## Letters

## **COMMENT & RESPONSE**

**In Reply** We thank Ehlers et al for their comments regarding our recent study. We welcome the opportunity to provide clarification and additional context to several points in our article to help readers best understand our findings.

As mentioned, the Abdominal Core Health Quality Collaborative (ACHQC) is a well-established national database of more than 400 surgeons and 90 000 patients representing outcomes from surgeons in academic and private practices. While it is true that participation is voluntary and data are input by the contributing surgeons themselves, the ACHQC is strengthened by its collection of longer-term follow-up data with more than a decade of hernia-specific data. To maintain rigorous and standardized data collection practices, the ACHQC mandates participating surgeons watch a data-entry training video, provides comprehensive data entry aids during collection to ensure fidelity, and requires yearly data quality assurance reviews.<sup>2</sup>

While population-level registries are an important source of information, they have limitations: specifically they are limited in number and frequently confined to countries with nationalized health care systems, may have incomplete data, and often lack hernia-specific details. To our knowledge, there are no national, population-level hernia-specific databases in the United States that currently report long-term outcomes (>5 years). Available outcome databases either report 30-day clinical outcomes, have less than 5 years of data, or are not hernia-specific, thus precluding long-term analyses of recurrence.

We clarify that we did not exclude approximately 60 000 patients for lacking follow-up. We first excluded patients without operative details entered or those who had not yet undergone surgery, reasons which we believe are unrelated to recurrence status. This left 43 960 persons with complete baseline data. From this, as illustrated in eFigure 1 in the article's Supplement 1, 4523 patients were excluded for no follow-up, some of whom had surgery within 30 days of data extraction.

Regarding our inclusion criteria, we specifically included patients with recurrent hernias to identify the risk factors and year-over-year risk of recurrence in this complex population. We acknowledge the higher risk of recurrence associated with recurrent hernia repairs compared with primary repairs. Unfortunately, unadjusted stratification of primary vs recurrent

repairs was beyond the scope of this article and may be investigated in future studies. Additionally, though the cohort of patients diminishes year-over-year (a limitation commonly seen in long-term outcome studies), our statistical approach was intentionally designed to address this. By leveraging Kaplan-Meier methods, we accounted for censored patients (those lost to follow-up) and provided confidence intervals that reflected increasing uncertainty as sample size diminished. For our risk factor analysis, we deliberately used the extended Cox proportional hazards model to account for both censored patients and confounding factors, including number of prior repairs (see Table 1 in the article).

We recognize the higher recurrence rates of parastomal hernias, as transparently discussed in the article's Limitations section, and appreciate the concern about including emergent hernia repairs. Future studies may exclude or analyze these subgroups separately.

Again, we appreciate the authors for thoughtfully evaluating our study. Despite the limitations, we believe our results are highly valuable to surgeons as we identify factors influencing hernia recurrence and describe long-term recurrence rates after ventral hernia repair.

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