# Management of Cancer Cachexia: ASCO Guideline

Roeland et al.



ASCO Guidelines

# Introduction

- The purpose of this guideline is to provide evidence-based guidance on the optimal approach for the treatment of cachexia in patients with advanced cancer.
- Cachexia is a multifactorial syndrome characterized by loss of appetite, weight, and skeletal muscle[1] leading to fatigue,[2] functional impairment,[3] increased treatment-related toxicity,[4] poor quality of life,[5] and reduced survival.[4,6-11]
- Across malignancies, cachexia is highly prevalent, impacting approximately half of patients with advanced cancer.[12,13]
- Assessment and management of cancer cachexia are major challenges for clinicians.

# ASCO Guideline Development Methodology

The ASCO Clinical Practice Guidelines Committee guideline process includes:

- a systematic literature review by ASCO guidelines staff
- an expert panel provides critical review and evidence interpretation to inform guideline recommendations
- final guideline approval by ASCO CPGC

The full ASCO Guideline methodology manual can be found at:
www.asco.org/guideline-methodology

# Clinical Questions

Among adult patients with advanced cancer and loss of appetite, body weight, and/or lean body mass, are outcomes such as weight, lean body mass, appetite, physical function, or quality of life improved by:

1. Nutritional interventions,
2. Pharmacologic interventions, and/or
3. Other interventions (e.g., exercise).

# Target Population and Audience

## Target Population

Adult patients with advanced cancer and loss of appetite, body weight, and/or lean body mass (i.e., skeletal muscle).

## Target Audience

Clinicians who provide care to adult patients with cancer, as well as patients and caregivers.

# Summary of Recommendations

## CLINICAL QUESTION 1

Among adult patients with advanced cancer and loss of appetite, body weight, and/or lean body mass, are outcomes such as weight, lean body mass, appetite, physical function, or quality of life improved by nutritional interventions?

### *Recommendation 1.1*

Clinicians may refer patients with advanced cancer and loss of appetite and/or body weight to a registered dietitian for assessment and counseling, with the goals of providing patients and caregivers with practical and safe advice for feeding; education regarding high-protein, high-calorie, nutrient-dense food; and advice against fad diets and other unproven or extreme diets. (Type: Informal consensus; Evidence quality: Low; Strength of recommendation: Moderate)

# Summary of Recommendations

***Recommendation 1.2***

Outside the context of a clinical trial, clinicians should not routinely offer enteral tube feeding or parenteral nutrition to manage cachexia in patients with advanced cancer. A short-term trial of parenteral nutrition may be offered to a very select group of patients, such as patients who have a reversible bowel obstruction, short bowel syndrome, or other issues contributing to malabsorption, but otherwise are reasonably fit. Discontinuation of previously initiated enteral or parenteral nutrition near the end of life is appropriate. (Type: Informal consensus; Evidence quality: Low; Strength of recommendation: Moderate)

# Summary of Recommendations

## CLINICAL QUESTION 2

Among adult patients with advanced cancer and loss of appetite, body weight, and/or lean body mass, are outcomes such as weight, lean body mass, appetite, physical function, or quality of life improved by pharmacologic interventions?

### *Recommendation 2.1*

Evidence remains insufficient to strongly endorse any pharmacologic agent to improve cancer cachexia outcomes; clinicians may choose not to offer medications for the treatment of cancer cachexia. There are currently no FDA-approved medications for the indication of cancer cachexia. (Type: Evidence based; Evidence quality: Low; Strength of recommendation: Moderate)

# Summary of Recommendations

***Recommendation 2.2***

Clinicians may offer a short-term trial of a progesterone analog or a corticosteroid to patients experiencing loss of appetite and/or body weight. The choice of agent and duration of treatment depends on treatment goals and assessment of risk versus benefit. (Type: Evidence based; Evidence quality: Intermediate; Strength of recommendation: Moderate)

# Summary of Recommendations

**CLINICAL QUESTION 3**

Among adult patients with advanced cancer and loss of appetite, body weight, and/or lean body mass, are outcomes such as weight, lean body mass, appetite, physical function, or quality of life improved by other interventions (e.g., exercise)?

***Recommendation 3.***

Outside the context of a clinical trial, no recommendation can be made for other interventions, such as exercise, for the management of cancer cachexia.

# Patient, Caregiver, and Clinician Communication

- Optimally, communication regarding cachexia management will involve caregivers as well as the patient. Caregivers frequently experience high distress when witnessing the impact of cancer cachexia, and may be more troubled than the patient by a symptom such as anorexia.[14]
- An excellent discussion regarding feeding recommendations near the end of life has been published.[15] Key points to discuss with patients and their caregivers include the following:
    1. Loss of appetite is common in patients with advanced cancer and may be the result of the cancer process itself
    2. Trying to force a patient to eat is usually counterproductive, potentially leading to increased nausea/vomiting;
    3. In most patients with advanced cancer and cachexia, providing additional calories by feeding tubes and/or intravenously, does not improve outcomes;
    4. Trying to make a patient eat, when they have marked appetite loss, can lead to decreased social interactions and increased patient distress regarding interactions with caregivers (including stories of patients, in their dying days, pretending to be asleep when relatives visit, so that the relatives do not try to make them eat something); and
    5. For caregivers, it may be best to listen to and support the patient in a variety of other ways (such as giving the patient a massage or applying a lip moisturizer), instead of trying to talk them into eating more.
- Referral to a registered dietitian may provide patients and caregivers with additional opportunities to discuss concerns and challenges related to nutrition, appetite, and meal planning.

# Cost Considerations

- Higher patient out-of-pocket costs have been shown to be a barrier to initiating and adhering to recommended cancer treatments.[16,17]
- Discussion of cost can be an important part of shared decision-making.[18]
- Clinicians should discuss with patients the use of less expensive alternatives when it is practical and feasible for treatment of the patient's disease and there are two or more treatment options that are comparable in terms of benefits and harms.
- Table 2 in the full-text guideline provides recommended dosing and estimated cost of megestrol acetate and dexamethasone. Of note, medication prices may vary markedly, depending on negotiated discounts and rebates.

# Limitations and Future Research

- The primary limitations of cancer cachexia clinical research include the use of highly varied definitions, heterogenous endpoints, and a lack of integrated biomarkers.
- The most recent definitions of cancer cachexia do not capture the clinical impact of symptoms, decreased quality of life, and impaired physical activity.
- Future research could focus on a number of endpoints. Assessment of changes in PROs including symptoms and quality of life are increasingly prevalent in clinical practice.
- A second opportunity for cancer cachexia research is the identification and validation of novel biomarkers.
- Multiple clinical trials are evaluating novel pharmacologic agents for the treatment of cancer cachexia.[19]
- Another area of future research interest might involve evaluating earlier nutritional interventions in patients with metastatic cancer.

# Additional Resources

More information, including a supplement, slide sets, and clinical tools and resources, is available at

www.asco.org/supportive-care-guidelines

Patient information is available at www.cancer.net

# ASCO Guideline Panel Members

| Name | Affiliation/Institution | Role/Area of Expertise |
|---|---|---|
| Eric J. Roeland, MD, Co-chair | Massachusetts General Hospital Cancer Center, Boston, MA | Gastrointestinal oncology, palliative care, and symptom science |
| Charles L. Loprinzi, MD, Co-Chair | Mayo Clinic, Rochester, MN | Medical oncologist with research interest in symptom control |
| Vickie E. Baracos, PhD | University of Alberta, Edmonton, Canada | Clinical and experimental cancer cachexia, cachexia pathophysiology, oncology nutrition, body composition |
| Eduardo Bruera, MD | MD Anderson Cancer Center, Houston, TX | Medical oncology, hospice and palliative medicine |
| Egidio del Fabbro, MD | Virginia Commonwealth University, Richmond, VA | Palliative care, with research interests in cancer-related fatigue and cachexia |
| Suzanne Dixon, MPH, MS, RD | Cambia Health Solutions, Portland, OR | Nutrition, epidemiology |
| Marie Fallon, MD | Edinburgh Oncology Centre, University of Edinburgh, UK | Palliative medicine, clinical studies and symptom control trials in supportive and palliative care |
| Jørn Herrstedt, MD, DMSci | Zealand University Hospital Roskilde and University of Copenhagen, Denmark | Gynecological oncology, supportive care |
| Harold Lau, MD | University of Calgary, Calgary, Alberta, Canada | Radiation oncology, head and neck cancer, lung cancer |
| Mary Platek, PhD, MS, RD | Roswell Park Comprehensive Cancer Center and D'Youville College, Buffalo, NY | Nutrition, epidemiology |
| Hope S. Rugo, MD | University of California San Francisco, San Francisco, CA | Medical oncology, breast cancer, clinical trials |
| Hester Hill Schnipper, LICSW, BCD, OSW-C | Beth Israel Deaconess Medical Center, Boston, MA | Oncology social work, cancer survivorship |
| Thomas J. Smith, MD | Johns Hopkins Medicine, Baltimore, MD | Medical oncology, hospice and palliative medicine |
| Winston Tan, MD | Mayo Clinic, Jacksonville, FL | Medical oncology, genitourinary cancer, cancer clinical trials and drug development |
| Kari Bohlke, ScD | American Society of Clinical Oncology (ASCO) | ASCO Practice Guidelines Staff (Health Research Methods) |



ASCO Guidelines

# References


1. Blauwhoff-Buskermolen S, Versteeg KS, de van der Schueren MA, et al: Loss of Muscle Mass During Chemotherapy Is Predictive for Poor Survival of Patients With Metastatic Colorectal Cancer. J Clin Oncol 34:1339-44, 2016
2. Strasser F: Diagnostic criteria of cachexia and their assessment: decreased muscle strength and fatigue. Curr Opin Clin Nutr Metab Care 11:417-21, 2008
3. Moses AW, Slater C, Preston T, et al: Reduced total energy expenditure and physical activity in cachectic patients with pancreatic cancer can be modulated by an energy and protein dense oral supplement enriched with n-3 fatty acids. Br J Cancer 90:996-1002, 2004
4. Prado CM, Baracos VE, McCargar LJ, et al: Sarcopenia as a determinant of chemotherapy toxicity and time to tumor progression in metastatic breast cancer patients receiving capecitabine treatment. Clin Cancer Res 15:2920-6, 2009
5. Nipp RD, Fuchs G, El-Jawahri A, et al: Sarcopenia Is Associated with Quality of Life and Depression in Patients with Advanced Cancer. Oncologist 23:97-104, 2018
6. Bruggeman AR, Kamal AH, LeBlanc TW, et al: Cancer Cachexia: Beyond Weight Loss. J Oncol Pract 12:1163-1171, 2016
7. Bachmann J, Heiligensetzer M, Krakowski-Roosen H, et al: Cachexia worsens prognosis in patients with resectable pancreatic cancer. J Gastrointest Surg 12:1193-201, 2008
8. Joglekar S, Nau PN, Mezhir JJ: The impact of sarcopenia on survival and complications in surgical oncology: a review of the current literature. Journal of surgical oncology 112:503-509, 2015
9. Utech AE, Tadros EM, Hayes TG, et al: Predicting survival in cancer patients: the role of cachexia and hormonal, nutritional and inflammatory markers. J Cachexia Sarcopenia Muscle 3:245-51, 2012
10. Prado CM, Baracos VE, McCargar LJ, et al: Body composition as an independent determinant of 5-fluorouracil-based chemotherapy toxicity. Clin Cancer Res 13:3264-8, 2007
11. Martin L, Senesse P, Gioulbasanis I, et al: Diagnostic criteria for the classification of cancer-associated weight loss. J Clin Oncol 33:90-9, 2015
12. Suzuki H, Asakawa A, Amitani H, et al: Cancer cachexia--pathophysiology and management. J Gastroenterol 48:574-94, 2013
13. Tisdale MJ: Pathogenesis of cancer cachexia. J Support Oncol 1:159-68, 2003
14. Poole K, Froggatt K: Loss of weight and loss of appetite in advanced cancer: a problem for the patient, the carer, or the health professional? Palliative medicine 16:499-506, 2002
15. Orrevall Y: Nutritional support at the end of life. Nutrition 31:615-6, 2015
16. Dusetzina SB, Winn AN, Abel GA, et al: Cost sharing and adherence to tyrosine kinase inhibitors for patients with chronic myeloid leukemia. J Clin Oncol 32:306-11, 2014
17. Streeter SB, Schwartzberg L, Husain N, et al: Patient and plan characteristics affecting abandonment of oral oncolytic prescriptions. J Oncol Pract 7:46s-51s, 2011
18. Meropol NJ, Schrag D, Smith TJ, et al: American Society of Clinical Oncology guidance statement: the cost of cancer care. J Clin Oncol 27:3868-74, 2009
19. Ma JD, Heavey SF, Revta C, et al: Novel investigational biologics for the treatment of cancer cachexia. Expert Opin Biol Ther 14:1113-20, 2014


 

# Disclaimer

The Clinical Practice Guidelines and other guidance published herein are provided by the American Society of Clinical Oncology, Inc. (ASCO) to assist providers in clinical decision making. The information herein should not be relied upon as being complete or accurate, nor should it be considered as inclusive of all proper treatments or methods of care or as a statement of the standard of care. With the rapid development of scientific knowledge, new evidence may emerge between the time information is developed and when it is published or read. The information is not continually updated and may not reflect the most recent evidence. The information addresses only the topics specifically identified therein and is not applicable to other interventions, diseases, or stages of diseases. This information does not mandate any particular course of medical care. Further, the information is not intended to substitute for the independent professional judgment of the treating provider, as the information does not account for individual variation among patients. Recommendations reflect high, moderate, or low confidence that the recommendation reflects the net effect of a given course of action. The use of words like “must,” “must not,” “should,” and “should not” indicates that a course of action is recommended or not recommended for either most or many patients, but there is latitude for the treating physician to select other courses of action in individual cases. In all cases, the selected course of action should be considered by the treating provider in the context of treating the individual patient. Use of the information is voluntary. ASCO provides this information on an “as is” basis and makes no warranty, express or implied, regarding the information. ASCO specifically disclaims any warranties of merchantability or fitness for a particular use or purpose. ASCO assumes no responsibility for any injury or damage to persons or property arising out of or related to any use of this information, or for any errors or omissions.