In Reply:

We appreciate the comments from Drs. Ferguson and Anon, as they raise an important issue regarding the possible confounding effect of concurrent septoplasty and turbinate reduction on health-related quality-of-life (HRQoL) outcomes following endoscopic sinus surgery (ESS) for patients with low-stage computed tomography (CT) chronic rhinosinusitis (CRS). Our study reported HRQoL outcomes following ESS in a patient cohort with medically refractory CRS with minimally affected sinus CT scans.1 After exclusion of patients with nasal polypsis, our final low-stage CT CRS cohort was only 17 patients. This is a relatively small subset of patients with CRS considering that our initial multi-institutional cohort was comprised of over 700 patients. Our results demonstrated that patients with low-stage CT CRS experience significant HRQoL improvements following ESS, similar to the improvement in patients with high-stage CT CRS. This suggests that a minimally affected CT scan, in patients with medically refractory symptoms and endoscopic evidence of CRS, should not necessarily be considered a contraindication to ESS. However, as outlined in our article, possible nonrhinologic diseases that may mimic CRS, such as headache disorders, must be considered and excluded before ESS is performed.

To assess whether concurrent septoplasty and turbinate reduction may have contributed to improved HRQoL outcomes, we re-evaluated our data. Although none of the 17 low-stage CT CRS patients underwent concurrent inferior turbinate surgery, concurrent septoplasty was performed in eight of the 17 patients. We compared HRQoL outcomes for patients with low-stage CT CRS who underwent concurrent septoplasty (n = 8) to those patients who did not undergo concurrent septoplasty (n = 9), and there was no statistical difference in the mean improvement in either the Rhinosinusitis Disability Index (−13.5 vs. −21.1, respectively; P = .268) or Chronic Sinusitis Survey (16.7 vs. 20.4, respectively; P = .847) instruments. In fact, patients who underwent concurrent septoplasty demonstrated smaller HRQoL improvements on both instruments, although this difference was not statistically significant. Although the analysis of these subgroups is challenging due to the small sample sizes, our reanalysis suggests that the HRQoL outcomes were not significantly impacted by concurrent septoplasty.

The questions surrounding potential confounders of outcomes following sinus surgery (e.g., concurrent septal/turbinate surgery) demonstrate some of the significant challenges encountered in designing prospective outcomes studies. After applying the additional exclusion criterion suggested by Drs. Ferguson and Anon, our already small sample size was further reduced. Performing meaningful analyses on such small samples is often not feasible, beyond what we have reported in this response, even though the question posed by Drs. Ferguson and Anon is of great interest. Even larger prospective, multi-institutional studies or alternate study designs will be necessary to fully answer these important questions.

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