

# The COVID-19 Pandemic and Transition to Digital Health in Clinical Oncology Care

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**BACKGROUND:** Clinical oncology care is complex, and new technologies can improve efficiency, contribute to safe treatment delivery, and enhance care for the patient. The COVID-19 pandemic prompted a shift to the use of digital health technologies to provide care. Oncology care providers can ensure that technology is integrated with the patient's plan of care.

**OBJECTIVES:** The aims of this review were to provide a survey of digital health technologies in oncology care and changes in practice resulting from the pandemic, as well as to highlight oncology nurses' and nursing leaders' roles in promoting digital health technology in clinical practice.

**METHODS:** Current and emerging literature, frameworks, and real-world experiences were reviewed to provide an overview of digital health technology in oncology care.

**FINDINGS:** Digital health technology has become an integral tool for the oncology care team and provides opportunities to improve the lives of patients. The pandemic accelerated the adoption of technology to provide safe and effective care. Oncology nurses play a role in identifying patients' needs and developing and implementing care strategies.

## KEYWORDS

technology; COVID-19; telehealth; digital health; nursing practice; oncology care

## DIGITAL OBJECT IDENTIFIER

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**DIGITAL HEALTH, ALSO REFERRED TO AS TELEHEALTH,** is a broad term that highlights the convergence of digital technologies with all aspects of health care. Digital health can make healthcare delivery more efficient, providing more personalized, precise, timely, and effective care (Perakslis, 2021). As clinical oncology care becomes more complex, the use of digital health technologies can improve efficiency, contribute to safe treatment delivery, and enhance the care experience for patients (Komarzynski et al., 2021). The COVID-19 pandemic prompted swift changes in healthcare delivery, including the adoption of digital health technologies to provide safe virtual care. These digital health technologies extended healthcare access for populations who could not access in-person care. Use of digital health technologies required rapid changes in clinical nursing practice to ensure optimal and safe care delivery.

The COVID-19 pandemic caused significant disruption in patient access to health care. The impact of this disruption was particularly apparent in cancer treatment, where disruption in care can lead to significant increases in cancer mortality (Knudsen et al., 2021). During the pandemic, an estimated 70% of patients deferred or canceled cancer treatment, and an estimated 77% of patients had their clinical trials suspended or delayed (Kaufman et al., 2020). Preventive cancer screenings fell by as much as 94% during the first four months of 2020 (Singhal, 2020). A study from the National Cancer Institute predicted an increase of about 1% in cancer deaths, resulting from a lack of screening for breast and colorectal cancer during the pandemic (McFarling, 2021). Strategies to promote prevention and mitigate the pandemic's effects on morbidity and mortality included telehealth and other digital health technologies.

Digital health technologies, such as telehealth, remote patient monitoring (RPM), and digital therapeutics, can improve patient communication and access to care, as well as increase adherence to preventive measures, decrease care utilization, and improve overall quality of life (Aapro et al., 2020; Basch et al., 2017). Use of digital technologies in clinical practice has expanded rapidly, but disparities in access to technology and digital literacy among patients with cancer present significant challenges for ensuring participation in care. Data analysis has found that the groups most disadvantaged by adoption of digital technology are older adults, individuals who identify as members of underrepresented groups, and individuals with lower socioeconomic status (Neter & Brainin, 2012).

Technology adds value across the cancer care continuum for patients, caregivers, providers and the system as a whole, particularly by enabling