Objective:
To systematically review the preoperative use of immunonutrition (containing all combinations of arginine, glutamine, n-3 fatty acids and nucleotides) in GI cancer surgery studies measuring at least one clinical outcome.

Methods:
16 randomized controlled trials (n=1387) with either isonitrogenous, isocaloric (IN/IC) controls (6 trials) or no supplementation (10 trials) were meta-analyzed. 6 trials had a mixed GI cancer surgery population, 4 were colorectal, 2 pancreatic, 2 gastric and 1 each liver and esophageal cancer. All trials evaluated the immunonutrition (IM) blend of supplemental arginine, n-3 fatty acids and nucleotides found in IMPACT® formulas.

Results:

✔ A large decrease in risk of infectious complications was shown when IM formula were compared with IN/IC controls, and this demonstrating the value of the immunonutrient blend apart from supplementing calories and protein.

✔ Regardless of the control compared, use of this specific IM formulation prior to GI cancer surgery decreased the risk of infectious complications by ~50%.

✔ Significant LOS reductions were associated with IM formulas used prior to GI cancer surgery among all studies analyzed, and when controls were unsupplemented.

✔ Differences between groups for non-infectious complications and mortality were not found.

Conclusion:
• Preoperative use of IMPACT® formulas is superior to standard oral nutritional supplements in GI cancer surgery patients.
• A minimum of 5 days of preoperative IMPACT® formula, orally or enterally should be part of routine practice in the care of GI cancer surgery patients.

Summary prepared by Nestlé Health Science.
The complete study may be accessed online: