



Cancer in the context of COVID-19: Summary of emerging evidence (11)

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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 eleventh of our weekly compilation, which we plan to update and disseminate as the pandemic evolves globally and nationally.

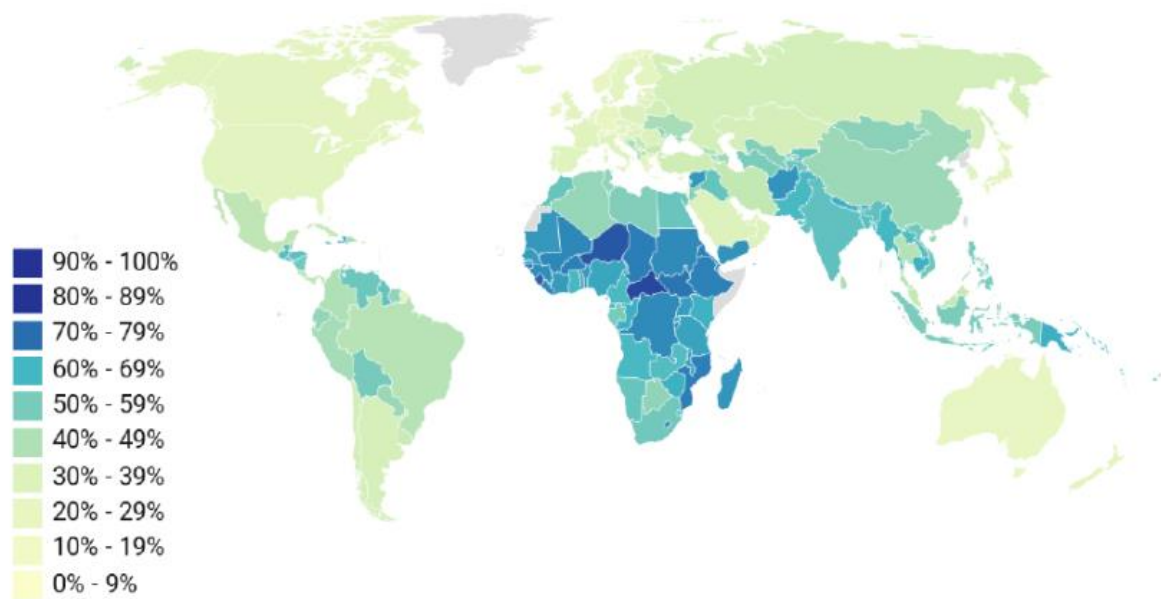
This week, we highlight the latest research and news related to oncology services in COVID-19 outbreak contexts globally, including news articles relating to the impacts of the pandemic within the South African context. We hope that insights from these pieces of evidence will help guide how we rethink 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 \(@UctCri\)](#).

COVIDSurg Collaborative. Elective surgery cancellations due to the COVID -19 pandemic: global predictive modelling to inform surgical recovery plans. BJS. DOI:10.1002/bjs.11746

Country Context: Global

This global expert-response study was conducted to model projections for the proportion of elective surgeries that would be cancelled or postponed during the 12 weeks of peak disruption. It estimated 12-week cancellation rates for 190 countries. Globally, the best estimate was that 28,404,603 operations would be cancelled or postponed during the peak 12 weeks of disruption due to the pandemic (about 2.4 million operations per week), representing an overall 12-week cancellation rate of 72.3%. These cancellations include 81.7% (25,638,921/31,378,062) of non-cancer surgeries, **37.7% (2,324,069/6,162,311) of cancer surgeries**, and 25.4% (441,611/1,735,483) of elective Caesarean sections. If countries increase their normal surgical volume by 20% post-pandemic, it would take a median 45 weeks to clear the backlog of operations resulting from COVID-19 disruption.

The figure below shows the global distribution of the proportions of cancelled surgeries:



Al-Shamsi et al. Screening for COVID-19 in Asymptomatic Patients With Cancer in a Hospital in the United Arab Emirates. JAMA Oncology. DOI: 10.1001/jamaoncol.2020.2548

Country context: UAE

In this editorial correspondence, the authors share findings from their implementation of universal COVID-19 screening of all asymptomatic patients with cancer prior to anticancer therapy at a hospital in Dubai, United Arab Emirates (UAE). Of the 85 asymptomatic patients with cancer who underwent screening, seven (8.2%) were diagnosed with COVID-19 by polymerase chain reaction (PCR) screening. Other findings are as presented in the table below:

Table. Demographic Characteristics and Clinical Outcomes of Patients Screened for COVID-19

Characteristic	No. (%)		
	Overall cohort (n = 85)	Asymptomatic with COVID-19 (n = 7)	Asymptomatic without COVID-19 (n = 78)
Age, median (range), y	55 (28-76)	51.6 (40-76)	56 (33-74)
Female	48 (56.5)	5 (71.4)	43 (55.1)
Cancer type			
Breast	25 (29.4)	2 (28.6)	23 (29.5)
Colorectal	22 (25.9)	2 (28.6)	20 (25.6)
Thyroid	10 (11.8)	0	10 (12.8)
Other	28 (32.9)	3 (42.9)	25 (32.1)
Outcomes			
Hospitalization	7 (8.2)	2 (28.6)	5 (6.4) ^a
ICU	2 (2.4)	2 (28.6)	0
Death	1 (1.2)	1 (14.3)	0
Anticancer therapy delay	15 (17.6)	7 (100)	8 (10.3) ^a

Abbreviation: COVID-19, coronavirus disease 2019; ICU, intensive care unit.

^a Not related to COVID-19.

Country context: Global

This report provides some suggestions for early identification of COVID-19 and differential diagnosis in patients with lung cancer who have fever and respiratory symptoms. It also provides clinical recommendations for individualized lung cancer management during the COVID-19 pandemic. The recommendations are highlighted below:

Scheduled elective surgery for patients with pulmonary nodules or early-stage lung cancer:

1. The date of the surgery can be delayed due to the COVID-19 pandemic, particularly in patients with ground-glass opacities (GGO) in the lung, as the short-term effects on the GGO lesions enlarging are insignificant. Physicians can maintain virtual communication and follow-up on patients.
2. In patients requiring admission for surgery in the foreseeable future or those who need to undergo confirmed procedures, patients are advised to undergo surgery at their local hospital to avoid the possibility of COVID-19 infection during the journey.
3. If patients who are scheduled for surgery develop fever, cough, productive cough, chest tightness, and shortness of breath, they should seek medical attention at the Fever Clinic. If the patient is asymptomatic but has an epidemiological history, he/she would be required to undergo home quarantine for 14 days before surgery.

Post-operative lung cancer patients:

Post-operative adjuvant chemotherapy can be performed at a local hospital to avoid traveling if their condition permits. If the tumor stage is graded as IIIa or IIIb based on postoperative pathological staging, with an epidermal growth factor receptor (*EGFR*) gene mutation or *ALK* rearrangement, oral targeted drug therapy can be considered as a postoperative adjuvant treatment to avoid chemotherapy-associated infection and repeated hospital consultations. Follow-up visits can be delayed if the patient's condition is stable.

Lung cancer patients receiving radiotherapy:

1. In the case of patients who have completed radiotherapy localization but have not started radiotherapy, the patient should stay in the city where the hospital for radiotherapy is located and should avoid traveling as much as possible. If an appointment has been made for treatment at an out-of-area hospital, the patient should arrive at that destination 14 days earlier and quarantine himself/herself at home.
2. In the case of patients receiving routine radiation therapy: monitor and record their temperature daily and report temperature to the physician, and pay attention to symptoms such as fever, cough, fatigue, runny nose, and diarrhea.
3. Adverse reaction monitoring and assessment during radiotherapy must be performed. The patient should be questioned regarding recent symptoms, which should be combined with laboratory tests for targeted treatment.

Lung cancer patients receiving targeted therapy:

1. Patients on oral targeted drug therapy in stable conditions should continue taking the prescribed therapeutic drug during the pandemic. If the condition is stable, the follow-up consultation and imaging assessment can be delayed based on the patient's

condition. To reduce the prescription frequency, a longer course of targeted therapeutic drugs can be prescribed according to the policies of the city.

2. If the patient develops a fever, cough, dyspnea, or other new symptoms, he/she should seek medical attention. If a patient with lung cancer develops worsening pain and headache but does not have a fever, cough, and dyspnea, he/she can obtain an appointment for a consultation at the specialist outpatient or emergency department.

Lung cancer patients receiving chemotherapy and/or immunotherapy:

1. Patients should regularly undergo chemotherapy and/or immunotherapy at the nearest hospital to avoid long distance traveling as much as possible. If patients cannot be admitted for treatment on time, the treatment interval can be extended, or the patient can be switched to oral drugs.
2. Adverse reaction monitoring and assessment during chemotherapy and/or immunotherapy (periodic routine blood tests, hepatic, and renal function tests, as well as electrocardiography) must be performed to assess safety.

Guidance on self-protection during the pandemic to patients and family members in medical institutions:

1. Self-protection for outpatients: consultation appointments should be made in advance, and the patient should report for the consultation according to the appointed time to avoid long waiting time at the hospital. The patient should use private transport if possible, and avoid public transport. Patients and their family members should wear masks appropriately during the entire process and avoid using masks with respiratory valves. Patients must undergo consultation in designated zones.
2. Self-protection during hospitalization: family visits should be avoided or reduced. If a companion is needed, he/she should be a fixed companion who must not exit the premises. During hospitalization, patients and their family members should wear surgical masks appropriately. They should also maintain good hand hygiene and reduce contact with other patients and their family members.

Sullivan et al. Caring. The COVID-19 Pandemic: A Rapid Global Response for Children With Cancer From SIOP, COG, SIOP-E, SIOP-PODC, IPSO, PROS, CCI, and St Jude Global. Paediatric Blood Cancer. DOI: 10.1002/pbc.28409.

Country Context: Global

This collaborative report summarizes the general principles for continuing multidisciplinary care during the COVID-19 pandemic. It seeks to provide a framework for healthcare teams caring for children with cancer during the pandemic, with focus on the six most curable cancers (acute lymphoblastic leukemia, Burkitt’s lymphoma, Hodgkin’s lymphoma, low-grade glioma, neuroblastoma and retinoblastoma) which are part of the WHO Global Initiative in Childhood Cancer. It offers specific recommendations for adapting diagnostic and treatment protocols for children with cancer during the pandemic. For instance, it recommends the following approaches for the provision of paediatric surgical oncology services:

SERVICE	GUIDANCE AND RECOMMENDATIONS
COVID-19 RELATED SURGICAL ISSUES	<ol style="list-style-type: none"> 1. Patients with COVID-19 may present more unwell 2. COVID-19 may present with abdominal pain, mesenteric adenitis or diarrhoea leading to delayed diagnosis of acute abdomen/peritonitis

	<ol style="list-style-type: none"> 3. Delayed presentation to hospital surgical services with acute surgical problems (acute abdomen) may be delayed due social isolation, hospital capacity issues or family reluctance to present acutely to hospital
CLINICAL SERVICE PRIORITIES	<ol style="list-style-type: none"> 1. Non-urgent in-person clinic/office visits should be minimized, postponed, or offered via tele/videoconferencing when available 2. Only one person stays with the child throughout the period needed for treatment – as per institutional policy 3. Review frequency of catheter flushing to q3 monthly
PRE and PERI-OPERATIVE MANAGEMENT	<ol style="list-style-type: none"> 1. If readily available and practical, surgical patients should be <i>tested pre-operatively for COVID-19</i> for staff safety, intraoperative and postoperative care and possible complications. 2. If testing is not available, consider the patient COVID-19 positive for the procedure. 3. Anaesthesia for cross sectional imaging (CT/MRI) should avoid intubation, if possible. 4. Performing aerosol-generating procedures in negative pressure rooms, if available.
GENERAL OPERATIVE GUIDANCE	<ol style="list-style-type: none"> 1. Airborne precaution PPE including whether a PAPR or P2 / N95 mask and face shield with impervious gown 2. Performing endotracheal intubation on patients with COVID-19 or suspected COVID-19 we suggest using video-guided laryngoscopy, over direct laryngoscopy, if available; (low quality evidence). 3. Designated COVID-19 operating rooms, if feasible 4. Only essential staff should be participating in the surgical case with minimal staff change over. 5. Clear briefing as to adequate PPE during the pre-surgical briefing and checking availability prior to surgery as recommended by national or international organizations including the WHO or CDC 6. Clear donning and doffing areas and procedures as recommended by national or international organizations including the WHO or CDC . 7. If available, monopolar diathermy pencils with attached smoke evacuators should be used. 8. Surgical equipment used during procedures with COVID-19 positive suspected COVID patients should be cleaned separately from other surgical equipment. 9. The operating room to remain closed for 30 minutes for air exchange after the patient leaves the room.
POST OPERATIVE CARE	<ol style="list-style-type: none"> 1. Aerosol-generating procedures should occur in negative pressure rooms with adequate PPE . 2. Post-operative activities considered aerosol-generating include high flow oxygen, CPAP , suctioning and respiratory physiotherapy to clear secretions
MINIMALLY INVASIVE PROCEDURES (MIS)	<ol style="list-style-type: none"> 1. Small incisions for ports to allow for the passage of ports but not allow for leakage around ports. 2. CO2 insufflation pressure kept to a minimum and ultra-filtration (smoke evacuation system or filtration) should be used, if available. 3. Safe evacuation of all pneumoperitoneum via a filtration system before closure, trocar removal, specimen extraction or conversion to open.
DISEASE SPECIFIC RECOMMENDATIONS	<ol style="list-style-type: none"> 1. Vascular Access: Vascular access should still be offered where feasible, if not, PICC lines or peripheral IV access may be considered. Removal of vascular access may be delayed where this poses minimal risk to the patient. 2. Surgical biopsy: Avoid any delays for surgical tumour biopsy where indicated, to establish a safe and reliable diagnosis especially if interventional biopsies unavailable. 3. Wilms Tumour: delay nephrectomy or elect for start pre-operative chemotherapy without biopsy if clinical presentation for Wilms; Prolong pre-op

	<p>chemotherapy up to a maximum 8 weeks for localized tumours and up to 12 weeks for bilateral.</p> <ol style="list-style-type: none"> 4. Lymphoma: Urgent surgery indicated for diagnosis and surgery is urgent for diagnosis and complications. 5. Bone and Soft Tissue Sarcoma: Plan local therapy as per standard of care. Where chemotherapy sensitive and responding to pre-operative chemotherapy safe to delay until surgery safe and possible. For relatively chemotherapy insensitive tumours (osteosarcoma) and soft tissue sarcomas, proceed to surgery where possible according to standard of care protocol. 6. Surgery for palliative care: maintain non-invasive supportive approach, but operate if surgically urgent and clinically indicated.
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Cinar et al. Oncology Care Delivery in the COVID-19 Pandemic: An Opportunity to Study Innovations and Outcomes. JCO Oncology. DOI: 10.1200/OP.20.00326

Country context: Global

Given the mounting challenges related to the COVID-19 pandemic that oncology professionals face and the need to triage care while minimizing the risks to patients, their caregivers and health care workers; this editorial explores the various ways through which clinicians and practices are responding to these challenges. Among other considerations, it specifically stresses the importance of seeing the situation as an opportunity to experiment and study innovations and outcomes in oncology care delivery in times of crises.

Greene FL. COVID-19 Data and the Cancer Patient: A Need for Registry Inclusion. Annals of Surgical Oncology. Doi: 10.1245/s10434-020-08554-y

Country context: Global

This articles makes a case for the inclusion of COVID-19 data-points in cancer registries. It calls for the introduction of a registry coding structure that can effectively collect data on all current and future cancer patients with COVID-19. It believes that such coding and data collection will be vital for identifying coronavirus-infected patients with a malignancy in order to capture data dealing with their comorbidities, tumour staging, recurrence, and overall survival, as well as treatment delays and other important sequelae occurring during the pandemic.

Kourie et al. The Future of Cancer Research After COVID-19 Pandemic: Recession? Future Oncology. DOI: 10.2217/fon-2020-0397

Country context: Global

This editorial reviews the impact of the COVID-19 pandemic on cancer research and its likely consequences in the future. It projects that the amount of cancer research, publications and new clinical trials will most probably decrease in the short- and long-term due to the pandemic. It urges cancer researchers to mitigate these impending consequences by combining their efforts to establish a clear road map to ensure a smooth and effective revival of cancer research immediately after the lockdown and movement restrictions have been eased.

News and Sites:

[City Press. 146 000 elective surgeries in SA could be cancelled due to COVID-19. News. 15 May 2020.](#)

Country context: South Africa

This news report analyses the findings of the [CovidSurg Collaborative modelling study](#) summarized earlier. It focuses on country-level projections of the study for South Africa, which indicate that more than 146 000 operations will be cancelled, including **12 000 cancer procedures** during the 12-week period of peak disruption of healthcare services due to the COVID-19 pandemic. The CovidSurg Collaborative is a research network of over 5 000 surgeons from 120 countries. Notably, this global study was led by CovidSurg collaborators from the University of Birmingham, UK and the University of Cape Town, South Africa.

[Buccimazza I and Edge J. How Covid-19 is impacting on cancer care in SA. Daily Maverick. 01 May 2020.](#)

Country context: South Africa

In this opinion piece, Drs Ines Buccimazza and Jenny Edge discuss the impact of the COVID-19 pandemic on oncology services in South Africa. They review current global evidence, consensus-based clinical guidelines and recommendations for managing cancer patients during the disruptions, while contextualizing their practicality and outcome implications within the South African context.