

# Post-operative enteral immunonutrition for gynecologic oncology patients undergoing laparotomy decreases wound complications.

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## Abstract

### OBJECTIVES:

The aim of this study is to determine if peri-operative immune modulating dietary supplements decrease wound complications in gynecologic oncology patients undergoing laparotomy.

### METHODS:

In July 2013 we instituted a practice change and recommended pre- and post-operative oral immune modulating diets (IMDs) to patients undergoing laparotomy. We retrospectively compared patients who received IMDs to those who did not for the study period July 2012 to June 2014. Our outcome of interest was the frequency of Centers for Disease Control surgical site infections (CDC SSIs).

### RESULTS:

Of the 338 patients who underwent laparotomy during the study period, 112 (33%) received IMDs post-operatively. There were 89 (26%) wound complications, including 69 (78%) CDC SSI class 1, 7(8%) class 2 and 13(15%) class 3. Patients receiving IMDs had fewer wound complications than those who did not (19.6% vs. 33%,  $p=0.049$ ). After controlling for variables significantly associated with the development of a wound complication (ASA classification, body mass index (BMI), history of diabetes mellitus or pelvic radiation, length of surgery and blood loss) consumption of IMDs remained protective against wound complications (OR 0.45, CI 0.25-0.84,  $p=0.013$ ) and was associated with a 78% reduction in the incidence of CDC SSI class 2 and 3 infections (OR=0.22, CI 0.05-0.95,  $p=0.044$ ).

### CONCLUSIONS:

Post-operative IMDs are associated with fewer wound complications in patients undergoing laparotomy for gynecologic malignancy and may reduce the incidence of CDC SSI class 2 and 3 infections.

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**KEYWORDS:**

Complications; Immune-modulating diets; Malnutrition; Post-operative; Surgical site infections

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