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Letter to the Editor

Impact of COVID-19 on oncology practice and research in the United States

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ABSTRACT

The COVID-19 outbreak has affected healthcare services in many ways, such as interruption of regular patient visit to clinical facilities and burdening of the already limited healthcare resources. Prior to the emergence of COVID-19, cancer has been one of the leading causes of deaths in the United States. While the regular care and access disruptions associated with the COVID-19 outbreak have received increasing attention in many areas, the range of gaps in oncology practice and research is not fully understood or well documented. Nonetheless, the global outbreak continues to unevenly affect the wealthiest and best-resourced country in the world and complicates response to other health issues. The aim of this study is to comment on the impact of the COVID-19 pandemic on oncology practice and research in the United States.

Dear Editor

The impact of the COVID-19 pandemic in the United States (US) has been far-reaching and the healthcare systems are not exempted [1]. As at the time of writing this paper, the US accounted for the highest number of COVID-19 cases and mortality globally. Even though national health authorities have been making efforts to respond to the pandemic, there is a tremendous impact of COVID-19 pandemic on health research and services including patients care and research regarding cancer [2,3]. It is indeed true that expertise of pandemic preparedness lies in the eye of beholders, as the COVID-19 pandemic has revealed how vulnerable the United States is to public health emergencies.

The global outbreak continues to unevenly affect the wealthiest and best-resourced country in the world, and this complicates response to other health issues [4]. In the US, as of 2019, cancer accounts for the second leading cause of death and of all the cancers, lung cancer is responsible for the highest mortality. Appreciable milestones in the detection, prevention, treatment, screening, and diagnosis of cancer have been achieved over the past 4 decades. While the regular care and access disruptions associated with the COVID-19 outbreak have received increasing attention in many areas, the range of gaps in oncology practice and research is not well-understood or well-documented throughout in the United States comprehensively.

The aim of this study is to comment on the impact of the COVID-19 pandemic on oncology practice and research in the US.

1. Impact of COVID-19 on oncology practice

Oncology practice involves intensive focus on cancer screening and diagnosis, treatment, and prevention strategies with the major aim of reducing and preventing mortality due to cancer. Unfortunately, during the peak period of COVID-19 in the United States, many hospitals halted elective surgeries and other non-urgent care as well as ancillary services [4–6]. This has resulted in 86%–94% decrease in the volume of cancer screening appointments in early 2020, as compared to the usual average volumes in previous years [6]. A report also revealed that between 15 March 2020 and 16 June 2020, 95,000 colon, 285,000 breast and 40,000 cervical examinations were missed, which represent deficits of 63%, 64%, and 67%, respectively, compared to the number of screenings in the previous year [6]. Another study revealed that in April 2020, screenings for breast, colon, prostate, and lung cancers were lower by 85%, 75%, 74%, and 56%, respectively [7]. The reduction in cancer screening is due to recommendations by national health authorities that no one should go to a health care facility for routine cancer screening until further notification and the fear to contract COVID-19 on the part of the patient due to clinical settings [7].

Even though cancer screening has resumed in areas where the outbreak has been well-controlled, there is still an uneven access to this service. This reiterates the need for health authorities to ensure cancer screening services are not disrupted for all groups. Failure to do this could result into untoward outcomes on the oncology community which include higher rate of patients diagnosed in an emergency setting, more advanced stage cancers and increase in overall cancer mortality compared to past years. Although telemedicine had been explored for urgent care and chronic disease management, it may also provide a significant role in mobilizing cancer screening and assessment.

Many patients living with cancer have struggled to receive treatment for their cancers due to cancelled hospitals appointment and/or delayed surgeries and other treatment procedures, such as chemotherapy and radiation therapy. Additionally, there is a concern that patients with curable cancers may not be able to access treatment (surgery, chemotherapy, or radiation) due to fear of contracting COVID-19. A recent study revealed that most physicians (N = 285; 70.0% of surgeons, 64.4% of medical oncologists, and 73.4% of radiation oncologists) had altered cancer treatment plans with an implication for reinstitution of standard cancer treatment [1]. Another study also revealed that 81.3% of the patients in a safety-net hospital in Los Angeles, who had cancer treatment in 2020 experienced delays in cancer treatment [3]. A recent study also showed that patients with metastatic cancers were more likely to indicate that COVID-19 had negatively affected their cancer care compared to patients with non-metastatic cancer (50.8% vs. 31.0%; p =

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0.02) and that chemotherapy delays are the commonest [5].

The COVID-19 outbreak and associated stay-at-home directives established across the United States reduced patient access to face-to-face care and, in turn, impacted patients' ability to receive cancer care including delayed treatment. Limited availability of personal protective equipment for care givers, inadequate hospital capacity, including intensive care units, and lack of point-of-care testing and seroprevalence data further complicate cancer treatments in the United States. It is important that national health authorities and relevant stakeholders devise means and formulate policies to ensure uninterrupted access to cancer treatment and care amid the pandemic in order to reduce morbidity and mortality in this patient population.

The emergence of the COVID-19 has also disrupted health promotion activities including cancer prevention programs and awareness initiatives. Before the global outbreak, telehealth has been leveraged to ensure access to cancer preventive care among underserved communities in the United States. However, the challenge of uneven access is concerning. This reifies the need to explore opportunities for health promotion within the context of a public health emergencies, perhaps with well-established systems for health promotion implore during natural disasters. Leveraging social media to promote healthy lifestyle amid the pandemic is also crucial as stay-at-home orders have the potential to encourage sedentary lifestyle, which has been linked to increase cancer incidence and mortality.

Furthermore, people living with cancer are a vulnerable population, and for a pandemic on the scale of COVID-19, interruption of their cancer or usual medical care is inevitable, especially when the United States is severely affected by the outbreak. Hence, clinicians continue to face a major challenge to balance the delivery of high-quality continuous unfragmented cancer care with minimizing clinicians' and patients' risk of exposure during care. Additionally, the diversion of clinicians and other healthcare workers to respond to COVID-19 has had a major impact on oncology practice in the United States.

2. Impact of COVID-19 on oncology research

Cancer research in the United States is not spared from the untoward impacts of the COVID-19 pandemic. In order to reduce the spread and transmission of the coronavirus, many cancer research centers enacted policies limiting the number of scientists and lab workers allowed on-site, which halt the progress of several studies. The COVID-19 pandemic has also impacted research projects funded by government and those projects funded by private philanthropy suffers limited funding.

Additionally, the pandemic has significantly reduced donations to cancer-focused research organizations. For instance, in 2020, the American Cancer Society expects $200 million reduction in donations and has not been able to announce funding calls for research in some grant cycles. This is doubly compounded by increased cost of logistics and other resources due to the pandemic. More so, funding is being shifted away from oncological research to COVID-19 research and vaccine development. It has been reported most of the governmental funds and resources of pharmaceutical companies are redirected from cancer therapies trials to studies on COVID-19 testing, surveillance, treatment, and vaccines. This will lead to a slower evolution of cancer trials. Additionally, the resulting changes and amendments to the clinical trial protocols can negatively influence outcomes of the studies.

It is no doubt that the pandemic has made finding patients for clinical studies harder, especially for oncology clinical trials, which rely on immunocompromised patients [8]. For clinical cancer research, patient enrolment for clinical trials dropped as a result of the COVID-19 pandemic. This is a major challenge because the potential new therapies need to be tested on patients in order to ascertain safety and efficacy. A survey of 36 clinical investigators conducted between 23 March 2020 and 3 April 2020 revealed that patient enrolment in clinical trials is negatively affected, especially in Europe and United States and that 50% of their institutions had stopped collection of blood and other tissue for research purposes [9]. This disruption in patient enrolment for oncology clinical trials will definitely set back advancement in research and capacity building of trainees in years to come.

It has also been reported that many research institutions have decided to delay the start of new clinical trials. A comprehensive analysis of data from ClinicalTrials.gov also reveals that due to COVID-19, over 190 interventional oncology studies were suspended in March 2020 and April 2020 globally and the United States is not excluded [9]. Furthermore, according to data from the Clinical Trials Arena report, United States beat all other regions in disrupted clinical trials in both single-country and multinational trials [10]. Even though there is resumption of trial activities in some centers, many cancer patients refused to turn up because of the fear of contracting COVID-19. Investigators in the United States have developed strategies e.g., virtual trials, to improve retention rates. The onsite clinical trials are still much desired. The FDA has recommended remote communication with patients for follow-up and to make changes and exceptions to trials' protocols to reduce overcrowdings at the trial centers. It is very important that national health authorities come up with strategies to improve patient enrolment and retention for cancer clinical trials and other research activities.

3. Conclusion

COVID-19 surmised that health systems services such as oncology practice and research including clinical trials in the United States, are not spared of the impact of public health emergencies, even in the wealthiest and best-resourced country of the world. It is important for health authorities, care givers, researchers, and other stakeholders to see the COVID-19 pandemic as an opportunity to develop sustainable strategies and systems to ensure continuous access to cancer care and uninterrupted research activities during any public health emergencies.

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Declaration of competing interest

None.

References

[1] J.Y.C. Hui, J. Yuan, D. Teoh, et al., Cancer management during the COVID-19 pandemic in the United States: results from a national physician cross-sectional survey, Am. J. Clin. Oncol. 43 (10) (2020) 679–684, https://doi.org/10.1097/COC.0000000000000757.

[2] M. Okereke, N.A. Ukor, Y.A. Adebisi, et al., Impact of COVID-19 on access to healthcare in low- and middle-income countries: current evidence and future recommendations, Int. J. Health Plann. Manag. 36 (1) (2021) 13–17, https://doi.org/10.1002/hpm.3067.

[3] L. Antrim, S. Capone, S. Dong, et al., Impact of COVID-19 infection among cancer patients treated at the Los Angeles county medical center, Cancer Treat Res Commun 26 (2021) 100273, https://doi.org/10.1016/j.ctarc.2020.100273.

[4] D. Lyon, Cancer prevention during the COVID-19 pandemic, Oncol. Nurs. Forum 47 (5) (2020) 491–492, https://doi.org/10.1188/20.ONF.491-492.

[5] E. Lou, D. Teoh, K. Brown, et al., Perspectives of cancer patients and their health during the COVID-19 pandemic, PloS One 15 (10) (2020), e0241741, https://doi.org/10.1371/journal.pone.0241741. Published 2020 Oct 30.

[6] A. Al-Jabir, A. Kerwan, M. Nicola, et al., Impact of the Coronavirus (COVID-19) pandemic on surgical practice - Part 1, Int. J. Surg. 79 (2020) 168–179, https://doi.org/10.1016/j.ijsu.2020.05.022.

[7] D. Patt, L. Gordan, M. Diaz, et al., Impact of COVID-19 on cancer care: how the pandemic is delaying cancer diagnosis and treatment for American seniors, JCO Clin Cancer Inform 4 (2020) 1059–1071, https://doi.org/10.1200/CCI.20.00134.

[8] N. Stallard, L. Hampson, N. Benda, et al., Efficient adaptive designs for clinical trials of interventions for COVID-19, Stat. Biopharm. Res. 12 (4) (2020) 483–497, https://doi.org/10.1080/19466315.2020.1790415. Published 2020 Jul 29.

[9] S. Upadhaya, J.X. Yu, C. Oliva, M. Hooton, J. Hodge, V.M. Hubbard-Lucey, Impact of COVID-19 on oncology clinical trials, Nat. Rev. Drug Discov. 19 (6) (2020) 376–377, https://doi.org/10.1038/d41573-020-00093-1.

[10] Clinical Trials Arena, Impact of Covid-19 on disruption of oncology clinical trials. https://www.clinicaltrialsarena.com/comment/covid-19-disruption-oncology-trials/. (Accessed 10 June 2021).

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