

Impact of Arginine-based Immunonutrition on Inpatient Total Costs and Hospitalization Outcomes for Patients Undergoing Colorectal Surgery

Banerjee S, Garrison LP, Danel A, Ochoa Gautier JB* and Flum DR. Nutr 2017; 1-8.

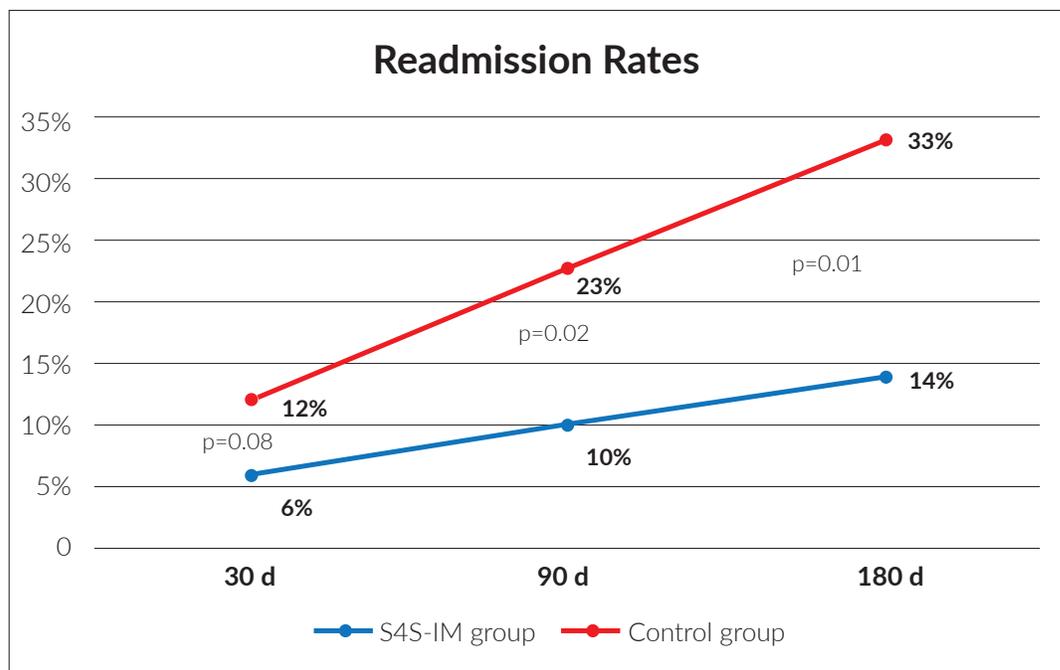
Objective:

Assess the effects of arginine-based immunonutrition (IM) on post-surgical utilization and cost outcomes in adult patients undergoing elective colorectal surgery involving anastomosis.

Methods:

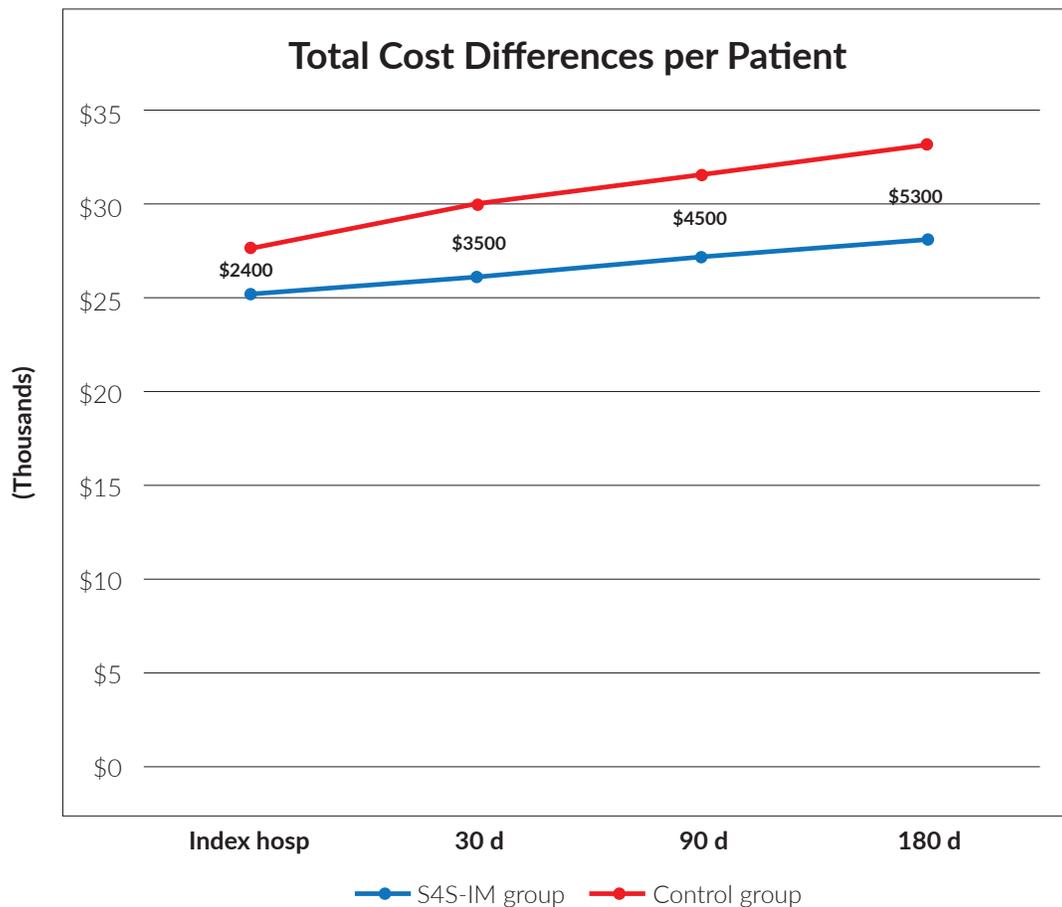
Patients from Washington State hospitals (n=722) participating in the Strong for Surgery® (S4S) initiative were drawn from the SCOAP (Surgical Care Outcomes Assessment Program) database. The immunonutrition group (n=151) was nutrition check-listed and received IMPACT Advanced Recovery® Immunonutrition Drink (3 cartons per day for 5 days) in addition to a regular diet prior to surgery. The control group (n=565) did not receive supplementation to a regular diet. A multivariate regression framework was used to adjust for demographic characteristics and patient health conditions.

Results:



- Patients in the S4S-IM group had a 50-58% lower rate of readmission (30-180 days post discharge) than those in the control group.
- After controlling for demographic and patient health conditions, readmission rates for the S4S-IM group continued lower at 30 days post-discharge ($p < 0.05$), as well as at 90 and 180 days ($p < 0.01$).

Results: (Continued)



- From index hospitalization to 180 days post-discharge, mean cost of care was \$5300 less for the S4S-IM group vs. control, and the mean increase in total costs was reduced by 10%.**

Additional Results

- S4S-IM group patients had a lower rate of surgical site infection (SSI) than control patients (0% vs. 2.65%; p=0.04)
- S4S-IM group patients had a lower rate of venous thromboembolism than control patients (1.32% vs. 4.96%; p=0.05)

Conclusion

- Within the context of the S4S program, use of IMPACT Advanced Recovery® Drink is associated with observed clinical benefit and a reduction in readmission rate.
- Health economic analysis within the real world setting of the S4S program shows cost savings associated with use of IMPACT Advanced Recovery® Drink at index admission, and at various time periods following discharge from colorectal surgery.

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**Not intended to guarantee specific reductions in cost.

The complete study can be accessed on line at: <https://doi.org/10.1016/j.nut.2017.06.002>

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