

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 will be false negatives with both RT-PCR and CT scans.

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 scans 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.

As no study has directly addressed the asymptomatic population, neither CT nor RT-PCR have been shown to be a useful screening tool for COVID-19 in asymptomatic surgical patients. In a study of patients with suspected COVID-19 chest CT showed changes consistent with COVID-19 prior to an RT-PCR positive result (Ai et al. 2020). However, this evidence is based on symptomatic patients and is very different to a population of asymptomatic patients undergoing elective cancer surgery.

RT-PCR is currently the best test to diagnose COVID-19 infection. The evidence does not support the routine use of CT screening scans for COVID-19 infection for elective cancer surgery patients. The Guidance Development Group acknowledge that there is a subgroup of patients in whom perioperative respiratory infection would pose a particularly high risk such as those undergoing major thoracic surgery and oesophageal surgery. Therefore in this subgroup of patients with an RT-PCR test where COVID-19 is not detected a CT scan may be considered based on clinical judgement.

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 is an asymptomatic phase of infection with COVID-19 and some patients will remain asymptomatic throughout their 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.

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NCCP COVID-19 Surgical testing group

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Revision date:

2020). Therefore communication to the patient preoperatively of the potential benefits and harms is important.

As no test can rule out asymptomatic infection the most important way a patient can minimise their risk of COVID-19 infection is to cocoon at home prior to elective cancer surgery and follow public health advice including hand hygiene, social distancing and the use of masks.

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. Therefore all patients should have an RT-PCR test, however only a select subgroup of patients should have a CT due to the potential of false positive results and resulting delay in surgery.

In the following surgical oncology patients a preoperative CT should be considered:

- Patients undergoing major 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 in this subgroup of elective cancer surgery patients.

Healthcare 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 and make the best use of HSE resources, while protecting staff from infection.

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.

Version: 2.00

Department:

NCCP COVID-19 Surgical
testing group

Update date: 04/06/2020

Code:

SO_COVID19_3

Revision date:

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.

The prevalence of COVID-19 is now considered to be low in the community and ICU capacity is functioning at a near normal level. To preserve diagnostic capacity CT should only be used where it will impact a decision to proceed to surgery.

Irish datasets on RT-PCR and CT findings would add to the evidence base on this topic.

9 Recommendations

- Patients should be advised the best way to minimise their risk of COVID-19 exposure is to cocoon for two weeks prior to surgery in line with public health advice.
Quality of Evidence: High
Grade of recommendation: Strong
- Patients should have an RT-PCR COVID-19 test up to 72 hours prior to scheduled cancer surgery.
Quality of Evidence: Moderate
Grade of recommendation: Strong
- If the RT-PCR test shows virus is detected, elective cancer surgery should be deferred in line with national recommendations.
Quality of Evidence: Moderate
Grade of recommendation: Strong
- If the RT-PCR test shows no virus detected a consultant may consider performing a non-contrast low dose chest CT based on clinical judgement for certain high risk groups:
 - Patients undergoing oesophageal surgery
 - Patients undergoing major thoracic surgery
 - Patients undergoing complex head and neck surgeryQuality of Evidence: Very low
Grade of recommendation: Weak

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 of delay to surgery.
- Information on hand hygiene, respiratory etiquette and social distancing should be given to household contacts to minimise risk of COVID-19 infection.

Version: 2.00

Department:

NCCP COVID-19 Surgical
testing group

Update date: 04/06/2020

Code:

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- 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 prevent and identify any postoperative infection.

The patient should be given written information regarding cooconing and strategies to minimise their risk of COVID-19 infection. (Patient information should inform the patient that any test cannot rule out COVID-19 infection).

12 GRADE

The grade of recommendations (Guyatt et al. 2008) considered the following items:

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

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Version: 2.00

Department:

NCCP COVID-19 Surgical
testing group

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Code:

SO_COVID19_3

Revision date:

14 Bibliography

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Version: 2.00

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SO_COVID19_3

Revision date:

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Department:

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Revision date: