Study reveals cancer screening decreased worldwide during height of pandemic

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A study that surveyed cancer screening data included in medical journals worldwide from January 2020 into December 2021 showed significant decreases in the number of screenings for breast, colorectal and cervical cancers during the early phase of the COVID-19 pandemic. The findings of the study, published in *JAMA Oncology*, are one point of evidence that the global pandemic widely affected cancer screening services.

In 2020, GLOBOCAN estimated that 19.3 million new cancer cases and approximately 10 million cancer deaths occurred—with breast, colorectal and cervical cancer as the first, third, and seventh most prevalent cancers for incidence worldwide, respectively.

"Cancer screening remains an important tool to fight cancer incidence and morbidity and mortality caused by these diseases worldwide," says lead author Paolo Boffetta, MD, MPH, Associate Director for Population Sciences at the Stony Brook Cancer Center, and Associate Professor in the Department of Family, Population and Preventive Medicine at the Renaissance School of Medicine at Stony Brook University. "And the COVID-19 pandemic has clearly affected public health services, including cancer screening tests, during parts or throughout the entire pandemic."

Dr. Boffetta and colleagues at Stony Brook and the University of Bologna in Italy compiled cancer screening data, found in PubMed and other medical publishing sources, from 19 countries.

They completed a systematic review and meta-analysis to identify published studies that reported data from cancer registries and large series of patients. They then compared the number of screening tests performed before and during the pandemic for all three forms of cancer.

The researchers also divided the data into six time periods (before the

pandemic, January-February 2020; March 2020; April 2020; May 2020; and June-October 2020) to assess the change in the number of cancer screening tests performed during the pandemic. The analysis was performed by geographic area, time period, and type of clinical setting.

They reported that during the period of January 2020 to October 2020, there was an overall decrease in screening worldwide of 35.6 percent for breast cancer, 41.8 percent for colorectal cancer, and 54.1 percent for cervical cancer.

The researchers also pointed out that they identified a U-shaped pattern, which differed by cancer type. By June 2020, most of the decrease in breast and cervical cancer screening was no longer present, while for colorectal cancer the decrease persisted until late 2020. Additionally, the decrease in breast and cervical cancer screening appeared to be less pronounced in the U.S. than in other countries, but there was no significant difference in colorectal cancer screening decrease between the U.S. and other countries.

While all of the reasons for a global decrease in important cancer screenings during the pandemic may be unclear, the authors write that based on their research and survey of medical publishing, the main factors that may have caused widespread decreases in breast, colorectal and cervical cancers are "stay-at-home orders, people's fear of the infection, and the avoidance of non-urgent medical treatment and care, limited access to in-person medical examinations, and the reorganization of hospital departments."

More information: Federica Teglia et al, Global Association of COVID-19 Pandemic Measures With Cancer Screening: A Systematic Review and Meta-analysis, *JAMA Oncology* (2022). DOI: 10.1001/jamaoncol.2022.2617

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