Insights | COVID-19

Oncology Clinical Transformation in Response to the COVID-19 Pandemic

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The coronavirus disease 2019 (COVID-19) pandemic is one of unprecedented scope and character. Unquestionably, present attention and resources should remain centered on scalable testing and tracing, maximizing availability of personnel protective equipment for health care workers, development of vaccines, and a coordinated resumption of public gathering. However, the present crisis also affords an opportunity to develop an oncology delivery system that is more affordable, equitable, and patient centered. We outline key pillars of this transformation below.

Virtual Care

Many oncology practices have transitioned to virtual visits, where appropriate, for new and established patients as a means of flattening the curve while maintaining continuity of care. The benefits of this strategy were immediately obvious and reinforced by the rapid implementation of several regulatory waivers, such as pay parity with in-person visits and removal of site-of-service limitations. Relaxation of interstate licensure requirements has been critical for patients with rare and advanced cancers who previously traveled across state lines for specialized care at quaternary cancer centers.

Given these incentives, oncology care is likely to incorporate greater use of telemedicine. Telemedicine can facilitate the setting, reducing the need for transfers to emergency departments. Hospital-at-home models in oncology have been proposed previously and, if augmented with emerging digital tools, would rapidly expand our ability to care for patients with cancer either as an early discharge paradigm or optimal care site for services of escalating intensity as experience is gained with this approach and their safety is confirmed. Present limitations to scalability include lack of centralized remote monitoring infrastructure, inadequate reimbursement models to offset the start-up costs, and insufficient community-based staff to provide in-home therapies. As the evidence base for telemedicine grows, serious consideration should be given to creating a reimbursement framework for this delivery model.

We should also use the present moment to study, iterate, and deepen the value proposition of telemedicine. What is its measurable impact on clinical outcomes and patient experience? In what scenarios is telemedicine found to be insufficient, and which components need to be improved? How does the wide-scale deployment of telemedicine affect physician burnout? How robust are the current mechanisms for data governance and privacy protection? Are there unintended consequences, such as creating a “digital divide” in oncology (ie, disparities in communities with limited broadband access)?

Advance Care Planning

The present pandemic has also forced oncologists to make tough decisions with respect to the timing, sequence, and setting for cancer treatment. These issues are heightened for patients at the end of life wherein the immediate value of any treatment rests on a shared understanding of the goals of care and a patient’s values and preferences. The extraordinary context of COVID-19 has generated the possibility that a loved one might be emergently intubated without participation from the family or be cared for by a new clinical team without guidance from the primary oncologist.

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Recognition of these concerns has prompted a substantial acceleration in the adoption of proactive advance care planning. Also, COVID-19 poses an unforeseen risk to the extent that it can acutely afflict any patient with cancer, independent of stage. This brings into urgent focus the need to have a shared, preemptive “what if” conversation. However, goal-concordant care should always be the case irrespective of disease stage, because prepandemic, many patients had fallen victim to an unpredictable disease trajectory. Furthermore, this approach helps to ensure that patients with cancer get the right care, at the right time, at the right place. Our hope is that the difficult gains made now will inform our practice norms moving forward.

Digitizing Clinical Trials

Laboratory and clinical research operations have experienced considerable disruption, particularly the suspension of clinical trials that do not have curative or life-prolonging intent. According to an NPR analysis, up to 440 US trials, a quarter of which involved cancer treatments, have been suspended since March 1. The adverse downstream impact on cancer innovation has invited a reimagining of the clinical trial in some quarters.

The traditional clinical trial enterprise entails a network of brick-and-mortar centers, a model that engenders a high degree of process control, which is important for early-phase trials. However, the trade-off has been a high cost structure for clinical trials and low patient accrual. These hurdles are also mutually reinforcing and ultimately drive up the attendant costs of trials. More importantly, the vast majority of patients with cancer do not have access to clinical trials, with published estimates ranging from 2% to 8%, despite generally positive public opinion toward trials. A key structural factor is the limited local availability of trials relevant to a patient’s cancer type and stage. Having to travel a prolonged distance poses a tremendous economic burden for patients and their families. Decentralized or virtual trials are built around the idea that some elements of a clinical trial can be safely, reproducibly performed in a patient’s home or local physician’s office via digital health tools. Assessing patient eligibility, facilitating consent, and enrolling participants can already be wholly performed remotely. Natural language processing can be used for trial matching, while advanced analytics leveraging artificial intelligence can monitor site performance (eg, enrollment and dropout rates), track treatment adherence, and collate data across sites.

By bringing clinical trials to patients, the intent is to increase the geographic and sociodemographic representation of these trials. Furthermore, virtual trials provide a framework for incorporating patient-reported outcome instruments and data collection into clinical research. They also create an infrastructure that is much more resilient to the challenges posed by COVID-19.

Conclusions

The “burning platform” of COVID-19 has provided the tacit but critical lesson that many of the key regulations, professional norms, and cultural constructs in our delivery system are not naturally occurring but human derived. They represent choices, and out of necessity we have had to reset, rediscover and reimagine many of them in cancer care and research. As the public health crisis inevitably subsides, we should be intentional and thoughtful about the next set of choices that we make to improve the care of patients with cancer.
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