

# 2021 NPCR ARKANSAS SUCCESS STORY

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*Understanding how COVID-19 is Affecting People with Cancer in Arkansas, 2021*

## National Program of Cancer Registries SUCCESS STORY

### SUMMARY

COVID-19 is a novel, severe acute respiratory virus which was first reported in Wuhan, China in December 2019. By March 20, 2020, there were more than 234,000 cases confirmed worldwide and more than 9,800 registered deaths.<sup>1</sup> Because it's known that persons with compromised immune systems suffer from the most severe form of COVID-19, staff at the Arkansas Central Cancer Registry (ACCR) conducted a linkage to study the distribution and severity of COVID-19 among cancer patients in Arkansas. The initial linkage was done in 2020 and the results published in Arkansas Family Physicians Journal.

### CHALLENGE

The fundamental challenge for the cancer community during this pandemic is the risk of contracting and developing severe complications of COVID-19.<sup>2</sup> Most people treated for cancer in the past are likely to have gained normal immune function back, but each person is different, and they should talk to their doctor about their personal situation. However, precautionary measures should still be taken.<sup>3</sup> Preventive measures include regular handwashing, avoiding close contact, wearing a mask, covering a cough or sneeze, and cleaning and disinfecting surfaces.

Another major challenge the cancer community faced was the pause of elective procedures at the beginning of the pandemic, such as cancer screenings, to help reduce the risk of transmission of COVID-19 in health care settings. A consequence of putting

these elective procedures on hold was a considerable decline in screening. A recent report by the Epic Health Research Network estimated that colon, cervical, and breast cancer screening appointments were down between 86% to 94% back in March 2020.<sup>4</sup> This may result in cancers being diagnosed at a later stage of tumor development going forward, which can lead to individuals receiving a worse prognosis and reduced chances of survival.

At the same time, there is also concern of delayed treatment among cancer patients. During normal times, fear and anxiety play a major role during patients' disease.<sup>5</sup> This is complicated by the added fear of contracting COVID-19, which could have a great impact on treatment refusals and cancer survivorship.<sup>5</sup>

These challenges bring importance to understanding the short- and long-term health effects of this disease on this patient population.

### SOLUTION

To gain a better understanding of the impact of COVID-19 on Arkansas cancer patients, a linkage was performed between the Arkansas Central Cancer Registry dataset, 1996-2020 (2019-2020 provisional), and the COVID-19 dataset at the Arkansas Department of Health on March 1<sup>st</sup>, 2021.

The ACCR collects high quality and complete data and has been consistently certified as a Registry of Distinction by NPCR. The COVID-19 dataset was not complete, this data were reported rapidly with little time for quality assessment, the linkage may have missed cases.

Standard dual probabilistic linkage methodology based on the Fellegi and Sunter model was used to perform a match between the two sets.<sup>6</sup> The variables used for the match were first name, last name, sex, race, telephone, birthdate, street address, city, and zip code. This linkage matched 390,885 patients with cancer diagnosed from 1996 to 2020 with 343,269 patients who had tested positive for COVID-19 from March 11, 2020, to March 1, 2021. We found that 10,623 cancer survivors had tested positive for COVID-19.

### RESULTS

Additional analysis showed that:

- More than half of the cancer patients testing positive for COVID-19 were women and the nearly one-third of the patients were between the ages of 65 and 74. This age distribution is like the median age at diagnosis among Arkansas cancer patients.
- Female breast, prostate, colorectal and melanoma of the skin were the most prevalent cancers among survivors who tested positive for COVID-19, which are the most common cancer types in survivors in general.
- Patients diagnosed with cancer in 2018 and 2019 were the largest group with a COVID-19 infection, likely because there are more cancer survivors during more recent diagnosis years than in the past.
- White men and women (80%) had a higher rate of COVID-19 infections than black men and women (15%). This is like the general population of cancer patients.

- Most cancer survivors diagnosed with COVID-19 in Arkansas recovered from their infection.
- The first cancer survivor in Arkansas died on April 1, 2020. Among the cancer survivors who were infected with COVID-19 and died, 75% succumbed to COVID-19.

### SUSTAINING SUCCESS

Current hospital safety guidelines for screenings and cancer treatment are in place, being followed and relaying effective messaging about why this is important. Further, cancer registry data will be critical in measuring the impact of a pandemic on the delivery of cancer care in Arkansas.

We presented these updated linkage results in June 2021 at a CDC townhall.

### REGISTRY CONTACT INFORMATION

501-661-2463

<https://www.healthy.arkansas.gov/programs-services/topics/arkansas-cancer-registry>

### REFERENCES

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