

COVID-19 recommendation

Update, 2023-03-13

1. SARS-CoV-2 testing of potential deceased solid organ donors (incl. Langerhans islets)

SARS-CoV-2 PCR diagnostics must be carried out in all potential deceased organ donors using an oro/nasopharyngeal swab or a deep respiratory tract sample. In case of lung donation, analysis of a deep respiratory tract sample is mandatory. If deep respiratory tract samples are not available for foreign lung offers, the lungs may be accepted at discretion of the transplant center if upper respiratory tract samples are negative and if there is no radiological evidence for a lower respiratory tract infection. The medical advisor of Swisstransplant can request an additional chest CT-scan for further evaluation of potential COVID-19. SARS-CoV-2 PCR testing must be performed **less than 48 hours** before organ donation. If the time window exceeds 48 hours, the test has to be repeated.

2. Deceased solid organ donors (incl. Langerhans islets) without active COVID-19

Organs of deceased organ donors without evidence for an active SARS-Cov-2 infection can be allocated as usual.

3. Deceased SARS-CoV-2 PCR positive solid organ donors (incl. Langerhans islets)

Potential deceased organ donors with active COVID-19 (positive PCR from oro- or nasopharyngeal swab) and suffering from a **mild/asymptomatic disease** are eligible for liver-, kidney-, pancreas-, Langerhans islets- and heart donation. No donor-derived SARS-CoV-2 infections have been reported so far when transplanting these organs from mild/asymptomatic SARS-CoV-2 infected donors ¹⁻⁴.

Potential deceased lung donors with active COVID-19 (positive PCR from oro- or nasopharyngeal swab) and suffering from a **mild/asymptomatic disease** may be eligible for lung donation if the chest CT scan does not show COVID-19 typical opacities and if the SARS-CoV-2 PCR of lower respiratory tract samples (bronchoalveolar lavage or tracheobronchial secretion) show either absence of SARS-CoV-2 RNA or if the viral load is low (ct value of the PCR >30 or viral load <10⁴ copies/ml). Recent literature suggests that lungs of SARS-CoV-2 infected donors may be used safely if there is no SARS-CoV-2 RNA detected in deep respiratory tract samples or if the ct value of the PCR is high ^{5, 6}.

However, all cases should be individually assessed and following aspects have to be taken into account when evaluating such potential donors:

- Active versus resolved COVID-19: SARS-CoV-2 PCR may remain positive for a prolonged period after resolved COVID-19. If the potential deceased organ donor has a recent history of a mild/asymptomatic SARS-CoV-2 infection, the positive SARS-CoV-2 PCR may reflect remnants of a resolved recent

infection. This may be particularly true if cycle threshold (ct) values of the SARS-CoV-2 PCR are high.

- Urgency of transplantation: for donation of organs from donors with potential active COVID-19, priority should be given to patients in urgent (life-saving) situations.
- Vaccination history and SARS-CoV-2 serostatus of the potential recipient: We strongly encourage evaluating the vaccination history and serostatus of potential solid organ recipients. The SARS-CoV-2 immunity of the recipient (by vaccination and/or exposure) should be taken into account when deciding about accepting a transplant, particularly a lung, of a SARS-CoV-2 infected donor.

The potential recipient or his/her next of kin has to be informed about the risks and benefits of accepting an organ from a donor positive for SARS-CoV-2 and has to provide written consent. The consent has to be attached in the SOAS prior to transplantation. A pre-emptive therapy with treatments facing the circulating variants may be considered and should be discussed in the interdisciplinary team on a case-by-case basis.

4. Living SARS-CoV-2 PCR positive solid organ donors

PCR diagnostics must be carried out in all living donors using an oro- or nasopharyngeal swab. The PCR testing has to be performed less than 48 hours before donation. If the time window exceeds 48 hours, the test has to be repeated. Detailed medical history, including prior SARS-CoV-2 vaccination, available SARS-CoV-2 serology titers, exposure to persons with COVID-19 and searching for COVID-specific symptoms is mandatory prior to donation and has to be documented.

Living donors with a positive SARS-CoV-2 PCR are not eligible for donation on a general basis. In exceptional cases, asymptomatic living donors with a positive SARS-CoV-2 PCR may be considered eligible for donation. However, these cases must be individually assessed with a special focus on the potential risk for the donor. We strongly advise against proceeding with the transplantation if an asymptomatic SARS-CoV-2 infected living donor has risk factors for developing severe COVID-19 (such as being overweight, being a current or former or cigarette smoker, or being ≥ 65 years old). Additional aspects such as (i) active versus resolved COVID-19, (ii) urgency of transplantation, (iii) vaccination history and SARS-CoV-2 serostatus of the potential recipient, and (iv) preemptive administration of monoclonal antibodies and/or antiviral drugs to the recipient must be considered as described in section 3. The potential recipient has to be informed about the risks and benefits of accepting an organ from a living donor positive for SARS-CoV-2 and has to provide written consent. The consent has to be attached in the SOAS prior to transplantation.

5. Cornea donation

Potential cornea donors must be screened by a SARS-CoV-2 PCR on an oro- or nasopharyngeal swab performed, less than 48 hours pre-mortem or not more than 24 hours post-mortem. Patients with active COVID-19 are not eligible for cornea donation.

6. Donation of tissues other than cornea

- a. In case of amniotic membrane donation for transplantation in human eye we recommend PCR diagnostics in the respiratory tract of the tissue donor using an oro- or nasopharyngeal swab not earlier than 24 hours before donation and no later than 24 hours after donation. SARS-CoV-2 positive donors are not eligible.
- b. In case of bone graft donation from asymptomatic donors we do not recommend routine PCR diagnostics.
- c. In case of isolated heart valve donation, we do not recommend routine PCR diagnostics. Heart valves of SARS-CoV-2 positive donors with mild/asymptomatic disease can be used.
- d. In case of isolated donation of arterial vessels, we do not recommend routine PCR diagnostics. Arteries of SARS-CoV-2 positive donors with mild/asymptomatic disease can be used.

Recommendation approved by the STAI Swisstransplant Working Group of Infectious Diseases | PD Dr. Cédric Hirzel, President; Dr. Katia Boggian; Prof. Nicolas Müller; Prof. Nina Khanna; Prof. Oriol Manuel; Prof. Christian van Delde; and PD Dr. Franz Immer, Medical Director and CEO Swisstransplant

References

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