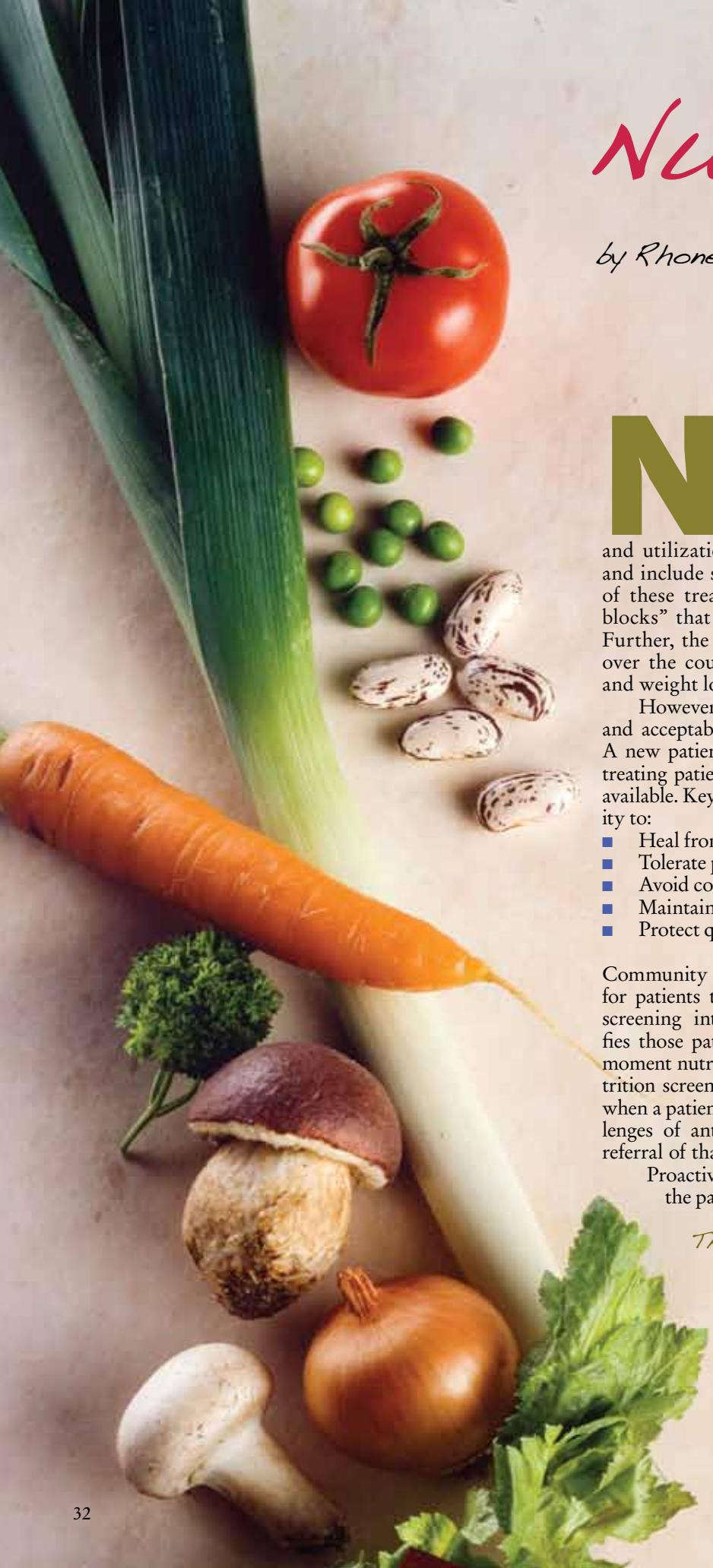

Nutrition—

by Rhone M. Levin, MEd, RD, CSO, LD

Nutrition is fundamental to everyday living and an integral part of the healing process. Oncology treatment can create a "healing burden" that can overwhelm even a healthy patient's nutritional reserve. The cancer itself can impair appetite, digestion, and utilization of nutrients. Treatment can be lengthy and include surgery, chemotherapy, and radiation. Each of these treatments may impose side effects or "road blocks" that interfere with adequate nutritional intake. Further, the adequacy of patients' nutrition can change over the course of treatment, with progressive decline and weight loss a common occurrence.

However, the belief that malnutrition is an expected and acceptable outcome of cancer treatment is outdated. A new patient-centered paradigm, which recognizes that treating patients for cancer requires adequate nutrition, is available. Key outcomes for cancer patients include the ability to:

- Heal from their treatment
- Tolerate prescribed treatment
- Avoid complications
- Maintain functional capacity
- Protect quality of life.

Community cancer centers provide the services and tools for patients to realize these key outcomes. Malnutrition screening integrated into global oncology care identifies those patients experiencing early malnutrition at the moment nutrition intervention is most effective. A malnutrition screening tool can be used to "catch" the moment when a patient is no longer able to compensate for the challenges of anti-cancer treatment and then trigger timely referral of that patient to the oncology nutrition specialist. Proactive nutrition care is pivotal to drive quality for the patient experience.

The 7th Vital Sign

As a result of a national patient quality-of-life campaign, all medical facilities were encouraged to routinely ask about and adequately treat pain symptoms. Asking about pain symptoms on a routine basis was coined "the 6th vital sign," indicating the significant impact that untreated pain can have on quality of life.

The new "adequate nutrition" model incorporates systematic malnutrition screen-

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the 7th Vital Sign

ing of all oncology patients across their treatment, incorporating a validated malnutrition screening tool into the collection of vital signs. Thus, malnutrition screening becomes the 7th vital sign, following temperature, pulse, respiration, blood pressure, oxygenation, and pain.

Malnutrition Happens: What is Your Program Doing about It?

It is well documented in the literature that up to 85 percent of all patients with cancer develop clinical malnutrition at some point in their treatment process.[1] One study found 35 percent of head and neck and gastrointestinal cancer diagnoses were classified as either moderately or severely malnourished at baseline prior to treatment.[2] Another study reviewing advanced non-small cell lung cancer patients identified that, at the time of diagnosis, 77 percent were in need of nutritional intervention, with 52 percent requiring urgent intervention.[3] At the fourth week of radiation treatment, 72 percent of patients report side effects affecting nutritional intake, up to 88 percent of head and neck patients continue to suffer from late effects that impair nutritional intake at six months post treatment.[4]

Malnutrition is a prognostic indicator for patient outcome. Weight loss correlates with decreased performance status in a majority of tumor categories, and a weight loss of as little as six percent predicts response to oncology treatment, survival, and quality of life.[5] Patients who develop malnutrition are at increased risk for having:[6]

- Treatment delays
- Treatment complications
- More frequent hospitalizations
- Reduced key outcomes, including quality of life.

Researchers have concluded that nutritional status is associated with improved survival prognosis.[7] One study demonstrated that when you compare weight-losing patients to non-weight-losing patients while controlling for confounding factors, those who lose weight receive up to 18 percent less treatment, which has potential negative impact on survival.[8]

Even mild weight loss is a predictive factor for malnutrition and should not be ignored. Attempts to reverse severe depletion are generally unsuccessful.[9] At the 2003 American Society of Clinical Oncology (ASCO) meeting, one study concluded that due to the difficulties in predicting malnutrition in oncology patients, "greater care should be taken for mild weight losses."[10]

Malnutrition Screening Tools

Malnutrition screening tools should be capable of identifying cancer patients who are malnourished and those at risk for malnourishment in daily clinical practice.[11] These tools must be:

- Easy to use
- Standardized
- Rapid
- Noninvasive
- Cost-effective.

The American Dietetic Association Evidence Analysis Library has information comparing parameters measured in the most common oncology screening tools.[12] The Oncology Nursing Society (ONS) has approved the following three malnutrition screening tools.[13]

- *Patient Generated – Subjective Global Assessment (PG-SGA)*: 17 data points, contains both screening and assessment criteria
- *Mini Nutrition Assessment*: 18 data points, contains both screening and assessment criteria
- *Malnutrition Screening Tool*: 2 data points, pure screening tool.

Provision of Nutrition Care

In one study, "Prevalence of Nutrition Screening in Ambulatory Cancer Patients and its Relationship to Nutrition Intervention," researchers Erskine and Perret concluded that standardized nutrition screening is lacking for ambulatory cancer patients and identification of risk most often did not result in the provision of medical nutrition therapy.[14] In their review, they estimated that 80 percent of oncology patients would have benefited from oncology nutrition intervention for malnutrition, but only about 33 percent received it. Another study found 35 percent of oncology patients received nutrition intervention, and 68 percent of the remaining patients indicated they would like to have had it.[15]

As oncology treatment has shifted to the outpatient setting, support services have changed. With the move to outpatient care, oncology patients lost access to routine nutrition screening and intervention provided by registered dietitians (RDs) in the hospital setting. Many community cancer centers offer nutrition services on a limited basis, or have inconsistent access to registered dietitians who are board-certified specialists in oncology nutrition. Patients may experience a time delay between referral and nutrition intervention. Physicians and nurses may only refer severely

Use of a screening tool can make effective use of a registered dietitian's time in today's challenging economic environment.

malnourished patients due to perceived difficulty in obtaining dietitian time. This scenario leads to a cycle of "crash and burn" consults where nutrition intervention has limited effectiveness, and patients do not receive the protective benefit of early and consistent nutrition services.

Benefits of Nutrition Intervention

Early and timely nutrition intervention, nutrition counseling, and appropriate use of nutrition supplementation can result in positive patient outcomes and is cost-effective.[16] Studies document that the later nutrition care is started in oncology treatment, the more difficult it is to improve or modify the nutritional status of the patient.[17] Oncology nutrition specialists can also improve compliance with difficult treatment regimens. Nutrition counseling has been demonstrated to improve nutritional outcomes, morbidity, and quality of life in colorectal treatment. Those patients receiving nutritional counseling demonstrated improved treatment adherence and a decrease in symptom severity scores for anorexia and diarrhea.[18]

Certified Specialists in Oncology Nutrition

The CSO (Certified Specialist in Oncology Nutrition) credential indicates registered dietitians who have a unique skill set. Board-certified oncology dietitians have experience, training, and tools to maximize good nutrition outcomes in the oncology setting. Aggressive symptom management and use of medical nutrition therapy, a technique that uses evidence-based nutrition research, provides the best opportunity to interrupt nutrition decline.[19] A study published in the *Journal of the American Dietetic Association* found that at week 6 following radiation treatment, the nutrition intervention group had significantly higher mean energy and protein intake when compared with the standard practice group. The intervention group was provided with medical nutrition therapy by a registered dietitian vs. the standard practice group who received a general nutrition talk by nursing staff and a booklet.[20] Providing individualized, cost-effective care avoids the cookie-cutter advice to "just drink another high-calorie supplement."

Specialized oncology nutrition skill sets include:

- Expertise in management of nutrition support such as tube feeding and total parenteral nutrition (TPN)
- Evaluation and counseling regarding the appropriate use of complementary strategies
- Wound healing
- Digestion and nutrient use in the altered or shortened gut
- Effective use of nutritional supplements and pancreatic enzymes
- Coordination of treatment diet with complex medical histories (e.g., celiac, cardiovascular, renal, and diabetic)
- The ability to help patients access nutritional supplements, as well as alternatives for those lacking insurance or unable to afford store-bought products.

Oncology nutrition expertise also encompasses cancer prevention, cancer survivorship issues, and management of the late effects of cancer treatment.

Patient Satisfaction and Perceptions of Care

When surveyed, patients associated their perceptions of care at community cancer centers with variables that impact quality of life. Adequacy of nutrition has direct impact on quality of life, including functional capacity, physical strength, and levels of fatigue. Support services, including nutrition, can drive decision making and revenue, as patients compare the different service offerings at various cancer centers. Wolcott and colleagues concluded in the 2008 *Journal of Clinical Oncology* that "utilization of support services is associated with statistically higher levels of patient satisfaction."[21]

Saving Time, Saving Money

A malnutrition screening tool can be used to identify patients at the right time, triggering nutrition intervention when it has the greatest impact. Use of a screening tool can make effective use of registered dietitian time in today's challenging economic environment. In implementing use of the tool, the oncology dietitian no longer spends valuable time seeking out those patients anticipated to develop nutrition problems, or dealing with time-consuming "crash and burn" referrals with late entry to nutrition care. Instead, nutrition intervention is focused on early malnutrition symptoms and indicators, when intervention has the most significant effect and provides maximum value.

Limitations regarding direct reimbursement for nutrition therapy do not need to hinder access to registered dietitian time. Although Medicare does not reimburse for oncology-related nutrition therapy at this time, a diagnosis of malnutrition may increase acuity of reimbursement. Some clinics use direct billing, or bill for Medical Nutrition Therapy incident to physician services. And, some community cancer centers are able to arrange for nutrition reimbursement with local payers based on positive outcomes data.

Rewarded by Cost Savings

Another pivotal cost savings is achieved when physician, nurse practitioner, and RN time is freed from nutrition surveillance. Aggressive nutrition intervention, nutrition orders, symptom management, and follow-up can be time consuming and is most effectively provided by the nutrition staff.

Screening Recommendations

- *The American Dietetic Association Nutrition Care Manual* recommends: "All patients diagnosed with or undergoing treatment for cancer should have a baseline nutrition screening to identify nutritional risks and deficits, and ongoing evaluation of the nutritional status."
- The Association for Parenteral and Enteral Nutrition states that: "It is important to identify those who require in-depth nutrition assessment and a nutrition care plan."
- The Association of Community Cancer Centers' *Cancer Program Guidelines*, Section 8: Nutrition Support Services, recommends:
  - Guideline I: A registered dietitian is available to work with patients and their families, especially those identified at risk for having nutritional problems or special needs. *Characteristic B*: Staffing of nutrition professionals is adequate to meet the needs of cancer patients and their families.
  - Guideline II: The nutrition professional in conjunction with the patient, family, and oncology team manages nutrition and hydration.
- The Joint Commission mandates nutrition screening for admission to a hospital, but not for ambulatory outpatients.

For facilities that serve indigent patients and those without adequate insurance coverage, the oncology dietitian can help decrease the incidence of expensive medical interventions, including:

- Hospital admission for malnutrition-related complications
- IV hydration
- Late nutrition support procedures (i.e., placement of a feeding tube due to significant weight loss)
- Increased use of symptom management medications.

McCallum and colleagues documented that pancreatic cancer patients who received nutrition education by an RD (at a cost of approximately $185) did not have any intestinal obstruction complications vs. 71 percent of the patients who did not receive dietary instruction and subsequently developed intestinal obstructions, with an average hospital length of stay of 13 days and at a cost of $7,500 per patient.[22]

Malnutrition Screening: Part of Oncology Care

The take-home message for community cancer centers? Use of a malnutrition screening tool throughout cancer treatment, as well as providing access to the services of a registered dietitian with expertise in oncology nutrition, medical nutrition therapy, and aggressive symptom management, can help your patients to maximize nutrition, maintain functional status, and protect their quality of life. Malnutrition screening is a part of global oncology care. Use of the 7th vital sign—malnutrition screening—will lead to increased efficiency, cost savings, and improved patient outcomes.

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