

COVID-19 recommendation

Update, 2024-01-21

1. SARS-CoV-2 testing of deceased solid organ donors

The risk for donor-derived SARS-CoV-2 infection in non-lung transplantation is low or even absent if organ/tissue donors suffer from mild/asymptomatic COVID-19 ¹⁻⁴.

For logistic reasons, uniform SARS-CoV-2 PCR from lower respiratory tract samples (bronchoalveolar lavage or tracheobronchial secretion) should be performed in all potential solid organ donors to ensure that lung donors have always been screened before organ donation. 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. SARS-CoV-2 PCR testing must be performed less than 48 hours before lung donation.

2. Deceased SARS-CoV-2 PCR positive solid organ donors

Deceased organ donors with **mild/asymptomatic SARS-CoV-2 infection** are generally eligible for liver-, kidney-, pancreas-, Langerhans islets- and heart donation. No donor-derived SARS-CoV-2 infections have been reported when transplanting these organs from mild/asymptomatic SARS-CoV-2 infected donors ⁵⁻⁸.

Potential lung donors with **mild/asymptomatic SARS-CoV-2 infection** may be eligible for lung donation if there is no evidence for COVID-19 typical opacities in chest CT and if the SARS-CoV-2 PCR in lower respiratory tract samples reveals either absence of SARS-CoV-2 RNA or a low viral load ^{9, 10}. We recommend to consider lungs for transplantation if the ct value of the PCR is >30 or if the viral load is $<10^4$ copies/ml. The final decision for acceptance of lungs from SARS-CoV-2 infected donors is the responsibility of the respective transplant center.

3. Consent for acceptance of organs from SARS-CoV-2 PCR positive donors

Lung recipients or his/her next of kin must be informed about the risks and benefits of accepting a lung from a SARS-CoV-2 infected donor. Written informed consent has to be obtained and the consent form has to be attached in the SOAS prior to lung transplantation. There is no need to obtain a written informed consent from recipients if other organs than lungs from donors with mild/asymptomatic SARS-CoV-2 are offered.

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

Asymptomatic living donors may be screened for SARS-CoV-2 infection at the discretion of transplant centers. However, screening of asymptomatic living organ donors is not mandatory.

5. Donation of tissues

- a. In case of cornea donation, we do not recommend routine SARS-CoV-2 PCR testing of asymptomatic donors. We recommend excluding individuals with known symptomatic COVID-19 from donation.
- b. In case of amniotic membrane donation for transplantation in human eye, we do not recommend routine SARS-CoV-2 PCR testing of asymptomatic donors. We recommend excluding individuals with known symptomatic COVID-19 from donation.
- c. In case of bone graft donation, we do not recommend routine SARS-CoV-2 PCR testing of asymptomatic donors.
- d. In case of isolated heart valve donation, we do not recommend routine PCR testing. Heart valves of SARS-CoV-2 positive donors with mild/asymptomatic disease can be used.
- e. In case of isolated donation of arterial vessels, we do not recommend routine PCR testing. 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 Delden; and PD Dr. Franz Immer, Medical Director and CEO Swisstransplant

References

1. Goldman JD, Pouch SM, Woolley AE, et al. Transplant of organs from donors with positive SARS-CoV-2 nucleic acid testing: A report from the organ procurement and transplantation network ad hoc disease transmission advisory committee. *Transpl Infect Dis.* Feb 2023;25(1):e14013. doi:10.1111/tid.14013
2. Schold JD, Koval CE, Wee A, Eltemamy M, Poggio ED. Utilization and outcomes of deceased donor SARS-CoV-2-positive organs for solid organ transplantation in the United States. *Am J Transplant.* Sep 2022;22(9):2217-2227. doi:10.1111/ajt.17126
3. Casagrande M, Fitzek A, Spitzer MS, et al. Presence of SARS-CoV-2 RNA in the Cornea of Viremic Patients With COVID-19. *JAMA Ophthalmol.* Apr 1 2021;139(4):383-388. doi:10.1001/jamaophthalmol.2020.6339
4. Salz AK, Acharya M, Hofmann N, et al. Risk of SARS-CoV-2 virus transmission from donor corneal tissue: A review. *Indian J Ophthalmol.* Jun 2021;69(6):1592-1597. doi:10.4103/ijo.IJO_3249_20
5. 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
6. 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
7. 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
8. 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
9. Eichenberger EM, Coniglio AC, Milano C, et al. Transplanting thoracic COVID-19 positive donors: An institutional protocol and report of the first 14 cases. *J Heart Lung Transplant.* Oct 2022;41(10):1376-1381. doi:10.1016/j.healun.2022.06.018
10. Hwang J, Yuen A, Rhoades J, et al. Real-time transcription polymerase chain reaction cycle threshold values as criteria for utilization of incidental COVID-19 positive lung donors. *J Heart Lung Transplant.* Dec 28 2022;doi:10.1016/j.healun.2022.12.016