

Submitted by: Oncology Nutrition Dietetic Practice Group, Academy of Nutrition and Dietetics

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NCCN Guidelines Panel: Head and Neck

On behalf of the Oncology Nutrition Dietetic Practice Group of the Academy of Nutrition and Dietetics, I respectfully request the NCCN Head and Neck Cancers Panel consider the following scientific data for inclusion in the *Principles of Nutrition: Management and Supportive Care*. The suggested changes are based on evidence-based guidelines developed by the Clinical Oncology Society of Australia (COSA) entitled *Evidence Based Practice Guidelines for the Nutritional Management of Adult Patients with Head and Neck Cancer*¹.

Overview: The COSA consists of over 1,000 oncology physicians, nurses, dietitians, allied health professionals and scientists throughout Australia. COSA develops guidelines to inform clinical practice on a wiki-based platform, provided by Cancer Council Australia. In 2012, the COSA developed the *Evidence Based Practice Guidelines for the Nutritional Management of Adult Patients with Head and Neck Cancer* to provide the multidisciplinary healthcare team with a summary statement of evidence-based clinical interventions related to the nutrition management of patients. The summary statement concludes that dietetic intervention is important throughout the head and neck cancer patient care pathway, including nutrition screening, referral, assessment and management.

A Steering Committee of experts with clinical and research expertise in evidence based guideline development and the nutritional management of patients with head and neck cancers developed the evidence questions. A review was completed by a Multidisciplinary Steering Committee that included representatives from dietetics, head and neck surgery, radiation oncology, medical oncology, palliative care, oral medicine, nursing, psychiatry, social work, pharmacy, speech pathology, and radiotherapy. The recommendations were submitted to the COSA, Cancer Institute NSW Oncology Group, Dietitian Association of Australia, Dietitians New Zealand, Australia and New Zealand Head and Neck Cancer Society and the British Dietetic Association. Additionally, the guidelines were approved by the U.S. Academy of Nutrition and Dietetics for the Evidence Analysis Library, published online in 2013 and in the *Journal of Nutrition and Dietetics* (in press)^{2,3}.

The strength of the evidence of the COSA guidelines were assessed using the *National Health and Medical Research Council (NHMRC) Levels of Evidence and Grades for Recommendations for Developers of Guidelines*⁴. The quality of each study was assessed using the *American Dietetic Association (now the Academy of Nutrition and Dietetics): Evidence Analysis Manual, Steps in the ADA Evidence Analysis Process*⁵. Only guidelines that were rated grade A (Excellent) or B (Good) are included here as suggested changes to existing NCCN guidelines. The COSA search utilized 288 articles for the review. We have refrained from including the references in this submission because they are available within the guidelines document¹.

Specific Changes:

- Paragraph one: Recommend greater emphasis on the fact that many head and neck cancer patients are often nutritionally compromised and at greater risk for malnutrition. Specifically, we recommend the following: **“Most head and neck cancer patients lose weight are nutritionally compromised as a result of their disease, health behaviors, and treatment-related toxicities. Malnutrition may have a significant and adverse impact on the delivery of treatment, costs, and on patient outcomes, including more infections, reduced treatment response, treatment interruptions, higher admission rates, greater length of stay and reduced quality of life.”**
Rationale: COSA guidelines Grade B.
- Paragraph one: Recommend addition of the following verbiage: “Registered dietitian nutritionists should be a part of the multidisciplinary team for treating patients with head and neck cancer throughout the continuum of care. Frequent and consistent nutritional care provided by registered dietitian nutritionists improves nutrition outcomes and quality of life for head and neck cancer patients.”
Rationale: COSA guidelines Grade A.
- Recommend the following modifications to the Assessment and Management section, specifically:

- Addition of “validated” to the following: Pre- and post-treatment functional evaluation including nutritional status should be undertaken using validated subjective and objective assessment tools.
Rationale: According to the COSA guidelines, a validated nutrition screening tool (e.g., Malnutrition Screening Tool) should be utilized for identifying malnutrition risk in cancer patients (Grade B) and a validated nutrition assessment tool (e.g., scored Patient Generated-Subjective Global Assessment or Subjective Global Assessment) to assess nutritional status (Grade B).
- Inclusion of “Pre-operative nutrition intervention in malnourished patients may lead to improved outcomes including increased quality of life and reduced adverse consequences of malnutrition.”
Rationale: COSA guidelines Grade B.
- Addition of: “Nutrition intervention may improve or maintain nutritional status and improve outcomes in patients undergoing chemotherapy and radiotherapy.”
Rationale: COSA guidelines Grade A (for nutritional status) and Grade B (for patient outcomes, including quality of life, functional status and patient satisfaction).
- Addition of: “Aim to prevent a decline/improve nutritional status and associated outcomes in pre-treatment and surgical head and neck cancer patients with malnutrition or who are at risk of malnutrition. Aim to minimize a decline in nutritional status and weight and to maintain quality of life and optimize symptom management in patients receiving radiotherapy and chemotherapy.”
Rationale: COSA guidelines Grade A.
- Addition of: “Weekly registered dietitian nutrition contact may improve outcome in patients receiving radiotherapy.”
Rationale: COSA guidelines Grade A.
- Addition of: “Consider registered dietitian nutrition follow up every 2 weeks for 6 weeks post treatment.”
Rationale: COSA guidelines Grade A.
- Addition of: “Nutrition intervention for 3 months post-treatment improves/maintains quality of life and nutritional status.”
Rationale: COSA guidelines Grade A.
- Inclusion of: “Antioxidants and beta-carotene dietary supplements, and high doses of vitamins A and E should not be taken during chemotherapy or radiotherapy.”
Rationale: According to COSA guidelines, antioxidants should not be taken during chemotherapy or radiotherapy due to possible tumor protection and reduced survival (Grade B); although beta-carotene (30 mg/d) may reduce side effects, experts advise against intake secondary to association with reduced survival in head and neck patients, and increased recurrent disease in other cancer tumor types (Grade B); vitamin A at high doses (200,000 IU/week) has no benefits and may have an adverse effect on survival and disease outcomes (Grade B); vitamin E at high doses (400 IU/d) may be associated with reduced survival or recurrent disease (Grade A).
- Recommend that the following be added to the Use of Alternative Routes for Nutrition section: “Consider post-operative tube feeding within 24 hours in patients for whom tube feeding has been deemed necessary for maintenance of nutritional status; individual consideration should be given to patients depending on planned surgical procedures in collaboration with the multidisciplinary team.”
Rationale: COSA guidelines Grade A.

Key References:

1. Cancer Guidelines Wiki. Evidence-based practice guidelines for the nutritional management of adult patients with head and neck cancer. http://wiki.cancer.org.au/australia/COSA:Head_and_neck_cancer_nutrition_guidelines
2. Academy of Nutrition and Dietetics. Evidence Analysis Library: Oncology Nutrition Evidence-Based Nutrition Practice Guidelines 2013. www.andeal.org. (Access to the Evidence Analysis Library is by subscription. For the purposes of this review, if you would like access, please notify Elaine Trujillo at trujille@mail.nih.org)
3. External Guideline Rating Equivalencies. http://www.andeal.org/files/Docs/ON%20External%20Guidelines%20-%20EAL%20Rating%20Equivalency_06252013.pdf
4. NHMRC additional levels of evidence and grades for recommendations for developers of guidelines. https://www.nhmrc.gov.au/files/nhmrc/file/guidelines/developers/nhmrc_levels_grades_evidence_120423.pdf
5. American Dietetic Association. American Dietetic Association: Evidence Analysis Manual. Steps in the ADA Evidence Analysis Process. 2008;Chicago: Scientific Affairs and Research (American Dietetic Association is now the Academy of Nutrition and Dietetics).