

Editorial

Raising the Bar for Assessing Nutritional Risk Among Patients with Cancer



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Nutrition is an important component of health, particularly for patients with cancer. Unfortunately, nutritional derangements are prevalent in the oncology population. Weight loss due to disease states and certain anticancer treatments is common, and changes in body composition due to weight loss can elevate metabolic risks.¹ Malnutrition can result in systemic inflammation, low skeletal muscle area, and high visceral-to-total fat states, leading to elevations in proinflammatory cytokines and lower levels of inhibitory cytokines.² Undernourishment can further lead to cachexia and sarcopenia.³ Sarcopenia has been specifically associated with systemic therapy dose interruptions and reductions, lower rates of pathologic response rates after neoadjuvant chemotherapy, shorter durations to cancer recurrence, and impaired overall survival.⁴⁻⁶ At the same time, research has increasingly shown that ketogenic and plant-based diets may impact tumor cells directly and indirectly via the tumor microenvironment and that a healthy diet is associated with reduced all-cause mortality for patients with cancer.⁷⁻¹¹ Yet, despite our recognition of the importance of nutrition in patients with cancer, there is a relative paucity of data regarding which populations of patients receiving radiation therapy may be at greatest risk of inadequate nutritional access and most in need of formal nutritional guidance.

In this issue of *Advances in Radiation Oncology*, Vyfhuis et al¹² examined nutrition access, cost, knowledge, and adherence among 320 US patients with lung, head and neck, gynecologic, or gastrointestinal cancers receiving definitive radiation therapy. Using patients' zip codes to determine if food priority areas (FPAs), or food deserts, would predict food insecurity and nutritional needs, the authors concluded that patients residing in FPAs had a 3-fold increased risk of food insecurity. They also found that predictors for food insecurity included Black race and advanced cancer stage. Notably, nutritional needs

decreased over time in patients who did not reside in FPAs but did not decline among patients in FPAs.

These findings highlight the importance of food insecurity screening and monitoring among patients receiving radiation therapy, particularly for traditionally marginalized patients. Providers must ascertain what the needs of their patients are, either by direct solicitation or via validated tools (as used by Vyfhuis et al¹²) and make appropriate referrals to address these needs. Because patient compliance to nutrition plans may be higher when prescribed by a physician and because their mortality, morbidity, and survivorship are potentially impacted by their diet, oncologists should view nutrition as an essential component of the therapeutic process, acknowledging, ascertaining, and conversing with patients about their status early on.¹³ For example, detailed nutritional assessment and guidance, with formal recommendations regarding the intake of macronutrients, fruits, vegetables, whole grains, and supplements, is critical for patients during and following therapy. Body composition analyses measuring the compartments of body mass (fat mass, water, bone, and protein) is also helpful to guide appropriate nutritional interventions, especially in patients with obesity, whose low lean body mass may be overlooked when paired with a high body mass index.^{1,14} Furthermore, both individualized on-demand nutritional counseling and intensive nutritional counseling are successful in preventing malnutrition during radiation therapy.¹⁵ And, although the emerging science of nutrition presents compelling arguments for personalizing diet plans for patients with cancer to optimize treatment adherence and physical health, equally critical is the patient's psychological health, emotional well-being, and overall quality of life after treatment. Studies show that optimal oral nutrition is needed to maintain patients' sense of autonomy, lifestyle, optimism, and mental fortitude.¹

Yet, despite the well-established relationship between nutritional impairments and health outcomes in patients

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with cancer, oncologists receive relatively little training about nutrition and little direct exposure to the expertise nutritionist partners provide in the care of our patients. Additionally, nutritional screening and assessment take time, another scarce resource for oncology care providers. Therefore, Vyfhuis et al¹² should be lauded for their efforts to advance this work. It serves as a reminder to those of us caring for patients with oncology to consider nutrition as an essential component of the therapeutic process and an important aspect of addressing health care disparities and inequity.

The authors describe their efforts to query zip codes from the electronic medical record to proactively identify patients at risk and although, innovative, may not be readily available data for all providers. So, where data and time are limited, providers can quickly reference existing tools, including the US Department of Agriculture Food Access Research atlas,¹⁶ to assist in identifying if they practice or care for patients in low-access regions of the country. Additionally, oncology providers can leverage their multidisciplinary treatment team, including social workers and nutritionists, to perform screening at diagnosis and regular intervals during care to assist with individualized counseling about nutritional intake and physical activity.

As in all areas of medicine, the importance of nutrition care for patients with cancer during treatment must be acknowledged and provided, especially for those who reside in FPAs. Although medical institutions' practical and technological systems are evolving to address this need, oncologists must also advocate for more support and activate change. For these reasons, it is imperative to prioritize nutritional risk in the assessment, surveillance, and intervention of health disparities in patients with cancer.

Disclosures

None.

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