swiss transplant

COVID-19 recommendation

Update, 2022-05-20

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. 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)

If the SARS-CoV-2 PCR is positive or if the chest CT-scan is highly suspicious for COVID-19, lungs cannot be allocated.

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].

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 (live-saving) situations.
- Vaccination history and SARS-CoV-2 serostatus of the potential recipient: We encourage evaluating the vaccination history and serostatus of potential solid organ recipients. Priority should be given to vaccinated/seropositive recipients.

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 preemptive therapy with monoclonal antibodies and/ or antiviral drugs 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 kidney and liver 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 premortem 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. As there are many potential uninfected donors and because of the ability of SARS-CoV-2 to induce placentitis [5], 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. SARS-CoV-2 positive donors with mild/asymptomatic disease may be eligible for heart valve donation.
d. SARS-CoV-2 positive donors with mild/asymptomatic disease may be eligible for donation of blood vessls.

References

1. La Hoz RM, Mufti AR, Vagefi PA. Short-term liver transplant outcomes from SARS-CoV-2 lower respiratory tract NAT positive donors. *Transpl Infect Dis*. Feb 2022;24(1):e13757. doi:10.1111/tid.13757
2. Saracco M, Romagnoli R, Martini S. Solid non-lung organs from COVID-19 donors in seropositive or naive recipients: Where do we stand? *Transpl Infect Dis*. Feb 2022;24(1):e13761. doi:10.1111/tid.13761
3. Eichenberger EM, Kaul DR, Wolfe CR. The pandemic provides a pathway: What we know and what we need to know about using COVID positive donors. *Transpl Infect Dis*. Oct 2021;23(5):e13727. doi:10.1111/tid.13727
4. Romagnoli R, Gruttadauria S, Tisone G, et al. Liver transplantation from active COVID-19 donors: A lifesaving opportunity worth grasping? *Am J Transplant*. Dec 2021;21(12):3919-3925. doi:10.1111/ajt.16823
5. Stenton S, McPartland J, Shukla R, et al. SARS-COV2 placentitis and pregnancy outcome: A multicentre experience during the Alpha and early Delta waves of coronavirus pandemic in England. *EClinicalMedicine*. May 2022;47:101389. doi:10.1016/j.eclinm.2022.101389