



## Cancer in the context of COVID-19: Summary of emerging evidence (6)

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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 sixth 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](#).

[Curigliano et al. Recommendations for Triage, Prioritization and Treatment of Breast Cancer Patients During the COVID-19 Pandemic. \*Breast\*. 2020 Apr 16;52:8-16. doi: 10.1016/j.breast.2020.04.006.](#)

**Country context:** Global

The paper provides guidance for preparing for the impact of the COVID-19 pandemic on breast cancer patients and advise on how to triage, prioritize and organize diagnostic procedures, surgical, radiation and medical treatments.

**Proposed risk stratifications:**

- I. Breast cancer patients recently suspected or recently diagnosed.
- II. Breast cancer patients on active treatment (i.e. chemotherapy, immunotherapy, anti-HER2 therapy, endocrine therapy with or without targeted therapies)
- III. Breast cancer patients in follow-up (non-active treatment) or on adjuvant endocrine therapy alone

**General recommendations:**

- Patients should be informed and guided to follow all measures of social distancing and wearing personal protective equipment (i.e. mask) when travelling to the hospital, always in compliance with each country public health regulations.
- Early identification of symptoms suspicious of SARS-CoV-2 infection is crucial, as well as of symptoms or adverse events caused by the malignancy or antitumor treatments. This prescreening can be done by phone before each appointment at the hospital and/or at the entry of the hospital. Body temperature should be measured at the entry

of the hospital. Patients with symptoms suspicious of SARS-CoV-2 infection, should be tested and managed in a COVID-19 hospital or in the COVID-19- dedicated departments/areas of the cancer center.

- Patients who need to be hospitalized for cancer treatment should be treated in COVID-19-free hospitals or COVID-19-free departments/areas of the hospital and be, as much as possible, shielded from potential SARS-CoV-2 infection, with a dedicated diagnostic and therapeutic internal pathway.
- No visits should be allowed in the inpatient facilities and no accompanying care giver should enter the hospital with the patient for appointments or treatments.
- Staff should be organized by shifts, limiting the number of people working simultaneously to the minimum required.
- The multidisciplinary tumour boards (MDM) should be continued but performed via web meetings or restricted to one element of each discipline of the core team. All decisions of the MDM should continue to be discussed with the patient and the final decision must account for the patients' preferences.
- Due to different availability of tests and different public health measures taken in each country, we recommend that testing guidelines of the national health authorities are followed. If tests are available, patients should be tested for SARS-CoV-2 before surgery or any invasive procedure and before initiating immunosuppressive therapies, independently of symptoms. If positive, the procedure and/or treatment should be postponed and resumed only after the patient is considered recovered. However, it is important to realize that even with this approach, some cases will be missed in view of the false negative rate of the PCR test on pharyngeal swabs.

The following scenarios describe the progression of COVID-19 outbreaks (based on European Centre for Disease Prevention and Control definitions):

**Scenario 1:** Multiple introductions and limited local transmission in the country (only second generation cases observed or transmission within sporadic contained clusters with known epidemiological links)

**Scenario 2:** Increasing number of introductions and of more widespread reports of localised human-to-human transmission in the country (more than two generations of cases outside of sporadic clusters with known epidemiological links)

**Scenario 3:** Localised outbreaks, which start to merge becoming indistinct, with sustained human-to-human transmission (more than two generations of cases outside of sporadic clusters with known epidemiological links) and an increasing pressure on healthcare systems.

**Scenario 4:** Widespread sustained transmission where healthcare systems are overburdened due to a large demand for emergency healthcare services, a strained ICU capacity, overworked healthcare workers and reduced staff availability due to illness, lack of PPE and lack of diagnostic testing capacity.

## Screening and diagnosis:

Prioritization of outpatient, screening and diagnostic visits for patients with breast cancer.

Modality	Pandemic Scenario	Urgent	High Priority	Medium Priority	Low Priority	
Outpatient visits  Replace as much as possible by telemedicine (phone/video)	Scenario 1 and 2	Infection	Post-operative visits for complications	Follow-up visits of mutation carriers	Follow-up visits: low risk patients	
		Haematoma if acute or progressive	Patients on treatment with symptoms	Follow-up visits of high-risk patients	Benign and low risk lesions	
		Newly diagnosed invasive cancer	Established patients with new problems New diagnostic of invasive cancer	Psychological support visits		
	Scenario 3 and 4	Infection and haematoma if acute or progressive	None		Post-operative visits for complications	Newly diagnosed non-invasive cancer
					Patients on treatment with symptoms	Follow-up visits of mutation carriers
					Established patients with new problems	Follow-up visits of high-risk patients Psychological support visits
Diagnostics and Screening	Scenario 1 and 2	None	Diagnostic imaging BIRADS 4b,c and 5 Signs or symptoms that are suspicious of recurrence	None	Routine screening deferred	
					Screening of mutation carriers	
	Scenario 3 and 4	None	None	Diagnostic imaging BIRADS 4b,c and 5 Signs or symptoms that are suspicious of recurrence Newly diagnosed non-invasive cancer	Routine screening suspended	
					Screening of mutation carriers	

## Primary systemic treatment:

Under normal circumstances, primary systemic therapy (PST) is increasingly used and preferred over upfront surgery, not only for locally advanced disease but also in the EBC setting, both within and outside clinical trials. This is due to the established benefits of this approach in terms of surgical de-escalation and more recently to optimize further adjuvant treatments. PST includes both neoadjuvant/primary chemotherapy ± anti-HER2 therapy (NAC) and neo-adjuvant/primary endocrine therapy (PET).

## Surgery in breast cancer patients:

Prioritization of surgery in patients with breast cancer.

Modality	Pandemic Scenario	Urgent	High Priority	Medium Priority	Low Priority	
Surgery  Replace as much as possible by telemedicine (phone/video)	Scenario 1 and 2	Incision and drainage of abscesses and haematomas  LABC not responding to PST  Pregnant patients Complicated LABC not otherwise manageable	Early isolated loco-regional recurrence (within 48 months from primary treatment)  High risk patients with contra-indications to PST, younger than 40, or node positive or biologically aggressive  Patients treated with PST (ideally at a maximum 4-6 weeks after treatment completion)	Pre-menopausal patients stage I invasive DCIS high grade ER negative extensive or palpable	DCIS low and intermediate or small high grade	
					Post menopausal Luminal A like non LABC - endocrine therapy can be initiated	
	Scenario 3 and 4	Incision and drainage of abscesses and hematomas	LABC not responding to PST Pregnant patients Complicated LABC not otherwise manageable	Early isolated loco-regional recurrence (within 48 months from primary treatment)  High risk patients with contra-indications to PST, younger than 40, or node positive or biologically aggressive  Patients treated with PST (ideally at a maximum 4-6 weeks after treatment completion)	DCIS low and intermediate or small size high grade	DCIS low and intermediate or small size high grade
					Post menopausal Luminal A like non LABC - endocrine therapy can be initiated	Post menopausal Luminal A like non LABC - endocrine therapy can be initiated
					Pre-menopausal patients stage I invasive DCIS high grade ER negative extensive or palpable	Pre-menopausal patients stage I invasive DCIS high grade ER negative extensive or palpable

## Radiotherapy:

Prioritization of radiotherapy in patients with breast cancer.

Modality	Pandemic Scenario	Urgent	High Priority	Medium Priority	Low Priority	
Radiation therapy	Scenario 1 and 2	Continuation of already started treatments (consider shortening by hypofractionation)	Postoperative radiation therapy for high-risk patients Patients on treatment with symptoms	Postoperative radiation therapy for intermediate-risk patients Post-treatment visits for complications	Postoperative radiation therapy for low-risk patients	
		Palliative treatments not responding to pharmaceutical interventions Acute spinal cord compression without symptoms		Palliative treatments responding to pharmaceutical interventions (for example brain metastases) Follow-up visits of high-risk patients		
Replace as much as possible by telemedicine (phone/video)	Scenario 3 and 4	Acute spinal cord compression with symptoms	Continuation of already started treatments (consider shortening by hypofractionation)	Postoperative radiation therapy for high-risk patients	Postoperative radiation therapy for intermediate-risk patients	
			Palliative treatments not responding to pharmaceutical interventions	Patients on treatment with symptoms	Palliative treatments responding to pharmaceutical interventions (e.g. brain metastases)	
			Acute spinal cord compression without symptoms			Post-treatment visits for complications Follow-up visits of high-risk patients

Haar et al. Caring for patients with cancer in the COVID-19 era. *Nat Med* (2020). <https://doi.org/10.1038/s41591-020-0874-8>

### Country Context: Europe

This is a report of how the seven comprehensive cancer centers of Cancer Core Europe have organized their healthcare systems at an unprecedented scale and pace to make their operations ‘pandemic proof’. It identifies and discusses commonalities, as well as important local differences, and pinpoints critical research priorities to enable evidence-based remodelling of cancer care during the COVID-19 pandemic. It also discusses how the current situation offers a unique window of opportunity for assessing the effects of de-escalating anticancer regimens, which may fast-forward the development of more-refined and less-toxic treatments. The key recommendations are highlighted in the table below:

Category	Measure
Hospital wide	<p>Construct a hospital-wide crisis team responsible for coordinating measures between departments.</p> <p>Encourage patients not to arrive early. Offer to text patients when you are ready to see them, so they can wait outside or in the car.</p> <p>Instruct patients not to visit the hospital if they have symptoms indicative of possible COVID-19 (unless urgent attention is required).</p> <p>Call patients the day before planned hospital admissions, to discuss the presence of any COVID-19-related symptoms.</p> <p>Screen patients at the entrance for symptoms of COVID-19 and fever.</p> <p>Quickly isolate patients with COVID-19 in specialized departments, with the intent of relocation to regional collaborating hospitals (if possible).</p> <p>Reduce preclinical research activities to a bare minimum.</p>

Category	Measure
	<p>Stop patient inclusion for clinical studies or trials requiring additional actions and/or visits. Consider a tumor type-specific 'exception list' of particularly successful studies for which inclusion continues.</p> <p>Discuss each patient with a multidisciplinary team to consider alternative treatment modalities with the fewest visits or lowest capacity problems or that are the shortest in duration.</p> <p>Therapeutic adjustments (versus regular guidelines) should be discussed in a multidisciplinary team meeting.</p> <p>Conduct multidisciplinary team consultations remotely if possible or include only one representative of each discipline to limit the number of people participating in the meetings.</p> <p>Inform patients about a possibly increased risk associated with anticancer therapy during the COVID-19 pandemic.</p> <p>Enable telephone or video consultations for healthcare professionals who need to self-isolate.</p> <p>When postponing procedures or contact moments, anticipate future capacity problems.</p> <p>Do not prescribe corticosteroids as anti-emetics (if avoidable), and limit their use in patients treated with immune-checkpoint blockade, to reduce vulnerability to COVID-19.</p> <p>With each patient, discuss resuscitation status to anticipate future decisions about intensive care.</p>
Outpatient clinic	<p>Critically triage second opinions.</p> <p>Do all follow up appointments by phone (except when physical examination is necessary).</p> <p>When possible, reduce or delay the number of radiological-response evaluations.</p> <p>Prioritize oral or subcutaneous treatments above infusion-based treatments to reduce time spent in the hospital.</p> <p>Perform blood tests outside the hospital (e.g., at a general practice or at home), when possible.</p> <p>Have oral medications delivered to the patient's home, rather than being picked up at the pharmacy.</p>
Day care	<p>Consider omitting supportive treatments (e.g., no bisphosphonate infusion, except in the case of hypercalcemia).</p> <p>When possible, organize the administration of intravenous maintenance treatments at home.</p> <p>When administration at home is impossible, consider temporary breaks or reductions in the frequency of intravenous maintenance treatments for less-aggressive metastatic cancers on a per-patient basis.</p>
Radiotherapy	<p>Consider hypofractionated regimens for patients with limited additional benefit of regular regimens.</p> <p>Create capacity for radiation as replacement of surgery.</p>
Surgery	<p>Consider postponement of surgeries with high morbidity and mortality during the pandemic.</p> <p>Consider other treatment modalities with equal benefit (e.g., radiation for prostate cancer, curative chemoradiation for other tumor types, or brain irradiation for metastases).</p>
Other	<p>Consider outsourcing of interventions (e.g., follow-up endoscopies) to private clinics.</p>

**Tabrizi et al. A Quantitative Framework for Modeling COVID-19 Risk During Adjuvant Therapy Using Published Randomized Trials of Glioblastoma in the Elderly. *Neuro-Oncology*, noaa111, <https://doi.org/10.1093/neuonc/noaa111>**

**Country context:** Global

This modelling study re-analyzed clinical trials data in elderly glioblastoma (GBM) patients, incorporating COVID-19 risk. It used the data to simulate COVID-19 associated mortality risk in several scenarios (low, medium, and high infection and mortality risks) in order to provide a quantitative framework for comparing different radiation fractionation schedules on patient outcomes. Our simulations reveal how COVID-19-associated risks affect survival under different treatment regimens. Hypofractionated radiotherapy with concurrent and adjuvant temozolomide (TMZ) demonstrated the best outcomes in low and medium risk scenarios. In frail elderly patients, shorter courses of radiotherapy are preferable. In patients with methylated O6-methylguanine-DNA methyltransferase (MGMT) receiving single modality treatment, TMZ-alone treatment approaches may be an option in settings with high COVID-19-associated risk.

**Nekhlyudov et al. Addressing the Needs of Cancer Survivors During the COVID-19 Pandemic. *J Cancer Surviv*. 2020 Apr 25. doi: 10.1007/s11764-020-00884-w**

**Country context:** USA

This article explores the challenges cancer survivors face during the COVID-19 pandemic, while identifying their peculiar needs. It compiles a [list of resources that can be shared with oncology clinicians, patients and survivors](#). It also recommends strategies for delivering high-quality survivorship care to ease the impact of the pandemic on their cancer survivors.

**Benjamin Mazer. Will Coronavirus Restrictions Lead to More Advanced Cancers? *Medscape Oncology***

**Country context:** Global

In this commentary, the author narrates how the COVID-19 pandemic is adversely impacting oncology services, with the potential of worsening cancer patients' outcomes. Of note, the author explored how unexpected nationwide delay in screening will inform the debate on cancer overdiagnosis – seeing the current situation as one that may tell whether less intensive screening leads to more advanced cancers.

Wu et al. Considerations for head and neck oncology practices during the coronavirus disease 2019 (COVID-19) pandemic: Wuhan and Toronto experience. *Head Neck.* 2020 Apr 27. doi: 10.1002/hed.26205

**Country context:** China

This paper outlines the authors' combined experience and key practical considerations for maintaining an oncology service in the midst of a pandemic. Their recommendations are summarized in the table below:

Prevention of transmission	<ol style="list-style-type: none"> <li>1. Avoidance of unnecessary procedures and physical exams;</li> <li>2. Full PPE for all aerosolizing procedures.</li> </ol>
Triaging new patient referrals	<ol style="list-style-type: none"> <li>3. Virtual multidisciplinary screening prior to patient assessment;</li> <li>4. Virtual case conference discussion;</li> <li>5. In-person consultations limited to instances where procedure/physical examination is essential.</li> </ol>
Ongoing care/posttreatment surveillance	<ol style="list-style-type: none"> <li>6. Virtual follow-up care whenever possible;</li> <li>7. In-person assessment by a small group of rotating providers.</li> </ol>
Preoperative screening	<ol style="list-style-type: none"> <li>8. Patient to self-isolate prior to surgery;</li> <li>9. In COVID-19 positive patient, surgery only in emergent cases;</li> <li>10. In COVID-19 unknown/negative patients, testing should be sought immediately prior to surgery.</li> </ol>
Surgical management	<ol style="list-style-type: none"> <li>11. In certain instances, treatment with primary (chemo)radiation over surgery may be preferred;</li> <li>12. Surgical management only in instances where worse oncologic outcome expected if delayed more than 4 weeks;</li> <li>13. Limiting operating room personnel to essential team members;</li> <li>14. Minimization of team member movement in and out of operating room during all surgical cases;</li> <li>15. Reconstructive options should be considered in the context of a pandemic setting and limited resources;</li> <li>16. Surgical team can consider staying immediately outside of operating room during intubation/extubation.</li> </ol>

Restivo et al. The Need of COVID19 Free Hospitals to Maintain Cancer Care. *Eur J Surg Oncol.* 2020 Apr 22;S0748-7983(20)30400-5. doi: 10.1016/j.ejso.2020.04.003

**Country context:** Italy

In this letter to the editor, the authors discuss the challenges oncological patients face on two fronts during the COVID-19 outbreak: the risk of Coronavirus infection and the risk of postponing cancer care. Based on their experience, they proffer ways of navigation those challenges.

[Saini et al. Effect of the COVID-19 pandemic on cancer treatment and research Lancet Haematol. 2020 Apr 24;S2352-3026\(20\)30123-X. doi: 10.1016/S2352-3026\(20\)30123-X.](#)

**Country context:** Global

This commentary highlights the effects of the COVID-19 pandemic on oncology services and cancer research. It narrates how the pandemic has had a serious and disruptive effect on the conduct of haematology and oncology clinical trials, with both immediate and delayed consequences. In the short term, research staff and resources have been reassigned to manage the rush of patients with COVID-19 at many academic institutions and participating hospitals, and routine clinical research activities have been suspended. Trials testing treatments for COVID-19 have been prioritised. A sharp reduction in recruitment to ongoing trials and a delay in the planned launch of new haematology and oncology studies might be expected during the peak of the pandemic

**Sites:**

[E-cancer. COVID-19 and cancer: Useful resources. April 2020](#)

**Country context:** Global

This page provides an updated list of COVID-19 related resources for oncology care providers and patients, including research articles, news articles and other resources.

[American Thoracic Society \(ATS\): ATS COVID-19 Resource Center](#)

**Country context:** USA

The ATS COVID-19 Resource Center provides free information to help healthcare providers, patients and their families manage a host of issues related to the COVID-19 pandemic. Content will be updated regularly.