

Patient Information Leaflet

Guidance on Solid Organ Transplantation during the COVID-19 Pandemic

Introduction

As the COVID-19 pandemic evolves, you may have many questions on how to manage your health, and whether you should proceed with organ transplantation. COVID-19 can cause serious health issues in persons who are healthy and in those who have chronic conditions. When it comes to organ transplantation, there are two additional aspects of care that you need to be aware of. One, the risk of donor-derived infection, which refers to the transmission of COVID-19 from the organ donor to you; and two, the implications of being infected with COVID-19 after you have had a transplant.

In this document, we will be sharing important information related to COVID-19 to guide you through this process.

What is COVID-19?

COVID-19 stands for Coronavirus Disease 2019, which is caused by SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2). SARS-CoV-2 belongs to a family of viruses called *Coronaviruses*. They commonly cause respiratory tract infections, producing symptoms such as a runny nose, sore throat, cough, and fever. However, there are some coronaviruses like SARS (Severe Acute Respiratory Distress Syndrome) and MERS (Middle East Respiratory Syndrome) which can cause severe infections like pneumonia (infection of the lungs). SARS-CoV-2 causes a range of illness, from a very mild “flu-like” illness to severe lung infection with multi-organ failure.

Risk of Donor-derived Infection i.e. Transmission of COVID-19 from the Donor to the Recipient

Transmission of COVID-19 from organ donors to recipients through solid organ transplantation is extremely uncommon, compared to exposure to respiratory droplets from an infected person. Nonetheless, there are stringent screening criteria in place to detect infection in the donor.

Deceased donors. Patients who are known or suspected to have COVID-19 are automatically excluded from organ donation. The Ministry of Health (MOH) has developed a set of guidelines that we use to test all potential deceased donors. These guidelines may change as we learn more about this disease. Be assured that these guidelines are strictly adhered to and only organs from persons who test negative more than once for SARS-CoV-2 will be accepted.

It is important that you understand the limitations of the tests. A single negative test for COVID-19 does not necessarily mean that the donor does not have an infection, because

there is a small chance that the test may be incorrect. This is also known as a false negative test result. The average incubation period of COVID-19 is 5 days (range is 2-14 days). This means that most people exposed to COVID-19 will demonstrate symptoms of the infection after 5 days. Thus, we recognize that a potential donor may be within the incubation period at the time of organ donation. To reduce the chance of that happening, we assess each donor's recent contact history, and perform repeated COVID-19 tests over time to confirm the result.

Live donors. The risk of transmitting SARS-CoV-2 through an organ of an asymptomatic living donor infected with COVID-19 is not known. Nevertheless, we require our live donors to observe measures to reduce their risk of exposure to COVID-19 prior to surgery. These include strict social distancing measures, the use of face masks when they leave home, and avoiding travel outside of Singapore for at least 14 days prior to donation. In addition, they must be free of respiratory symptoms for at least 14 days. Testing for COVID-19 will be performed as a final check before proceeding to organ donation.

Risks and Implications of the Recipient Contracting COVID-19 after Transplant

You might think that you, as a patient, can be exposed to COVID-19 both inside, and outside of the hospital environment. In our hospital, we have strict infection control measures to segregate patients with suspected and confirmed COVID-19 from other patients. All staff are required to wear appropriate protective equipment. Staff members who are unwell are given medical leave and appropriately tested for COVID-19.

Transmission of COVID-19 can also occur in the community. One feature of COVID-19 is asymptomatic / pre-symptomatic transmission. This means that a person who appears well may harbour a "silent" infection and go on to infect others. The risk of acquiring COVID-19 depends on many things, and is not only limited to you and your family members' adherence to hand hygiene, daily activities, occupations, and habits. Therefore, we encourage you to read our "COVID-19 Patient Advisory Booklet" and have all members of your household consider how they too, can reduce their own exposure to COVID-19. The local COVID-19 situation is ever-changing, and you may visit the MOH's website "Updates on COVID-19 (Coronavirus Disease 2019) Local Situation" (<https://www.moh.gov.sg/covid-19>) for latest measures, updates and news. We are also available through your transplant coordinator or doctor if you require any updates.

At present, when there is a suitable organ, an offer would be made and patients will be called to hospital for evaluation and testing.

COVID-19 infection in transplant recipients may be graft- and/or life-threatening. Due to the immuno-suppressive medications taken to prevent rejection of the donor organ, mortality rates from COVID-19 infection in transplant recipients are higher than in the general population and can range from 20-30% of infected patients. Thus, we will be performing tests to ensure that you do not have COVID-19 at the time of transplantation. Again, there is a small chance that an early COVID-19 infection is not detected. Therefore, for your sake, we encourage you and your family to be proactive in adopting precautions

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to reduce your personal risk of exposure to COVID-19. At the time of writing, there is no specific cure for COVID-19, and treatment involves sustaining the patients' health while allowing the infection to run its course. Should you contract COVID-19, we will remain fully committed to caring for you in every way possible. You may also be invited to participate in a treatment study to identify potential therapies to treat the illness.

Logistical and Organizational Issues

Our hospital has undergone many changes in order to care for patients with and without COVID-19. Access to the hospital, critical care beds, outpatient visits and re-admission pathways have changed and may continue to change at short notice. We appreciate your understanding during this time as we continually adapt to the situation. Rest assured that we are committed to meeting your healthcare needs both in and outside the hospital. If you have any specific concerns, do contact the transplant team for clarification.

Deciding Whether to Proceed with Transplantation

We recognize that you may be uncomfortable with proceeding with transplantation during this time. Should you decide to defer or delay transplant, you will not be penalized for such a decision. However, it is important that you understand the risks of deferring transplantation.

First, COVID-19 is a pandemic which means that there is widespread infection around the world. Thus, there is a risk of contracting COVID-19 even as you continue to wait for a transplant. We know for a fact that persons with reduced organ function or chronic health conditions (like yourself) have a worse outcome when they contract COVID-19. Thus, you will be at a higher risk of a worse outcome (compared to a healthy person) whether or not you have had a transplant.

During this time, there may be restrictions placed on transplantation due to resource limitations and safety concerns. Restrictions have been placed on non-urgent living donor organ transplant programs. We expect that the waiting time for an organ transplant will be longer than what it was before COVID-19. It is inevitable that some patients' conditions will deteriorate while waiting for an organ transplant. This will mean that they will no longer be eligible for transplant. This likelihood of waitlist dropout may vary from patient to patient. Do consult your doctor if you need a frank discussion about your current health situation.

All of us at SingHealth Duke-NUS Transplant Center are committed to providing you with the healthcare that you need during this challenging time. If you have any questions, do contact your transplant coordinator to arrange for a discussion.