COVID-19 Pandemic–Related Outcomes in High-Risk Gastrointestinal Cancers—Beyond the Numbers

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Janczewski and colleagues contribute to the literature with a comprehensive comparison of pandemic-related differences, including incidence, stage at diagnosis, 1-year survival, and 30-day and 90-day operative mortality, in patients with high-risk gastrointestinal (HRGI) cancers. This retrospective cohort analysis was performed using the National Cancer Database (NCDB) with data comparison extending from the prepandemic years (including 2018 and 2019) to the height of the COVID-19 pandemic through 2020. To our knowledge, this report is the largest retrospective study examining pandemic-related outcomes data for patients with HRGI cancers. According to their findings, the observed outcomes data in 2020 paralleled those of the prepandemic years studied.

The effects of the global COVID-19 pandemic on cancer care, including delays in screening, diagnosis, and treatment, have been established in the literature. Understandably, however, the impact of these setbacks on various cancer types was not uniform. Overall, pandemic-related outcomes data among patients with HRGI cancers are sparse. Those with HRGI cancers, including esophageal, gastric, pancreatic, and primary liver cancer, comprise a particularly susceptible subgroup because these cancers commonly harbor distinctly aggressive tumor biology. Timely diagnosis and a multidisciplinary approach to treatment are paramount, and surgical intervention, which experienced delays at institutions worldwide throughout the pandemic, is the cornerstone of cure for these patients. Therefore, one would hypothesize that disruption of screening and treatment pathways, as caused by the pandemic, would have nefarious consequences within this patient population. The analysis performed in this study would suggest otherwise.

The authors report that although the incidence of HRGI cancers declined in early 2020 (March to May) compared with 2018 to 2019, the number of newly diagnosed cases reached prepandemic levels without rebound effect through the remainder of 2020. These results were consistent across the 4 groups studied. These findings align with the results of the CAPANCOVid study, which selectively evaluated pandemic-related outcomes on patients with pancreatic adenocarcinoma. The fact that no rebound effect was evidenced in either study is largely suggestive of missed diagnoses as a result of the COVID-19 pandemic. Conversely, the short 3-month window of a reduction in new cases reported by the authors indicates that medical professionals treating patients with HRGI cancers were innovative and prudent in combating the systemic hurdles facing screening and diagnostic strategies in this patient population and should be commended.

In terms of pandemic-related implications for gastrointestinal tumor staging, results from previous retrospective studies are mixed, and data are not well elucidated. Higher proportions of advanced-stage colorectal cancer have been reported, whereas the Italian multicenter retrospective COVID-AGICT study did not find significant differences in pathologic stage at time of surgery in patients with gastroesophageal, colorectal, or pancreatic cancers in the pandemic vs prepandemic era. The authors report an increase in the proportion of patients with HRGI cancers presenting with stage IV disease and a decrease in diagnosis of early-stage disease in early 2020 (March to May) compared with the prepandemic period. Importantly, however, these trends were not reflected in the yearly comparisons. Previous work has shown a substantial decline in overall reported cases to the NCDB in 2020, with the lowest number of cases existing March through May 2020. Furthermore, the proportion of reported cancer cases with early-stage disease substantially decreased during this period, whereas the proportion of cases with late-stage disease increased. A relatively large...
proportion of patients with advanced-stage HRGI cancers present with symptoms prompting workup, and it is possible that this characteristic may have mitigated a more significant decline in diagnosed cases during the study period. These discoveries could have lasting implications on the true investigation of pandemic-related effects on disease staging and stage migration.

This study\(^1\) found that 30-day and 90-day operative mortality rates remained stable across the study period. As COVID-19 infection was of major concern for perioperative morbidity and mortality in 2020, the authors report that 0.9% of patients with HRGI cancer also had COVID-19, and a small fraction of these cases was diagnosed in the perioperative period. Work by Chavez-MacGregor and colleagues\(^2\) showed increased mortality in 2020 among patients with a diagnosis of COVID-19 within 3 months of cancer treatment. Although these results cannot be extrapolated to the findings by Janczewski et al.,\(^1\) it may raise the question as to what proportion of reported operative mortality rates in the NCDB during 2020 are directly attributable to perioperative complications or COVID-19 infection or both.

Finally, the authors\(^1\) observed no significant difference in 1-year survival in patients with HRGI cancers between prepandemic and pandemic study groups. Insufficient data currently exist for thoughtful comparison; however, the fact that the incidence, staging, and operative mortality rates were similar between study groups presumably supports congruency between survival analyses. That said, the aforementioned work\(^6\) underlining the deficiencies within NCDB reporting in 2020, as well as the lack of rebound cases, as exhibited in this study,\(^1\) should be strongly considered when interpreting the survival comparison. Given the aggressive nature of HRGI cancers, it is probable that a substantial portion of these underreported cases and inferred missed diagnoses resulted in deaths not evidenced by the data.

Indeed, the lack of rebound observations of HRGI cancer incidence in 2020 described by Janczewski et al.\(^1\) deserves further mention and is hypothesis generating. It should be noted that reported cancer incidence across the entire NCDB registry sharply declined in 2020\(^6\) and was not limited solely to patients with HRGI cancers. In essence, this finding suggests that we should more attentively evaluate what is missing from the study data.\(^1\) The lack of rebound cases through 2020 is presumably multifactorial, because missed diagnoses, underreporting, and mortality, inclusive of disease-related and all-cause mortality, likely contributed. The root cause of these missing cases during the pandemic, however, is still up to question. It may be reasonable to postulate that populations for whom access to high-quality cancer care is most tenuous (based on location, socioeconomic status, race, ethnicity, and education) are more invisible to the NCDB at baseline and likely contributed disproportionately to the loss of visibility of the true incidence of HRGI cancer during this study period.\(^6\) Second, there may be a small subset of patients with HRGI cancer who did not receive care at a Commission on Cancer institution in 2020 and, thus, were not reported to the NCDB. These considerations would lead us to agree with the authors’ conclusions that, for patients with HRGI cancer accessing the formal cancer care pathway at Commission on Cancer institutions during the pandemic, outcome measures were preserved, and the valiant efforts of the health care community should be recognized. Nevertheless, as missing cases are at the forefront of this discussion, we should be concerned about both baseline deficiencies in patient population access to care and observed vulnerability to crisis, such as a pandemic. There is important work to be done by both our clinical and nonclinical colleagues in the arena of disaster preparedness, with particular attention directed toward supporting access for vulnerable populations.
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REFERENCES