Assessment of COVID-19 status in transplant candidates

BACKGROUND

- With the emergence of the Omicron variant of SARS-CoV-2, COVID-19 case numbers in Australia have exponentially increased[1]. Early data indicates that the disease caused by Omicron is milder than with previous variants[2], however the impact on transplant recipients and peri-operative complications remains unclear.
- With increasing prevalence of COVID-19 in Australia, the likelihood of transplant candidates having COVID-19 will also increase.
- Guidance as to when transplantation is safe to occur following recovery from COVID-19 is required.
- The use of the Public Health 'release from isolation' (CDNA SoNG)[3] as the sole criteria to reactivate listing status is not appropriate, as they are primarily designed to reduce spread of SARS-CoV-2 and achieve current public health goals.
- Clearance of COVID-19 prior to reactivation on the transplant waiting list aims to ensure that the potential recipient is no longer infectious and does not have persistent infection, which may worsen with transplant immunosuppression

Information on testing

- The preferred testing method for SARS-CoV-2 in this setting is PCR on a nasopharyngeal swab.
- For testing patients who have recovered from COVID-19 with a view to returning to the active waitlist (Figure 1), conventional PCR is appropriate. If PCR positive in this context, viral culture may be used as a measure of infectivity and active infection, in consultation with a transplant infectious diseases physician, noting that turn around time for results is 7 days.
- At the time of a transplant offer, preferred tests are nucleic acid tests with rapid turn around time and provision of cycle threshold values (e.g. GeneXpert), which may assist in further decision making if SARS-CoV-2 is detected. Rapid antigen tests (RAT) are not appropriate in this setting due to variable sensitivity, which is reduced compared to PCR[4]. However, RAT may be considered if rapid PCR is not available and a there is an urgent need to make the decision to transport a potential recipient to a transplant centre (figure 2).

Immunosuppression

- There is no available data to guide choice of immunosuppression regimen for transplant candidates who have recovered from COVID-19. As the intent of this document is to avoid performing transplantation in a person with an active SARS-CoV-2 infection, choice of immunosuppression should not be impacted by past COVID-19.

AIMS

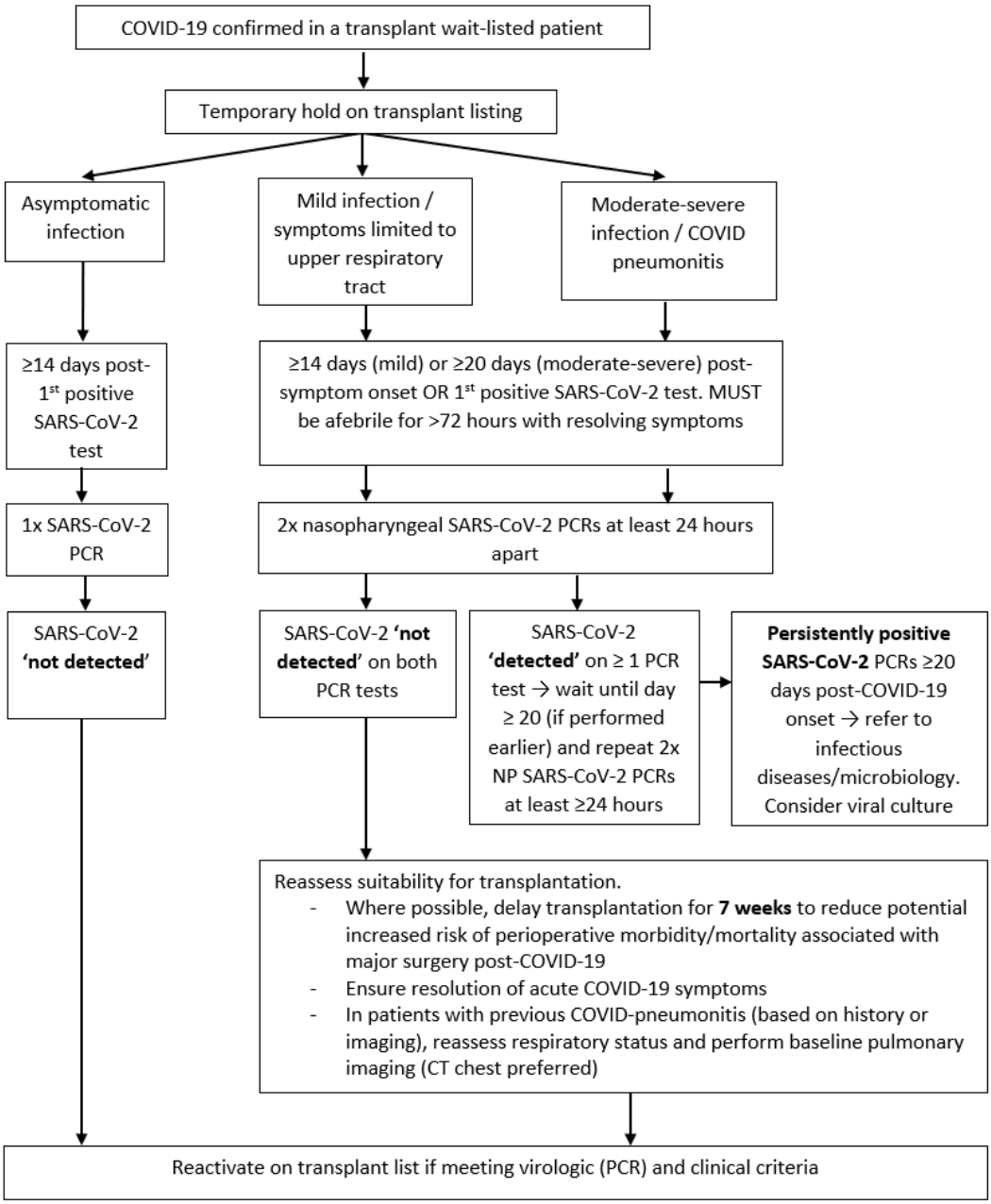
- To reduce the potential risk of increased morbidity and/or mortality associated with COVID-19 in the peri-transplant period
- To reduce the risk of transmission of SARS-CoV-2 to transplant providers and other transplant candidates/recipients
- This document provides guidance on assessment of suitability for transplant, with regards to COVID-19, in the following situations;

1. Reactivation to the active transplant waitlist following recovery from COVID-19
2. Pre-transplant COVID-19 assessment, at the time of organ offer

REACTIVATION OF ACTIVE TRANSPLANT LISTING FOLLOWING COVID-19

- Many transplant candidates will have COVID-19 and require a temporary hold on their listing status. Restoration to the active waitlist should be considered as per **figure 1**

Figure 1: Assessment of suitability for restoration to the active transplant waitlist post-COVID-19



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ASSESSMENT OF TRANSPLANT CANDIDATES IMMEDIATELY PRIOR TO TRANSPLANT

- All potential transplant recipients should undergo assessment for COVID-19 at the time of organ offer (**figure 2**)
- Potential recipients may be incidentally diagnosed with COVID-19 on pre-transplant screening or may have recently recovered from COVID-19, without the prior knowledge of the transplant team
- The time between onset of COVID-19 symptoms or first positive PCR if asymptomatic, should be no less than 14 days for asymptomatic for mild infection and 20 days for moderate-severe infection
- Undergoing major surgery immediately post-COVID-19 has been associated with increased post-operative mortality [5,6]. It is unclear to what degree these risks occur in a vaccinated individual infected with the Omicron variant. Where possible, consider delaying transplantation for at least 7 weeks post-onset of COVID-19 symptoms

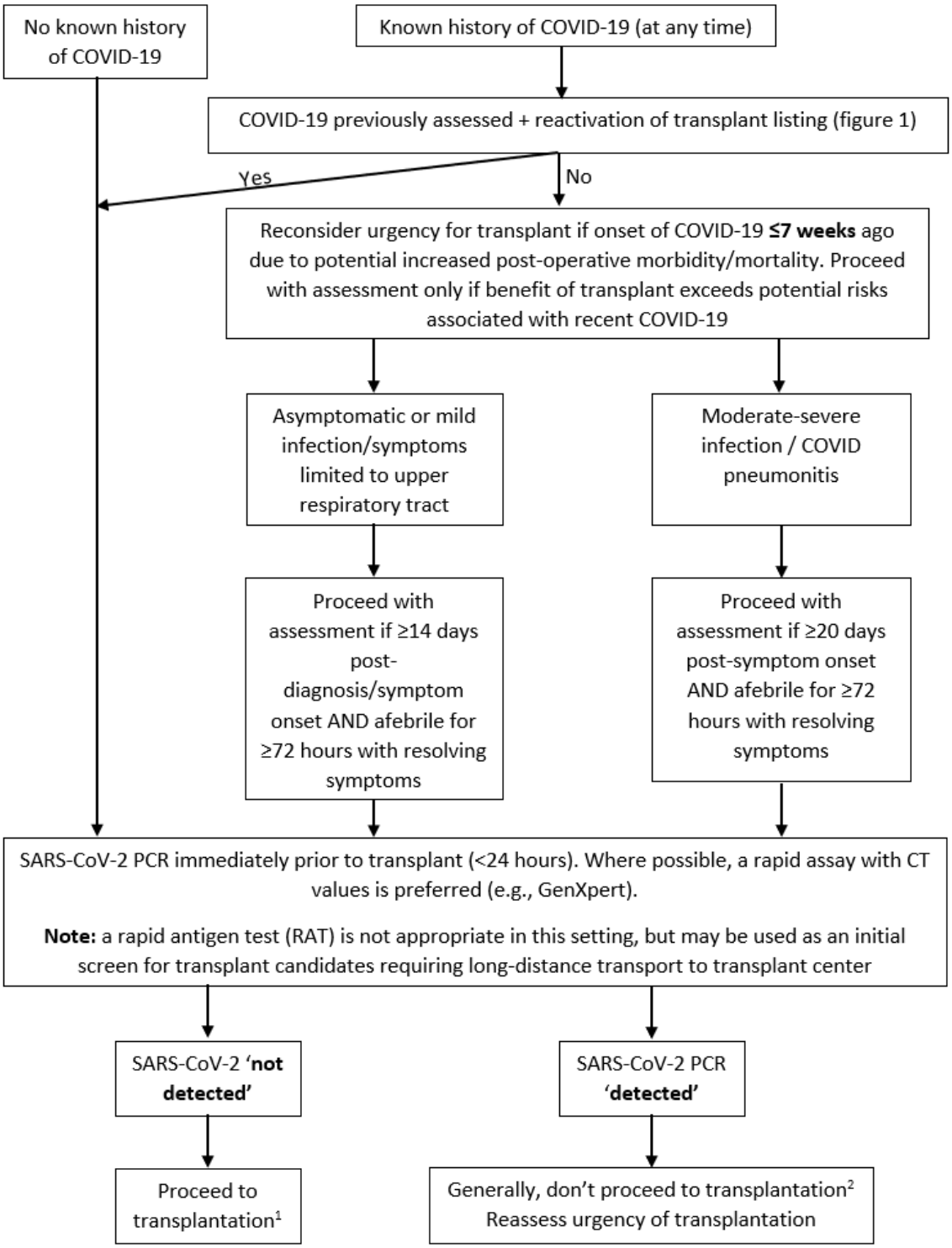
Considerations for transplant candidates requiring transport to transplant centre

- 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:
    - Risk of exposure/transmission
    - Time between SARS-CoV-2 exposure and transplantation
    - Vaccination status and expected efficacy of vaccination
    - Personal history of COVID-19 and timing in relation to current exposure
    - 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

Figure 2: Pre-transplant COVID-19 assessment, at time of organ offer



[1] Caution is advised if the individual is a “close contact” of a case of COVID-19 and might be in the incubation period of infection where testing is negative (see above)

[2] Transplantation might be considered after discussion with an infectious diseases physician/microbiologist where a SARS-CoV-2 PCR detected result is likely to represent historical infection (not active infection) according to CDNA COVID-19 Series of National Guidelines criteria available at https://www1.health.gov.au/internet/main/publishing.nsf/Content/cdna-song-novel-coronavirus.htm

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