

ASSESSMENT OF TRANSPLANT CANDIDATES including (RE)LISTING AFTER COVID-19 INFECTION

BACKGROUND

- COVID-19 infection continues to occur at significant levels in Australia and New Zealand
- Poor outcomes from COVID-19 infection in transplant recipients may relate to perioperative complications, organ dysfunction, or immunosuppression.
- Early data with initial SARS-CoV-2 variants in an unvaccinated cohort showed significant mortality rates in patients undergoing surgery in the first 6 weeks after COVID-19 infection¹ while surgery performed ≥ 7 weeks after diagnosis had a similar mortality risk to baseline.
- Hence our initial communication recommended delaying transplantation for 7 weeks to reduce mortality and morbidity associated with major surgery post COVID-19 infection
- Recent unpublished COVIDSurg3 data during the Omicron wave shows a lower mortality rate after surgery with peri-operative COVID-19 infection than the original COVIDSurg data², however overall, 30-day mortality of 5.8% continues to be excessive. Higher mortality rates occurred in those over 70 years of age, with a high ASA grade, who were symptomatic of COVID-19, were having emergency surgery, who were unvaccinated, or who were in a lower middle-income country.³
- Other large cohort studies suggest the highest risk of post-operative complications occurs in those diagnosed with SARS-CoV-2 0-4 weeks prior to surgery, particularly unvaccinated individuals.⁴
- Studies of COVID peri-transplant surgery are small and show outcomes may not be excessively severe in kidney transplant recipients diagnosed with COVID-19 at transplant⁵ or early after transplantation.⁶
- Omicron has resulted in less severe infection than earlier strains.⁷
- For some patients the risk of not being transplanted will outweigh the potential risk of post-operative complications after COVID-19 infection.

This document provides updated guidance on assessment for transplant in the following situations;

- Reactivation on the transplant waitlist following recovery from COVID-19
- Pre-transplant COVID-19 assessment at the time of organ offer

TRANSPLANT LIST REACTIVATION FOLLOWING COVID-19

- Many transplant candidates who have COVID-19 will require a temporary hold on their listing status.
- While patients should wait 7 weeks from SARS-CoV-2 diagnosis until surgery where possible, those with favourable risk profile (e.g., mild/asymptomatic infection, recovered symptoms, younger adult, or paediatric patient, up to date with vaccination) and/or who have more pressing need for transplantation may be considered for transplantation 4 weeks after SARS-CoV-2 diagnosis.
- Transplantation earlier than 4 weeks from SARS-CoV-2 diagnosis can be considered after risk-benefit analysis on a case-by-case basis.

ASSESSMENT OF TRANSPLANT CANDIDATES IMMEDIATELY PRIOR TO TRANSPLANT

- All potential transplant recipients should undergo assessment for SARS-CoV-2 at the time of organ offer with upper respiratory tract PCR
- Positive PCR results may indicate distant, recent, current, or pre-symptomatic infection, or uncommonly may represent false positive results. History of infection and symptoms, strength of PCR, and results from repeat testing may aid interpretation.

In candidates with a positive PCR result it is generally recommended the transplant is deferred. Proceeding with transplantation may be considered in certain circumstances after careful risk-benefit analysis including principles mentioned above, such as risk profile and timing from infection if known, along with treatment with COVID-19 antiviral and/or monoclonal antibody therapy.

Considerations for transplant candidates requiring transport to transplant centre

- For candidates who require long-distance transport to the transplant centre and where rapid SARS-CoV-2 PCR testing is not available or would significantly delay transport/organ acceptance, consider a screening RAT to assist with the decision to initiate transport of the patient.

Transplant candidates with a history of recent exposure to SARS-CoV-2 (“close contact”)

- Transplant candidates may be exposed to SARS-CoV-2 (“close contact”) and be in the latent period (SARS-CoV-2 not detectable by PCR, asymptomatic) of infection at the time of transplant offering
- The decision to proceed with transplantation should consider several factors including:
 - o Risk of exposure/transmission
 - o Time between SARS-CoV-2 exposure and transplantation
 - o Vaccination status and expected efficacy of vaccination
 - o Personal history of COVID-19 and timing in relation to current exposure
 - o Urgency for transplantation
- The role of SARS-CoV-2 prophylaxis (e.g., monoclonal antibodies or antiviral agents) has not been assessed in this setting but may be considered in certain circumstances following consultation with infectious diseases

References

- 1 COVIDSurgCollaborative, CollaborativeGlobalSurge. Timing of surgery following SARS-CoV-2 infection: an international prospective cohort study. *Anaesthesia*. 2021;76(6):748-758. doi:10.1111/anae.15458
- 2 *Anaesthesia* 2021; 76: 748-758.
- 3 [COVIDsurg 3 - Changing global practice - YouTube](#)
- 4 Sidney L *Annals Surgery* Nov 2022; Deng *Annals Surgery* Feb 2022
- 5 Manfro *Transplantation* 2022
- 6 Meshram *Transplantation Proc* 2021
- 7 Cochran *Transplantation* 2022