Cancer in the context of COVID-19: Summary of emerging evidence (5)

Date: 21 April 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 fifth of our weekly compilation, which we plan to update and disseminate as the pandemic evolves globally and nationally.

This week, we highlight latest research related to oncology services in COVID-19 outbreak settings, some of which had been shared in the past week via the **CRI Twitter page (@UctCri)**. 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 settings and will profile these as they become available. Previous weeks' editions can be found on the **CRI website**.

Al-Shamsi et al. A Practical Approach to the Management of Cancer Patients During the Novel Coronavirus Disease 2019 (COVID-19) Pandemic: An International Collaborative Group. Oncologist. 2020 Apr. doi: 10.1634/theoncologist.2020-0213.

Country context: Global

In this review, the potential challenges associated with managing cancer patients during the COVID-19 infection pandemic are discussed. It suggests practical approaches to addressing these challenges, as summarized below:

Recognising that cancer patients are a high-risk population: Accumulating evidence suggests that cancer patients are at higher risk of COVID-19 infection and more likely to have higher morbidity and mortality than the general population.

Resource allocation during the pandemic: A primary challenge when planning for a pandemic is human resource management. Strong leadership with clear chains of command within oncology and hematology teams nationally and locally will be needed to ensure timely and proportionate implementation of contingency plans that balance risks and protect patients and health care workers (HCWs) as infections rise. In preparation for increased care and resource utilization during the COVID-19 pandemic, strategies should be implemented to minimize interruption of cancer treatment, particularly in patients being treated with curative intent.

Challenges of cancer diagnosis during a pandemic: The diagnosis and timely treatment of cancer patients should not be compromised during an infectious disease pandemic; however, the management of such patients should be tailored to the best available resources.

Cancer patients in the outpatient setting: While outpatient visits for cancer patients should be reduced to the safest level without jeopardizing patient care, several measures may help reduce transmissions in outpatient settings. Clear communication and education about hand hygiene, infection control measures, the signs and symptoms of the COVID-19, high-risk travel or exposure, and the importance of reporting new symptoms to their HCWs should be reinforced. Clinic attendance should be limited to the patient and one visitor (or no visitors). Entry/exit points should be reduced, with signage and personnel at these ports to facilitate communication and policy adherence. Suggested steps to reduce the risk of exposure include a call to the patient the day before their scheduled appointment to screen for any recent travel and contact history, as well as symptoms associated with COVID-19. On the basis of this assessment, the patient may be directed to an acute care health care facility or dedicated COVID-19 assessment center. Universal precautions remain essential. The chemotherapy infusion unit should function at usual capacity to avoid cancer treatment delays. Patients on active outpatient anticancer therapy can be categorized into oral or intravenous therapy, and consideration for switching intravenous chemotherapy to acceptable alternative oral anticancer drugs may be considered on a case-bycase basis.

Hospitalized patients with cancer: There should be strict and safe triaging procedures to assess any COVID-19 symptoms, as well as the urgency and necessity of hospitalization, at entry points, especially in emergency rooms. Restrictions on hospital-based ambulatory care, nonurgent hospital utilization, and hospital transfers may be a safe public health strategy to control an infectious epidemic and provide hospital surge capacity for up to several months during an epidemic. Patients with suspected COVID-19 infection should be admitted first to an isolation room, as per standard infection control protocol, as a precaution in case they test positive for SARS-CoV-2 infection.

Active anticancer therapy for cancer patients with infection or at risk of infection: During a pandemic, the potential for benefit with chemotherapy would be unchanged, but the risk of harm would be increased to a degree that cannot be readily quantified. During a pandemic, the consent process may change because the risk and benefit ratio may alter. For example, cancer patients need to know that anticancer therapy could carry greater risk during a pandemic. In addition, access to hospital beds will be limited both by increased demand and by potential staff shortage. In this circumstance, patients may well make an informed choice for a potentially less efficacious but less myelosuppressive treatment. Additionally, the risk of surgery may carry the risk of nosocomial infection with the pandemic pathogen. Delaying curative adjuvant chemotherapy can be considered within the accepted duration for each disease site (e.g., adjuvant chemotherapy for stage III colorectal cancer can be safely delayed up to 8 weeks, but more than 12 weeks of delay is not recommended).

Special consideration: patients with lung cancer: Patients with lung cancer usually have compromised lung function with associated dyspnea, cough, and polypnea. They might be at higher risk of severe forms of COVID-19 infection due to decreased pulmonary function. Whenever possible, patients with advanced NSCLC should be treated as outpatients at the nearest medical center during the COVID-19 pandemic. Patients who need to be hospitalized should be screened for COVID-19. Clinicians should remain vigilant not to miss alternative or co-infecting respiratory infections. In addition, pulmonary adverse reactions caused by anticancer treatment (e.g., drug- or radiationinduced pneumonitis) should also be sought in

the right clinical setting. Lastly, other potential causes for the respiratory deterioration of NSCLC patients, which could mimic COVID-19 symptoms, must be considered; these may include obstructive pneumonia, pleural or pericardial effusion, pulmonary embolism, and heart failure; therefore, rapid access to SARS-CoV-2 assays is of utmost importance.

Special consideration: hemapoetic cell transplant recipients: Hematopoietic cell transplant (HCT) recipients are at increased risk of various infections, including viral infections due to the underlying disease and immunosuppression. Respiratory viral infections (RVI) are prevalent in both the pre- and the post-engraftment periods. Initial evaluation of patients with underlying hematological malignancies and/or undergoing HCT includes full clinical history and examination along with chest x-ray and computerized tomography (CT) scan of the chest [60]. Laboratory evaluation for respiratory viruses is essential to document active infection (i.e., nasopharyngeal aspirate, nasal and/or throat swabs. Plans for rationing medical care need to take the vulnerability of the blood transfusion system into account. Some of the measures that may be used to support transfusion services during a pandemic include conducting blood drives with acceptable donors one at a time and encouraging HCWs to donate in their workplace. On March 19, 2020, the FDA issued a statement encouraging the community to donate blood, as the number of blood donations was dramatically reduced.

Psychological aspect of patients with cancer during a pandemic: Social distancing measures, quarantine, and visitor limitations will limit opportunities for family support and advocacy, affecting an important sense of connection and source of strength and well-being for cancer patients. It is important to recognize the increased level of distress that cancer patients and their families might face during this time, over and above the distress already experienced in relation to their diagnosis and treatment.

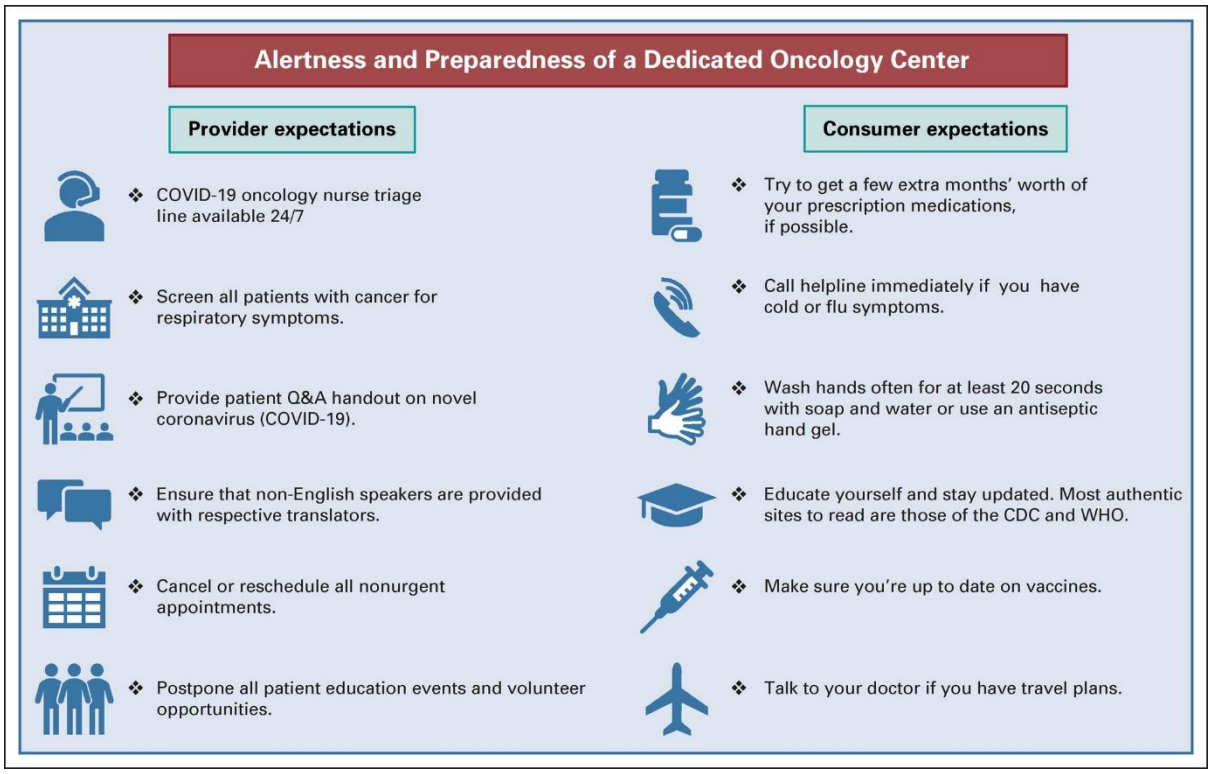
Impact of the pandemic on cancer research: Clinical and basic cancer research is likely to be severely affected by a pandemic. There will most likely be a decrease in trial initiations and accruals, and the pace of progress will slowed. there is a need to carefully reconsider the clinical cancer research processes and procedures that contribute to data integrity and patient safety versus tasks that might ultimately detract from cancer research goals. Further research is needed in this area to address these issues.

Health care workers in oncology during the pandemic: The spread of COVID-19 disease can be rapid and may overwhelm primary and acute care facilities. This may be compounded by COVID-19 infection of medical personnel, quarantine requirements, and school closures, all of which may affect staffing levels and increase stress of the HCWs. Clinicians and other support staff may need to work flexibly to facilitate safe service provision in alternative settings. Social distancing and separation of clinic work spaces are important steps to reduce the risk of infection. If staff are required to self-isolate due to contact with a confirmed case of coronavirus, consider ways they can continue to provide care and/or support multidisciplinary tumor boards (e.g., virtual attendance at meetings; telephone or video consultations, especially follow-ups; identifying vulnerable patients and making contact to discuss changes to care and treatment; identifying patients suitable for remote monitoring/follow-up; and data entry (where remote access enabled).

Sahu et al. Managing COVID-19 in Patients With Cancer: A Double Blow for Oncologists. JCO Global Oncology 2020 : 2020 Apr 17;OP2000167. doi: 10.1200/OP.20.00167

Country Context: Global

This article reviews the impact of the COVID-19 pandemic on the managegment of cancer patients. It discourses an integrated approach for alertness and preparedness, summazrised in the figure below:



Qadan et al. A Multidisciplinary Team Approach for Triage of Elective Cancer Surgery at the Massachusetts General Hospital During the Novel Coronavirus COVID-19 Outbreak. Ann Surg. 2020 Apr 13. doi: 10.1097/SLA.0000000000003963.

Country context: USA

This report outlines the authors' multidisciplinary approach to the management of gastrointestinal (GI) and hepatopancreatobiliary (HPB) cancers at the Massachusetts General Hospital (MGH). In the hope of providing a reproducible framework based on their early experience, the authors are using this approach to aid decision-making for patients. The key elements of their approach are as follows:

- All GI oncology patients for whom a surgeon proposes an operation in the next seven to ten days are submitted for a two-hour multidisciplinary midweek video conference.
- In attendance at the virtual conference are medical oncologists, radiation oncologists, surgeons, gastroenterologists, interventional radiologists, and other providers (e.g. residents, nurse practitioners, ward managers, etc.) with a vested interest in presented cases.
- The conference is open to all hospital affiliates including regional satellite facilities.

- The individual surgeon leads the clinical discussion with a radiologist providing the review of images, which are projected across the virtual main platform screen.
- A thorough discussion of alternative therapies, consequences of delay of surgery, and resource utilization ensues.
- The conversation is moderated by a senior member of the multidisciplinary team.
- Finally, the chief of the department or section makes the final decision as to approval or denial of each case based on the consensus recommendation from the multidisciplinary panel.

In accordance with the MGH hospital guidelines that were devised based on the Massachusetts of Department of Public Health guidelines, current recommendations for proceeding with oncologic surgery include:

- Cancers in patients who have completed their neoadjuvant therapy and are in the window of resectability, and for whom non-operative temporizing maneuvers are not possible.
- Aggressive cancers that will grow significantly in two months for which other therapies cannot be used to temporize (e.g. triple-negative breast cancer).
- Second part of staged procedures in which the first stage has been completed (e.g. patient has an open wound awaiting reconstruction).
- Diagnostic procedure required to allow initiation of appropriate cancer therapy (e.g. diagnosis of lymphoma or diagnosis of metastatic cancer).
- Acute symptoms (e.g. GI bleeding, bowel obstruction, dysphagia and/or aspiration risk, airway encroachment) for which alternative therapy is not appropriate.

Spicer et al. Provision of Cancer Care During the COVID-19 Pandemic. Nat Rev Clin Oncol. 2020 Apr 15. doi: 10.1038/s41571-020-0370-6. Online ahead of print.

Country context: Global

This article reviews the rapidly evolving landscape of oncology services, organization and workforce in response to the coronavirus disease 2019 (COVID-19) pandemic. It notes that these changes, in addition to the desire to mitigate infection risk among patients, are having profound effects on other vital aspects of care, including the care of patients with cancer. It outlines some practical approaches to prioritizing both active anti-cancer treatment and palliative care.

Chen et al. How Should Health Systems Prepare for the Evolving COVID-19 Pandemic? Reflections From the Perspective of a Tertiary Cancer Center. Clinics (Sao Paulo). 2020 Apr 6;75:e1864. doi: 10.6061/clinics/2020/e1864. eCollection 2020

Country context: Brazil

This paper discusses issues to be considered as health systems systematize their responses to the COVID-19 pandemic, from the authors' perspectives and experience working in publically funded tertiary referral cancer center in Brazil. Notably, they recommend that before initiating systemic anticancer treatment, oncologists should weigh the evolving COVID-19 epidemic risk. Factors like disease severity, the potential benefit from treatment, drug schema immunosuppression potential, patient age, and comorbid conditions should be considered.

In the adjuvant or neoadjuvant scenarios, the pros and cons of every available treatment option should also be considered and communicated with the patients for shared decision-making.

El-Shakankery et al. Caring for Our Cancer Patients in the Wake of COVID-19. Br J Cancer. 2020 Apr 17. doi: 10.1038/s41416-020-0843-5

Country context: UK

This articles explores why cancer patients may be more susceptible to severe COVID-19 infection and complications, highlighting various interventions that may help to ensure continuity of care in this unique cohort. The authors share their approach, which they are implementing to ease the impact of this disease on their cancer patients. The approach is highlighted below:

1. Limit exposure
    - Virtual outpatient clinics.
    - Virtual assessments of any possible symptoms prior to scheduled chemotherapy, with delayed treatment for those patients who have possible COVID-19 symptoms.
    - Encouraging hand-washing and social distancing.
    - Restrict visiting on inpatient wards.
2. Rationalise treatments
    - Prioritise systemic anticancer therapy (SACT) to patient groups who will have most benefit, e.g., in the neoadjuvant and adjuvant 'curative' setting.
    - Consideration of treatment delays, especially in 'high risk' patients such as those with established cardiovascular comorbidities.
    - Prioritisation and rationalisation of surgeries based on urgency, symptoms and possibility of cure of cancer, also mindful of the need for subsequent post-operative critical care beds.
3. Limit morbidity
    - Consideration of increased use of prophylactic granulocyte-colony-stimulating factor alongside chemotherapy regimens to minimise neutropenic durations.
    - Early identification of infection with on-the-door triage/assessments in those with fevers and symptoms.
    - Delaying all treatments in COVID-positive or query patients, as this would enter an unknown field in which we do not fully understand the consequences.
    - Ensure that patients are fully vaccinated (especially against influenza) to help rule out differential diagnoses in patients with possible respiratory infections.
    - Provision of oncological support in decision-making for admitted COVID-19 cancer patients.

Sites:

St Jude Global. COVID-19 and childhood cancer resource library. April 2020

Country context: Global

This global COVID-19 observatory and resource site for childhood cancer is for health care professionals focused on paediatric cancers. It shares general information on COVID-19 and resources specific to the management of childhood cancer in COVID-19 oubreak contexts.

COVID-19 and Cancer Consortium (CCC). Resource page

Country context: USA

A consortium of over 80 cancer centers and other organizations who have come together to collect data about cancer patients who have been infected with COVID-19. Our intent is to rapidly collect and disseminate information about this especially vulnerable population.

European Society of Medical Oncology (ESMO). COVID-19 Resources.

Country context: Europe

ESMO offers compilation of resources to support its members and the oncology community to ensure the continuum of cancer care during the COVID-19 pandemic.

Rogel Cancer Centre. Oncology Language for the COVID-19 Pandemic. April 2020.

Country context: USA

This page provides oncologists and cancer care providers with a set of appropriate language and communication strategies for communicating changes in delivery of cancer care due to the pandemic of the novel coronavirus of 2019 (COVID-19). It contains 3 general evidence-based communication principles and suggestions for addressing specific issues related to the following aspects of cancer care: COVID-specific fears, screening, diagnostic workup, treatment, follow up and inpatient issues. The suggested language is not intended to be a verbatim script, and practitioners are encouraged to adapt the wording in the hopes it will help us all deal with patient concerns during this difficult time.