

## Evidence check

Updated 21 April 2020

Rapid evidence checks are based on a simplified review method and may not be entirely exhaustive, but aim to provide a balanced assessment of what is already known about a specific problem or issue. This brief has not been peer-reviewed and should not be a substitute for individual clinical judgement, nor is it an endorsed position of NSW Health.

### COVID-19 testing before surgery

#### Rapid review question

What is the evidence for preoperative testing of COVID-19 for patients undergoing surgery?

#### In brief

- COVID-19 testing before surgery is generally recommended for people undergoing surgeries perceived as high risk, including upper gastrointestinal, ear nose and throat, neurosurgery and interventional cardiac services.
- Most of the guidance is from surgical specialty groups or from individual hospitals – generally these publications recommend preoperative testing, however there are some publications that say this is impractical.
- The Royal Australasian College of Surgeons (RACS) recommends COVID-19 testing should be carried out where possible in line with current federal, state, and territory Department of Health guidelines.
- The Australian Safety and Efficacy Register of New Interventional Procedures recommends following local protocols for risk stratification, and giving consideration to the potential for false negative tests.
- Speciality surgical groups also provide guidance around screening for COVID-19 risk by investigating symptoms, pathology results and patient file/history the day before or of surgery.
- Justification for testing is based on: mitigating infection risk to staff and patients through appropriate use of personal protective equipment (PPE) and, in some instances, delaying surgery.

#### Background

Operating on patients with COVID-19 presents potential risks to those in the operating room(1, 2).

#### Limitations

Evidence in the review is low quality and generally based on consensus guidance and opinion. New evidence is emerging and the response to pre-testing evolving. However, decision-making and guidance would be further strengthened if reliable data were available about COVID-19 prevalence; test specificity and sensitivity data were factored into decisions (3); and clear distinctions are made regarding testing prior to planned and emergency surgery.

## Methods (Appendix 1)

PubMed, TRIP and college websites were searched on 14 April 2020.

## Results (Tables 1 and 2)

**Table 1: Peer reviewed evidence**

Publication	Title	Study type	Recommendation
Givi et al, 2020 (4)	Safety Recommendations for Evaluation and Surgery of the Head and Neck During the COVID-19 Pandemic	Recommendations (narrative)	<p>COVID-19 status – If possible, determine the COVID-19 status of the patient beforehand. If a patient tests positive, a careful assessment of risk to the patient and healthcare workers should be performed by a multidisciplinary team before the operation is recommended.</p> <p>Endoscopic sinonasal and skull base surgery – Endoscopic nasal operations, including sinus surgery and transsphenoidal pituitary surgery, are very high-risk procedures. In general, these procedures should be postponed in patients with COVID-19 or those who cannot be tested. In negative patients, PPE for all operating room staff is recommended.</p> <p>Ear surgery – Ideally, any patient undergoing any ear surgery should be tested for COVID-19 preoperatively. If a patient is positive, surgery should be delayed until the patient has cleared the disease.</p>
Dexter et al, 2020 (5)	Perioperative COVID-19 Defense: An Evidence-Based Approach for Optimization of Infection Control and Operating Room Management	Narrative review/approach	<p>In most U.S. hospitals, routine COVID-19 testing is impractical. Testing every patient for COVID-19 has economic and logistic considerations that are likely to be unachievable in the short term and unsustainable for the long term.</p> <p>When there are insufficient test reagents/supplies to screen all patients preoperatively for COVID-19, consider the assignment of anaesthetic cases and staff (including anaesthesiologists and Certified Registered Nurse Anaesthetists) to operating rooms or non-operating room locations.</p>
Tan et al, 2020 (6)	Preliminary Recommendations for	Single hospital experience/ recommendations	All patients were first applied to the special fever clinics in the outpatient department, including a temperature test, history and physical examination. A pulmonary computed tomography (CT) scan and nucleic acid sequencing

Publication	Title	Study type	Recommendation
	Surgical Practice of Neurosurgery Department in the Central Epidemic Area of 2019 Coronavirus Infection		<p>of throat swab were recommended for preliminary diagnosis of COVID-19 infection before hospitalisation.</p> <p>Surgical indications should be rigorously evaluated and surgical treatment should be preserved for patients with emergency condition, such as ruptured aneurysm and intracranial haemorrhage.</p>
Forrester et al, 2020 (7)	Precautions for Operating Room Team Members during the COVID-19 Pandemic	Single hospital experience/algorithm	<p>Patients were stratified based on their risk of having active infection. For patients that screened positive for symptoms (fever, cough, sore throat), the surgeon would consider delaying the surgery. If surgical delay would result in unacceptable risk, then any patient with positive symptoms would undergo urgent RT-PCR testing. If a patient's surgery is unable to be delayed for testing, then the patient will be re-triaged into the emergency category and presumed COVID+.</p> <p>Rapid testing for COVID-19 was not possible for emergency procedures, so it was assumed patients were infected with COVID-19 and PPE requirements were followed.</p> <p>In this centre, RT-PCR testing of symptomatic patients was made mandatory given the availability of in-house testing at our institution, with the caveat of a 24-hour turnaround.</p>
Li et al, 2020 (8)	Anesthesia Management and Perioperative Infection Control in Patients With the Novel Coronavirus	Recommendations (narrative)	Flowchart for scheduled procedures includes admission screening (epidemiologic history, respiratory symptoms, fever, cluster incidence, CT characteristics, complete blood count, nuclei acid test or serological antibody test). Pathway for surgery is dependent on suspected disease, including usual surgical care, suspension of surgery and transfer to another hospital. PPE is also described.
Wong et al, 2020 (9)	Preparing for a COVID-19 pandemic: a review of operating room outbreak response measures in	Single hospital experience	Management of patients, visitors, and staff: All patients presenting to the hospital were screened using a standard questionnaire. Patients who fulfilled the criteria for suspected SARS-CoV-2 infection were isolated, referred to an infectious diseases specialist, and tested for the virus.

Publication	Title	Study type	Recommendation
	a large tertiary hospital in Singapore		Elective surgery was postponed if the patient had travelled to affected areas.
Al-Muharraqi 2020 (10)	Testing recommendation for COVID-19 (SARS-CoV-2) in patients planned for surgery - continuing the service and 'suppressing' the pandemic	Recommendations	<p>This recommendation paper suggests aggressive testing while carrying out surgical services despite being expensive, as they mitigate risk to patients, staff and public. It highlights data on available tests, and the need to use both the RNA and antibodies. It also reflects on the published incubation period estimates and proportion of asymptomatic/mildly symptomatic cases, concluding that patients who are scheduled for surgery should always be assumed to be potential carriers throughout the duration of their hospital stay, irrespective of pre-assessment triage (no history of exposure/travel/normal temp/no respiratory symptoms). It recommends patients to be screened with the gold standard PCR 24 hours before the surgery, as well as antibody screening, then isolated in their rooms with no visitors allowed.</p>

**Table 2: College and other guidance**

Organisation	Title	Recommendation
Society of American Gastrointestinal and Endoscopic Surgeons and European Association for Endoscopic Surgery <a href="https://www.sages.org/recommendations-surgical-response-covid-19/">https://www.sages.org/recommendations-surgical-response-covid-19/</a>	SAGES and EAES recommendations regarding surgical response to covid-19 crisis	<p>If readily available and practical, surgical patients should be tested pre-operatively for COVID-19. Operating rooms for presumed, suspected or confirmed COVID-19 positive patients should be appropriately filtered and ventilated and if possible, should be different than rooms used for other emergent surgical patients. Negative pressure rooms should be considered, if available. Only those considered essential staff should be participating in the surgical case. All members of the operating room staff should use PPE as recommended by national or international organisation, including the WHO or CDC.</p> <p>Use of monopolar electrosurgery, ultrasonic dissectors, and advanced bipolar devices should be minimised, as these can lead to particle aerosolisation. Surgical equipment used during procedures with COVID-19 positive or persons under investigation (PUI)/suspected COVID patients should be cleaned separately from other surgical equipment.</p>
Royal Australasian College of Surgeons <a href="https://umbraco.surgeons.org/media/5214/2020-04-15-recommendations-on-safe-surgery-laparoscopic-vs-open.pdf">https://umbraco.surgeons.org/media/5214/2020-04-15-recommendations-on-safe-surgery-laparoscopic-vs-open.pdf</a>	Guidelines for safe surgery: open versus laparoscopic: A rapid review commissioned by RACS	<p>Preoperative testing for COVID-19 in urgent surgery patients may not be practical. This is based on the time taken to run tests and the known issue of false negatives that is innate to the RT-PCR test, which is only correct once viral load increases above the limit of detection. A single negative test result prior to surgery could give a false sense of security, which may affect the clinical decision to operate as well as the donning of appropriate personal protective equipment (PPE).</p> <p>Of concern for managing urgent surgical patients are those patients asymptomatic for COVID-19 who are unlikely to be tested unless specific risk criteria are met. A risk stratification based on clinical information, patient history and age as well as the possibility of contact with known COVID-19 patients should be developed to assess the COVID-19 risk when considering surgery.</p>
Royal Australasian College of Surgeons <a href="https://umbraco.surgeons.org/media/5137/racs-guidelines-for-the-">https://umbraco.surgeons.org/media/5137/racs-guidelines-for-the-</a>	RACS guidelines for the management of surgical patients	<p>In relation to testing and COVID-19 precautions in the operating theatre:</p> <ul style="list-style-type: none"> <li>• The following patients are regarded as high risk for COVID-19:                             <ol style="list-style-type: none"> <li>a. Positive test for COVID-19</li> <li>b. Close contact with a confirmed case of COVID-19</li> </ol> </li> </ul>

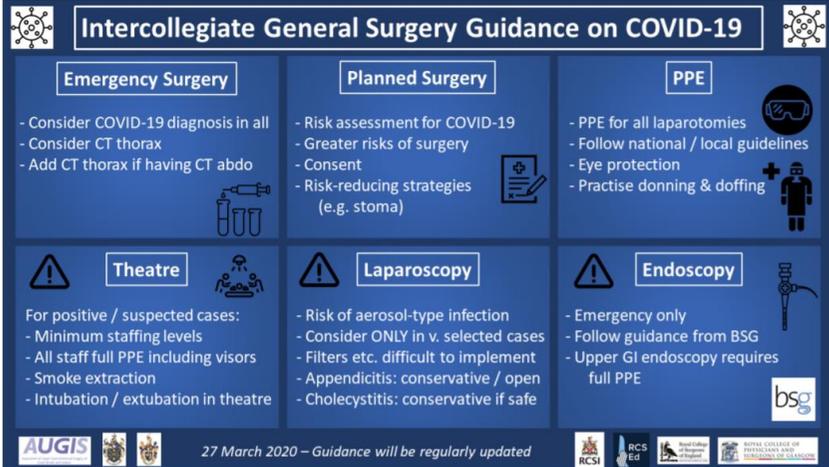
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<a href="https://www.health.gov.au/resources/publications/management-of-surgical-patients-during-the-covid-19-pandemic.pdf">management-of-surgical-patients-during-the-covid-19-pandemic.pdf</a>	during the COVID-19 pandemic	c. International travel within the last 14 days d. Any of the following symptoms: i. Sore throat ii. Cough iii. Shortness of breath iv. Fever >38°C: <ul style="list-style-type: none"> <li>• at least 15% of patients are asymptomatic</li> <li>• chest x-ray or CT chest could be considered on clinical grounds.</li> </ul>
Royal Australasian College of Surgeons <a href="https://umbraco.surgeons.org/media/5160/doc-2020-03-31-covid-19-guidelines-for-general-surgery_final_updated.pdf">https://umbraco.surgeons.org/media/5160/doc-2020-03-31-covid-19-guidelines-for-general-surgery_final_updated.pdf</a>	COVID-19 Guidelines for General Surgery	COVID-19 testing should be carried out wherever possible in accordance with current Federal, State, and/or Territory Department of Health guidelines.
Australia and New Zealand Gastric and Oesophageal Surgery Association (ANZGOSA) <a href="https://umbraco.surgeons.org/media/5161/general-guidelines-for-og-cancer-management-during-covid-outbreak_v2_6-april.pdf">https://umbraco.surgeons.org/media/5161/general-guidelines-for-og-cancer-management-during-covid-outbreak_v2_6-april.pdf</a>	ANZGOSA General Guidelines for managing Patients with Oesophageal and Gastric Cancer during COVID-19 pandemic	Oesophagectomy is considered an aerosol generating procedure (AGP). Expert opinion suggests that the risk is not as high as gastroscopy or ENT procedures, however, for patients suspected/confirmed COVID-19 full PPE including N95 respirators should be utilised. Suggestion for routine testing for COVID-19 prior to oesophagectomy due to the predicted morbidity and mortality of operating on an infected patient, even if asymptomatic.
Australian Society of Otolaryngology Head and Neck Surgery <a href="http://www.asohns.org.au/about-us/news-and-announcements/latest-news?article=78">http://www.asohns.org.au/about-us/news-and-announcements/latest-news?article=78</a>	Guidance for ENT surgeons during the COVID-19 pandemic	Advice coming from the US indicates otolaryngology is a high-risk group for COVID-19 infection. There is anecdotal evidence that a single endoscopic case in China infected 14 people who were in the operating room. There is a presumed high risk in any procedures involving the airway. The current recommendation is to reconsider the need for non-urgent surgery in particular sinonasal, tonsils and oral cavity.  Current US advice is that pre-operative COVID-19 status should be prioritised for all procedures involving the upper and lower respiratory tract, and eventually all patients

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		<p>requiring endotracheal intubation. In COVID-19 positive patients, endoscopic sinus cases should be conducted only with powered air-purifying respirator (PAPR).</p>
<p>International Society for Diseases of the Oesophagus  <a href="https://isde.net/covid19-guidance">https://isde.net/covid19-guidance</a></p>	<p>Management of Upper-GI Endoscopy and Surgery in COVID-19 Outbreak</p>	<p>It is recommended that all patients undergoing upper-GI endoscopy are triaged the day before or the same day for COVID-19 risk. Criteria for defining a patient at high-risk include one or more of the following: fever &gt;37.5°C; cough; dyspnea; exposure to patients with such symptoms/signs, COVID-19 disease; or travelling to high-risk areas.</p> <p>Operations should be avoided as much as possible while the patient still tests positive for the virus unless the surgery is deemed life-saving and needs to be performed immediately.</p>
<p>Cardiac Society Australia and New Zealand  <a href="https://www.csanz.edu.au/wp-content/uploads/2020/03/CSANZ_CONSENSUS_GUIDELINES_FOR_INVASIVE_CARDIOLOGY_SERVICES_DELIVERY_DURING_COVID_PANDEMIC_29-March_2020.pdf">https://www.csanz.edu.au/wp-content/uploads/2020/03/CSANZ_CONSENSUS_GUIDELINES_FOR_INVASIVE_CARDIOLOGY_SERVICES_DELIVERY_DURING_COVID_PANDEMIC_29-March_2020.pdf</a></p>	<p>Consensus guidelines for interventional cardiology services delivery during COVID-19 pandemic in Australia and New Zealand</p>	<p>Bringing a confirmed or suspected COVID-19 patient to the cardiac catheterisation laboratory will expose all laboratory staff to the risk of infection and disable laboratory use for a prolonged period of time for terminal cleaning. Ideally all patients undergoing urgent cardiac catheterisation in the absence of a negative COVID-19 test should be treated as potentially infected, as in Italy.</p> <p>All patients presenting for cardiac catheterisation should be screened: Screening of COVID-19 risk by cardiology trainee/registrar or consultant or catheter laboratory nurse via verbal communication as well as patient file/history: Are they a confirmed COVID-19 case? Does patient have a cough, sore throat, runny nose, recent anosmia? Does the patient currently have a temperature &gt;37.5°C? Have they had contact with a confirmed COVID-19 case? Has the patient returned from overseas or cruise in the last 14 days? Are they coming from an aged care facility/group home? Are they a healthcare worker? Have they been COVID-19 tested? If yes, when and was it negative?</p>

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		<p>Some units have created screening tools (Orange Base Hospital screening tool) which may include imaging (CXR or CT) and biochemical markers (e.g. lymphocyte count).</p> <table border="1" data-bbox="860 336 1671 818"> <thead> <tr> <th data-bbox="860 336 1104 360">LOW EXPOSURE RISK</th> <th colspan="2" data-bbox="1104 336 1671 360">HIGH EXPOSURE RISK</th> </tr> <tr> <th data-bbox="860 360 1104 384">LOW RISK FEATURES</th> <th data-bbox="1104 360 1413 384">INTERMEDIATE RISK FEATURES</th> <th data-bbox="1413 360 1671 384">HIGH RISK FEATURES</th> </tr> </thead> <tbody> <tr> <td data-bbox="860 384 1104 818"> <ul style="list-style-type: none"> <li>- Listed as droplet/contact precaution</li> <li>- No symptoms or contacts</li> <li>- Negative COVID-19 test</li> <li>- Socially distanced for 2 weeks without symptoms</li> </ul> </td> <td data-bbox="1104 384 1413 818"> <ul style="list-style-type: none"> <li>- Current fever/temperature <math>\geq 37.5</math> °C</li> <li>- Constant non-productive cough</li> <li>- Recent anosmia/hyposmia</li> <li>- Documented recent international travel/cruise or close contact with someone who has recently travelled</li> <li>- Flu like symptoms in HCW</li> <li>- Non English-speaking patient with urgent need where no history is possible</li> <li>- High likelihood of requiring NIV/CPAP/BIPAP or high flow oxygen in suspect patient</li> <li>- Lymphopaenia</li> </ul> </td> <td data-bbox="1413 384 1671 818"> <ul style="list-style-type: none"> <li>- Confirmed COVID-19</li> <li>- Patient has had contact with confirmed COVID-19 case</li> <li>- CT/CXR suggestive of COVID-19</li> </ul> </td> </tr> </tbody> </table>	LOW EXPOSURE RISK	HIGH EXPOSURE RISK		LOW RISK FEATURES	INTERMEDIATE RISK FEATURES	HIGH RISK FEATURES	<ul style="list-style-type: none"> <li>- Listed as droplet/contact precaution</li> <li>- No symptoms or contacts</li> <li>- Negative COVID-19 test</li> <li>- Socially distanced for 2 weeks without symptoms</li> </ul>	<ul style="list-style-type: none"> <li>- Current fever/temperature <math>\geq 37.5</math> °C</li> <li>- Constant non-productive cough</li> <li>- Recent anosmia/hyposmia</li> <li>- Documented recent international travel/cruise or close contact with someone who has recently travelled</li> <li>- Flu like symptoms in HCW</li> <li>- Non English-speaking patient with urgent need where no history is possible</li> <li>- High likelihood of requiring NIV/CPAP/BIPAP or high flow oxygen in suspect patient</li> <li>- Lymphopaenia</li> </ul>	<ul style="list-style-type: none"> <li>- Confirmed COVID-19</li> <li>- Patient has had contact with confirmed COVID-19 case</li> <li>- CT/CXR suggestive of COVID-19</li> </ul>
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<p>Urological Society of Australia and New Zealand  <a href="https://umbraco.surgeons.org/media/5163/policies/021-guidelines-ppe-for-urologists-during-covid-19-final-310320.pdf">https://umbraco.surgeons.org/media/5163/policies/021-guidelines-ppe-for-urologists-during-covid-19-final-310320.pdf</a></p>	<p>Personal Protection Equipment (PPE) for Urologists during COVID-19 Pandemic</p>	<p>Where possible, it may be advisable test for COVID-19 of patients to reduce known risk to staff. However, the currently available PCR testing may provide a false negative result early in the course of the disease, so is of limited benefit to reassure staff regarding patient safety. The newer immunoglobulin tests that may be available in the next few weeks may well provide better early detection of disease, and provide greater reassurance, and further advice may follow once there is availability and clinical experience with the new tests.</p> <p>Urologists generally do not perform significant aerosol generating procedures but are exposed to urine and blood in the course of their daily work. The risk of contamination from a urine splash is minimal, COVID-19 not having been identified in urine to date (although other coronaviruses have been found in urine). Faecal spread is possible, however considered a low risk. Aerosol risks to urologists may be more significant from patients coughing during intimate procedures, e.g. catheterisation, LA cystoscopy, or following intubation/extubation.</p>									

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<p>NSW Health/Agency for Clinical Innovation  <a href="https://www.health.nsw.gov.au/Infectious/covid-19/Documents/COVID-19-surgery-management-principles.pdf">https://www.health.nsw.gov.au/Infectious/covid-19/Documents/COVID-19-surgery-management-principles.pdf</a></p>	<p>Key principles for management of surgery during COVID-19 pandemic</p>	<p>If possible, all emergency surgery patients should be tested for COVID-19 so that they can be housed in appropriate wards to minimise cross-infection.</p>
<p>Intercollegiate General Surgery Societies  <a href="https://www.rcsed.ac.uk/news-public-affairs/news/2020/march/intercollegiate-general-surgery-guidance-on-covid-19-update">https://www.rcsed.ac.uk/news-public-affairs/news/2020/march/intercollegiate-general-surgery-guidance-on-covid-19-update</a></p>	<p>Intercollegiate General Surgery Guidance on COVID-19 UPDATE</p>	<p>Acute patients are the priority, and COVID-19 testing should be sought in any patient needing emergency surgery: use history, COVID-19 testing, recent CT chest (last 24 hours) or failing that CXR. Any patient undergoing abdominal CT scan should also have CT chest. Current tests for COVID-19 may be false negative.</p>  <p>The infographic is a 2x3 grid of blue boxes with white text and icons. The top row contains 'Emergency Surgery', 'Planned Surgery', and 'PPE'. The bottom row contains 'Theatre', 'Laparoscopy', and 'Endoscopy'. Each box lists specific clinical recommendations. At the bottom, it includes logos for AUGIS, RCS, and BSG, along with the date '27 March 2020' and a note that 'Guidance will be regularly updated'.</p>
<p>World Federation of Societies of Anaesthesiologists  <a href="https://www.wfsahq.org/components/com_virtual_l">https://www.wfsahq.org/components/com_virtual_l</a></p>	<p>Pre-operative assessment</p>	<p>Identify suspected COVID-19 patients during the pre-operative assessment. Although suspected and confirmed case should ideally be identified prior to anaesthetic assessment, anaesthesiologists should maintain a high index of suspicion, particularly in clinic setting.</p>

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<p><a href="https://www.library/media/1c4ec5c64b9aaacf7c47f76a61fb6edc-atow-422-01.pdf">library/media/1c4ec5c64b9aaacf7c47f76a61fb6edc-atow-422-01.pdf</a></p>		<div data-bbox="869 272 1384 715" style="border: 1px solid green; padding: 5px;"> <p><b>Characteristics of COVID-19 infection</b></p> <p><b>Risk factors</b></p> <ul style="list-style-type: none"> <li>• Male gender</li> <li>• Comorbidities, e.g.: Hypertension, diabetes, cerebral vascular disease, cardiovascular disease</li> </ul> <p><b>Symptoms and signs</b></p> <ul style="list-style-type: none"> <li>• Asymptomatic*</li> <li>• Fever</li> <li>• Fatigue</li> <li>• Dry cough</li> <li>• Myalgia</li> <li>• Dyspnoea</li> <li>• Others: diarrhoea and nausea</li> </ul> <p><b>Investigation</b></p> <p><b>Blood tests:</b></p> <ul style="list-style-type: none"> <li>• Lymphopenia</li> <li>• Leucocytosis</li> <li>• Neutrophilia</li> <li>• Elevated lactate dehydrogenase</li> <li>• Prolonged INR</li> </ul> <p><b>Imaging:</b></p> <ul style="list-style-type: none"> <li>• Chest X-ray: consolidation</li> <li>• CT thorax: bilateral distribution of patchy shadows and ground glass opacity</li> </ul> <p><b>Complications</b></p> <ul style="list-style-type: none"> <li>• Shock</li> <li>• Acute respiratory distress syndrome (ARDS)</li> <li>• Arrhythmia</li> <li>• Acute renal injury</li> </ul> </div> <p>If patient is considered high risk, discuss with surgeons on urgency of operation, and delay if possible. Involve infection control team early in suspected cases. Consider performing rapid test to confirm diagnosis to guide infection control measures if time allows. If diagnosis has been established, coordinate with infection control team for isolation purposes. Identify high-risk procedures.</p>
<p>Recommendation from the Joint Taskforce of the Chinese Society of Anesthesiology and the Chinese Association of Anesthesiologists  <a href="https://anesthesiology.pubs.asahq.org/article.aspx?articleid=2763456">https://anesthesiology.pubs.asahq.org/article.aspx?articleid=2763456</a></p>	<p>Perioperative Management of Patients Infected with the Novel Coronavirus</p>	<p>Provides a pathway and recommendations in the Anesthesia Preoperative Evaluation Clinic; including:</p> <ul style="list-style-type: none"> <li>• Measuring patients' body temperatures (electronic ear thermometer) before entering the consulting room. If the body temperature is higher than 37.3°C, the patient must be escorted to the clinics for fever disorders immediately and should be reported to the infection control officer on duty of the hospital. Patients with normal body temperature can proceed with the evaluation at the anaesthesia clinic.</li> <li>• During the first encounter, the anaesthesiologists should take a detailed history and conduct a thorough physical examination, particularly a careful chest examination.</li> </ul>

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		<ul style="list-style-type: none"> <li>Suspected cases of infection with 2019-nCoV even with normal body temperature should be reported to the infection control officer on duty at the hospital immediately.</li> </ul>
<p>NHS  <a href="https://static1.squarespace.com/static/5e6613a1dc75b87df82b78e1/t/5e7b2d9f284dcc611e0b9391/1585130911931/NHSE-Fragility-Fractures-Coronavirus.pdf">https://static1.squarespace.com/static/5e6613a1dc75b87df82b78e1/t/5e7b2d9f284dcc611e0b9391/1585130911931/NHSE-Fragility-Fractures-Coronavirus.pdf</a></p>	<p>Clinical guide for the perioperative care of people with fragility fractures during the Coronavirus pandemic</p>	<p>The team, ideally with the input of an orthogeriatrician or other physician, must clarify the current coronavirus status of every patient to be listed as either ‘treat as coronavirus’ OR ‘treat as non-coronavirus’. This is a clinical judgement to be based on current Public Health England PPE guidelines, and an understanding that older patients may not present with typical coronavirus symptoms. This judgement should not be delayed by waiting for coronavirus test results. The rationale for this decision should be clear and documented.</p>
<p>American Association for the Study of Liver Diseases  <a href="https://www.aasld.org/sites/default/files/2020-04/AASLD-COVID19-ClinicalInsights-4.07.2020-Final.pdf">https://www.aasld.org/sites/default/files/2020-04/AASLD-COVID19-ClinicalInsights-4.07.2020-Final.pdf</a></p>	<p>Clinical insights for hepatology and liver transplant providers during the COVID-19 pandemic – collective opinion</p>	<p>Guidance for ways to evaluate COVID-19 risk for hepatology and liver transplant providers: Screen potential donors for exposure and clinical symptoms/fever compatible with COVID-19 (regardless of test results or availability).</p> <p>Alternatives to PCR-based testing such as chest radiography may also be considered. Screen potential recipients with an acceptable organ offer for COVID-19 symptoms/fever before they are called in from home for transplantation. When an organ offer becomes available, call in to the hospital potential transplant recipients at the latest possible time to minimise exposure to the hospital environment. Consider accepting only grafts with a low risk of delayed graft function to minimise complications and postoperative lengths of stay. Consider testing of recipients and donors for SARS-CoV-2 before transplantation, if testing is available. Consider the risk of false negatives and testing turnaround time in your area. Review as much donor history as possible for fever, respiratory symptoms and radiographic findings. Consider limiting the involvement of fellows in endoscopies and other procedures to conserve PPE. Follow CDC recommendations for cleaning and disinfecting rooms or areas visited by individuals with suspected or confirmed COVID-19.</p>
<p>Australian Health Protection Principal Committee (AHPPC)</p>	<p>Statement on organ donation and transplantation</p>	<p>To support the critical programs that provide life-saving transplants (deceased donor), AHPPC recommends:</p>

Rapid evidence checks are based on a simplified review method and may not be entirely exhaustive, but aim to provide a balanced assessment of what is already known about a specific problem or issue. This brief has not been peer-reviewed and should not be a substitute for individual clinical judgement, nor is it an endorsed position of NSW Health.

Organisation	Title	Recommendation
<a href="https://www.health.gov.au/news/australian-health-protection-principal-committee-ahppc-coronavirus-covid-19-statements-on-7-april-2020#statement-on-organ-donation-and-transplantation-during-the-covid19-pandemic">https://www.health.gov.au/news/australian-health-protection-principal-committee-ahppc-coronavirus-covid-19-statements-on-7-april-2020#statement-on-organ-donation-and-transplantation-during-the-covid19-pandemic</a>	during the COVID-19 pandemic	<ul style="list-style-type: none"> <li>• inclusion of deceased donors and transplant recipients in the testing criteria in the CDNA National Guideline for COVID-19</li> <li>• prioritisation of testing of samples or specimens to allow the logistics for retrieval and transplantation teams to be expedited.</li> </ul>
Anaesthesia tutorial of the week <a href="https://www.wfsahq.org/components/com_virtual_library/media/1c4ec5c64b9aaacf7c47f76a61fb6edc-atow-422-01.pdf">https://www.wfsahq.org/components/com_virtual_library/media/1c4ec5c64b9aaacf7c47f76a61fb6edc-atow-422-01.pdf</a>	Peri-operative Considerations in Urgent Surgical Care of Suspected and Confirmed COVID-19 Orthopedic Patients	<p>SARS-CoV-2 test should be considered in high risk individuals, preferably before surgery and before intubation if possible.</p> <p>If patient is considered high risk, discuss with surgeons on urgency of operation, and delay if possible. Involve infection control team early in suspected cases. Consider performing rapid test to confirm diagnosis to guide infection control measures if time allows. If diagnosis has been established, coordinate with infection control team for isolation purposes.</p>

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10. Al-Muharraqi MA. Testing recommendation for COVID-19 (SARS-CoV-2) in patients planned for surgery - continuing the service and 'suppressing' the pandemic. *Br J Oral Maxillofac Surg*. 2020.

## Appendix 1

PubMed search string: ((((((Preoperative Period[MeSH Terms]) OR (Preoperative Care[MeSH Terms])) OR (Preoperative[Title/Abstract])) OR (Pre-operative[Title/Abstract])) OR ("Pre operative"[Title/Abstract])) OR (perioperative[Title/Abstract])) AND ((2019-nCoV[title/abstract] or nCoV\*[title/abstract] or covid-19[title/abstract] or covid19[title/abstract] OR "covid 19"[title/abstract] OR "coronavirus"[MeSH Terms] OR "coronavirus"[title/abstract] OR sars-cov-2[title/abstract] OR "severe acute respiratory syndrome coronavirus 2"[Supplementary Concept]))

'RACS hub was used to review the specialty societies'

TRIP database: 'COVID-19 and surgery' and Google: 'COVID-19 testing and surgery'