Cancer in the context of COVID-19: Summary of emerging evidence (12)

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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 12th 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 news related to oncology services in COVID-19 outbreak contexts globally, with a focus on Africa and other low- and middle-income countries. 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).**

Lombe et al. Zambia's National Cancer Centre response to the COVID-19 pandemic—an opportunity for improved care. E Cancer. https://doi.org/10.3332/ecancer.2020.1051

Country Context: Zambia

The existence of only one cancer centre in Zambia, coupled with the country's growing cancer burden, makes the continuation of cancer care in the face of the COVD-19 pandemic an absolute necessity. This article reports the response of Zambia's comprehensive cancer centre to COVID-19 and how the pragmatic strategies implemented have served as a springboard to improve cancer services beyond the COVID-19 pandemic. The strategies included the establishment of a facility-level taskforce, increased education and facilitation of good hygiene practices, staff training, patient triaging, improved patient scheduling, remote review of patients and establishing a virtual platform for meetings. Some of the measures taken are highlighted below:

Establishment of a hospital level COVID-19 task force: The cancer centre's leadership decided to establish a local response taskforce to formulate, implement, enforce and communicate national measures to maintain the safety of patients and hospital staff. This task force included both clinical and administrative staff. Each unit was invited to nominate a senior staff member with managerial exposure in their day-to-day activities as well as a junior

staff member who was on the treatment floor actively on a day-to-day basis to ensure solutions and strategies were practical.

Basic epidemiologic measures: These included increased capacity for hand washing, sanitising and social distancing. In addition to the existing water infrastructure, locally innovated mobile water reservoirs with taps were placed at strategic points all around the institution. Security staff received enhanced orientation to ensure increased utilisation of the hand washing facilities. The centre's pharmacy team reconstituted a cost-effective alcohol-based hand rub as the financial barriers to commercially produced ones were recognised. Housekeeping personnel were requested to strengthen adherence to cleaning schedules. Social distancing was enforced in waiting areas.

Staff training: The National Response Team organised staff training, helping to ensure that all staff were adequately trained in the prevention of COVID-19 transmission. Training topics consisted of understanding the disease, how it is spread and what can be done to prevent transmission. Emphasis was placed on how to respond if faced with patients undergoing treatment who were COVID-19 positive.

Patient triage: Access into the cancer centre has been restricted. The outpatient nurses and environmental health officers screen the attendees for raised temperature and symptoms. The outpatients with a good performance status are seen alone; those requiring assistance are allowed one caregiver to accompany them. A holding room has been designated for any person found to be high risk for SARS-CoV-2 infection.

Inpatients: Following a directive from the ministry of health, all inpatients at the cancer centre were swabbed and tested for SARS-CoV-2. The nursing staff conducted education to inpatients and their caregivers on COVID-19 to strengthen adherence to good hygiene practices. Mandatory testing is ongoing for all newly admitted patients. Inpatients are allowed one caregiver at their bedsides. Visitation for inpatients has been suspended.

Patient appointments: All new patients continue to be seen as a priority for establishment of a treatment plan. Patient referral is challenged by the lack of a formal electronic based referral system. Thus, this COVID-19 crisis is being seen as an opportunity to develop and pilot a robust referral system.

Patient reviews: During the first 2 weeks of the pandemic, patients on surveillance following definitive cancer treatment were called by the booking desk to reschedule follow up visits. Following the establishment of a task force, medical personnel are conducting telephonic reviews.

Scheduling of patients on radiotherapy: Patients have scheduled in time slots in order to ensure that only a specific number of patients occupy the waiting area at a particular time allowing for maximal physical distancing. The socioeconomic challenges faced by patients in accessing transport to make their appointments have been recognised and the slots are further arranged into blocks to allow some flexibility.

Scheduling of patients receiving chemotherapy: Chemotherapy scheduling as an institution had less adjustment as allocation of days was already organised around cancer site so patient congestion was more controlled. The enforcement of social distancing in the waiting rooms and chemotherapy suite was successfully implemented.

Radiotherapy protocols: A major challenge for most cancer patients who are severely anaemic is the availability of blood for transfusion or alternatives to increase the haemoglobin

value. The closure of colleges and schools that are sources of blood donors and restricted movements in Zambia may impact the centre's ability to optimise patients for conventional photon radiation.

Surgical oncology services: A review of evidence and adaptation of the multidisciplinary team protocols to match the reduced surgical capacity were conducted. Some suggested approaches, specific to cancer sites, are as follows:

- Vulvar cancer surgery will continue as per standard of care but may suffer a 6–8 week delay
- Endometrial cancer low risk patients with grade 1 disease can be considered for non-surgical options, including hormonal therapy and intrauterine devices. Higher-risk disease should be considered for simple hysterectomy and bilateral salpingo-oophorectomy with adjuvant therapy.
- Cervical cancer operable cases (Ib1, IB2 and IIA1) will be decided on a case by case basis
- Ovarian cancer interval debulking will be preferred even for cases qualifying for primary debulking in the immediate period to give way for other cases that have no alternate approach to delay surgical intervention.

Palliative care services: Palliative care services are based at the cancer centre. Hospice- and home-based care are currently not well developed. The strengthening of the referral and communication systems being established during this crisis may present an opportunity to expand the service and build the necessary human resource capacity for it.

Vasquez et al. Early impact of the COVID-19 pandemic on paediatric cancer care in Latin America. The Lancet Oncology. DOI: 10.1016/S1470-2045(20)30280-1

Country context: Latin America

To examine the potential impact of COVID-19 on the management of children with cancer in Latin America, the authors conducted a cross-sectional survey of paediatric onco-haematologists in April 2020, early in the spread of the outbreak in the region. The survey was electronically distributed through the Latin American Society of Pediatric Oncology (SLAOP) email list and through regional partners. Additionally, SLAOP's national delegates for each country contacted their centres for an increased response and reviewed the responses from their countries for validation before analysis. A total of 453 paediatric onco-haematologists (267 faculty members, 142 medical directors, and 44 residents from public and private institutions) from 20 countries were surveyed. Most participants reported that chemotherapy was administered for newly diagnosed (429 [95%]) and active ongoing (441 [97%]) treatment cases. However, indefinite postponement or delay of surveillance consultations (405 [89%]), outpatient procedures (264 [58%]), cancer surgeries (206 [45%]), radiotherapy schedules (122 [33%]), outpatient consultations (119 [26%]), stem-cell transplantation (173 [73%]) and palliative care (87 [19%]) were reported. In 36% of cases, modification of chemotherapy regimens was required because of shortage of drugs.

Lee et al. COVID-19 mortality in patients with cancer on chemotherapy or other anticancer treatments: a prospective cohort study. Lancet. DOI:https://doi.org/10.1016/S0140-6736(20)31173-9

Country context: UK

This research article describes the clinical and demographic characteristics and COVID-19 outcomes in patients with cancer from a prospective cohort study. From March 18, to April 26, 2020, 800 patients with a diagnosis of cancer and symptomatic COVID-19 were followed up in the study. Of these patients, 412 (52%) had a mild COVID-19 disease course, while 226 (28%) died. Mortality from COVID-19 in cancer patients appears to be principally driven by age, gender, and comorbidities. The study was unable to find evidence that cancer patients on cytotoxic chemotherapy or other anticancer treatments are at an increased risk of mortality from COVID-19 disease compared with those not on active treatment. Other findings are as presented in the table below:

	All patients (n=800)	Patients who died (n=226)	Patients who survived (n=574)
Sex			
Male	449 (56%)	146 (65%)	303 (53%)
Female	349 (44%)	80 (35%)	269 (47%)
Other*	2 (0%)	0 (0%)	2 (0%)
Age, years	69 (59–76)	73 (66–80)	66 (57–74)
Comorbidities			
Cardiovascular disease	109 (14%)	48 (21%)	61 (11%)
Chronic obstructive pulmonary disease	61 (8%)	24 (11%)	37 (6%)
Diabetes	131 (16%)	46 (20%)	85 (15%)
Hypertension	247 (31%)	92 (41%)	155 (27%)
None	169 (21%)	27 (12%)	142 (25%)
Other†	336 (42%)	108 (48%)	228 (40%)
No information	123 (15%)	28 (12%)	95 (17%)
Cancer type			
Lip, oral cavity, and pharynx	27 (3%)	4 (2%)	23 (4%)
Digestive organs	150 (19%)	42 (19%)	108 (19%)
Respiratory and intrathoracic organs	90 (11%)	32 (14%)	58 (10%)
Melanoma (skin)	27 (3%)	4 (2%)	23 (4%)
Breast	102 (13%)	18 (8%)	84 (15%)
Female genital organs	45 (6%)	5 (2%)	40 (7%)
Male genital organs	78 (10%)	30 (13%)	48 (8%)
Urinary tract	50 (6%)	16 (7%)	34 (6%)
Central nervous system	15 (2%)	3 (1%)	12 (2%)
Lymphoma	60 (8%)	20 (9%)	40 (7%)
Other haematological	109 (14%)	40 (18%)	69 (12%)
Other or unspecified‡	47 (6%)	12 (5%)	35 (6%)
Cancer stage			
Primary tumour localised	149 (19%)	40 (18%)	109 (19%)
Primary tumour locally advanced	78 (10%)	14 (6%)	64 (11%)
Metastatic	347 (43%)	103 (46%)	244 (43%)
Remission	21 (3%)	3 (1%)	18 (3%)
No information	205 (25%)	66 (29%)	139 (24%)

	All patients (n=800)	Patients who died (n=226)	Patients who survived (n=574)
(Continued from previous column)			
Cancer treatment within 4 weeks of COVID-19 diagnosis			
Chemotherapy	281 (35%)	75 (33%)	206 (36%)
Hormone therapy	64 (8%)	21 (9%)	43 (7%)
Immunotherapy	44 (6%)	10 (4%)	34 (6%)
Radiotherapy	76 (10%)	18 (8%)	58 (10%)
Surgery	29 (4%)	7 (3%)	22 (4%)
Targeted treatment	72 (9%)	16 (7%)	56 (10%)
Other§	60 (8%)	13 (6%)	47 (8%)
None	272 (34%)	92 (41%)	180 (31%)
No information	10 (1%)	1 (0%)	9 (2%)
COVID-19 severity category			
Mild	412 (52%)	22 (10%)	390 (68%)
Severe	187 (23%)	59 (26%)	128 (22%)
Critical	173 (22%)	140 (62%)	33 (6%)
No information	28 (3%)	5 (2%)	23 (4%)
COVID-19 treatment			
Intensive therapy unit	53 (7%)	23 (10%)	30 (5%)

Data are n (%), or median (IQR). UKCCMP=UK Coronavirus Cancer Monitoring Project. ICD10=International Classification of Diseases. *Includes patients who do not identify as either male or female. †Includes comorbidities that were not listed in the table. ‡Includes ICD10 cancer types including malignant neoplasia of the bone and articular tissue, endocrine glands, mesothelioma and soft tissue, and any other tumour type that was not included in the table. §Includes cancer treatments that did not fall into the cancer treatment types defined in the table.

Table 1: Clinical features of patients in the UKCCMP registry

Patients were assessed by the local teams and review of their medical history as to whether they had received chemotherapy (which did not include treatment with denosumab), immunotherapy, hormonal therapies, or radiotherapy within 4 weeks of contraction of COVID-19. Non-palliative chemotherapy was defined as chemotherapy that was used in a neoadjuvant, adjuvant, or radical setting. Outcomes were monitored until April 26, 2020.

Christopher Fosker. COVID-19 and cancer care in Bermuda. The Lancet Oncology. DOI:10.1016/S1470-2045(20)30272-2.

Country Context: Bermuda

In this perspective article, the author shares his experiences as the sole radiation oncologist in the small island country at the time of the COVID-19 pandemic. Some of the notable experiences shared were the decisions to suspend routine screening mammography even before the country's first confirmed case of COVID-19 and the freeing up of physical space by relocating the entire oncology outpatient clinic and chemotherapy suite to another location. Also shared are the measures and actions taken by the health system and medical community in Bermuda, in response to the situation.

Mauri et al. Summary of international recommendations in 23 languages for patients with cancer during the COVID-19 pandemic. The Lancet Oncology. DOI: https://doi.org/10.1016/S1470-2045(20)30278-3

Country context: Global

The authors share their establishment of an international scientific panel with the aim of reviewing available guidelines from 63 oncology societies and provide summarised comprehensive recommendations for patients with cancer in multiple languages. As most patients worldwide do not speak English, the language of guidance delivery is a major barrier to the dissemination of recommendations in different countries. To address this barrier, the authors have translated the summary of the comprehensive recommendations into 22 different languages (Arabic, Bulgarian, Catalan, Chinese, Croatian, Czech, Dutch, English, French, German, Greek, Hungarian, Italian, Japanese, Norwegian, Polish, Portuguese, Romanian, Serbian, Slovenian, Spanish, and Swedish). The translations are published elswewhere.

Nakayama et al. Adjusting to the new reality: Evaluation of early practice pattern adaptations to the COVID-19 pandemic. Gynecologic Oncology. DOI: 10.1016/j.ygyno.2020.05.028

Country context: US

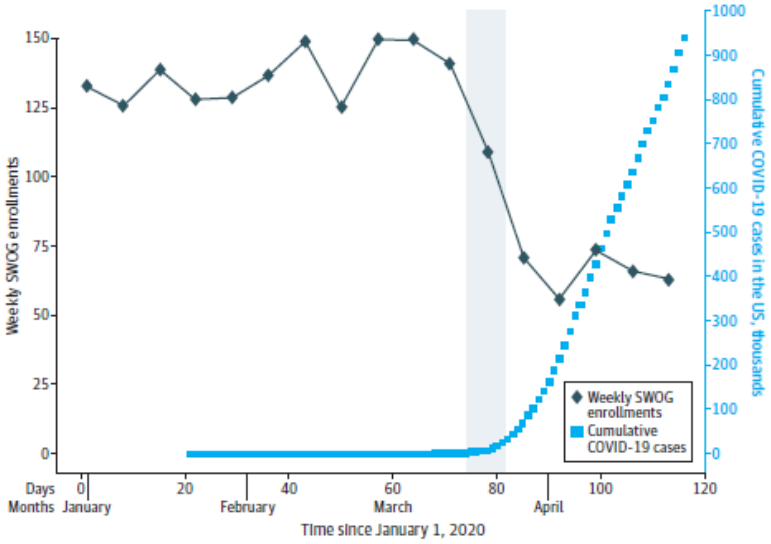
This paper reports the findings of a study that aimed to define national gynaecological oncology practice patterns by assessing current clinical practice, anticipated delays and areas of concern that potentially could lead to deviations from the normal standard of care. Anonymous surveys were emailed to 331 gynecologic oncology providers. The spread of COVID-19 and its impact on gynecologic oncology care in terms of alterations to normal treatment patterns and anticipated challenges were assessed. COVID-19 was present in 99.1% of surveyed communities with 99.7% reporting mitigation efforts in effect. Practice volume dropped by 61.6% since the start of the pandemic with most cancellations being provider initiated. A majority of responders (52.8%) believed that ovarian cancer will be the most affected cancer by COVID-19. Most (94%) of the gynecologic oncology care providers are proceeding with gynecologic cancer surgeries with exception of grade 1, endometrioid endometrial adenocarcinoma. Surgical backlog (58.6%), delayed cancer diagnosis (43.2%) and re-establishing normal care with delayed patient (37.8%) were identified as the top 3 challenges after COVID-19 has abated.

Unger et al. Association of the Coronavirus Disease 2019 (COVID-19) Outbreak With Enrollment in Cancer Clinical Trials. JAMA Network Open. DOI: 10.1001/jamanetworkopen.2020.10651

Country context: US

To answer the important question of how the COVID-19 pandemic is affecting the enrollment of patients and research participants in cancer clinical trials, these authors conducted a cohort study to examine initial enrollments in studies conducted by the SWOG Cancer Research Network, a National Cancer Institute–sponsored National Clinical Trials Network group. Weekly total enrolments ranged from 125 perweek to 150 perweek fromweek 1 (January 1-4) throughweek 11 (March 8-14), with a mean enrollment of 137. Beginning in week 12 (March 15-21), enrollment declined to 109; concurrently, the cumulative COVID-19 cases increased from 2918 to 25697. From week 13 (March 22-28) until the end of the study period, weekly enrolments did not exceed 74 patients, as cumulative COVID-19 cases neared 1 million. In total, 1870 patients were enrolled (1431 [76.5%] during weeks 1-11 and 439 [23.5%] during weeks 12-17). The figure below highlights the weekly enrollment trends in the study period:

Figure. Enrollment to National Cancer Institute–Sponsored Trials vs Coronavirus Disease 2019 (COVID-19) Incidence



The first case of COVID-19 in the US was detected on January 21, 2020. For presentation and estimation purposes, the weekly total for the partial week January 1 to 4 was estimated as the mean daily rate for January 2 to 4 multiplied by 7. The vertical gray bar indicates week 12, when COVID-19 cases in the US increased nearly 10-fold.

News and Sites:

Consolata Kirigia. Cervical cancer screening during the COVID-19 Crisis: Africa view point. Ecancer News. 12 May 2020.

Country context: Africa

While the COVID-19 crisis continues to cause unprecedented health and economic burden, this news article outlines the various ways in which the pandemic is constraining cervical cancer screening in African countries. It provides a guide on continued cervical cancer screening services considering local health policies in sub-Saharan Africa and other low resource contexts.

European Cancer Patient Coalition. Guidelines on COVID-19 for cancer patients.

Country context: Global

This page provides access to the multi-language summaries of COVID-19 related recommendations for cancer patients, developed by **Mauri et al.** as summarised earlier. It contains summaries of recommendations in 22 different languages (Arabic, Bulgarian, Catalan, Chinese, Croatian, Czech, Dutch, English, French, German, Greek, Hungarian, Italian, Japanese, Norwegian, Polish, Portuguese, Romanian, Serbian, Slovenian, Spanish, and Swedish). There are also plans to include translations in more languages.