Considerations for Multidisciplinary Management of Patients with Colorectal Cancer during the COVID-19 Pandemic

26 March 2020

Since the outbreak of COVID-19, we have had to accept that we will simply not be able to manage patients with colorectal disease as normal. A particular concern is how best to manage the many patients diagnosed and living with bowel cancer during the evolving crisis as the UK and Ireland try to mitigate the impact of COVID-19 and save patient lives. Previously unimaginable pressures on our services and resources have moved us to a “wartime” footing and will heavily impede delivery of normal standards of colorectal cancer care in either surgery or oncology.
**Introduction**

We aim here to provide a framework to help colorectal cancer multidisciplinary teams and our patients make difficult decisions in unprecedented circumstances. Our suggested recommendations should be used in conjunction with NHS England and other national broad guidance on cancer care during the COVID-19 pandemic.

This document is intended as a starting point for discussion for local policies, as resource implications may vary between institutions. There may also be windows of opportunity to return to standard levels of services for short periods during the coming months. These suggestions should also be viewed in the context of the individual’s care, care of other patients, and responsible prioritisation of healthcare resources.

We shall need to be good doctors first and colorectal surgeons second, practicing for the greater good with an emphasis on managing the short term and anticipating the long-term impact.

Priorities will need to be re-assessed based on clinical urgency, lack of access to operating theatres and intensive care support, additional risks faced by patients on immunosuppressive treatments, shifting risk-benefit considerations, individual patient fitness, risk of exposure to COVID-19 within healthcare settings and the anticipated natural history of colorectal cancer. We need to make changes to safeguard patients with colorectal cancer in the context of the reassurance provided by the joint letter from the Chief Medical Officers of all four nations in Great Britain and Ireland and the General Medical Council that specifically acknowledges and protects the necessity for doctors to act outside normal roles and standards of care in the context of the unfolding crisis.

The suggestions provided here are offered in good faith to help clinicians treat patients and to prevent paralysis caused by fear of doing the wrong thing or deviating from normal practice.

**Risks related to COVID-19 Infection**

Reports from the recent Chinese experience (Chinese Centre for disease control and prevention, CCDC Weekly/Vol2/No 8: 113-122) estimate that percentage case fatality in mainland China stratified for age group among 44 672 patients infected by COVID-19 was:
• 1.3% in 50 - 59 years old
• 3.6% in 60 - 69 years old
• 8.0% in 70 - 79 years old
• 14.8% in >80 years old

Male case fatality rate overall was 2.8% compared to 1.7% for females. Overall mortality rates ranked for comorbidity were cardiovascular disease 10.5%, diabetes 7.3%, chronic respiratory disease 6.3%, hypertension 6% and cancer 5.6%.

Viral shedding in the gastrointestinal tract may occur and it is difficult to predict how this might impact on decision-making in elective gastrointestinal surgery and postoperative care. This might yet have implications for testing patients for COVID-19 prior to surgery. Evidence emerging from Italy suggests that chest CT may be predictive of asymptomatic COVID-19 infection, and if changes are seen, then surgery should be deferred if possible. Viral shedding also has implications for postoperative recovery as between 16% and 48% of infected patients manifest gastrointestinal symptoms during the course of their illness and may only develop these during the postoperative phase.

Setting Priorities and Evaluating Individual Risks

Scoring systems that weigh up the urgency of surgery and the adverse consequences of contracting COVID-19 infection are being developed and may assist us in our decision-making and recommendations from MDTs on a case by case basis. Some patients with low risk minimally symptomatic early colon cancer, and significant comorbidities or on immunosuppression, will almost certainly fare better by waiting until circumstances result in lower risk of infection and resources allow for better access to critical care electively and in the event of postoperative complications.

Patients with obstructing colonic cancers may be temporised by colonic stenting as a bridge to surgery.

Decisions become more complex for symptomatic rectal cancers where one might deviate from normal standards of care to reduce footfall in hospitals and conserve radiotherapy resources due to staff shortages and self-isolation.

Likewise, a patient who has metastatic disease and would normally be offered
Chemotherapy will require a detailed risk-benefit conversation and shared decision-making, taking into account the patient’s wishes and priorities, as well as resource availability.

Urgent or Emergency Intervention for Colorectal Cancer

As this group of patients will be in most urgent need of treatment, their priority for treatment will be high. Where possible, alternative strategies should be explored, including stenting for obstructing cancers with a view to delayed resection, and radiological drainage of contained perforation. Where surgery is indicated, involvement of anaesthetic and intensive care colleagues to determine level of risk and confirm local availability of resources, including potential ceilings of postoperative care, is advisable. [NHS England guidance on intensive care provision during COVID-19 pandemic includes critical care support for patients undergoing emergency laparotomy.](https://www.england.nhs.uk/coronavirus/intensive-care/)

It would be prudent to employ lower risk surgical strategies during the coming months, given the uncertainty about resources to manage postoperative complications such as anastomotic leak. A good example here is the use of Hartmann’s procedure rather than resection with primary anastomosis.

Colon or Rectal Surgery for Cancer

Placing high risk surgical patients in an environment at high risk of COVID-19 infection increases overall risk of mortality. Scoring systems and perioperative risk assessment tools e.g. American College of Surgeons Surgical Risk Calculator tool may be helpful in guiding shared decision-making but will not account for environmental risk and lack of critical care resources. Resource availability may also flex at times during the coming months. Involvement of anaesthetic and critical care colleagues will be invaluable when weighing up and discussing individual risks.

Need for an individual patient to have perioperative critical care input may ultimately be the factor that guides us best whether to proceed promptly to surgery or defer until safe elective capacity has been restored in the system. Ideally deferred patients should have regular scheduled remote consultations followed by MDT case review to reassess prioritization and if surgery can be safely undertaken. We would recommend evaluating and documenting the following considerations when balancing relative risks of bowel cancer surgery:
• Urgency of case based on mode of presentation, symptoms, and severity of disease

• Likelihood of patient requiring access to planned or unplanned critical care

• Strategies to mitigate risk of needing critical care

• Current and predicted critical care capacity

• Key points in shared decision-making

Surgeons will need to maximise use of theatre time as a scarce resource, with Consultant-delivered procedures and dual Consultant operating to reduce theatre times. Training opportunities will undoubtedly be severely affected as a consequence. Surgeons should be prepared to weigh benefits in resource utilisation, especially when selecting operative approach; they may consider more expeditious open surgery over laparoscopic procedures unless there are specific circumstances where the patient will benefit from use of a laparoscopic approach.

There is an increased risk of aerosol spread of COVID-19 during laparoscopic procedures. As the pandemic becomes widely prevalent among the population, it is probable some patients will have asymptomatic infection when undergoing colorectal resection.

It would also be wise to give consideration to lower risk surgical procedures, wherever possible, and in consultation with the patient, to minimize the risks of developing postoperative complications requiring critical care support during the coming months.

Neoadjuvant Treatment

Neoadjuvant radiotherapy should be considered for rectal cancer patients as an interim treatment, even in patients where a straight to surgery approach would normally have been recommended. The main purpose here is to delay progression of disease during this period, and a small proportion may achieve a complete clinical response. It is proposed that use of short course radiotherapy (SCRT) with 25 Gray in 5 fractions for most patients will minimise hospital visits and optimise use of resources, compared to long course chemoradiotherapy. A long wait would then be required in the order of 8-12 weeks, or even longer depending on duration of crisis, fitness of patient and tumour response.
Patients who have already had neoadjuvant therapy and are awaiting surgical resection will need reassessment based on degree of tumour regression, fitness for surgery and risk of complications if surgery deferred for several months. Patients with a complete clinical response should be encouraged to adopt a close watch and wait strategy, along lines of OnCoRe study protocol. Patients with residual disease will need to be assessed in the same manner outlined for surgical patients in the previous section.

Early stage rectal cancer treatment may be deferred for up to 6 months provided that repeat imaging and assessment is planned and available prior to the deferred intervention. If resources allow, short course radiotherapy (SCRT) as an initial definitive treatment may be considered. The STAR-TREC trial team can advise on an appropriate follow up strategy after completion of SCRT.

Patients with locally advanced non-metastatic anal cancer and good performance status should still be offered chemoradiotherapy, again if local resources allow, given the poor prognosis if treatment is delayed. Patients with early tumours (T1 or small T2 N0) may be delayed 3 to 4 months if necessary.

Adjuvant Chemotherapy

The National Institute of Clinical Excellence has now published guidance on delivery of systemic anticancer treatments during COVID-19 (NG161): [https://www.nice.org.uk/guidance/NG161](https://www.nice.org.uk/guidance/NG161). The risks of treatment with chemotherapy have increased with the advent of COVID-19, and so the threshold for chemotherapy must be raised. Where the benefit of adjuvant chemotherapy is relatively marginal, it is in the patient’s best interests to avoid the additional risks of immunosuppression during the COVID-19 pandemic.

There are some scenarios where the benefit of adjuvant chemotherapy may confer a significant survival benefit (~10% or more) and, in these circumstances, delaying adjuvant chemotherapy may result in adverse outcomes. Individual risk-benefit analysis will need to be discussed with the patient and clearly documented, with safeguards in place to secure the patient’s safety in the event of complications during chemotherapy. A shortened duration of 3 rather than 6 months of adjuvant chemotherapy or oral monotherapy may also be advisable to reduce number of hospital attendances.
Adjuvant chemotherapy should only still be considered and discussed in fit patients under 70 years with performance status of 0 or 1, who have node positive colorectal cancer.

**Surgery for Metastatic Colorectal Cancer**

Selected patients with liver and lung metastases would, in normal circumstances, be referred for consideration of liver- and lung-directed therapies including surgical metastectomy. Most patients would also be treated with systemic anti-cancer therapy during their course of treatment. In view of significant concerns regarding risk of systemic therapies in this high-risk group during the COVID-19 pandemic, and as the patients are also at highest risk of developing future metastatic disease, it may be better to offer patients a period of observation and self-isolation as their lowest risk scenario.

Once again, such decisions will require detailed discussion with the patient explaining rationale of recommendation, good documentation and a clear plan for future imaging and reassessment when normal levels of service and access are available. There will also no doubt be a few highly selected cases where there is realistic expectation of cure from liver metastectomy in a fit patient, and these should be prioritised in the same way as other surgical cases.

**Extended Resection and Exenteration Surgery**

Undertaking complex exenteration surgery for locally advanced and recurrent rectal cancer involves significant use of operating theatre time, critical care input and often blood transfusion. This means that it is most unlikely that salvage surgery will be possible for the duration of the pandemic. Unfortunately, alternative interim therapeutic options are limited, and these patients are likely to be impacted to the greatest extent. Untreated, patients may progress beyond the point of resectability, or develop metastatic disease, in a prolonged pandemic. Some will present as emergencies with obstruction or perforation and surgical management may be to drain sepsis and offer diversion. We propose that early best supportive care input is considered for palliation of symptoms even if salvage remains a realistic option after the period of enforced observation during the pandemic.

Ideally patients with locally advanced and recurrent rectal cancer should still be
referred and discussed in a specialist MDT to assess resectability, manage patient expectations, and help guide the patient pathway if disease is still stable when normal services resume. There may be exceptional circumstances when pelvic exenteration surgery might be considered, for example in a very fit young patient where curative intent is highly likely. Such cases should be accommodated only if local resources allow.

**Palliative Systemic Anti-Cancer Therapy**

Where patients have metastatic disease, poor performance status due to cardiorespiratory disease and an expected life expectancy of less than 6 months, best supportive care is likely to be the best option in order to reduce exposure to hospital and infection with COVID-19. Fit patients with inoperable colorectal cancer where life expectancy is likely greater than 12 months are most likely to have a survival benefit from palliative chemotherapy and should still be offered treatment. The group in between with life expectancy predicted between 6 and 12 months may have better quality of life if on chemotherapy, and this should be considered and discussed in younger fitter patients.

Palliative patients may benefit from chemotherapy breaks during the worst of the pandemic, or reduction in dose or frequency of treatment, to mitigate against risks of immunosuppression, severe complications requiring inpatient admission, and frequent hospital visits.

**Considerations for Colorectal Cancer Multidisciplinary Teams**

Enforced changes in clinical practice and the potential for worse patient outcomes and experience is likely to have significant negative impact upon the morale of the multidisciplinary team. Difficult ethical decisions about resource allocation should ideally be shared with colleagues. All team members will require ongoing pastoral support, especially if they bear the brunt of emotional, disappointed or angry patients as expectations are adjusted during these unprecedented times. Remote consultations discussing complex and personal issues will bring their own challenges.

There is also a risk of detachment as many MDTs invoke social distancing with meetings convened by video teleconference rather than in person, and specialist clinical nurses are encouraged to work from home. Regular team debriefings may
help mitigate against these factors.

MDT documentation will need to ensure accurate documentation of transparent decision-making in context of pressures imposed by COVID-19 on resources. Ideally both standard care and “real world” decision-making should be included. Administrative support to ensure that patients remain under close tracking will be essential. It is likely that many MDTs will need to pause surveillance programmes. Again, a reliable tracking system will be necessary for patient recall when resources later allow surveillance to resume.

Conclusions

COVID-19 will undoubtedly have a global impact in terms of human suffering, excess mortality and economic hardship. It is also likely to have an impact on patient outcomes for colorectal cancer treatment. Ideally, where time and resources permit, ongoing data collection is advisable to allow evaluation of changes made to treatment pathways.

Different hospitals and teams will vary in the resources available to them but ultimately will have to make the best decisions they can for the benefit of all patients. We have tried to provide some starting points on where treatment strategies might need to be reviewed, altered or deferred as a result of excess risk due to COVID-19 infection.

Attention to the individual patient’s relative risks balanced against benefit, good communication between colleagues and with patients, shared decision-making with the patient and documentation will be essential. Inclusion of limitations of care due to the COVID-19 can reasonably be included in the consent process and documented on the consent form. Such changes necessarily deviate from standard practice and will bring ethical and moral challenges in delivery. Ultimately, they are primarily intended to protect the safety of patients with colorectal cancer in the short-term during the global tsunami in healthcare precipitated by COVID-19.

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