

REVIEW SUMMARY

Preoperative Nutrition Optimization of the Oncology Patient: A Scoping Review

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Objective:

This scoping review was submitted by the Division of Research and Optimal Patient Care, American College of Surgeons, and designed to develop recommendations for general surgeons regarding preoperative nutritional support for patients with cancer.

Methods:

5,505 publications were identified (2010–2020) and 69 GI oncology surgery studies were selected (57% RCT, 19% observational, 15% other, 9% meta-analyses). Outcomes most frequently evaluated were total post-op complications, wound or infectious complications and length of stay. Nutritional interventions were studied in isolation or as part of Enhanced Recovery Pathways. Studies looking at nutritional interventions occurring within 24 hours of surgery, i.e., carbohydrate loading were not considered in this review.

Results:

The recommendations address **five types of nutrition intervention** as described below.

Nutritional counseling	Providing preoperative nutritional education by trained nutrition specialists, as part of a multicomponent prehabilitation regimen, especially to at-risk patients with GI cancer, should be strongly considered.
Oral protein and calorie supplementation	Nutritional supplementation is strongly recommended for patients with GI cancer who are malnourished. The optimal quantity is yet to be determined, but benefit in colorectal cancer has been seen with quantities as low as 250 mL per day (with 24 g protein).
Immunonutrition and pharmaconutrition	Preoperative immunonutrition (arginine, omega-3 fatty acids, or dietary nucleotides alone or in combination) can be recommended for patients with GI cancer. Consideration for provision after surgery is also advised.
Synbiotics and probiotics	Synbiotics or probiotics should be considered for patients with colorectal cancer.
Enteral and parenteral supplementation	Data was limited, however preoperative enteral supplementation should be considered for at-risk patients with esophageal cancer, especially those who are unable to maintain sufficient caloric intake by eating orally.

Conclusions:

Patients undergoing surgery for GI malignancy should be considered for:

- Preoperative nutritional counseling
- Immunonutrition
- Protein and calorie supplementation (if malnourished)

Access the article at: <https://pubmed.ncbi.nlm.nih.gov/35213503/>

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