Routine testing for coronavirus (SARS-CoV-2) causing COVID-19:
Information for donation and transplant professionals - Version 6 dated 2 Nov-2021

Knowledge about COVID-19 is rapidly evolving with advice and publications regarding the disease continually being updated. The guidance in this document will evolve due to changing circumstances e.g., community prevalence of viral infection, viral testing processes, and intensive care unit and hospital capacity.

Clinicians within the organ donation and transplantation sector should ensure that information utilised is in its most up to date form. This information should be read in conjunction with the Coronavirus Disease 2019 (COVID-19) Communicable Disease Network of Australia (CDNA) National guidelines for public health units, CDNA-SoNG. Further links to national guidance are provided within and at the end of this document.

The donor risk assessment interview includes questions about travel and occupation (e.g., healthcare workers with direct patient contact) that is relevant to assessing epidemiological risk for COVID-19. In addition, it should be ascertained whether the donor has ever been tested or diagnosed with COVID-19, or has been in close contact with a person known to have confirmed or suspected COVID-19.

Routine testing of deceased donors

Routine COVID-19 (SARS-CoV-2) virus screening should be undertaken in all deceased donors, generally within 72 hours of donation (although a negative test undertaken earlier in the same hospital admission may suffice in the absence of subsequent development of clinical features suggestive of COVID-19).

Testing should be conducted as follows:

- Nasopharyngeal swab (PCR test) – Minimum requirement
  and
- Lower respiratory tract sample (PCR test) – Preferable in all donors; Required for lung donors
  Diagnostic sensitivity is improved with the addition of testing lower respiratory tract samples. As donor transmission is more likely with lung transplantation than that of other solid organs, lower respiratory tract sampling is a requirement for lung donation. A tracheal aspirate is generally acceptable, although in potential lung donors presumed recovered from recent COVID-19 infection, a bronchoscopically obtained sample is preferable (e.g., mini- or full broncho-alveolar lavage, bronchial washings).

Prospective results are required prior to proceeding with transplantation, including a negative lower respiratory tract sample for lung donors.

Suggested approach to assessing donors for COVID-19 (SARS-CoV-2):

- SARS-CoV-2 PCR testing within 72 hours of planned donation
  - All organs: nasopharyngeal (NP) swab
  - Lungs: NP swab + lower respiratory tract sample (tracheal aspirate generally acceptable; bronchoscopically obtained sample preferable if recently recovered from COVID-19)
- If SARS-CoV-2 PCR positive*
  - All organs: stage of infection should be assessed using CDNA “release from isolation” guidelines to assist whether the organs are suitable for transplantation.
  - Lungs: not suitable for transplantation
- If SARS-CoV-2 PCR(s) negative

- Assess risk of recent, significant SARS-CoV-2 exposure (i.e., is the donor considered a "close contact"?), which may affect transplant suitability

* If prior infection, see "Organ donation and transplantation from donors with a diagnosis of COVID-19", available on the TSANZ website

Routine testing of living donors

If a potential living donor has symptoms of an acute respiratory infection, unless a diagnosis other than COVID-19 has been established (e.g., PCR confirmed rhinovirus with minor and resolving symptoms), consideration may be given to delaying donation until symptoms have resolved even if the test is negative. Only in time critical circumstances, and where the transplantation team has appropriately considered epidemiological and clinical risks, should transplantation proceed prior to resolution of acute respiratory infection symptoms.

It is also recommended that routine testing of living donors (generally kidney donation) is undertaken for SARS-CoV-2 (virus causing COVID-19), preferably within the 48 hours prior to donation:

- Nasopharyngeal swab (PCR test): Obtain the PCR result prior to proceeding with donation.

Routine testing of recipients prior to transplantation

It is recommended that routine testing of recipients is undertaken for SARS-CoV-2 (virus causing COVID-19) preferably within 48 hours before transplantation for recipients of living and deceased donor organs:

- Nasopharyngeal swab (PCR test)

For intended recipients of living donor organs a negative result should be obtained prior to proceeding. For recipients of deceased donor organs, where possible obtain the PCR result prior to proceeding with transplantation, although this should be at the discretion of the transplant team in time constrained circumstances, after consideration of personal exposure risks and local COVID epidemiology, as below.

Recipients (or their delegates) should be questioned to ascertain epidemiological risk and clinical features for COVID-19 prior to proceeding with transplantation. Where there is suspicion for recipient COVID-19 infection negative PCR results should be obtained prior to proceeding with transplantation. Careful consideration should be given to recipients who are at epidemiological risk and may be in the incubation period of COVID-19 where PCR tests may be negative.

Reporting suspected or confirmed cases of donor derived COVD-19 in transplant recipients

In the event of a suspected or confirmed case of donor derived COVID-19 in a recipient the local Donation Agency should be immediately contacted and any other state/territory reporting requirements undertaken. In addition, in Australia a notification should be submitted to the Vigilance and Surveillance Expert Advisory Committee (VSEAC) of the Organ and Tissue Authority (OTA), which may be made through your DonateLife State Medical Director or by contacting "saen@donatelife.gov.au".

Information sources

- American Society of Transplantation. SARS-CoV-2 (Coronavirus, 2019-nCoV): Recommendations and guidance for organ donor testing. [7 July 2021; cited 1 Nov 2021]. Available at: https://www.myast.org/sites/default/files/Donor%20Testing%20Document_07.07.21.pdf
- Communicable Disease Network of Australia (CDNA) COVID-19 national guidelines. Available at: https://www1.health.gov.au/internet/main/publishing.nsf/Content/cdna-song-novel-coronavirus.htm
- PHLN guidance on laboratory testing for SARS-CoV-2 (the virus that causes COVID-19). Available at: https://www.health.gov.au/resources/publications/phln-guidance-on-laboratory-testing-for-sars-cov-2-the-virus-that-causes-covid-19
- Organ Procurement and Transplantation Network. Summary of current evidence and information-donor SARS-CoV-2 testing and organ recovery from donors with a history of COVID-19. [22 Sept 2021; cited 01 Nov 2021]. Available at: https://optn.transplant.hrsa.gov/media/kkhnlwah/sars-cov-2-summary-of-evidence.pdf