

# COVID-19 rapid guideline: delivery of radiotherapy

NICE guideline

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[www.nice.org.uk/guidance/ng162](https://www.nice.org.uk/guidance/ng162)

## Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

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## Overview

The purpose of this guideline is to maximise the safety of patients who need radiotherapy and make the best use of NHS resources, while protecting staff from infection. It will also enable services to match the capacity for radiotherapy to patient needs if services become limited because of the COVID-19 pandemic.

**12 February 2021:** We added 3 recommendations for research following a [review of the evidence on the effects of systemic anticancer treatment or radiotherapy on the risk of severe illness or death in patients with cancer and COVID-19](#).

NICE has also produced a [COVID-19 rapid guideline on delivery of systemic anticancer treatments](#).

This guideline focuses on what you need to stop or start doing during the pandemic. Follow the usual professional guidelines, standards and laws (including those on equalities, safeguarding, communication and mental capacity), as described in [making decisions using NICE guidelines](#).

This guideline is for:

- health and care practitioners
- health and care staff involved in planning and delivering services
- commissioners.

The recommendations bring together:

- existing national and international guidance and policies
- advice from specialists working in the NHS from across the UK. These include people with expertise and experience of treating patients for the specific health conditions covered by the guidance during the current COVID-19 pandemic.

We developed this guideline using the [interim process and methods for developing rapid guidelines on COVID-19](#) in response to the rapidly evolving situation. We will review and update the recommendations as the knowledge base develops using the [interim process and methods for guidelines developed in response to health and social care emergencies](#).



# 1 Communicating with patients

- 1.1 Communicate with patients and support their mental wellbeing, signposting to charities and support groups (including NHS volunteers) where available, to help alleviate any anxiety and fear they may have about COVID-19.
- 1.2 Minimise face-to-face contact by:
- offering telephone or video consultations whenever possible
  - cutting non-essential face-to-face follow up, and minimising the number of on-treatment reviews
  - using alternative ways of delivering medicines, such as postal services, NHS volunteers, or drive-through pick-up points
  - using local services for blood tests if possible.
- 1.3 Advise all patients to contact their cancer team rather than NHS 111 if they feel unwell, to ensure their symptoms are appropriately assessed.
- 1.4 Tell patients who still need to attend services to follow relevant parts of government advice on social distancing (this differs across the UK), or UK government guidance on shielding and protecting people defined on medical grounds as extremely vulnerable from COVID-19. [amended 22 May 2020]

## 2 Patients not known to have COVID-19

- 2.1 Ask patients to attend appointments without family members or carers, if they can, to reduce the risk of contracting or spreading the infection.
- 2.2 Minimise time in the waiting area by:
- careful scheduling
  - encouraging patients not to arrive early
  - texting patients when you are ready to see them, so that they can wait in their car, for example.

## 3 Patients with known or suspected COVID-19

- 3.1 For patients with known or suspected COVID-19, do not use COVID-19 alone as a reason to cancel radiotherapy. See [recommendation 7.1 on factors to take into account when prioritising radiotherapy treatments](#).
- 3.2 When patients with known or suspected COVID-19 have been identified, follow appropriate [UK government guidance on infection prevention and control](#). This includes recommendations on patient transfers, transport and options for outpatient settings.
- 3.3 All healthcare workers involved in receiving, assessing and caring for patients who have known or suspected COVID-19 should follow [UK government guidance on infection prevention and control](#). This contains information on using personal protective equipment (PPE), including visual and quick guides for putting on and taking off PPE.



## 4 Patients with symptoms of COVID-19 at presentation

- 4.1 Assess and triage all patients to check if they could have COVID-19, or if they have been in contact with someone who could have COVID-19.
- 4.2 If a patient not previously known or suspected to have COVID-19 shows symptoms on presentation, the general advice is to follow [UK government guidance on investigation and initial clinical management of possible cases](#). This includes information on testing and isolating patients.
- 4.3 Be aware that patients having radiotherapy for certain cancers may be immunosuppressed and may have atypical presentations of COVID-19. For patients having systemic anticancer treatment, see the [NICE COVID-19 guideline on delivery of systemic anticancer treatments](#).
- 4.4 For patients having radiotherapy who are immunosuppressed and have a fever (with or without respiratory symptoms), suspect neutropenic sepsis. Follow the [NICE guideline on neutropenic sepsis](#), which recommends:
- referring patients with suspected neutropenic sepsis immediately for assessment in secondary or tertiary care
  - treating suspected neutropenic sepsis as an acute medical emergency and offering empiric antibiotic therapy immediately.
- 4.5 If COVID-19 is later diagnosed in someone not isolated from admission or presentation, follow [UK government guidance on management of exposed staff and patients in health and social care settings](#). [amended 22 May 2020]

## 5 Grouping and separating patients to reduce risk

- 5.1 To minimise cross infection, set up and review facilities and treatment schedules so that patients can be scheduled for treatment based on their COVID-19 status. Options include:
- scheduling treatment for patients with known or suspected COVID-19 at a specific time of day
  - scheduling treatment for patients who are at particularly increased risk of severe illness from COVID-19 (such as patients with lung cancer) at a different time from patients with COVID-19.
- 5.2 If possible, have separate entrances and facilities for patients who do not have COVID-19 and for patients known or suspected to have COVID-19.
- 5.3 Ensure treatment schedules can properly accommodate the cleaning needs for any areas used by patients with COVID-19.

## 6 Supporting staff, including staff who are self-isolating

- 6.1 If a healthcare professional needs to self-isolate, ensure that they can continue to help by:
- enabling telephone or video consultations and multidisciplinary team meetings
  - identifying patients who are suitable for remote monitoring and follow up and those who are vulnerable and need support
  - carrying out tasks that can be done remotely.
- 6.2 Support staff who are self-isolating to keep in touch as much as possible, to support their mental wellbeing.
- 6.3 Provide all staff with visible leadership and supportive messaging, to maintain morale.
- 6.4 Take account of the information on [the NHS Employers website](#) about good partnership working and issues to consider when developing local plans to combat COVID-19.

## 7 Prioritising radiotherapy treatments

7.1 If radiotherapy treatments need to be prioritised, use table 1 to help make these decisions. Take into account:

- balancing the risk of cancer not being treated optimally with the risk of the patient becoming seriously ill from COVID-19
- patient-specific risk factors including vaccination status, comorbidities and any risk of them being immunosuppressed
- service capacity issues, such as limited resources (workforce, facilities, anaesthetics, equipment).

Table 1 Prioritising radiotherapy treatments

Priority level	Treatment
1	<p>Radical radiotherapy or chemoradiotherapy with curative intent, if:</p> <ul style="list-style-type: none"> <li>• the patient has a category 1 (rapidly proliferating) tumour and</li> <li>• treatment has already started and</li> <li>• there is little or no possibility of compensating for treatment gaps.</li> </ul> <p>External beam radiotherapy with subsequent brachytherapy, if:</p> <ul style="list-style-type: none"> <li>• the patient has a category 1 (rapidly proliferating) tumour and</li> <li>• external beam radiotherapy has already started.</li> </ul> <p>Radiotherapy that has not started yet, if:</p> <ul style="list-style-type: none"> <li>• the patient has a category 1 (rapidly proliferating) tumour and</li> <li>• they would normally start treatment, based on clinical need or current cancer treatment waiting times.</li> </ul>

Priority level	Treatment
2	Urgent palliative radiotherapy, for patients with malignant spinal cord compression who have salvageable neurological function.
3	Radical radiotherapy for a category 2 (less aggressive) tumour, if radiotherapy is the first treatment with curative intent. Post-operative radiotherapy, if: <ul style="list-style-type: none"> <li>the patient has a tumour with aggressive biology or</li> <li>they have had surgery, but there is known residual disease.</li> </ul>
4	Palliative radiotherapy, where improving symptoms would reduce the need for other interventions.
5	Adjuvant radiotherapy, if: <ul style="list-style-type: none"> <li>the disease has been completely resected and</li> <li>there is a less than 20% risk of local recurrence at 10 years.</li> </ul> Radical radiotherapy for prostate cancer, in patients having neoadjuvant hormone therapy.

Table adapted from [NHS England's clinical guide for the management of non-coronavirus patients requiring acute treatment: cancer](#).

For definitions of tumour categories, see the [Royal College of Radiologists' guidance on managing unscheduled treatment interruptions](#).

- 7.2 Do not treat benign conditions with radiotherapy unless there is an immediate threat to life or function.
- 7.3 Make prioritisation decisions as part of a multidisciplinary team and ensure each patient is considered on an individual basis. Ensure the reasoning behind each decision is recorded.
- 7.4 Clearly communicate, with written documentation if possible, what prioritisation is and the reason for the decision to patients, their families and

**carers.**

## 8 Modifications to usual care

- 8.1 Think about how to modify usual care to reduce patient exposure to COVID-19 and make best use of resources (workforce, facilities, anaesthetics, equipment).
- 8.2 Centres should discuss changes to standard cancer treatment pathways within their operational delivery networks. This may include discussing alternative dose fractionation schedules or radiotherapy techniques with appropriately experienced centres, if a radiotherapy technique is not available locally.
- 8.3 Centres should work with their operational delivery networks and/or cancer alliance to manage capacity issues across their area.
- 8.4 Make policy decisions about modifying usual care at an organisational level.
- 8.5 When modifying individual patients' treatment plans:
- take their clinical circumstances into account
  - involve all relevant members of the multidisciplinary team in the decision
  - record the reasoning behind each decision.
- 8.6 When treatment has to be interrupted because of COVID-19, use the [Royal College of Radiologists' guidance on the management of unscheduled treatment interruptions](#) to help make decisions.
- 8.7 Use the RADS (Remote, Avoid, Defer, Shorten) principle to help plan individual patient treatment:
- Remote visits: use phone or video assessments instead of face-to-face contact.
  - Avoid radiotherapy: avoid treatment if the evidence suggests there will be little to no benefit, or if an alternative treatment is available.
  - Defer radiotherapy: defer treatment if clinically appropriate. Use [table 1 on prioritising radiotherapy treatments](#).

- Shorten radiotherapy: if treatment is unavoidable, use the shortest safe form of treatment.

[the RADS principle is adapted with permission from Zaorsky et al. (2020) Prostate Cancer Radiation Therapy Recommendations in Response to COVID-19. *Advances in Radiation Oncology*]

- 8.8 The Royal College of Radiologists has created a set of [resources on cancer treatment \(including hypofractionation\) during the COVID-19 pandemic](#).
- 8.9 Discuss the risks and benefits of changing treatment schedules or interrupting treatment with patients, their families and carers.



## Recommendations for research

We have made the following recommendations for research.

### 1 Risk of radiotherapy in people with cancer and COVID-19

Are patients with cancer and COVID-19 who are receiving/have recently received radiotherapy (that is, within the 4 weeks preceding a diagnosis of COVID-19) at increased risk of severe COVID-19 illness or death? [12 February 2021]

It is recommended that this research should also consider:

- if there are specific types of radiotherapy carrying increased risk of poor outcomes from COVID-19
- if there are specific types of cancer for which radiotherapy may carry increased risk of poor outcomes from COVID-19
- if there is a difference in any risk of poor outcomes from COVID-19 between people who have received SACT alone, radiotherapy alone, or both SACT and radiotherapy
- if there is a difference in any risk of poor outcomes from COVID-19 between children and young people who have received radiotherapy and adults who have received radiotherapy.

### 2 Duration of risk of radiotherapy in people with cancer and COVID-19

Are people who have had radiotherapy recently (that is, within the 4 weeks preceding a diagnosis of COVID-19) at increased risk of poor outcomes from COVID-19 compared with those who had radiotherapy less recently? [12 February 2021]

### 3 Radiation-induced lymphopenia and risk of new COVID-19 and severity of COVID-19

Does radiation-induced lymphopenia predispose patients to an increased risk of new COVID-19 and does it contribute to patients developing more severe COVID-19? [12 February 2021]

## Update information

**12 February 2021:** We added 3 recommendations for research following a [review of the evidence on the effects of systemic anticancer treatment or radiotherapy on the risk of severe illness or death in patients with cancer and COVID-19](#).

### Minor changes since publication

**22 May 2020:** We aligned recommendation 1.4 with current government advice on social distancing and recommendation 4.5 with current government advice on managing exposed staff and patients in health and social care settings.

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