What Do Cancer Patients Really Want From mHealth Technology?

Mobile health (mHealth) technologies (apps, wearables, and other digital tools) are increasingly finding their place in cancer care. They promise to objectively track symptoms, recovery, emotional well-being, and even provide early warnings of complications. Evidence suggests they can improve quality of life and perhaps even survival, which explains the rise in clinical trials testing them in recent years. Yet one important question remains: what do patients themselves want from these tools? What are the barriers and facilitators that shape their acceptability?

When setting up an mHealth trial, researchers must decide which devices, sensors, and data collection methods to use, while balancing clinical goals with patient comfort. Little research has focused on cancer patients' perspectives regarding mHealth, what they consider obstacles, and which aspects would encourage use. This gap may help explain the poor recruitment and limited long-term engagement seen in some trials.

To better understand what matters to patients, an interview study was conducted with thirteen cancer patients or survivors aged between 51 and 83, eight of whom were men. Some were already familiar with digital health, using apps linked to their hospital's electronic record, smartwatches, or other devices such as blood pressure monitors, scales, or thermometers, while others had little prior experience. Together, their reflections offered insight into both the promise and potential pitfalls of mHealth in oncology.

One recurring theme was burden. For some, digital monitoring was seen as an extra weight, a constant reminder of illness, or simply bothersome due to unwanted notifications. At the same time, others described these tools as relieving rather than adding to their burden: reducing unnecessary hospital visits, saving time, and providing reassurance. Active measurements, such as questionnaires or weight checks, were not generally viewed as demanding, but passive measures like heart rate monitoring through a smartwatch were considered easier for long-term use. This balance between ease and usefulness is delicate, yet central to whether patients accept or abandon such technology.

Equally important was the human side of care. Every participant stressed the irreplaceable value of personal contact with doctors and nurses. Digital tools were welcomed as complements, but never as substitutes. In fact, some saw them as a bridge: they admitted hesitating to call the hospital about side effects, worried about taking up staff time. Remote monitoring, they felt, could lower the threshold for reaching out, providing objective data that would support rather than undermine their relationship with the care team. Far from threatening human contact, patients hoped mHealth might strengthen it.

Relevance also played a decisive role. Some felt that digital measures such as step counts were unrelated to their illness and therefore less useful. But when patients could see the connection to their own health, they were much more engaged. Similarly, many were also willing to use mHealth if it advanced scientific understanding; the sense that their participation might help others turned out to be a powerful motivator.

Practical considerations mattered as well. Most patients described themselves as comfortable with technology and confident in their ability to use digital tools. They did not see mHealth as especially complicated. A few preferred not to engage with technology at all, but they were in the minority. What patients did emphasize was the importance of reliability and integration. Hospital-developed platforms, seen as trustworthy, were preferred over consumer devices. The idea of an integrated platform that combined multiple measurements into a single, user-friendly system was considered a facilitator.

Finally, patients reflected on ethical aspects, particularly data privacy and equal access. Views on privacy varied. Many were comfortable sharing health data with caregivers and showed little concern about data breaches. Location tracking initially raised more suspicion, but when its potential value for understanding mobility and emotional well-being was explained, most participants became willing to accept it. Similarly, accessibility emerged as a crucial item: if digital monitoring becomes part of standard cancer care, patients insisted it must be available and affordable for everyone.

Perhaps the most telling moment came at the end of the interviews, when participants were asked to choose between three scenarios: using an app, using an app plus a wearable, or the combination of app, wearable and passive smartphone data such as location tracking. Almost all chose the last option. With clear explanations of its value, patients were not only open to but actively supportive of the most comprehensive approach.

Taken together, these interviews highlight what truly matters to patients. They want tools that ease, not amplify, the burden of illness; that strengthen, not replace, human contact; that collect data relevant to their health and meaningful to their lives; that are practical, reliable, and integrated; and that remain accessible to all. Their perspectives do not stand in the way of technological innovation; they point the way forward.

If mHealth is to fulfill its promise in oncology, its development must be guided by those who will ultimately use it. Listening carefully to patients' perspectives is essential for designing digital tools that will truly make a difference.

Original study