For Cancer Screening, COVID-19 Creates Obstacles, Opportunities

Efforts to reach patients during the COVID-19 pandemic has led to both setbacks and new innovations in cancer screening.

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In January, First Lady Dr. Jill Biden visited a community health clinic near the White House to learn about the impact of COVID-19 on access to preventive care, including cancer screening.

At Whitman-Walker Health, Dr. Biden learned, the coronavirus pandemic initially led to sharp decreases in the use of recommended cancer screening tests, which could mean that some early cancers may have gone undetected.

Like many health care centers, Whitman-Walker has resumed limited in-person services, including cancer screening. But after a year of changes brought about by COVID-19, researchers are now exploring ways to improve cancer screening during the current crisis and beyond.

“We’ve learned some things during the pandemic that could lead to better screening practices in the future,” said Jennifer Haas, M.D., of Massachusetts General Hospital, who studies cancer screening. “For instance, the pandemic has created an opportunity to promote home-based screening tests, such as the fecal immunochemical test (FIT) for colorectal cancer.”

FIT does not require an initial in-person medical appointment. A person collects a stool sample at home using a kit they receive in the mail and sends it to a laboratory for testing.

A recent report showed that a large health care system in California continued to send FIT kits to its eligible members in April and May of 2020—after the use of most cancer screening tests had dropped. But despite the pandemic, the FIT response rates for members remained high.

“FIT could be a model for developing other cancer screening tests,” Dr. Haas said. Home-based screening tests are being studied for cervical cancer, though none has yet been approved by the US Food and Drug Administration, she noted.

The pandemic may lead to other potential innovations in cancer screening. Some physicians are already using video conferencing tools to educate people about screening tests, while others are discussing ways to focus screening resources on those most at risk of developing cancer.

“For cancer screening, there may be silver linings of the pandemic,” said Carolyn Muller, M.D., of the University of New Mexico Comprehensive Cancer Center, who has led several cancer screening clinical trials.

“Health systems have demonstrated that they can do things quickly when they have to—and that they can make all kinds of accommodations to get people the best possible care,” Dr. Muller added.

Concerns about Delays in Cancer Diagnoses

Screening has the potential to detect precancerous lesions and cancers in their earliest stages, when they might be most treatable, and before symptoms appear.

But cancer screening has potential risks as well. Detecting slow-growing, or indolent, cancers that would never have caused harm in a person’s lifetime—a phenomenon known as overdiagnosis—can lead to unnecessary follow-up tests and treatments that may cause harms.

The US Preventive Services Task Force has recommended screening for four types of cancer—breast, colorectal, cervical, and lung—among people of certain ages and with certain risk factors, such as a history of smoking.

Last spring, NCI researchers and others raised concerns that the pandemic would delay the diagnosis and treatment of some cancers, with potentially serious consequences.

Delays in screening, the experts warned, could mean that the “missed” cancers might be larger and more advanced when they were ultimately detected. In general, cancers are easier to treat in their early stages.

Because some cancers grow slowly, the impact of the pandemic on overall cancer deaths will not be clear for many years, according to Eric Feuer, Ph.D., chief of the Statistical Research and Applications Branch in NCI’s Division of Cancer Control and Population Sciences.

“This is a complicated story that will reveal itself slowly over time,” said Dr. Feuer. He noted, however, that recent studies had shown that “screening rates dropped very sharply, very quickly” in the spring of 2020.

“As we get a more complete picture of the pandemic’s impact on screening, then we can put the data in our models,” Dr. Feuer continued. “The models can estimate long-term outcomes from shorter-term data.”

Cancer Screening in the Northeast

One source of shorter-term data is a study of screening at Massachusetts General Brigham, the largest health care system in the Northeast.

The study tracked how many people in the health care system received at least one of five cancer screening tests—mammography, colonoscopy, Pap test, PSA test, or low-dose CT scan—and how many were diagnosed with cancer in the first 3 months of the pandemic, which was the initial peak of COVID-19 infections in the region.

The study authors then compared the results with data from three other 3-month time periods (the same time the previous year, the preceding 3 months, and the subsequent 3 months).

During the initial peak of the pandemic, there was "a very abrupt decrease" in the number of cancer screening tests and the number of cancer diagnoses, compared with the preceding 3 months and the same 3 months in 2019, said study leader Ziad Bakouny, M.D., of the Dana-Farber Cancer Institute.

Cancer Screening Tests and Cancer Diagnoses at Massachusetts General Brigham

Subsequent 3 Months (6/3/20 to 9/3/20)

	Start of Pandemic **(3/2/20 to 6/2/20)**	Previous Year **(3/2/19 to 6/2/19)**	Preceding 3 Months **(12/1/19 to 3/2/20)**	Subsequent 3 Months **(6/3/20 to 9/3/20)**
Patients Screened	15,453	60,344	64,269	51,944
Patients Diagnosed with Cancer	1,985	2,961	3,423	3,190

Patients Screened	
Start of Pandemic (3/2/20 to 6/2/20)	15,453
Previous Year (3/2/19 to 6/2/19)	60,344
Preceding 3 Months (12/1/19 to 3/2/20)	64,269
Subsequent 3 Months (6/3/20 to 9/3/20)	51,944
Patients Diagnosed with Cancer	
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Previous Year (3/2/19 to 6/2/19)	2,961
Preceding 3 Months (12/1/19 to 3/2/20)	3,423
Subsequent 3 Months (6/3/20 to 9/3/20)	3,190

Although screening did not return to prepandemic levels in the subsequent 3-month period, "it

was pretty close, which is reassuring," said Dr. Bakouny.

The researchers also found that the percentage of screening tests resulting in a diagnosis of cancer was higher at the start of the pandemic than at other times. "We believe that doctors may have been prioritizing higher-risk patients for cancer screening," said Dr. Bakouny, though he noted that the available data cannot answer this question.

The most important message of the study, he added, is that patients need to get back to receiving the age- and risk-appropriate cancer screening tests as recommended by their health care providers.

Delays in Lung Screening Linked to Increase in Suspicious Nodules

At the University of Cincinnati Medical Center, the pandemic has caused "considerable disruption" to the lung cancer screening program, researchers reported last year.

In March 2020 alone, COVID-19 forced the postponement of more than 800 appointments for lung cancer screening. But when screening fully resumed on June 1, the percentage of people tested who had lung nodules that were suspicious for cancer had increased from 8% before the pandemic to 29%, the researchers found.

"That was striking," said study leader Robert Van Haren, M.D., of the University of Cincinnati Medical Center. "In some patients—over the course of several scans—we found new nodules that seemed to be larger than we usually see, perhaps because of the longer time intervals between scans."

Even after screening returned to a normal schedule, the percentage of new patients getting screened remained low, the researchers said. In addition, there were more "no shows"—patients who failed to show up for their scheduled low-dose CT scans—than in the past.

"We made some changes in our operations to try to address these challenges," said Dr. Van Haren. For instance, the scans were moved from the main hospital building to less-crowded outpatient facilities, sparing people a trip to the hospital.

PROSPR Recommendations for Improving Cancer Screening

Researchers have also assessed screening patterns across the country. Last year, an NCI-supported consortium analyzed data on screening from eight large health care systems in seven states and developed recommendations for improving screening.

"We found very significant drop-offs in screening rates for breast, cervical, colorectal, and lung cancer," said Dr. Haas of Massachusetts General Hospital, who is a member of the Population-based Research to Optimize the Screening Process (PROSPR) consortium.

In a commentary, the researchers recommended expanding remote testing with established

methods such as FIT and evaluating emerging strategies such as home-based screening for cervical cancer.

The researchers also recommended developing outreach programs aimed at groups that may be less likely to seek or complete cancer screening. Another priority would be to develop tools to identify those at "highest medical risk of cancer by age and other risk factors (including lack of prior screening) and those at lowest risk, who are unlikely to benefit from screening."

"The idea would be to get the people at highest risk of cancer in for screening first," said Dr. Haas.

The authors of a new study of cervical cancer screening in Southern California also stressed the importance of prioritizing individuals at greatest risk.

The study, led by researchers at the Centers for Disease Control and Prevention, found that between March and June of 2020 (when Californians were under a stay-at-home order) the rate of cervical cancer screening among approximately 1.5 million women decreased by roughly 80%, compared with rates during the same period in 2019.

Although the decrease in screening was similar across all racial/ethnic groups in the study population, the researchers noted that this might not be the case in other settings.

"Cervical cancer incidence and mortality rates are disproportionately higher in Hispanic women and non-Hispanic Black women than in non-Hispanic White women because of existing disparities," the researchers wrote.

The Need for Cancer Screening in New Mexico

Now that many health care systems have put in place COVID safety measures to allow in-person screening tests to resume, these systems may face a new challenge: Getting the word out to people that it's safe to return for recommended screenings.

"The perception among many people is still that 'this can wait,'" said Dr. Muller of the University of New Mexico Comprehensive Cancer Center. "What's unfortunate is that screening really can't wait." Almost a year into the pandemic, she continued, doctors are seeing cancers that may be more advanced than they usually see "because people have had to wait."

Dr. Muller is a leader in the NCI Community Oncology Research Program (NCORP), which conducts clinical trials at smaller, community hospitals across the country. Her organization, the New Mexico Minority Underserved NCORP, makes cancer clinical trials accessible to a range of diverse populations, such as Hispanic, rural, and tribal communities, through a statewide network.

Between 2019 and 2020, the NCORP site saw a 25% reduction in the number of cancer diagnoses, according to Dr. Muller. She attributed the decline, in part, to a decrease in referrals from primary

care physicians, as fewer people have been going to the doctor.

“It’s also a lot harder to diagnose a problem through telemedicine,” Dr. Muller said. “And people just do not want to go to the emergency room.”

Getting the Message Out to the Community

When Dr. Biden visited the Whitman-Walker community health clinic in January, she asked a question that many in health care are also now asking: How do you get the message out to the community that it’s safe to come in for preventive care such as cancer screenings?

The approaches to outreach will likely vary depending on the site. Whitman-Walker, for example, will send text messages to the people they have served in the past, letting them know which preventive care services have safely resumed. Similar messages will be shared on the clinic’s social media channels and through their Helpline.

“We are in your corner,” Dr. Biden told officials at the health clinic. “We just have to work together. And the first thing we have to do is to address the pandemic and get everyone vaccinated and back to the new normal.”

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