I read with great interest the article of Tharakan and colleagues\(^1\) in a recent issue of the journal. The authors conducted a study on 209 patients who underwent total thyroidectomy, hemithyroidectomy, or parathyroidectomy and concluded that the number of pain pills meeting the opioid needs of 80% of these patients was 10 pills and that older age was associated with lower odds of opioid use. The authors should be applauded for performing a well-designed study in an important topic (eg, acute pain) in patients undergoing elective surgery.\(^2,3\) The need to reduce opioid prescription and diversion is currently an important public health issue.\(^4,5\)

Nonetheless, some critical points need to be clarified by the authors to determine the validity of the findings. First, the authors did not report the use of intraoperative opioids in their analysis as this can directly affect the use of postoperative opioids. Second, the authors included the use of nonopioid analgesics in their statistical model; however, they did not quantify the amount or the type of opioid analgesic consumed by patients as this can also alter the study results. Last, the authors had fewer than 50 events (ie, patients taking more than 10 pills), but they constructed predictive models using more than 10 dependent variables, potentially resulting in substantial model overfitting.

I would welcome some comments by the authors as this would help to further support the findings of this important clinical study.\(^1\)

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References

Response to Confounding Factors on the Prediction of Opioid Usage after Thyroidectomy and Parathyroidectomy Surgery
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We read with interest Dr Kang’s comments on our recent publication.\(^1\) We would like to provide our response to the 3 important points outlined by the author.
First, we did not report data on the use of intraoperative opioids. We currently do not have a standardized protocol for intraoperative opioid use for thyroidectomy and parathyroidectomy surgery at our institution and did not collect data quantifying anesthesiologist-administered analgesia.

Second, we did not quantify the type and amount of postoperative nonopioid analgesics in our statistical model. The types of nonopioid analgesics reported to be taken included varying doses and combinations of acetaminophen, nonsteroidal anti-inflammatory drugs (NSAIDs), gabapentin, benzocaine-menthol, and capsaicin cream. Many patients took nonopioid analgesics without a prescription, leading to difficulty ascertaining the amount taken. We found that there was too much variation in type and amount of nonopioid analgesia used to include precise quantities of nonopioids as a variable in our analysis. We agree that the author’s points 1 and 2 are limitations of our study. A systematic approach to intraoperative analgesia and postoperative nonopioid analgesics for endocrine surgery as part of an Enhanced Recovery After Surgery (ERAS) protocol would help to standardize postoperative pain control, allow for more precise analysis of analgesic use, and potentially decrease postoperative opioid use. Our department has adopted a policy of recommending alternating ibuprofen and acetaminophen after endocrine surgery, and since implementing this change, we have anecdotally had excellent results (ie, no patient complaints or phone calls for refills).

Third, we attempted to limit the number of independent variables in our logistic regression models to minimize model overfitting. The model in question, patients taking at least 10 opioid pills (Table 3), had 15 of 87 events and 3 independent variables, which included age (continuous), sex (binary), and Charlson comorbidity index quartile (4-level categorical). The logistic regression model of patients taking opioids at all had 51 of 87 events and 4 independent variables, including age, sex, body mass index (continuous), and Charlson quartile (Table 2).

We would like to thank the author for constructive comments and for helping us identify potential areas of future investigation.

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