Cancer in the context of COVID-19: Summary of emerging evidence (18)

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Date: 21 July 2020

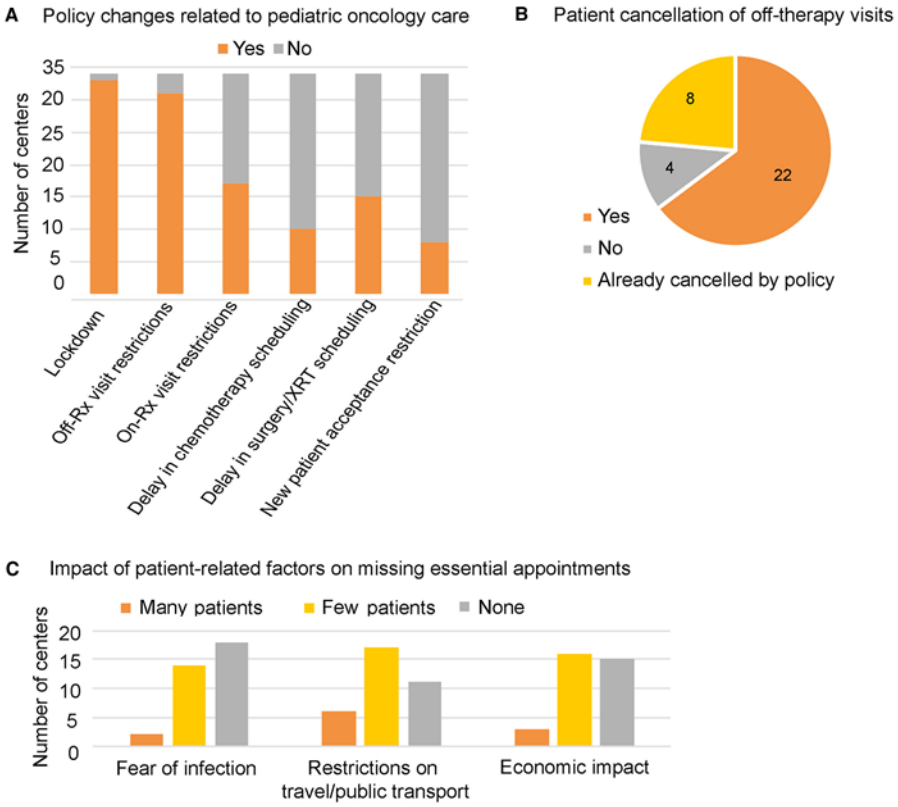
The CRI presents a selection of emerging research articles and clinical practice guidelines related to cancer and COVID-19, with a summary of their key findings/recommendations (links to the articles are embedded as hyperlinks in the titles). This is the 18th of our weekly compilation, which we plan to update and disseminate as the pandemic evolves globally and nationally.

This week, we highlight the latest research and evidence related to oncology services in COVID-19 outbreak contexts globally, with a focus on African and other low- and middle-income country (LMIC) contexts. We hope that insights from these pieces of evidence will help guide how we rethink cancer prevention, treatment and care in the context of the ongoing pandemic, in view of its unprecedented implications for patients, healthcare providers and the community in general. We are keen to include research and guidelines from African and other low- and middle-income settings and will profile these as they become available. Previous weeks' editions can be found on the **CRI website,** as well as on **our Twitter page (@UctCri)**.

Saab et al. Impact of the coronavirus disease 2019 (COVID-19) pandemic on paediatric oncology care in the Middle East, North Africa, and West Asia Region: A report from the Paediatric Oncology East and Mediterranean (POEM) Group. Cancer. DOI: 10.1002/cncr.33075.

Country context: Middle East, North Africa and West Asia

In this study, a 34-item survey focusing on barriers to paediatric oncology management during the COVID-19 pandemic was distributed to heads of paediatric oncology units within the Paediatric Oncology East and Mediterranean (POEM) collaborative group, from the Middle East, North Africa, and West Asia. Responses were collected from April 11 through 22, 2020. In total, 34 centres from 19 countries participated. Almost all centres applied guidelines to optimise resource utilisation and safety, including delaying treatment visits, rotating and reducing staff, and implementing social distancing, hand hygiene measures, and personal protective equipment use. Essential treatments, including chemotherapy, surgery, and radiation therapy, were delayed in 29% - 44% of centres, while 24% of centres restricted acceptance of new patients. Clinical care delivery was reported as negatively affected in 28% of centres. Furthermore, over 70% of centres reported shortages in blood products, and 47% - 62% reported interruptions in medication supplies, cancer surgery and radiation. The figures below highlight some of the main findings:



(A) The number of centres reporting specific changes in national and hospital policies affecting paediatric oncology care, as detailed; B) the number of patient cancellations of surveillance (off-treatment) follow-up visits; and C) the effect of fear, restrictions in transportation, and economic duress in patient-driven cancellations of essential treatment visits are illustrated. On-Rx indicates on medication; XRT, radiation therapy.

The impact of the coronavirus disease 2019 (COVID-19) pandemic is illustrated on (A) medical staffing resources, as detailed; (B) treatment resources, as detailed; and C) overall treatment delivery according to the number of centres. PICU indicates paediatric intensive care unit.

Guven et al. COVID-19 pandemic: changes in cancer admissions. BMJ Supportive and Palliative Care. DOI: 10.1136/bmjspcare-2020-002468.

Country Context: Turkey

In this short report, the authors evaluated the early changes in cancer admissions and outpatient clinic attendance at a cancer treatment cancer in Turkey. The study involved patients applying to the outpatient clinic and outpatient palliative care clinic for the first time and patients admitted to inpatient wards in the first 30 days after the first case of COVID-19 in Turkey. Compared with the previous years, the mean number of daily new patient applications to the outpatient clinic (9.87 vs 6.4) and outpatient clinic (3.87 vs 1.13) was significantly reduced. Similarly, the median duration of hospitalisation and the rate of hospitalisations for palliative care or elective interventional procedures were significantly reduced. In contrast, the frequency of hospitalisations for chemotherapy was higher than in previous years.

Tuech et al. The Day after Tomorrow: How Should We Address Health System Organization to Treat Cancer Patients after the Peak of the COVID-19 Epidemic? Oncology. DOI: 10.1159/000509650

Country context: France

In this review article, the authors conceptualised three phases of the COVID-19 pandemic: phase 1 (the start phase), phase 2 (the storm), and phase 3 (the recession) in the context of how health care systems need to be restructured to prevent excess cancer mortality. They detail the specificities of each epidemic phase and discuss several methods of healthcare re-organisation to optimise cancer patient flow during the COVID-19 pandemic, particularly during phase 3. One of their proposals for hospital reorganisation is illustrated below:

Model for possible reorganisation of monobloc hospitals.

Note: Areas in blue are virus-free zones, areas in yellow are contaminated viral zones, and areas in green are uncertain viral status zones. All patients use the green road to the triage area. After screening, the patient is redirected according to the presumed viral state to the yellow or blue area. Dedicated elevators are identified and used by dedicated patients. The blue elevator cannot stop on the yellow floors, and the yellow elevator cannot go up to the blue floors. Green floors are shared common areas (technical units, radiology departments, etc.). If a second wave of infection hits the country, the COVID-negative floors will gradually be converted into COVID-positive floors. The yellow and blue arrows show the possible evolution in the case of a second wave.

Tian et al. Cancer associates with risk and severe events of COVID-19: A systematic review and meta-analysis. Int J Cancer. DOI: 10.1002/ijc.33213

Country context: China

This systematic review used a meta-analysis to obtain estimates of pooled prevalence of cancer in patients with COVID-19, and determine the association between cancer and severe COVID-19 events, including severe cases judged by clinical symptoms, utilisation of intensive

care unit services and death. In total, 38 studies comprising 7,094 patients with COVID-19 were included. The pooled prevalence of cancer was estimated at 2.3%. Cancer was significantly associated with the events of severe cases (odds ratio [OR]=2.20, 95% CL[1.53, 3.17]) and death (OR=2.97, 95% CL[1.48, 5.96]) in patients with COVID-19. The findings add to the increasing evidence that cancer co-morbidity is associated with higher risks of COVID-19 infection, morbidity and fatality.

Joode et al. Impact of the coronavirus disease 2019 pandemic on cancer treatment: the patients' perspective. Eur J Cancer. DOI: 10.1016/j.ejca.2020.06.019

Country context: The Netherlands

This study assessed the impact of the COVID-19 pandemic on oncological care through a nationwide survey of patients with cancer in the Netherlands. A total of 5302 with cancer completed the survey. Overall, 30% of patients reported changes in their oncological treatment or follow-up due to the pandemic. In the majority of cases, there was conversion from hospital visit to consultation by phone or video. The most frequently adjusted treatments were chemotherapy (30%) and immunotherapy (32%). Among patients with delay and discontinuation of treatment, 55% and 63% of patients, respectively, were concerned about these consequences of the COVID-19 pandemic. Consequences were independent of regional differences in COVID-19 incidence. However, patients in regions with high COVID-19 incidence were significantly more concerned.

Karacin et al. How does COVID-19 fear and anxiety affect chemotherapy adherence in patients with cancer. Future Oncol. DOI: 10.2217/fon-2020-0592

Country context: Turkey

This study investigated how COVID-19 fear and anxiety (COV-FA) affects chemotherapy adherence in patients with cancer. The records of 3661 patients with chemotherapy (CT) appointments were retrospectively reviewed. Chemotherapy postponement rates were 11.6% and 14.2% in the 60-day periods before and after 10 March 2020, when the first COVID-19 case was diagnosed in Turkey, respectively. The rate of COV-FA-related chemotherapy postponement after telemedicine was introduced was lower than before that (4.6% vs 17.4%). Advanced age (≥60 years) was found to be the independent factor that was predictive of time to return to treatment. The table below highlights some of the key findings:

Table 1. Reasons for postponement of chemotherapy after the first COVID-19 case.[1]

Characteristic	n (%)
Neutropenia	51 (23.1)
Thrombocytopenia	46 (20.9)
Fear and anxiety	30 (13.6)
Infection	17 (7.7)

Table 1. Reasons for postponement of chemotherapy after the first COVID-19 case.[†]	
Characteristic	**n (%)**
Progressive disease	12 (5.5)
ECOG PS	9 (4.1)
Transportation problem	9 (4.1)
Anemia	5 (2.3)
Acute thrombosis	5 (2.3)
Metabolic	5 (2.3)
Other	31 (14.1)

[†]n = 220 ECOG: Eastern Cooperative Oncology Group; PS: Performance status.

Magno et al. The impact of the COVID-19 pandemic on breast cancer patients awaiting surgery: Observational survey in an Italian University hospital. Breast J. DOI: 10.1111/tbj.13889

Country context: Italy

In this article, the authors present the findings of their study that aimed to assess the impact of the COVID-19 pandemic on breast cancer patients awaiting surgery. The study involved 125 women (mean age: 56.3 years) recently diagnosed with breast cancer and awaiting surgery in a cancer centre in Italy. According to the majority of women with breast cancer, regardless of age, the COVID-19 pandemic generated significant additional distress. Almost one third of the patients (28,6%) indicated that the emotional distress due to the infection had become prevalent as compared to the distress determined by the diagnosis of cancer. More than half (53%) of patients reported that COVID-19 had exacerbated their already existing cancer fears. This was particularly noted in women with invasive cancers. Among women with increased COVID-19 related distress, major concerns referred to the fear that the pandemic could cause a delay in their oncological treatments (71,4%) and the fear that, as cancer patients, they could be more vulnerable to the infection compared to the general population (56%). These concerns were also stronger in women with invasive cancer.

Elkaddoum et al. Treating cancer patients in times of COVID-19 pandemic: A virtual women cancers multidisciplinary meeting experience. British Journal of Haematology. DOI: 10.1111/bjh.17014

Country context: Lebanon

In this report, the authors discuss how the gynaecological oncology Multidisciplinary Meetings (MDM) were affected by the COVID-19 outbreak and the subsequent strict social distancing rules. They also highlight how they navigated those challenges, including how they ensured the sharing of high-quality images (mammograms and pathology slides) and maintaining patients' confidentiality with shared data during virtual meetings.