



HHS Public Access

Author manuscript

J Natl Compr Canc Netw. Author manuscript; available in PMC 2021 June 10.

Published in final edited form as:

J Natl Compr Canc Netw. ; 19(2): 235–238. doi:10.6004/jnccn.2021.7006.

The Impact of Early Referrals to Dietitians for Patients With Esophagogastric Cancer

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Abstract

Weight loss is a physical representation of the impact of cancer on the body and loss of control. For patients with esophagogastric cancer (EGC), loss of appetite and weight loss lead to reduced quality of life and poor clinical outcomes. In this issue of *JNCCN*, Dijksterhuis et al¹ present data evaluating the prevalence of pretreatment cachexia, association of pretreatment cachexia with survival, and early integration of dietitians in the care of patients with EGC. This 3-year Dutch study included >400 patients with EGC across all stages. Half of the patients had cachexia at presentation, which was associated with decreased survival. In our opinion, the key finding of this study is that 3-month median weight loss was lower for the patients referred to a dietitian at diagnosis (0% vs 2%; $P=.047$).¹ These findings suggest that early involvement of dietitians may slow or stabilize weight loss in the care of patients with EGC and highlight 3 key take-away points for practicing oncologists: (1) clarify the difference between weight loss and cachexia, (2) identify precachexia and (3) refer early to dietitians.

Clarify the Difference Between Weight Loss and Cachexia

In this study, the investigators refer to “cachexia” and “weight loss” interchangeably, which is common across clinical practice. However, as clinicians, we must be clear about these terms, especially when talking to patients and caregivers. Words matter. In fact, most patients and caregivers are unaware of the term “cachexia.” The optimal time to introduce cachexia is when patients and caregivers express concerns and frustrations about loss of appetite and weight loss. Weight loss is a component of cancer cachexia but does not define it. Instead, we introduce and describe cancer cachexia as a multifactorial syndrome

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Disclosures: Dr. Roeland has disclosed that he is a consultant for Mitobridge Inc., Asahi Kasei Pharmaceuticals, DRG Consulting, Napo Pharmaceuticals, American Imaging Management, Immuneering Corporation, and Prime Oncology. Additionally, he has served on recent advisory boards for Heron Pharmaceuticals, Vector Oncology, and Helsinn Pharmaceuticals. He has also served as a member on data safety monitoring boards for Oragenics, Inc, Galera Pharmaceuticals, and Enzychem Lifesciences Pharmaceutical Company. Dr. Dunne has disclosed that he is a consultant or on an advisory board for Exelixis Inc.

The ideas and viewpoints expressed in this commentary are those of the author and do not necessarily represent any policy, position, or program of NCCN.

characterized by loss of appetite, weight, and skeletal muscle, leading to fatigue, functional impairment, increased treatment-related toxicity, poor quality of life, and reduced survival.² Oftentimes, labeling the patient experience as cachexia rather than focusing solely on weight loss helps mitigate mounting tensions between patients and their caregivers regarding food. Although this may seem like a trivial point, in our experience, explaining the differences between weight loss and cachexia minimizes blame and guilt. When the issue of weight loss arises, do not miss a key opportunity to educate.

Identify Precachexia

Most clinicians define cachexia as emaciation and frailty in a patient approaching death, and might be surprised to learn that there are 3 described stages of cancer cachexia: precachexia, cachexia, and refractory cachexia.³ In precachexia, patients experience only minimal weight loss (ie, 2%–5%), with early clinical and metabolic changes (eg, anorexia, insulin resistance, inflammation, and hypogonadism) predictive of future weight loss and poor clinical outcomes. In contrast, the onset of cachexia is characterized in three ways: (1) weight loss >5% over the preceding 6 months; (2) body mass index <20 kg/m² with ongoing >2% weight loss; or (3) depletion of muscle mass and >2% weight loss. Finally, refractory cachexia is a clinically resistant catabolic state characterized by limited performance status, progressive cancer, and a life expectancy <3 months. In our experience, when colleagues refer to cachexia they are usually referring to end-stage wasting, when medical interventions are by definition refractory. Not all patients progress through all stages of cachexia, and the risk of progression depends on multiple factors, including cancer type and stage, tumor biology, and response to cancer therapy.

Unfortunately, reliance on weight loss alone to define cachexia leads to late recognition and prevents patients from receiving important early interventions, including cancer therapy, symptom palliation, nutrition, exercise, and psychosocial support. As has likely occurred in the study by Dijksterhuis et al¹, we argue that considering only weight loss and body mass index underestimates the prevalence of cancer cachexia. Weight loss measures ignore other changes, such as occult skeletal muscle loss and adipose tissue gain, which when present are useful for detecting patients at high risk for poor outcomes.⁴ Strategies to identify precachexia may include routine assessment of patient-reported outcomes (PROs) and body composition.

In this study, the investigators included a PRO at presentation to identify cancer cachexia. As PROs are becoming increasingly part of the standard of care in oncology practice, this may be a highly feasible and practical strategy for early identification. For example, determining thresholds of PROs may trigger consultations with dietitians, physical therapists, palliative care specialists, psychologists, and social workers.

Another strategy becoming increasingly more practical is the routine assessment of skeletal muscle on CT scans. Despite the availability of body composition data on CTscans obtained as part of usual care, oncologists primarily use CTscans to monitor tumor response to treatment.⁵ Although research has shown that CT-derived body composition data provide potential information to predict toxicity and poor clinical outcomes,^{6–9} radiologists have not

routinely quantified body composition because it is considered overly burdensome. However, body composition analysis on CT scans is becoming increasingly available as artificial intelligence algorithms are being developed that are capable of performing body compartment (muscle/adipose) segmentation.^{10,11} For example, fully automated algorithms exist to process thousands of CT images using machine learning.^{10,12} As a radiologic biomarker, this approach could help integrate body composition assessments into routine cancer care. Moreover, given that CT scans are obtained at diagnosis and used to assess treatment response, repurposing scans obtained as part of the standard of care has no cost or additional radiation exposure.

Refer Early to Dietitians

In this study, patients who met the authors' specified criteria for cachexia and were referred to a dietitian at diagnosis experienced subsequent weight stability over 3 months compared with those who were not referred. We should interpret these findings with caution given recall bias (dietitian referral was patient-reported, not abstracted from the medical chart) and lack of control for practice location or clinician, because clinicians who refer to dietitians may engage in more intensive supportive care. Unfortunately, only about half to two-thirds of patients who experienced weight loss were referred to a dietitian. This mirrors our observations that late referrals to dietitians are common when cachexia is advanced and irreversible.^{13,14} Several reasons exist for the underutilization of dietetic services in patients with cachexia. First, there is a systematic failure to address nutrition and cachexia-associated symptoms in oncology. For example, a qualitative research study found that clinicians miss opportunities to discuss, treat, and educate patients and caregivers regarding cachexia due to poor knowledge, a culture of avoidance, fear of causing distress, and limited time and resources.¹⁵ This missed opportunity stands in contrast to surveys of patients with cancer cachexia who report that they want to discuss weight loss and nutrition with their clinicians.¹⁶ Second, cachexia among patients with cancer is poorly recognized by clinicians, especially when patients are obese and have low muscle mass (ie, sarcopenic obesity), leading to increased treatment-related toxicity and poor survival.^{17,18}

Finally, we believe the most significant explanation for underuse of dietitian expertise is an issue of access. Approximately three-quarters of institutions have dedicated dietitians working with patients with cancer, but these departments are understaffed.¹⁹ Evidence suggests a dietitian-to-patient ratio of approximately 1:120 is most likely to improve quality of life and nutrition outcomes; this is much different than the current ratio of 1:2,300 in most settings.²⁰ Therefore, we believe a crucial role of practicing oncologists is to advocate for increased numbers of and access to dietitians. In fact, dietitians should perform a nutritional assessment for every patient with cancer, especially those at the highest risk for malnutrition, such as patients with EGC. This advocacy must also include developing self-sustaining business models, aside from philanthropy, to ensure consistent access to dietitians for patients with cancer.

Many oncologists perceive cancer cachexia as an eventual and unavoidable complication of progressive cancer. In fact, a central tenet in oncology is that treating the cancer is the most effective method to minimize cachexia—in other words, effective cancer treatment is

optimal palliation. Although we agree that effective antineoplastic treatment may mitigate weight and muscle loss, we believe this approach should be expanded to include nutrition, symptom palliation, research, exercise, mental health, caregiver support, and education (Figure 1). To achieve this expanded model, oncologists must clarify the difference between weight loss and cachexia, identify precachexia, and refer early to dietitians. The study by Dijksterhuis et al supports this integrated model of care. Cancer cachexia, as a hypermetabolic syndrome, requires multidisciplinary collaboration. As cancer care becomes increasingly complex, our success will depend on our ability to collaborate, communicate, and advocate.

Funding:

Dr. Dunne is supported by the University of Rochester CTSA award number KL2TR001999 from the National Center for Advancing Translational Sciences of the National Institutes of Health (RFD).

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Eric J. Roeland, MD, is a dual-trained and board-certified physician in palliative care and medical oncologist working as an Assistant Professor at the Massachusetts General Hospital Cancer Center. His oncology clinical practice focuses on the care of patients with gastrointestinal cancer, while his palliative care practice includes patients with all types of cancer. His clinical research focuses on identifying and evaluating novel approaches to minimize suffering and maximize the quality of life for patients with cancer.



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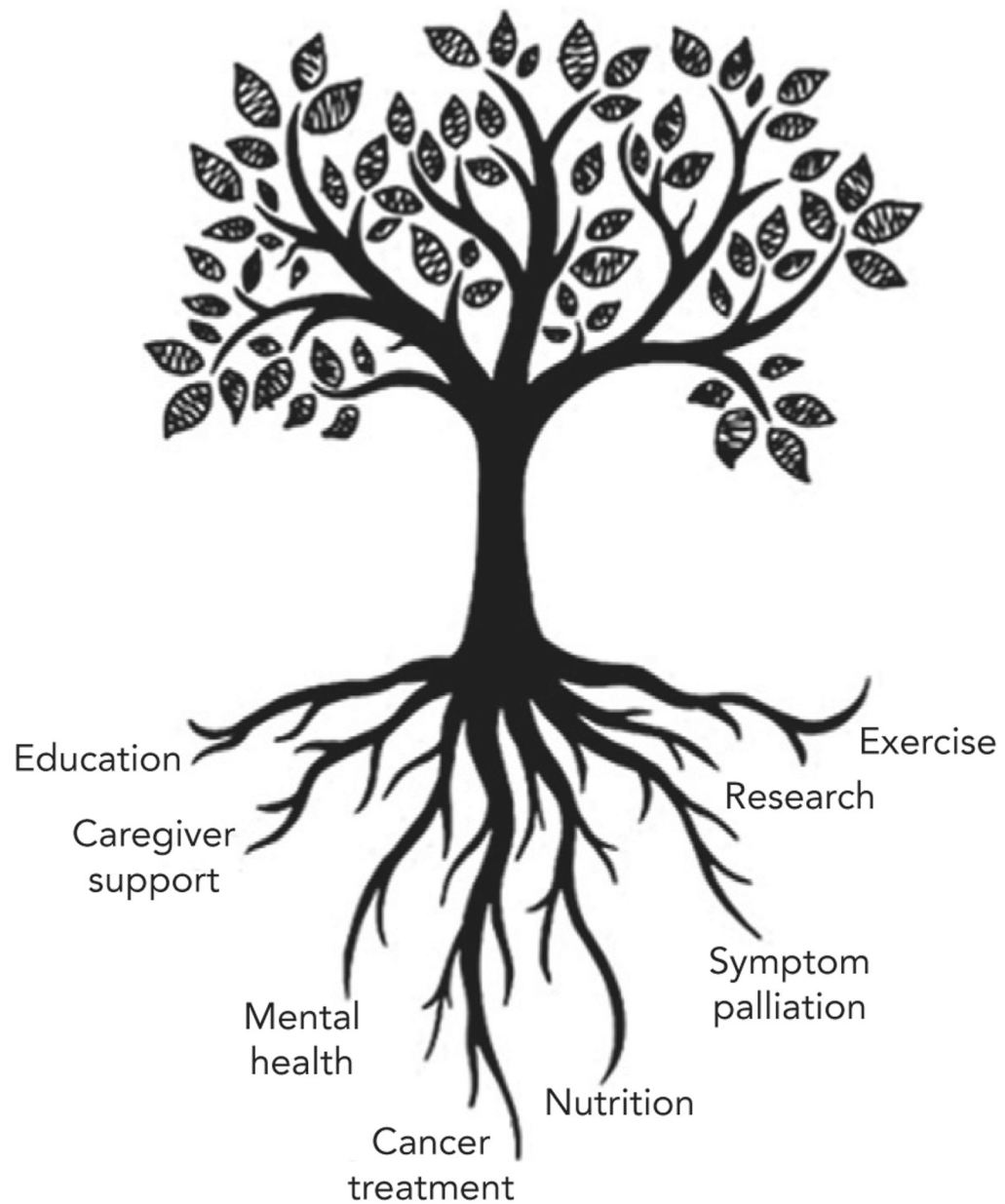


Figure 1.

A comprehensive approach to the care of patients with esophagogastric cancer experiencing cachexia, including cancer treatment, nutrition, symptom palliation, research, exercise, mental health, caregiver support, and education.