Certain cancers will likely rise exponentially due to COVID-19 screening delays

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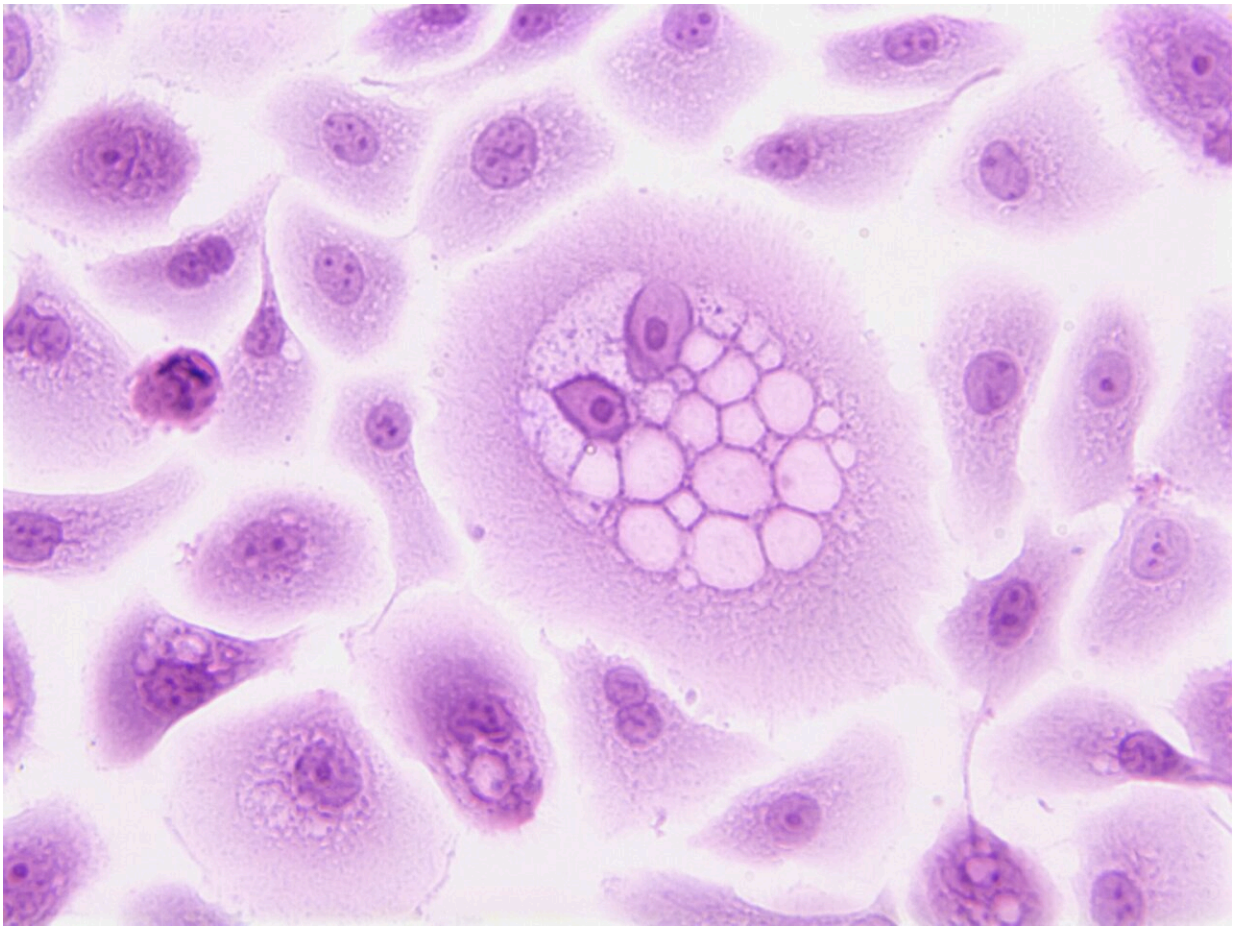

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Delays in cancer screening during the COVID-19 pandemic will likely

cause a significant increase in cancer cases that could have been caught earlier with screening, and may now be diagnosed at later stages, placing an increased burden on an already strained healthcare system, according to a new research article published in the *Journal of the American College of Surgeons (JACS)*.

"While the medical system as a whole experienced an incredible burden from the COVID-19 pandemic, now we're going to see a much different burden present itself due to delays in cancer screening," said senior author Teviah E. Sachs, MD, MPH, FACS, an associate professor of surgery at Boston University Chobanian and Avedisian School of Medicine and chief of the section of surgical oncology at Boston Medical Center.

"With this study, we sought to illustrate with data how we could forecast these likely future trends related to screenable cancer incidence."

For the study, researchers at Boston University developed a predictive statistical model to quantify missed diagnoses of lung, breast, and colorectal cancers by comparing observed cancer rates in 2020 with pre-pandemic cancer rates (2010-2019). According to the authors, the study is one of the first to look at the number of missed colon, lung, and breast cancer diagnoses at the U.S. population level, and adds to the growing body of scientific research revealing how pandemic-related disruptions constrained cancer care.

"These are all cancers that have very profound incidences in our patient population across the U.S. They are much better managed and often curable when found early, and devastating when caught late," Dr. Sachs said. "In addition, these are all screening tests that were likely put off during COVID-19 because they require patients to come into the hospital setting."

To quantify potential missed diagnoses, the team's statistical model incorporated data from the National Cancer Database (NCDB), which collects data on more than 70% of all cancer cases in the United States. To adjust for cancer cases not included in the NCDB, researchers standardized the data to the U.S. population using Census data.

Key findings

The team analyzed data from 1,707,395 lung, 2,200,505 breast, and 1,066,138 colorectal cancer patients. Significant differences between the observed cancer rates in 2020 compared with the historical data from 2010-2019 were noted for all three types of cancer:

- **Colorectal cancer:** observed incidence decreased by 18.6%
- **Lung cancer:** observed incidence decreased by 18.1%
- **Breast cancer:** observed incidence decreased by 14.6%

"The incidence for all these cancers decreased, but there's no reason to believe that cancer incidence dropped during the pandemic in 2020. The data we observe is not likely due to decreasing incidence rates, but I think more likely reflective of missing cancer diagnoses," said first author Kelsey S. Romatoski, MD, a general surgery resident at Boston Medical Center. "These missed diagnoses are likely going to lead to delays in treatment and upstaging of disease in the coming years."

In addition, missed diagnoses appeared to disproportionately affect certain sociodemographic populations, including non-White and Hispanic patients and those treated within the Northeast and West regions of the U.S.

Key messages for practitioners

"For these vulnerable patients, it's especially important that they stay up

to date on their screening so we can detect these missed cancers," Dr. Romatoski said.

"The data in this paper is an important reminder for practitioners to encourage patients who have delayed their recommended cancer screenings to get screened now," Dr. Sachs added. "And we encourage patients to ask their primary care physician about recommended cancer screenings. It's imperative that screenings put off due to the pandemic aren't delayed any longer."

More information: Kelsey S Romatoski et al, Delay and Disparity in Observed vs Predicted Incidence Rate of Screenable Cancer During the COVID-19 Pandemic, *Journal of the American College of Surgeons* (2023). DOI: 10.1097/XCS.0000000000000772

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