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## COMMENTARY

# Value of nutrition supplementation prior to cystectomy

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Radical cystectomy with urinary diversion is associated with high postoperative complication rates of over 60%<sup>1</sup> and research into ways to minimize complications is important. Nutritional status has been shown to affect postoperative complications<sup>2</sup> and as such there have been efforts to determine whether improving the nutritional status can reduce complications. This has been studied more extensively for gastrointestinal surgery<sup>3</sup> but role in cystectomy is still controversial. The authors of the current study should be congratulated for conducting a phase II study evaluating the use of preoperative - high arginine immunosupplement prior to cystectomy. In this study 40 patients in the treatment group were compared to a contemporary cohort of patients receiving standard care in their institution. Unfortunately, there were no significant differences in postoperative overall or infectious complications.<sup>4</sup>

While the use of high arginine immunosupplements was shown to be effective in decreasing infectious complications in both GI and non GI surgeries,<sup>5</sup> in radical cystectomy patients only two small series were published so far.<sup>6,7</sup> Both of these studies reported a decrease in overall and infectious complications.<sup>6,7</sup> In the current study, the authors were unable to validate prior findings, however, the results of this study should be interpreted with caution. This is the largest study to date yet it was powered to detect a reduction from 35% to 10% in infectious complications and might have missed less dramatic changes. Furthermore, various additional nutritional parameters such as pre-albumin, or the use of nutritional assessment tools were not reported.

Treatment duration was set according to other studies concerning gastrointestinal surgery,<sup>8</sup> however, cystectomy patients form a unique group as many receive prolonged neoadjuvant chemotherapy. This may lead patients to surgery in a less optimal nutritional status, yet may

form an opportunity for earlier and longer preoperative nutritional interventions. In this study the percentage of patients receiving neoadjuvant chemotherapy was relatively small and intervention period was short.

Enhanced Recovery After Surgery (ERAS) protocols are increasingly implemented for cystectomy patients, defining better and more standardized peri-operative care leading to faster recovery times and less complications. Those protocols were not implemented in the care of the patients included in this study and might have impacted surgical complications, thus, implementation of the results of this study to current practice standards might be impaired.

Nevertheless, this study showed good safety and tolerability of immunonutrition.<sup>4</sup> If it can be demonstrated that immunonutrition can improve outcomes then it is a reasonable to institute broadly to patients since it would represent an intervention with little to no morbidity. Future studies need to focus on more realistic benefits and larger cohorts so they are adequately powered to demonstrate benefits if they exist. □

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