As doctors we all have general responsibilities in relation to coronavirus and for these we should seek and act on national and local guidelines. We also have a specific responsibility to ensure that essential cancer service care continues with the minimum burden on the NHS. We must engage with those planning our local response. We may also need to work outside our specific areas of training and expertise and the General Medical Council has already indicated its support for this in the exceptional circumstances we may face: [www.gmc-uk.org/news/news-archive/how-we-will-continue-to-regulate-in-light-of-novel-coronavirus](http://www.gmc-uk.org/news/news-archive/how-we-will-continue-to-regulate-in-light-of-novel-coronavirus)

Cancer services may not seem to be in the frontline with coronavirus but we do have a key role to play and this must be planned. In response to pressures on the NHS, the elective component of our work may be curtailed. However, cancer services will need to continue to deliver care. We should seek the best local solutions to continue the proper management of these cancer services while protecting resources for the response to coronavirus.

In addition, we need to consider the small possibility that the facility for cancer services may be compromised due to a combination of factors including staff sickness and supply chain shortages among others. This is an unlikely scenario but plans are needed.

**The most vulnerable cancer patients**
Some people with cancer are more at risk of becoming seriously ill if they contract the coronavirus infection:
• People with cancer who are undergoing active chemotherapy
• People having radical radiotherapy for lung cancer
• People with cancers of the blood or bone marrow such as leukaemia, lymphoma or myeloma who are at any stage of treatment
• People having immunotherapy or other continuing antibody treatments for cancer
• People having other targeted cancer treatments which can affect the immune system, such as protein kinase inhibitors or PARP inhibitors.
• People who have had bone marrow or stem cell transplants in the last 6 months, or who are still taking immunosuppression drugs.

In addition to immunosuppression, several factors/co-morbidities are likely to be linked with a poorer prognosis with coronavirus:

• age over 60
• pre-existing cardiovascular disease
• pre-existing respiratory disease.

The more of these individual factors a cancer patient has, the more likely they are to develop a serious illness with coronavirus especially if treated with systemic anti-cancer therapies.

Support for patients and their clinicians when making decisions about cancer treatment

The NHS action plan,¹ issued on 3 March 2020, makes clear that ‘at all phases of a future pandemic, the NHS/HSCNI and local authorities have plans in place to ensure people receive the essential care and support services they need – and sometimes this might mean that other services are reduced temporarily’. It also states that as the disease moves into different phases ‘the chief focus will be to provide essential services, helping those most at risk access the right treatment’.

Cancer patients will want to discuss with their clinicians whether the risks of beginning or continuing their cancer treatment could outweigh the benefits, given that many patients receiving systemic therapies in particular are more at risk of becoming seriously unwell if they contract the coronavirus infection. In the event of disruption to cancer services, clinicians may also need to prioritise treatment for those most in need. It is important that all

decisions taken are done so with multidisciplinary team (MDT) input and clearly communicated with patients.

Categories of cancer services to consider

- Leadership
- Surgical patients: Continue to require admission and surgical management
- Systemic anti-cancer treatments: MDT decision-making should continue.
- Radiation therapy.
- Proton beam therapy

When planning your local response, please consider the following:

Leadership

- A consultant must be designated as ‘lead consultant’. This duty can be for one day, a few days or even five days in small units. This is an essential role during crisis management. It cannot be performed by the consultant ‘on-call’. They must be free of clinical duties and the role involves co-ordination of the whole service from emergency department (ED) through to liaison with other specialties and managers.
- It can be very stressful during a crisis. Support each other and share the workload. Do not expect the clinical director to do all the co-ordination!
- Make contingency plans for supply chain issues.

Surgical patients

Categorisation of patients

Priority level 1a
Emergency - operation needed within 24 hours to save life

Priority level 1b
Urgent - operation needed with 72 hours

Based on

Urgent / emergency surgery for life threatening conditions such as obstruction, bleeding and regional and / or localised infection permanent injury / clinical harm from progression of conditions such as spinal cord compression

Priority level 2
Elective surgery with the expectation of cure, prioritised according to:
• within 4 weeks to save life/progression of disease beyond operability based on
  • urgency of symptoms
  • complications such as local compressive symptoms
  • biological priority (expected growth rate) of individual cancers

Local complications may be temporarily controlled, for example with stents if surgery is deferred and /or interventional radiology

**Priority level 3**
Elective surgery can be delayed for 10-12 weeks will have no predicted negative outcome

**General measures to consider**
All complex cancer surgery will require level 1 support routinely. There is a small risk of postoperative complications requiring return / admission to ITU in (usually) the first week.

Separation of the location of emergency from elective operations within the same trust may allow elective work to continue at one site.

If appropriate, MDTs may consider non-surgical options, including prolongation of neoadjuvant treatment and non-surgical treatment if the outcomes are similar.

**Systemic anti-cancer treatments**
Treatment decisions will need to be made on a case-by-case basis with input from both patients and the MDT. The prioritisation details should be overseen by the nominated trust haematology leads at provider level.

**General approach to prioritising patients on systemic anti-cancer therapy:**

• Categorise patients by treatment intent and risk-benefit ratio associated with treatment.
• Consider alternative and less resource-intensive treatment regimes.
• Seek alternative methods to monitor and review patients receiving systemic therapies.

Clinicians will also need to consider the level of immunosuppression associated with an individual therapy and the condition itself, and patients' other risk factors.
Categorisation of patients
This will differ according to tumour type, but it is suggested that clinicians begin to categorise patients into priority groups 1-6. If services are disrupted, patients can be prioritised for treatment accordingly.

**Priority level 1**
- Curative therapy with a high (>50%) chance of success.
- Adjuvant (or neo) therapy which adds at least 50% chance of cure to surgery or radiotherapy alone or treatment given at relapse

**Priority level 2**
- Curative therapy with an intermediate (20-50%) chance of success.
- Adjuvant (or neo) therapy which adds 20 – 50% chance of cure to surgery or radiotherapy alone or treatment given at relapse

**Priority level 3**
- Curative therapy of a low chance (10 – 20%) of success
- Adjuvant (or neo) therapy which adds 10 – 20% chance of cure to surgery or radiotherapy alone or treatment given at relapse
- Non-curative therapy with a high (>50%) chance of >1 year of life extension.

**Priority level 4**
- Curative therapy with a very low (0-10%) chance of success.
- Adjuvant (or neo) therapy which adds a less than 10 chance of cure to surgery or radiotherapy alone or treatment given at relapse
- Non-curative therapy with an intermediate (15-50%) chance of > 1 year life extension.

**Priority level 5**
- Non-curative therapy with a high (>50%) chance of palliation / temporary tumour control but < 1 year life extension.

**Priority level 6**
- Non-curative therapy with an intermediate (15-50%) chance of palliation or temporary tumour control and < 1 year life extension.

**General measures to consider**
Consider whether systemic therapies can be given in alternative regimens, different locations or via other modes of administration to minimise patient exposure and maximise resources.
1. Changing intravenous treatments to subcutaneous or oral if there are alternatives, subject to agreement with commissioners.
2. Selecting regimens that are shorter in duration.
3. Consider using 4-weekly or 6-weekly immunotherapy regimens rather than 2-weekly and 3-weekly.
4. Repeat prescriptions of oral medicines or other at home treatments should where possible be provided without patients needing to attend clinics in person.
5. Consider deferring supportive therapies such as densoumb and zoledronic acid treatments (except for hypercalcaemia).
6. Consider home delivery of oral medication where possible (but need to confirm the resilience of home care providers).
7. Use of GCSF as primary prophylaxis to protect patients and reduce admission rates.
8. Considering treatment breaks for long-term treatments when risk of coronavirus is high.
9. Consider what supportive services are required to deliver regimens safely.

Seek alternative methods to educate, monitor and review patients on systemic therapies. Identify alternative arrangements to minimise patient exposure. This could involve patients having blood tests locally or telephone/virtual appointments.

**Radiation therapy**

**Categorisation of patients**

**Priority level 1**
- Patients with category 1 (rapidly proliferating) tumours currently being treated with radical (chemo)radiotherapy with curative intent where there is little or no scope for compensation of gaps.
- Patients with category 1 tumours in whom combined External Beam Radiotherapy (EBRT) and subsequent brachytherapy is the management plan and the EBRT is already underway.
- Patients with category 1 tumours who have not yet started and in whom clinical need determines that treatment should start in line with current cancer waiting times.

**Priority level 2**
- Urgent palliative radiotherapy in patients with malignant spinal cord compression who have useful salvageable neurological function.
**Priority level 3**
- Radical radiotherapy for Category 2 (less aggressive) tumours where radiotherapy is the first definitive treatment.
- Post-operative radiotherapy where there is known residual disease following surgery in tumours with aggressive biology.

**Priority level 4**
- Palliative radiotherapy where alleviation of symptoms would reduce the burden on other healthcare services, such as haemoptysis.

**Priority level 5**
- Adjuvant radiotherapy where there has been complete resection of disease and there is a <20% risk of recurrence at 10 years, for example most ER positive breast cancer in patients receiving endocrine therapy.
- Radical radiotherapy for prostate cancer in patients receiving neo-adjuvant hormone therapy.

**General measures to consider**
In all cases, the most clinically appropriate hypofractionated schedule should be used, for example single 8Gy fraction for metastatic spinal cord compression (MSCC).

For adjuvant breast radiotherapy 26Gy in 5 fractions is isotoxic compared with 40.05Gy in 15 fractions and may mitigate a deferred start date in patients with node negative breast cancer.

Offer omission of adjuvant breast radiotherapy to those patients with low risk breast cancer who fulfill the NICE Early Breast Cancer Guideline (2018) criteria.

Anaesthetic availability may be the determining factor for capacity for some radiotherapy including gynae brachytherapy, TBI and paediatrics.

**Proton beam therapy**
Particular considerations will apply for patients receiving proton beam therapy (PBT), which will be managed through the PBT commissioning route and clinicians at the Christie. Patients are prioritised considering both priority to access protons as a treatment and, if they can't be treated with protons, priority for receiving photon treatment (using Royal College of Radiologists’ categorisation and where they are in their treatment).

In some patients a short delay for treatment may be possible without compromising outcomes, so opting to treat with photons as an immediate alternative may not be the best choice.
In the event of significant PBT capacity issues, advising to have photons locally rather than travel for PBT is something that may need to be considered. The above consideration for radiation therapy would then apply through the treating centre.

General measures across all services to reduce patient contact and maximise workforce capacity

Minimise face-to-face appointments

- Offer consultations via telephone or video consultation wherever possible.
- Cut non-essential follow-up visits.
- Accelerate adoption of stratified follow-up models.
- Home delivery of oral systemic agents where suitable/available.

Reduce dwell time in services

- For those who do still need to attend, particularly for treatment, schedule appointments to reduce waiting times.
- Encourage patients not to arrive early – consider measures such as texting them when ready to see them so they can wait in their car.
- Follow broader Trust actions and protocols including testing and isolation of patients with COVID-19 symptoms.

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 MDTs. For example:

- Virtual attendance at MDT 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.
- Data entry (where remote access enabled).

Overall considerations

- We should avoid unproductive attendances at hospital.
- Senior decision-making at the first point of contact should reduce or even prevent the need for further attendances.
- A decrease in elective work will allow for a greater senior presence at the front door.
- Clinicians may need to work in unfamiliar environments or outside of their sub-specialist areas. They will need to be supported.
- No patient should be scheduled for surgery without discussion with a consultant.
• The longer hours will allow ED access and help reduce crowding in waiting rooms.
• The possibility of a seven-day service may need to be considered.
• Consider postponing long-term follow-up patients until the crisis has passed.
• Can a follow-up virtual clinic be developed with your facility?
• CT scanning and other imaging may be limited as radiology departments divert resources towards the coronavirus pandemic.