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Management of Fatigue in Adult Survivors of Cancer: American Society of Clinical Oncology - Society for Integrative Oncology (ASCO-SIO) Guideline Update Clinical Insights

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Cancer-related fatigue (CRF) is one of the most common toxicities accompanying the diagnosis and treatment of cancer. Characterized by a persistent and often overwhelming sense of physical, mental, and/or emotional exhaustion, CRF differs from fatigue induced by exertion as it does not readily subside with rest or sleep. Its impact can be felt across all stages of cancer progression, spanning from the initial diagnosis through the phases of long-term survivorship. Prevalence estimates indicate that 30%-60% of patients experience moderate-to-severe fatigue during the course of treatment, and a notable subset of 20%-30% of individuals continue to experience fatigue for months or years after treatment completion.[1-3] The etiology of CRF is complex and multifaceted, and it can be challenging to identify contributing factors since multiple causes frequently exist simultaneously, often with additive effects.[4] Recognizing the importance of optimizing both the longevity and quality of life for survivors of cancer, ASCO convened a multidisciplinary panel to undertake a comprehensive review of existing literature to update the 2014 guideline on management of CRF in adult survivors across the entire cancer care continuum from diagnosis, through treatment, survivorship, and end of life.[5]

WHAT ARE THE KEY TAKEAWAYS FROM THE GUIDELINE?

The panel endorsed prior ASCO 2014 recommendations that all patients should be screened for CRF across the entire cancer continuum, and when moderate-to-severe CRF is present, it should be treated.[6]

When moderate-to-severe CRF is identified, clinicians should offer patients under active treatment and survivors who have completed treatment effective therapies (Fig 1) identified in the ASCO 2024 guideline[5] to alleviate this toxicity. Guideline recommendations are presented as an algorithm in Figure 2.

In the management of CRF among adult patients undergoing treatment, the panel strongly recommended the use of exercise, cognitive behavioral therapy (CBT), mindfulness-based programs, and tai chi interventions. Additionally, psychoeducation and the use of American ginseng were also recommended as potential strategies. The Expert Panel issued strong recommendations against the use of wakefulness agents, such as modafinil or armodafinil, in the management of CRF in adults undergoing treatment. For adults who have completed treatment, the panel strongly endorsed the use of exercise, CBT, and mindfulness-based interventions to manage CRF, with CBT and mindfulness-based interventions having the strongest evidence during this time frame. Furthermore, yoga, acupressure, and moxibustion may also be used to manage CRF after completion of treatment. By contrast, the panel recommended against the use of wakefulness agents, L-carnitine, and antidepressants and discouraged the routine use of psychostimulants to manage CRF. For adult patients at the end-of-life, the expert panel recommended that CBT and corticosteroids may be offered.

HOW TO CHOOSE FROM THE RECOMMENDED OPTIONS?

Deciding which recommended therapy for CRF is best for a patient or survivor is not straightforward. Physical activity has a range of benefits in addition to effects on fatigue, and ideally, all patients should be advised to engage in regular physical activity during and after cancer treatment. Exercise can be modulated to meet the needs of an individual patient, given

Recommendation	Evidence Quality	Strength
During Cancer Treatment		
1.1. Clinicians should recommend exercise (aerobic, resistance, or a combination) to reduce the severity of fatigue during cancer treatment. Exercise should be tailored according to the individual patient's abilities and may be either supervised or unsupervised.	M	S
1.2. Clinicians should recommend CBT with or without hypnosis to reduce the severity of cancer-related fatigue in adults undergoing cancer treatment.	M	S
1.3. Clinicians should recommend mindfulness-based programs to reduce the severity of cancer-related fatigue in adults undergoing cancer treatment. Mindfulness-based programs may include MBSR and MBCT.	M	S
1.4. Clinicians should recommend tai chi or qigong, practiced at a low to moderate intensity, to reduce the severity of cancer-related fatigue in adults undergoing cancer treatment.	M	S
1.7. Clinicians should not recommend wakefulness agents, such as modafinil or armodafinil, to manage symptoms of cancer-related fatigue in adults undergoing cancer treatment.	M	S
After Cancer Treatment		
2.1. Clinicians should recommend exercise (aerobic, resistance, or a combination) to reduce the severity of cancer-related fatigue symptoms in adults who have completed cancer treatment. Whenever possible, exercise should be tailored according to the abilities of the individual patient and may be either supervised or unsupervised.	M	S
2.2. Clinicians should recommend CBT to manage symptoms of cancer-related fatigue in adults who have completed cancer treatment. CBT may be delivered in person or via a web-based program.	M	S
2.3. Clinicians should recommend mindfulness-based programs to reduce the severity of fatigue in adults who have completed cancer treatment. Mindfulness-based programs may include MBSR, MBCT, and MAPs and may be delivered in person or via a web-based program.	M	S
End-of-Life		
3.1. Clinicians may recommend CBT to manage symptoms of cancer-related fatigue in adults with advanced cancer and/or receiving treatment with palliative intent.	L	C
3.2. Clinicians may recommend corticosteroids to manage symptoms of cancer-related fatigue in patients at the end of life where no contraindications exist. The risk-benefit ratio of corticosteroid use should be assessed over time.	L	C

FIG 1. Summary of management of fatigue recommendations. C, conditional; CBT, cognitive behavioral therapy; L, low; MAPs, mindful awareness practices; MBCT, mindfulness-based cognitive therapy; MBSR, mindfulness-based stress reduction; M, moderate; S, strong.

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that a range of exercise approaches have shown efficacy in managing CRF. Some patients may be unwilling or unable to participate in regular exercise or may have more severe and persistent fatigue that requires a different approach. For these patients, interventions that target cognitive and emotional processes should be recommended, including CBT or mindfulness-based programs, both of which have demonstrated efficacy in managing and treating CRF.

Given that many recommended therapies include components of behavior change, it is crucial for patients and survivors to receive therapies they can realistically carry out to achieve optimal outcomes. One of the best ways to ensure uptake, adherence, and successful outcomes is to involve patients and survivors in the decision-making process. For example, a participatory approach could include asking about their preferences regarding therapy selection, considering factors such as accessibility and affordability and evaluating the appropriateness of each therapy considering the severity of their CRF and individual circumstances. With such collaboration on the final care plan for treating CRF, patients and health care providers can enhance treatment efficacy and patient satisfaction.

HOW CAN PEOPLE WITH CANCER ACCESS RECOMMENDED THERAPIES?

Many cancer centers and community oncology practices in the United States now offer exercise, psychosocial, and some integrative services for their patients. However, the level of these services varies in terms of accessibility and quality. Many cancer centers and community oncology practices struggle to source qualified professionals adept at delivering these therapies within an oncology setting and to fund these

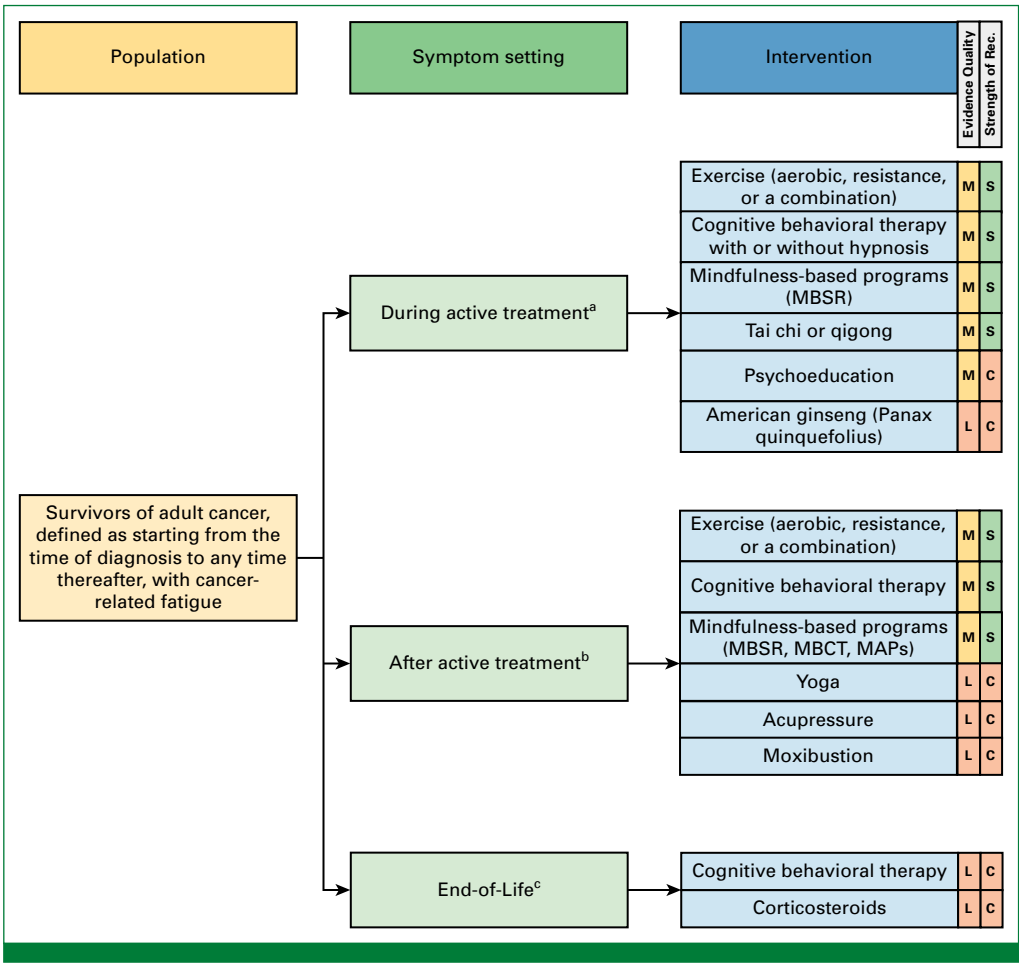

FIG 2. Management algorithm for cancer-related fatigue. Definitions for the quality of the evidence and strength of recommendation ratings are available in the guideline publication; accessible via asco.org/survivorship-guidelines. [a]Clinicians should not recommend wakefulness agents, such as modafinil or armodafinil, L-carnitine, or antidepressants, such as paroxetine, and should not routinely recommend psychostimulants, such as methylphenidate, to manage symptoms of cancer-related fatigue in adults undergoing cancer treatment. [b]Clinicians should not recommend wakefulness agents, such as modafinil or armodafinil, and should not routinely recommend psychostimulants, such as methylphenidate, to manage symptoms of cancer-related fatigue in adults who have completed cancer treatment. [c]Clinicians should not recommend wakefulness agents, such as modafinil or armodafinil, and should not routinely recommend psychostimulants, such as methylphenidate, to manage symptoms of cancer-related fatigue in adults with advanced cancer or at the end of life. C, conditional; L, low; MAPs, mindful awareness practices; MBCT, mindfulness-based cognitive therapy; MBSR, mindfulness-based stress reduction; M, moderate; Rec., recommendation; S, strong.

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services long-term for all patients and survivors. If no such services exist in a cancer center or community oncology practice, patients and survivors should be referred to certified and credible professionals in their community. Notably, community-based referrals may even be preferred by patients and survivors who do not live close to their point of cancer care.

It is important for clinicians to invest time and effort to develop relationships with both hospital and community-based exercise, psychosocial, mind-body, integrative, and other professionals qualified to provide these services for patients and survivors. Due, in part, to the variance in exercise oncology, integrative medicine training and credentialing, and psychosocial and mind-body models, identifying appropriately trained, credible, and high-quality providers can be difficult. Table 1 offers some resources for background information on specific training, licensure, directories, and professional organizations associated with recommended therapies. Access to qualified providers has been greatly enhanced with the availability of video conferencing, web-based platforms, and other digital programs. Patients can access standardized interventions such as mindfulness-based stress reduction online and can also

TABLE 1. Patient and Provider Resources for Exercise, Psychosocial, and Mindfulness-Based Programs

Organization	Services	Website
Exercise resources		
ACSM	Information on certification and licensure of exercise oncology professionals Moving Through Cancer program, developed by ACSM to help patients, families, health care providers, and others find hospital and community-based exercise programs in their communities	[7,8]
Psychosocial resources		
American Psychological Association	State, provincial, and territorial Psychological Association Directory National psychologist locator	[9,10]
Beck Institute	CBT-certified clinician international directory	[11]
Mindfulness-based programs resources		
American Mindfulness Research Association	Information on American Mindfulness Research Association UCSD Center for Mindfulness	[12,13]
Center for Mindfulness, UMass Memorial Health Care	Mindfulness-based information, training, and support	[14]
Center for Mindfulness Studies, University of Toronto	Mindfulness-based information, training, and support	[15]
School of Professional Studies, Brown University	Mindfulness-based stress reduction programs	[16]
Integrative medicine resources		
Cleveland Clinic	Tai Chi Class for Cancer Survivors	[17]
Memorial Sloan Kettering Cancer Center	Integrative Medicine at Home Membership Program	[18]

Abbreviations: ACSM, American College of Sports Medicine; CBT, cognitive behavioral therapy; UCSD, University of California San Diego.

connect with therapists who are trained in cognitive-behavioral approaches.

IS THERE A ROLE FOR MEDICATIONS IN THE MANAGEMENT OF FATIGUE IN PEOPLE WITH CANCER?

The panel concluded that there are currently no data to support that wakefulness agents, psychostimulants, or antidepressants are effective in managing CRF during or after treatment. There is stronger evidence for the effectiveness of behavioral and integrative therapies than medications. Exercise, CBT, and mindfulness-based therapies are first-line treatments for CRF during and after cancer treatment. However, in the case of adult patients at the end of life, corticosteroids may be recommended. Additionally, a stepped-care approach could be helpful in some circumstances, where medications are added to behavioral and integrative therapies if a survivor's fatigue is not relieved by recommended first-line therapies alone. In such cases, a judicious and short-term use of medications for patients with severe CRF with close monitoring for side effects can be considered. In addition, medications may be helpful for patients whose fatigue is driven by another medical or psychiatric condition, such as depression.

In conclusion, CRF remains a highly prevalent toxicity that impairs treatment adherence and quality of life for patients and survivors. Research now supports the use of several behavioral and integrative therapies as first-line treatment for CRF. The ASCO 2024 guideline[5] for the management of CRF provides an in-depth review of this literature and suggests critical areas for future research to advance capacity even further to effectively mitigate this toxicity.

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Open Payments is a public database containing information reported by companies about payments made to US-licensed physicians (Open Payments).

Suzanna Zick
Patents, Royalties, Other Intellectual Property: We developed a mobile application called MeTime Acupressure available for free in the Apple Store or Google Play. We originally charged for this app, but for the past year it has been available for free. We received less than $500 from the sale of the app, and have no plan to charge for it in the future. We use this app in clinical trials for cancer related fatigue
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