

Nutritional Intervention Effectiveness in Oncology Patients Receiving Active Anti-Cancer Treatment: A Systematic Review

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Learner Objectives:

- Inform on the current state of science regarding nutritional interventions in oncology patients.
- Understand potential for quality nutritional intervention strategies for cancer patients on treatment.
- Provide platform for future research on topic.

Additionally:

- No conflicts of interest exist for this review or the information presented herein.
- No sponsorship or commercial support was provided for this review or presentation.
- Employer: Erie County Medical Center, Center for Cancer Care, Buffalo, NY, USA.

Acknowledgements

- Jessica Castner, RN, PhD (University at Buffalo)
 - Mentor and lead faculty support.
- Jennifer Frustino, DDS, PhD, and Carly Gerretson, FNP-C, RNFA of Erie County Medical Center
 - Second and third reviewers for inclusion/exclusion process.

“Cancer has the most devastating economic impact of any cause of death in the world”

(The American Cancer Society, 2010, p. 2).

Introduction

- Cancer is leading cause of death worldwide (National Cancer Institute, 2016).
- Cancer treatments (e.g. chemotherapy, radiation, chemoradiation) come with related co-morbidities and side effects.
 - Malnutrition and progressive weight loss.

Why is malnutrition a big deal?

Purpose of Systematic Review

- Look at present state of science on nutritional interventions and effects on weight maintenance → inform practice potential.
- Identify if any gaps in literature exist.

Where/how can we be more impactful in our practice? What intervention(s) work(s) best?



Methods

- Medline & CINAHL Plus databases searched.
- McMaster University Quality Appraisal Tool for Quantitative Studies used for quality analysis.

Inclusion Criteria

P	Adults (18+), any cancer diagnosis at any stage, on active anticancer treatment (chemo, radiation, chemorads), monitor weight loss/malnutrition.
I	Nutrition education, supplementation, or combination.
C	No intervention; intervention not nutrition related.
O	Observation, randomized/controlled, intervention, or case studies. Outcome measured weight, performance status, and/or hospital admissions.
T	From 1980 to 2015 included in review.

Key Phrase Search

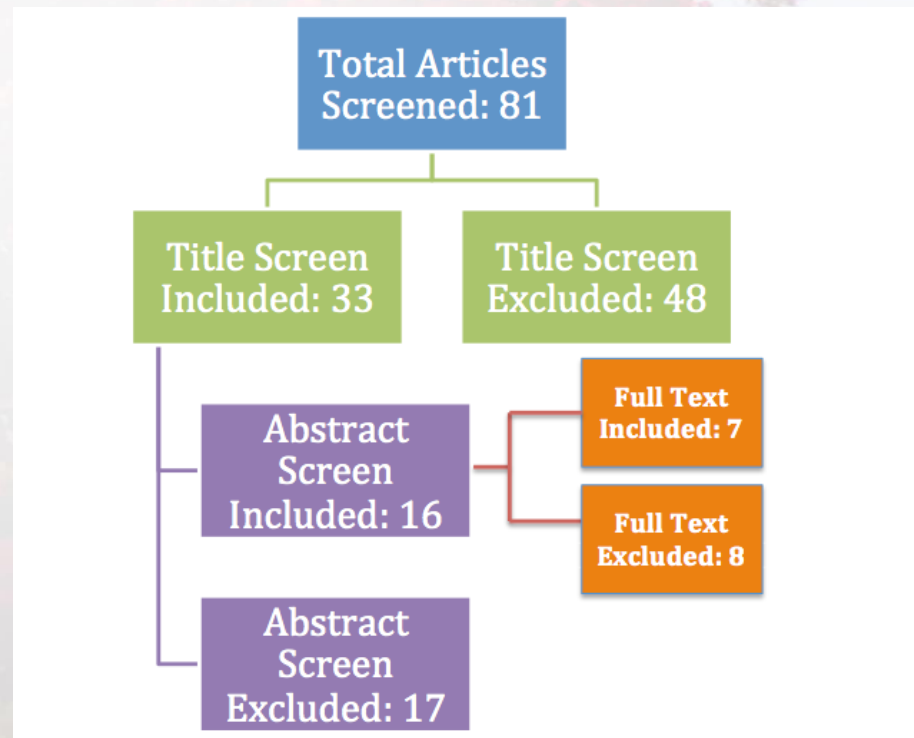
- Table summarizing search terms and corresponding number of hits by term progression.

Database Searched & Number of Hits

Key Phrase Searched	Medline	CINAHL Plus
"cancer OR oncology"	1,627,905	22,036
"nutrition intervention OR nutritional program"	1,933	843
"weight maintenance OR weight loss OR weight gain"	123,187	30,659
(cancer OR oncology) AND (nutritional intervention OR nutritional program) AND (weight maintenance OR weight loss OR weight gain)	67	27

Key Phrase Search

- (cancer OR oncology) AND (nutritional intervention OR nutritional program) AND (weight maintenance OR weight loss OR weight gain)
 - Total Medline hits: 67; CINAHL Plus hits: 27



Results

- Integrated Theory of Health Behavior Change guided synthesis of results: proximal (short-term) and distal (long-term) goals (Ryan, 2009).

Proximal Goals: Six out of seven studies found that nutritional intervention (education and/or supplementation) significantly improved weight (gains, no losses).

Distal Goals: Two out of seven studies found hospital admissions were reduced in nutritional intervention groups.

- One study found improved performance status (ECOG scores) with **early** nutritional education intervention.

What does this mean for practice?

Practice Implications

- Intensive/focused early education, supplementation, or combination significantly benefits:
 - Weight maintenance
 - Improved performance status
 - Decrease in hospital stays
- Opportunity for further research
 - Expansion or improvements to current literature



Questions



Photo credit: <http://www.humanosphere.org/tag/fred-hutchinson-cancer-research-center/>

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