Managing the Backlog of Cancer Care Due to COVID-19: A Perspective from Low-to-middle Income Countries (LMICs)

Shafquat A Khan[1] and Ikram A Burney[1,2*]

[1]*Department of Medical Oncology, Sultan Qaboos Comprehensive Cancer Care and Research Center, Muscat, Oman*
[2]*Panjwani Center for Molecular Medicine and Drug Research, ICCBS, Karachi University, Karachi, Pakistan*

A novel coronavirus, SARS-CoV-2 surfaced in Wuhan, China in December 2019, and in less than 3 months, the disease assumed proportions of a pandemic, named COVID-19 [1]. Over the next two years, the pandemic assumed an exponential course, resulting in more than half-a-billion of world population getting infected with the virus, and more than 6 million deaths, so far. The pandemic had an unprecedented devastating effect, not only on the health, but also on social behaviors and economies. Airlines, travel and tourism, restaurants, business enterprises, sports and leisure activities; all were hit hard, leading to job losses, unemployment, late payments and bankruptcies. Whereas the direct effects of COVID-19 are well known, the indirect losses in term of financial losses and non-COVID related health issues are only beginning to emerge. Amongst other industries, healthcare industry bore the brunt of the damage. On the one hand, the global pandemic mandated the hospitals and healthcare professionals and facilities to go all-out to provide services; a diversion in provision of routine clinical services was inevitable. Routine medical care, such as, screening procedures and programs, non-emergency surgeries and services were put on a hold for almost two years. Hospitals and staff members worked to full capacity to provide life-saving measures to those affected with COVID-19. Like other routine services, cancer management was affected.

Besides the fact that the hospitals had to divert their routine services and prioritize emergency management, there were other reasons for disruption of routine cancer management. Lockdowns, social isolation, hospital policies of limiting the number of patients and visitors, lack of availability of consumables and chemotherapy, and above all, the fear amongst patients of contracting the virus in hospital environment, where the risk was probably the highest - prevented patients from visiting hospitals and seeking management [2]. Patients and physicians were aware that the risk of contracting COVID-19 infection is substantially higher in patients with cancer, especially those receiving myelosuppressive and immunosuppressive chemotherapy. As a result, there was a significant backlog due to deferred treatment [3]. The delays were observed throughout the spectrum of cancer management (screening, diagnosis and treatment). The delays in each of these steps of cancer management may lead to excess deaths, leading to an increase in overall mortality rates [3, 4].

After almost 2 years of turbulence and devastation, there is a glimmer of hope that the pandemic may be over. In many countries, 70% or more of the population has received at least two, and in some countries even three or four doses of the vaccine, and effective treatments are now available. The rate of new infection, hospitalization, intensive care use, and deaths seem to have plateaued, or even fallen. It has been suggested that more than 2/3rd of the population has either received vaccine or has developed immunity due to infection. The question is being asked, “Is the pandemic over? [5]” Despite the fact that waves of new variants of SARS-CoV-2 continue to emerge, travel restrictions have been eased, social distancing and wearing masks is not required in many countries, and social life has returned back to pre-pandemic levels [6]. These developments have caused many to look to the future with hope. As the pandemic may be over, or at the verge of transitioning to an endemic, it’s time for re-thinking, re-organization, and repairing the damage. Amongst other services, there is an urgent need to organize and prioritize the delivery of cancer services, not only to ease the backlog, but also with an aim to seize the opportunity to implement processes and pathways to deal with such calamities in the future.

Whereas, literature is describing the scale of effects of lack of screening and early detection of cancers in the developed countries, and suggesting ways to mitigate the effects, there is a paucity of published information from low-to-middle income countries (LMICs), where population-based screening programs were not in place even before the pandemic, but where a huge backlog of cancer care has accumulated with symptomatic cancer patients needing urgent treatment.

The delays in diagnosis and treatment have several consequences. Delay in treatment not only reduce the survival, but has an effect on morbidity due to worsening of symptoms, increasing cost of treatment, including cost of treatment of complications, quality of life, psyche and morale of the patient, but also has a psychosocial impact on the caregivers and the society [7]. A delay in cancer treatment has an inverse effect on survival at any stage of disease, and more so, when

**Corresponding author: Ikram A Burney, Department of Medical Oncology, Sultan Qaboos Comprehensive Cancer Care and Research Center, Muscat, Oman; Email: ikramburney@hotmail.com*
Received: July 07, 2022; Revised: August 01, 2022; Accepted: August 01, 2022
DOI: https://doi.org/10.37184/lnjcc.2789-0112.3.12

the disease is symptomatic. For example, the risk of death from colon cancer increases 6% every 4 weeks that surgery is delayed, and by 13% for a 4-week delay in initiating chemotherapy [4]. Generally, time to initiate chemotherapy after surgery is 4-6 weeks, but during COVID-19 pandemic, delays for up to 10 weeks were observed in Canada, resulting in potentially doubling of the mortality rates. More recently, a team from Canada reported that disruptions of cancer care during the pandemic could lead to an additional 20,000 deaths in Canada alone [3]. In LMICs, with poor infrastructure of cancer management services, the actual burden of the backlog, in terms of number of patients, and the number requiring emergency treatment, may not be known, and what is surfacing, may only be the tip of the iceberg.

We are at a very important juncture in the management of cancer in LMICs. Whereas, new cases continue to be diagnosed, there is an additional burden on healthcare services due to the backlog. Efforts to combat the backlog to provide treatment to symptomatic cancer patient have to be urgent, multi-dimensional and supported by all stakeholders. The public, the physicians, other healthcare providers, and the governmental organizations need to be aware that a huge number of patients need help. Human resources in terms of available trained medical, surgical and radiation oncologists should be mobilized, and mobilized urgently. Treatment plans should be discussed and prioritized in multi-disciplinary tumor boards. Interventional radiologists, gastro-enterologists and pulmonologists need to be included in the discussion, to initiate early interventions to diagnose cancer. Young oncologists, physicians, nurse and pharmacists need to be trained on emergency grounds to provide initial medical care, and work together with experienced staff. Physicians and nurse in primary care and small clinics need to be empowered, so that they could help provide early diagnosis, and should be encouraged to refer patients to cancer treatment facilities without delay. Medical and surgical oncologists, histopathologists and radiologists working oversees may need to be involved. They can participate and provide their services for a defined period of time, at least to help clear the backlog. Technology should be employed, and physicians and patients should be encouraged to use telehealth to seek expert opinions about the symptoms and possible course of action. CT and MRI scan reporting can be outsourced to experts in the field using the telemedicine facilities. Social media platforms can be deployed, and patients may get medical advice through applications on their smartphones. Diagnosis and treatment of cancer comes with a huge psychological burden on patients and their care-givers. Psychologists and social workers need to come on board and work in multi-disciplinary tumor boards with the oncologists.

While the healthcare providers, including oncologists and the non-oncologist physicians, together with nurse and pharmacists can provide cancer care at an accelerated pace once the patient arrives at their doorstep, it is equally important to coordinate the services. Symptomatic patients, or those who are suspected to have the COVID-19 or other infections should be treated separately from asymptomatic patients. Staff dealing with the cancer patients should be provided personal protective equipment, and should be trained on donning and doffing. The responsibility should be shared by the ministry of health, the private healthcare organizations, and the non-governmental organizations to create awareness and to create a data base. Investment is needed and politicians and governments need to mobilize resources. For example, it has been estimated that a 10% increase in treatment capacity may have a significant effect on mortality from cancer, by reducing the mortality from 20,000 to 4,000 [3]. For the moment, financial counselors may help to find and mobilize resources for patients in need, so that the treatment could be provided without substantial gaps.

Every cloud has a silver-lining, and no wonder if COVID-19 pandemic and the resultant disruption of cancer care services lead us in the LMICs to develop infrastructure which was scarce at the onset of the COVID-19 pandemic. For example, developing databases, cancer registries, and pathways and processes to deal with such calamities in the future more effectively. A few more suggestions include, ensuring the cancer treatment facilities and staff are kept free of the infection, the number of patient visits be reduced by the use of oral forms of treatment, providing home healthcare, and using telemedicine and other forms of innovation.

REFERENCES

1. Cucinotta D, Vanelli M. WHO Declares COVID-19 a pandemic. Acta Biomed 2020; 91(1): 157-60.

2. Riera R, Bagattini AM, Pacheco RL, Pachito DV, Roitberg F, Llbawi A. Delays and disruptions in cancer health care due to COVID-19 pandemic: systematic review. JCO Global Oncol 2021; 7: 311-23.

3. Cancer treatment and diagnosis backlogs during COVID-19 may affect cancer survival https://theconversation.com/cancer-treatment-and-diagnosis-backlogs-during-covid-19-may-affect-cancer-survival-179294

4. Hanna TP, King WD, Thibodeau S, Jalink M, Paulin GA, Harvey-Jones E, *et al.* Mortality due to cancer treatment delay: systematic review and meta-analysis. BMJ 2020; 371: m4087.

5. Is the Pandemic Over in 2022? What the Experts Say About COVID-19 (rd.com)' accessed on Sept 11, 2022.

6. People, Not Science, Decide When a Pandemic Is Over - Scientific American https://www.scientificamerican.com/article/ people-not-science-decide-when-a-pandemic-is-over1/

7. Dhada S, Stwart D, Cheema E, AbdulHadi M, Paudyal V. Cancer services during the COVID-19 pandemic: systematic review of patient's and caregiver's experiences. Cancer Manag Res 2021; 13: 5875-87.