

2. Toner AJ, Ganeshanathan V, Chan MT, Ho KM, Corcoran TB: Safety of perioperative glucocorticoids in elective non-cardiac surgery: A systematic review and meta-analysis. *ANESTHESIOLOGY* 2017; 126:234–48
3. De Oliveira GS Jr, Castro-Alves LJ, Ahmad S, Kendall MC, McCarthy RJ: Dexamethasone to prevent postoperative nausea and vomiting: An updated meta-analysis of randomized controlled trials. *Anesth Analg* 2013; 116:58–74

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In Reply:

We thank Dr. Wax for his response to our recent article on perioperative steroid management.¹ Since the publication of our article, we have received several queries regarding the use of dexamethasone as a perioperative stress-dose steroid and appreciate the opportunity to further address this topic. As Dr. Wax aptly notes, dexamethasone has significantly more glucocorticoid potency than hydrocortisone, has no mineralocorticoid effect, and can be clinically effective in the prevention of postoperative nausea and vomiting. Indeed, the recommended antiemetic dose of dexamethasone (4 mg) has at least the same glucocorticoid equivalence as the recommended intraoperative stress dose of hydrocortisone (100 mg) for patients at risk for adrenal insufficiency undergoing major surgery.¹ The available literature on perioperative steroid supplementation provides dosing guidelines based on hydrocortisone, which has a shorter, more predictable half life compared to dexamethasone and is thus more easily tapered to the usual daily dose in patients requiring continued postoperative supplementation based on surgical stress. However, the literature on patients with *secondary* adrenal insufficiency does not make any specific recommendation as to what is the “best” stress-dose steroid to administer. Dexamethasone is not appropriate for patients with *primary* adrenal insufficiency or critically ill patients, both of whom require mineralocorticoid supplementation.^{2,3} While we agree that the use of dexamethasone may be a reasonable approach for many patients with *secondary* adrenal insufficiency, with additional benefit in the prevention of postoperative nausea and vomiting, we caution against a “one-size-fits-all algorithm,” especially in critically ill patients.

Competing Interests

The authors declare no competing interests.

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References

1. Liu MM, Reidy AB, Saatee S, Collard CD: Perioperative steroid management: Approaches based on current evidence. *ANESTHESIOLOGY* 2017; 127:166–72

2. Bornstein SR, Allolio B, Arlt W, Barthel A, Don-Wauchope A, Hammer GD, Husebye ES, Merke DP, Murad MH, Stratakis CA, Torpy DJ: Diagnosis and treatment of primary adrenal insufficiency: An endocrine society clinical practice guideline. *J Clin Endocrinol Metab* 2016; 101:364–89
3. Cooper MS, Stewart PM: Corticosteroid insufficiency in acutely ill patients. *N Engl J Med* 2003; 348:727–34

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Volume Responsiveness Alone Is Not an Indication for Volume Administration!

To the Editor:

It is with intrigue that we read Gómez-Izquierdo *et al.*'s paper demonstrating the lack of effectiveness of goal-directed fluid therapy (GDFT) in reducing ileus after elective laparoscopic colorectal surgery.¹ We congratulate the authors for a well-done study and *ANESTHESIOLOGY* for publishing an important negative trial. There are a few points we would like to discuss.

First, these authors join an increasingly large number of research groups whose results call into question the value of GDFT in mitigating complications and reducing hospital length of stay or cost after elective surgery. Specifically, several previous reports, and now that of Gómez-Izquierdo *et al.*, collectively force us to critically examine the *general applicability* of GDFT in today's surgical patients. Although GDFT has been shown to mitigate postsurgical complications in studies spanning three decades,² its effectiveness in reducing postsurgical morbidity in patients on enhanced recovery pathways appears limited.³ Additionally, traditional proponents of GDFT recently have questioned its value within enhanced recovery.^{4,5} Even staunch proponents of standardized, best-evidence clinical pathway design and implementation have questioned the acceptance of all enhanced recovery elements without continued individual element evaluation.^{6,7} To be sure, the laparoscopic approach, avoidance of dehydrating bowel preparations, and clear liquid consumption until 2 h before surgery all play important roles in reducing the volume shifts that were typical of traditional surgical procedures. To these points, we agree with Gómez-Izquierdo *et al.* that important advancements in perioperative care have diminished the positive impact of GDFT.

Second, the implemented GDFT approach is not in line with the referenced perioperative fluid therapy consensus statement, which details a logical two-step rationale for intraoperative fluid administration. “First, determine if the patient requires hemodynamic support or augmentation of cardiovascular function. Second, if the need is apparent and the patient is fluid responsive, fluid bolus therapy should be considered.”⁸ As recently penned by Takala, “giving volume