

Immunonutrition for patients undergoing elective surgery for gastrointestinal cancer: impact on hospital costs.

[Mauskopf JA](#)¹, [Candrilli SD](#), [Chevrou-Séverac H](#), [Ochoa JB](#).

Author information

1RTI Health Solutions, Durham, NC, USA. jmauskopf@rti.org

Abstract

BACKGROUND:

Oral or enteral dietary supplementation with arginine, omega 3 fatty acids and nucleotides (known as immunonutrition) significantly improve outcomes in patients undergoing elective surgery. The objective of the study was to determine the impact on hospital costs of immunonutrition formulas used in patients undergoing elective surgery for gastrointestinal cancer.

METHODS:

US hospital costs of stay with and without surgical infectious complications, and average cost per day in the hospital for patients undergoing elective surgery for gastrointestinal cancer were estimated using data from the Healthcare Cost and Utilization Project's 2008 Nationwide Inpatient Sample. These costs were then used to estimate the impact of perioperative immunonutrition on hospital costs using estimates of reduction in infectious complications or length of stay from a meta-analysis of clinical trials in patients undergoing elective surgery for gastrointestinal cancer. Sensitivity of the results to changes in baseline complication rates or length of stay was tested.

RESULTS:

From the meta-analysis estimates, use of immunonutrition resulted in savings per patient of \$3,300 with costs based on reduction in infectious complication rates or \$6,000 with costs based on length of hospital stay. Cost savings per patient were present for baseline complication rates above 3.5% or when baseline length of stay and infectious complication rates were reduced to reflect recent US data for those with upper and lower GI elective cancer surgery (range, \$1,200 to \$6,300).

CONCLUSIONS:

Use of immunonutrition for patients undergoing elective surgery for gastrointestinal cancer is an effective and cost-saving intervention.

PMID: 22770421

PMCID: [PMC3506456](#)

DOI: [10.1186/1477-7819-10-136](#)

[Indexed for MEDLINE]