines suggest integrative approaches that can be applied to manage anxiety and depression during and after cancer treatment.
- People with cancer will need to find their own level of comfort with these approaches and their choices of therapies should be respected by their families, cancer care team, and others who support them.
- It is critical that the cancer care providers regularly discuss and offer different types of emotional, social, and physical support as needs change and evolve over the cancer trajectory.
- At times of critical treatment and diagnostic junctures, cancer care teams should routinely screen for anxiety and depression symptoms.
- People with cancer and advocates of integrative oncology strategies will need to continue to raise awareness among mainstream physicians for the need to address and treat the psychiatric consequences of cancer.

Health Disparities

- Many patients have limited access to medical care or receive fragmented care.
- Treatment for major depression has been documented to be lower in minoritized Black and Latino communities.⁸
- Disparities in mental health care are significantly exacerbated by a lack of uniform insurance coverage for behavioral care and ongoing societal stigma.
- Individual factors such as race, ethnicity, age, socioeconomic status, sexual orientation, gender identity, geographic location, education, literacy, numeracy, environmental exposure, insurance access, and lack of trust in the healthcare system are known to impact cancer care outcomes.⁷
- Clinician factors such as unconscious and conscious bias can contribute to missed diagnoses and differences in care.⁹

Health Disparities

- A review of racial and socioeconomic factors related to the use of complementary therapies for cancer pain management found lower income and educational levels had a greater influence on complementary therapy use than race.
 - People who had a higher educational degree and income typically used body manipulation techniques or practitioner-based therapies that cost money or required insurance, whereas users with inadequate financial resources reported greater use of free methods for symptom management, such as meditation and relaxation techniques. Prayer and spirituality, when included as complementary modalities, were also more often used by racial minority groups.
 - A general limitation of the included studies was the lack of integration between race and socioeconomic factors, wherein social determinants of health and the link between minority status and socioeconomic status were essentially overlooked.¹⁰

Health Disparities

- Disparities in cancer care treatment can be caused or exacerbated by a lack of open and supportive patient-provider communication. It is important that cancer care teams diligently focus on those diagnosed with rare cancers, minoritized groups (including people with cancer from Black and indigenous communities, sexual and gender minorities), and adolescents as their symptoms of anxiety and depression are less likely to be addressed.
- All stakeholders are called to work together to ensure equitable access to both high-quality cancer care and cancer clinical research and address the structural barriers that maintain health inequities.¹¹

Cost Implications

- Increasingly, people with cancer are required to pay a larger proportion of their treatment costs out-of-pocket through deductibles and co-insurance.^{12,13}
- Complementary therapies can be one of the larger out-of-pocket expenses. Higher out-of-pocket costs are often a barrier to initiating and adhering to recommended cancer treatments.^{14,15}
- Given that some recommendations indicate that therapies “should” be offered to treat symptoms of anxiety and depression, comprehensive cancer centers and governing administrative bodies should consider prioritizing these specific therapies in their financial and operational planning, providing access to people with cancer without significant financial barriers.
- Research also shows that complementary and supportive therapies can be cost-effective and provide medical cost offsets by preventing future use of services, such as psychoactive medication, emergency room, psychiatry, and family practice visits.^{16,17}

Limitations of the Research and Future Research

- Limitations of the literature that cut across multiple modalities include:
 - Assessment of risk of bias
 - Standardization of therapies
 - Lack of diversity
 - Inactive or “usual care” controls
- Opportunities to enhance the use and reach of integrative therapies in addressing anxiety and depression include:
 - Digital health interventions
 - Pragmatic designs and focus on patient-oriented research
 - Incorporation of precision integrative oncology

Additional Resources

- More information, including a supplement and clinical tools and resources, is available at www.asco.org/survivorship-guidelines
- Patient information is available at www.cancer.net

Expert Panel Members

Name	Affiliation/Institution	Role/Area of Expertise
Linda E. Carlson, PhD, R. Psych (Co-Chair)	Division of Psychosocial Oncology, Department of Oncology, Cumming School of Medicine, University of Calgary, Calgary, AB, Canada	Clinical psychology
Julia H. Rowland, PhD (Co-Chair)	Smith Center for Healing and the Arts, Washington, DC, US	Psychology
Elizabeth L. Addington, PhD	Northwestern University Feinberg School of Medicine, Chicago, IL, US	Psychology
Gary N. Asher, MD, MPH	University of North Carolina, Chapel Hill, NC, US	Family medicine, internal medicine (herbal, Ayurveda, massage, TCC)
Chloe Atreya, MD, PhD	University of California San Francisco, San Francisco, CA, US	Gastrointestinal oncology
Lynda G. Balneaves, RN, PhD	College of Nursing, University of Manitoba, Winnipeg, Manitoba, Canada	Psychosocial oncology, integrative oncology, cannabis
Joke Bradt, PhD, MT-BC	Drexel University, Philadelphia, PA, US	Music therapy
Nina Fuller-Shavel, MB BChir, MA	Synthesis Clinic, Winchester, England, United Kingdom	Nutritionist, herbal medicine, TCM, yoga, mindfulness, integrative oncology
Joseph Goodman, MD	The George Washington University, Washington, DC, US	Head and neck oncologic surgery & acupuncture
Caroline J. Hoffman OAM, PhD, RN, BSW	Paul's Cancer Support, London, United Kingdom	Mindfulness, integrative oncology
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Ashwin Mehta, MD	Memorial Healthcare System, Hollywood, FL, US	Nutrition, exercise, sleep, yoga, mindfulness
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Abbreviations

- ASCO, American Society of Clinical Oncology
- CI, confidence interval
- MBIs, mindfulness-based interventions
- OR, odds ratio
- SIO, Society for Integrative Oncology

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