

NCCP guidance for Medical Professionals for testing COVID-19 in asymptomatic patients undergoing elective cancer surgery in response to the current novel coronavirus pandemic

This document relates to patients who do not have COVID-19 or are not suspected of having COVID-19.

Current events surrounding the COVID-19 pandemic are challenging and all public health bodies are placing the safety of patients, staff and communities first in all decisions.

This is an evolving situation. This advice is based on current information, it is additional to the advice of the NPHET, the HSE and the DoH, and will be updated as necessary.

The NCCP acknowledges that each hospital is working under individual constraints, including staff and infrastructure, and as a result will implement this advice based on their own unique circumstances.

The purpose of this advice is to maximise the safety of patients and make the best use of HSE resources, while protecting staff from infection. It will also enable services to match the capacity for cancer care to patient needs if services become limited due to the COVID-19 pandemic.

Any clinician seeking to apply or consult these documents is expected to use independent medical judgement in the context of individual clinical circumstances to determine any patient's care or treatment.

1 NPHET, HSE and DoH advice

Hospitals will operate under the overarching advice of the National Public Health Emergency Team (NPHET), the HSE and the DoH. Information is available at:

- HSE HPSC - <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/>
- HSE Coronavirus (COVID-19) - <https://www2.hse.ie/conditions/coronavirus/coronavirus.html>
- DoH Coronavirus (COVID-19) - <https://www.gov.ie/en/campaigns/c36c85-covid-19-coronavirus/>
- Ireland's National Action Plan in response to COVID-19 (Coronavirus) - <https://www.gov.ie/en/campaigns/c36c85-covid-19-coronavirus/>

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2 Purpose

The purpose of this guidance document is to provide guidance for testing COVID-19 in asymptomatic patients undergoing elective cancer surgery in response to the current novel coronavirus.

3 Clinical question

For patients undergoing elective cancer surgery who are COVID-19 asymptomatic, what is the best test or combination of tests to rule out COVID-19 infection?

4 Quality of the evidence

There is no test or tests that can rule out COVID-19 infection in asymptomatic patients.

There is no direct evidence to answer this question so it has been extrapolated from indirect evidence from a meta-analysis on testing of symptomatic patients (Kim et al. 2020). There is a high level of heterogeneity reported in this study and all results should be interpreted with caution.

The reported sensitivities of RT-PCR and CT for COVID-19 are in symptomatic patients and lower sensitivities would be expected in the asymptomatic population. The prevalence of COVID-19 in the study populations may also be different in the community in Ireland and therefore the PPV may also be lower. The criteria used in the studies for a positive CT is different to the criteria used in Ireland, this may have biased the sensitivity quoted in Kim et al. 2020.

Neither CT nor RT-PCR have been shown to be a useful screening tool for COVID-19 in asymptomatic surgical patients. One study reported in patients with suspected COVID-19 that chest CT showed changes consistent with COVID-19 when the RT-PCR test reported no virus detected and subsequently the RT-PCR test was positive in these patients (Ai et al. 2020). There will be false negatives with both RT-PCR and CT scans. At a time of scarce ICU resources it is important that patients with pulmonary infiltrates do not have surgery as they will need post-operative ICU. Therefore the Guidance Development Group recommend that all patients with pulmonary infiltrates should be treated as if they potentially have COVID-19 even if COVID-19 is not detected on RT-PCR and elective surgery should be deferred until such time as infection with COVID-19 is ruled out.

If COVID-19 is not detected on RT-PCR this does not rule out COVID-19 infection. If no abnormality is detected on CT this does not rule out COVID-19 infection. There have been case reports on the increased ICU admissions and mortality post-surgery in patients who were subsequently suspected of having asymptomatic COVID-19 perioperatively (Lei et al. 2020). Therefore communication to the patient preoperatively of the potential benefits and harms is important.

An article on pre symptomatic infection in nursing facilities found that of those that were tested 56% were asymptomatic at the time of testing and the majority went on to develop symptoms (Arons et al. 2020). While this population is not generalisable to the cancer surgery population it does

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highlight the asymptomatic phase of infection. Therefore a period of cocooning at home is recommended to minimise patient's risk of COVID-19 exposure.

5 Benefit and Harm

There have been case reports on the increased ICU admissions and mortality post surgery in patients who were subsequently suspected of having asymptomatic COVID-19 perioperatively (Lei et al. 2020). The risk to the patient appears higher in those undergoing more complex or more lengthy surgeries, or otherwise vulnerable due to age and comorbidities (Lei et al. 2020).

The risk to a patient of undergoing surgery with asymptomatic COVID-19 infection should be balanced against the risk of delaying cancer surgery. Patients who are expected to require postoperative ICU care may benefit from the addition of CT following an RT-PCR test where COVID-19 is not detected.

Surgical oncology patients who would benefit from a preoperative CT include:

- All patients predicted to require postoperative ICU care
- Patients undergoing thoracic surgery
- Patients undergoing oesophageal surgery
- Patients undergoing complex head and neck surgery

The risks associated with additional radiation dose of CT is outweighed by the potential benefit. A false positive CT result may result in a delay of surgery.

Health care professionals should still follow recommendations regarding appropriate PPE, noting that the RT-PCR COVID-19 test and CT do not rule out COVID-19 infection.

6 Justification for change

The purpose of this advice is to maximise the safety of patients undergoing elective cancer surgery and to minimise the risk of operating on a patient with asymptomatic COVID-19 infection. This guidance also aims to protect staff from COVID-19 infection and aims to make the best use of HSE resources.

7 Equity, acceptability, preferences and values

The recommendations attempt to reduce uncertainty for patients and medical professionals while minimising potential harm to patients and healthcare staff. The Guidance Development Group agreed that the request to cocoon was proportionate when compared to the potential harm of undergoing elective surgery with asymptomatic COVID-19 infection

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8 Resources

These recommendations are designed to provide the most effective use of resources and to reduce the impact on ICU. This is dependent on CT capacity and RT-PCR COVID-19 testing availability.

9 Recommendations

- Patients should be advised of how to minimise their risk of COVID-19 exposure prior to surgery including cocooning and hand hygiene. The extent of cocooning should take into account the potential benefits and harms of COVID-19 infection and delaying surgery.
- Patients should have RT-PCR COVID-19 testing within 48 to 72 hours prior to scheduled cancer surgery.
- If RT-PCR test shows virus is detected, elective surgery should be deferred in line with national recommendations.
- If RT-PCR test shows no virus detected where surgery is high risk a non-contrast low dose chest CT should be performed in the following groups:
 - All patients predicted to require postoperative ICU care
 - Patients undergoing thoracic surgery
 - Patients undergoing oesophageal surgery
 - Patients undergoing complex head and neck surgery

The quality of evidence for all recommendations was deemed to be very low.

The grade of recommendations (Guyatt et al. 2008) was deemed to be strong when considering the following items:

1. Quality of evidence,
2. Benefit and harm,
3. Equity, acceptability, preferences and values,
4. Resources

10 Good practice points

- No test can rule out a COVID-19 infection, therefore patients should be given advice preoperatively on how to minimise infection as part of the consent process.
- The time to surgery versus the cocooning period prior to surgery should be determined based on an assessment of the benefit versus the harm.
- Shared decision making should take place to ensure that the benefit and risks of surgery with potential COVID-19 infection have been communicated to the patient.
- The number of visits to the hospital should be minimised.

11 Practical issues

Postoperative surveillance/ protocols should be in place to ensure that patients do not become infected with COVID-19 post operatively.

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