

Sing-Kobe Liver Transplant Centre is a clinic offering high quality living donor liver transplant services covering all processes from diagnosis and evaluation of liver diseases to life-long patient care after discharge.



We are located at Mt Elizabeth Novena Hospital, Singapore's first purpose-built private sector hospital to be built in over 30 years. Located in the heart of the country's next medical hub in Novena, this latest healthcare facility brings together clinical expertise, state-of-the art medical equipment and operational excellence to provide local and international patients with quality healthcare, greater privacy and quick access.

Sing-Kobe Liver Transplant Centre is a collaboration effort between IFMS (International Frontier Medical Support) led by Dr. Koichi Tanaka and the Mount Elizabeth Hospital Liver Transplant Team led by Dr. Prema Raj.

This joint venture brings the expertise to the region which puts the team as one of the centres with the largest number of living donor liver transplant cases with more than 2,000 cases since 1990. The team from Kyoto University headed by Dr. Tanaka has performed more than a third of liver transplant surgeries out of Japan.

A study¹ in the year 2007 found that LDLT accounts for less than 5% of liver transplants in the U.S. and Europe compared to more than 90% in Asia excluding mainland China due to the shortage of deceased liver. Notably Asian teams are highly trained and experienced given the number of LDLT performed.

Our team led by Dr. Prema Raj and Dr. Tanaka have been well-known in establishing high quality of living-donor liver transplantation with results in three key aspects in both liver and paediatric transplant programme :

1. *Clinical outcomes – recipient and donor*
2. *Complicated living donor liver transplant – blood group incompatible*
3. *Hospital Nursing Care and Facilities*

1. Clinical Outcomes & Milestones

- First year survival rate of more than 80% for elective adult LDLT procedures. (Survival rate comparable to that of the renowned centres in the U.S and Europe)
- More than 2000 cases of LDLT with more than 23 years of LDLT experience
- One of the largest number of LDLT in a single transplant centre

Milestones

1992 Microsurgical reconstruction of hepatic arteries was performed

1992 Successfully transplanted blood group incompatible liver transplant

1998 Introduction of right liver graft, providing adequate functional mass to the recipient without compromising donor safety

2000 Reduced graft for infants, paediatric which expands paediatric donor pool

2. Complicated Living Donor Liver Transplant

There are four blood types: A, B, AB and O. Everyone fits into one of these inherited groups. The standard transplantation requires recipient and donor to have either the same blood type or compatible ones.

However it is now possible to transplant across the ABO blood group barrier with excellent result.

Incompatible blood group from donor's liver? There's a solution.

A transplant is usually carried out when the recipient's blood and tissue type is compatible with the donor's. With today's advances in anti-rejection drugs which are so good, tissue-typing and good matching is no longer essential for a successful transplant. Although blood group also known as ABO-compatible transplants are preferred, the liver transplant has successfully transplanted ABO-incompatible liver patients with excellent outcomes since the mid 1990's. However, the patient has to undergo special pre-transplant procedures such as immunoadsorption or plasmapheresis to 'wash out' the incompatible antibodies against the incompatible donor's blood group.

In this aspect the expertise in managing complicated transplants are highly essential in timing, administering and providing the sequence of treatment to ensure a successful transplant. The transplant surgery is no different from the standard method of liver transplant.

Plasmapheresis is a process that removes harmful antibodies from the blood so they don't attack and damage the new kidney. It can be carried out as an outpatient and minimal discomfort. It is similar to going through dialysis where it removes the plasma portion of the blood where antibodies are present. The number of plasmapheresis treatments required by the recipient before surgery varies depending on the amount of harmful antibodies in their blood.

3. Hospital Facilities and Nursing Care



A set of highly skilled and trained nurses from surgical support in the operating theatre to the team of nursing care in the ICU and ward, provides the pre and post-transplant for both donor and recipient.

The nursing transplant care supports the surgical team carries out detailed plans in preparation to the surgery and set-up of the operating theatre for both donor and recipient surgery to run concurrently. The trained team of nurses utilises the right essential equipment like the rapid infusion systems to coagulators used during the surgery and instruments tailored to suit surgeons for microsurgery during the operation with the priority of patient safety minimises the risks and complications as part of the support to doctors.

Pre & post-transplant care

Critical care and knowledge of post-transplant ICU and ward together with the transplant medical and surgical team of doctors are crucial. Competency of nurses is consistently evaluated and the team of trained nurses demonstrates the knowledge of interpreting data and application of our transplant protocol. ICU rooms are well-equipped with positive pressure rooms and one-to-one nursing care to ensure the best care for patient during the immuno-compromised stage.