

# Australian and New Zealand Paired Kidney Exchange Program

Protocol 11: Coronavirus Disease (COVID-19) Testing



# Coronavirus Disease 2019 (COVID-19) Testing for Donor and Recipient Pairs in the Australian and New Zealand Paired Kidney Exchange Program

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the cause of COVID-19, emerged in late 2019 and had a global impact on transplantation.

However, there is now increased knowledge regarding the significance of SARS-CoV-2 infection in organ donors and solid organ transplant recipients and transmission of donor derived SARS-CoV2 has not been demonstrated in kidney transplant recipients<sup>1</sup>.

This ANZKX protocol has been updated in keeping with current recommendations from the Transplantation Society of Australia and New Zealand (TSANZ) which advises on up-to-date COVID-19 practices related to transplantation in both countries<sup>2,3</sup>.

The Australian and New Zealand College of Anaesthetists (ANZCA) have also updated their recommendations on safe timing for surgical procedures after SARS-CoV-2 infection which includes a risk assessment based on patient related and health safety related factors prior to proceeding.

The aim of this protocol is to provide guidance around screening for donor SARS-CoV-2 infection around the time of donation. It also aims to minimise the risk of last-minute cancellation of chains when SARS-CoV-2 infection is detected in a donor or recipient. The risk assessment for chain cancellation due to SARS-CoV-2 infection is based on both patient related safety factors as well as health/institution safety factor.

## COVID-19 Testing

SARS-CoV-2 Nucleic Acid Detection testing should be by PCR to detect current infection where available, given it has demonstrated superior diagnostic sensitivity >90%<sup>5</sup> compared to rapid antigen testing (RAT). In units where PCR cannot easily be performed COVID-19 RAT maybe used which has a sensitivity of approximately 82% in the first week of infection; transplant units must therefore risk assess based on clinical symptoms and this result<sup>6</sup>. SARS-CoV-2 testing should be performed by staff trained in nasopharyngeal swab for COVID-19<sup>7</sup>.

## Screening Protocol for ANZKX Donors

Symptoms of COVID-19 include fever, sore throat, cough, dyspnoea, anosmia, rhinorrhoea, loss of taste, myalgia, arthralgia, anorexia, nausea and vomiting and diarrhoea<sup>8</sup>.

All ANZKX kidney donors and recipients should be assessed for the risk of COVID-19 transmission as per their local transplanting unit's protocol.

Transplanting units should educate donors to take precautions to reduce their risk of infection in the 2-3 weeks prior to surgery and to notify their transplanting unit if their risk of acquiring COVID infection has increased due to contact with a suspected or known case during this time period or if they develop symptoms of SARS-CoV-2 infection. Donors and recipients should be educated to keep up to date with their COVID-19 vaccinations as per Australian Government Department of Health and Aged Care guidelines<sup>9</sup>.



The ANZKX team should be notified by the transplanting unit if a donor has acquired symptomatic SARS-CoV-2 infection within 3 weeks of surgery where there is an expectation that operation date may need to be rescheduled.

### 1 day prior to surgery

The ANZKX program no longer mandates the testing of all donors in the 24 hours prior to surgery. However, we request that units **still assess all donors the day prior to surgery for symptoms of COVID-19**<sup>8</sup>.

If no symptoms of SARS-CoV-2 infection are present, there is no need to test for SARS-CoV-2 infection, unless this is usually performed as part of local practice.

If a donor is symptomatic, the ANZKX team should be notified, and SARS-CoV-2 (COVID-19) testing should be performed as per the local transplanting unit protocol. The result should be accessed the same day and the ANZKX team should be notified of the result.

If a symptomatic donor is COVID-19 positive, the transplanting unit should follow ANZCA guidelines<sup>4</sup>, which recommend not proceeding with surgery. The ANZKX team should be notified of the result in order that other transplant units involved in the chain can be contacted regarding cancellation.

The **day prior to surgery all recipients should also be assessed for symptoms of COVID-19** and testing guidelines should follow local practice guidelines. If a recipient is symptomatic and SARS-CoV-2 (COVID-19) testing is positive, the transplanting unit should notify the ANZKX team if cancellation is to occur.

If the local policy is still to perform COVID testing then the timing should ensure the result is available during the afternoon of the day prior to surgery or earlier.

### Day of surgery

The ANZKX program does not require SARS-CoV-2 testing in an asymptomatic patient.

### Protocol for Reactivation of Donors/Recipients in ANZKX following recent COVID-19 infection

As per ANZCA guidelines<sup>4</sup>, when a patient is no longer symptomatic and the transplanting unit has medically cleared the donor/recipient, the ANZKX team should be notified. The earliest surgery should be rescheduled is usually 2-3 weeks from SARS-CoV-2 infection.

## References

- 1 Utilization and outcomes of deceased donor SARS-CoV2-positive organs for solid organ transplantation in the United States. *Am J Transplant.* 2022 Sep;22(9):2217- 2227 Schold JD et al.
- 2 TSANZ Communique May 2024: [https://tsanz.com.au/storage/COVID\\_Communique/OTA-TSANZ-COVID\\_19\\_Info\\_for\\_donation\\_and\\_transplantation\\_v7\\_May\\_2024\\_Final.pdf](https://tsanz.com.au/storage/COVID_Communique/OTA-TSANZ-COVID_19_Info_for_donation_and_transplantation_v7_May_2024_Final.pdf)
- 3 TSANZ Communique June 2024: [https://tsanz.com.au/storage/COVID\\_Communique/Pre-transplant-COVID-assessment-update-June-2024\\_Final.pdf](https://tsanz.com.au/storage/COVID_Communique/Pre-transplant-COVID-assessment-update-June-2024_Final.pdf)
- 4 Australian and New Zealand College of Anaesthetists ANZCA Communique May 2023: [https://www.anzca.edu.au/getattachment/af1fb728-5e87-413a-b006-c54cecf282b1/PG68\(A\)-Guideline-surgical-patient-safety-SARS-CoV-2](https://www.anzca.edu.au/getattachment/af1fb728-5e87-413a-b006-c54cecf282b1/PG68(A)-Guideline-surgical-patient-safety-SARS-CoV-2)
- 5 Binny RN, et al. Sensitivity of Reverse Transcription Polymerase Chain Reaction Tests for Severe Acute Respiratory Syndrome Coronavirus 2 Through Time. *The Journal of Infectious Diseases*, Volume 227, Issue 1, 1 January 2023, Pages 9–17, <https://academic.oup.com/jid/article/227/1/9/6649627>
- 6 How accurate are rapid antigen tests in diagnosing COVID-19 [https://www.cochrane.org/CD013705/INFECTN\\_how-accurate-are-rapid-antigen-tests-diagnosing-covid-19](https://www.cochrane.org/CD013705/INFECTN_how-accurate-are-rapid-antigen-tests-diagnosing-covid-19), Cochrane Database, July 2022, J Dinnes et al.
- 7 CDC June 2024: Testing for COVID-19 <https://www.cdc.gov/covid/testing/index.html>
- 8 CDC June 2024: Symptoms of COVID-19 <https://www.cdc.gov/covid/signs-symptoms/index.html>
- 9 Australian Government Department of Health and Aged Care: May 2024: <https://www.health.gov.au/our-work/covid-19-vaccines/getting-your-vaccination>



VERSION CONTROL			
Version	Date	Author	Comments
V 1.0	Sep 2020	ANZKX Team	New protocol created in response to the COVID-19 pandemic.
V 1.0	Feb 2021	ANZKX Team	Reviewed no changes.
V 1.0	Nov 2021	ANZKX Team	Reviewed no changes.
V 2.0	Apr 2022	ANZKX Team	<ol style="list-style-type: none"> <li>1. Changed advice to cancel surgery due to COVID-19 exposure detected 7-9 days prior to planned surgery, to an exposure within the last 10 days.</li> <li>2. Changed the final donor PCR to the day prior to surgery.</li> <li>3. Added protocol for the reactivation of donors and recipients after COVID-19.</li> <li>4. Updated appendix references and links.</li> </ol>
V 3.0	Sep 2024	ANZKX Team	<ol style="list-style-type: none"> <li>1. Donor testing 24 hours prior to surgery is no longer mandated by the ANZKX program and Transplant Centres should instead follow their local guidelines.</li> <li>2. However, donors and recipients should still be assessed for symptoms of COVID-19 the day prior to surgery.</li> </ol>

