An analysis of electronic medical records indicates that patients who previously had a false-positive breast or prostate cancer screening test are more likely to obtain future recommended cancer screenings. Published early online in Cancer, a peer-reviewed journal of the American Cancer Society, the findings suggest that false-positives may be reminders to screen for cancer. Additional studies are needed to explore whether false-positives have a detrimental effect on quality of life or increase anxiety about cancer.

False-positive cancer screening test results—when results that are suggestive of cancer ultimately turn out to be wrong—are common. Over 10 years, about 50 to 60 in 100 women who get annual mammograms, 23 in 100 people who get regular stool tests, and 10 to 12 in 100 men who get regular prostate cancer testing will have false-positive results. Such results may affect individuals’ willingness to continue screening for cancer in the future, causing them to be either more diligent or more reluctant about getting screened.

To investigate, Glen Taksler, PhD, of the Cleveland Clinic, and his colleagues obtained 10 years of electronic medical records data to analyze the association between prior receipt of a false-positive cancer screening test result and future participation in routine cancer screenings. The records pertained to 92,405 individuals aged 50 to 75 years.

Women with a false-positive mammogram were at least 43% more likely to obtain future breast cancer screenings, and the same women were at least 25% more likely to obtain future colorectal cancer screenings. Men with a false-positive prostate cancer screening were at least 22% more likely to obtain future colorectal cancer screenings. Results were stronger for individuals with a greater number of false-positive results. Women with previous false-positive fecal occult blood testing (a type of colorectal cancer screening) were less likely to be up-to-date with breast cancer screening, however.

“We don’t know why the observed pattern occurred,” said Dr. Taksler. “False-positives are a limitation of the technology that we use to check for cancer. Hopefully, over time, the technology will improve so that patients don’t have to deal with as many false-positives.” He noted that other researchers have reported results that conflict with this study’s findings, indicating the need for more research.


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About the Journal

Cancer is a peer-reviewed publication of the American Cancer Society integrating scientific information from worldwide sources for all oncologic specialties. The objective of Cancer is to provide an interdisciplinary forum for the exchange of information among oncologic disciplines concerned with the etiology, course, and treatment of human cancer. Cancer is published on behalf of the