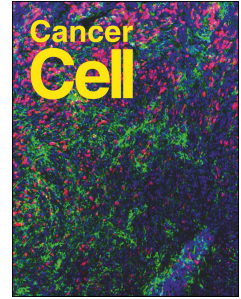


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Cancer Patient Care during COVID-19

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Main Text

Since WHO declared COVID-19 a global pandemic, measures including lockdown, social distancing, and service reprioritization have been imposed to deal with the unprecedented crisis. However, this poses two major health risks for cancer patients: compromised cancer care and their increased vulnerability to COVID-19. In primary care, family physicians reported delays in delivering cancer screening tests and reluctance to refer patients with suspected cancer to secondary care, posing a risk to missing diagnosis (Jones et al., 2020), whereas in specialist units downscaling of cancer care has been reported in many countries, including India, Singapore, and African countries (Pramesh and Badwe, 2020; Vanderpuye et al., 2020). Systemic treatments are withheld due to worries of treatment-induced complications. Curative surgeries could face delays, due to shortage in manpower, medical supplies, and high-dependency care capacities (van de Haar et al., 2020). In light of these challenges, this Letter addresses the issues of COVID-19 in cancer management and possible measures in streamlining future cancer services.

To ameliorate the crisis, infection control measures and hospital surveillance have been imposed in various methods (Table S1). Prior to outpatient visits in the U.S., India, and some European countries, patients would be triaged on respiratory symptoms and contact histories. While this was done by telephone calls in Europe (van de Haar et al., 2020), out-of-hospital pods have been used in the U.S. and India to screen outpatients (Pramesh and Badwe, 2020; Ueda et al., 2020). For inpatients, effective infectious control measures like vigorous preadmission surveillance, with regular temperature testing, blood tests, and high-resolution computed tomography (HRCT) of lungs, were reported in China (Wang et al., 2020). Others downscaled their services to only include new referrals that are acute and emergency (Vanderpuye et al., 2020). However, these safety measures would disrupt delivery of cancer care and delay in-patient treatment. Shifting to home deliveries of oral medication to cancer patients' homes has allowed the continuity of care of affected patients (van de Haar et al., 2020). However, this temporary change aims to slow disease progression until services return to normal after COVID-19 subsides, as well as to reduce risk of treatment-induced complications and unnecessary hospital visits.

For oncological surgery, out-of-hours operations have been a viable coping strategy adopted by worldwide cancer centers to catch up on delayed surgeries (Table S1). As of May 2020, our unit in Liverpool has limited interruption from COVID-19, and we have successfully sustained thoracic operating capacity by ensuring adequate and timely delivery of lung cancer surgery. In Indonesia, surgery eligibility has been adjusted to prioritize aggressive cancers, post-neoadjuvant cancers, and timetabling surgeries and outpatient to avoid clashes on same days (Brahma, 2020). Although cancer surgery is considered to be essential in the U.S., delays to surgery are being managed by oral therapeutics due to lack of personal protective equipment (Ueda et al., 2020).

In order to minimize hospital travel, most healthcare providers have started to transition medical practice to telemedicine (Table S1). Besides replacing outpatient services with virtual calls (Pramesh and Badwe, 2020; van de Haar et al., 2020), in the U.S. healthcare system, automated logic flow bots in emergency departments can refer moderate-high risk patients to direct-to-consumer care. These services can be covered by quarantined doctors to free up other doctors to perform in-person care (Hollander and Carr, 2020). Before this epidemic, tele-oncology has demonstrated similar effectiveness to in-person care at lower costs and has high levels of satisfaction in patients and health professionals (Sirintrapun and Lopez, 2018). Telemedicine can facilitate cancer management by providing remote chemotherapy supervision, symptom management, and palliative care as well as psychological support (Sirintrapun and Lopez, 2018). Thus, we believe that this is a precious opportunity for other centers to trial the integration of telemedicine into cancer care while alleviating the pressures of COVID-19.

Departmental adjustments to improve communication and work efficiency have also been made (Table S1). Online channels for communication between staff and webinars at Indian cancer hospitals have been made available to facilitate collective decision making and sharing ideas amidst social distancing (Pramesh and Badwe, 2020). Additional measures to ensure safety of staff include paid leave given to high-risk staff, such as those with comorbidities, those who are taking immunosuppressive medication, or those who are currently pregnant. Cancer centers have also used telecommunications for multidisciplinary team meetings to implement social distancing (Vanderpuye et al., 2020). Several other countries have employed a segregated team workflow in which staff are separated into teams to avoid an entire department being quarantined if one staff member is infected (Pramesh and Badwe, 2020; Vanderpuye et al., 2020).

Overall, the COVID-19 pandemic places stress on standard cancer management pathways, which may compromise all aspects of cancer care and can affect multi-organs (Zaim et al., 2020). In order to maintain a high quality of care for cancer patients, efficacious leadership frameworks shall be crucial to staff morale, communication, and rapid response to incidents. Healthcare providers should prepare for a possible surge in cancer cases, especially when it comes to meeting new demands. We believe implementing telemedicine could offer short-term relief for the current crisis and provide valuable experience in reshaping future practice.

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Supplemental Information

Table S1. Summary of Mitigating Measures Reported by Healthcare Providers from China, the U.S., and European Countries

Document S2. Article plus Supplemental Information